FEDERATED STATES OF MICRONESIA'S



The Next 20 Years:

ACHIEVING ECONOMIC GROWTH & SELF-RELIANCE

Vol I: Policies and Strategies for Development

Table of Contents

Volume I	Polices and Strategies for Development	
Table of C	Contents	i
Terms and	d Abbreviations	ii
Foreword		iii
1.	Economic Developments: 1987-2003	1
2.	The Macroeconomic Framework	38
3.	Private Sector Development	75
4.	Agriculture	105
5.	Fisheries	155
6.	Tourism	213
7.	Environment	273
8.	Health	359
9.	Education	441
10.	Gender	499
Volume II	Strategic Planning Matrices and Appendices	
Appendix	A Strategic Planning Methodology	1
Appendix	B Sector Planning Matrices	13
1.	Private Sector	13
2.	Agriculture	29
3.	Fisheries	39
4.	Tourism	59
5.	Environment	83
6.	Health	115
7.	Education	127
8.	Gender	141
Appendix	C Statistical Tables	160
1.	Gross Domestic Product	160
2.	Tourist and Visitor Arrivals	165
3.	Employment by Industry	168
4.	Commercial Banking Survey	179
5.	Consumer Price Index	180
6.	Balance of Payment and External Debt	187
7.	General Government Finances	190

Terms and Abbreviations

ADB Asian Development Bank

AusAID Australian Assistance for International Development

CFA Compact of Free Association

c.i.f. Price of traded goods inclusive of cost, insurance, and freight

COM College of Micronesia

CPUC Chuuk Public Utility Corporation
CSG Core Stake Holder Group
DOE Department of Education

DTC&I Department of Transportation, Communications and Infrastructure

EEZ Exclusive Economic Zone

EPIC Economic Policy Implementation Council FAA US Federal Aviation Administration FIAS Foreign Investment Advisory Service

FFA Forum Fisheries Agency
FMI Fisheries and Maritime Institute
f.o.b. Free on board price (traded goods)
FPA Fiscal Procedures Agreement
FSM Federated States of Micronesia
FY Fiscal Year: October 1 – September 30

GDP Gross Domestic Product
IDP Infrastructure Development Plan
IMF International Monetary Fund

IPIC Infrastructure Planning Implementation Committees

MOU Memorandum of Understanding
NDE National Division of Education
NGO Non-Government Organization
NSC National Steering Committee

PFTAC Pacific Financial Technical Assistance Center

PMU Program Management Unit PPA Pohnpei Ports Authority

PSIP Public Sector Infrastructure Program
PTA Parent Teachers Association
PUC Pohnpei Utilities Corporation
SDP Strategic Development Plan

SEPA State Environmental Protection Agency

SGS Sustained Growth Strategy

USAID US Agency for International Development

USDA US Department of Agriculture US DOI US Department of Interior

UNDP United Nations Development Programme

VAT Value-Added Tax

WTO World Tourism Organization YSPA Yap State Ports Authority

YSPSC Yap State Public Service Corporation



The President Falikir, Pohrpei Federated States of Micronesia

Foreword

Work on the Strategic Development Plan (SDP) started late in 2003, as the FSM entered a new phase of its development with the implementation of the amended Compact. While the new fiscal procedures required the FSM to transmit a Strategic Development Plan to the U.S. to provide the framework on which to base the annual requests for the Compact sector grants, the FSM more importantly required a process to identify its development strategy for the new era.

In March 29-April 2 the FSM convened the 3rd FSM Economic Summit. The Summit was attended by four hundred participants representing the four FSM states, the traditional leadership, private sector, National and State governments, non-government organizations, churches, women's and youth groups, government officials, as well as representatives of foreign governments and donor institutions. The theme of the Summit was, *The Next 20 Years: Achieving Economic Growth & Self-Reliance*. The objectives of the Summit were several:

- To achieve consensus on an overall strategy consistent with the theme of achieving economic growth and self-reliance,
- To build awareness of the economic structure of the amended Compact provisions and the likely impact on the FSM economy, and
- To improve implementation and monitoring of the outcome of the planning process.

The Summit can be said to have successfully achieved the first two, while commitment and determination will be required in the detailed planning process to ensure successful implementation and monitoring. The Summit participants were presented with two sets of materials: draft sector chapters, and sector planning matrices. Both were debated in committee and the matrices were adopted by the Summit. This material has now been consolidated, included in the SDP, and adopted by our Congress.

The Summit provided the opportunity for the leadership to consider the progress attained during the first 17 years of the Compact. While implementation of the Compact was successful and saw the emergence of a stable democracy, economic growth was disappointing. The leadership concurred that the FSM could attain a better result during the 20-year period of the amended Compact, and adopted a "Sustained Growth Strategy". While it was recognized that the strategy would entail sacrifice and commitment, it was felt that only through adopting a more aggressive reform agenda could the FSM provide the type of environment that our citizens could hope to find gainful economic opportunities at home, and avoid the need to migrate to neighboring territories.



The SDP comes in three volumes. Volume I is the major component of the Plan and presents on overview of the FSM economy, discussion on the macroeconomic framework in light of the Sustained Growth Strategy, and the need for fiscal adjustment in the medium and long term. Volume I also presents discussion on the policies and development strategies for each sector of the economy. Volume II contains the sector planning matrices adopted at the Summit together with a statistical appendix. These first two volumes are complementary and should be used in cross-reference with each other. Volume III is the Infrastructure Development Plan (IDP) and is an integral component of the overall planning framework for the FSM.

I would like to take this opportunity to thank the many donors and individuals who have supported and made the preparation of the Strategic Development Plan possible. Both the Asian Development Bank and the U.S. Department of Interior provided valuable funding to support the development of resource material for the Summit and subsequently the Plan. I would also thank the many citizens of the FSM who participated in the Summit and for their valuable contribution that helped formulate the policies and strategies contained in this document. I thank the individuals of the Department of Economic Affairs responsible for the many hours of hard work required to produce this document. I am confident the SDP will provide a sound basis for the development of our nation as is embarks on the next phase of our development.

President

1 Economic Developments: 1987-2003

1.1 Economic Performance

1.1.1 Economic Growth

- Developments in the FSM economy need to be analyzed in the light of the Compact of Free Association with the United States, which commenced in FY1987 and resulted in large external transfers to support the operations of Government and public sector investment. The structure of the Compact economic assistance, to last 15 years until 2001, was front-loaded with two stepdowns after 5 and 10 years entailing a 15 and 22 percent reduction in base grant funding. The transfers were only partially indexed to US inflation, resulting in a real reduction in resource flows amounting to an annual average decline of 4 percent. Provision was made for a further two years of funding through FY2003 should renegotiation of the expiring economic sections of the Compact remain incomplete, but at the average level of funding during the first 15 years. The original Compact period thus incorporated three large distinct fiscal shocks and challenges to the economy: two negative requiring substantial downward adjustment and a third "bump-up" in resources requiring measures to limit unsustainable increases in public expenditures.
- In 1987 the FSM economic structure was heavily dominated by Compact flows, supporting a level of Government expenditures that represented 88 percent of GDP. The economic structure was simple, with a private sector dominated by non-traded goods production, virtually no export activity, and a small, nascent tourism sector. Against this background developments in the economy can be divided into three periods: 1987-95, 1995-99, and 1999-03. The initial period saw strong growth in economic activity as the economy adjusted to increased flows and grew by an annual average rate of 3.9 percent in real terms (see Figure 1 for annual developments). While growth of the government contribution to GDP was modest and grew by an average of 1.4 percent, the private sector recorded an impressive annual growth of 6.5 percent. While private sector activity was strong this did not reflect growth in the traded goods sectors or the emergence of significant export activities. The growth represented the emergence of a modern cash economy as non-traded goods production expanded to meet growing demand and resources were attracted out of the subsistence sector. The first stepdown in Compact funding, in FY1992, was adjusted to with relatively little pain, in part because expenditures had not fully adjusted upward to the new levels of funding. Further, borrowings against future flows through the issue of Compact-backed Medium Term Notes (MTN) to fund public enterprise investment in the fisheries sector enabled levels of expenditures to

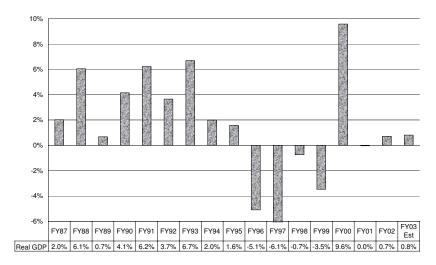


Figure 1 Real GDP Growth

be maintained through much of the second five-year period of Compact assistance.

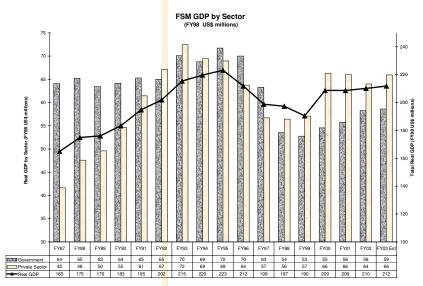
- However, the second stepdown in FY1997 was both larger in magnitude and required a painful adjustment. Supported by an ADB Public Sector Reform Program Loan, an Early Retirement Program was initiated to reduce the level of public servants to an affordable level. By loan close-out in December 1999 the work force had been reduced by 23 percent against a target of 27 percent and the wage bill had been cut by 29 percent against a target of 35 percent through reductions in the number of hours in the working week. While not fully meeting the targets, the program was considered successful, avoiding a potentially destabilizing financial situation, and balance with respect to recurrent operational expenditures was restored by the end of FY1998. Not unsurprisingly, the adjustment required to restore balance after the second stepdown had a significant impact on the economy. The government contribution to GDP declined by an average of 7.4 percent annually between FY1995 and FY1999, while total GDP fell at an annual rate of 3.9 percent.
- While the second stepdown in Compact funding imparted a significant downward shock on the economy, events in Chuuk State compounded the contraction. Poor fiscal management and increasing expenditure overruns led to a build-up in arrears to domestic and international creditors, and undermined economic stability. By the start of FY2000 with adjustment to the second stepdown complete and the Chuuk crisis resolved, the FSM economy rebounded strongly

- 5 cant and, perhaps largely unreconized achievement.

and grew by 9.6 percent in real erms, further buoyed by airport reconstruction in Chuuk. However, the spike i economic growth was not to be sustained and the economy reached a plateau nd grew by an average rate of 0.5 percent between FY2000 and FY2003. V ith the onset of the Compact negotiations, the resulting uncertainty in the medi m term, and return of financial crisis in Chuuk, the private sector took on a "wai and see" attitude with respect to investment.

For an economy domin ted by large government and an in the absence of significant traded goods production, the capacity of the private sector to achieve a growth rate nearly 2.0 percent per annum above the public sector during the FY1995-FY2003 period is not an unfavorable outcome. Figure 2 indicates these developments. The percentage of the structure of the Compact economic assistanc; imposed a continuous downward shock to the economy and Government activ y fell by 0.6 percent per annum from FY1987 to FY2003, the private sector managed to grow by an annual rate of 2.9 percent, with GDP averaging 1.6 percent While, this rate of economic growth is consistent with other Pacific Island experience, the ability of the economy to achieve positive growth in the face of large reductions in external transfers is a signifi-

There are two importar lessons to be learned from the FSM economic experience during the original compact period. Firstly, that economic growth supported by large Governmen is not sustainable, and that the impetus for



FSM Real GDP by Sector (FY98 US\$ millions)

4

growth must lie with the private sector—a lesson that is largely accepted in the FSM. Secondly, that despite inheritance of a weak policy regime and poor design of the Compact that placed recurring shocks and a continuing reduction in demand through the first fifteen years, the private sector has demonstrated a capacity for economic growth. As part of the adjustment process to the second stepdown, the FSM adopted an economic reform program, which was implemented through the ADB-supported Public Sector Reform Program (PSRP). While important progress was achieved, the emphasis placed on the renegotiation of the amended Compact, and adverse incentives inherent in the bump-up years, the reform initiative stalled. Now that the terms of the amended Compact have been agreed, the FSM must reinvigorate the reform process if the nation wants to launch itself on an improved growth path.

1.1.2 State Economic Developments

The FSM is a federation with considerable autonomy in each of the four states, and analysis of the economy is not complete without an adequate description of developments at the state level. This is instructive not only as developments at the state level explain aggregate economic performance of the nation, but also as the varying performance reflects differences in the policy regime and response to external developments. Table 1 below indicates recent economic performance of the four states and relative growths of the private and government sectors. It should be noted that other institutions such as public sector enterprises, non-profit organizations and households although included in state GDP have not been explicitly revealed in the Table. Full details of state level GDP is provided in Appendix C Table 1b-1e.

Economic performance at the state level has been highly varied. Pohnpei and Yap have been the fastest growing with GDP growth averaging 2 percent per annum in the FY1987-FY2003 period. Performance in Kosrae was poor with GDP growing at a modest 0.6 percent per annum, while the Chuuk economy performed only marginally better at 0.7 percent per annum. In the early period FY1987-FY1995 of the Compact growth was strong in Pohnpei and Yap, which experienced rates of growth of 5.4 and 3.8 percent, respectively. The private sector expanded vigorously in both states attaining nearly 9.0 percent. While public sector activity was cut back in Yap, in Pohnpei it expanded by 2.3 percent contributing to the slightly faster overall growth in the two states. Private sector activity recorded a respectable rate of growth of 4.2 percent in Chuuk, while in Kosrae it was almost non-existent. During the period of adjustment to the second-step down in Compact funding, FY1995-FY1999, economic growth was negative in all states with the exception of Yap, which just managed to keep its head above water. While the public sector contracted significantly in all states during these years, only Yap managed to sustain a grow-

Full Compact Period Early Compact Period Adjustment Period Final Compact Period FY1987-FY1987-FY2003 FY1995 FY2003 FY1999 GDP Prv³ GDP Gov Prv GDP Gov Prv³ GDP Gov Prv³ Gov Chuuk -6 0 -7.8 7.5 0.7 -13 1.8 2.5 1 6 42 -123 4 0 4 6 0.6 -0.6 0.5 1.6 -0.6 0.2 -2.8 -6.3 -1.0 2.0 5.5 2.4 Pohnpei² 2.2 0.2 2.3 8.7 -7.0 2.6 3.2 5.4 -4.4 -4.4 0.9 3.1 2.4 -1.3 3.8 -0.5 8.9 1.0 -6.5 4.7 2.6 Yap 5.8 1.1 1.0 FSM 1.6 -0.6 3.9 6.5 -3.9 3.7 2.9 1.4 -4.6 2.7 2.7

Table 1 Average Real GDP Growth per annum by State and Economic Sector¹

- Notes
- 1 Growth rates computed using end points.
- 2 Pohnpei inclusive of National Government.
- 3 Private Sector, excludes public enterprises, NGOs, and households

ing private sector to offset the decline, and thus maintain a positive overall rate of growth.

- During the final years of the original Compact economic growth was restored, as the state economies revived after completion of the adjustment to the second step down. The differential rates of growth reflect the degree of recovery and use of the bump-up funds to stimulate economic activity. In Yap which resisted the temptation to temporarily ramp-up public expenditures, and opted to set aside the bump up funds, the economy grew only modestly as the private sector failed to maintain its past performance. In Chuuk economic growth was strongest, having the furthest to recover from, and utilizing the largest proportion of the bump-up funds of all the states. While financial crisis once again returned to the state during these years, the necessary adjustments to pay back past debts have yet to be made. Further large inflows of FEMA funds, to assist recovery from Typhoon Chata'an, helped stimulate economic growth. In Kosrae, the state embarked on an expansionary fiscal policy rapidly expanding the public sector and temporarily stimulating the economy. In Pohnpei fiscal policy was more moderate, and the economy benefit from a return of private initiative.
- Compounded by the reduction in Compact flows, Chuuk State suffered a severe financial crisis in the mid-1990s due to weak fiscal management. Chuuk State ran up large arrears with domestic and international vendors and failed to make allotments on public servant payroll. At the height of the crisis in FY1996 the state had accumulated debts of over \$17 million—equivalent to 30 percent of state GDP. However, in late FY1996 the state initiated a recovery program with conditioned financial support from the National Government. That program, coupled with the Early Retirement Program, rapidly reversed the adverse fiscal position. By the start of FY2000 the state had repaid essentially all of their recorded arrears and was running a significant structural surplus in terms of its recurrent operations. Coupled with the airport renovation project,

the main island road resurfacing, increased capacity to implement development projects, and a return to a 72 hour bi-weekly pay period, state economic activity increased by a sizeable 18.7 percent in FY2000 after several years of negative growth between FY1996-FY1998. However, the level of economic activity has still to attain that achieved in FY1991.

- The return to fiscal discipline in Chuuk lasted only four years. The elections in March 2001, revenue overestimation based on stock market trends in the late 1990s, return to an 80-hour pay period, uncontrolled off-island medical referrals, and a significant increase in hiring of contract workers led to a rapid deterioration in the fiscal position. By the second quarter of FY2002 the state had returned to payment of employee net pay only, essentially defaulting on approximately 60 percent of employee deductions to vendors, banks, the FSM tax authority, and Social Security Administration. As the crisis broke, it was estimated that the state had again run up arrears to the sum of \$9 million compounded by as much as \$6 million owed to complete land purchase agreements entered into without adequate authorization and appropriation. During the fourth quarter of FY2002 the national government and the state were operating under a Memorandum of Understanding that ensured full payment of the gross wages and also led to the creation, as a Chuuk State statutory body, of a Chuuk State Financial Control Commission (CFCC). From the outset of FY2003, the CFCC effectively controlled expenditures and played an important role; however, the resources needed to fully address arrears and land purchase obligations were not provided in the FY2003 budget and thus the states financial situation, while stabilized, is not yet moving toward a full recovery. As a consequence of these developments the state economy failed to sustain the recovery initiated in FY2000. State GDP remained static in FY2001 and declined by 2.1 percent in FY2002. In FY2003, although expenditures were reigned in to meet commitments to set aside the state's share of the bump-up funds, the expansionary impact of FEMA funded individual family grants to compensate households for the destruction caused by Typhoon Chata'an stimulated economic activity, and state GDP grew by 2.8 percent.
- Pohnpei State, which had achieved the strongest growth during the initial period of the Compact FY1987-FY1995 of 5.4 percent per annum, experienced a substantial decline in GDP after the second step down of 4.4 percent per annum during the adjustment period FY1995-FY1999. The state was unable to replace the strong stimulus to growth of hosting the nation's capital of the early 1990s, and sustain the associated private sector growth. An inward-oriented policy environment and high levels of investment in unprofitable public enterprises, contributed to economic stagnation. However, the state maintained a tight grip on fiscal policy subsequent to the reforms initiated in FY1996. After experiencing negative economic growth in each year from FY1996 through FY1999, economic performance improved between FY1999 and FY2003 and

the state economy expanded by an annual average rate of 2.4 percent. However, the average growth rate masks significant variations for year to year. The economy expanded strongly in FY2000 by 8.4 percent reflecting recovery from the fiscal adjustment and improving fish prices and conditions, the latter contributing 3.7 percent to the overall increase. In FY2001, the economy fell back by 2.5 percent as fishing conditions reverted to more normal conditions. Economic growth was strong in FY2002 and state GDP grew by 6.9 percent as the state fully utilized the available bump-up funds and benefited from an additional increase in resources after the final repayment of the Medium Term Notes (MTN) in FY2001 (the state issued a series of MTNs in the early 1990s to fund investment in public enterprises.) In the final year of the original Compact, FY2003, economic forces were mixed. The state legislature opted to fully fund a return to an 80-hour pay period stimulating economic activity. The state further committed to fully meeting its contribution to the Compact trust fund in the one year only, rather than setting aside the additional bump-up funds over two years, thus sterilizing a significant proportion of available resources. Coupled with an estimated poor year for fishing the state economy is estimated to have contracted by 2.1 percent in FY2003.

- 13 Economic performance in Kosrae, the smallest state in the FSM, failed to compensate for geographical remoteness and limited resource endowments with an attractive policy regime. The economy has remained stagnant since the beginning of the Compact recording an average rate of GDP growth of 0.6 percent and attaining a level of GDP in FY2003 of only just 9 percent above the FY1987 level. The state is the most dependant on public sector activity in the FSM and has failed to generate an active private sector-economic developments and growth of the private sector are almost entirely driven by trends in public expenditures. While the state achieved the ERP targets in the PSRP set for personnel, the gains have been largely eroded through increases in wages, which are now above their pre-reform levels, with the results that recurrent expenditures have returned to their former levels. In FY2002, Kosrae opted not to set aside the state's share of the bump-up funds for contribution to the amended Compact Trust Fund, and returned the bi-weekly payroll from 56 to 64 hours. In FY2003, the state made provision to set aside an amount greater that the one year level of the bump-up funds, recorded a significant fiscal surplus, but with a consequent reduction in demand resulting in contraction of the private sector.
- The Yap state economy achieved the highest rate of economic growth of the FSM states during the original Compact period. Growth of the private sector was the most impressive, achieving an annual average of 5.8 percent during the 17 years. While the state underwent a public sector contraction similar to the other states after the second step-down, the private sector managed to remain buoyant and assisted the state in maintaining positive GDP growth during the period. While it is difficult to attribute the success of the state to any one par-

ticular factor, it has maintained stable fiscal policies and, perhaps, a more lais-sez-faire policy environment. The state achieved the best outcome in the PSRP reform program meeting its ERP targets and achieving the cost-savings anticipated. These policies have been maintained through the end of the original Compact period, and the state has avoided the temptation to utilize the bump-up funds to temporarily inflate public expenditures. The main weakness in the state's performance is a failure to transform investment in public enterprises, which have failed to produce a profit in all but one fiscal period since commencement of operations in the early 1990s. Economic performance during the last 4 years of the Compact were disappointing reflecting the inability of the private sector to sustain growth, prudential fiscal policies, and poor results of the state owned purseining company.

1.1.3 The Sectoral and Institutional Structure of the Economy

The structure of the FSM economy is dominated by a large public sector with a dependent non-traded goods sector providing services to Government and its employees. In FY1996 the most recent year for which GDP by sector is available, the Government represented 42 percent of GDP, with wholesaling/retailing representing 22 percent and other services 15 percent. The other main sector is production for own consumption or subsistence production, which accounts for 16 percent. Most striking is the very small role played by the traded goods sectors, of commercial agriculture, fisheries, and tourism; these are the activities that are recognized as providing the long-run growth potential and comparative advantage of the FSM (see Figure 3.)

- 16 This structure has two important policy implications. Firstly, the economy remains adversely positioned to weather further large downturns in external resource flows. A reduction in Compact flows immediately requires adjustment in the public sector, either through expenditure compression or increased tax effort, both of which reduce the demand for non-traded goods and services, primarily in wholesaling and retailing. The next largest sector, namely subsistence, is outside the cash economy and thus insulated from external shocks, but it is also unable to provide significant compensation for any major downturn in the modern economy. Second, the absence of any sizeable traded goods production indicates the magnitude of the challenge facing the FSM. Very rapid rates of growth in exportables will be required for many years before the objective declared in the Compact of self-reliance is attainable. Clearly, the policy environment will be critical to achievement of this objective, if the FSM is to provide incentive for domestic investment and attract the foreign investment needed to improve and accelerate economic growth and development.
- While the lack of disaggregated National Accounts statistics by industry does not permit a review of structural change in the economy, the data series has now been disaggregated by institutional structure, and Figure 4 indicates trends during the Compact period. Most of the increase in the share of the private sector occurred during the first half of the period as the Compact initiated the development of a modern economy in the FSM. While the FSM may not have attained the Compact objective of self-reliance, the increase in the size of

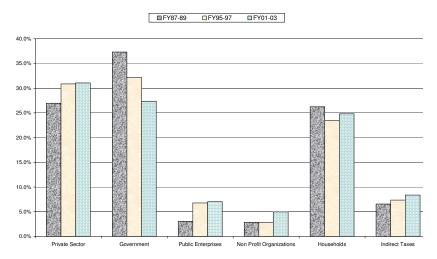


Figure 4 The Institutional Structure of the FSM Economy

the private sector attests to the development of the economy. The public sector declined significantly throughout with its share falling by 5.2 and 4.4 percent between the three periods, respectively. In part, the early decline reflects the restructuring of Government through the creation of Public Sector Enterprises (PSE) to provide the utility services of power and telecommunications, which had formally been government departments. However, not all of the increase in the share of PSEs of 3.8 percent in the early period was in the creation of public utilities; a very significant portion of the growth was in the creation of fishing enterprises, a largely misdirected and costly venture into an area the public sector is wholly unsuited to. By the second half of the Compact potential for further development of PSEs had run its course, and the public sector contracted further with the need to adjust to the second step-down.

The decline of the public sector during the second half of the Compact was not compensated for by any increase private sector activity, but by offsetting increases in other institutions. Most significantly the share of non-profit organizations or NGOs expanded significantly by 2 percent, and represents the large expansion of the College of Micronesia (COM). The household sector, which reflects movements in the non-marketed components of GDP, subsistence and ownership of dwellings, fell by 2.8 percent in the early Compact period reflecting the growing cash economy. However, in the second half the household sector share increased by 1.3 percent reflecting the ailing modern sector undergoing adjustment, and reversion of the population to traditional activities. Finally of significance, the share of indirect taxes increased throughout the Compact from representing 6.6 percent of GDP at the start to 8.3 percent in the final period. This development reflects two trends. Firstly, reform of the National customs tax regime under the PSRP to broaden the tax base, through subjecting all sectors in the economy to the same tax rates, and change in the basis of evaluation of duties from an f.o.b. basis to c.i.f. Secondly, state sales tax rates rose through the period to offset declining Compact revenues.

1.1.4 Sectoral Developments

Discussion of the performance of the main productive sectors of the FSM economy, agriculture, fisheries and tourism is undertaken in detail in the individual SDP sector chapters. In this section analysis is limited and devoted to the contribution of the sectors to the FSM and state economies. Data on the primary economic sectors of the FSM is weak: there are no indicators on agricultural production, limited information on agricultural exports, and fisheries information is poor. In tourism the time series of visitor arrivals only starts in FY1996. In agriculture subsistence activities make a substantial contribution to GDP, while production for either the domestic or export market is surprisingly small. The perception persists among local growers that returns from agriculture are low and slow to materialize compared with other activities such as, fishing,

tourism, non-traded services, and government employment. Compact assistance has exerted upward pressure on wages, making agricultural production unattractive, and turning the terms of trade against agriculture. Copra production, as in many other Pacific Island nations, has all but disappeared due to inefficiencies and low prices, but profitable export opportunities exist in other niche agricultural products.

- Attempts to stimulate commercial production for both export and import substitution of introduced commodities including pepper, broiler chickens, and pork have failed despite direct and indirect government subsidies. These failures indicate inadequate understanding of competitiveness and business practices on the part of government support services, producers, and farmers. The failure of the pepper industry, which was in the first instance inappropriately identified as a commodity with comparative advantage, led to a long period of direct government subsidies and subsidized loans, public sector intervention, and failed foreign investment. The lesson learnt is that the private sector should be left to identify business opportunities and take risk, and for the government to refrain from distorting and influencing commercial decisions.
- With the vast marine resource falling under FSM jurisdiction it might be anticipated that fisheries would be a well-developed sector making a significant contribution to GDP. However, the sector has failed to achieve the growth anticipated. In the early 1990s in an attempt to develop the economy, the FSM embarked on a strategy of substantial public sector investment in fisheries facilities and enterprises. Joint ventures with foreign partners in purse seine fishing operations were initiated in Chuuk, while similar but direct public sector investment in Pohnpei and Yap was undertaken. Investment in freezing, storage, and transshipment plant was undertaken in all four states coupled with airfreight of Sashimi-grade tuna to Japan by the National Government. A longline fishing company (MLFC) was set up with ADB loan finance for eventual sale to the private sector.
- However, none of the public sector fisheries enterprises has achieved profitability. In most cases the operations are either defunct or operating with continuous losses. While there is a growing awareness that the public sector should not be involved in the productive sectors of the economy, no public sector enterprise in the fisheries sector has yet been privatized or liquidated; although the National Government divested its ownership shares in a purse seine operation now wholly owned by the Pohnpei State Government. Divestment and establishment of an improved enabling environment will help in development of the sector, but it is yet to be proved with many existing structural impediments and current cost factors whether the FSM has a long-run comparative advantage in fishing. The main benefit of the resource has been the annual rents

earned from fishing access fees that make a substantial contribution to Government revenues.

- 23 As with other neighboring tourist destination economies the Asian crisis had a significant negative impact on FSM tourism (see Tables 2 in the statistical appendix for detail on visitor arrivals for the FSM and by State.) From a level of 17,359 arrivals in FY1997 visitors slumped in FY1998 to 14,526, reflecting a downturn not only in Japanese and Asian tourists, but also arrivals from the US. The fall in FSM tourism reflected not only the direct effects of the Asia crisis, but also a reduction in flights as Continental Micronesia, the major carrier in the FSM, reduced its capacity in the region. Resurfacing of the Yap and Chuuk airports and the Chuuk financial crisis also had negative affects. In FY1999, the number of visitor arrivals overall improved to 15,367 as conditions firmed, although demand from Japan remained weak and the U.S. market deteriorated. In FY2000, there was a significant improvement and visitor arrivals reached a record level of 19,497 as the Asian and Japanese markets strengthened significantly and the US segment regained some of the previous downturn. In FY2001, the market mysteriously dropped recording a level of 15,896 visitors although the impact of the September 11th terrorist attacks in the US fell largely outside the period. While the U.S. events had a substantial negative impact on world tourism these developments went largely unfelt in the FSM. In FY2002 visitor levels expanded strongly from the low levels of the previous year, with improvements in most segments of the market. In FY2003, the Asian, Japanese and European markets were strong, while demand from the U.S. weakened. In conclusion, the tourism sector reveals significant volatility reflecting international trends, and change in market segments. During the period for which information is available, tourism in the FSM was largely stagnant and demand remains little changed in FY2003 from what it was in FY1996.
- While tourism represents the major potential growth sector of the economy, many factors currently hinder development of a vibrant visitor industry. The foreign direct investment climate, although policies affecting FDI have been recently improved, has proved unattractive. Difficulties in obtaining secure long-term land leases have also been reported as an impediment, although there are a handful of success stories in this area. Tourism plant currently operates at low capacity levels, but many of the facilities offer a standard of accommodation that is unattractive to international travelers. Reliance on a single carrier in a remote geographical location operating high priced flights has repressed growth in demand. While these factors have all impeded tourist development, the FSM has much potential particularly as a niche market in the eco-tourism and dive areas. Recent developments have seen the refurbishment of the major resort on Chuuk, the commencement of operations of an international standard hotel in Yap, and opening of an eco-tourist resort in the outer islands of Yap.

1.1.5 Incomes, Distribution, and Poverty

25 While the economic performance of the FSM during the Compact era has been lackluster much of the small gains in economic growth has been eroded by population growth. At the beginning of the Compact population growth as recorded between the 1986 census and 1989 was at the rapid rate of 3.0 percent per annum. Between 1989 and the next count in 1994 the rate fell to 1.9 reflecting lower fertility rates and modest rates of emigration. However between 1994 and the most recent census in 2000, population growth fell to the low rate of 0.2 percent (see Table 2). While fertility rates fell further, the large majority of the decline reflected outward migration to neighboring US territories, Hawaii, and the US mainland under the migration provisions of the Compact. Clearly, the negative rates of economic growth experienced in the FSM since the second stepdown resulted in large-scale migration to seek employment opportunities and better rates of remuneration in the US. In the short-run migration plays an equilibrating role: as incomes decline outward migration compensates, improving average income levels for those remaining. However, outward migration will have a distorting impact on the local economy, if it is achieved through a loss of the economically active and skilled cohorts. The loss of human capital will reduce the long-run productive potential of the economy.

Table 3 indicates the level of GDP per capita at the beginning and end of the Compact for the FSM and four states. While some of the differences reflect the structure of the Compact and that the smaller states receive a larger per capita share, much of the difference is due to the impact of differential growth performance. To illustrate the point, in FY1987 per capita income in Yap was double that of Chuuk and similar to that of Pohnpei and Kosrae. By FY2003, per capita income in Yap was nearly two and a half times the level of Chuuk and a third greater than that of Kosrae. Over the period real per capita income grew by 15.3 percent in Pohnpei and 27.1 percent in Yap. At the same time real per capita income declined by 5.8 percent in Chuuk and 9.6 percent in Kosrae. On an

Table 2 Population by State and annual average growth rates

		Population numbers				Annual average growth		
	1980	1989	1994	2000	1980-89	1989-94	1994-00	
Chuuk	37,488	47,871	53,319	53,595	2.7%	2.2%	0.1%	
Kosrae	5,491	6,835	7,317	7,686	2.4%	1.4%	0.8%	
Pohnpei	22,080	30,669	33,692	34,486	3.7%	1.9%	0.4%	
Yap	8,100	10,365	11,178	11,241	2.7%	1.5%	0.1%	
FSM	73,159	95,740	105,506	107,008	3.0%	1.9%	0.2%	

Source: National Census Report May 2002

Table 3 Real GDP Per Capita (US\$ 1998 Constant Prices)

				,
	FY1987	FY2003	Total percent growth FY1987- FY2003	Annual aver- age percent growth FY1987- FY2003
Chuuk Kosrae Pohnpe i	1,255 2,551 2,358	1,182 2,307 2,718	-5.8% -9.6% 15.3%	-0.4% -0.6% 0.9%
Yap FSM	2,464 1,829	3,133 1,966	27.1% 7.5%	1.5% 0.5%

annualized basis on the achievements in Pohnpei and Yap could be taken as satisfactory with annual average improvement in living standards by 0.9 and 1.5 percent respectively.

Generally speaking poverty has not been recognized as a major problem facing the FSM economy. However, no adequate investigation has been undertaken. A household survey was conducted in 1998 but failed to provide any reliable indicators on the incidence of poverty. Clearly, there is significant difference in income distribution between the states, and marked differences exist across households in the major centers as compared to the outer island groups. While political and cultural forces have not resulted in poverty being identified as a major issue in civil society, there is a need to better quantify and define the dimensions of income distribution and poverty in the FSM. The Household Income and Expenditure Survey scheduled for FY2004 will help significantly in improving understanding of this important issue.

1.2 Employment and Wages

1.2.1 Employment

Reflecting the rate of growth in GDP, employment in the formal sector grew by the healthy annual average rate of 3.7 percent during the early part of the Compact (FY87-FY95, see Table 4). This rate of expansion, higher than the rate of population growth, but approximating the growth in the labor force, was sufficient to provide jobs for the youth of the FSM entering the labor market for the first time. However, in the later part of the Compact between FY1995 and FY2003, the labor market remained stagnant, and was unable to provide enough jobs for new job seekers, and employment declined by an annual average rate of 0.3 percent.

As already noted in the discussion on economic developments, the FSM has been able to achieve significant expansion in the private sector despite the

FY87-FY03 FY87-FY95 FY95-FY03 Total Gov Gov Private Total Private Gov Private Total Chuuk -0.2% -1.3% 1.5% 2.0% 0.8% 3.7% -2.3% -3.4% -0.7% 0.8% 2.9% 0.9% -1.6% 4.7% -1.6% 1.1% -1.5% 6.5% Kosrae 5.1% 0.8% 9.0% 0.2% Pohnpei 2.6% -0.1% 4.3% -1.1% -0.3% 3.7% 6.0% 0.4% 13.1% -3.7% Yap -1.7% 8.6% 1.4% 4.3% FSM 7.4% 2.0% -1.0% 4.6% 3.7% 0.4% -0.3% -2.4% 1.1%

Table 4 Employment Growth Rates by Sector and State (annual averages)

Source Social Security Data

reductions in Government. Figure 5 indicates recent trends in private and government employment since FY1987. Government employment remained relatively static through the period until 1995 and the second stepdown in Compact funding when a major fiscal adjustment was undertaken. The ADB-financed Public Sector Reform Program (PSRP) enabled implementation of an Early Retirement Program that facilitated the needed adjustment. By FY1999 employment in government had fallen from a height of approximately 7,000 in the early 1990s to 5,488. However, commitment to reform weakened especially in Chuuk and total public sector employment expanded during the following three years. In FY2003, with the return of discipline in public service hiring in Chuuk total employment in government fell back to 5,584.

30 Employment in the private sector expanded rapidly in the early part of the Compact as the economy adjusted to large levels of external inflows and as a modern cash economy emerged in the non-traded goods sectors. Private sector employment declined between FY1995 and FY1998 reflecting the contraction in the economy, but rose again between FY1999 and FY2003 as the economy expanded after adjustment to the second stepdown was completed and the Chuuk financial crisis had been resolved. By FY1999 private sector employment surpassed, for the first time, the level of Government employment—a significant achievement.

1.2.2 Wages

The labor market in the FSM is relatively free from regulatory distortions and institutional rigidities. Pohnpei State is the only state to impose a minimum hourly wage for the private sector, which is set at \$1.35. While this wage may leave unaffected the demand for skilled workers, it may be an active constraint in labor-intensive activities such as garment manufacturing, although private sector operators are not vocal. All the FSM governments have set minimum hourly wages for government employment (\$2.00 for Pohnpei, \$1.25 for Chuuk; \$1.35 for Kosrae; and \$0.80 for Yap), but these levels coincide with the lowest step on the public servant pay scale and are thus redundant. There are

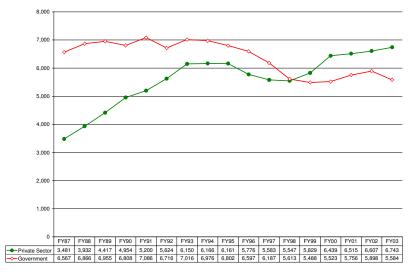


Figure 5 Employment by Sector FY1987-FY2003

currently no unions in the FSM and there is no indexation of wage rates (until recently there has been no CPI).

- However, while the labor market is relatively free from market rigidities, it is distorted by high public sector wage rates, the ease of migration and higher comparative wages in Guam and other US labor markets, and the opportunity cost of labor in the subsistence sector. Table 5 indicates the level of real wages by state and between the private and Government sectors. For the FSM as a whole government wages are nearly double those of the private sector. While the skill mix of the two activities surely affects the differential, the public sector clearly asserts an upward pressure on wages, and influences the allocation of labor between the sectors.
- Unfortunately, policy is constrained in its ability to influence distortions in the labor market. The effect of unrestricted external migration is part of the basic rights of FSM citizens under Title III of the Compact. However, during the 2nd FSM Economic Summit the FSM adopted a policy to reduce the differential between the private and public sectors. Data in Table 5 indicates that despite this policy objective, differentials widened in Kosrae, and Pohnpei (national and state governments), although they remained unchanged in Yap, and fell in Chuuk. Table 5 also indicates that real wages fell in the FSM during the Compact period 1987-2003, by 4.8 percent in the public sector and 9.6 percent in the private sector. The only exception to this outcome was Kosrae, which increased real public sector wages by 12 percent, with the consequence of a

Table 5	Real Wages	and Differentials	bν	Sector and State

	Real Government Wages (1998 US\$)		Real Private Sector Wages (1998 US\$)		Differentials		
	Average FY87- FY90	Average FY00- FY03	Average FY87- FY90	Average FY00- FY03	Average FY87- FY90	Average FY00- FY03	
Chuuk	7,154	6,401	3,342	3,104	214%	206%	
Kosrae	6,689	7,464	3,402	2,965	197%	252%	
Pohnpei	11,026	10,693	4,956	4,507	222%	237%	
Yap ·	7,585	6,067	4,706	3,769	161%	161%	
FSM	8,413	8,007	4,253	3,844	198%	208%	
Source	Social Security Data						
Note	Data for EV2002 based on first six months						

Note Data for FY2003 based on first six months.

large increase in the public—private wage differential, a particularly adverse outcome for the one state in the FSM most dependant on Compact transfers and the most in need of private sector development.

1.3 Monetary Developments and Prices

1.3.1 Money and Banking

34 The FSM uses the US dollar as the currency in circulation and has consequently forgone the option to implement an independent monetary and exchange rate policy. This leaves fiscal policy as the major macroeconomic tool of adjustment. The use of a foreign metropolitan country currency is practiced in many other small island economies of the Pacific and has served the FSM well. While the range of macroeconomic policy options is limited, it has removed the potential to use inflationary monetary policy to adjust to the stepdowns in Compact funding. Of course, this has left the FSM with no other means of adjustment to reduced levels of resource transfers other than through the more politically painful means of directly cutting Government expenditures, reducing public sector employment and wages, and increasing domestic revenues. The use of a foreign currency has removed exchange rate realignment and devaluation to encourage the export and traded goods sectors of the economy. A this stage of the FSM's economic development with many underlying structural impediments exchange rate adjustment without accompanying supporting policies would be unlikely to have encouraged a favorable supply response in traded goods production.

35 The lack of an independent monetary policy and use of US currency also results in domestic interest rates being closely aligned with US rates. Deposit interest rates observed in the market are broadly similar to those through-

out the insular US, while lending rates are generally higher, reflecting the additional risk and costs of doing business in the FSM. Initially, the higher rates charged on loans resulted in regulation and limits were placed on both consumer and commercial loan interest rates. As part of the Public Sector Reform Program, removal of regulation was recommended and was a loan condition. The interest rate limits were effectively removed (leaving only a non-binding usury limit at 24 percent) in 1998 and there was no adverse change in the local interest rate structure as the financial system was allowed to adjust to market forces.

- The FSM banking system benefits from the FDIC (Federal Deposit Insurance Corporation) as part of the provisions of the Compact. The FDIC has played a critical role in supervising the banking system and ensuring a sound and stable financial system. Under the amended Compact FDIC support will remain effective. This will maintain financial stability in the economy, and avoid the adverse consequences of banking system failures experienced in many other Pacific island economies. The Banking system is also regulated by the FSM Banking Board, which is developing a capacity for banking supervision. The role of the Board includes licensing of domestic and foreign banks, on-site and off-site supervision of all banks, consumer protection, and consultation with the FDIC. Until December 2002 there were two US banks operating in the FSM, when the Bank of Hawaii withdraw from the market. There is one locally owned bank, the Bank of the FSM. The remaining US bank, the Bank of Guam, is a branch of its parent, and thus also comes under US federal supervisory requirements. The present system is thus well supervised and provides a secure basis for financial intermediation.
- Early in 2002 the Bank of Hawaii announced its intention to withdraw from the FSM and sell its local operations. Being the largest and most profitable bank in the economy, this decision was an unwelcome development. The decision apparently was motivated in large part by broader corporate restructuring concerns as opposed to an isolated analysis of the FSM-based operations. The same Bank had recently completed divestiture of its South Pacific operations. In the depressed state of the FSM market the Bank was unable to find an interested buyer, and was left with little alternative but to run down its operations. The closure of the bank, effective from November 30, 2002, appears to have occurred in an orderly fashion, but not without major macroeconomic disruption to the economy. The departure of a major player has reduced competition in the financial sector and entailed a loss of institutional knowledge that will take time to rebuild.
- Reporting on the FSM banking sector commenced in 1990. The deposit base rose rapidly through the early part of the 1990s reflecting strong growth in the economy. However, the system reached a plateau in 1993 and declined through the mid 1990s with the onset of the second Compact stepdown. The

Chuuk financial crisis also occurred during thi period with tl state' financial system coming under considerable strait as the state government failed to pay local vendors, withheld allotments from public servant pay hecks, and ran up large arrears mostly to domestic vendors. (There are currently no state-based banking statistics available for public release, which is a serious weakness, and impedes analysis.) In 1998 the economy began o recover and the deposit base returned to former levels but has failed to show in y signs of growth through the remainder of the Compact. These developments re described in Figure 6

Following a similar pattern to the grow h in deposits commercal bank lending doubled from a level of \$29 million at the end of 1990 to \$58 million by the end of the fourth quarter in 1993, reflecting the booming economy. As in the case with deposits a period of stagnation set in as the Banks pogressi ely cut back their portfolio to \$43 million through the 3r quarter of 199, again reflecting the second stepdown and Chuuk financial cross. By 1998, reatters began to improve and the banks began to extend credit of ce more reaching a pea; at the end of September 2000 of \$52 million, but still t low the level a tained in 1994. Domestic credit remained at these levels through 2001 until 2002 when the Bank of Hawaii began implementation of its plans to w thdraw from the market From a level of \$49 million at the end of the 1st quarter of 2002 or tstanding bank credit fell precipitously in each consecutive quater, declining to a level of \$27 million at the end of June 2003. While the departure of the Banl of Hav aii was implemented quietly without incurring adverse publicity, the back failed to sell

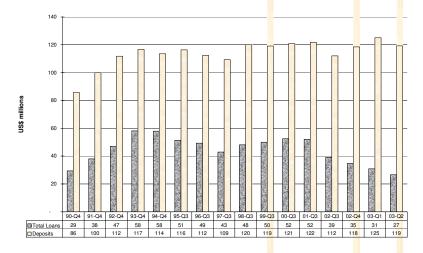


Figure 6 Commercial Bank Loans and Deposits (end of period)

its assets to the two remaining banks. Neither the Bank of Guam nor the Bank of the FSM acted competitively or tried to capture the available business released by the Bank of Hawaii. The lack of a competitive spirit in the remaining banking community is extremely disappointing, and raises the question as to whether the critical needs of maintaining an efficient financial intermediation system are adequately served.

- 40 The difference between loans and deposits indicates the large level of liquidity in the FSM banking system, and reinforces the widely observed phenomena in the Pacific island region that capital is not a factor of production in short-supply. The loans to deposit ratio rose from 34 percent in 1990, peaked at 51 percent in 1994, and fell back to 39 percent in 1997 recovering to 43 percent by the end of the 2001. Reflecting the run-off in lending with the departure of the Bank of Hawaii, the loans to deposits ratio fell to 22 percent by the end of June 2003. The large difference between the level of deposits and loans is invested offshore, and mirroring the reduction in credit the level of foreign assets rose by approximately \$25 million or 39 percent between June 2002 and June 2003. The rise in foreign assets and associated reduction in credit would imply that the FSM economy experienced a large macroeconomic shock during FY2003 as the extra liquidity was invested offshore. Surprisingly, the GDP figures, while indicating that the economy remained subdues in FY2003, do not indicate a shock of the magnitude anticipated. The reduction in credit would have been offset to some extent by the infusion of funds from FEMA for typhoon rehabilitation in Chuuk, but a greater reduction in GDP would have been expected.
- 41 The large level of liquidity in the FSM is frequently taken to indicate that the commercial banks are failing to support the domestic economy; the recent events concerning the departure of the Bank of Hawaii excepted. However, the lack of more active lending is better understood as a result of the many impediments to increased lending that lie outside the control of the banking sector. The lack of adequate security against which the banks can lend, including land, leasehold, and chattel mortgages, are critical. Limited entrepreneurial experience and a lack of commercial know-how to operate profitable modern businesses is also a key factor that makes lending risky. The uncertainty over the outcome of the Compact recent negotiations also constrained credit creation. Appropriate policy is thus not to encourage the banks to make unsound loans to "kick-start" the economy, but rather to ensure a sound environment for private sector development in the longer-term. In order to improve the institutional environment for private sector development the Private Sector Development Program (PSD), a loan sponsored by the ADB, includes provision for long-term leases, leasehold, and chattel mortgages. These policies will hopefully ease some of the constraints on bank lending, and encourage a more dynamic private sector once the Compact economic assistance negotiations have been concluded.

42 Reflecting the lack of "bankable projects" the commercial banks have preferred to extend credit to consumers with secure public sector jobs and an identified repayment stream. Until the departure of the Bank of Guam lending to consumers represented about 60 percent of domestic credit creation. However, retail lending has oscillated considerably (see Figure 7.) Consumer credit expanded rapidly in the early 1990s with the onset of the Compact, but then dropped off rapidly as the Chuuk crisis set in and with the second step in funding. With a return of more prudent fiscal policies in the state, consumer credit once again expanded but failed to attain the levels achieved earlier. It was feared with the return of poor financial administration in Chuuk and failure of the state government to make payments on employee allotments to the Banks that the market would once again collapse. However, the "missed" payroll allotments were short lived after the creation of the Chuuk State Financial Control Commission, and the impact of the 2nd Chuuk financial crisis appears to have had a less severe impact on the state economy compared with the first. The impact of the departure of the Bank of Hawaii appears to have been more adverse on the consumer market than on the business sector, although business loans have also been run-down significantly. The data implies that the remaining commercial banks failed to extend credit to "orphaned" consumer customers lacking a credit track record, but picked up the better commercial clients of the Bank of Hawaii.

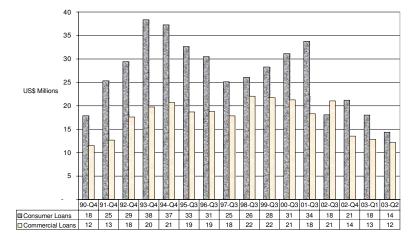


Figure 7 Commercial Bank Credit by Sector

1.3.2 Prices

- 43 In the first quarter of 1999 the FSM commenced price collection to establish a Consumer Price Index (CPI) for each state and the nation. However, problems were experienced establishing the series in Chuuk, and the state index did not get under way until the 1st quarter of 2001. For the period 1999-2000 the Chuuk series is based on averages of the other three states. Pohnpei data exists back to 1997, but increased competition in the retail sector during the period, makes it unreliable as an indicator for the FSM. Tables 5 in the Statistical Appendix provide CPI data for the FSM and each state. In the absence of a price series before 1999 the US CPI has been used as a proxy for inflation on the basis that the majority of FSM imports originate from the US. While this has a certain validity, there are many areas where this approximation is not appropriate, but in the absence of alternatives it is probably the best achievable. A general deflator based on the US CPI through 1999, but chained to the FSM thereafter, has been used in the various statistical series including real GDP that have been included in this report.
- Figure 8 provides information on the rate of annual change quarter on quarter in the FSM CPI since the series commenced in 1999 by domestic and imported components. The series indicates that inflation has been low in the FSM falling from an annual average rate of 2.1 percent in FY2000 to 1.3 percent

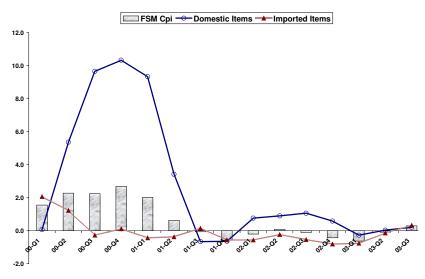


Figure 8 Change in CPI - Domestic and Imported Items (year on year percent change)

in FY2001 and a negative 0.2 in both FY2002 and FY2003. For imported items the CPI increased by 1.1 percent in FY2000, but thereafter during the remainder of the period was negative and in the range between -0.1 to -0.3 percent. The low and negative rate of inflation of imported items may reflect changes in the composition of imports as domestic suppliers shifted to cheaper sources. However, the trend is surprising given the higher level of inflation in the US from which most of the FSM's imports originate, and the depreciation in the US dollar during FY2003. Inflation in domestic items on the other hand, which has a weight of 25 in the index, rose to high levels during the earlier part of the period, peaking at 10 percent in the 4th quarter of 2000. There were three main sources of domestic inflation: (i) increased fish prices in Pohnpei during 2000, (ii) increases in utility prices for water in both Pohnpei and Yap, and (iii) increased user fees for medical and health services in Pohnpei and Yap, and increased school fees in Yap. While the increases in these items were large, they reflect either short-run supply shortages, or deliberate implementation of policy to increase user rates of publicly supplied goods. In both cases the impact was short lived. Domestic inflation returned to low levels in FY2002 recording a rate of 0.5 percent, and in FY2003 average prices were largely stagnant with inflation at 0.1 percent.

1.4 Balance of Payments and External Debt

1.4.1 Balance of Payments

45 The trade account of the balance of payments runs a significant deficit reflecting the excess of imports over exports (see Table 6.) Exports currently include a small quantity of agricultural produce and fish. While small volumes of inshore reef fish are exported to neighboring islands, the majority of fish exports are tuna caught by local purse seine and longline vessels operated by public enterprises. The FSM has yet to establish a sustainable fishing industry and the sector is highly fragile and financially vulnerable. The majority of the fish caught in FSM waters are caught by foreign vessels under license and the associated fishing access fees are treated as a factor income in the balance of payments. During the period FY1994-FY2000 exports volumes were largely stagnant with prices and values fluctuating, reflecting changes in international tuna prices. In the FY2000-FY2003 period there was an important increase in fish exports as international operators decided to "home base" operations out of Pohnpei. Imports dominate the trade account and reflect the state of health in the economy. The increase in FY2000 reflects the increase in GDP and improvement in economic performance subsequent to the completion of the adjustment to the second Compact step-down. Up till FY1999 import estimates were derived from customs data, but have subsequently been based on actual imports entering the FSM.

24 FSM Strategic Development Plan

Table 6 Balance of Payments (FY97-FY00, US\$ Millions)

	• •						
	FY94	FY96	FY98	FY00	FY01	FY02	FY03
Current Account Balance	5.2	16.6	-7.1	-2.0	-18.9	10.2	16.3
Trade balance	-86.1	-81.4	-78.0	-85.4	-93.8	-80.9	-88.8
ExportS, f.o.b.	11.4	18.1	17.2	16.3	16.7	19.6	20.1
Imports, f.o.b. 1/	-97.5	-99.6	-95.2	-101.7	-110.5	-100.6	-108.9
Services account	-27.3	-23.4	-35.2	-28.9	-29.3	-28.3	-28.4
Receipts	14.8	19.9	14.4	18.6	16.8	19.0	19.1
Travel	13.7	16.6	13.2	17.0	14.7	16.9	16.8
Payments	-42.2	-43.3	-49.6	-47.5	-46.2	-47.4	-47.5
Freight and insurance	-17.2	-17.6	-16.8	-18.0	-19.5	-17.7	-19.2
Income, net	20.7	22.8	17.6	18.6	7.6	9.8	12.1
Receipts	21.3	34.6	28.6	26.6	15.0	16.1	16.1
Fishing rights fees	21.3	20.5	13.5	14.1	12.0	11.2	12.4
Interest dividend income	11.8	14.1	15.0	12.8	2.5	4.8	5.9
Payments	-12.4	-11.8	-10.9	-8.3	-6.8	-6.2	-6.2
Interest payments	-1.6	-2.4	-3.8	-3.3	-3.4	-3.1	-3.1
Dividends	-9.5	-7.7	-5.5	-3.7	-2.0	-1.7	-1.6
Unrequited transfers	97.9	98.6	88.6	93.6	96.7	109.6	121.3
Private	1.1	1.4	1.9	2.2	2.2	2.3	2.3
Official	96.8	97.2	86.7	91.4	94.4	107.3	119.0
Compact funds	61.4	62.8	54.4	54.7	55.3	65.9	66.6
Other	35.4	34.4	32.3	36.7	39.2	41.4	52.3
Capital and financial account	30.0	13.4	23.6	13.0	20.0	36.6	11.5
Capital Transfers	28.8	29.8	24.0	24.5	24.6	31.8	32.2
Short term, net	1.9	-6.2	-1.3	0.1	-2.1	-0.8	-26.0
Medium term, net	-9.5	-15.6	-3.4	-17.0	-8.9	0.0	0.0
Inflows	2.2	0.8	11.8	2.2	0.0	0.0	0.0
Outflows	-11.7	-16.4	-15.2	-19.2	-8.9	0.0	0.0
MTN amortization	-8.6	-15.8	-11.3	-18.5	-8.2	0.0	0.0
Overall balance 2/	35.2	30.0	16.5	11.0	1.1	46.8	27.7

Notes 1/E

1/ Based on import tax collections FY94-FY99, thereafter actual imports 2/ Includes changes in FSM reserves, valuation changes, errors and omissions

46 The service account is dominated by two main factors: tourism and the cost of freight to transport imports to the FSM. The demand for tourism has remained relatively stagnant in recent years, but picked up in FY2000 with the recovery from the Asian crisis, although the drop back in FY2001 was disappointing. Surprisingly demand for tourism was strong in FY2002 despite the impact of the aftermath of the September 11th terrorist attacks. The factor account is comprised of fishing access fees, earnings of dividends and interest on overseas investments, and payment of interest on debt. Fishing fee earnings have dropped throughout the period covered by the balance of payments falling from a high of \$21.3 million in FY1994 to \$12.4 million in FY2003, reflecting secular trends and an unattractive administrative regime. The FSM Governments maintain a sizeable level of foreign investments currently approximating \$120 million, which has provided a significant source of interest and dividend earnings. However, earnings have declined in recent years reflecting both a reduction in the level of investments and the sizeable downturn in US equity markets in which much of the reserves are invested. From a level of \$15 million in

FY1998 interest and dividend earnings dropped to \$2.5 million in FY2001 at the height of the stock market crash, but subsequently improved and currently stand at \$5.9 million in FY2003. The repayment of the Yap MTN scheme, greater use of unspent Capital Improvement Project (CIP) funds, together with use of past savings to fund deficits by the National Government have all lead to a reduction in the level of reserves.

- The most significant component of the balance of payments is the transfers account, which includes Compact funds and other aid flows. Private remittances appear to be relatively small in the FSM compared with other Pacific Islands, which have large migrant communities living in neighboring metropolitan nations. The 2000 population census indicates that migration has increased significantly, and suggests that this item may well be underestimated and likely to rise in the future. Current account official transfers including Compact flows, federal and special programs represented 60 percent of current account receipts during the non bump-up period FY1997-FY2001 of the original Compact. In total, the balance on the transfers account approximately matches the trade account deficit, and indicates the dependent nature of the FSM economy.
- The major items on the capital account include capital transfers, changes in commercial bank foreign assets, external borrowing, and repayment of debt including the MTNs. Capital transfers, previously recorded as a current account item, include Compact funding of Capital Improvement Projects (CIP), and projects delivered in kind by other donors, mainly from Japan. Taken together current and capital account official transfers accounted for an average of 65 percent of total current account payments during the non bump-up period FY1997-FY2001 of the original Compact. Clearly, the attainment of economic self-sufficiency, and progress to replacing transfers through other foreign exchange earning sources, will be a long-term process and presents perhaps the major and most difficult challenge facing the FSM economy.
- The FSM has adopted a prudent external debt management strategy and external borrowing has been modest (see section below on external debt.) In FY1997 and FY1998 draw down of the ADB Public Sector Reform Program (PSRP) loan provided a major source of funds to finance the Early Retirement Program (ERP). The FSM drew down on further concessional funds from the ADB in FY1999 and FY2000, but the order of magnitude was small. There were no further drawdowns in the final years of the original Compact FY2001-FY2003. With most of the FSM's external debt financed from concessional sources with amortization not due for several years, the major component of debt service has been MTN repayment. This was paid in full by the end of October 2001 and is no longer an item in the balance of payments.
- The balance of payments account is under ongoing development and the figures currently presented do not indicated the overall balance. The level of

the FSM foreign reserves is estimated at market prices, and currently includes valuation adjustments. The latter have been very sizeable in recent years with stock market variation, and until it possible to exclude their influence on the account, it has been decided to include foreign reserve and valuation changes, along with errors and omissions. However, analysis of the underlying data suggests that the overall balance of payments was negative between FY1998 and FY2001. This trend reflects the repayment of the Yap MTN issue through draw down of reserves, and also indicates weak fiscal policy mainly by the national government. While the magnitude is not excessive, the trend is a cause for concern, as it represents a lack of understanding that use of past savings to fund Government operations is funding a deficit and not sustainable in the longer-term. In FY2002 and FY2003 the balance of payments turned into surplus. This reflects saving of the bump-up funds to contribute to the Compact Trust Fund, and the sizeable FEMA inflows for cyclone rehabilitation.

1.4.2 External Debt

- Prior to FY1990 the FSM had no official public sector debts to offshore lenders. During FY90-93 the nation underwent a period of rapid increase in external public borrowing. This borrowing included MTN bonds issued for \$71 million to finance portfolio investments by Yap State, and \$42.9 million for fisheries-related investments in Pohnpei, Chuuk, Kosrae and for the National Fisheries Corporation. Public guaranteed borrowing also included \$41 million from the US Rural Electrification Administration by the FSM Telecommunications Corporation and \$9 million by the Yap Fishing Corporation.
- Figure 9 shows that the heavy borrowing by FSM Governments brought the nation's total official external debt to a peak of \$137 million at the end of FY1993 representing 69 percent of GDP in that year. The only significant borrowing that has been undertaken since FY1993 has been through the concessional lending facility of the Asian Development Bank with the Water/Sanitation loan, Fisheries Project loan and Public Sector Reform Program loan. The FSM external debt level has shifted from a position that was, in the early 1990's, quite adverse, to one that is now favorable. The completion of the medium-term note program with final repayments taken from Compact revenues in FY2001 has resulted in this desirable outcome. With a debt to GDP ratio of just 24 percent, down from a high of 72 percent, the FSM's debt level will be low by PDMC standards (see Figure 10 and Table 6b in the Statistical Appendix.) Furthermore, with the remaining debt on concessional terms, the debt service ratio in 2003 is projected at the low level of 5.6 percent of exports of goods and services. Each of these ratios is somewhat overstated in light of the fact that the FSM holds a sinking fund equal in value to the amount outstanding for the PSRP loan from the ADB. Adjusting for this asset held against external debt, the debt to GDP ratio in FY2003 would be 15 percent.

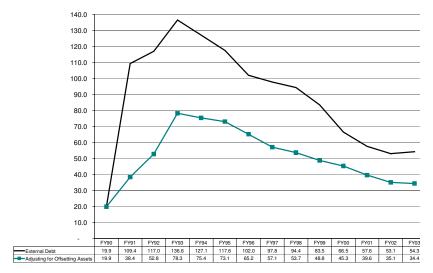


Figure 9 FSM External Debt (US \$ millions)

The FSM has outlined a medium-term policy objective of minimizing further external borrowing and, furthermore, of using a sinking fund mechanism to secure repayment of future concessional loans. An External Debt Manage-

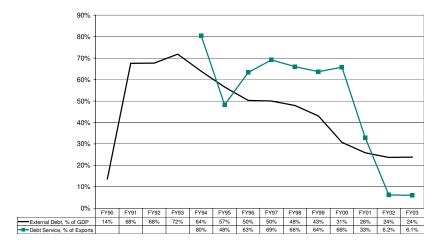


Figure 10 FSM External Debt Ratios

ment Fund (EDMF) has been established that will be funded from the savings of the PSRP Trust Accounts (savings from the ERP match the total PSRP borrowing). Each borrowing Government of the FSM will deposit sufficient funds into the EDMF from the Trust Accounts to repay future concessional borrowing (calculated as the net present value required to repay the borrowing assuming the funds are invested at a yields in access of the concessional ADB ADF rates). During FY2003 the FSM embarked on two new project and program loans: the Private Sector Development Program and Basic Social Service loans. Repayment of these loans has been secured through the EDMF, which is managed by the National Government. On deposit of funds into the EDMF the liability of the states has been transferred to the National Government. Establishment of this process has provided a mechanism beneficial to both parties through which debt incurred by the National Government will be backed by a matching asset securing future repayment, and at the same time relieving the states of a liability.

1.5 Fiscal Developments

1.5.1 Fiscal Policy Background

- Fiscal policy in the FSM is complicated by the fact that each of the national and four state governments formulate separate expenditure and revenue policies in the absence of significant coordination. With respect to revenue policy, the national government has the power to collect import and income taxes and through those taxing powers the national government collects about three-fourths of all domestic taxes. In FY2001 national taxes amounted to \$21.6 million, while the four states collected an additional \$6.2 million.
- By Constitutional mandate at least 50 percent of the nationally imposed taxes (and 80 percent of the fuel import tax) must be shared with the state in which the taxes were collected. Since the start of FY1999, the national government has shared a further 20 percent with the states, although the use of these extra transfers, amounting to about \$4.3 million annually, is restricted to health and education capital projects. The states, with widely varying levels of tax effort, collect the remaining one-fourth of domestic taxes, primarily through general sales taxes and excise taxes on alcohol, tobacco and other goods. While overall tax effort remains low relative to other PDMCs, there has been some gradual increase over time. In FY2001 tax revenues equate to 12.1 percent of GDP as compared to roughly 10 percent, the level that prevailed throughout most of the Compact period from FY1987-1997. The increase reflects primarily a policy change to the import tax that shifted the base from fob to cif and eliminated most personal (non-commercial) imports. While it is likely that there has been a modest improvement in collection performance, tax administration, and in particular compliance and audit functions, the tax regime remains in need of rigorous reform.

- 56 With respect to non-tax revenues, these continue to be dominated by fishing access fees, which recently have represented nearly one-third of all domestic revenues. The national government manages the tuna resources and keeps all of the revenues from the licensing fees. Revenue from penalties and fines is shared with specific states and, in some cases, local governments. The fishing access fee source of revenue, which grew rapidly from less than \$4 million in FY1987 to a peak of over \$21 million in FY1995, was contested by the states in a series of unsuccessful attempts to amend the FSM Constitution to require sharing of fishing access fees. The states collectively presented and lost their case and a subsequent appeal in the FSM Supreme Court. The peak revenue years were from FY1993-1996. Based on diminished collections, the national government now budgets, rather nervously, for annual earnings in the \$12 million range, which represents just less than 30 percent of total domestic revenues, but less than 10 percent of total revenues and grants combined. For the national government itself, the fishing access fees represents over 60 percent of domestic revenues accruing to the national government and about 30 percent of total revenues and grants. The declining trend in this revenue source is the leading cause of the serious deterioration in the national government's fiscal position as discussed below.
- During Compact I the national government acted as an agent in distributing to each government, according to mutually agreed formulas, the grant funding received from the US under the Compact. The national government has received just less than 15 percent of current grants and 10 percent of capital grants. The remainder was distributed to the states based roughly on a formula that split 30 percent of funding evenly among the four states and 70 percent of the funds according to population. The formula shares applied to each of the sub-components of annual Compact transfers was developed prior to the start of the Compact assistance and remained unchanged throughout the 17 years of Compact I assistance. Total Compact transfers have declined over time due to two programmed stepdowns in FY1992 and FY1997 and due to the fact that the bulk of grants are adjusted by a factor of only two-thirds of inflation in the US. Some components of Compact assistance, notably the health and education grants, are not indexed at all. Total grants, which exceeded the level of GDP in the initial years under Compact assistance, have fallen to 42 percent of GDP as of FY2001. There was a clause in the Compact calling for transfers to increase during FY2002-2003, the bump-up funds, if negotiations to continue economic assistance were proceeding in good faith. The bump-up funds have, in fact, been transferred and are the subject of a separate discussion below.
- On the expenditure side of fiscal policy, the five governments all operate within "balanced budget" requirements based on either Constitutional or statutory provisions. However, the definition of a balanced budget is, quite unfortunately, not restricted to the operations of a single budget year. Funds unex-

pended in one year are reported as revenues in the following year. The use of this so-called "carry-over" component in revenue projections tends to cloud fiscal management and can mask the onset of significant structural imbalances. The vulnerability to fiscal imbalance is compounded by delays in financial reporting and expenditure controls that results in legislative bodies taking appropriation actions without an accurate appraisal of each governments true fiscal position being readily available.

- The national and state governments conduct budgetary operations through a series of separate funds, the most important being the general fund, special fund and capital fund. Transfers are made between these funds for specific purposes; however, there is limited flexibility or authority to use funds from the special and capital funds to finance current expenditures. Thus, standard Government Financial Statistics (GFS) reporting, aggregating across funds and accurately distinguishing between "above-the-line" revenues and expenditures and "below-the-line" financing operations do not always highlight some of the additional constraints faced by fiscal policy-makers. The best example of this was in the State of Chuuk, which experienced a traumatic financial crisis culminating in FY1996 when the state's failure to meet current obligations required intervention by the national government in the form of a policy-conditioned financial recovery loan. The crisis was one affecting the general fund in particular. Primarily due to contractions in capital spending, during that time the state was not experiencing overall fiscal deficits. Once again, since FY2001 and presently, Chuuk State is experiencing a fiscal crisis which while different in character is still largely confined to the general fund. Large balances of unexpended (though fully committed) resources in the capital fund cannot be used to address large and growing arrears to domestic and foreign creditors.
- Total expenditure as a share of GDP has declined from a peak of 108 percent in FY1989 to 67 percent in FY2003. Capital expenditures have averaged about 19 percent of GDP over the Compact assistance period, though it must be noted that a large share of this investment went toward commercial public enterprises that have yielded mounting losses. Recently, with the decline in Compact capital grants, capital expenditures have been lower and have averaged approximately 15 percent over the FY1999-2003 period. Due to the smoothing effect enabled by the spending down of fund balances built up during prior years, total expenditures have declined less rapidly than total revenues. The annual deficit spending that is thus accommodated does, however, highlight the need for further fiscal adjustment for most of the governments.
- Fiscal analysis in the FSM continues to be hampered by the lack of timely and comprehensive financial reporting by the five governments. The analysis undertaken herein is based on audited financial statements completed as of the time of reporting. Thus the information, while sound in quality, is consid-

erably delayed in availability. The financial outturn for FY2002 has been estimated for all five governments as no final audits are available even 17 months after the end of that fiscal year. Fiscal performance for all five governments in FY2002 and the fiscal year just ended, FY2003, are based on estimates with fairly accurate data available for tax revenues and payroll expenditures only. For a few revenue components and for all non-payroll expenditure components the estimates derive from budget documents and trend assumptions.

1.5.2 Recent Fiscal Performance

- 62 The FSM has undertaken a series of fiscal reforms from FY1996 to the present. The greatest effect of these reforms has been to reduce current expenditures, particularly on payroll costs, and, to a more modest extent, to increase tax revenues. As such, the medium-term fiscal position of the FSM has been strengthened despite the shock caused by the scheduled reduction in Compact economic assistance that took effect at the outset of FY1997. This statement must be clarified to highlight that recurrent operational costs of government have been reduced and domestic revenue effort has been increased, improving the structural fiscal position in the process. Non-recurrent and discretionary spending has, however, continued apace, especially for the two largest governments, National and Chuuk State. This deficit spending has been financed by drawing down on unspent reserves of the national government and, in the case of capital spending, the same is true for Chuuk State from FY1998-2000. Chuuk State also ran up large arrears in FY2001-2002 that will need to be paid from the general fund. With the exception of Yap State which continue to run large surpluses on an annual basis, each government will face, to a lesser or greater extent, a fiscal adjustment with the onset of the amended Compact economic assistance.
- Tables 7a-f in the statistical appendix show the fiscal performance on a consolidated basis and for each of the five governments. The presentation follows the standard Government Financial Statistics (GFS) format. Tables 8a-e show fiscal performance of each of the five governments in the audit format. This latter format provides fund balances for each of the three main funds and, as noted above, does not report financing items below the line.
- The FSM has experienced a significant fiscal trend over the period FY1987-203 (see Figure 11.) During that period, nominal revenues have been declining at about 2.1 percent annually, while nominal expenditures have only been declining at about 0.9 percent annually indicating a deterioration of the FSM's fiscal position. However, this simple analysis masks significant variation in fiscal performance across the five governments. Thus the discussion on recent fiscal performance will be brief for the consolidated fiscal accounts and is followed by a detailed review for each government. Analysis in FY2002-2003 needs to take into account the fact that Compact transfers increased very significantly for a temporary period. The FSM as a whole received a 21 percent in-

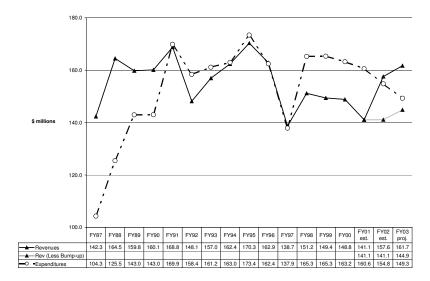


Figure 11 FSM Consolidated Revenues and Expenditures

crease from the FY2001 level for each of the two years. The increase in each year was approximately \$16.5 million. Much, but not all of this increase was sterilized and is to be placed in the Trust Fund that has been negotiated for the amended Compact economic assistance package. Chuuk and Kosrae States were notable exceptions in that during FY2002 they consumed, their entire bump-up allocations resulting in a ramping up of expenditures, although in FY2003 the two States set aside the increase. The national government and Yap State set aside their full bump-up allocations in each fiscal year, while Pohnpei State set aside the two-year amount during FY2003.

Reviewing the structure of fiscal accounts on a consolidated basis one can see the extensive dependence on external grants as well as the trend in reducing that dependence over time. As shown in Table 7 (excluding the bum-up years), grants, which for the first two years under Compact assistance exceeded GDP levels, now equate to 43 percent of GDP. As government expenditures have declined as a share of GDP from a peak of 108 percent in FY1989 to an estimated level of 73 percent of GDP in FY2001 and 67 percent in FY2003, the dominance of government in the economy has been reduced. Still, grants made up some 68 percent of government revenues in FY2001, down from a level of 83 percent in FY1987. Tax revenues have grown as a share of total revenues, having increased from 8 percent in FY87 to 19 percent in FY2001; however, this has resulted from a quite modest increase in overall tax effort. Tax revenue as a share of GDP has grown from 8 percent in FY1987 to 12 percent in FY2001.

Table 7 Comparative Analysis of Fiscal Structure FY1987 and FY2001

	Chuuk	Kosrae	Pohnpei	Yap	National	FSM
FY1987						
Grants as % of GDP	96	115	51	102	25	104
Grants as % of Total Revenue	92	87	80	88	74	83
Tax Revenue as % of GDP	7	8	9	11	7	8
Current Expenditure as % of GDP	70	66	38	67	17	74
Capital Expenditure as % of GDP	10	44	4	24	5	18
Overall Balance as % of GDP	24	22	22	26	11	33
Current Balance as % of GDP	1	10	9	16	9	16
FY2001						
Grants as % of GDP	46	60	24	47	8	43
Grants as % of Total Revenue	79	90	70	74	48	68
Tax Revenue as % of GDP	12	12	12	13	9	12
Current Expenditure as % of GDP	53	46	25	38	21	55
Capital Expenditure as % of GDP	15	25	7	16	2	14
Overall Balance as % of GDP	-10	-4	3	10	-6	-9
Current Balance as % of GDP	-9	-1	3	16	-5	-6

Notes

Taxes include all taxes collected in each state, irrespective of revenue sharing arrangements.

State GDP is used for each of first four columns; FSM GDP used for final two columns.

The most prominent change in the structure of revenues has been the growth in fishing access fees, which were less than \$4 million in FY1987, reached a peak of \$21.5 million in FY1995 and have averaged about \$13 million annually in the seven years after that peak.

- Looking at the structure of the fiscal accounts of the national government shows a considerably different pattern to that of the state governments. Grants make up less than 50 percent of national government revenues. National taxes represent about 75 percent of total taxes in the FSM. During the first 12 years of the Compact the National Government shared as constitutionally mandated 50 percent of national taxes with the States. In FY1999 and subsequent to the "fishing rights" court case, the national government legislated an increase in the share benefiting the States to 70 percent. However, subsequent to the Compact renegotiations, reduction in overall funding levels, and deteriorating fiscal position, the national government returned the States share back to 50 percent.
- The national government's expenditure pattern over time is one of rapid growth from FY1987 to FY1998. During that period total expenditures doubled from \$25.1 million to \$55.8 million. Current expenditures followed a similar pattern, although the downward adjustment began a year earlier, with a reduction in FY1998. The national government faced little pressure to adjust expenditures at the time of the first stepdown in Compact grants as this was more than offset by the growth in fishing access fees. But the impact of the second stepdown in FY1997 was worsened by a large reduction in fishing access fee revenue in that year and in subsequent years. The combined revenue losses, together with a

failure to reduce current expenditures, created a current deficit of nearly 5 percent of GDP, completely erasing the combined current surpluses of the four states in the same year. Payroll costs have been reduced in nominal terms, from a peak of \$13.5 million in FY1997 to the current \$12.3 million estimated for FY2003, a cut of just over 9 percent.

- The fiscal performance of the national government was a serious concern during the FY1997-FY2001 period as it ran large overall deficits in the range of 4-6 percent of GDP. During FY2002 and FY2003, it became increasingly apparent that such deficits were no longer sustainable and expenditures on public projects were severely curtailed. However, preliminary estimates suggest the adjustment was insufficient and the national government continued to run deficits of 2 and 1 percent of GDP in the two years, respectively. These deficits are largely funded from surplus balances accumulated in prior years—in effect by drawing down portfolio assets from abroad. Two revenue factors have also negatively affected the fiscal outturn in recent years. Fishing access fee revenues peaked at \$21.5 million in FY1995 and have subsequently fallen to an average of \$13 million in more recent years. The shift in revenue-sharing formula to transfer an additional 20 percent of national taxes to the states resulted in a structural decline in revenues in the range of \$4.3 million per year. Meanwhile, the national government made an inadequate adjustment in its overall expenditure pattern. Overall "fund balances" held by the national government peaked prior to recent deficits at a level of about \$80 million so there was clearly scope for smoothing the adjustment to reduced overall revenues. However, despite the cut back in expenditures in FY2002 and FY2003 an overall deficit persisted although at lower levels indicating the adjustment process was not yet complete. It should also be noted that the fund balances recorded do not represent uncommitted funds. Once reserving for a range of factors, the fund balances available to the national government were recorded at only \$0.5 million at the end of FY2001, and may well have turned negative in the two subsequent years.
- Fiscal performance in the states has been highly variable over the years; however recent performance has been solid in all states except Chuuk. The impact of the reduction in Compact grants in FY1997 required particularly difficult adjustments in state expenditure patterns. Beginning with an analysis of Chuuk State, where the largest adjustment was required, expenditures were cut in FY1997 to just \$25.8 million from a peak of \$54.2 million in FY1991. Chuuk's financial crisis resulted from the lack of adequate adjustment to the initial reduction in Compact grants in FY1992 and the subsequent build-up in arrears from FY1993-1997. Current expenditures in FY1998 and 1999 do not fully reflect the reduction in structural expenditures as the state was paying down its arrears by some \$5-6 million each year. Reductions in payroll expenditures from a peak of \$21.9 million in FY1995 to \$12.8 million in FY1998, reflected a 42 percent nominal cut. The state restored half of the working hour cut, up from 64 to 72

hours bi-weekly, at the start of FY2000. The remaining 8-hour increase was restored in FY 2001. The impact of this return to full-hours, combined with new hiring has contributed to almost fully reversing the significant fiscal recovery that had been in place through FY1999.

- 70 Yet still even with that upward adjustment, much of the return to fiscal crisis can be ascribed to an increase in other discretionary spending for constituency-based project spending and increases in legislative allowances and expenses coupled with similar indiscipline in executive branch discretionary spending, especially in FY2000. While the overall deficit in FY1999 was primarily a result of a doubling of capital expenditures from trend levels, subsequent overall deficits in FY2000 and FY2001 result from current deficits. The FY1999 capital spending spurt reflected the airport renovation project and implementation of previously delayed projects. The capital fund balance which peaked at \$43.5 million in FY1997 is estimated to have fallen below \$10 million at the end of FY2001. The amount of this that is unreserved-meaning not already committed—is unknown due to the inability of the auditors to make any estimate of either continuing appropriations or accounts payable on the capital fund. This is a serious deficiency in financial reporting that has contributed in part to a nationally imposed freeze on spending against prior year capital appropriations. Until this freeze is lifted, it will not be possible for the state to spend further against fund balances, meaning that there is effectively a ceiling on capital expenditures equal to the capital-restricted revenues received in FY2002 and FY2003.
- The return to fiscal discipline in Chuuk from FY1997-1999 was sufficient to repay arrears and to support a significant economic recovery, however, immediately upon declaring recovery, as noted most prominently by the presence of a positive unreserved balance in the state's general fund, the state has returned to many of the same poor fiscal practices that led to the previous financial crisis. Unchecked growth in wages was a primary concern, although in FY2004 the State returned to a 72-hour pay period to assist restoration of fiscal stability.
- Chuuk State remains highly dependent on external grants to fund government operations and investment. The share of grants in total revenues was 79 percent in FY2001, having declined from a level of 92 percent at the outset of the Compact economic assistance period. Improvements in tax collections, coupled with an increase of the State sales tax from 3 percent to 5 percent effective in FY2000 helped to modestly reduce this measure of dependency. However, Chuuk State's economy is still heavily reliant on sustained government expenditures, which represented some 61 percent of state GDP in FY2003. The challenge remains for Chuuk State to live within its means and still support sustained economic growth.

- Capital expenditures in Chuuk State have fluctuated tremendously from a low of 4 percent of state GDP to a high of 34 percent during the period recorded. The average level of capital investment was 17 percent of GDP, considered quite high by PDMC standards; however, the predominance of investments in commercial public enterprises and in a wide-range of small, un-vetted, "constituency-based" projects have contributed little to sustained economic growth as evidenced by the 0.7 percent average annual growth in state real GDP from FY1987 to FY2003.
- Kosrae State has maintained relatively consistent fiscal balance throughout the period since FY1987. The period of overall deficits from FY1991-1993 was driven predominantly by large-scale capital expenditures financed by issue of medium-term notes in the amount of \$5 million and spending down fund balances. The state had a current deficit of about 7 percent of state GDP in FY1997 as a result of the reduction in Compact grants and a delay in implementing expenditure cuts. Notably, the fall in revenues that year amounted to over 12 percent of state GDP. While current expenditures have been reduced and current balance had been restored, the outturn for FY2000 led to concern that further fiscal tightening was required. Payroll levels have not been reduced as significantly in Kosrae as in other states, despite working 56 hours bi-weekly. Payroll costs had been cut from a peak of \$5.8 million in FY1996 to a level of \$4.6 million in FY1999, a nominal cut of over 20 percent. However, a mandated annual step increase of 5 percent provided significant upward pressure on the state wage bill, and in FY2002 the state was able to accommodate a large increase in payroll expenditures and return to a 64 hour bi-weekly payroll as the state benefited from the large increase in revenues from the bump-up funds. The payroll estimated for FY2003 will reach \$5.9 million, slightly larger than the pre-reform peak.
- This leaves the state in an unenviable position as the amended Compact provisions come into affect. In effect the modest current surplus in FY2002-FY2003 is less than the bump-up, and represents a clear signal that, with respect to medium-term fiscal policy, the state has a structural deficit and will have to undergo another period of adjustment. The structure of Kosrae State's fiscal accounts have been transformed the least of any of the five FSM governments. Notably, grants as a share of total revenues have been reduced only marginal from an average of 88 percent during the first three years of the Compact to an average of 84 percent during the FY1999-FY2001 period. Domestic revenues have been stagnant in nominal terms while grants have declined. Tax revenues as a share of state GDP have grown from 8 percent in FY1987 to 12 percent in FY2001. Nontax revenues have declined markedly, primarily as a result of spending fund balance assets that had been earning interest and dividends in the FSM investment portfolio.

- 76 Capital expenditures in Kosrae have fluctuated less than in some states and have been very high as a share of state GDP by both FSM and PDMC standards. Capital expenditures have ranged from 17 to 54 percent of state GDP and have averaged 31 percent over the FY1987-2003 period. This exceedingly high investment does not compare favorably with the average annual state GDP growth rate over the same period of just 0.6 percent. Clearly the investments of choice, predominantly in commercial public enterprises, have not succeeded in contributing to economic growth. Like her sister states Kosrae ran fiscal deficits during the early part of the Compact during the early 1990s. Subsequent to the second step-down fiscal management improved and the state has recorded an average overall balance of 2 percent of GDP during the FY1997-FY2001 period, which rose to 10 percent of GDP in FY2003 as the state contributed more that a full year of bump-up funds to the amended Compact trust fund. However, the failure to restrain wages will present the state with the most difficult adjustment of all states to the new provisions of the amended Compact.
- Pohnpei State has shown considerable fiscal discipline from FY1997 to the present. As with Chuuk State, the GFS presentation masks some budgetary problems that were faced with respect to the general fund, but even with that the state appears to have adequately adjusted to current resources. FY1995 represented a year of extreme fiscal indiscipline with a 9 percent increase in payroll costs and a near doubling of other purchases of goods and services. The current deficit in that year, amounting to over 9 percent of state GDP, was financed by the depletion of assets invested abroad and, in part, by the build-up of domestic arrears. From that period the State has restored positive fund balances in the general fund. Payroll costs have been reduced from their peak of \$17.9 million in FY1996 to a low of \$13.6 million in FY2001. A return to the normal 80-hour working week was possible in FY2003 without threatening fiscal balance and the wage bill rose to \$14.9 million. More than any other state, Pohnpei responded significantly to the adjustment challenge by increasing state tax revenues. State taxes have nearly doubled from \$1.4 million in FY1997 to \$3.0 million in FY2003, although total tax revenue as a share of state GDP remains large unchanged at 11 percent.
- The structure of Pohnpei State's fiscal accounts shows they have the least reliance of any state on external grants; however grants still make up 70 percent of government revenues, down from 80 percent in FY1987. In terms of capital outlays, the state aggressively invested in commercial enterprises during the early 1990s mostly financed by medium-term notes. Capital expenditures fluctuated in the range 3 to 22 percent of GDP. Of necessity, capital outlays in recent years have been restricted as those debts are repaid. The average capital expenditures of 9 percent of GDP compares quite favorably with the average annual GDP growth rate of 2.2 percent. During the initial period of the Compact between FY1990 and FY1995 the state expanded fiscal policy to fund large and

unprofitable public enterprise investment and incurred average deficits of 5 percent of GDP. However, with restoration of financial discipline during the later Compact period between FY1997 and FY2003, the state has managed to sustain an impressive average surplus of 3 percent of GDP. In FY2003 as the state set aside its full bump-up contribution to the amended Compact trust fund in one year, the overall surplus rose to 7 percent of GDP.

- Yap State has shown the most consistent fiscal performance within the FSM. Only during FY1993 did the state experience a current deficit, and the adjustment to the stepdown in FY1997 was done in an impressive manner. Despite running consistent surpluses on its current account the state has maintained discipline on recurrent expenditures. Payroll has been reduced from a peak of \$7.3 million in FY1996 to \$5.9 million in FY2003, a cut of 19 percent in nominal terms. Tax revenues as percent of GDP have remained largely constant during the Compact period representing an average 13 percent of GDP. However, while national tax collections in the state have shown buoyancy, state tax collections have plummeted and fallen from a level of \$1.8 million in FY1996 to only \$0.9 million in FY2003 indicating declining capacity, and the need for administrative strengthening.
- Yap State has reduced dependence on external grants to fund government operations and capital expenditures by more than any other state. Grants made up 88 percent of all revenues in FY1987 and 74 percent in FY2001. Capital expenditures have been high and relatively stable in Yap, ranging between 9 to 42 percent of state GDP during the period of Compact economic assistance. The average of 21 percent does not compare very favorably to the average annual GDP growth of 2.4 percent from FY1987-2003. This surely reflects the dominance of investments in commercial public enterprises that have not proven successful. Yap State will end the secure period of Compact economic assistance with a large reserve of assets invested abroad. The State's monetization scheme has proven successful. In FY 1991 the state borrowed \$71 million through the issuance of MTN bonds secured by future Compact assistance flows under full faith and credit provisions provided for in the Compact Treaty by the US government. Having borrowed at a weighted average interest rate of 8.5 percent, the state has earned investment earnings in excess of the cost of borrowing in the range of \$17 million. This is reflected in the unreserved fund balance of the state's general fund of \$19 million. Although Yap sustained overall balance on the fiscal account between FY1993 and FY1996, during the later part of the Compact between FY1997 and FY2003 the state recorded a very impressive average surplus of 12 percent of GDP reflecting the prudential nature of financial management in the state.

2 The Macroeconomic Framework

- This chapter is concerned with describing the evolution of the FSM Sustained Growth Strategy (SGS), and the fiscal challenges facing the nation resulting from the need to implement the provisions of the amended Compact. Discussion starts through detailing the FSM's negotiating strategy for the amended Compact and in outlining the principal objectives that the FSM sought to secure—macroeconomic stability and sustainable development. These objectives are compared with what the FSM and U.S. finally agreed, and which are embodied in the terms and conditions of the amended Compact.
- During March of 2004 the FSM convened the 3rd Economic Summit. A major outcome of the Summit was recognition of the weak performance in attaining the goals of the original Compact, and a desire that the nation should do better during the coming 20-year period of the amended Compact. In particular, the FSM leadership adopted a strategy that would accelerate growth above the poor rates attained during the original Compact period, and which is described in Chapter 1. While originally called the FSM's high growth strategy, it later and more appropriately became known as the Sustained Growth Strategy (SGS). The principal objective of the strategy was to attain a rate of economic growth that would generate sufficient jobs for the citizens of the FSM seeking gainful employment, and to avoid the large out migration that has occurred since the mid 1990s.
- The leadership of the FSM understood that adoption of the SGS would not come without cost, and that it could require implementation of economic reforms and sacrifice. Without this commitment the leadership realized that a low growth or even dismal outcome might result, where the majority of Micronesians would be forced to migrate and look for opportunities overseas. The chapter provides a simulation of three alternative scenarios and the likely outcome based on varying degrees of reform and commitment.
- The chapter continues with a discussion of the implications of the implementation of the amended Compact in the medium term and the required adjustment in fiscal policy that will be needed. A section is devoted to tax reform as a means of avoiding substantial across the board expenditure cuts, and three different Plans for tax policy are presented. Tax reform will also be required in the longer-term as the nation seeks to replace declining Compact grants through greater domestic resource mobilization. The impact of the adoption of the Sustained Growth Strategy on tax yield, and consequences in failure to successfully implement the program are indicated. In the final section a set of policies is identified that will support attainment of macroeconomic stability and the FSM's long-run development goals.

2.1 FSM Compact Negotiating Strategy

- At the commencement of the Compact negotiations in late 1999, the FSM presented its proposal for future Compact assistance. The proposal was developed from a set of principles identified in the 1st and 2nd Economic Summits to support economic stability, growth, development, and ultimate self-reliance. The strategy was macroeconomic in nature, such that the total level of grant assistance would be chosen to support macroeconomic stability, rather than derived from simply adding up the sum of identified sectoral needs. Given an agreed level of funding the strategy proposed that the use of the annual Compact grants would be to support the provision of basic social services in educational and health, and in infrastructure. This strategy is represented diagrammatically in Figure 1, and may be summarized as follows:
 - 1. Stability and Security—to maintain economic assistance at levels that supported macroeconomic stability. Achievement of this objective required levels of funding close to prevailing levels to avoid the large periodic step-downs in funding that were a characteristic of the first 15-year funding package. These five-yearly funding cuts proved to be highly disruptive to government operations specifically and, particularly through discouraging investment to the economy in general. The important principle of macroeconomic stability was to be further supported by continued participation in federal programs at prevailing levels.
 - 2. Improved Enabling Environment for Economic Growth—the second objective would be achieved through the continued FSM commitment to economic reform and the provision of an enabling environment to support open, outward-oriented and private sector led development. In addition to the FSM's improved policies and practices in support of economic development, US provision of a sufficient grant stream to fund capital projects would also be a key element to provide the infrastructure necessary for a growing economy.
 - 3. Improved Education and Health Status—the third objective concerned the use of the annual Compact grants to support the provision of basic services in education and health. Recognizing that the delivery of education and health services was weak, the strategy emphasized the need for greater efficiency and effectiveness through performance monitoring and improved management.
 - 4. Assured Self-Reliance and Sustainability—this objective would be achieved through the establishment of a Trust Fund that would, after a period of time, replace the annually appropriated transfers from the US. While providing the US with a known time when further transfers

would no longer be required ("exit strategy"), it would more importantly ensure a sustainable and independent economy for the FSM.

The implications of the strategy was a request for funding at the level prevailing in FY03 of \$84 million over a period of 20 years. The strategy in-

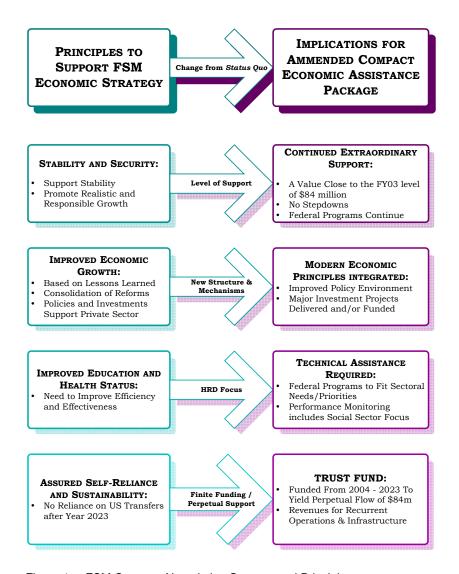


Figure 1 FSM Compact Negotiation Strategy and Principles

cluded provision for contributions to a Trust Fund, such that the yield of the Fund would be sufficient in year 21 to replace the annual Compact grants, but without erosion of the real value of the fund (this condition became known as the terminal condition). The initial response of the U.S. was an offer of \$61 million without inflation adjustment, and with a \$13 million contribution to a Trust Fund over a period of 15-year period. While this counter offer is now history and of limited importance, the analysis of the economic impact made at the time is instructive and identifies many of the adjustment problems that the FSM is now having to face and will need to respond to over the full period of the amended Compact 20-year period.

Figure 2 provides a comparison of the anticipated impact of the original FSM amended Compact proposal and the initial U.S. counter offer¹. The trajectory of the FSM proposal indicates a flat increasing trend of GDP per capita from a level of \$1,827 in FY03 to \$1,975 in FY24; this is an 8 percent increase over the whole period, or a 0.4 percent increase per annum. By world standards this was not an ambitious target and certainly below the sustained growth strategy adopted at the 3rd Summit. However, given the resource scarcity, remote nature, and general development constraints facing the FSM, it was felt prudent to target a low GDP per capita growth rate for the negotiations. The target

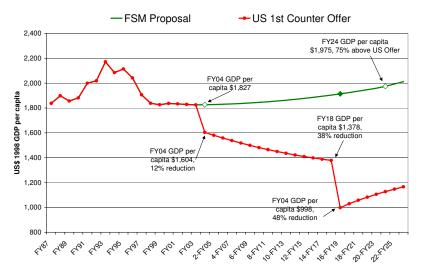


Figure 2 Real Per Capita GDP Growth and Impact of the FSM and US Original Compact Proposals (FY1998 prices)

The impact of the Compact negotiations were analyzed through the use of a simplified macroeconomic model developed by EMPAT known as the "analyzer".

growth in per capita incomes was in fact slightly lower than the 0.6 percent attainment during Compact I.

- 8 Although the FSM proposal for funding could not have been considered excessive, it was simply a continuation of the status quo; the original U.S. counter offer would have had a disastrous impact on the FSM economy. The projected drop in funding in FY04 from \$84 to \$61 million would have precipitated a decline in GDP per capita in excess of that experience in FY97 at the time of the second step-down. However, that was not the end of the story, real incomes or GDP per capita would have contracted thereafter by an average annual rate of -1.1 percent. The decline in the economy during the amended Compact period was the result of two basic flaws in the original U.S. proposal; (i) the lack of inflation adjustment, and (ii) an inadequate rate of investment in infrastructure that would have constrained the rate of private sector growth. While the level of the annual grants during the 15 year period would have had an adverse impact on the economy, the inadequate level of contribution and build up of funds in the Trust Fund, would resulted in a corpus level way short of that required to fulfill the "terminal condition", that is to replace the annual grants without any reduction in funding. Post Compact the Trust Fund dependant economy would have seen real incomes falling even lower to less than \$1,000 per capita.
- An analysis of the original U.S. offer for Compact funding is instructive since it brings out the purpose of the objectives of the FSM strategy. It is clear that the U.S. offer would have failed to meet the first objective to maintain economic stability and security. The large step-downs at the beginning and end of the amended Compact period and stagnation in funding during the 15-year period, would have resulted in a declining economy precipitating a perpetual fiscal crisis as funding levels declined. The second object to provide a basis for improved economic growth would have been violated by the lack of inflation adjustment and consequent decline in real levels of funding. The inadequate provision for public infrastructure would have led to deterioration in the quality of the capital stock, and undermined the potential of the private sector to take up the lead role in the economy. Finally, the third objective to develop an assured self-reliant and sustainable economy through the establishment of the Trust Fund would have been violated and failed to provide an "exit" strategy for the U.S.

2.2 The Economic Provisions of the Amended Compact

10 Fortunately the U.S. substantially revised the initial offer, and the final negotiated outcome accepted by both parties went a long way in meeting the FSM negotiating objectives and requirements. Table 1 below indicates the aggregate structure of the annual Compact grants and the U.S. contribution to the Compact Trust Fund. Each year over a 20-year period the U.S. will contribute

Table 1 U.S. Annual Compact Grants and Contributions to the Trust Fund

	Annual Grants	Trust Fund Contribution	Total Contribution
FY04	76.0	16.0	92.0
FY05	76.0	16.0	92.0
FY06	76.0	16.0	92.0
FY07	75.2	16.8	92.0
FY08	74.4	17.6	92.0
FY09	73.6	18.4	92.0
FY10	72.8	19.2	92.0
FY11	72.0	20.0	92.0
FY12	71.2	20.8	92.0
FY13	70.4	21.6	92.0
FY14	69.6	22.4	92.0
FY15	68.8	23.2	92.0
FY16	68.0	24.0	92.0
FY17	67.2	24.8	92.0
FY18	66.4	25.6	92.0
FY19	65.6	26.4	92.0
FY20	64.8	27.2	92.0
FY21	64.0	28.0	92.0
FY22	63.2	28.8	92.0
FY23	62.4	29.6	92.0

to the FSM \$92 million partially inflation adjusted. The inflation adjustment factor remains as in the original Compact at 2/3rds of the annual U.S. GDP deflator. The annual sector grants start a level of \$76 million in FY04 and are to be annually reduced by a \$0.8 million decrement from FY07 onwards. The difference between the total contribution and the annual sector grant levels will be deposited in a Trust Fund to accumulate over the 20-year Compact period. At the end of the 20 years the Trust Fund will provide a stream of benefits that will replace the annual sector grant transfers.

In comparison to its original proposal the FSM was unable to obtain full indexation of the annual Compact grants, but did achieve an extension of the period of the amended Compact from 15 to 20 years to enable the Trust Fund to accumulate sufficient resources to meet the "terminal requirement" of a smooth transition between years FY23 and FY24. However, the U.S. imposed a decrement, which became necessary to generate sufficient resources for the Trust Fund, which would otherwise have been under funded. There remain, however two serious weaknesses concerning the operation of the Trust Fund that the FSM will need to address once the Fund becomes operational. The first concerns the Trust Fund subsidiary agreement, which violates the principle to maintain the real corpus of the Fund. The agreement protects not the real value, but the

nominal value, and simulations have indicated that consequently the corpus of the Trust Fund has a tendency to "crash" or decline precipitously after periods of fluctuating or sustained adverse yields. Secondly, while the value of the contributions to the Fund was based on historical market interest and equity yields sufficient to meet the terminal condition, the Corpus is clearly vulnerable if historical trends are not replicated. Finally, the FSM managed to maintain access to U.S. Federal Programs, except that education sector programs were "cashed out" in order to allow the FSM to design projects more suited to its needs. While this change was substantial, it does not adversely affect the macroeconomic impact of the total Compact package.

Figure 3 draws the comparison between the original FSM proposal and the final negotiated outcome. While the FSM did not achieve the full value of its proposal, the estimated impact on the economy does not indicate a significantly different outcome between the two. It can be argued that the FSM achieved the three macroeconomic principals it set out to achieve at the beginning of the negotiations. While the projected growth path dips in FY04 due to the drop in funding from \$84 to \$76 million, the two trajectories do not diverge significantly. Noting the weakness in the Trust Fund arrangements, the projected yields will be sufficient to replace the annual Compact grants, if historical market performance is replicated over the next 20 years. However, while the FSM achieved the major objectives of the negotiations, a flaw in the agreement result-

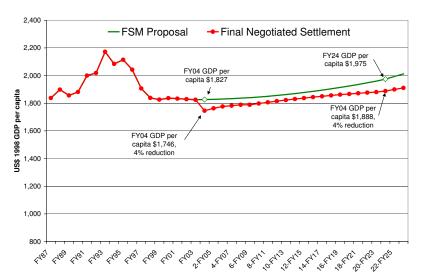


Figure 3 Real Per Capita GDP Growth and Comparison of the Impact of the Original FSM Proposal and Final Negotiated Settlement (FY1998 prices)

ing from the sectoral structure of the annual grants, has resulted in a macroeconomic and fiscal adjustment, significantly greater than had been anticipated. This topic is taken up in detail in section 2.4 below.

2.3 The Third FSM Summit and Evolution of the FSM Sustained Growth Strategy

2.3.1 The Third FSM Economic Summit

- The 3rd FSM Economic Summit² was held in Palikir, Pohnpei, from March 29-April 2, 2004. Over four hundred participants attended representing the four FSM states, the traditional leadership, private sector, National and State governments, non-government organizations, churches, women's and youth groups, government officials, as well as representatives of foreign governments and donor institutions. The theme of the Summit was, *The Next 20 Years: Achieving Economic Growth & Self-Reliance*. The Summit was successful in achieving its two immediate objectives to:
 - build awareness of the economic structure of the amended Compact provisions and the likely impact on the economy.
 - achieve consensus on an overall strategy consistent with the theme of achieving economic growth and self-reliance.
- The third objective, to improve monitoring mechanisms to enhance implementation of the economic strategy and its underlying strategic goals and policies, will be addressed through actions following the Summit and will be the responsibility of the FSM Economic Policy Implementation Council (EPIC), an advisory body comprised of national and state executive and legislative leaders that was created in 1999 as a recommendation of the 2nd FSM Economic Summit.
- The President of the FSM, His Excellency Joseph J. Urusemal, opened the Summit and indicated that now was the right time for the nation to gather to plan bold new actions to meet the challenge of achieving a higher growth rate despite declining Compact funds. The Summit was presented with three economic scenarios that the FSM might experience over the next 20-year period of Compact support. While noting that the FSM might face a truly "dismal" scenario if the country's leadership failed to make needed economic adjustments to offset the drag on economic activity resulting from the structure of the Compact assistance, the discussion focused on "moderate growth" and "sustained growth" scenarios.

See 3rd FSM Economic Summit Communiqué, and Select Committee resolution.

Referred to during the Summit at the "high growth" scenario.

- To achieve moderate growth in incomes and to avoid rising outmigration rates, the FSM would need to maintain fiscal discipline, including increases in its tax effort to support essential services and needed public infrastructure as Compact flows decline over time. The FSM would also need to implement a moderate program of reforms to improve the environment for domestic and foreign investment in private, productive activities. To do better, and to make significant improvements in incomes of Micronesians over the next 20 years, a much bolder reform program would be required, including greater sacrifice at the outset in order to bolster investment levels and to create a truly attractive and competitive environment of investment. The breaking of an air transportation bottleneck was presented as a vital key to achieving high growth from the leading sectors of tourism, fisheries and agriculture. The synergies of inbound tourism and outbound sashimi-grade tuna exports were discussed.
- At the outset of the Summit the President created a Select Committee, comprised of the EPIC members and the co-chairmen of the Summit Convening Committee. That Select Committee endorsed the sustained growth strategy and gave its support to implementing reforms required to achieve sustained growth based on tourism, fisheries and agriculture. The Select Committee proposed a resolution that was subsequently presented and adopted by the Summit at large:

WHEREAS the structure of the amended Compact economic package entails declining annual grants that require the FSM to make tough choices between alternative economic strategies and policies that will result in different outcomes in terms of income and likely out-migration rates of Micronesians;

WHEREAS in the absence of significant reform efforts, a dismal scenario would likely prevail in which economic activity would decline, incomes would stagnate and large numbers of Micronesians would surely choose to migrate from their homeland;

WHEREAS to attain a baseline growth scenario wherein incomes would rise modestly, as they did during the original Compact period, significant reform measures would need to be implemented, including revenue reform to ensure protection of essential public services and public investment;

WHEREAS such a revenue reform would entail a three-pronged approach to: (i) improve collection of existing taxes; (ii) design a revenue-neutral shift to a modern tax system appropriate to the FSM's economic strategy; and (iii) introduction of a unified tax administration and implementation of the new tax system within 2-3 years;

WHEREAS to achieve the high growth scenario, where incomes will be rising and Micronesians will no longer be forced to out-migrate to earn a liv-

ing, still further reform efforts and a higher level of public infrastructure investment will be required;

WHEREAS achieving the high growth scenario requires a solution to the existing air transportation bottleneck, which constrains rapid growth in the tourism, fisheries, and agriculture sectors;

WHEREAS the EMPAT project has come to an end after eight years, during which several Micronesian economists have received training and have achieved a high professional standard and all of the governments have received support for their economic reform efforts.

NOW THEREFORE, BE IT RESOLVED that:

- 1. The Select Committee endorses the high-growth strategy and recommends that the 3rd FSM Economic Summit supports the strategy, noting that environmental and cultural protection measures must be integrated into such strategy;
- 2. The Select Committee requests the President of the FSM to seek the agreement of our major donor partners to convene a Consultative Group of Donors meeting at an early date so that our Strategic Development Plan and our high growth strategy can be presented for their review and support;
- 3. The Select Committee further recommends that the President of the FSM request that the World Bank or other International Financial Institutions provide a pre-loan technical assistance team comprised of experts in aviation, airports, tourism, fisheries, environment, and economics, and that the FSM seek to create a team along the lines of the EMPAT model with international economists and Micronesian counterparts in order to support the ongoing economic strategy and reform efforts of the nation.
- 4. The Select Committee supports other reforms required to achieve high growth based on tourism, fisheries and agriculture, including:
 - Increasing investment in infrastructure, especially in airports, electricity, roads and health facilities;
 - Raising revenue sufficiently to provide the funds; (i) the FSM will need to invest in infrastructure, and (ii) to compensate for declining Compact funds;
 - c. Revising rules and laws with respect to investment and other matters to make the FSM an attractive place for investors;
 - d. Carrying out other measures needed to achieve high growth including (i) rules and regulations to facilitate the employment of

foreign technicians and managers needed for rapid growth, (ii) to ensure also that over several years it is primarily Micronesians who benefit from high growth, (iii) to strengthen education to train people in skills needed for growing tourism, fisheries and agriculture sectors, and (iv) other measures.

2.3.2 A Six-Part Strategy for Transition and Accelerated Growth

The Select Committee resolution identified an approach to developing the "Sustained Growth Strategy" or SGS, the initial component being preparation of the nations Strategic Development Plan (SDP). With the Plan complete, the stage is set to move forward with a request to the FSM's donor partners to convene a "Consultative Group of Donors Meeting" or CGM. The SDP will be tabled and the FSM will indicate its resolution and commitment to adopt the measures necessary to attain the objectives of the Sustained Growth Strategy. The initial phase will be a request to the donor community to assist in developing a program of reform measures and policies. While the strategies necessary to implement the SGS will need to be the focus of technical assistance, the following Six-Part strategy outlines the critical components that will need to be included:

1 Macroeconomic Stability

- 1.1 Maintaining fiscal stability and responsibility through the initial transition period of the amended compact,
- 1.2 Maintaining essential public services and protecting the public investment program, and
- 1.3 Tax reform in support of the growth strategy.

2 Good Governance: Improving Effectiveness and Efficiency of Government

- 2.1 Protecting essential services through the transition,
- 2.2 Improving public sector management,
- 2.3 Enhancing accountability, and
- 2.4 Ensuring the rule of law and safeguarding property rights,

3 Developing an Outward-Oriented, Private Sector-Led Economy

- 3.1 Competition policy: improving the regulatory regime,
- 3.2 Promoting domestic and foreign investment,
- 3.3 Enhancing entrepreneurial skills and opportunities, and
- 3.4 Reducing inefficiencies of the public enterprise sector.

4 Investing in Human Resource Development

- 4.1 Protecting health expenditure levels and improving health outcomes.
- 4.2 Health financing for the future,

- 4.3 Protecting education expenditures and improving education outcomes, and
- 4.4 Linking higher education and skills development to the needs of a growing economy.

5 Investing in Infrastructure

- 5.1 Protecting investment levels through the transition,
- 5.2 Learning from the past and targeting critical needs within the growth strategy, and
- 5.3 Long-term financing of economic infrastructure

6 Long-Term Sustainability

- 6.1 Environmental concerns integrated into the growth strategy,
- 6.2 Social and cultural factors protected during the growth strategy, and
- 6.3 Inter-generational equity supported by the compact trust fund.

2.3.3 Growth Scenarios

19 In this section the three scenarios presented at the Summit are discussed with the aid of an economic model⁴. Behind each scenario is an assumed policy environment and commitment to reform, which supports private sector entrepreneurship. Economic growth proceeds through the development and export of the principal sectors of agriculture, fisheries and tourism. Private sector investment plays a key function in supporting the growth of these activities. Figure 4 provides a graphical representation of economic growth per capita under the three scenarios: dismal, medium and sustained growth. The dismal scenario is indeed just that. The economy dips in FY04 during the first year of the amended Compact as the economy responds to declining levels of grant assistance, and due to the lack of public sector investment. Low levels of public sector investment result from administrative problems in implementation of the infrastructure grant. In FY05, it is assumed that the FSM has been able to fulfill the grant award conditions, overcome absorptive capacity constraints, and implement the grant on the ground. As a result the economy strengthens but under the dismal scenario living standards stagnate and never regain the levels prevailing at the end of Compact I. Under the medium scenario living standards are projected to improve, surpassing Compact I levels, but not by any significant margin. The medium growth scenario corresponds to that presented to the U.S. during the Compact negotiations. The Sustained growth scenario on the other hand is the only option that provides a significant increase in GDP per capita.

The three scenarios are described utilizing a Computable General Equilibrium (CGE) model developed by EMPAT. This model is more comprehensive than the analyzer and captures many of the complex economic linkages in the FSM economy.

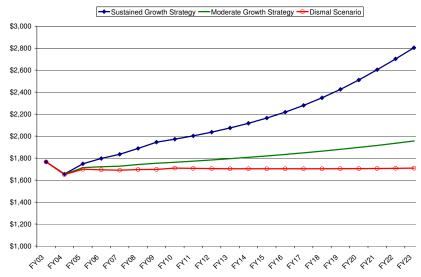


Figure 4 Alternative Growth Scenarios, GDP per capita, \$s 1998 prices

- 20 Discussion will now proceed to examine the assumptions behind the different growth scenarios, and the type of effort required to achieve the results. Under the sustained growth scenario, it is assumed that the FSM actively implements the strategy adopted at the 3rd Summit, and pursues a rigorous reform agenda. Improving the environment for the private sector takes center stage, and implementation of a regulatory regime that encourages private entrepreneurship is adopted. Foreign investment is streamlined and a transparent liberalized regime implemented. Public enterprise reform is pursued and the myriad of existing non-performing enterprises are liquidated, corporatized or privatized. This sends a strong signal to the private sector they are welcome in the FSM. Access to land is improved through better management and administration, and through legislation that supports long-term leasehold and mortgage leases. Secured transactions legislation is implemented, and the commercial banking system now finds itself in a position to actively lend to an expanding private sector. Other critical pieces of legislation that affect the private sector are implemented: bankruptcy law and a modern but simple commercial code, etc. Support services to develop Micronesian business skills and entrepreneurship are put in place.
- Reform of the public sector supports improvements to the private sector regulatory environment. Tax reform is a central component of the sustained growth strategy as the FSM changes the culture of tax administration to an incentivized modern system. The tax regime is modernized based on a system that

encourages effective tax collection in a non-distorting way consistent with the objectives of an outward orientated development strategy. resource mobilization and revenue effort is required to support the sustained growth strategy. The public service is also modernized and "ri ht" sized to provide efficient and effective services to the nation that supports the private sector.

Figure 5 provides a picture of the GDP annual growth path of the FSM economy under the sustained growth scenario. As a result of the policies described above, the FSM economy is launched onto a higher powth trajectory. Consistent with the discussion presented under the sector SDP hapters for agriculture, fisheries and tourism, exports of agriculture expand at 7 percent per annum during the period, or from \$3.2 million in FY03 to \$12.0 million in FY23. While the growth rate is a significant departure from ast achievement, the total expansion in exports is not great. In particular, Ko rae and Pohnpei states are projected to participate in increased agricultural production. In the Fisheries sector, with the adoption of a proactive reform age da, privatization and reform of the foreign investment regime, the sector is projected to double during the first six years of the amended Compact period, FY0 -FY09. Consistent with the fisheries SDP sector chapter, further potential exists and the sector is projected to double over the following 14 years between FY 1)-FY23.

The tourism sector is the most dominant growth sector under the sustained growth strategy. Overall the sector is projected to grow from the low

Freater domestic

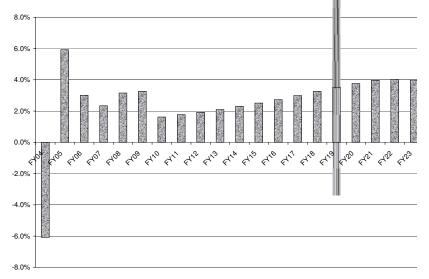


Figure 5 The sustained growth scenario, real annual GDP growth, FY03-FY23 (1998 prices)

base of 21,000 visitor arrivals in FY03, to attain 110,000 by the end of the amended Compact period in FY23. This represents an annual increase of 9 percent. While this again is a significant departure from historical experience, it represents a feasible 20-year target, when viewed in the context of competing tourism destinations in neighboring Micronesian islands. In order to support the rate of private sector expansion embedded in the agriculture, fisheries, and tourism sectors, private investment must also grow from the prevailing levels, representing about 7 percent of GDP, to a projected level of 17 percent. Domestic resource mobilization or saving is unlikely to generate the required volume and a significant increase in foreign investment would be needed. This is consistent with the policy commitment inherent in the sustained growth strategy.

- 24 Figure 5 presented the annual rate of GDP growth, and after an initial negative decline in FY04 resulting from reduced Compact flows and slow start in the use of the infrastructure grant, the economy picks up. During the first 5 years between FY05 and FY09, the growth pattern reflects a variety of counter prevailing factors. The affect of the need to phase out the use of the capacity building sector grant to fund government operations, either through tax reform or cuts in public expenditures, forces contraction. However, this is counterbalanced by the positive impact of an assumed rapid growth in the fisheries sector as the Governments of the FSM implement a liberalize regime that encourages foreign investment. After an initial spurt in fisheries, economic growth assumes a lower but sustained trajectory. This is augmented by growth in tourism, which over time begins to have a substantial impact on economic activity, as the sustained growth rates are translated into higher numbers. Overall economic growth is held back during the first part of the amended Compact, but as the benefits of the sustained growth strategy take hold, the economy is projected to experience a growth of 4 percent by the end of the 20 years. This represents an annual average rate of 2.6 percent over the whole period.
- Figure 6 presents an overview of the moderate growth variant. This scenario also assumes that the FSM adopts a reform agenda but with less commitment, and at a less aggressive rate compared with the sustained growth strategy. While the foreign investment regime is improved and encourages new private investment, reform of public enterprises remains weak. Improvements are made to the private sector regulatory environment but take time to implement. Tax reform is adopted to support the transition and implementation of the amended Compact, and financial stability is secured. As a result of a weakly implemented reform program the private sector shows signs of growth, but not at its full potential. Agriculture is projected to grow at 2.5 percent, but fisheries growth is largely stalled as important public enterprise reforms are not implemented. The tourism sector responds to the improved environment and visitor arrivals double over the 20-year period to 41,000. Private sector investment increases as a share of GDP from 7 percent in FY03 to 9 percent by FY23. After the initial adjustment in FY04 and FY05 to the conditions of the amended

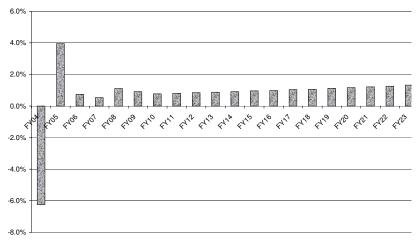


Figure 6 The medium growth scenario, real annual GDP growth, FY03-FY23 (1998 prices)

Compact, GDP growth settles down to an average annual growth rate of 0.7 percent attaining 1.3 percent by FY23.

- Figure 7 indicates the results of the dismal scenario. The dismal scenario is essential a status quo projection. It assumes that the policy regime remains largely unaltered, and the FSM remains inward looking. There is no tax reform and efficiency on the delivery of public services remains largely unaltered. The transition to the amended Compact is arduous and in the absence of tax reform is achieved through difficult reductions in expenditures that threaten financial stability. Based on a very modest increase in visitor arrivals from 21,000 in FY03 to 30,000 in FY23, the average annual growth of GDP is projected at 0.1 percent over the period. The results of this scenario are indeed dismal.
- The projections and trajectories of the three growth scenarios presented above are estimates of what the course of the FSM's economic development could look like over the amended Compact period. They are based on assumptions about the policy regime and reforms that are required to generate the rate of development projected that is consistent with international experience. The projections are based on different rates of growth of exports of the agriculture, fisheries and tourism sectors and required level of supporting private sector investment. Importantly the trajectories indicate the rate of growth in these variables that are required to attain the rate of GDP or economic growth projected.

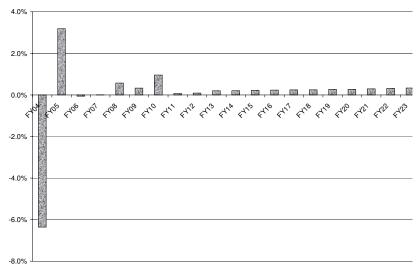


Figure 7 The dismal scenario, real annual GDP growth, FY03-FY23 (1998 prices)

Clearly, only the sustained growth strategy will provide an increasing level of welfare and economic growth that will be sufficient to fulfill the aspirations of the FSM's growing population, and avert the large out migration that was experienced during the latter part of Compact I. While the medium scenario results in a very modest rate of growth, it will be insufficient to generate the supply of jobs that is required to provide attractive opportunities for young Micronesians to remain in the FSM. Under the dismal scenario the size of the population in the FSM is actually likely to decline below existing levels.

2.4 Medium Term Fiscal Adjustment

- As the FSM enters a new phase of its development with the implementation of the amended Compact, the nation is faced with substantial fiscal adjustment challenges in the medium and long-term. At the outset of the amended Compact period the new sectoral grant structure and its related expenditure category constraints will require significant budgetary restructuring. The effect will be to place pressure on recurrent operations expenditures that in the past were funded from Compact current account (unrestricted) funds but that must in future either be cut or funded from local revenues. In the longer-term the lack of full indexation of the annual Compact sector grants and the annual decrement of \$800,000 will require continuous fiscal adjustment.
- The fiscal adjustment required to adapt to the new realities of the amended Compact can be achieved through a mix of expenditure cuts and reve-

nue increases. The nature of the sectoral grants—funding virtually all of education and health costs and requiring substantial public infrastructure investment—means that any expenditure cutting must be done on a very narrow portion of recurrent public expenditures. Quite clearly, a major part of fiscal adjustment will need to come from revenue increases in order to avoid seriously jeopardizing the delivery of Government services. In the long-term the decline in the real value of Compact funding also implies the need for continuous fiscal adjustment, with continued need for revenue growth, though if the nation's "Sustained Growth Strategy" is achieved, such revenue growth may be achieved by growing the tax base rather than requiring higher and higher tax rates.

2.4.1 Fiscal Structure and the Magnitude of the Adjustment

- The structure of the FSM state and national government budgets is presented in Table 2 below. The table indicates the importance of Compact and other US funding in the fiscal structure of the FSM governments, and highlights the relatively small contribution from domestic revenues. Chuuk State appears as the government that is most reliant on external sources of funds, with domestic sources as only 14 percent of total funding needs. Pohnpei and Yap are considerably less reliant, yet even they only generate 24 and 22 percent of funding needs from domestic sources. The fiscal structure of the national government differs substantially, especially after reverting to the 50 percent revenue-sharing minimum on national taxes, and in light of the sizable value of the non-shared fishing revenues.
- There are three major components of the adjustment that each Government in the FSM will be required to make:
 - the 5-year phase out of the non-conforming use of the capacity building grant to fund general government operations;
 - (ii) the requirement to increase the use of the infrastructure grant to 30 percent of total Compact sector grants in FY06 and thereafter; and

Table 2 Fiscal expenditures and sources of funding FY2005 by government (\$'million)

		FY05 Expenditures Funded by:							
	Compact grants	SEG	Federal programs	Domestic revenues	Total	Domestic revenues % of Total			
Chuuk	29.31	4.09	1.23	5.53	40.17	14%			
Kosrae	8.41	1.15	1.67	2.42	13.63	18%			
Pohnpei	19.52	3.22	2.03	7.81	32.58	24%			
Yap	12.18	2.25	0.89	4.38	19.70	22%			
National	6.57	0.65	3.68	21.79	32.70	67%			
FSM	76.00	11.36	9.51	41.92	138.78	30%			

Note 1 As presented to the FY05 JEMCO meeting

2 SEG-Special Education Grant

- (iii) the need to immediately eliminate the (ineligible) funding of public works departments and operations from the infrastructure grant.
- 33 At the start of the amended Compact in FY04 the FSM found itself with inadequate domestic resources to finance those areas of public expenditures not eligible for Compact funding. While the FSM to this date has never concurred with the US interpretation of "non-conforming" costs under the capacitybuilding grant, there were extensive bilateral discussions, which resulted in a policy decision that permitted the FSM to use the capacity building grant to fund the "non-conforming" activities over a 5-year phase out. In order to comply with this decision the FSM was required to submit to the US a phase-out schedule, reducing the level of "non-conforming" activities by 20 percent per annum. The phase-out schedule agreed by each Government of the FSM is provided below in Table 3, and indicates the maximum allowable funding of nonconforming government operations in each year. The rate of phase-out varies from state to state; Pohnpei selected to reduce expenditures equally over a fouryear period, Chuuk and Yap committed to a three-year phase-out, and Kosrae back loaded over the last two years. The national government ceased funding its budget from the capacity building grant subsequent to the reversal of the state favorable 70-30 revenue share, to the constitutional minimum of 50-50 from FY05 onwards.
- During the FY05 JEMCO budget discussions in Honolulu, JEMCO required the FSM to achieve utilization of the infrastructure grant at a level not less than 30 percent of total Compact grants by FY06. This rule was enforced as a result of the extensive cut in infrastructure budgets from levels prevailing at the end of the original Compact period, the continued low level requested by the FSM for infrastructure in FY05, and the likely adverse implications on public investment and economic development over the amended Compact period as the real level of grants declines. The use of the infrastructure grant to fund operations of public works department operations is undeniably inconsistent with the terms of the fiscal procedures agreement; however, some portion of those expenditures may be eligible if properly presented (and billed) as maintenance costs or as allowable project implementation costs.

Table 3 Public sector capacity building grant phase-out schedule (\$'million)

	FY05 (request)	FY06 (ceiling)	FY07 (ceiling)	FY08 (ceiling)	FY09 (ceiling)
Chuuk	2.74	2.65	1.77	0.88	0
Kosrae	0.91	0.91	0.91	0.46	0
Pohnpei	1.31	0.99	0.66	0.33	0
Yap	1.35	1.35	0.90	0.45	0
National					
FSM	6.31	5.89	4.23	2.12	0
Required	8.49	6.37	4.25	2.12	0

35 Table 4 indicates the magnitude of the amended Compact adjustment required from each Government in the FSM, from the three different sources, and shows that the total 5-year adjustment is less than the sum of the three component adjustments. The phase out of the capacity building grant releases Compact sector grant funds that can be used to meet the infrastructure 30 percent requirement. The table also indicates the adjustment required as a percent of the non-Compact funded "expenditure base." This base is the sum of existing expenditures funded from local revenues and the cost of those Compact funded activities that are considered non-conforming. The adjustment indicates that the expenditure cutting required would need to be a very significant percentage of the affected activities in the state governments, while the adjustment facing the national government is minor. It is precisely because the adjustment required in the affected departments in the state governments is very large that the appropriate fiscal adjustment response should focus heavily on increased revenue effort. Adjustment through expenditure cutting alone would entail severe disruption in the delivery of government services, extensive job losses, and likely closing of key departments and divisions.

2.4.2 Government-by-Government Adjustment

36 **Chuuk State** Table 5 indicates the estimated size of Compact grants and the phasing of the adjustment required in Chuuk State. Chuuk receives 38.6 percent of the annual gross level of \$76 million of Compact grants in FY04 prices. In FY07 the annual decrement of \$0.8 for the FSM kicks in, of which \$0.31 million is Chuuk's share. Estimating for the inflation adjustment based on current levels of the implicit US GDP deflator, the table indicates that

Table 4	Magnitude of	the transition l	ny cource and	government (\$'million	١
i able 4	Madrillude of	i ille iransilion i	ov Source and	doverninent (\$ million)

	Trans	sition Requireme	ents		_
	Capacity building phase out	Increase in infrastructure to meet 30%	Public works operations funded from infrastructure	5-year Adjustment ¹	Adjustment % ²
Chuuk	2.74	0	0	1.99	-26%
Kosrae	0.91	0.38	0.49	1.40	-37%
Pohnpei	1.31	3.03	0	1.76	-18%
Yap	1.35	1.93	0.75	0.86	-16%
National	0	1.39	0	0.39	-2%
FSM	6.31	6.73	1.25	6.41	-13%

Note 1 5-year adjustment does not equal to sum of transition adjustments since funds released from CB phase-out and partial inflation adjustment offsets required increase in infrastructure.

2 Equals 5-year adjustment as % of FY05 expenditures funded from domestic revenues plus 5-year adjustment—referred below to the affected expenditure base.

Table 5 Compact adjustment in Chuuk State by type, FY05-FY09 (\$'million)

Chuuk ²	FY05 ¹	FY06	FY07	FY08	FY09
Compact grants	29.31	29.31	29.31	29.31	29.31
less decrement			-0.31	-0.62	-0.93
plus inflation adjustment		0.78	1.20	1.62	2.04
Compact grants inflation adjusted	29.31	30.10	30.21	30.32	30.42
Capacity Building Phase-Out		-0.09	-0.88	-0.88	-0.88
Resources required to meet Infrastructure @ 30%					
Public works maintenance phase-out					
Funds released from inf. adj. and CB phase-out					
Budget savings ³		0.09	0.66		
Annual adjustment			-0.22	-0.88	-0.88
Cumulative Adjustment			-0.22	-1.11	-1.99

Note 1 FY05 = actual grant approved by JEMCO

- 2 Share of Compact funds = 38.6%
- 3 Underestimation of revenues \$0.75m

the expected level of Compact grants in current prices is expected to hold its nominal value despite the annual decrement. The level of usage of the infrastructure grant in Chuuk state exceeded the 30 percent requirement in the FY05 budget request to JEMCO, and the only major source of adjustment is thus the reduction in the use of the Capacity Building grant to fund general government operations. Chuuk has pledged to reduce this grant starting in FY06, but distributing the major impact in equal amounts over the years FY07-FY09. The cumulative adjustment required, after technical correction for \$0.75 million of revenue underestimation in the FY05 budget, is \$1.99 million by the end FY09, which would require a 26 percent cut of the affected expenditure base in the absence of any revenue increase.

37 **Kosrae State** Table 6 shows that the adjustment challenge for Kosrae is more complex, and difficult. In FY05 Kosrae is required to reduce it's usage of the infrastructure grant to fund public works operations by approximately \$0.5 million. Given the small size of the state, this is a large adjustment and it is immediately binding. In FY05 the use of the infrastructure grant was slightly less than the 30 percent requirement, and thus the adjustment required in FY06 is relatively small at \$0.22 million. Kosrae has chosen to back-load the phase-out of the use of the capacity grant to fund general operations to FY08 and FY09. However, since some of the required reduction of \$0.45 million in FY08 can be used to offset the infrastructure requirement, the overall adjustment in that year is limited to \$0.25 million. In FY09 the state will need to make the full adjustment of \$0.46 million. The adjustment timeline for Kosrae is a rising amount in the first two years, a pause in FY07, and then a final increase during the last two years. Overall Kosrae will be required to make the most difficult adjustment of all the FSM states. Restoring fiscal balance would require a 37

Table 6 Compact adjustment in Kosrae State by type, FY05-FY09 (\$'million)

Kosrae ²	FY05 ¹	FY06	FY07	FY08	FY09
Compact grants	8.41	8.41	8.41	8.41	8.41
less decrement			-0.09	-0.18	-0.27
plus inflation adjustment		0.22	0.35	0.47	0.58
Compact grants inflation adjusted	8.41	8.63	8.66	8.69	8.72
Capacity Building Phase-Out				-0.45	-0.46
Resources required to meet Infrastructure @ 30%		-0.22			
Public works maintenance phase-out	-0.49				
Funds released from inf. adj. and CB phase-out			0.02	0.20	
Annual adjustment	-0.49	-0.22	0.02	-0.25	-0.46
Cumulative Adjustment	-0.49	-0.72	-0.69	-0.94	-1.40

Note 1 FY05 = actual grant approved by JEMCO

- 2 Share of Compact funds = 11.1%
- 3 Underestimation of revenues \$0.75m

percent cut of the affected expenditure base in the absence of any revenue increase.

Pohnpei State Table 7 indicates a totally different adjustment challenge. Pohnpei has a relatively small capacity building grant adjustment, which it opted to phase-out in equal installments over the FY06-FY09 period. However, Pohnpei requires a large \$3.0 million adjustment to meet the 30 percent infrastructure requirement in FY06. Part of this increase can be met through the increase in funds received from the inflation adjustment, and part from more efficient planning and avoidance of overestimation of budget requirements (Pohnpei has large "carry-over" balances of Compact funds, reflected in the \$.75 million budget savings in the table). In the subsequent years, the phase-out of the capacity building grant can be used to offset the infrastructure requirement,

Table 7 Compact adjustment in Pohnpei State by type, FY05-FY09 (\$'million)

Pohnpei ²	FY05 ¹	FY06	FY07	FY08	FY09
Compact grants	19.52	19.52	19.52	19.52	19.52
less decrement			-0.21	-0.41	-0.62
plus inflation adjustment		0.52	0.80	1.08	1.36
Compact grants inflation adjusted	19.52	20.05	20.12	20.19	20.26
Capacity Building Phase-Out		-0.33	-0.33	-0.33	-0.33
Resources required to meet Infrastructure @ 30%		-2.34			
Public works maintenance phase-out					
Funds released from inf. adj. and CB phase-out			0.38	0.38	0.38
Budget savings ³		0.75			
Annual adjustment		-1.92	0.05	0.05	0.05
Cumulative Adjustment		-1.92	-1.86	-1.81	-1.76

Note 1 FY05 = actual grant approved by JEMCO

- 2 Share of Compact funds = 25.7%
- 3 Over budgeting \$0.75m

such that there is a minimal annual adjustment. In the case of Pohnpei the Compact adjustment is a one-time event, but all of the adjustment is required by the outset of FY06. The magnitude of the adjustment overall is such that achieving structural balance would require an 18 percent cut of the affected expenditure base in the absence of any revenue increase.

Table 8 shows that Yap's case is similar to that of Yap State Pohnpei, but in addition there is an immediate adjustment to eliminate public works operations from the infrastructure grant. It appears that funding levels for public works in the FY05 budget were not a feature of the original Compact budgets, and that adjustment can be made through restoration of earlier expenditure levels—thus savings of \$0.5 million have been assumed in the table. Yap's use of the infrastructure grant in FY05 is similar to that of Pohnpei at 14 percent of total state use of Compact grants. Increasing the level to the 30 percent requirement will necessitate a significant adjustment in FY06, although savings can be realized from more efficient budgeting and avoidance of overestimation of requirements. In subsequent years the phase-out of the use of the capacity building grant can be offset against the infrastructure requirement without incurring any significant net additional adjustment. Over the 5-year period Yap will be required to make a significant adjustment in FY06, which in fact overshoots the final requirement estimated for FY09. Achieving structural balance for Yap without revenue increases would require a 16 percent cut of the affected expenditure base.

National Government Table 9 shows that the only adjustment required is to meet the 30 percent infrastructure requirement. The national government has traditionally allocated little funding to infrastructure (except through Congressional projects) as most of these expenditures are incurred at the state level. However, since the 30 percent requirement will need to be met by each government, the national government will need to increase it's outlays on

Table 8 Compact adjustment in Yap State by type, FY05-FY09 (\$'million)

Yap ²	FY05 ¹	FY06	FY07	FY08	FY09
Compact grants	12.18	12.18	12.18	12.18	12.18
less decrement			-0.13	-0.26	-0.38
plus inflation adjustment		0.33	0.50	0.67	0.85
Compact grants inflation adjusted	12.18	12.51	12.56	12.60	12.64
Capacity Building Phase-Out			-0.45	-0.45	-0.45
Resources required to meet Infrastructure @ 30%		-1.70			
Public works maintenance phase-out	-0.75				
Funds released from inf. adj. and CB phase-out			0.48	0.48	0.48
Budget savings ³	0.50	1.00			
Annual adjustment	-0.25	-0.70	0.03	0.03	0.03
Cumulative Adjustment	-0.25	-0.95	-0.92	-0.89	-0.86

Note 1 FY05 = actual grant approved by JEMCO

- 2 Share of Compact funds = 16%
- 3 Over budgeting \$1.75m

Table 9 Compact adjustment for the National Government by type, FY05-FY09 (\$'million)

National ²	FY05 ¹	FY06	FY07	FY08	FY09
Compact grants	6.57	6.57	6.57	6.57	6.57
less decrement			-0.07	-0.14	-0.21
plus inflation adjustment		0.18	0.27	0.36	0.46
Compact grants inflation adjusted	6.57	6.75	6.77	6.80	6.82
Capacity Building Phase-Out					
Resources required to meet Infrastructure @ 30%		-1.27			
Public works maintenance phase-out					
Funds released from inf. adj. and CB phase-out			0.08	0.02	0.02
Budget savings ³		0.75			
Annual adjustment		-0.52	80.0	0.02	0.02
Cumulative Adjustment		-0.52	-0.44	-0.42	-0.39

Note 1 FY05 = actual grant approved by JEMCO

- 2 Share of Compact funds = 8.7%
- 3 Underestimation of revenues \$0.75m

infrastructure projects selected from the Infrastructure Development Plan. Overall the national government will need to make a once-off adjustment in FY06, but as in the case of Chuuk more accurate revenue forecasting indicates that on trend at least an additional \$0.75 million in revenues will be available. Thus achieving fiscal balance would require only a 2 percent cut of the affected expenditure base.

2.5 Tax Reform

- The preceding section outlined the magnitude and phasing of the fiscal adjustment the FSM state governments must undertake. The discussion indicated that revenue effort must play a central role in the overall fiscal adjustment effort. The adjustment required is so immediate for Pohnpei and Yap, and so extensive for Chuuk and Kosrae, that fiscal balance cannot readily be achieved through expenditure cutting alone, as was the case of the response to the second-step down of the original Compact. In the long-term enhanced revenue effort will be required as the real value of Compact flows decline and as the nation attempts to implement the Sustained Growth Strategy.
- At the present stage the FSM has the lowest tax-to-GDP ratio of all developing Pacific island economies with tax revenues being equivalent to just 10 percent of the size of the economy. Table 10 indicates the tax-GDP ratio and structure of the revenue regime in similar Pacific Island economies, and suggests there is significant scope for additional revenue effort in the FSM. However, increased revenue effort cannot be achieved with the existing, outdated tax regime without significantly distorting economic incentives. The FSM needs to reform tax administration and adopt a modern tax regime that will support economic development through the amended Compact period.

Table 10 Tax to GDP ration and structure of tax regimes in selected Pacific island economies

		Percent Total Taxes								
	Tax/GDP	Income Taxes	VAT	Trade Taxes	Sales Taxes					
Fiji	20%	33%	37%	30%	0%					
FSM ¹	10%	4%		30%	65%					
Kiribati	27%	37%		62%	1%					
Palau ¹	20%	26%		27%	46%					
Samoa	21%	21%	61%	17%	1%					
Solomon Islands	17%	30%		41%	30%					
Vanuatu	17%	0%	61%	38%	1%					

Note 1 For FSM and Palau sales taxes includes the Gross Receipts Tax (GRT)

2.5.1 Major Principles of Tax Reform

- A single modern and efficient tax administration serving the nation administered by an "FSM Unified Tax Administration" (FUTA), a body which would be independent from both the National Government and the States;
- 2. The implementation of a new modern nation wide tax regime that provides a powerful means to increase revenue effort in an economically efficient way that supports the development of the nation and shares the burden of taxation in an equitable way; and
- 3. A tax system designed to provide sufficient flexibility such that each government in the federation can operate an independent fiscal policy.

2.5.2 Establishment of a Unified FSM Tax Administration

At the heart of any FSM tax reform proposal must be the modernization and establishment of an efficient tax administration. The current administration at both the national and state levels duplicates functions and is ineffective. It is known to be inefficient and the institutional culture is not conducive to effective tax collection. The level of compliance (taxpayers that voluntarily pay their tax due on time) is very low compared with international standards, and the penalty system is outdated and enforcement weak. The undervaluation of imported goods and the underreporting of sales are common and costly in terms of revenue loss. Tax staff is under skilled, underpaid, and poorly managed due to the lack of performance assessment. The tax administrations are not client-oriented; a large amount of staff time is devoted to small hard-to-tax taxpayers, instead of being concentrated on large taxpayers. Tax reform should thus include the establishment of an "FSM Unified Tax Administration" (FUTA) on a similar legal basis to the FSM Social Security Administration. The FUTA would be estab-

lished by an Act of Congress and would be empowered to collect taxes on behalf of the national and state governments. Staff would be recruited on the basis of their qualification and priority, but preference would be given to current staff assigned to the national and states tax administrations for the same level of qualification.

- While the FUTA would be tasked to collect all taxes, both national and state, each administration would be permitted to set tax rates in their respective jurisdiction in order to permit an independent fiscal policy at the state level, a key objective of the reform. However, with the need to maintain a simple administrative structure and to avoid economic distortions between states, uniformity in imposition of regulations would be critical. An administrative system that enables a wide diversity in tax regimes in the four states of the FSM would be unmanageable.
- A major objective in the creation of the new institution would be to establish a modern, client-oriented, and efficient tax administration. External technical assistance would be needed to assist implementation, and contracts for employees would be issued on a performance basis and not limited to public service pay scales and regulations. It should be anticipated that a totally different institutional culture would be developed in comparison with the conditions that currently exist in the public service.

2.5.3 Reformed Tax Regime

- This section indicates the major elements of a modern tax regime that the FSM will need to consider as it implements the amended Compact fiscal adjustment and sustained growth strategy.
 - 1. **Introduction of a Valued Added Tax (VAT)**: A VAT would replace Customs Duties and State Sales taxes. The VAT would be a new tax but not an additional tax as the first objective is to replace the two inefficient and economically distorting taxes. It would be introduced at the customs and domestic consumption levels at the same time. The VAT should be an easy-to-administer, broad-based tax (applicable to goods and services with few exemptions), and with a single rate.

While all importers would have to pay the VAT on entry of goods into the FSM, only large taxpayers (those with an annual turnover of more than \$100,000) would be required to charge VAT on their customers. This will limit administrative and compliance costs. No more than around 200 large taxpayers for the four states would be VAT registered.

The single rate of the tax in each State would be determined by the needs of the State and National Government to finance the adjustments

in implementation of the amended Compact, needs to implement the Sustained Growth Strategy, and to provide sufficient yield to compensate the national government for the loss of the duties and States for the loss of the sales taxes.

Clearly, the successful introduction of a nation-wide VAT to meet the needs of both the National and State Governments will require careful coordination. This critical role would be achieved through the establishment of the FSM Unified Tax Administration. A VAT could be introduced through either of two approaches: firstly, the national government could legislate the VAT at the import level, and the states would be required to legislate the tax on domestic production. This approach would avoid any constitutional conflicts but would be administratively more complex. Secondly, the state governments could enact the VAT without national government involvement. This is consistent with the constitution as a VAT is neither an income nor an import tax.⁵

- 2. Excise duties: Excises are taxes levied on specific products (e.g., alcohol, tobacco, petroleum, motor vehicles), regardless of whether the origin is within the FSM or the goods are manufactured overseas. Excises are collected at the importation stage for imported goods or at the point of manufacture when locally produced. In both cases they will be collected by FUTA, and will form an important component of the reformed tax regime.
- 3. **Wages and salaries tax**: The existing wage and salary taxes withheld at source by employers works well, but is in need of reform to ensure fringe and non-cash benefits fall in the tax net.
- 4. A simplified net profit tax: The net profit tax would be designed to cover non-wage revenues and business income (individual or corporate) for businesses that have an annual turnover above the VAT threshold. There are currently no taxes on profits and non-wage income in the FSM. To ensure fairness and equity in the system the introduction of a simple net profits tax would be an important ingredient of the reform.
- 5. **Presumptive Taxation**: A presumptive tax would be levied on the turnover of the hard-to-tax population, mainly businesses that are not VAT registered, i.e. businesses with a turnover below the threshold and

In the second case while a VAT is collected on imports, it is subsequently rebated to VAT registered taxpayers. While economically it is clear that a VAT is not an import tax, it is not guaranteed the courts would uphold this interpretation, if the legality of the tax were contested.

- with poor bookkeeping records. This presumptive tax on limited taxpayers would be similar to the current GRT collected on all businesses.
- 6. **GRT**: The gross receipts tax would be abolished during the tax reform process.

2.6 Medium Term Adjustment Options

47 Three plans to resolve the amended Compact adjustment and transition requirements are outlined in this section. Plan A outlines a program of coordinated tax and administrative reform, largely through the introduction of a unified tax administration, net profits tax, and VAT. Since this plan emphasizes enhanced revenue effort to resolve the fiscal imbalance, expenditure cutting forms a minor part of the overall adjustment. Plan A comes in two flavors: (i) the national government legislates the collection of the VAT on imports, while the state governments legislate the VAT on domestic production, and (ii) the state governments legislate the introduction of the VAT on both imports and domestic production. In Plan B it is assumed that coordinated tax and administrative reform is not pursued and that each government has to fend for itself to make the needed adjustments through a mix of greater revenue effort and expenditure cutting. In this case expenditure cutting must take the lead role as state taxation authority would be insufficient to yield sufficient increases. In Plan C it is assumed that the National government increases national taxes, but that the overall increase in tax burden is identical in value to Plan A. In this case, due to revenue sharing, the states are still required to make a substantial reduction in expenditures, while the national government would achieve substantial revenue gains in excess of its required adjustment.

2.6.1 Plan A(i): Tax and Administrative Reform

- Table 11 indicates the structure of Plan A(i) and implementation of tax reform. The first two rows of the table indicate the total magnitude of the required adjustment and the current level of taxes received by each government, respectively. Under Plan A(i) it is assumed that a VAT of 8 percent is implemented. This is achieved through legislation of a 8 percent tax on imports by the national government and a matching 8 percent tax on domestic production by the states.
- Both components of the VAT would be administered in unison by the FSM Unified Tax administration. However, the VAT would need separate legislation enacted by each of the two layers of government. In the FSM import and income taxes are, by Constitution, the prerogative of the national government, while all other taxes, including a VAT on domestic value added, come under the jurisdiction of the state governments. While the separation of the jurisdiction of the VAT results in the need for careful coordination and a uniform

Table 11 Plan A(i) FSM Wide Uniform Tax Reform, FY09 (\$'million)

	Chuuk	Kosrae	Pohnpei	Yap	National	FSM
Amended Compact Adjustment	1.99	1.40	1.76	0.86	0.39	6.41
Current Tax Collection ¹	4.65	1.12	6.71	2.89	10.19	25.56
Tax rates						
VAT import rate					8.0%	
VAT domestic production rate	8.0%	8.0%	8.0%	8.0%		
Net Profits Tax	25%					
VAT						
VAT on imports	1.44	0.43	2.26	0.86	5.00	9.99
VAT on domestic production	1.44	0.40	2.29	0.95		5.08
Taxes on Goods						
Special Import Duties - National	1.43	0.46	1.67	1.17		4.73
Fuel - National ²	0.16	0.06	0.23	0.06	0.51	1.03
Excises - State ³	0.43	0.42	0.63	0.90		2.38
Income Taxes						
Wages ²	0.96	0.34	1.71	0.55	3.56	7.12
Net Profits	0.74	0.19	1.23	0.52	2.68	5.36
Plan A(i) Tax Yield	6.61	2.29	10.02	5.02	11.75	35.68
Additional Tax Yield	1.96	1.17	3.31	2.12	1.56	10.12
Current Administrative Costs	0.14	0.05	0.12	0.05	0.74	1.10
Tax collection @ 5%	0.33	0.11	0.50	0.25	0.59	1.78
Net Additional Administration Cost	-0.19	-0.06	-0.38	-0.20	0.15	-0.69
Revenue Shortfall	-0.22	-0.30	1.16	1.06	1.32	3.03
Expenditure Reduction Required	0.22	0.30	~	~	~	0.52
Expenditure Reduction % of Total	11%	21%	~	~	~	8%

Note 1 Before recent increases in "sin": taxes introduced by Congress November 2004

- 2 No change on current levels
- 3 Significant additional revenue effort in Kosrae

imposition by the FSM Unified Tax Authority (FUTA), it unambiguously complies with the FSM Constitutional constraints.

The tax reform program assumes that state level general sales taxes and the GRT would be abolished and the laws repealed; it would be replaced with a 8 percent VAT on imports and a 8 percent VAT on domestic value added. The majority of the VAT would be collected on imports on behalf of the national government by FUTA, and subject to the 50 percent revenue share. The current 3 percent import tax on food and 4 percent tax on imports of general merchandise would be replaced with a general 8 percent VAT on imports. The VAT on domestic value added would again be collected by FUTA, but this time on behalf of each state government. All of the VAT collected on domestic production would not be subject to revenue sharing and would directly add to state revenues. The estimated yield of the VAT is based on the data for the current level of imports, GRT, Social Security, and a recent business survey to provide value added estimates. Experience in other countries with the introduction of a VAT generally indicates that collections significantly exceed initial estimates based on pre reform administrative practices. It is worth noting that the introduction of

- a VAT preserves existing levels of national government tax revenues, and adds very significantly to current levels of state revenues.
- In order to balance the regressive aspects of a VAT the tax reform strategy includes the introduction of a net profits tax. A rate of 25 percent has been utilized so that the total tax yield is sufficient to meet the requirements of the amended Compact adjustment. The 25 proposed rate is modest by international standards and would permit greater revenue effort later during the amended Compact period as the real value of the annual grants decline. Administration of a net profits tax is more complex than the VAT, and tax reform may be more smoothly introduced if a phased approach was adopted with the introduction of the profits tax at a later stage.
- The tax reform package envisages that import duties levied on individual commodities (i.e. "sin" goods) with rates higher than 3 or 4 percent by the national government would be abolished and merged with the current state sales taxes on similar goods to form what is commonly called excises. This policy reflects the objective to pass to the state governments those taxes that can effectively be collected at both levels of government⁶, and thus to strengthen the powers of the state governments to operate an independent fiscal policy. Table 11 includes the impact of the recent legislation passed by Congress to increase the rate of tax on beer and cigarettes to 25ϕ a can and 50ϕ a pack, respectively. The tax reform proposal also includes a significant increase in excises in Kosrae where current tax effort is low and there is thus scope for greater effort.
- Under Plan A(i) it is not envisaged that there would be any significant increase in the yield of the existing wages tax, although minor changes in the tax would improve equity and the cost of administration. Also under Plan A(i) an estimate of the annual cost of operating FUTA is indicated at 5 percent of collections. At the present time most of the cost of tax administration is borne by the national government, but under the tax reform proposal this cost would be shared equally with the states. There is thus some additional cost to the state governments and savings for national.
- Bringing the picture together table 11 indicates that under Plan A(i) the tax reform scenario, the large majority of the cost of the adjustment is borne by additional tax effort. In Pohnpei, Yap and the National Government additional tax yields are generated, while in Chuuk and Kosrae a reduction in expenditures would remain. This results from the current weak tax administration in Chuuk and small size of the economy and low tax base in the case of Kosrae.

Although the national government is only empowered to collect taxes on imports and state governments may only collect excises on both imports and domestically produced commodities, this effectively amounts to the same tax base given the structure of the economy.

To conclude the discussion under Plan A(i)—tax and administrative reform—the onus has been on increasing tax revenues at the state level, while leaving the tax effort of the national government largely unchanged. This has the clearly desirable outcome that while the national government would need to support the tax reform initiative, it would not be the cause of the extra tax burden. The tax reform proposal will empower additional taxing capacity at the state level, but will also shift the political responsibility of raising taxes to the states. Future decisions about balancing expenditure cutting with revenue increasing to maintain long-term fiscal balance can be made by each of the five governments with a great degree of autonomy and flexibility.

2.6.2 Plan A(ii) Tax and Administrative Reform

In this variant of Plan A the tax reform strategy is identical to that outlined under Plan A(i) (see Table 12). The difference lies in the method of implementation of the VAT. Under A(i) it has been assumed that the national government imposes an 8 percent VAT on imports, while the states legislate an 8 percent VAT on domestic production. This approach is unambiguously compli-

Table 12	Plan A(ii) FSM	Wide Uniform	Tax Reform,	FY09	(\$'million)

	Chuuk	Kosrae	Pohnpei	Yap	National	FSM
Amended Compact Adjustment	1.99	1.40	1.76	0.86	0.39	6.41
Current Tax Collection ¹	4.65	1.12	6.71	2.89	10.19	25.56
Tax Rates						
Import duties (non VAT registered)					8.0%	
VAT domestic production rate	8.0%	8.0%	8.0%	8.0%		
Net profits Tax					25%	
Import tax (non VAT registerd)	0.14	0.04	0.23	0.09	0.50	1.00
VAT	4.04	1.16	6.36	2.51		14.07
Taxes on Goods						
Special Import Duties - National	0.72	0.23	0.84	0.58	2.37	4.73
Fuel - National ²	0.16	0.06	0.23	0.06	0.51	1.03
Excises - State ³	0.43	0.42	0.63	0.90		2.38
Income Taxes						
Wages ²	0.96	0.34	1.71	0.55	3.56	7.12
Net Profits	0.74	0.19	1.23	0.52	2.68	5.36
Plan A(ii) Tax Yield	7.20	2.44	11.22	5.21	9.62	35.68
Additional Tax Yield	2.54	1.32	4.51	2.32	-0.57	10.12
Current Administrative Costs	0.14	0.05	0.12	0.05	0.74	1.10
Tax collection @ 5%	0.36	0.12	0.56	0.26	0.48	1.78
Net Additional Administration Cost	-0.22	-0.07	-0.44	-0.21	0.26	-0.69
Revenue Shortfall	0.33	-0.15	2.30	1.25	-0.70	3.03
Expenditure Reduction Required	~	0.15	~	~	0.70	0.85
Expenditure Reduction % of Total	~	11%	~	~	178%	13%

Note 1 Before recent increases in "sin": taxes introduced by Congress November 2004

- 2 No change on current levels
- 3 Significant additional revenue effort in Kosrae

ant with the FSM constitution, which reserves income and import taxes for the national government and delegates powers to collect all other taxes to the states. However, it can be argued that the introduction of a VAT could be undertaken at the state level since a VAT is a consumption tax, which is neither an import nor an income tax. The VAT comprises a totality and the levy of tax on imports is rebated through the collection method. The VAT cannot therefore be considered an import tax as the incidence of taxation does not fall on imports.

Plan A(ii) thus outlines the impact of the tax reform package assuming the VAT is levied entirely at the state level. In order to compensate the national government for the loss of revenue, it is assumed import duties levied on individual commodities (i.e. "sin" goods) with rates higher than the prevailing 3 and 4 percent would remain with the national government. Table 12 indicates the impact of these changes. The outcome is more favorable to the state governments than under A(i), with Pohnpei a clear gainer. The national government would be required to make an expenditure adjustment of \$0.7 million under this scenario, but it could argued is better positioned than the state governments to absorb a shock of this magnitude.

2.6.3 Plan B State Level Adjustment

58 Under Plan B (Table 13) adjustment only occurs at the state level through a combination of increased revenue effort and expenditure compression. There is no tax reform or creation of a FUTA, and administrative capacity is

	Chuuk	Kosrae	Pohnpei	Yap	National	FSM
Amended Compact Adjustment	1.99	1.40	1.76	0.86	0.39	6.41
Current Tax Collection ¹	4.65	1.12	6.71	2.89	10.19	25.56
Tax Rates						
State sales taxes	5%					
Import tax	1.24	0.39	1.68	0.92	4.22	8.45
Fuel tax	0.16	0.06	0.23	0.06	0.51	1.03
Wages	0.96	0.34	1.71	0.55	3.56	7.12
GRT	0.90	0.27	1.37	0.54	3.08	6.17
State Excise 2	0.96	0.42	1.55	0.99		3.91
State Sales	1.31	0.36	2.24	0.93		4.85
Plan B Tax Yield	5.54	1.84	8.77	3.99	11.38	31.52
Additional Tax Yield	0.89	0.72	2.05	1.10	1.20	5.96
Revenue Shortfall	-1.10	-0.68	0.29	0.24	0.80	-0.45
Expenditure Reduction Required	1.10	0.68	~	~	~	1.78
Expenditure Reduction % of Total	55%	48%	~	~	~	28%

Table 13 Plan B State Level Adjustment, FY09 (\$'million)

Note 1 Before recent increases in "sin": taxes introduced by Congress November 2004

² Significant additional revenue effort in Chuuk and Pohnpei, compared with Plan A(i)

assumed to remain weak. Changes in excises that were assumed to occur in Kosrae under Plan A are also undertaken in Plan B, and it has been assumed that an ambitious program of additional revenue effort is also attempted in Chuuk and Pohnpei. The main difference in tax policy is that each state levies a 5 percent state sales tax. In the case of Chuuk state this implies no change as the state already levies a 5 percent sales taxes. In Pohnpei there is currently a 2 percent general sales tax on food items, and 5 percent sales tax on general merchandise. It is assumed that the 2 percent food tax is increased to 5 percent. In Kosrae and Yap there is a minimalist 1 percent general sales tax, and both states thus have capacity to increase revenue effort. Overall it was assumed that 5 percent was the maximum rate of sales tax that could be applied, although in some U.S. states slight higher rates apply.

Overall under Plan B an additional \$6.0 million of taxes are generated, which includes the recent increases in "sin" goods legislated by Congress. While the result comes close to the \$6.4 million required a significant adjustment remains, and would require reduction of expenditures. Chuuk and Kosrae state are the worst affected under this scenario and are required to reduce expenditures by 55 percent and 48 percent, respectively. This reflects weak tax administration and low tax base. In both Pohnpei and Yap state the additional tax effort is sufficient to offset the required amended Compact fiscal adjustment.

2.6.4 Plan C National Government Undertakes Greater Revenue Effort

- Under Plan C it is assumed that the national government raises taxes under its jurisdiction to assist the adjustment with an overall increase in revenue effort equivalent to Plan A and the tax reform strategy. It has been assumed to meet this yield that the GRT is raised from 3 to 5 percent, import taxes on general merchandise are raised from 4 to 10 percent and the level of import duties on individual commodities ("sin" goods) reflect the recent changes legislated by Congress. The impact of these changes shown in Table 14 is mixed and the result uneven. In Chuuk and Kosrae the brunt of adjustment must be made through expenditure compression, which is 27 and 67 percent of the total adjustment required. In Pohnpei and Yap the additional yield largely offsets the fiscal adjustment required.
- Not surprisingly, given the implications of 50 percent revenue sharing, the national government not only meets its revenue needs but also generates an excess revenue yield of \$4.8 million. This outcome clearly indicates the need for revenue reform, and the adoption of a regime that enables each government to set tax rates at levels suited to need. Of course, it maybe argued that a mix of adjustment at the state and national levels i.e. Plan B and Plan C would provide a closer fit. However, revenue capacity at the state level would still remain weak given the concentration of taxing power with the national government, and the system would still tend to generate surplus revenue where the need is less.

Table 14 Plan C National Government Enhances Revenue Effort, FY09 (\$'million)

	Chuuk	Kosrae	Pohnpei	Yap	National	FSM
Amended Compact Adjustment	1.99	1.40	1.76	0.86	0.39	6.41
Current Tax Collection 1	0.33	0.11	0.50	0.25	0.59	1.78
Tax Rates						
GRT	5.0%					
Import tax rates						
Food	3.0%					
Merchandise	10.0%					
Import tax	1.74	0.55	2.53	1.32	6.14	12.28
Food	0.20	0.05	0.28	0.06	0.58	1.17
Merchandise	0.82	0.28	1.42	0.68	3.19	6.38
Special Import Duties	0.72	0.23	0.84	0.58	2.37	4.73
Fuel tax	0.16	0.06	0.23	0.06	0.51	1.03
Wages	0.96	0.34	1.71	0.55	3.56	7.12
GRT	1.50	0.46	2.28	0.90	5.14	10.28
State Excise	0.43	0.12	0.63	0.90		2.09
State Sales	1.31	0.05	1.52	0.22		3.10
Plan C Tax Yield	6.11	1.58	8.90	3.95	15.35	35.89
Additional Tax Yield	1.45	0.46	2.18	1.06	5.16	10.33
Revenue Shortfall	-0.54	-0.94	0.42	0.20	4.77	3.92
Expenditure Reduction Required	0.54	0.94	~	~	~	1.47
Expenditure Reduction % of Total	27%	67%	~	~	~	23%

Note 1 Before recent increases in "sin": taxes introduced by Congress November 2004

2.7 Long Term Adjustment

- The forgoing analysis indicates the magnitude of the medium-term fiscal adjustment required to meet the provisions of the amended Compact, and outlines a series of possible responses. However, the amended Compact entails continuing adjustment over the longer term as the annual decrement of \$0.8 million and lack of full indexation erode the real value of the annual transfers. The FSM thus needs a tax and revenue system that will provide a powerful and flexible system over the long-run for the next 20 years. Under both Plan B and Plan C, the greater revenue effort from indirect taxes approximates the maximum revenue effort that the economy could sustain without distorting economic incentives.
- Efforts to raise taxes beyond these levels could be undertaken either through increasing the VAT rate indicated in Plan A, increases in the rate of the net profits tax, or greater personal income taxes. In Europe and elsewhere VAT rates of 17.5 20 percent are not uncommon. Rates in the range of 10 12.5 percent prevail in the Pacific island states with the VAT. In the FSM a rate of just 8 percent would be sufficient to accommodate the needs of the medium term fiscal adjustment. This is below the regional average, and there would clearly be additional scope to raise rates should the need arise. For example a VAT of 15 percent would yield an additional \$12 million or 5 percent of GDP. Higher

rates of the net profit tax would also provide additional yield, but increasing the rate from 25 to 40 percent would only generate \$3 million, and the additional yield would not be great.

Analysis presented earlier in this chapter on the economic impact of the three development scenarios presented at the 3rd FSM economic summit, also permits estimation of the required tax yield in the long-term as the economy adjusts to the declines in real Compact funding (see Figure 8.) Under all scenarios, there is an immediate required increase in revenue effort, equivalent to about 3 percent of GDP. However, from this point on the trajectories differ markedly. Under the sustained growth scenario, the positive effects of economic growth kick in, and the economy generates a level of additional revenues greater than required to support the projected level of government consumption (the incremental tax-GDP ratio turns negative.) Under all scenarios government expenditures are projected to remain constant in real terms, although increases in education and health are built in to support growth in the population. Under the sustained growth strategy the need for domestic resource mobilization has been conservatively estimated, and it could be assumed that the projected increase in revenue generation would be needed to support additional investment in infrastructure. However, the point is made that adoption of a more aggressive growth strategy, while requiring painful reforms, in the longer term pays a significant dividend. Figure 8 also indicates the consequences of failure to adopt

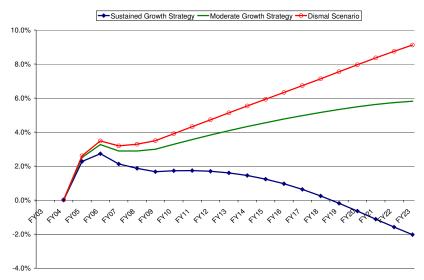


Figure 8 Incremental Tax-GDP ratios incurred under the three growth scenarios, FY03-FY23 (1998 prices)

the sustained growth strategy. Increased revenue effort becomes an increasing burden on a sluggish economy, and under the dismal scenario revenue effort would need to nearly double the existing tax-GDP ratio. Since the revenue reform is not part of this scenario long-run fiscal adjustment would need to reply almost entirely on expenditure cuts.

2.8 Macroeconomic Policy

- To conclude this chapter the following set of macroeconomic policies will be adopted:
 - 1. The FSM will take measures to develop and implement the Sustained Growth Strategy (SGS) adopted at the 3rd FSM Economic Summit:
 - Upon adoption of this Plan by the Congress of the FSM the President will request the donor community to convene a Consultative Group of donors meeting.
 - b. At the CG meeting a request will be made to the donor community for technical assistance to prepare a reform program consistent with the objectives of the SGS.
 - A-mini Summit will he convened where the SGS will be presented to the FSM for adoption.
 - The FSM will maintain macroeconomic stability through adoption of fiscally responsible policies:
 - a. Implementation of the amended Compact and fiscal adjustment in the medium term will be undertaken through a well-coordinated program of tax reform and expenditure reduction.
 - b. Public expenditures will be targeted at a level to support the needs of the FSM economy in an efficient and effective manner that is consistent with medium term fiscal balance.
 - c. Tax reform will be implemented and based on two principles: (i) tax administration strengthening to establish a modern and efficient administration with a culture conducive to effective revenue collection, and (ii) a tax regime based on modern taxes that will support the development of the nation and implementation of the SGS.
 - d. The FSM will implement a medium term expenditure framework (MTEF) based on sustainable revenue projections.
 - The FSM will maintain a prudential external debt policy based on concessional external borrowing and consistent with the nation's capacity to service debt from local revenues.

3 Private Sector Development

3.1 Private Sector Review

This chapter begins with a review of the performance of the private sector in the FSM during the original Compact period from FY1987-2003 with a special focus on the recent period since the 2nd FSM Economic Summit in 1999. Section 1.2 outlines the key inter-relationships between macroeconomic management and private sector development. Section 1.3 describes characteristics of the factor markets for labor, land and finance in the FSM while also highlighting particular constraints to accelerated private sector growth in the future in the face of declining Compact transfers. Section 1.4 describes the environment faced by domestic and foreign investors and the status of the entrepreneurial skill base within the FSM. Section 1.5 addresses the impact of trade and tax policies on the private sector's potential for outward-oriented growth. Section 2 provides a description of the recommended strategic goals to promote private sector development. Section 2 also looks forward to assess the constraints that need to be overcome in order for the FSM to achieve its vision of having a growing, private sector-led economy. Section 3 provides the core elements of the strategic planning matrix that will be the subject of extensive review and modification during the upcoming 3rd FSM Economic Summit (note: this matrix will be further detailed in meetings with national and state-level officials and select private sector stakeholders during a pre-Summit workshop on March 18-19, 2004).

3.1.1 Description of the Private Sector and Recent Performance

- 2 Similar to the economies of other Pacific Island nations, the FSM has seen a shift from subsistence production to market-oriented production. Since the outset of foreign influence there has been an influx of traders, planters, whalers, fishermen, and others to take advantage of commercial opportunities. Commercial opportunities have changed dramatically over time. While foreign involvement prevailed initially, the market economy is increasingly driven by Micronesian entrepreneurs and formal sector workers.
- Since the outset of the Compact of Free Association (Compact) in FY1987, the FSM economy benefited from a large infusion of cash transfers channeled through the national and state governments. The nature of these transfers and the incentives faced by the legislators responsible for appropriating the use of Compact funds—together with limited domestic revenues—had a profound impact on the course of private sector development over the period FY1987-2003. On the positive side, the Compact enabled the income levels of Micronesians to rise and resulted in expansion of the formal economy. On the negative side, the structure and terms of the Compact economic assistance package favored a state-

led development strategy that, at least through the first decade of assistance, did not provide an economic environment supportive of outward-oriented and internationally competitive private sector development.

- 4 The higher income levels supported by Compact funding resulted in substantial changes. Participation of individuals and families in subsistence production declined, while participation in the formal economy increased. Increasing taste and preference for imported foods and other goods resulted in increased consumption of imported goods. These imports were, of course, financed from the cash transfers available to the economy through the Compact, most significantly through growing rising wages of an increasingly large government workforce.
- 5 The commercial response to increased domestic demand was impressive. The private sector was able to grow at a moderate rate over the whole Compact period despite declines in the real value of Compact funding.
- Table 1 shows that over the whole period from FY1987-2003, the private sector grew at an average real (inflation-adjusted) rate of 2.9 percent annually. This growth occurred despite the fact that the contribution of government to GDP (essentially wages) was declining over the same period by -0.6 percent annually. The table also shows that the private sector growth was concentrated during the early period from FY1987-1995, indicating a reliance on the expansive fiscal policy funded out of the more generous Compact transfers available to the five governments during that period. Notably, the private sector growth during the most recent period, FY1999-2003, recovered and is again outpacing growth of the government sector.
- Figure 1 shows the growth performance of the economy as a whole and of the private sector and government annually over the Compact period to-date. Again, the outstanding performance during the early period is evident. Similarly the severe impact of the fiscal adjustment required by the FSM at the time of the second Compact stepdown is also clearly shown. Private sector activity declined five consecutive years from FY1994-1999. As noted in Chapter 1, the FSM governments ramped up expenditures excessively and failed, with only one state

Table 1 Real Growth Rates by Sector and Compact Period

	Compact Period To-Date FY1987-2003	Early Compact Period FY1987-95	Adjustment Period FY1995-99	Recent Compact Period FY1999-2003
Private Sector	2.9	6.5	-4.6	3.6
Public Enterprises	6.0	15.1	-9.2	4.9
Government	-0.6	1.4	-7.4	2.6
Non-Government Organizations	5.1	2.6	6.2	9.0
All	1.6	3.9	-3.9	2.6

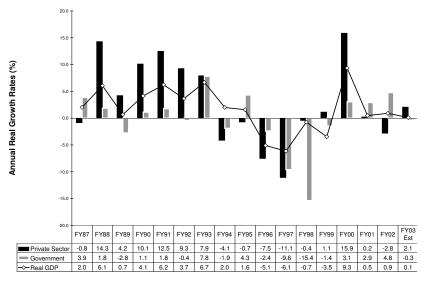


Figure 1 Real Growth Rates

excepted, to reserve funds to smooth the adjustment to the Compact's front-loaded funding structure. While the private sector was able to grow over the whole period, the susceptibility to fiscal shock is clearly shown by the poor performance during the period from FY1994-1999.

- 8 Private sector growth was a result of two factors. First, there was a shift of some non-market production to market production in the monetized economy; such transformation is, to a significant degree, a once-off transition wherein activities previously not recorded in the national accounts are now captured. The second category of growth resulted from actual, albeit modest, improvements in the environment for private activity. The growth was predominantly in the production of non-traded goods and services. In the future, growth of the private sector will need to be driven by increases in production in those activities producing competitively traded goods and services. The policy implications of targeting such outward-oriented growth are outlined in section 2 below.
- 9 The need to grow the productive sectors is compelling. As of 1996 private sector activity was so dominated by non-traded activity that the output from the priority sectors of agriculture, fisheries and tourism amounted to just 5 percent of total GDP. Thus the challenge of growing the private sector—which is just under one-third of the economy—at a rate sufficient to produce jobs and entrepreneurial opportunities is daunting, indeed. Given the fact that the structure of

amended Compact assistance will result in declining real transfers over the next 20 years, the FSM cannot rely on an expanding government to support growth.

10 The role of the government in the economy of the FSM has been and continues to be large even relative to other small, Pacific Island nations. The government was the largest sector in the economy from FY1987-2000, supported by large Compact transfers directly to national and state governments. The private sector, which was 27 percent of GDP at the outset of the Compact, was 31 percent of GDP during FY2001-2003 (see Table 2). Government contribution to GDP declined from 39 percent to 28 percent over the same period. The table also shows significant difference across the four states. Notably, Yap made the most progress in reducing the importance of the government and increasing the role of the private sector.

a Policy Developments since the 2nd FSM Economic Summit

- 11 At the 2nd FSM Economic Summit in 1999 the participants endorsed an approach to promote private sector development strategy by following the five principles outlined below:
 - Develop competitive markets through a sound macro-economic environment and efficient and competitive for the means of production: land, labor and finance and for product markets, especially exports;
 - Develop efficient transactions or exchanges in these markets through awareness building and information dissemination on procedures, prices, clear and property rights, enforcement of contractual obligations, and systems for dispute resolution;
 - Develop effective public agencies and administration to promote good governance in business, provide information and capacity building services, regulate as necessary while streamlining approval processes, mini-

Table 2 Structural Change: Government and Private Sector Contribution to GDP

	Early Compact Period avg. FY1987-89		Recent Compact Period avg. FY2001-2003		
	Government	Private Sector	Government	Private Sector	
Chuuk	38%	25%	29%	27%	
Kosrae	44%	30%	33%	34%	
Pohnpei	37%	29%	28%	31%	
Yap	35%	23%	21%	37%	
FSM	37%	27%	27%	31%	

- mize government involvement in commercial and service activity through effective public enterprise reform;
- Provide an efficient and cost effective infrastructure to support private sector development through the provision of efficient social services (health and education), and physical infrastructure;
- **Commitment to economic reforms** to build investor confidence.
- 12 The agreement on principles was augmented by the adoption of a private sector development policy matrix that specified: (i) policy elements, (ii) strategies, (iii) programs and activities, and (iv) responsibilities for implementation. The follow-up actions from the 2nd Summit were extensive in late 1999 and through 2000; in particular, the ADB fielded a Project-Preparatory Technical Assistance (PPTA) team to design the Private Sector Development (PSD) project and program loans. This loan was designed to follow immediately after the completion of the Public Sector Reform Program (PSRP), which focused more on fiscal austerity and public sector downsizing.
- 13 Consistent with the 2nd FSM Economic Summit outcomes and at the request of the national and state governments, there was a clear need to focus on private sector promotion. Thus the PPTA team utilized the 2nd Summit private sector policy matrix as the guiding document. Unfortunately, the PSD loans were delayed in approval from the targeted start-up in late 2000 to actual project inception in April 2003. A considerable amount of momentum was lost, and in the intervening period there was very little progress made in implementing reforms to promote private sector development.
- An additional factor leading to general uncertainty with respect to the economic prospects for the nation was the end of guaranteed funding under the original Compact terms and conditions. In effect, the attention of the FSM leadership was focused on the lengthy Compact negotiations extending over a period from 1999-2003. The collective focus on policy reform implementation was diminished throughout that period. While the start of the ADB-sponsored Private Sector Development Program in FY2003 is a good sign that reforms to improve the policy regime will be given renewed attention, there was very little to show in terms of land, labor, or capital market reforms over four years preceding the 3rd FSM Economic Summit.

3.1.2 Macroeconomic Policy and the Private Sector in the FSM

15 The macroeconomic tools available to FSM policy makers to manage the economy and to adjust to domestic or external shocks are extremely limited. With the use of the US dollar as the official currency and with no domestic debt instruments with which to affect interest rates or monetary aggregates, macroeconomic management in the FSM is virtually limited to fiscal policy.

a The Primacy of Fiscal Policy

- Not only is the burden of macroeconomic management largely restricted to fiscal policy, but, in practice, the burden of adjustment has been largely focused on expenditure policy. The fiscal expansion of the early Compact period led to rapid growth of recurrent expenditures, in particular on wages. More recent fiscal adjustments required austerity and were affected predominantly through expenditure cutting, falling heavily on wages, as well.
- During the original Compact period a large portion of FSM annual revenues fell outside of direct policy control. Compact receipts ranged between 53-65 percent of total annual revenues. These transfers were virtually guaranteed through the "full faith and credit of the US Government" under a Treaty obligation. An additional major source of revenue was from fishing access fee receipts, ranging from 8-13 percent of total annual revenues. These access fees varied largely with fish price and catch factors and are not readily subject to fiscal fine-tuning on an annual basis.
- Revenue sources that were subject to direct policy control were taxes and non-tax revenues such as user fees and other charges. Tax revenues ranged from 7-20 percent of total annual revenues, increasing as a share of revenues over time with modest policy intervention and economic growth, as well as declining Compact transfers. Non-tax revenues aside from fishing access fees were never large and actually declined as government activities were corporatized. In FY2001-2003 this component of the revenue structure averaged 3% of total annual revenues.
- Revenue measures have been few and far between, due to weak administration of a tax regime that is little changed from that which was inherited from the Trust Territory Administration at outset of self-government in 1979. Constitutionally inflexible revenue-sharing provisions between the national and state governments also limit the ability of policy makers to implement revenue policies. The nature of the amended Compact economic assistance provisions, declining in real terms over twenty years, implies that there will need to be considerable attention paid to the revenue component of fiscal policy. There are severe implications for private sector development with respect to the nature of revenue reforms that will be implemented over the medium-to-long-term. The strategic planning matrix for private sector development thus highlights the need to address economic efficiency concerns and avoid distortions.
- 20 Given the structure of the FSM economy and the heavy reliance of policy makers on expenditure policy to adjust to shocks, the impact of such shocks on the government translates directly into impacts on the private sector. In the case of a negative fiscal shock, government expenditure cuts on goods and services tends to bear the brunt of adjustment. In the past, positive fiscal shocks, al-

though few, led to expenditure increases that were skewed toward wages. Perhaps more importantly, the effect of fiscal shocks on the private sector has been magnified where fiscal policy failed to make timely and transparent adjustments. This has been most pronounced in two fiscal crises in the state of Chuuk and a brief review follows.

b The Impact of Financial Instability on the Private Sector

- 21 It is worth noting briefly the impact on the private sector of fiscal mismanagement and failure to adjust to fiscal shocks by policy makers in Chuuk in FY1994-96 and again in FY2000-2001. In both periods of financial crisis, the causes were two-fold: first, annual appropriations exceeded revenues, largely due to over-optimistic projections of revenues; and second, expenditures exceeded appropriated levels, largely due to uncontrolled offshore medical referral expenses, but also due to unauthorized expenditures arising from poor management and ineffective financial controls. In Chuuk as in the other states, the private sector relies significantly on the government for prompt payment for goods and services delivered. Retail businesses and the banking system also rely heavily on payments withheld from government employee wages to repay consumer loans (these automatic deductions from gross wages are called allotments).
- In the other states, when a fiscal adjustment was required, the private sector suffered the indirect, macroeconomic effect of reduced demand in the economy. In Chuuk, the private sector suffered that effect plus the direct effect of a failure of the allotment payments system and a build up of arrears for goods and services already provided. The crisis was compounded by the impact on the banking system. When Chuuk state government withheld employee allotments, the loan portfolio for the two commercial banks operating there was severely affected. Both banks ceased lending to government employees and to businesses that did a significant portion of their business with the government. In 1996, this led to a 70 percent reduction in outstanding loans. In 2000-2001, there was a reduction on the order of 50 percent of total loans. Thus government, by forcibly financing its deficits to maintain cash flow off the backs of employee wages (allotments) forced the private sector into a massive contraction. The recovery from the initial crisis took about three years and the recovery from the most recent crisis is still underway. Strategic goal 1 outlined below is particularly important for the Chuuk state economy given the recent history of instability.

c The Special Need for Efficient and Flexible Markets for Labor, Land and Finance

23 Given the reliance of policy makers on fiscal policy alone, together with the absence of sufficient fiscal reserves (or borrowing capacity) to enable the government to undertake counter-cyclical policies, the private sector can expect little insulation from inevitable shocks to the economy. Thus, even more than

would be the case in many of its Pacific Island neighboring countries, the FSM requires substantial flexibility in its factor markets. In particular, without the ability to affect real wages through exchange rate policy, real wages, and even nominal wages need to be flexible in the FSM. Real wages in both the public and private sectors have generally moved in the expected direction—upward in times of economic expansion and downward during recession. However, the relative wage between the public and private sector has moved in the wrong direction as further discussed in section 1.3.1 below. Furthermore, the important ratio of wages in the sectors producing traded goods and services versus wages in the non-traded sectors has almost surely not adjusted to improve the competitiveness of the FSM for the production of traded goods.

- The financial market in the FSM is relatively market-oriented; however, there is an extreme degree of concentration in the commercial banking sector and financial sector development has stagnated since the mid-1990s. The banking sector competitiveness issue is addressed in greater detail in chapter 1.
- Looking forward, it is expected that the banking sector, which has a surplus of loanable funds, will increase lending as a result of two important factors. First, the completion of amended Compact negotiations puts an end to the high degree of uncertainty that constrained lending recently. Macroeconomic stability is well protected and the economy is unlikely to suffer any sustained or large-scale negative shock. The second important factor is that governments will not have the same level of funds available to provide grants for activities that would have otherwise created demand for business loans, and the government will neither be investing in commercial enterprises nor maintaining the level of subsidies earlier provided to public enterprises. This, too, should increase the effective demand for lending from the commercial banks and the FSM Development Bank.
- The market for land in each state is entirely unrelated to markets in the other states. In all states the market for land is characterized by few transactions, limited market information and no formal mechanisms for public dissemination of market transaction data, and price demands from (often multiple) landowners. As a result of these conditions, together with prevailing cultural factors influencing the perceived value of land, it can be said that transactions are only partially influenced by economic market forces and the potential productive value of land. Distortions and rigidities in land market transactions will be difficult to reduce and change will undoubtedly be gradual. A focus on public education and information dissemination may result in accelerating progress.

3.1.3 Description of Factor Markets in the FSM: Issues and Constraints

a The Labor Market—Distortions and the Need for Qualitative Improvements

i Distortions

- The labor market in the FSM is relatively free from regulatory distortions and institutional rigidities. There are currently no unions in the FSM and no indexation of wage rates (until FY1999 there was no consumer price index). The state and national governments set a "minimum wage" by law, but in all but Pohnpei, this binds only the Government as in each case the legislated minimum is set at the lowest pay level on the civil service pay scale. The private sector minimum wage for Pohnpei is \$1.35, but this rate appears to be non-binding as local employers are not vocal and tend to set entry level wages above that rate. There are two factors, however, that do distort the market for labor in the FSM.
- The first distorting factor is the high level of public sector wages relative to private sector wages. This is a result of the manner in which Compact transfers from the US have been appropriated by the national and state governments to fund a large and relatively well-paid government workforce. Just as the booming of the oil and natural gas extraction sector of the Netherlands led to a shift of labor and capital resources to the booming sector and led to widespread decline in competitiveness of the previously well developed manufacturing and services sectors in what has come to be known as the "Dutch Disease" effect. The FSM had a booming government sector from the outset of the Compact in FY1987 through the initial decade of assistance. Not surprisingly, talented workers were attracted to work in government and the wage pressures spilled over, making the FSM less competitive in the production of traded goods for domestic and external markets.
- The relative wage distortion issue was addressed in the economic Summits with the policy objective of reducing the differential in real wages; however, the differential has actually increased over time. For the FSM as a whole, the average real public sector wage in constant 1998 prices fell from \$8,413 at the outset of the Compact (FY1987-90) to \$8,007 at present (FY2000-03). For the same two periods, average real private sector wages fell from \$4,253 to \$3,844. Thus the differential ratio of average public to private sector wages increased from 1.98:1 to 2.08:1. While the skill and experience base of the employees working in the two sectors are not directly comparable in aggregate, the differential clearly affects both wage demands and the allocation of trained workers.
- 30 The second labor market-distorting factor is the ease of migration to high wage locations, such as Guam, Commonwealth of the Northern Marianas, Hawaii, and mainland US. This ease of migration, ostensibly limited to migrants to secure employment or to take advantage of educational opportunities, is seen as

a valuable right of FSM citizens negotiated as an important part of the original Compact and re-affirmed under the amended Compact.

- There is no direct policy response proposed to eliminate this market distortion; however, there is a need to ensure that the FSM as a nation minimizes the negative impact of emigration on the FSM society and economy while maximizing the benefits from its special relationship with the United States. FSM will need to devise a human resource development strategy and develop related policies to gain the best advantage from the access of Micronesians to these labor markets. Remittances are not yet an important macroeconomic factor, but there is potential for remittances to grow and sustain FSM income levels even as amended Compact flows decline over time.
 - ii Improving Human Resource Development Linkages to Labor Market Requirements
- Ack of skilled labor and staff in areas of potential comparative advantage for private sector production will limit the extent to which the private sector can expand its activities. While government attracted much of the better-qualified labor pool when it was expanding, say through FY1996, competition with the private sector for labor resources has been negligible in the period since then. However, labor scarcity is likely still a constraint for private sector expansion due to a lack of (or inappropriateness of) vocational and training courses. There is no effective training for the agriculture sector. Training for tourism is more available, especially in Pohnpei; however, operators comment on the lack of high-quality, skill specific training of relevance for their tourism operations. For the fisheries sector, the National Government has invested heavily through the College of Micronesia-FSM to establish a Marine Training capacity, but results to-date remain disappointing.
- 33 In general there is limited and probably declining access to vocational and technical training in the FSM. Perhaps most importantly, there is need to improve the coordination and information flow between the private sector and the training institutions.

b Land in the FSM—the Challenge to Bring More Land into Productive Use

- i Land Tenure System Constraints on Economic Use
- 34 Land is managed under a complex mix of modern and traditional systems. However, the majority of transactions in commercially important areas and for commercial ventures in other areas transpire with survey, titling and documentation completed under modern land management institutions. Chuuk is an exception, due to long-standing unresolved disputes between individuals and clan

groups. Disputes also arise periodically in the other states and often take an inordinately long period of time to resolve.

- 35 Land matters are subject to state laws and not national law by the FSM Constitution. Improvements in mortgage laws, leasehold mortgages, and land management in general require actions within each state. The PSD project aims to improve all of these, but only Chuuk State has taken action to-date, by passing leasehold mortgage law but not yet promulgating regulations to implement the law.
- The limited land area in the FSM, growing population, and increasing integration with the market economy is placing ever increasing pressure on the traditions of ownership, and needs for improved security of rights and land management. The evolution of ownership patterns toward individual titles, while varying by State, is advanced in the FSM compared to many Pacific countries. In Kosrae, Chuuk and Yap land rights may be legally sold to FSM citizens. In Pohnpei land can only be sold to Pohnpeians. The FSM Constitutions forbids the ownership of land by foreigners, but they are permitted to lease land. Multiple ownership of land still exists throughout the FSM—requiring the consensus of families, clans and traditional leaders for leases and development. This may or may not present a constraint to development depending on the ability to achieve consensus. Specific problems are as outlined below:
 - Limitations in systems to support individual titles: A concern is the suitability of systems needed to support evolving land tenure based on individual titles and rights. Effective institutions and systems are needed for land titling and registration, land purchase and leasing, mortgaging and increasing public understanding and awareness. Weak systems have resulted in: (i) constraints in accessing government and private land for productive and investment purposes; (ii) barriers to new business entry; (iii) obstacles to long-term, land or lease-secured lending; and (iv) distorted allocation and of land use patterns. The extent to which land can be leveraged and mortgaged is important for increasing productive activity and incomes. Land assets that become locked outside the modern market economy cannot be leveraged or redeployed for production. The overall effect is that many landowners are asset rich and income poor.
 - Slow titling and registration: the FSM uses a compulsory, systematic adjudication and registration system aiming for a complete survey of FSM lands and registration of title. Financial constraints, insufficient and inefficient staff, lack of training, poor equipment (with the exception of Pohnpei) and mobility, failure of proprietors to register land transfers in the past, boundary disputes and absence of witnesses, and a cumbersome adjudication system means that survey and titling targets have simply not been met. Land registers are therefore incomplete, out-of-date, and in

some cases in a state of deterioration. Loss of existing records would be catastrophic. The recent fire destruction of the Chuuk land management office demonstrates the risk. It is not yet known what records were lost in that event.

- Inefficient land markets: As sales require and result in individual titles, the ability to understand and manage land use and transfer processes from owner and buyer perspectives is important. This includes how to arrange finance and lease land or to sell it for a fair price. Lack of information on prices paid and land values can confound owners and buyers. There is no public (or private) dissemination of land transaction information.
- Restrictions on leases: Restrictions on the length of leases may give insufficient time for investors to realize an adequate or competitive return on an investment. The lessors often do not understand the nature of leases and the different ways in which rents can be charged to ensure the intended use of the land, provide a fair income to the landlord, and security of tenure for the lessee. Lease conditions may not be in the best interests of either party.
- Limitations on the use of secured loans raising lending risks: Currently, only the FSM Development Bank, and housing authorities are permitted to directly secure loans through mortgages. Foreign commercial banks are not permitted to own land and therefore cannot arrange mortgage secured lending. The alternative, Deeds of Trust, are often poorly understood by borrowers and considered a second best by banks. This limits the options on loan foreclosures and therefore increases the risks from poor loan management and default, and limits the access to commercial finance for development.

c The Financial Sector—the Need to Improve the Risk and Cost of Lending to the Private Sector

- Description of the Commercial Banking Sector and Reforms To-Date
- 37 The two commercial banks, the Bank of Guam and the Bank of the FSM, are regulated by the US Federal Deposit Insurance Corporation. This regulation carries with it the benefit of deposit guarantees up to \$100,000 per account, as well as a high degree of confidence in the banking system in general.
- 38 The FSM Banking Commission also provides oversight through both offsite and on-site supervision. Banking statistics are well managed and compliance in reporting is ensured by active oversight. The banking statistics are compiled and provided to the government on a monthly and quarterly basis. The

Banking Survey (a summary of gathered statistics) is published quarterly in the newspaper, providing for considerable transparency.

- 39 The two commercial banks are well capitalized. The commercial banking system has adequate funds to expand lending, but there has been a decline in lending for both business and consumer loans.
- 40 The effects of the 2000-2001 Chuuk financial crisis were severe, but have been largely reversed through payments from the state. The practice of public sector employees repaying loans through payroll deductions (allotments) has been negatively impacted by Chuuk State's use of such amounts to finance deficits (in 1995-96 and again in 2001). Some bad loans persist as Chuuk and Pohnpei State government's both allowed employees to cancel allotment agreements for loans. While neither Bank faced a solvency threat, there has been an impact through reduced access to credit for a broad category of government employees, though the allotment practice is still utilized. The impact on balance sheets spilled over into reducing credit to enterprises.
- 41 The Bank of Guam is a branch of a US-based bank while the Bank of FSM has well-established correspondence bank relations that make foreign exchange transactions smooth and relatively well priced. Other services of relevance to the private sector, such as wire transfers, letters of credit and trade credits, are available, though at relatively high cost.
- 42 The Bank of the FSM is owned by the national and state governments (aggregate ownership of over 90%), however, with multi-government ownership and sound governance structures, it operates without significant interference and on commercial principles. Efforts to sell government shares of the Bank of the FSM have not been active over past five years.
- 43 Since 1997 deposit and lending rates have been effectively determined by market forces, at least to the extent limited competition allows. The only remaining lending rate ceiling is a 24% per annum limit which is non-binding for commercial lenders. Real interest rates on deposits have been near zero or weakly positive. Rates on CDs have been in range of 2-3%. Interest rate spreads are moderately high and have increased marginally over past two years. Deposit rates generally track US markets, however loan rates are higher reflecting increased risk and limited competition. Perceived economy-wide risks may be reduced with the amended Compact provisions now secured and well understood by banking officials.

ii The Role of the FSM Development Bank

44 The FSM Development Bank has a sound record and, unlike many PDMC institutions, has been managed prudently for nearly two decades. Problem loans are concentrated in a portion of the portfolio that was directed (under Compact

provisions for an Investment Development Fund) by Government officials and implemented by the Bank. Those loans occurred mostly in the early 1990s and are fully provisioned and separately accounted for on the balance sheet.

- 45 The FSM Development Bank provides credit to the commercial sector; however, it also has not been successful in extending credit to small enterprises or to the rural and outer island populations. The FSM Development Bank is encouraged to lend to small businesses and specific sectors from time to time; however, political interference is negligible. The Bank is the focus of one component of the ongoing ADB-financed PSD project.
- 46 There are no micro-finance institutions in the FSM. A few small projects have provided seed money to women's groups but none persist. A likely cause is the ready-access of small groups to "public projects" from national Congress members and (in Chuuk) from state legislators. These grants distorted incentives by applying none of the normal selective or quality checks that are typically utilized by effective micro-lending institutions. Such grant finance is likely to be greatly reduced during the amended Compact period.

3.1.4 Private Investment in the FSM

a The Policy Regime and Incentives Facing Investors

- 47 The potential for private sector development sufficient to support a growing economy during the amended Compact period will be reliant upon securing an improved environment for domestic and foreign investment in the FSM. As noted above, there is considerable variability across the four states on policy and infrastructure factors affecting investment decisions. An important consideration for domestic and foreign investors in deciding whether or not to undertake a potential investment is the regulatory environment and how this will affect the ability to realize an acceptable return. It can be said that the policy regime and the environment for investment has been slowly and consistently improving over time. A number of issues are outlined below:
 - Business registration and corporate laws are clearly legislated and business registers are generally well administered.
 - Land laws are at the state level and are clearly legislated. Delays in dispute resolution in land courts remain a concern.
 - There is no formal bankruptcy law, although insolvencies of several (public and private) corporations have been relatively well administered under court supervision. An early attempt to pass bankruptcy legislation was halted due to concerns that the proposal did not effectively protect creditor interests and might lead to a higher risk environment for commercial lending. Bankruptcy legislation is to be drafted under the PSD project.

- There is generally good respect for rule of law, though enforcement is limited by capacity constraints and funding. Citizens and enterprises have ready access to the courts and to legal counsel. Foreign individuals and corporations have guaranteed access to the National Court, which is considered more efficient and consistent in its handling of cases.
- The lack of regulations surrounding secured transactions and bankruptcy are disincentives for potential investors and borrowers. For subsistence producers and artisanal fishermen and others starting or expanding small commercial businesses, their ability to understand and follow regulations will affect their decision on whether to become involved in commercial activity. Unclear, protracted reviews or excessive regulation and control will discourage commercial activity and private sector development. Conversely, regulations are needed that control unsustainable and unscrupulous practices. A balance is needed that enables sound private sector development while controlling counterproductive activity in a way that does not result in excessive government and bureaucratic interference. The FSM and its States have a range of laws and regulations for commercial activity specified in the FSM and State Codes that were developed during the Trust Territory period or early in the Compact period. The recent emphasis on an economic strategy that centers on a private sector-led growth requires assessment of the adequacy and balance of the regulatory and enabling environment that affects private sector activity.
- Variable infrastructure and transport limitations undermine the potential for private sector growth. All business, domestic and foreign, needs access to basic economic infrastructure. Despite the considerable public investment throughout the FSM, the state of completion and durability of infrastructure is still variable. This includes the adequacy of roads, access to telecommunications, electricity, water and other utilities essential for most business operations, especially those requiring cost-effective movement of products to markets, cleaning, processing, refrigeration, and storage. In some cases, most notably in Chuuk State, thinly spread infrastructure investment has resulted in the lack of concentration needed to achieve the advantages of economies of scale from industry or business clusters. This is partly due to the lack of formalized land-use zones to encourage easily serviced and efficient industry clusters (e.g. tourism, fisheries, small-scale manufacturing or processing) but also due to policies that have attempted to provide equal investment to as many islands as possible. While some infrastructure is inadequate in certain states (e.g. roads), the scale of other infrastructure, especially fish bases, is excessive in size and uneconomic. This situation has been compounded by the inefficient operation or subsidy dependency of State-owned or managed infrastructure (e.g. fish bases, etc.).

- Transport constraints and high fuel costs: Difficult problem facing potential investors include transport bottlenecks, especially airlines, high costs, low or inconsistent frequency, and poor handling (i.e. for sashimi export) reducing competitiveness in fisheries, tourism and agriculture. On the other hand, the services that are provided are in some cases underutilized, and the airlines claim that it is hard to justify additional flights. A clearer understanding of the airline situation is badly needed. High fuel and energy production costs further increase downstream production costs and reduce international competitiveness.
- There are no active price controls, though Pohnpei and Kosrae maintain price-monitoring mechanisms.
- Foreign investment laws were reformed as part of the reform program in 1997-98 to remove overlapping jurisdiction at the national and state levels. Implementation of the reformed laws through regulations reduced the intended effect and left a large degree of bureaucratic discretion and lengthy case-by-case reviews for many applicants. Yap is an exception, having implemented a simple business licensing system that treats domestic and foreign businesses alike, consistent with best practice among PDMCs. Apart from simple municipal level licensing, there are no restrictions on enterprises of any size.
- National monopoly rights are granted to the FSM Telecommunications
 Corp. and state-owned public utility corporations hold power distribution
 monopolies. There are no monopolies granted through import or export
 licensing schemes.
- There is no formal bankruptcy law, although insolvencies of several (public and private) corporations have been relatively well administered under court supervision. An early attempt to pass bankruptcy legislation was halted due to concerns that the proposal did not effectively protect creditor interests and might lead to a higher risk environment for commercial lending. Bankruptcy legislation is to be drafted under the PSD project.
- Privatization has proceeded slowly and there is a notable lack of political commitment to this long-standing element of the national and state reform programs. The only direct private participation in infrastructure services is the contract to provide sanitation removal and solid waste management in Pohnpei. No progress made in 2003 even on planning for transformation of the power, water, ports, or other components of economic infrastructure.

b Business Development Services and Entrepreneurship Training

- There has been a wide array of business support and outreach programs. National and state institutions of direct relevance to business development include: The Department of Economic Affairs (FSM), FSM DB (credit), JTPA (FSM and State), T3 Program (FSM and State), COM (FSM and State), Commerce and Industry agencies (State), small business advisory and entrepreneur development centers (State), Agriculture agencies (FSM and State), Marine Resources (FSM and State), Visitors Bureaus (FSM and State). Private sector and non-government institutions that support business development include Chambers of Commerce (State), Commercial banks, Community Action Programs (State), PATS and the Micronesian Seminar. The type and nature of services, technical support, and training varies considerably among each of these institutions and agencies, but combined they represent a wide array of potential support. A project that has played a central role in promoting FSM business development in recent years is MEDC supported by UNDP/UNIDO. The project has provided technical assistance, institutional strengthening and direct business training and advisory services to the four States and established the overall direction for business support services. Future coordination among these programs will be important to improve the delivery and efficiency of funds use and build on lessons learned.
- 49 Entrepreneurial training was provided under UNDP sponsorship through the 1990s and this program was meant to be continued and extended under PSD project. The delay in initiating the PSD has resulted in a lack of clarity on next steps. There is a widely perceived need for skilled specialist staff to train counterparts and ensure participant training quality. Partnerships with the University of Guam-centered, US Commerce Department Business Development Centers has provided significant funding for staff and facilities. Outcomes of training todate have not been demonstrated by significant growth in small enterprise out put or employment and there has been limited success in improving access to credit for training graduates.
- 50 The University of Hawaii Based business development program has proposed a joint program with UNDP and state governments to target horizontal expansion, especially into export activities, of existing successful entrepreneurs. The approach is designed to address the observed fact that the failure rate of new enterprises is very high in the FSM, as elsewhere, and there is merit to working with entrepreneurs who have proven their capabilities in management, marketing and a wide range of skills required to grow their businesses (for the domestic market).

c Foreign Investment: Regulatory and Promotion Issues

- All four states exhibit some degree of protective attitudes toward foreign investment. Past policies and regulations for foreign investment applications required lengthy, case-by-case review, and lacked transparency. This approach toward foreign investment arose from the prevailing desire to protect local jobs, business opportunities, incomes, and resources. Inconsistency between rhetorical policy statements and actual legislative and regulatory outcomes still reduces the attractiveness of the FSM as an investment location.
- 52 The feelings within communities toward protecting local interests and opportunities will not disappear easily. Quality investors, who are bringing their own capital, will not be attracted to an environment where they face an uneven playing field, or worse, a non-transparent risk of discretionary bureaucratic intervention. As government financing diminishes, the FSM must increasingly compete for serious foreign investors who are looking for the best business environments that will ensure an adequate and relatively low-risk return on their investments. The mutual benefits from quality investment, for the FSM and for the investor, must be recognized if the FSM is not to lose quality investors to more competitive and investor-friendly economies elsewhere in the Pacific region.
- Foreign investment approvals occur with very limited frequency due to limited interest. Complaints about the length and complexity of the process have been reduced, but still exist.

3.1.5 Trade, Tariff and Tax Policy in the FSM

a The Need for an Outward-Oriented Foreign Trade Regime

- One fortunate aspect of the FSM's reliance in the past on Compact transfers is that the tax system was not required to yield high revenue levels. Most other Pacific Island nations have much higher tax effort, measured by revenues as a share of GDP, and raised major portions of their taxes at the border through customs and duties. This led those countries to have tax systems which distorted economic incentives in favor of domestic production of non-traded goods or of traded goods behind high protective tariff barriers.
- In the FSM average tariff collection as a share of imports (c.i.f.) is roughly 5%. Rates are set at 3, 5, 25 and 100% but distortions are minimal. The 25% rate is, in effect, applied to excise-type products (e.g. alcohol, tobacco, perfume). The 100% rate protects locally produced bar detergent but is irrelevant, since the higher rate is not applied to preferred substitutes (powder and liquid detergents). Thus dispersion is very narrow, in actual effect. There are no quantitative restrictions on imports or exports and no significant non-tariff barriers to trade in goods or services.

56 In the future, as the requirement that the tax effort increase, it is essential that the relative neutrality of the tax system not be lost. If the FSM were to ramp up existing import tax rates, the disincentives for internationally competitive production would increase.

b Regional Trade Agreements and the Role of WTO Accession in Ensuring Policy Coherence

that, over the next ten years if the FSM Congress approves, will have the effect of forcing the FSM to adopt an outward-oriented, internationally competitive tax regime. Should the FSM decide to pursue accession to the World Trade Organization (WTO), it is likely its current tax regime would be seen as favorable and generally acceptable. While other Pacific nations will need to reduce their reliance on border taxes as a result of the regional agreements (and certainly for WTO accession), the FSM will likely just need to ensure that its reliance on border taxes stays at the current low level. A broad-based consumption tax, such as a value-added tax (VAT) or a goods and services tax (GST), would be an ideal tax to meet the revenue needs of the governments while maintaining compliance with regional and international agreements. There would be other benefits to private sector development in the FSM to have the FSM government commit itself to a broad range of economic management principles embodied in the membership agreements to the regional agreements and the WTO.

c The Need for an Efficient and Effective Modern Tax Regime in the FSM

As noted above, the FSM will surely have to increase total tax effort (revenues as a share of GDP) over the long-term. If the tax rates under the current system, which was initially designed to be a minor local revenue component of the Trust Territory Administration, were to be simply ramped up, the impact on private sector development would be disproportionately negative. While private sector actors will likely resist tax increases on principle, there will come a time, given the declining real value of Compact transfers, when it is clear to all parties that fiscal adjustment cannot only focus on expenditure-cutting. The distortions in the existing system are well-known to the private sector. The most obvious problem is with the Gross Revenue Tax (GRT), which has a cascading effect (taxes upon taxes). The GRT is also disdained as it taxes revenues of even unprofitable firms. This latter is made the worse by the perception that it is meant to be a tax on business (income) when in effect it operates as a simple sales tax. The import tax has distorting effects as well, although in a manner which is not so obvious to domestic producers. In the end, the existing distortions are relatively insignificant simply because the rates are so low. It is important that the distortions be addressed through system-wide reform with a focus on consistency with an outward-oriented, private sector-led economy.

3.2 Strategic Goals, Policies and Outcomes

3.2.1 Strategic Goal 1: Create a sound economic policy environment to support outward-oriented private sector-led growth.

a Analysis and Justification

- 59 The FSM has placed sound economic management at the top of its reform agenda since the 1st FSM Economic Summit in 1995. Progress has been made; however, the nature of the global economy, taken together with the new realities the FSM faces under the amended Compact calls for a re-doubling of effort to improve the economic policy environment in a coherent and comprehensive manner. Private sector development can only occur on the basis of investment and hiring decisions of domestic and foreign-owned enterprises. Incentives matter, thus this strategic goal is about improving incentives for the private sector.
- 60 Domestic investors and the banking institutions are now fully aware of the terms of the amended Compact and they will be looking to ensure that the degree of relative economic stability provided for by that 20-year package is consolidated through the adoption—and, most importantly, the implementation—of a sound economic strategy to support sustained economic growth.
- 61 The expected result of successfully achieving strategic goal 1 is improved economic incentives that will lead to increased investment and growing employment levels in the private sector. Existing and potential domestic investors will, presumably, be the first to respond to improvements. Experience has shown that foreign investors tend to require a significant period of policy reform "coherence" before they become sufficiently confident that improvement will be long-lasting. It may be the case that recent policy reform stagnation (and even some back-tracking) has made domestic investors somewhat skeptical that FSM policy makers will, in fact, follow a coherent economic strategy. Similarly, concern about the quality of governance—including accountability, transparency and efficiency of government expenditures—creates a challenge.
- 62 For the private sector to confidently invest and create new jobs, their perceptions about governance need to be effectively addressed. Through an improved public-private dialogue four positive outcomes can be achieved: (i) private sector perceptions can be comprehensively addressed; (ii) misperceptions and misinformation can be corrected; (iii) information on actual improvements and policy objectives can be shared; and (iv) emerging issues can be addressed collaboratively.

b Economic Policy Implications

- 63 Achievement of this strategic goal calls for attention to four policy areas:
 - Maintain financial stability.

- Improve fiscal accountability, transparency and performance management systems.
- Establish an effective system to disseminate information and promote public-private sector dialogue.
- Adopt trade and tax policies consistent with improving the international competitiveness of FSM-based producers.
- Policies related to the size, cost and scope of government activities could also be included under this strategic goal, but instead have been addressed separately under strategic goal 4 below.

c Critical Issues for Implementation

- None of the identified policy areas are new; however, the leadership of the national and state governments must find a way to re-establish momentum for reform that has diminished since the reform period following the 1st FSM Economic Summit. It is important to note that there is considerable skepticism that identified policy priorities will be implemented in a timely fashion.
- A suggested remedy to address this issue is the adoption of a succinct economic vision statement at the 3rd FSM Economic Summit and, more importantly, the establishment of a policy-monitoring matrix to demonstrate commitment and—over time—to demonstrate progress. While some of the policy monitoring will occur as a direct result of implementation of the fiscal procedures of the amended Compact, the FSM should consider a monitoring mechanism that is closer to home and that includes private sector and NGO participation on a periodic basis (perhaps semi-annually, in conjunction with regular EPIC meetings).
- With respect to the financial stability policy area, the major concern is, of course, fiscal policy. It is essential that the FSM governments proceed with current plans to adopt a new financial management information system (FMIS). At the present time, the lack of reliable and timely information on the fiscal position of any of the five governments is a constraint to sound fiscal policy development. Similarly, to improve accountability and transparency, the new FMIS should be augmented by improved accounting standards and performance, greater resources devoted to audit and compliance, improved response to audit findings, and improved dissemination of results. All of these have been identified under an accountability improvement project (AIP) and should be funded adequately.

d Outcome Measures and Justification

Achievement of strategic goal 1 may be measured by a growing economy and increased employment; however, it is preferred to focus on a narrower set of

outcome measures that are more closely and more directly related to the strategic goal. While it is difficult to measure achievement of the goal directly, five measures are identified below. Each of these can be measured using existing data collection and analysis systems. For each there is data for the baseline year (FY2003). A few additional measures are identified for possible future consideration; however, they cannot currently be measured using existing data collection systems.

- Fiscal stability is maintained [fiscal balance as % of GDP for each government and consolidated]
- External debt remains at prudent levels [(a) total external debt as % of GDP, (b) debt service as % of total export of goods and services]
- Tax policy does not discourage internationally competitive production [(a) average effective tariff rate on imports, (b) import taxes as % of total taxes]
- Export production increases [\$ value of exports]
- Tourism sector grows [# of tourist arrivals]
- 69 Additional outcome measures that should be considered, but that cannot be adopted at the present time due to inadequate data systems, include:
 - Total investment as % of GDP
 - Tourist expenditures (\$) and tourism value-added as % of GDP
 - Business confidence rising (measured through quarterly or semi-annual business confidence sample survey)

3.2.2 Strategic Goal 2: Improve the competitiveness of the factors of production in the FSM to promote private sector development.

a Analysis and Justification

As noted in the discussion in section 1.3 above, there are significant distortions in the markets for labor, land and finance in the FSM. Many of these distortions are long-standing and cannot be readily influenced by feasible policy measures. This makes it all the more important that policy measures that can be plausibly implemented be given priority attention in order to progressively move the FSM economy forward. Small, incremental improvements in the markets, as called for below, can add up to significant gains in competitiveness over time.

- Some actions called for may suffer from yielding limited benefits—notably where it is difficult to determine which constraints are binding. For example, it may be that improvement of the efficiency of adjudication of land disputes does not immediately result in significant amounts of land being brought into directly productive activities. Other constraints may persist. However, this should not be seen as a reason to forestall action on the numerous pieces of the reform agenda. The approach recommended is to make as many improvements as possible, knowing that benefits may be forthcoming only over time, when other complementary reforms are implemented and as the economy as a whole becomes characterized by more market-oriented behavior.
- 72 The policy issues are addressed separately for three factors of production.

b Economic Policy Implications

i Labor Market Policies

- 73 To address the distortions caused by the "Dutch Disease" effect that have caused public sector wages to be high relative to both productivity and to private sector wages, it will be necessary to:
 - Avoid labor market restrictions such as minimum wages.
 - Resolve alien labor recruitment and retention issues to ensure access to sufficiently skilled labor for FSM enterprises.
 - Encourage wage restraint in the public sector.
- 74 To address the distortions caused by the ease of migration to high wage locations, such as Guam, Commonwealth of the Northern Marianas, Hawaii, and mainland US, it will be necessary to:
 - Reduce the "push" factors leading to emigration of productive workers, especially by improving living standards in general and health and education services in particular.
 - Reduce the negative impact of Micronesian emigrants in their new communities, especially through improved orientation programs and screening (health and character) of potential migrants.
 - Improve the likelihood of success of Micronesian emigrants through targeted human resource development (training), regulation of external labor recruitment programs, and increased overall academic standards.
 - Introduce programs to encourage remittances and return of skilled Micronesian workers and entrepreneurs.

ii I and Market Policies

- 75 While there are a wide range of proposed project and program activities to address land distortions and improve the economic use of land in the FSM, the policy implications can be limited to two items:
 - Improve the effectiveness and public outreach of institutions that support an efficient market for land sales and leases.
 - Facilitate the use of land as collateral for commercial lending.
- 76 In addition, consideration of Constitutional reform is proposed to address restrictions on sales of land (Pohnpei), and on transitory (10 year time-limited) land ownership by foreign banking institutions to affect mortgage foreclosure to recover secured debts.

iii Financial Market Policies

- 77 To support financial sector deepening and to better meet the needs of an outward-oriented private sector, three policies are highlighted:
 - Reduce the risks of bank lending to domestic businesses.
 - Reduce transaction costs for banks and businesses in the event of loan default or business insolvency.
 - Expand access to bank financial services and products to a broader range of enterprises.

c Critical Issues for Implementation

- Many of the policy issues outlined above are being implemented as part of the PSD project. However, given the delay between design (1999-2000) and the initiation of the project (2003), there is a pressing need for a rejuvenation of effort to implement the PSD project. There is also a need to highlight the policy objectives more clearly and to share them more widely, especially with private sector advocates in the four states.
- 79 The use of the private sector development grant under the amended Compact has been substantially focused in FY2004 on sectoral development activities (agriculture, fisheries and tourism). While spending in these areas is certainly appropriate, it will be necessary to identify the more "policy-based" objectives that require funding to implement and seek to get them prioritized for funding under the PSD sector grant in FY2005 and beyond.

d Outcome Measures and Justification

80 In the interest of simplicity and ease of monitoring it is proposed that there be only one or two outcome measures to monitor achievement of strategic goal 3

for each of the three factors of production. Over time it may be beneficial to expand the set of outcome measures to highlight these areas.

Labor

- Private sector employment growth
 [(a) # of private sector employees, (b) \$ value of private sector wages]
- Reduced distortion in labor market due to relative wage levels in public sector
 [ratio of average public and private sector wages]

Land

• Increased lending as a result of improved use of land as collateral [\$ value of leasehold/mortgage secured lending]

Financial Sector

- Increased lending of mobilized savings for business investment [(a) ratio of loans to deposits, (b) total commercial lending as % of GDP]
- Additional outcome measures that should be considered, but that cannot be adopted at the present time due to inadequate date systems, include:
 - Ratio of public and private sector wages categorized by corresponding skill levels.
 - Total number and value (\$) of registered land sale and lease transactions.
 - Total number of secured transaction on active register and value (\$) of security registered.
- 3.2.3 Strategic Goal 3: Improve the environment for direct investment and expand entrepreneurial and business development support services.

a Analysis and Justification

82 An often-noted characteristic of the FSM private sector is a lack of entrepreneurial talent and a tendency for successful businesses to engage in a wide variety of endeavors through horizontal expansion. As noted above, there have been many project activities to address the development of entrepreneurial skills and the delivery of business development services. While not all of these attempts have been successful, there is a cumulative effect of support in this area that is undoubtedly positive.

b Economic Policy Implications

- 83 The broad policies required to achieve this goal are quite limited. The activities and outputs associated with this strategic goal are outlined in detail in the strategic matrix in section 3 below.
 - Improve the corporate regulatory environment.
 - Revise foreign investment laws and regulations to improve attractiveness.
 - Government support at the level of private enterprises should be limited to facilitation, coordination, information dissemination, and broad-based advisory and training services (and not on subsidized finance).
 - Support for entrepreneurial development and export promotion should not be limited to new entrepreneurs or to small and micro-enterprises.

c Critical Issues for Implementation

84 The FSM needs to coordinate the ongoing activities under this strategic goal; there are now numerous players and potential for inefficiencies. The US Commerce Department's program, based at the University of Guam but now active in all four states, provides significant and welcome resources and needs to be complemented through activities of the government, the ADB, UNDP and the University of Hawaii's business development program. The 3rd FSM Economic Summit should be utilized as an opportunity for the players to meet and clarify roles and objectives.

d Outcome Measures and Justification

- 85 At the present time the statistical collection system can only provide a rough proxy indicators for achievement of the foreign investment component of this strategic goal and there are no readily available indicators for the entrepreneurship and business development service component.
 - Increased domestic and foreign investment
 [(a) # of existing domestic and foreign investor enterprises, (b) gross
 turnover of existing domestic and foreign investor enterprises]
- 86 It will be necessary to coordinate with the providers of support in this area to develop a small number of feasible outcome measures, these may include:
 - Foreign Direct Investment (\$)
 - Total number and value (\$) of commercial bank and FSMDB lending to enterprises (aggregated by annual turnover and/or employment level).
 - Number and value (\$) of business support services provided to the private sector (measured by fee collection where service fees are charged).

3.2.4 Strategic Goal 4: Reduce the direct role of government in the economy.

i Analysis and Justification

87 The government has been the dominant force in the FSM economy for at least four decades and it is essential, for the sake of stability, that the government remains an important force for the foreseeable future. What is most important is that the long-standing rhetorical policy of the FSM to promote private sector development, be put into effect with a sense of purpose. The areas of greatest concern with respect to impact on private sector economic incentives are two-fold: first, government must avoid the past tendency to spend excessively on wages to the detriment of other government responsibilities; and second, government involvement in commercial activities, while undertaken for ostensibly positive social purposes, has proven to be detrimental to the fiscal position of the governments and to the development of those sectors in which direct intervention was greatest. Put in simple terms, the role of government must change from direct intervention to a facilitation role in support of private sector development.

ii Economic Policy Implications

88 Achievement of this strategic goals calls for attention to three policy areas:

- Maintain wage discipline in the public sector (including public enterprises).
- Eliminate new investments in public enterprises and eventually eliminate subsidies to commercial public enterprises.
- Pursue opportunities to privatize or otherwise transform existing public enterprises.

iii Critical Issues for Implementation

89 Similar to the situation described in section 2.1.3, the economic policies to achieve strategic goal 4 are not new. They do require a greater level of political will than has been evident in the period since the 2nd FSM Economic Summit. A greater degree of transparency and public dissemination of policy monitoring may assist policy makers to implement policies (or to resist taking actions contrary to policies) by making the public and key private sector stakeholders more aware of the overall economic management strategy and the linkages to long-term private sector development.

iv Outcome Measures and Justification

90 In order to measure achievement of strategic goal 4, five outcome measures are proposed:

- Government recurrent expenditures decline in importance [operating expenditures as % of GDP]
- Government wage bill growth is restrained [wage bill as % of operating expenditures]
- Subsidies and transfers to public enterprises decline [subsidies and transfers as % of government expenditures]
- Public Enterprises decline in importance [public enterprise value-added as % of GDP]
- Private sector increases in importance [private sector value-added as % of GDP]

3.2.5 Strategic Goal 5: Provide efficient and cost-effective economic infrastructure to support competitive private sector development.

i Analysis and Justification

- 91 The FSM economy suffers from all of the constraints and vulnerabilities common to small island economies, including, distance from supply and product markets, high transportation costs, natural disasters, small and fragmented domestic market size, etc. However, the economic infrastructure in the state centers, Chuuk excepted, is relatively well developed. To-date, public investment decisions have been influenced by political imperative and non-economic factors that has led to both misallocation of scarce investment resources, and, inability to achieve expected social and economic returns from infrastructure investments. The private sector has demonstrated its willingness and ability to pay for infrastructure services, but it is important to ensure that the costs they face for roads, ports, water and power are kept as low as possible to support competitiveness.
- 92 It is imperative that the existing public infrastructure supporting economic development be managed more efficiently and that future public investment decisions be more significantly influenced by economic signals such as market demand, willingness-to-pay, and private sector investment interest.

ii Economic Implications

- Dedicate at least 30 percent of amended Compact sector grants to infrastructure development (and maintenance).
- Establish effective infrastructure plan implementation council (IPIC) as outlined in the IDP.

iii Critical Issues for Implementation

93 Given the nature of the sector grant funding under the amended Compact, it should not prove too difficult for the FSM to achieve the 30 percent target for

spending on the infrastructure sector. This level of funding, together with all other donor financed projects will still only fund a fraction of identified infrastructure needs. Still, implementation will require governments to avoid ramping up real expenditure levels on operations that may be funded out of Compact sector funds.

iv Outcome Measures and Justification

- 94 In order to measure achievement of strategic goal 5, three outcome measures are proposed:
 - Public investment remains adequate
 [public investment as % of total government expenditures]
 - Expenditure on infrastructure maintenance increases [value (\$) of maintenance expenditures]
 - Utilities price and collect charges reflecting capital and current costs of production
 [cost recovery of utilities as % of total cost of production]
- An additional outcome measure that should be considered, but that cannot be adopted at the present time due to inadequate date systems, is:
 - Average cost of electricity for commercial users compared to Pacific region benchmark (%)

104

4 Agriculture

4.1 Agriculture Sector Review

4.1.1 Introduction

- Of FSM's population of 107,000, an estimated 80 percent have subsistence or semi-subsistence livelihoods. All families living outside more urbanized areas are engaged in land-based food production of some kind. While agriculture is not a major part of the economy in terms of export receipts, it nevertheless provides a livelihood and employment to most of the population. Income derived from subsistence activities amounted to 31.5 percent of aggregate household income in 1998.1 Gross domestic product (GDP) for agriculture, hunting and forestry was estimated at \$30.3 million per year or 17 percent of total GDP in 19982. Exports in 2002 were valued at \$1.43 million, down from \$1.62 million in 1994.
- Though agriculture remains important to the economy, production is much lower today than in past times. Recent policies have tended to favor commercial development of agriculture, and have failed to account sufficiently for the subsistence and semi-subsistence tradition and its inherent characteristics. Politicians too often have looked for quick fix, magic bullet solutions. The vision for the sector has been inconsistent. Government funding has been allocated with a fiscal rationale, and with insufficient attention to sector needs or quality outcomes.
- Over the years, agriculture's socio-cultural role as a safety net for the disadvantaged has greatly diminished. Inequality of income and the incidence of families with incomes below the poverty line are among the highest in the Pacific region.3 The poorest quintile of households, most of whom are engaged in subsistence agriculture, receives just 3.6 percent of household income, while the highest receive 55.5 percent.4 The poorest households are increasing in number, and they are living in conditions of hardship, a situation that can no longer be ignored.
- 4 Traditional subsistence foods have been overwhelmingly replaced by imported foods (\$28.2 million in 2002). Traditional foods are regarded as inferior ("starch foods"), and are not fully recognized for their economic or nutri-

¹ Household Income & Expenditure Survey. FSM Dept. of Statistics. 1998

² New GDP data not available as at November, 2004.

³ Poverty incidence is worse in only PNG and Timor Leste.

⁴ ADB TA 6047–REG: National Poverty Reductions Strategies for PDMCs. Jan 2004

tional value. Support services have not targeted traditional agriculture. And most young people want to escape agriculture, preferring wage employment or migration.

- Commercial agriculture has had some successes—especially in niche export markets, e.g., kava (sakau), betel nut, cooked breadfruit, and bottled processed noni. The common feature of these products is that their markets were developed and are operated entirely by the private sector, with government support confined to quarantine services. This should be the model for the future. Products where government has been involved or is active have either largely failed (pepper, livestock) or continue to require subsidies (copra).
- There is scope for import substitution on a limited scale. In 2002, food imports totaled \$28.2m of which about \$1.6m were for fruit and vegetables that could be produced locally.

7 In sum:

- Government expenditure in the sector is largely ineffective;
- Government expenditure can be better targeted at traditional crop production;
- non-government groups can provide cost-effective support to traditional farmers;
- more people than 10 years ago are relying on subsistence agriculture for employment;
- the integration of agriculture and culture must be recognized by sector planners;
- traditional farmers place higher priority on social/cultural obligations than on agriculture;
- traditional farmers prefer crops that allow flexibility to meet social/cultural obligations while still managing their commercial risk;
- land resources are adequate in Kosrae, Pohnpei and Yap but under pressure in Chuuk;
- niche markets exist for traditional crops;
- opportunities exist for local production of some imported fruit and vegetables; and
- some local foods can address serious dietary deficiencies.

8 Kosrae

Traditionally there has been strong government involvement the economy.

- during Compact 1, the private sector scarcely grew and GDP grew by only 0.6 percent a year.
- The preferred staple crops are taro and breadfruit.
- Banana was formerly a significant crop
- Citrus fruits are the backbone of local agriculture, but "citrus canker" is reducing yields and cutting access to key export markets in Guam and RMI.
- Noni, a fledgling industry in Kosrae, has been entirely developed and supported by the private sector.
- Greater reliance on rice & canned meat, and over-fishing of the reef, is increasing vulnerability.
- There is still spare capacity in traditional agriculture.

9 Chuuk

- The most economically troubled state, it suffered financial crises in the mid-1990s and 2001.
- It has accumulated creditor and outstanding court order debts of more than \$20 million because of weak fiscal management.
- GDP declined by an average of 0.4 percent yearly over the first Compact period.
- Land pressures are undermining food security.
- There is almost no forest cover.
- The preferred staple crop is breadfruit.
- The large, bountiful lagoon and out-migration are key factors in avoiding a food security crisis, but dynamite and poison fishing are problems, as are exports of reef fish to Guam.
- Chuukese are the biggest migrant group in FSM.
- Traditional farming is producing enough food with little or no technical support.

10 Pohnpei

- Annual GDP growth averaged 2.8 percent during the first Compact period.
- There is some benefit from the national capital being located in Pohnpei.
- Breadfruit and yam are the preferred staple crops.
- Watershed destruction in the forest reserve for kava production has reduced primary forest cover from 15,000ha in 1994 to 4,200 ha in 2002.

- NGO/community partnerships are delivering agriculture services with a conservation focus.
- Kava is the beverage and cash crop of choice. Most is consumed locally but some 272,000 kg are exported annually, mainly to Guam, Hawaii and Saipan.
- Betel nut production is growing rapidly as a profitable cash crop option.

11 Yap

- The state has strong fiscal discipline, and enjoyed 3 percent annual growth in GDP during Compact 1.
- Taro is the main food staple.
- Women do most subsistence agriculture and marketing work.
- Slash-and-burn agriculture is preferred.
- It is the state least reliant on imported food, and it has well organized, functional community leadership.
- Betel nut production is intercropped and is all smallholder production.

4.1.2 Farming Systems

a Subsistence Agriculture

- Most agricultural production in FSM is subsistence in nature. The aim is to provide food at minimum cost for family use, for ceremonial purposes, to meet social obligations and to generate income. Income sources include agroforest and home gardens, backyard livestock production, reef fishing, and handicrafts. Nevertheless, most people have come to prefer the convenience of cash transactions using income from informal and formal employment, and/or remittances from within FSM and from overseas. With the decreasing regard for local foods, policy makers have tended to overlook subsistence agriculture development.
- Economic growth during the 15-year Compact period was slight. GDP grew by only 1.6 percent yearly with wide variation between states. Employment increased at about the same pace. Almost all the growth occurred during the first ten years. With the second step-down of Compact funding in 1996, the economy went into decline. Reduced funding coupled with cuts in the public sector reduced cash incomes, and GDP declined by an average of nearly 1 percent yearly through the last five years of the Compact. Many families were forced to fall back on subsistence agriculture, the 2000 Census showing 20 percent of families

having subsistence agriculture as the main source of employment compared with 10 percent.5

- The traditional farming system, especially in Pohnpei and Yap, is slash and burn. Today, traditional farming is still based on fairly complex intercropping systems, using prolonged periods of fallow to replenish fertility. Root crops (yam, taro), banana, kava in Pohnpei, and betel nut in Yap and Pohnpei, are grown amongst food trees (breadfruit, coconut). One important aspect of the development of traditional farming systems over the centuries has been management of risk and vulnerability especially from typhoons, but also from salt water flooding on atolls. This is why most FSM farmers find monocrop agriculture difficult to adopt.
- There is a lack of hard information on the agriculture sector. However, a recent survey on Pohnpei showed average agricultural production per household of \$4700 in 2003, equivalent to 74 percent of median household income in 2000. But only 25 percent of this came from market sales; own consumption accounted for 68 percent and 22 percent was used for ceremonial activities or to fulfill social obligations. Looking at it another way, after providing for household needs, only half of the discretionary surplus is used to generate cash in-

Table 1 Major crops by state

Species	Chuuk	Kosrae	Pohnpei	Yap
1. Food Crops:				
Coconut	Υ	Υ	Υ	Υ
Breadfruit	Υ	Υ	Υ	Υ
Giant Taro	Υ	Υ	Υ	Υ
Yam	N	Υ	Υ	
Cassava	Υ	Υ	Υ	
Banana	Υ	Υ	Υ	Υ
Taro Leaf	Υ		Υ	
2. Commercial Crops				
Kava			Υ	
Betel Nut			Υ	Υ
Banana		Υ	Υ	
Breadfruit	Υ			
Citrus		Υ		
Processed Noni		Υ		
Taro	Υ	Y		

⁵ This increase may be partly explained by changes to the Census questions.

come.6

- The major species of livestock are free-range chicken and pigs. Both are kept for home consumption purposes, and pigs have an important ceremonial value, especially for funerals. They tend to fetch high prices. Large pigs (>180kgs) can sell for up to \$2,000, with a typical price of \$1,000. Although these prices are close to \$10 per kg carcass weight equivalent, they are down from a decade ago, when a more buoyant economy supported prices at least 50 percent higher. There are a few regular piggeries. Imported pig feed is expensive, which helps to explain the high prices.
- Poultry are run free-range, getting food scraps and scavenging for food. They are used for both meat and egg production. There are a few commercial layer poultry operations, but imported feed makes production costs high. Egg imports in 2002 amounted to \$444,400, suggesting additional opportunities for local production, based on locally grown feeds.

b Commercial Agriculture

- Commercial agriculture can defined as production primarily for sale. Despite several (misguided) attempts to stimulate commercial agriculture, it has never been a significant factor in the economy. Its development has been constrained by cultural issues, especially attitudes to agricultural work, the cost and time associated with funerals, freight difficulties, and government interference. Government has made investments in copra (ongoing), black pepper, broiler chicken, and layer poultry (ongoing).
- 19 There are export markets in Guam, RMI and Saipan for betel nut and kava, and in Bangladesh for copra. There are potential markets for root crops and banana in Guam, RMI and Saipan and for niche products in specific mar-

Table 2 FSM Livestock Population Estimates

	Chuuk	Kosrae	Pohnpei	Yap	Total
Layers Free range chicken	1000 Na	na 3.000	20001 15-20000	3,000 na	6000 18-23000
Pigs	18,000	4,500	25-30000	4,500	52-57000
Goats Cattle	-	20 -	<150 20-30	-	<170

Note: Layers are run on two commercial farms, one of which is run by government.

_

⁶ Mark Drew to Pohnpei Director of Agriculture – data are part of a thesis dissertation, 2004

kets. In addition, there are immediate prospects for import substitution of selected fruit and vegetables in local markets.

- Agriculture exports amounted to about \$1.4 million a year, equivalent to an average annual increase of 6.5 percent, 1999-2002. Exports of betel nut, kava and copra grew annually by 18 percent, 7 percent and 5 percent respectively in the same period. All three crops are grown by traditional, semi-subsistence farmers, not by commercial operators. Exports of banana, citrus fruits and root crops declined over the same period by an average of 17 percent. The majority of agriculture exports are sourced from Yap 51 percent and 65 percent of total agriculture exports for 1999 and 2002 respectively -- while Pohnpei accounted for 31 percent and 26 percent. Conversely, exports from Chuuk and Kosrae are negligible.
- Agriculture export data are sourced from quarantine records. However, a great deal of product is thought to be exported by individuals in their personal luggage, especially to Guam, Saipan and Majuro. The Pohnpei Conservation Society estimates about 30-40 thousand kg of kava is currently exported annually with an export value of \$0.33-\$0.44 million.7 The corresponding official export figure for 2002 was 22,000 kg, valued at \$0.24 million.
- Subsistence farmers tend to sell with a sum of money in mind to meet an immediate cash need. Betel nut, kava and copra suit this mentality well—they are largely non-perishable, with harvesting time being quite flexible. Conversely, vegetable crops (e.g. cucumber, egg plant) require more labor and greater precision in harvesting. Thus, commercial agriculture output from traditional farmers is from crops with which farmers are familiar and from crops that can be readily integrated into the existing farming system. There are very few commercial farmers (see the case study). The Chinese operate a "model' farm in

Table 3: Major export crops by state by destination market

Product	Chuu k	Kos- rae	Pohnpe i	Yap	Destination
Copra	Υ		Υ	Υ	Bangladesh, Japan, Ko- rea1
Banana	Υ	Υ	Υ		Guam, RMI
Citrus fruits		Υ			RMI
Root crops		Υ	Υ		Palau, Guam, RMI
Black Ppr.			Υ		
Kava			Υ		Guam, RMI, Saipan
Betel Nut	Υ		Υ	Υ	Saipan, Guam, Palau

⁷ based on updates of an unpublished TNC Report on the Kava Market (1997).

112 FSM Strategic Development Plan

Pohnpei and sell commercially in Kolonia.

A 1997 TNC Report provided a description of the kava industry on Pohnpei, which is largely relevant today: "The kava industry is currently the major income source for much of the island's rural population. 4000-5000 people (15 percent of the population) are engaged in kava-growing and approximately 2500-5000 Ha are planted. Domestic market consists of about 50 licensed kava bars, a number of retail stores, and numerous unlicensed temporary kava bars and is estimated at 477,000 kg/yr – 40 percent of total production. (1996). Local demand is mainly for fresh plants, processed (roots pounded and

Table 4: Indicative Crop Budgets - Cucumber and Chinese Cabbage

	Cucumber/acre				Chinese Cabbage/acre			
	Units		Price/unit	Total	Units	Quantity	Price/unit	e Tota
GROSS OUTPUT & BENEFIT		Quantity	Frice/unit	TOTAL	UTILIS	Quantity	Frice/unit	1018
Plant population	plants	3485			plants	21500		
Yield & sales	lbs		0.00	¢01 170	Lbs	32250	1.00	#00.0
rieid & sales	IDS	23,522	0.90	\$21,170	LDS	32250	1.00	\$32,2
VARIABLE PRODUCTION C	OSTS							
Inputs								
Seedlings/pots	number	3485	0.10	\$348	number	21500	0.10	\$2,1
Fertilizer	lbs			\$250	Lbs			\$2
	lump							
Sprays	sum			\$50	Lump su	ım		\$
					Sub-			
	Sub-total			\$648	total			\$2,4
Husbandry Mechanical land								
Preparation	lump							
·	sum			\$100	Lump su	ım		\$1
Planting, crop maintenance								
					Man			
harvest, post harvest	Hired/day	402	1.50	(603)	days	397	1.50	(59
	Sub-total			\$100	Sub- total			\$1
Marketing								
Transport				\$100				\$1
Boxes (2ply 40lb/box)	number	784	1.50	\$1,176	number	1075	1.50	\$1,6
				* · · , · · · •	Sub-			4.,,-
	Sub-total			\$1,276	total			\$1,7
Debt								
\$10,000 For 1 yr	9%/yr			\$900	9%/yr			\$9
					Sub-			
	Sub-total			\$900	total			\$9
Total Cash Cost				\$2,924				\$5,1
GROSS MARGIN (excluding	own labor)			\$18,246				\$27,0
GM per lb				\$0.77				\$0.
RETURNS TO LABOR:								
\$ per day work	red			\$45				\$
\$ per hour				\$6				\$
BREAK EVEN PRICE (without		:)		\$0.09				\$0.
(w	ith labor):			\$0.15				\$0.
Compared to:								
CIF Cost of imported Produc	ct per lb1:			\$0.92	1			\$0.

Source: Adaptation from ADB TA – 2484. Agriculture Market Study.

Note: data from local importer invoice (Sept. 04).

squeezed) fresh and bottled extract, and pounded and frozen roots. There also exists an export market (mainly to expatriate Pohnpeians living in Guam, Saipan, Hawaii, and the US mainland) estimated at 40,000 kg/yr – 3 percent of total production - for pounded and frozen roots and liquid extract. Another 660,000 kg - 56 percent of total production - is harvested annually for customary use and personal consumption by farmers and their extended families".

- Gross margin analysis of cabbage and cucumber shows a profitable opportunity to grow crops which are currently imported in significant quantities (see Table 4). Costs of production are 5-times lower than the CIF cost of equivalent imported product. Assuming a crop failure rate of one in four (drought, typhoons, disease etc), farmers can still expect to earn for their labor around \$5 per hour, about 3 times the rate for agriculture labor.
- Internal marketing infrastructure is limited. A "farmers" market in Pohnpei is run by the municipality. Stalls are rented to vendors for \$35 per month but management is weak. Most produce is marketed through supermarkets, with individual growers delivering directly. However, supermarkets report that supplies of local product are limited and erratic.
- Underlining the vulnerability of commercial agriculture, Yap was hit by a severe typhoon in early 2004, resulting in a dramatic loss of agriculture production.
- Coconut is an integral part of island life, and is especially important in the outer islands where 19,071 people (19 percent of the population) live.
- FSM produces around 40 million nuts annually, with a copra equivalent of 6,500 tons8. However, the tree stock is ageing with very limited replanting.

Table 5: Imports of "substitutable" fruit and vegetables: 2000–2002 (US\$)

Product/Year	2000	2001	2002
Eggs	218,229	423,858	444,386
Cabbage, lettuce, etc	100,762	127,369	187,539
Citrus fruits	31,174	60,664	57,147
Onions, etc	153,200	229,624	179,388
Potatoes	44,896	69,113	102,498
Fruit juice	117,321	213,928	194,132
Other fruit & vegetables	231,643	171,270	252,420
Total:	897,225	1,295,828	1,417,510

Source: Office of Statistics, DEA

⁸ Namio Manpi, General Manager, Coconut Development Authority.

Table 6: Outer island population by State: 2000

State	Number of Ols	Total population	OI population	% population in OIs
Chuuk	4	53,595	13,130	24
Kosrae	0	7,686	-	0
Pohnpei	5	34,486	2,091	6
Yap	10	11,241	3,850	34
Total	19	107,008	19,071	18

Source: FSM Census 2000.

Coconut has largely reverted to a food crop in the outer islands. Since 1991, copra production has exceeded 1,000 tons only once, and it has averaged 610 tons in the last five years. Prices are subsidized but irregular collection and slow payment are a disincentive to farmers. Subsidy allocations by the national government have dropped by 62 percent from \$200,000 in FY2002 to \$75,000 in FY2005. Storage losses - typically at least 15 percent – exacerbate the situation.

The government moved in September 2004 to reduce the subsidized price from 13 cents/lb (\$260 per ton equivalent) to 5 cents/lb (\$100 per ton equivalent). Widespread opposition led government to change its decision and introduce a subsidy price of 10 cents/lb (\$205 per ton) – still a 23 percent drop in price. Freight to Pohnpei, wharfage costs, etc account for an additional \$205 per ton. The FOB price is still above the world price of around \$350/t. All copra is now marketed by a Singapore agent who sells for 5 percent commission.

30 Some regard the copra price as a social payment – to encourage outer islanders to remain in their islands, and not migrate to Pohnpei, Weno or further

Table 7: Agriculture Exports – FSM 1999–2002 (FOB US\$)

-	•		•	•
	1999	2000	2001	2002
Copra	173,568	186,380	200,908	210,676
Banana Citrus	188,294 -	71,918 44,417	32,606 22,615	25,897 27,886
Kava	188,893	151,522	160,403	241,253
Betel Nuts	511,000	625,233	907,710	887,654
Piper Leaves	13,349	17,658	20,845	25,039
Root Crops Other	381 2.722	13,655 12,483	7,668 5,657	3,542 6,577
Total:	1,127,811	1,139,538	1,367,279	1,428,586

Source: Division of Statistics, FSM Dept. of Economic Affairs

115

	Year	Chuuk	Kosrae	Pohnpei	Yap	Total
Copra	1999 2000 2001 2002	10,643 19,127 52,970 76,175	Na 747 6,688 423	83,055 62,388 141,250 88,228	79,870 104,118 - 45,850	173,568 186,380 200,908 210,676
Banana	1999 2000 2001 2002	121,275 5,610 6,617 7,058	Na 44,468 8,074 5923	58,540 21,673 17,821 12,881	8,479 166 94 35	188,294 71,918 32,606 25,897
Citrus	1999 2000 2001 2002	- - - -	Na 42,755 21,105 25,292	30 8 57	1,632 1,502 2,537	44,417 22,615 27,886
Kava	1999 2000 2001 2002	- - -	Na 377 - 38	188,893 151,145 160,403 241,215	- - -	188,893 151,522 160,403 241,253
Betelnut	1999 2000 2001 2002	23,587	Na 3 13 16	3,885 18,110 106,350 30,649	483,529 607,121 801,347 856,989	511,000 625,233 907,710 887,654
Piper Leaves	1999 2000 2001 2002	- - -	Na - - -	13,349 1,375 2,145 2,888	16,283 18,700 22,151	13,349 17,658 20,845 25,039
Root Crops	1999 2000 2001 2002	- - - -	Na 26,625 8,019 2,609	845 1,740 995	381 2,457 6,778	381 29,927 16,537 3,605
Other	1999 2000 2001 2002	6,693 168 198 211	Na 11,077 3,146 2,762	226 105 770 712	190 1,133 1,542 2,892	7,109 12,483 5,657 6,577
Total:	1999 2000 2001 2002	162,198 24,905 59,785 83,444	45,2171 126,051 47,045 37,064	347,948 255,671 430,486 377,624	572,449 732,910 829,962 930,454	1,082,595 1,139,538 1,367279 1,428,586

Source: Division of Statistics, FSM Dept. of Economic Affairs (i) No breakdown by crop available.

afield. Others see it as fiscal and economic efficiency.

There are commercial poultry operations on most islands. On Pohnpei, there are two commercial farms with a total of two thousand birds. One is privately owned (1400 birds) and one is government-owned, but operated by the Chinese as part of a "model" farm.

Availability of inputs e.g. seeds, fertilizer, chemicals, animal feeds, is variable. The private sector provides feedstuffs for pigs and poultry on a fairly regular basis. However, the Department of Agriculture in some states continues to compete with the private sector in the provision of seeds and fertilizer. While this is done with the best of intentions, it undermines the opportunities for smaller private sector providers. As an example, the Pohnpei Department of Agriculture operates a revolving fund to purchase seeds and fertilizers, with turnover around \$50,000 per year. It has around 5000 customers and, apart from a small mark-up to cover overheads, it charges wholesale prices.

4.1.3 Key Productive Resources

- Land Arable land in FSM is generally sufficient to underpin food production needs. The exception is Chuuk, where a combination of high population and limited land means food production capacity is stretched under traditional farming practices. Chuuk accounts for over 50 percent of FSM's population, but has only 12 percent of the arable land. Arable land per capita is 0.1 ha in Chuuk, compared to 0.95 ha, 0.65 ha and 0.80 ha in Kosrae, Pohnpei and Yap, respectively.
- In pre-colonial times, land tenure was the responsibility of the traditional chiefs, and then this responsibility passed to successive colonial rulers: the Spanish government (1880-1898); the German government (1898-1914); the Japanese mandate (1914-1945); and the US-administered UN Trust Territory (1945-1986). Since Federation in 1986, surveying of individual land plots for issuance of title has been proceeding slowly. Previous studies have also highlighted this point.9 Lack of title on government land issued under the Homestead Land Grant Scheme of 1960 is constraining investment.
- Land can be mobilized under private lease arrangements. The terms of lease of agricultural land varies: Chuuk 99 years; Kosrae 25 years10; Pohnpei 25 years; and Yap 49 years. However, rental arrangements are mostly informal, with little transparency of terms. Surveying and registration is proceeding, but a slow pace. In Chuuk, a fire destroyed many land records in January 2004, further exacerbating the problem.
- Land degradation is a serious issue on most islands. On Pohnpei, encroachment by squatters growing kava into the upper watershed has reduced the area of primary forest significantly from 15,000 ha in 1975 to 5,200 ha in 1995

⁹ FSM Economic Report – PIER Series, ADB 1996

¹⁰ The Kosrae authorities are considering an increase to 55 years

Table 9: Total arable soils by state and availability per capita

	Well suited (ha)	Moderately suited (ha)	Total (ha)	Total ha per capita
Chuuk Total arable soils Including:	_		5484	0.10
Root Crops Vegetable crops Tree Crops	451 451 1139	2679 3920 3558	3130 4371 4697	0.06 0.08 0.09
Kosrae Total arable soils Including:	-	-	7311	0.95
Root Crops Vegetable crops Tree Crops	0 0 752	7049 1323 5964	7049 1323 6716	0.92 0.17 0.87
Pohnpei Total arable soils Including:	-	22493	22493	0.65
Root Crops Vegetable crops Tree Crops	- - - -	11080 6843 22251	11080 6843 22251	0.32 0.20 0.65
Yap: Total arable soils Including:			9049	0.80
Root Crops Vegetable crops Tree Crops	1635 1746 637	7139 7236 8238	8774 8982 8875	0.78 0.80 0.79
FSM Total arable soils Including:			44337	0.41
Root Crops Vegetable crops	2086 2197	27947 19322	30033 21519	0.28 0.20
Tree Crops	2528	40011	42539	0.40

to 4,200 ha in 200211. Siltation of fringing reefs as a result of deforestation and subsequent erosion is causing significant damage to traditional food supplies.

On the outer islands, the gradual demise of the copra industry is having a double impact. It is forcing villagers to rely more on sea foods and, with loss of income from copra, the ability to purchase imported food is diminishing. The sustainability of this is uncertain.

ADB TA 1925 – Pohnpei Watershed Management and Environment - 1997; and Pohnpei Conservation Society data - 2002

a Labor

- 38 The 2000 Census shows that 52 percent of the labor force (37,414 out of a total working age population of 63,836) were engaged in agriculture and/or fishing. Seventy percent said they were engaged in subsistence activities, indicating 30 percent regarded themselves as "commercial' farmers or fishermen. There was a notable narrowing of the gap in labor force participation rates between males and females in 1994 (1.9) – i.e. 1.9 males per 1 female, and 2000 (1.3). Much of the additional participation appears to have been in the agriculture sector where women are becoming more active. In 2000, the Census showed 17 percent of the working age population engaged in subsistence activities - up significantly from 10 percent in 1994. The rate for females increased from 6 percent in 1994 to 18 percent in 2000. Women in Yap provide the majority of the agriculture labor. Elsewhere, the work is undertaken by men or shared. In Chuuk, Pohnpei and Yap, agriculture and fisheries activities are the most important with 24 percent, 26 percent and 34 percent respectively of the working age population engaged in the sector. In Kosrae, only 9 percent of the population was engaged in agriculture or fisheries.
- Eighty percent of the males and 86 percent of the females engaged in subsistence agriculture had either no education or had failed to complete high school. This stark reality highlights the dualistic nature of FSM society the educated participate in the cash economy; the rest are increasingly marginalized to subsistence agriculture.
- There is continuing debate over the impact of migration on the FSM economy, regarding both the skill mix and remittance flows. Of significance to the agriculture sector is the outflow of young people, especially men. Anecdotal evidence suggests that this is a factor, but not yet a major concern. Certainly, the demographic structure is skewed FSM has one of the highest proportions of the population (40 percent) under 15 years indicating a big increase in demand for employment in the future. If the youth show a continuing propensity to migrate, there may be problems for agriculture as an increasingly aged population tries to maintain traditional family farms.
- However, the youth of FSM tend to prefer the cash economy and imported food rather than hard agricultural work. Agriculture as a career has low status. This is well illustrated by the closure in 2002 of the Jesuit-operated Pohnpei Agriculture and Trades School course on vocational agriculture one of the few remaining courses of its type in the region. The College of Micronesia is offering a degree course in agriculture, aimed at providing career opportunities in agriculture, but not at the manual work level. There are currently 15 students majoring in the two year agriculture degree out of around 2500 total students across FSM about 0.5%. In addition, in Kosrae there is a one year course

for agricultural technician training. There are currently 14 students taking the course.

b Capital

- Access to affordable capital is a constraint for many FSM farmers. Frequently their needs are fall below the minimum threshold of finance agencies. For example, the minimum loan size from FSM Development Bank (FSM DB) under the microfinance loan guarantee scheme is \$500. Loans are geared towards larger commercial operations, though FSM's recent history is littered with such failed enterprises. Evidence suggests that commercial crop production is sufficiently profitable to justify a well designed credit program at an appropriate scale. Gross margin analysis (see Table 4) indicates that returns per acre and per hour are strong, even after debt servicing. Returns to labor are about 3 times the wages for an agriculture laborer.
- Opportunities for capital formation from savings are constrained by social issues the demands of extended family members and a shrinking job market. The FSM DB and others are building compulsory savings into their loan products. FSM DB has a new product that forces borrowers to save at the rate of 0.5 percent per week. Thus, a borrower with a \$3,000 loan will save at the rate of \$780 per year. Similarly, the Yap Small Business Development Center gives \$100 loans on a monthly basis. Repayment is \$112 each month, of which \$5 (5%) is debt service cost and \$7 is compulsory savings.
- FSM DB has had very limited exposure to the agriculture sector over the past five years.
- As discussed in Section 1.3.1, commercial lending to agriculture is constrained by collateral issues currently \$38,000 outstanding loans. FSM DB is currently testing its ability to repossess a lease on a commercial non-agriculture property where the lease was offered for collateral on a defaulted loan. Some progress on land surveying and registration, along with a transparent lease process, would improve the opportunity of commercial farmers to offer land to FSM

Table 10: FSM DB loan portfolio to agriculture, fisheries & tourism1 - % of total outstanding

	1999	2002
Agriculture	1%	0.2%
Fisheries	40%	4.2%
Tourism	31%	47%

Source: FSM DB Annual Reports.

Note: These are the FSM government's three "priority productive" sectors.

DB as collateral.

Government budget allocations for agriculture in 2004 and estimates for 2005 demonstrate the lack of Government support for the agriculture sector. While agriculture is designated as one of Governments priority productive sectors, that status is not reflected in the national and state budget resource allocations with only 1.8 percent of the total allocations being applied to agriculture in both 2004 and (budgeted in) 2005. This is compounded even further by the disproportionate share of resources required to fund the salaries and wages of a notoriously unproductive public service, including agriculture staff. As a result the actual impact of Government investment on farm families must be almost nil.

c Technical Support

Under the COM Cooperative Research and Extension Service affiliated with the USDA Land Grant Program (also administered in RMI and Palau), the major thrust of agriculture technical backup is offered. This service has a total of 43 staff and a budget of \$0.75 million. This budget is approximately comprised of \$200,000 from FSM Government, \$200,000 from Land Grant as matching funds and a further \$350,000 from a "Match Free" fund within USDA. Of the 43 staff, 18 are agriculture extension agents and 3 are researchers. In each of the states, wages, salaries and associated staff costs account for over 97 percent of total budget. This constrains the capacity of the service to deliver relevant ser-

Table 11: Agriculture and Forest Sector Budget Allocations - 2004 (\$)

Source/Stat e	FSM	Chuuk	Kosrae	Pohnpei	Yap	Total
Health Private Sector		80,000			17,913	80,000 17,913
Environment Capacity Building	218467	379,810 41,381	185,370 139,338	298,0001	87,124 41,086	1,168,771 221,805
Sub-total: Compact 2	218,467	501,191	324,708	298,000	149,260	1,491,626
Federal Programs			52,000			52,000
Domestic Revenue	215,533	47,500		289,587	36,200	588,820
Total Agriculture	434,000	548,691	412,708	637,587	185,460	2,218,466
% share of total budget	1.4%	1.6%	3.3%	2.0%	1.1%	1.8%

Source: DEA;

Natar (4) A abaua af tha Faanana'a Davidanmant Avithau'ti Diida

Table 12: Agriculture & Forest Sector Budget Allocations – 2005 Estimates (\$)

Source/Stat e	FSM	Chuuk	Kosrae	Pohnpei	Yap	Total
Health Private Sector		491,792	534,817	298,0001	11,500 95,680	11,500 1,420,289
Environment Capacity Building		45,718	139,813	-	35,771 15,623	221,302 15,623
Sub-total:		537,510	674,630	298,000	158,575	1,668,714
Compact 2 Federal Programs			28,000	25,182		53,182
Domestic Revenue	433,048	47,500		277,409	27,903	785,860
Total Agriculture	433,048	585,010	702,630	600,591	186,478	2,507,757
% share of total budget	1.3%	1.6%	5%	1.8%	1%	1.8%

vices to rural communities. There is an opportunity to improve the productivity of these funds. Discussions with the relevant USDA staff regarding applying them to community oriented NGOs to deliver agriculture extension should be a priority. Existing staff can either be retained as subject matter specialists until they retire, or re-directed to community oriented agencies. But outputs to farmers must be the priority.

Other agencies with activities in FSM agriculture are SPC and Peoples Republic of China. In addition, there are volunteers from Peace Corp and JVC supplementing State Agriculture staff.

4.2 Development Problems, Issues and Constraints

4.2.1 The need for a consistent, agreed vision for the future

- The agriculture sector has been typified over the last 20 years by a lack of a consistent and agreed vision and by expensive failed government investments. Senior public servants and politicians have made policy and investments in relative isolation, with little or no data, and without reference to the needs and priorities of either rural communities or the private sector.
- The mentality has been that there is a single magic solution for agriculture. Agricultural projects have tended to be large (e.g. pig slaughter and packaging facilities in Yap, broiler chicken production) and have overwhelmed the small, traditional and poor farmers. Others have failed because they got "hi-

jacked or captured" by departments/ministries, whose staff are often out of touch with small farmers. All too often the only outcome has been money spent on vehicles, equipment, offices and trips overseas. The problems in agriculture are directly attributable to leadership and governance failures. The rate of outmigration in FSM is a clear measure of the degree of that failure.

Policy advice has tended to favor commercial, market-oriented approaches (both export and import substitution at various times). Policy advice has paid too little attention to the realities – in particular the prevalence and characteristics of traditional agriculture and the varying needs of different states – especially Chuuk. Future agriculture policy must reflect the needs of those who rely on the sector for food, livelihood and employment. Future investments must directly benefit them.

4.2.2 Traditional agriculture has been misunderstood and overlooked

- Traditional farm families are increasingly in need of cash. For many, agriculture is the only income source. For others, opportunities in agriculture are perceived to be too limited, risky or difficult and out-migration to the United States is the preferred alternative. There are opportunities to work with village communities, and to introduce simple but improved technologies, business understanding and market awareness. But small traditional subsistence and near subsistence farmers are a difficult extension target, requiring very different strategies from commercial farmers. One State Director of Agriculture freely admitted that he and his staff did little if anything for traditional farmers. The focus he said was on commercial farmers because they are more demanding, and in any case with 95 percent of his total budget being spent on wages and salaries, he has no resources with which to help traditional farmers. Moreover, government staff is seen as lacking skills, budget, confidence, energy and visibility. "They help the Chinese, not the Pohnpei farmers".
- In 1997, the extension officers from State Departments of Agriculture were moved from the Department of Agriculture management to the College of Micronesia Land Grant Section, which has USDA Land Grant funding. However, the move was made with little or no reference to the farming community and with a fiscal not a service quality objective. For example, in Pohnpei, five staff were moved from the State Department of Agriculture with combined salaries then of \$50,000. DoA agreed to continue this payment, and the Land Grant Fund to provide another \$50,000 as a matching grant. Today, the arrangement remains, but \$50,000 is sufficient for three salaries only. As a result, the extension service staff has been cut by 40 percent since 1997.
- R&D for traditional agriculture has been limited. One comment was that there has been no research outcome of any value to farmers since 1994 when intercropping with spices research work was done. A further complaint is

that, even if research is undertaken, the results are never properly disseminated. Another is that R&D programs reflect the interests and hobbies of researchers, not the needs of farmers (e.g., the banana germ plasm R&D effort).

- The combination of poor performance and fiscal constraints is leading to alternative responses. DoAs are looking to collaborate with donors and NGOs that want to see achievement-oriented outcomes, not continual institution building.
- A number of agencies are using a community-based approach. They recognize farmers are reluctant to openly share knowledge, and are suspicious of outsiders and new ideas. But once a new technology has been demonstrated in the community, with time to absorb the concept and information, and the message has been reinforced, farmers do respond. A community approach can work, with homogenous groups, using a gentle approach and regular follow up to allow shyness to be overcome and messages to be absorbed and recognizing that work in agriculture has lower priority than say funerals. Using multiple avenues of contact, e.g. radio/tv, interpersonal, workshops, is also important.
- What FAO has been trying over the past 2-3 years (2001-2003) in the region is to involve community/village based stakeholders in the decisions on interventions with capacity building exercises on technical topics such as record keeping, farm planning, etc based on a better knowledge of marketing related issues. FAO believes that, for any positive changes to be initiated, target groups need better understanding of what the real world (without handouts and subsidies) is about. Then farmers and processors will have a better basis for decision making.
- The Natural Resource Conservation Service (NRCS) has been doing community-based extension work with groups of farmers (20-30) who are organized by the village chief. Each farmer signs an agreement to participate. NRCS believes the key is grassroots involvement in initial planning, when needs are determined by the community for the type of service required. Demonstration key—farmers must see results before they will adopt new ways. NRCS staff make regular follow ups, at least twice a month. NRCS believes there many opportunities to "tweak" traditional agriculture to improve both yields and profitability. For example, using pig manure as a fertilizer has increased banana bunch weights from 30 kg to 80kg.
- The Pohnpei Conservation Society (PCS) started in 1997. Today it has 19 staff and a \$350,000 budget funded independently of government. It works with farmers to encourage agriculture in the lowlands and discourage encroachment into high forest areas. Its extension strategy is based on a belief that knowledge can be effectively shared between villages and between islands, science can be applied to traditional farming systems, but that it must be under-

pinned by dissemination through farmer groups/associations. It sees a current disconnect between R&D and farmer needs—no interaction, no dissemination, and no feedback.

The Yap agriculture garden program (Sudal Victory Garden Project) is jointly funded by the Salvation Army, the Red Cross, UNDP and Yap State Dept. of Agriculture. It aims to provide relief after typhoon "Sudal." It assists men and women to establish a food garden (cucumber, egg plant, beans, etc) of up to 350 sq. ft., by providing funds for seeds, fertilizer, tools, fencing, etc – up to about \$200 per applicant. The ultimate aim is to form a cooperative from the successful grantees, with a market outlet based around the local supermarket. It is a grass roots approach, with none of the grand vision style of the past.

4.2.3 Food insecurity, vulnerability and hardship are big issues

- Chuuk State, with 50 percent of the population and 12 percent of the arable soil is considerably more vulnerable to food shortages than other states. "Chuuk is dangerously over-stretched in demands on natural resources. The large, bountiful lagoon and out-migration are the saving factors in avoiding a food security crisis"12. Chuuk's indicators are the worst on nearly every criterion.13
- Food security in the outer islands is underpinned by swamp (pit) taro production and (falling) copra sales. (CDA purchased 466t of copra in 2003). Properly managed, swamp taro could last in the ground for at least 10 years but traditional techniques for protecting taro pits from sea flooding and salt toxicity are however being lost and islanders are switching to imported rice. One major reason for this is a loss of interest by young people who fail to see their relevance. Copra is subsidized (see Section 2.5) but recent cuts have reduced prices by 23% (from 16.5c/lb to 13c/lb) to farmers, with further cuts likely. This year in Kapingamarangi Island in Pohnpei state (pop'n 474) there was famine because of shipping delays and salt damage to taro pits.
- Rice and noodles have become the food staples in FSM; imports in 2002 were worth almost \$6.0 million. The shift away from reliance on traditional crops (including taro, yam, breadfruit and banana) does however bring exposure to cash shortages, shipping delays, etc. Some regard this as dependency (on foreign food supplies) rather than food insecurity 9intermittent loss of availability). As one villager commented "our traditional root crops and banana have become 'show foods' at special occasions afterwards we go home to eat rice and tinned meat".

¹² Personal comment – Bill Raynor, Director, The Nature Conservancy, FSM Office.

¹³ ADB TA 6047 – REG; National Poverty Reduction Strategies for the PDMCs.

- The Census 2000 (see Section 1.3.2) showed increasing reliance on subsistence agriculture indicating a declining capacity to buy imported food. The number of women engaged in subsistence agriculture increased threefold. In Chuuk, Pohnpei and Yap subsistence agriculture was the most important activity for 24, 26 and 34 percent respectively of the working age population. Eighty percent of males and 86 percent of females so engaged had either no education or had failed to complete high school.
- 66 Environmental degradation continues. There is heavy reliance in most islands on seafood, especially catches from the fringing reef. However, land degradation and resulting reef siltation are degrading reefs to the point where they are dying.

4.2.4 Nutrition habits are resulting in disease and death

- A 1994 blood survey in Chuuk and Pohnpei showed greater than 50% of children had low levels of vitamin A, with Chuuk being the worst. In 2000, a blood survey showed Yap and Kosrae had 38% and 63% of children with low levels of vitamin A. A recent UNICEF study found that 30-50 percent of youth in Pohnpei state reported consuming no fruit or vegetables.14
- Vitamin A deficiency can lead to diabetes, infections, impaired vision, heart disease, cancer and anaemia. Infant mortality (aged 0-1 year) is around 50 per 1000 in FSM. In a recent dietary survey in Kosrae, not a single mother or child was meeting vitamin A dietary needs, but many were eating three times their need for protein.15
- Some traditional FSM foods (especially yellow flesh banana, taro and breadfruit) are high in beta keratin, the source of vitamin A. While a white Cavendish banana has 30 micrograms of bk per 100 gm, the FSM "karat" banana has 800 micrograms of bk. One karat banana per day would be more than sufficient to provide for a child's vitamin A needs.16 Conversely, rice contains no bk. Rice simply has to be supplemented by healthier and more nutritious traditional local foods.

^{14 &}quot;The State of Health Behavior and Lifestyle of Pacific Youth: Pohnpei State, Federated States of Micronesia." UNICEF Pacific office.

¹⁵ Corsi Allison. An Exploratory Study of Food and Nutritional Beliefs and Practices in Pohnpei, Federated States of Micronesia; University of Colorado; A thesis submitted to the Department of International Health, Rollins School of Public Health, Emory University. August, 2004;

¹⁶ Englberger L. A Community and Laboratory-based Assessment of Natural Food Sources of Vitamin A in the Federated States of Micronesia. The University of Queensland, Doctorate Dissertation. April 15, 2003.

Table 13: CDA copra purchases

	Total subsidy (\$)	Copra prod'n (t)	Subsidy/lb (c)	Farmer price (c)
2002	200,000	754	13.2	13
2003	150,000	466	16.1	13
2004	100,000	6001	8.3	10
2005	75,000	5002	7.5	10
	,			

Note (1) - CDA estimate; (2) Mission estimate

While this need is being actively promoted by a local NGO – the Island Foods Community of Pohnpei - there is an equal in other states. While the Department of Health has a nutrition officer, this person is frequently required to help in curative medicine. An agro-nutrition approach is needed whereby diet improvement and improved recognition of and performance in traditional farming are promoted in an integrated manner.

4.2.5 Agriculture always has a lower priority than sociocultural activities

- 71 FSM agriculture must be adaptable to the demands that sociocultural activities place on farmers and their families and in particular the funeral culture. The main constraint to commercial agriculture is not technical, economic, freight or lack of markets. The constraint is local culture, especially attitudes to agricultural work and the costs and obligations associated with funerals.
- While traditional feasts allow a farmer to get recognition e.g. the size of his yams there is no such opportunity for those who produce commercial crops. It is too very difficult for a farmer to opt for agricultural work rather than participate in a funeral, an obligation that typically lasts three days with no opportunity to feed the pigs.
- Thus success is more likely with crops such as betel nut and kava that can be harvested at the farmer's convenience. Previous approaches to development of the sector have identified market opportunities and made the incorrect assumption that farmers can easily and quickly move their production systems to capture them. As discussed in Section 2.6, profitable crop options which are adaptable to the sociocultural overlay will be quickly and enthusiastically taken up by the majority of farmers. In fact (see Table 7) such crops are now the major agriculture exports.

4.2.6 Education resources are skewed away from rural populations

As discussed in Section 1.3.2, eighty percent of the males and 86 percent of the females engaged in subsistence agriculture have either no education, or have failed to complete high school. This stark reality highlights the dualistic nature of FSM society – the educated participate in the cash economy while

those without education are increasingly marginalized to subsistence agriculture. The closure in 2002 of the vocational agriculture course at PATS was a serious blow for young people wanting to learn about agriculture. The reason given is that young people are not interested, but given their general level of literacy and numeracy, it seems probable that many simply lack the confidence or ability to proceed further in education.

4.2.7 The coconut crop has potential

- The important reality is that coconut provides only cash crop option for the 19,071 people living in the outer islands. The crop has been heavily subsidized by Government (see Section 2.1.2).
- Subsidies are paid in two forms; thus, CDA made a profit on subsidy payments of \$28,000 in 2003, but will incur a loss of about \$20,000 in 2004 and a projected loss of about \$25,000 in 2005.
- 77 Surplus operating funds are applied to:
 - 2004: 600t shipping at \$205/t = \$123,000. Further subsidy required is about \$53,000.
 - 2005: 500t shipping at \$215 = \$107,500. Further subsidy required is about \$43,500.
- Thus, in 2004, CDA will incur a copra purchase loss of about \$20,000, plus a shipping loss of about \$53,000 total \$73,000. In 2005, the projected loss is \$25,000 for purchase and \$43,500 for shipping total \$68,500.
- The coconut tree stock is the African Talls variety, which has an optimal 70 years productive lifespan, after which production continues but at a slowly declining rate. While the FSM tree stock is ageing, it is still productive and younger than trees in other parts of the region e.g. Tonga or Samoa.
- The prospects lie in the extraction of oil in each outer island. This will allow reduced freights, reduced losses and retention of by-products.

Table 14: Indicative CDA operating budget1

Financial Year	Total Budget (\$)	Net Rev. (oil etc sales)	Total	Wages and overheads	Operating funds
2004	115,000	40,000	155,000	\$85,000	\$70,000
2005	109,000	40,0002	149,000	\$85,000	\$64,000

Note (1) Net of subsidy and copra purchase; (2) Mission estimate

- The 2004 copra crop of 600 tons is equivalent to around 1,200 tons of fresh nuts. With an oil extraction rate of 40 fresh nuts per gallon, and with 3000 fresh nuts per ton, the oil extraction rate per ton of fresh nuts is approximately 75 gallons. On this basis, 1,200 tons of fresh nuts would produce 90,000 gallons of oil. However, because losses caused by shrinkage and insect damage are avoided, oil production could be reasonably expected to be 100,000 gallons. The oil extracted from fresh nuts is the premium, virgin grade.
- 82 Coconut oil prices are currently around \$550 fob per ton (\$2.10 per gallon), equating to \$210,000 of oil exports. This compares well to copra export revenue after subsidies (\$350 per ton fob less \$88 of subsidy) in 2004 of \$157,000. This should allow farm gate payments to farmers to increase significantly and subsidy payments to be eliminated. Clearly in recent years, government policy has not been for the benefit of growers.
- There are still further opportunities for value adding to the coconut crop by processing the oil into high-end products as has been successfully achieved elsewhere in the Pacific.
- The EU New and Renewable Energy Resources Project may offer another alternative by developing coconut oil as a replacement fuel in Outer Islands.

4.2.8 Marketing strategies - think small, think niche

Previous approaches to development of the sector have identified market opportunities and made the (incorrect) assumption that farmers would move their production systems to capture these opportunities. This is not correct for the majority of FSM farmers. The vital thing to understand about market opportunities is that they are opportunities—they come and go. Like any window, they open and they close. Recognizing this reality is vital to success. The cumbersome processes of governments are typically too slow for niche marketing. The saga of the Pohnpei pepper industry is a classic example. A private sector operator developed a profitable market that government encouraged other growers to supply as well. The subsequent collapse of that industry profited no-one. Only now, several years later, is the market being recovered as a small niche market.

Table 15: World Prices of Copra and Coconut Oil (US\$ per ton).

	2002	2003	2004
Coconut Oil	383	425	603
Copra	242	273	409

Source: World Bank Commodity Prices – October 2004.

- FSM agriculture will never develop on a foundation of large monoculture crops. The capacity to supply is too limited and the most farmers will not change their farming system. Exposure to one or two crops is risky. For example, the demise of banana exports to Guam resulted from the difficulty of getting access to airfreight space as fish will always have priority for cargo space. But FSM agriculture can develop by accessing several small, diverse niche markets for different crops, recognizing that these markets will close off from time to time, but that others will become available. An example is the production of processed noni by an entrepreneur in Kosrae.
- In this kind of flexible changing marketing environment, government's role is to provide an enabling environment, including a consistent and appropriate policy framework, secure land tenure, and the provision of public infrastructure, R&D and effective quarantine and protection services. The private sector's role is to find and fill markets with quality product, on a consistent basis and in a way which treats farmer suppliers equitably. One important aspect of this is providing farmers with up-to-date market information, including prices, marketing costs and customer feedback. Successful exporters are often the best source of market information but this is rarely acknowledged. The farmer's role is to provide product that meets the quality and quantity requirements of the market on a regular basis. This should not happen in isolation. There has to be regular dialogue between government and the private sector (i.e. exporters in this case), between government and farmers, and between the private sector (exporters and input suppliers) and farmers. Such dialogue does not occur in FSM at this time.
- 88 A number of niche markets do exist and are being filled to some degree. FSM can project an image that is clean and green, with an environment in which food can be produced without concern about contamination. Local products can be labeled as being produced by small, poor farmers in FSM, perhaps organically. Such strategies can return a premium price in some markets. Niche markets can be for import substitution too. A community of farmers could agree to produce to replace a share of the market for some imported fruit and vegetables. Discussions with one importer indicated that out of a range of 18 varieties of vegetables and 15 varieties of fruits that were imported, 8 vegetables and 7 fruit varieties could be produced locally (see Table 3). There are opportunities for value adding to local crops, either for local or export marketing. The Island Food Society of Pohnpei recently funded an international expert in food processing to run training in Pohnpei. There was considerable interest from local people interested in small scale operations. Niche markets exist for local crops as well as introduced crops – they may be different markets but that is the strength of such a strategy. One market closes off, another one continues, another opens.
- 89 Imports of vegetables and fruits which can be grown locally in FSM amounted to \$1.4 million in 2002. It seems reasonable to assume that techni-

cally, at least half of this amount could be replaced with local production in the medium term. In addition, imports of rice and noodles amounted to \$5.9 million in 2002. It seems reasonable to assume that at least 10 percent of this amount could be replaced with locally produced root and tree crops in the medium term.

4.2.9 There is no data on the agriculture sector

An important function of government is establishment of an enabling policy environment. To develop effective policy that reflects the priorities of all stakeholders, policy makers need good information on crop varieties, areas, consumption, prices, diseases, yields, profitability, etc. Likewise, for livestock, they need data on species, numbers, prices, diseases, etc. There is a complete absence of such data in FSM. The only reliable data comes from the quarantine service, but because of staff constraints, their data is not up to date.

Extension staff would benefit enormously from a simple farm monitoring program where they worked with village leaders to gather area and yield data and identified a few randomly selected farmers to monitor in depth on a regular basis. In this way, the data could be constantly updated, both horizontally (general data) and vertical data (in depth data from individual farmers).

4.2.10 Land tenure

"Land tenure arrangements vary in each state, and depend on the type and prevalence of traditional and customary authority, and the degree of change to modern systems of land registration and ownership. Systems that are in the process of transition are least clear. Land is perceived as scarce and has high value (but there is no transaction price data that would at least provide some indication of land values) but standards for land value appraisal systems are not clear. Where survey and ownership records and values are disputed, and progress with new surveys and registration is slow, the access and security of ownership to land is a constraint to production and investment. Where customary agreements or modern systems provide fair and undisputed access, value and ownership, the constraint is diminished".17 This is an accurate assessment of this issue today in relation to agriculture.

4.2.11 Migration

Ontinuing out migration is likely. The rate of that migration is the important issue in agriculture. If there is a high rate of migration amongst young people, the demographic reality is that initially the population will remain roughly constant, and then begin to decline. FSM could learn from the experi-

¹⁷ Quote from ADB TA – 2484. Agriculture Market Study.

ences in parts of Polynesia in the South Pacific. If the population falls at some point in the future, the largest outflow is likely to be from among the rural poor.

4.2.12 There are other issues

There are other issues that affect both traditional and commercial agriculture. Many of them were raised in ADB TA 2484 – Agriculture Market Study which was undertaken for the National Agriculture Policy Conference in 1998 and are as relevant today as they were then. See Annex 1 for selected coverage.

4.3 Strategic Goals, Policies & Outcomes

The problems, constraints and opportunities facing the agriculture sector are outlined in Section Two. In April 2004 the DEA prepared a draft policy matrix for the development of agriculture in FSM. This section reviews that matrix. The revised sector goals and policies are designed to support agriculture sector development strategies that:

- Ensure that within an agreed framework, investment in the sector is consistent, equitable and relevant
- Encourage broad dialogue between all stakeholders, including national and state governments, private sector businesses, civil society service providers and farmer groups.
- Focuses attention on the realities of the agriculture sector it is largely based on traditional agriculture
- Brings rural communities into the decision making process, encouraging greater self reliance, responsibility and local level initiative for the development of agriculture
- Recognizes that significant commercial production can come from within traditional agriculture
- Understands the market opportunities in import substitution, local sales and regional exports
- Allows the private sector to devise appropriate, realistic strategies for each market segment
- Ensures the private sector are fully responsible for supplies of farm inputs
- Encourages the provision of sustainable financing for commercial farming
- Develop extension support services that respond to the different needs of traditional and commercial farmers
- Ensures future R&D efforts relate directly to the expressed needs of traditional and commercial farmers

- Encourages civil society to participate in delivery of extension services on a contractual basis
- Ensures environmentally sustainable production
- 4.3.1 Mission Statement: The agriculture sector, including forestry, shall provide: (i) food security, cash incomes and healthy livelihoods; and (ii) opportunities for domestic and export markets, while promoting environmentally sustainable production within a stable and consistent policy framework.
- The Draft Strategic Goals and Policies for the agriculture sector are:
- 4.3.2 Strategic Goal 1:A well resourced and properly focused agriculture sector consistently operating within a stable policy framework

a Rationale for change:

This is an entirely new Strategic Goal. It has been added to address the need to provide consistent vision and adequate productive investment that benefits farmers and their families, and not government staff. Agriculture receives inadequate funding and existing funds are highly unproductive - expenditure is ineffective in helping traditional farmers. Education and health receive adequate funding but are still ineffective in helping traditional farmers and their families. The Compact 2 funding schedule will result in reduced Government budget resources. Greater efficiency and productivity from Government expenditures will have to be achieved

b Supporting Policies:

- Adherence to an agreed policy framework based on solid information
- Allocation of an equitable Government budget share to agriculture
- Equitable allocation of Government budget for agriculture between staff salary related costs and operating expenses
- Delivery of effective education to rural population
- Raising the image of agriculture as a worthy and satisfying career choice

The agriculture sector has lacked a consistent and agreed vision. Policy advice has tended to favor commercial, market oriented approaches (both export and import substitution at various times). Policy advice has paid too little attention to the realities of the sector – in particular that is substantially based on traditional agriculture and that different States have different needs constraints and opportunities – especially Chuuk. Future agriculture policy must reflect the expressed needs of those who rely on the sector for food, livelihood and employment. Future investments must benefit them as well - directly. Senior public ser-

vants and politicians have made policy and investments in relative isolation, with little or no data, without reference to the needs and priorities of either rural communities or the private sector. The expectation that single solutions for agriculture based on large Government expenditure has been the norm. But most such investments have failed and have tended to either ignore or overwhelm small, traditional farmers. Projects have been hi-jacked by Government with the only outcome being money being spent on vehicles, equipment, offices and trips overseas.

- An important function of Government is establishment of an enabling policy environment. To develop an effective policy that reflects the needs and priorities of all stakeholders, policy makers need good information on crop varieties, areas, consumption, prices, diseases, yields, profitability etc. Likewise, for livestock, they need data on species, numbers, prices, diseases, etc. There is a complete absence of such agriculture data in FSM. The only reliable data comes from the quarantine service, but due to staff constraints, their data is not up to date. Establishment of a farm monitoring system run by extension staff, and adequate resourcing of the Quarantine service to record export data would address this issue.
- 100 The share of financial resources being allocated by national and state governments to the agriculture sector is inadequate. The overall share applied to agriculture is less than two per cent of total resources. This is despite the fact that agriculture is one of three designated priority productive sectors and despite the fact that it provides employment for 52 percent of the workforce – 37,400 men and women. The real issue is that the 70 percent of those in the agriculture workforce are engaged in subsistence agriculture and that 80 percent of the males and 86 percent of the females engaged in subsistence agriculture have either no education, or have failed to complete high school. This stark reality highlights the dualistic nature of FSM society - the educated participate in the cash economy while those without education are increasingly marginalized to subsistence agriculture. The closure in 2002 of the vocational agriculture course at PATS was a serious blow for young people wanting to learn about agriculture. The reason given is that young people are not interested, but given their general level of literacy and numeracy, it seems probable that many simply lack the confidence or ability to proceed further in education.
- There is mounting evidence that the attitude to traditional farmers has been "out of sight out of mind". Compounding this inadequacy is the fact that existing expenditure is largely unproductive. The major share is spent on agriculture staff who are viewed with skepticism by farmers because they offer nothing of relevance to them and their families. Agriculture successes in recent times (in kava and betel nut production) have been achieved in spite of Government involvement in the sector, not because of it.

4.3.3 Strategic Goal 2:To Increase production of traditional farming systems for home nutritional and traditional needs and cash incomes.

a Rationale for change:

This Strategic Goal and Supporting Policies are a revision of the Strategic Goal #1 in the matrix presented to the 3rd Economic Summit in April 2004. It has been modified to incorporate parts of Strategic Goals 3 and 4 from the earlier version as well. The reason for this is: (i) to focus this strategic goal specifically on the farm family; (ii) the need to differentiate services, especially extension services between traditional and commercial agriculture; (iii) the need to highlight the need to offer support services at community level where extension will be effective and to employ agencies best equipped to deliver such services — not necessarily from inside Government; and (iv) to ensure closely related aspects of traditional agriculture such as quarantine and nutritional health are seen as part of the same goal. The specific issues associated with availability of arable land per capita in Chuuk state, the high levels of food imports and under-resourcing of quarantine services are addressed.

b Supporting Policies:

- Improved outputs and profitability from traditional farming systems
- Development of a flexible extension service specifically designed to deliver quality services to traditional farmers
- Elimination of Vitamin A deficiency among the FSM population
- Develop more focused, HH food security strategy for agriculture in Chuuk
- Replacement of some imported foods with local product
- Adequate investment in border protection and agricultural quarantine

Traditional farm families are increasingly in need of cash to purchase food, pay for utilities, transport etc. With too few formal jobs available, agriculture is the only alternative income source. For others, out-migration to the USA is the preferred alternative. There are opportunities to work with village communities, to introduce simple but improved technologies, business understanding and market awareness. But small traditional subsistence and near subsistence farmers are a difficult extension target, requiring very different strategies from commercial farmers. Changes to extension delivery have been attempted in the past but with little or no reference to the farming community and with fiscal objectives, not a service quality outcome objective. Research and development (R&D) for traditional agriculture has been very limited, with programs not reflecting the needs of farmers and results not properly disseminated.

A combination of poor performance and fiscal constraints accentuates the need for development of alternative responses to servicing farmer needs. Some DoAs are looking to collaborate with donors and civil society organizations (NGOs), but donors and NGOs are frustrated with Government programs. To them the important thing is the need to achieve focused outcomes, not continual institution building.

105 A number of agencies are using a community based approach. They understand that traditional farmers can be reluctant to openly share knowledge and be suspicious of outsiders and new ideas. But, once a new technology has been demonstrated in the community, with time to absorb the concept and information, and the message has been reinforced, farmers do respond. The secret is a community approach, working with homogenous groups, using a softly, softly approach, with regular follow up and recognizing the lower priority of agriculture compared to obligations like funerals. For example what FAO has been trying in the Pacific over the past 2 to 3 years is to combine the involvement of community/village based stakeholders in the decision on the interventions with capacity building exercises related to technical topics such as record keeping, farm planning based on a better knowledge of marketing related issues, etc. The Natural Resource Conservation Service (NRCS) have been doing community based extension by working with groups of farmers (20-30) who are organized by the village chief. The key is grassroots involvement in the initial planning, where the needs are determined by the community, from which the type of service required can be determined. NRCS believes there many opportunities to "tweak" traditional agriculture to improve both yields and profitability. There are a number of other civil society groups in FSM successfully using the same approach. Two examples are:

- The Pohnpei Conservation Society (PCS) started in 1997. Today it has 19 staff and a \$350,000 budget funded independently of government. They work with farmers to encourage agriculture in the lowlands and to discourage encroachment into the high forest areas;
- The Yap agriculture garden program (Sudal Victory Garden Project) is joint-funded by Salvation Army, Red Cross UNDP and Yap State Dept. of Agriculture. It assists with establishing food gardens by providing funds for seeds, fertilizer, tools, fencing, etc. The ultimate aim is to form a cooperative from the successful grantees, with a market outlet based around a local supermarket.

106 Chuuk State, with 50% of the FSM population and 12% of the arable soils is considerably more vulnerable to issues of food insecurity than other states. In the outer islands, food security is under-pinned by swamp (pit) taro production and cash sales from copra production. Traditional means of protecting taro pits from sea flooding and salt toxicity are failing due to increasing reli-

ance on imported rice. Copra has been subsidized but recent subsidy cuts have reduced prices by 23% to farmers, with further cuts likely.

Rice and noodles have become the main food staple with imports worth almost \$6.0 million in 2002. Because these foods require cash to purchase them, the food security of many households is exposed to loss of cash income and shipping delays, etc. Public service layoffs are forcing some workers to fall back on the safety net of subsistence agriculture. Census 2000 data demonstrates this - the number of women engaged in subsistence agriculture increased three-fold; in three of the States (Chuuk, Pohnpei and Yap), subsistence agriculture was the most important activity for 24 percent, 26 percent and 34 percent respectively of the working age population; 80 percent of the males and 86 percent of the females engaged in subsistence agriculture had either no education, or had failed to complete high school.

A very high proportion of the population has been shown to be deficient in Vitamin A. There is a direct link between this and the heavy reliance on imported rice as the food staple of choice. Conversely, Some traditional FSM foods (especially yellow flesh banana, taro and breadfruit) have been analyzed and shown to be very high in beta keratin (bk) (the source of Vit. A). Vitamin A deficiency increases susceptibility of the population, especially children, to many other diseases (including diabetes, infections, impaired vision, heart disease, cancer and anaemia. While there is no doubt that rice is always going to play a major role in the diets of the FSM population, it must be supplemented by healthier and more nutritious traditional local foods.

This issue is being actively promoted on Pohnpei by a local NGO but there is an equal need to address the issue in other States. There is a need to promote an "agro-nutrition approach" whereby diet improvement and improved recognition and performance in traditional farming techniques are promoted in an integrated manner.

4.3.4 Strategic Goal 3:Increased volumes of saleable surpluses to be marketed by the private sector into local and regional markets.

a Rationale for change:

This Strategic Goal and Supporting Policies are a revision of the Strategic Goal #2 in the matrix presented to the 3rd Economic Summit in April 2004. The reason for this are: (i) while the role of the private sector must be recognized, there is an issue of recognizing and building dialogue between all stakeholders and their roles; (ii) small incremental gains from niche markets will build confidence among all stakeholders, especially farmers where improved status and recognition are important needs; (iii) some products have potential for value adding – especially relevant to the coconut crop.

b Supporting Policies:

- Establishment of regular dialogue between stakeholders (Government, private sector and growers)
- Recognition of the separate roles of stakeholders.
- Encouragement of niche commercial crops for import substitution and export
- Manage the coconut industry for the benefit of both producers and proc-
- Differentiate extension services between commercial farmers and traditional farmers
- Develop small-scale agriculture/food production units and industries
- 111 Previous approaches to development of the sector have identified market opportunities and made the (incorrect) assumption that farmers would move their production systems to capture these opportunities. This is not correct for the majority of FSM farmers. But there are niche windows of opportunity for agricultural products from FSM. Such markets may be small and diverse, but the thing to understand is that they come and go - like any window, they open and they close and for agricultural products, this can be a rapid process. Recognizing this reality is a vital part of any investment strategy for a productive sector. Being able to capture these opportunities while they are there is the strength of the private sector. The cumbersome and bureaucratic processes of Governments are typically too slow for niche marketing. Niche markets exist for local crops as well as introduced crops - they may be different markets but that is the strength of such a strategy. One market closes off, another one continues, another opens.
- 112 Policy makers must recognize that agriculture will never develop with large mono-culture crop systems. The capacity to supply is too limited and the majority of farmers will not change their farming system. Exposure to one or two crops is a risky business but Agriculture can develop by accessing several small, diverse niche markets, recognizing these markets will close from time to time, but that others will become available.
- In this kind of flexible changing marketing environment, each stakeholder should recognize its particular role. Government's role is to provide an enabling environment, including a consistent and appropriate policy framework, secure land tenure, provision of relevant public infrastructure, relevant research and development and effective quarantine and protection services. The farmers' role is to provide product that meets the quality and quantity requirements of the market on a regular basis. The private sector role is to find and fill markets with quality product, on a consistent basis and in a way which treats farmer suppliers equitably. One important aspect of this is providing farmers with up to date mar-

ket information, including prices, marketing costs and customer feedback. Everything else in the marketing chain should be the role of the private sector. Pacific Governments have tended to ignore this, claiming their economy is too small for an effective private sector. The reality is that successful exporters are the best source of market information but this is rarely acknowledged. These roles should not be played out in isolation. There needs to be regular dialogue between Government and the private sector (involved marketing and input supply), between Government and farmers and between private sector and farmers. Such dialogue does not occur in FSM at this time.

- There are a number of niche markets that already exist, and are being filled to some degree. There are opportunities to leverage the FSM image of a clean and green environment where food can be produced without concerns about contamination. Local products can be labeled as being produced by small, poor farmers in FSM, perhaps organically. Such a strategy would return a premium price in some markets. Niche markets can be for import substitution too. A community of farmers could agree to produce to replace a share of the market for some imported fruit and vegetables.
- Agriculture must be adaptable to the demands that socio-cultural activities place on farmers and their families. In particular the funeral culture places considerable stress on both time and money resources. The major constraints to commercial agriculture are not mainly technical, economic, freight and lack of markets. Commercial agriculture is constrained by cultural issues, especially attitudes to agricultural work and the opportunity costs of time and money associated with funerals.
- While traditional feasts are an opportunity for a farmer to get recognition and status there is no such recognition for farmers who produce commercial crops. The socio-cultural environment makes it very difficult for a farmer to make choices in favor of his agriculture activities at the expense of, for example, a funeral which takes typically 3 days per week. The success and growth of commercial crops produced by traditional agriculture cannot be over-looked. Betel nut and kava are major contributors to FSM agriculture exports.
- The Coconut crop is the only cash crop option for the 19,071 people living in the outer islands. The crop continues to be subsidized by Government, but to a lesser degree. The government marketing agency (CDA) will incur losses of about \$73,000 in 2004 and is projected to lose about \$68,500 in 2005. These losses would be very much higher if the copra price had not increased by 70% in the last 2-3 years. The prospects for the future lie in the extraction of oil from fresh nuts. Current production would produce about 100,000 gallons the oil extracted from fresh nuts is the premium, virgin grade.

- Revenue would equate to about \$210,000, compared to 2004 copra export revenue of \$157,000 33 percent higher. Farm gate payments could increase and Government could cease subsidy payments. Clearly in recent years, Government policy for the coconut crop has not been for the benefit of the growers.
- There are still further opportunities for value adding to the coconut crop by processing the oil into high end products as has been successfully achieved elsewhere in the Pacific.

4.3.5 Strategic Goal 4: Promote environmentally sound and sustainable production.

a Supporting Policies:

- Establish effective mechanisms to control invasive species
- Discourage slash and burn farming/deforestation
- 120 FSMs limited land resources and fragile eco-systems cannot be left to casual methods for addressing environmental protection, given the rapid deterioration that can result from inappropriate production practices. The causes and effects of environmental decline are often not immediately obvious or understood by resource users. For those striving to make a living the issue may not be a priority. As proven in a number of programs, a community-based approach focusing on resource users through education and support services can yield results. The policy is aimed at a pro-active and integrated approach to addressing environmental sustainability.
- 121 Environmental degradation continues to impact on food security. There is heavy reliance in most islands in FSM on seafood, especially subsistence catches from the fringing reef. However, land degradation and resulting reef siltation are heavily degrading reefs to the point where they are dying.

140

4.4 Policies & Outcome Performance Measures

Strat. Goal & Outcomes	Outcome performance measure	Discussion				
1.1 Adherence t	1.1 Adherence to an agreed policy framework based on solid information					
1.1 (i)	Agriculture sector policy reflects the views and priority needs of all major stakeholders by Dec. 2006.	The current scenario is politicians and public servants acting in their own interests, the private sector is very cynical about Government's role in the sector and farmers simply have no participation or service support.				
1.1 (ii)	Public investments in agricul- ture sector are agreed by private sector and farmers in relevant States before expen- diture is approved	A unified, multi-stakeholder sector planning approach is the absolute pre-requisite to any subsequent performance.				
1.1 (iii)	Less waste of scarce public resources	The wastage of the past as a result of politicians and public servants acting in isolation cannot continue in a sector wide investment environment.				
1.2 Allocation of	1.2 Allocation of an equitable Government budget share to agriculture					
1.2 (i)	Budget share allocated to agriculture increases to 3% of total by 2009	The current share is 1.8% - not a true reflection of the role of agriculture in FSM society or economy.				
	allocation of Government budget f nd operating expenses	or agriculture between staff salary				
1.3 (i)	75% of agriculture extension services are undertaken by civil society and community groups on contract basis by 2007.	Existing expenditure in agriculture is unproductive with 90% spent on salaries of nonperforming staff – expenditure needs refocusing on quality outcomes for farmers. At present, the system is funding staff, not farmers.				
1.4 Delivery of	effective education to rural popul	ation				
1.4 (i)	Better educated rural population, equipped to improve traditional systems to meet fiscal demands of Compact 2, attain at least 50% high school completion rates by 2015	Currently, traditional farmers are disadvantaged by their limited education. Understanding technical and financial opportunities requires basic levels of education.				
1.5 Raising the	e image of agriculture as a worthy	and satisfying career choice				

Strat. Goal & Outcomes	Outcome performance measure	Discussion		
1.5 (i)	Rates of youth migration are contained at 2004 levels	Agriculture needs a better image. If it were presented to young people within a dynamic policy framework with a clear vision and profitable opportunities, more would see it as a career with dignity.		
1.6 Affordable farm monitoring system established				
1.6 (i)	Quality agricultural data avail- able on real time basis to all stakeholders including non- government	Policy makers and business people are working a relative vacuum as there is so little data available.		
1.7 Invest in bor	der protection and agricultural qua	arantine		
1.7 (i)	Subsistence families and traditional farmers adequately protected from introduced weeds, pests and diseases	Limited investment in quarantine places those who rely on natural resources for a living a great risk of loss of livelihood. This is a short sighted approach.		
1.7 (ii)	Export market access is enhanced by adequate certification on country by country basis.	Market access for agriculture products today is built on certification of being free of disease, pests and contamination. Failure to properly certify can quickly close a market for farmers.		
	a flexible, affordable extension services to traditional farmers	ervice specifically designed to		
2.1 (i)	75% of agriculture extension services are undertaken by civil society and community groups on contract basis by 2007.	Current extension relies on unproductive staff with no incentive to perform. By moving to contracts, Government will have more control over performance and measurement of it. NGOs etc will have a direct incentive to perform or they lose their contract.		
2.1 (ii)	A livelihoods approach to traditional agriculture with community ownership results in a 10% increase in production and the consumption of local foods and 10% increase in quantity of local produce sold in local markets by 2009.	At present there is effectively no extension support to farmers. By providing well targeted and quality services to farmers, there is a real opportunity to capture immediate and sustainable output gains.		

142

Strat. Goal & Outcomes	Outcome performance measure	Discussion			
2.2 Elimination	2.2 Elimination of Vitamin A deficiency among the FSM population				
2.2 (i)	Vitamin A deficiency levels less than 10% by 2009	Correction of this problem is simple and low cost. A well directed campaign to include local nutritious foods in diets would address this.			
2.2 (ii)	50% reduction in infant mortality by 2010	FSM infant mortality rates could be halved with proper infant nutrition.			
2.2 (iii)	Reported morbidity rates among all age groups reduced by 50% by 2010	As well as death, Vit A deficiency contributes to a number of non-fatal illnesses that weaken the population. Susceptibility to many of these diseases will be lowered with good diet.			
2.3 Develop of r	more focused, HH food security st	trategy for agriculture in Chuuk			
2.3 (i)	Agriculture program in Chuuk better reflects the pressing food security issues there.	A review of the extension strategy for Chuuk is the first step to solving the issues of land shortage and over-crowding.			
2.3 (ii)	Food insecurity reduces by 30% by 2009	The specific food security orientation of the Chuuk extension program will reduce reliance on imports by providing more local food.			
2.3 (iii)	Cooked foods exports increase by 30% by 2009	Exports of cooked processed foods from Chuuk are an opportunity that the revised extension package will build on.			
2.4 Replace sor	ne imported foods with local prod	uct			
2.4 (i)	10% reduction in HH expendi- ture on imported foods by 2010 in FSM	The traditional farming system has considerable potential for increased output. Home technology courses in food presentation will allow diets to be varied and made more interesting and more convenient, hence encouraging a switch back to local foods.			
2.4 (ii)	Tourism and visitor industry using local foods in 20% of meals presented by 2010.	The projected growth in tourism is an opportunity to present local foods to visitors, hence maximizing economic gains			

Strat. Goal & Outcomes	Outcome performance measure	Discussion
		from tourism. A program to encourage chefs to use local food and entice visitors to eat it will be introduced.
3.1 Establishme sector and grow	nt of regular dialogue between sta ers)	akeholders (Government, private
3.1 (i)	Collaborative approach to domestic and export market- ing by 2007 results in greater market volumes and higher prices	As discussed under Policy 1.1 above, if farmers are to gain from investments in the sector, marketing must also be a collaborative effort with each stakeholder focusing their own particular responsibilities and roles.
3.1 (ii)	Higher cash returns for com- mercial farmers and exporters	By working together in finding, accessing and filling markets, the stakeholders will achieve greater volumes and prices which will benefit growers.
3.1 (iii)	More efficient provision of key inputs including farm supplies and freight services by 2007	Farmers are constrained by erratic input supplies. The private sector is undermined by Government undertaking its role and Government offers limited service. Inputs should be the domain of the private sector. Groups of farmers can buy together and obtain better prices by bulk buying.
3.2 Recognition	of the separate roles of stakehold	ders.
3.2 (i)	More efficient marketing on behalf of growers results in greater market volumes and higher prices	See 3.1 (i) above.
3.2 (ii)	Higher cash returns for com- mercial farmers and exporters	See 3.1 (ii) above.
3.3 Encouragen	nent of niche commercial crops fo	or import substitution and export
3.3 (i)	Export receipts for agriculture increase by 2% annually compound from 2009	Many small profitable domestic and export markets exist. They need to be recognized as such. This requires greater skill by farmers and extension staff in meeting these opportunities quickly. In turn, this requires

Strat. Goal & Outcomes	Outcome performance measure	Discussion
		communication and regular dialogue.
3.3 (ii)	Import value of fruit and vege- table able to be grown in FSM increasing by 2% annually by 2009.	See 3.3 (i) above.
3.3 (iii).	Higher cash returns for com- mercial farmers and exporters	See 3.1 (ii) above.
3.3 (iv)	50% increase in rate of new land titles registered	The land registration rate is so slow it appears to be a tool to obstruct greater commercial agriculture development. The contracting out of the surveying work may improve this. Right now land titles are not a major issue, but they will become one as the sector begins to develop. The issue must be addressed.
3.4 Manage the	e coconut industry for the benefit of	of both producers and processors
3.4 (i)	Future structure of coconut oil industry is established within private sector framework that offers social protection to Ols by 2006	Recognition of the role of the coconut crop in the lives of outer island communities is important as this industry is restructured. Equally important is the need to move to a private sector ownership structure. Defining the best way of achieving both these goals will be an important outcome and challenge. There are some options available and investigation of the best choice is an urgent task.
3.4 (ii)	20% higher cash returns for outer island (OI) farmers by 2007	Coconut oil prices are 33% higher than copra prices. By extracting oil from fresh nuts on the Ols, extraction will be higher, losses lower and the product more valuable. The challenge is to design a business model that benefits all industry stakeholders.
3.4 (iii)	At lest 3 new employment opportunities in each Ols by 2006	Oil extraction in the OIs will provide jobs.

Strat. Goal & Outcomes	Outcome performance measure	Discussion
3.4 (iv)	Nil direct subsidy payments to coconut producers by 2006	The opportunity to place the industry on a feasible financially sustainable footing exists. Prices for oil are at a high level but equally so are copra prices. Subsidies would need to be much higher if copra prices were lower.
3.4 (v)	20% reduction in out migration rates from Ols to main islands or USA by 2010.	By underpinning the financial returns to Ols farmers, two advantages will accrue. The cash incomes will rise and the environment will be less pressured as less demands are placed on marine resources. This will encourage many to stay.
3.4 (vi)	Coconut crop export receipts up by 10%	Additional value of virgin quality coconut oils over copra.
3.5 Differentiate farmers	e extension services between com	nmercial farmers and traditional
3.5 (i)	Value of commercial agricul- ture activity grows by 5% per year from 2007	By developing a smaller separate fully commercially oriented extension arm, commercial farmers will be provided with quality technical, business and market help. This will quickly lead to better performance and entice other farmers into commercial farming.
3.5(ii)	Number of commercially focused agriculture enterprises increases by 25% per year on 2004 baseline.	See 3.5 (i) above.
3.6 Develop sm	all-scale agriculture/food product	ion units and industries
3.6 (i)	Value of agriculture exports increases 2% per year from 2006	Some products are suitable for further processing and value adding. Coconut oil can be made into perfumes and attractively packaged for tourism; food can be cooked and packaged; by-products can be fed to livestock. There are opportunities which could be captured in a sector environment where stakeholders collaborate to

146

Strat. Goal & Outcomes	Outcome performance measure	Discussion
		produce competitive products.
3.6 (ii)	5 new jobs created per year from 2006	Difficult to measure how many, but small scale domestic proc- essing offers opportunities for women.
3.6 (iii)	Food imports reduced by 3% per year from 2006	Fresh, quality products at competitive prices will easily compete with imports.
Establish effecti	ve mechanisms to control invasiv	e species
4.1 (i)	Increase in returns to organic farmers by 10%	Organics offers real opportunity as a profitable niche market. Protecting the environment is a pre-requisite the achieving this.
4.2 Discourage	slash and burn farming/deforesta	tion
4.2 (i)	Maintenance of remaining forest cover at 2004 levels.	Greater involvement of communities in having responsibility for this outcome will be important.

4.5 Assessment of risks and weaknesses

#	Risk	Suggested response
	Strategic Goal # 1: A well resourced and properly ing within a stable policy fram	r focused agriculture sector consistently operat- ework
1.	High growth projections for FSM economy prove to be unrealistic – encouraging politicians to look for quick fix solutions over incremental gains from consistent policies.	Recognize and accept sensible, realistic potential of the FSM economy and plan accordingly with expectations of incremental gains.
2.	Failure to adopt an all embracing policy framework, money continues to be wasted, farmers continue to suffer.	See Output 1.1.1 and Output 1.1.2 in Agriculture Policy Matrix.
3.	Political interference in sector management	Politicians be asked to sign code of conduct, committing to a governance role and leaving executive functions to the industry.
4.	Failure to re-structure agri- culture services to release funds for more productive uses in agriculture.	Extension services are contracted out to ensure salary costs are managed and that flexibility in staff recruitment is achieved.
5.	Agriculture continues to be a career of last resort for young people, with outmigration the only real option.	Government take the lead in raising the pro- file of agriculture, ensuring functional quality support services are available and that the profitable opportunities offered in agriculture are understood and taken up.
	Strategic Goal # 2: Increase production from with tional and traditional needs ar	in traditional farming systems for home nutri- nd cash incomes
6.	Continued attitude that traditional farmers are not relevant in economic and political terms	Senior political and public service leaders' emphasis the risks of continuing this complacency.
	Failure to re-structure ex- tension services to offer more effective community based support to traditional farmers	Extension services be contracted out to civil society groups (e.g. modeled on existing successes in conservation) with specific conditions that services are to be community based and traditional agriculture focused.
7.	Inadequate funding for quarantine services results in farmers' livelihoods be- ing damaged by introduced	Ensure quarantine services get adequate resources.

- Mistrust of private sector impacts in clear decision making for sustainable future of coconut industry
 - coconut industry with wide consultation with and livelihoods of Ols. all stakeholders, including Ols. Careful consideration to ownership structure that includes a stake for Ols. Future developments in Ensure all opportunities are widely adverfood processing are domitised; ensure training courses are for private nated by Government ownsector trainees as first priority; ensure suit-

ership and management with resulting inevitable failure. Strategic Goal # 4:

Promote environmentally sound and sustainable production.

management roles.

Failure to identify profitable organic markets on which to base organic production. See response to Risk # 7 above.

jointly fund and manage preparation of a business plan and feasibility study for the

Failure to convince rural 13. communities to respect the remaining forest environment.

Work closely with communities at community level; place management responsibility on community, with incentive system for successful compliance.

able credit products are provided by Banks;

and ensure private sector has ownership and

4.6 Agriculture Sector growth projections (2005 – 2023)

- Growth scenarios for the agriculture sector have been calculated (see Table 16 and Annex 2 for details). Growth projections for subsistence agriculture and forestry, export receipts have been calculated. Special account has been taken of the potential to add value to the coconut industry by moving from copra to oil production and of the opportunity to replace some food imports with locally produced crops but only on a range of products that are able to be readily substituted.
- In the average growth scenario over the period from 2005 2023, subsistence agriculture is expected to grow by 3.3 percent per annum, exports by 13.3 percent and 82 per cent of the readily replaceable products will be locally produced (see Table 5). The average growth scenario expects population growth to be 0.5 percent. In addition, account is taken of a higher proportion of the population falling back on traditional agriculture and higher output from traditional agriculture as a result of implementation of the Sector Matrix, especially restructuring of extension delivery. Export receipts are expected to grow as a result of improved extension to commercial farmers, a focus on niche markets and increases in food processing. As mentioned, the potential of the coconut crop is captured by moving to oil extraction resulting in 23 percent additional export receipts from coconut. Imports of readily replaceable products, taking account of limited tourism growth, increases by 1.5 percent annually.
- In the high growth scenario over the period from 2005 2023, subsistence agriculture is expected to grow by 9.6 percent per annum, exports by 33.5 percent and 97 per cent of the readily replaceable products will be locally produced (see Table 5). The high growth scenario expects population growth to be 1.5 percent. As mentioned, the potential of the coconut crop is captured by moving to oil extraction resulting in 12 percent additional export receipts from coconut. Imports of readily replaceable products, taking account of strong tourism growth, increases by 5 percent annually.
- In the low growth scenario over the period from 2005 2023, subsistence agriculture is expected to grow by 1 percent per annum, exports by 3.6 percent and 59 per cent of the readily replaceable products will be locally produced (see Table 5). The low growth scenario expects population growth to be negative (-0.5%). As mentioned, the potential of the coconut crop is captured by moving to oil extraction resulting in 4 percent additional export receipts from coconut. Imports of readily replaceable products, taking account of nil tourism growth remains static.
- 126 In summary, the agriculture sector and FSM farmers could make significant contributions to economic growth if they were provided with appropriate support and direction.

Table 16 High Growth Scenario

High Growth Scenario:				
	C. C. C. COONAIN			
Subsistence Agriculture:				
Ave. growth rate (2005-2023)	9.62%			
Year:	2010	2015	2020	2023
Growth rate:	6.0%	6.0%	6.0%	6.0%
Total subsistence agric. (\$m)	38.83	51.47	68.88	82.03
Commercial Agriculture				
a) Agric. export receipts				
Ave. growth rate (2005-2023)	33.53%			
Growth rate:	11%	11%	11%	11%
plus:				
Coconut export growth:	18%	18%	18%	18%
Total Agric. Exports (\$m)	30.19	53.61	96.57	138.60
b) Food import substitution				
% replaced by 2023	97.24%			
Growth rate ¹ :	23%	23%	23%	23%
Net Food Imports (\$m)	1.18	0.44	0.16	0.11

Average Growth Scenario:				
Subsistence Agriculture:				
Ave. growth rate (2005-2023)	3.27%			
Year:	2010	2015	2020	2023
Growth rate:	3.0%	3.0%	3.0%	3.0%
Total subsistence agric. (\$m)	28.85	33.12	37.47	40.35
Commercial Agriculture				
a) Agric. export receipts				
Ave. growth rate (2005-2023)	13.31%			
Growth rate:	7%	7%	7%	7%
plus:				
Coconut export growth:	11%	11%	11%	11%
Total Agric. Exports (\$m)	24.00	34.60	50.10	62.72
b) Food import substitution				
% replaced by 2023	82.42%			
Growth rate ¹ :	12%	12%	12%	12%
Net Food Imports (\$m)	1.21	0.71	0.42	0.34

Table 17 Average Growth Scenario

Table 18 Low Growth Scenario

LowGi	owth Scenario:			
Subsistence Agriculture:				
Ave. growth rate (2005-2023)	1.03%			
Year:	2010	2015	2020	2023
Growth rate:	1.00%	1.0%	1.0%	1.0%
Total subsistence agric. (\$m)	23.83	25.05	26.33	27.12
Commercial Agriculture				
a) Agric. export receipts				
Ave. growth rate (2005-2023)	3.62%			
Growth rate:	3%	3%	3%	3%
plus:				
Coconut export growth:	4%	4%	4%	4%
Total Agric. Exports (\$m)	18.95	22.11	25.79	28.30
b) Food import substitution				
% replaced by 2023	59.21%			
Growth rate ¹ :	6%	6%	6%	6%
Net Food Imports (\$m)	1.22	0.89	0.66	0.58

4.7 Agriculture Infrastructure Investment

An Infrastructure Development Plan (IDP) was prepared in 2002 by Nathan and Associates. The IDP covered anticipated infrastructure needs in FSM for the period 2003-2017. While the IDP addresses the infrastructure needs of the private sector, it makes no specific mention of the agriculture sector. However, does address one major area of importance to agriculture and that is secondary rural roads. There is \$250 million earmarked for expenditure on roads. The IDP notes that: (i) tourism is expected to grow strongly and that handicraft production will grow as part of tourism growth; (ii) existing infrastructure is confined mainly to main islands and that there is very limited infrastructure on the outer islands (with the exception of two outer islands in Yap); and (iii) continuing maintenance of infrastructure investments requires considerable strengthening.

128 Infrastructure investments relevant to agriculture which should be considered for addition to the IDP include infrastructure for quarantine, additional market infrastructure and coconut oil extraction facilities in the outer islands.

4.7.1 Quarantine infrastructure needs:

a Inspection facilities

 Office (located near port or airport), inspection area, equipment, and a refrigerated container to store product after inspection, preexport.

Cost estimate: \$110,000 per State.

ii Heat treatment plant

There would be requirement for a small plant ONLY if there is sufficient capacity for thru-put. Investment is a "chicken & egg situation" - no product means not needed while no plant means no access for some products. Only relevant if papaya, banana, etc exports with fruit fly infestation problem. Say 2 required in medium term.

Cost estimate \$250,000 per plant (2).

iii Chill Treatment Plant

For tangerines from Kosrae only. The refrigerated storage container could be used. However, requires 10 days at 0C which is expensive in electricity costs – thus requires a minimum of 5 ton per batch – a volume that is seldom achieved at present.

154 FSM Strategic Development Plan

iv Fumigation Plants

Methyl Bromide is being phased out due to ozone problems. CSIRO (Australia) is investigating and developing a new technology which is likely to be approved. When this happens, fumigation plants could be considered. Cost estimate: \$25,000 per State.

Total quarantine infrastructure cost estimate: \$1,040,000

b Market infrastructure needs:

i Market cool storage, grading and packaging facilities – 1 per State.

Cost estimate: \$30,000 per state

ii Total market infrastructure cost estimate: \$120,000

c Coconut oil extraction facilities:

The capital cost of equipment and building renovation in each of the 19 outer islands is estimated to be \$9,500, as follows:

- equipment \$3,000
- generator \$1,500
- building \$4,500
- freight \$500

Total coconut oil extraction cost estimate: \$180,500

Total agriculture infrastructure capital requirements: \$1,340,500.

5 Fisheries

5.1 Fisheries Sector Review

5.1.1 Introduction

- The extensive marine resources of the Federated States of Micronesia are contained within an Exclusive Economic Zone (EEZ) covering some 900,000 square miles extending from 135° to 165° east longitude and from 10 north to 1 south latitude in the western Pacific Ocean.
- Responsibility for the oversight and management of nearshore and coastal resources to 12 miles is vested in State Governments with the management of offshore oceanic resources retained as a National Government function. In reflection of this demarcation, this review divides consideration of the marine and fisheries resources into Coastal and Nearshore Fisheries and Marine Resources and Oceanic Resources.
- The past 15 years has seen substantive documentation and reporting of the marine and fisheries resources of FSM, most particularly in relation to optimizing National benefit from oceanic tuna fisheries. The preparation of the current report draws heavily on previous documentation, in particular the studies and reports associated with the development of sectoral policy and linked to the series of FSM Economic Summits.

5.1.2 Coastal and Nearshore Fisheries and Marine Resources

a The Nature, Extent and Utilization of Resources

- 4 Coastal and nearshore marine and fisheries resource use in FSM comprises inshore fisheries (those taking place in mangroves, reef areas, and lagoons), nearshore fisheries for large pelagic species (including tunas) and bottom fisheries (for snappers, groupers and other demersal species).
- 5 The nature and extent of these resources has been variously documented¹. The coastal areas and lagoons have an enormous variety of different resources with very different uses including:
 - Living resources including reef and deep-slope fish, mangrove crab, land crab, coconut crab, lobster, deep-water shrimp, trochus shell, clams, pearl oyster, ornamental shells, turtles, octopus and squid, sea cucumber, sponges, corals. Uses include food, cash income from local and export sales of fresh and processed products, handicrafts, and shore protection by the reefs in general.

¹ References throughout the report are given as endnotes.

- Non-living resources including sand and coral rubble used for building, road and other infrastructure construction.
- Recreational and tourist resources including swimming, diving and other aesthetic and economic benefits derived from the natural beauty of reefs and coastal areas
- Coastal based infrastructure including port facilities and airports to support fishing, tourism and other import/export activities that depend on access to the accessible coastal areas.
- According to Smith, 1992^2 , the nature and extent of resources remained difficult to determine. Based on a rough stock assessment of fishable biomass of between 15 and 70 tons per square mile, and a total lagoon area of over 2,700 square miles, a total fishable resource of 100,000 tons was estimated.
- Subsistence fishers make the greatest use of inshore resources with much of the artisanal (small-scale commercial) fishing effort more focused on nearshore, bottom and coastal pelagic resources. A wide range of fishing methods are practiced with the most common being spearing (both by day and with the use of lights at night), trolling from small outboard-powered skiffs, handlining, gill-netting and cast-netting.
- In the main islands of each state small-scale fishers sell catch in excess of their own requirements through various outlets. A few fishers and traders also ship small quantities of fish to other parts of FSM and elsewhere although commercial activity in the export of reef fish has recently been controlled in Kosrae, Yap and Pohnpei due to concerns as to resource depletion. The artisanal fisheries are essentially extensions of the subsistence fishery and can also focus on inshore species, which are susceptible to over-exploitation. Artisanal fishers also harvest trochus, some beche-de-mer, crabs, and some lobster for export. The greatest cash value resource is trochus (Trochus niloticus) shells, a commodity endemic to Yap but which since the 1930s has been progressively introduced to many other locations within FSM.
- Attempts to develop and structure the small-scale commercial fishery, through projects such as the financing (or gratis provision) of fishing craft in Chuuk and Kosrae, as well as other schemes, have met with limited success. Problems with catch distribution and marketing are perennial constraints. Nevertheless a great deal of (mainly foreign) development funding has been directed towards the commercialization of inshore fisheries, and has included regional or village fisheries centers, infrastructure projects, and the provision of boats, motors and other equipment.

² Smith, Andrew. FSM Marine Resource Profiles. FFA report No.92/17. March 1992

Nearshore and bottom fish resources are utilized by artisanal fishers operating mainly from outboard boats of 5-7 m in length. Most hand-line bottom-fishing is conducted in waters shallower than 100 m, as the bathymetry of FSM's islands does not provide much demersal habitat below that limit. Handline trolling is a common method employed by these vessels. Ice is increasingly being carried and the catch is either sold immediately upon landing, or else iced or refrigerated on shore for later sale or export.

b Institutional Arrangements

- The development and management of coastal fisheries in FSM out to 12 miles from the shore is the constitutional responsibility of the four state governments. This responsibility encompasses all reef and lagoon fisheries as well as near-shore fisheries for coastal and ocean pelagic species, including tunas. Responsibility for marine resource fisheries development and management activities has been divested to separate agencies in Kosrae, Pohnpei and Yap with a single agency responsible for both management and development in Chuuk.
- The FSM national government has the responsibility to provide support to state agencies involved in coastal fisheries development and management efforts. This is done primarily through the Fisheries Section of the Division of Sector Development within the Department of Economic Affairs. The Fisheries Section assists the states in implementing their development and management plans through the provision of technical support and information, facilitation of contacts between state agencies and external organizations, and coordinating the activities of FSM's international development partners in the fisheries sector. The Fisheries Section also retains responsibility for the operation of the National Aquaculture Center in Kosrae State.
- In addition to the State and National Government Fisheries/ Marine Resource Agencies, various other organizations are involved in coastal resource management. These include environmental agencies, fisheries and economic development authorities, and non-government organizations. Because of the variety of agencies involved in coastal resource management in FSM, coordination of activities and harmonization of goals and objectives is an ongoing challenge.

c Legal Arrangements

In the mid-1990's draft marine resources legislation was prepared for each State in consultation with State officials. The draft legislation was intended, in each case, to enable community or traditional participation in fisheries management, and to harmonize key provisions among states and with the national government for effective management and enforcement purposes. These respective marine resources laws, responding to different needs and situations in each

State, were originally inspired by the concept of a "model law". Since that time, there have been changes in personnel, political administrations and priorities in the states. There has been uneven progress in revising the State fisheries laws. New laws have been passed in recent years in Yap and Kosrae but have yet to be adopted in Pohnpei and Chuuk. However, in Pohnpei, the recent adoption of a Marine Protected Areas Act, has provided a partial framework for fisheries management.

d Sector Performance

- Dalzell et al. (1996)³ used information from Smith (1992a)⁴ to estimate coastal fisheries production and value as being approximately 6,243 metric tons valued at \$11,237,400 for subsistence fisheries and 637 metric tons valued at \$1,483,544 for small scale commercial fisheries. The Statistics Unit (1999)⁵ suggested that some 490 mt of fish and shellfish worth about \$1.2 million was "purchased by local fishing markets" in 1997.
- The Household Income and Expenditure Survey (HIES) of 1998 reported that \$18,496,000 was spent by households in FSM on fresh and frozen fish, the vast majority of which would come from small-scale commercial fishing in FSM. Using average fish price information in Statistics Unit (1999), this equates to 6,323 metric tons of purchased fish.
- 17 Fisheries Engineering (1995)⁶ carried out extensive fieldwork in Pohnpei and estimated the total coastal fishery production of Pohnpei Island to be about 1780 metric tons (75% reef/inshore, 25% pelagic). Of this, 780 metric tons was attributed to subsistence catch and 1000 to commercial effort (with the proviso that approximately 28% of this was for non-sale domestic consumption).
- Given an extrapolation of the catch level reported in Pohnpei (32% of FSM population) to all of FSM, the catch by coastal fisheries would be about 5,500 metric tons. However, taking account of population increase and the likely higher per capita catches of the outer islands and Chuuk, a more likely catch estimate is approximately 8000 metric tons per year.
- 19 Gillett et al. (2001)⁷ estimated an annual catch of about 2,000 metric tons of tuna by small-scale coastal fisheries in FSM. Given agreement that the

³ Dalzell, P., T.Adams, and N.Polunin (1996). Coastal Fisheries in the Pacific Islands. Oceanography and Marine Biology, volume 34, pages 395-531.

Smith, Andrew. FSM Marine Resource Profiles. FFA report No.92/17. March 1992

⁵ Statistics Unit. Statistics Review. FSM Department of Economic Affairs (1999).

⁶ Fisheries Engineering Company (1995). Report on In-shore Fisheries Resources and Environment in Pohnpei State. Prepared for Overseas Fishery Cooperation Foundation, April 1995.

⁷ Gillett,R and Lightfoot, C. The Contribution of Fisheries to Pacific Island Economies. 2001

Table 1 Value of Exports of Reef Fish and Marine Products 2000 – 2002

Marine Product	2000	2001	2002
Reef fish Crabs/lobster Live clams Other marine products	\$ 75,272 \$172,339 \$ 41,836	\$100,823 \$177,948 \$ 2,837	\$109,512 \$206,480 \$ 21,037 \$ 4,561

Source: DEA Statistics Unit

pelagic catch represents 25% of the fish caught in small-scale fisheries (as suggested by the Fisheries Engineering study and by individuals knowledgeable in FSM fisheries), then the total catch from small-scale fisheries would be about 8.000 mt.

- Given known increases in fishing effort in recent years and taking account of increasing populations, an approximate indication of coastal fisheries production would be in the range of 10,000 metric tons distributed equally between subsistence and commercial activity. At \$2.90 per kg for the commercial catch and \$2 per kg of value for the subsistence catch this equates to a value of \$24.5 million per year.
- The documented export component of the artisanal fishery is reported in Table 1. The commercial export of reef fish has been discouraged in Yap and Kosrae and limited in Pohnpei. There are currently no controls on the export of reef fish from Chuuk and the majority of current exports are thought to be taken from Chuuk lagoon. Given the general tendency to limit or control reef fish exports, it is unlikely that there will be a major increase in export values from the sector.
- Perhaps with the exception of Chuuk, there is an increasing realization of reef fisheries depletion issues and the need for fisheries management. This is reflected in the formal establishment of 11 Marine Protected Areas (MPA's) in Pohnpei and well progressed plans for MPA's in Kosrae and Yap.

e Problems, Constraints and Issues

In reflection of the gradual move to a commercial economy, nearshore marine and fisheries resources have increasing become the target for commercial development. The introduction of new fishing methods and associated technology and the establishment of fisheries infrastructure have made commercial activity more prevalent and accessible, especially in proximity to urban development. Traditional communities have often yielded to unsustainable fishing methods to meet the need for immediate cash income.

- Increasing population over the past fifty years has placed much greater demands on the resource for income generating activity, food, housing and other coastal based developments. The competition is intensifying between resource uses and their users, and inappropriate fishing techniques has accelerated resource depletion.
- Increasingly the focus of effort in relation to coastal and nearshore resources has turned to resource management and issues relating to sustainability and the need to preserve fisheries for subsistence and community access. This is clearly exemplified in the work activities of State marine resource agencies and NGO's.
- The particular configuration of resources and the ease with which they can be commercially extracted are two of the key factors influencing the need for coastal resource management in each state. Other important factors are population density, and the degree to which other developments are taking place in the coastal zone. Dredging and sand-mining, the construction of roads, wharves and buildings, solid and liquid waste disposal, deforestation and agriculture development almost always have negative downstream effects on coastal marine living resources, and FSM is no exception in this regard. As elsewhere, the impacts of coastal development in FSM are most pronounced in urban areas where population, infrastructure development and pollution are concentrated. Since these are also the areas where commercial pressure on coastal fish stocks is strongest, the result can be a degradation in fisheries.
- Coastal and inshore resource management issues were summarized at the 2000 Coastal Fisheries Consortium⁸ as follows:
- Chuuk State has historically had the largest state fishery agency in FSM. It is also the state with the most serious fishery management problems. High and rapidly growing population is creating greater pressure on fishery resources. There are large numbers of boats in the lagoon (reportedly over 2,000). Although many of these are used primarily for transport, many are also used for fishing, at least occasionally. Good air connections exist to Guam, which provides a market for a component of the catch. Dynamite fishing is prevalent, and dredging and sand-mining for land fill and for building materials is largely uncontrolled. The dredging problem is exacerbated by the shortage of land on Weno, the state center, where development is leading to extensive shoreline reclamation. The State's numerous municipalities (and in some cases individual reef owners) nominally have some authority to control access to their fishing areas but these seem to be upheld only in the outer island and more remote parts of Chuuk proper, and are largely ignored close to the population centers. There are

⁸ Preston, G. Proceedings of the Coastal Fisheries Consortium. ADB TA No. 2832-FSM. 2001

no current data on fish catches or production but anecdotal information suggests that large quantities of reef fish are being exported by air to Guam, and that strong declines in abundance of some resources are said to have occurred in some areas.

- Kosrae is the state with the least complex fishery management environment. A single small high island with a small population (who are historically not such ardent fishermen as those of other FSM states), limited resources, and far from most commercial marketing opportunities, Kosrae's fishery management problems are mainly related to the smallness of the resource. Harvests of certain key species such as trochus and crabs are, or need to be, controlled, but most threats to coastal resources come from land-based developments which cause increased runoff, pollution or sedimentation. However Kosrae probably has the best-developed coastal management system of any state, with environmental review procedures being progressively implemented for all coastal development projects. Basic statistics on catches are said to be collected on a regular basis, but these are not analyzed or published.
- 30 Pohnpei is something of an intermediate case in terms of resources, degree of exploitation, and the extent of fishery management problems. Some production statistics are collected by the State fisheries agency, but these are not analyzed to show trends or even annual production data. The general perception in Pohnpei seems to be that resources are not yet in crisis but that the time is approaching when management action will be needed, at least on Pohnpei proper. Unfortunately there is also something of a fatalistic view that management will not be possible until a crisis situation develops. As in other states, enforcement of State fishery laws by State police or conservation officers is largely ineffective, while the absence of traditional reef/ lagoon tenure systems on Pohnpei proper may impede the development of community-based management arrangements. A major issue in Pohnpei is land-based development: the island has lost a large proportion of its virgin forest to the cultivation of sakau and this is thought to have caused increased runoff, sedimentation, and chronic reef degradation.
- Yap is unique in the degree to which traditional marine tenure arrangement have been preserved, both in Yap proper and in the outer islands. Inshore fishery management in the state essentially needs to be community-based because the state constitution and laws recognize that communities and their leaders have authority over access to and use of coastal areas. Relative to other states, Yap has a large resource base and in most areas a small population, so management issues related to over-exploitation are generally not pronounced. Nevertheless some resources, especially of sessile types such as clams and beche-de-mer, or of other species close to the state center of Colonia, have been seriously over-exploited in the past, demonstrating that the traditional system of

tenure does not guarantee effective stewardship. For several years the State Government has been progressively trying to introduce a coastal area management plan that will be implemented through the actions of both Government and traditional groups. As elsewhere, sand-mining and dredging were noted as serious environmental problems that were difficult to control.

- As can be seen, the four FSM states are quite different in the fishery management problems they face. However, some common themes emerge:
 - In most states there is more than one agency that has responsibilities relating to inshore fisheries management. This is not a problem when agency heads are willing to work together, but that is sometimes not the case.
 - There appears to be a general lack of awareness or understanding of the
 resource base that is available to support coastal fishery development.
 Few detailed assessments have been carried out of inshore resources, and
 comparative information from elsewhere has not been extrapolated to the
 FSM situation. In general, there is perhaps an over-optimistic view of the
 degree to which coastal resources can support commercial development.
 - Perhaps because of the failure to appreciate that coastal resources are limited, there has also been a general lack of awareness of the need for fisheries management, and the advantages that this may bring in terms of sustainable benefits. This often extends to all levels, from resource users to decision-makers, and may include the staff of fishery agencies. In those locations where traditional marine tenure does not exist, even if resource users are aware of the benefits of management, there may be no incentive for them to act in a conservation-minded manner.
 - There is a universal difficulty in enforcing State-level fishery regulations.
 Enforcement is impeded at every step: there are not enough enforcement officers or patrols, enforcement officers often turn a blind eye to offenders because of family or personal connections, and on the rare occasions that cases are brought to court, they are often dismissed or dealt with lightly, providing no disincentive to the offender.
 - There is also a widespread belief among State fishery agencies that
 management must be effected through communities or municipalities.
 This is generally coupled with a lack of knowledge on how to go about
 the process of promoting or introducing community-based management.
 - In three of the four states, sand-mining and dredging are said to be serious
 environmental problems that are difficult to control (often because of
 vested interests) and which are having negative effects on coastal fishery
 resources.
 - In general the States are progressing towards an integrated approach to coastal area management. Three of the four states have or are working

towards coastal resource management plans, although only in Yap and Kosrae is this at a reasonably advanced stage of implementation.

- A final observation is that management arrangements seem to be most effective in those States or areas where a community-based or participatory approach is used. This observation encompasses both the more traditional systems in place in Yap and in the outer-island areas of other states, as well as the more modern participatory approach
- Increasingly, the principle issue for nearshore resources is that of sustainability and effective resource management.

f Development Potential

- Due to their distinct biological, physical and economic characteristics, FSM's four states each have different prospects for the development of coastal living marine resources. In terms of resource endowment Chuuk and Yap states and, to a lesser extent, Pohnpei state, have extensive areas of reef and lagoon and in consequence relatively substantial inshore resources. Kosrae, a single high island with a limited coastline and small fringing lagoon is much more limited in this regard.
- As well as resource abundance, the commercial potential varies considerably from state to state. Local markets for fish could be developed further in each state, particularly in Pohnpei which, as the seat of national government, has the most extensive cash economy. Yap, being in closest physical proximity to Guam and the large demand for fish there, formally participated in a relatively steady reef fish export trade to that destination. As a resource management measure, this trade has recently been restricted. Pohnpei also participates in a similar trade with some species controls and a higher overall cost for fish transportation. Chuuk exports of reef fish have increased in recent years despite resources within the state being less conveniently distributed in relation to transportation hubs. Kosrae, which is hampered both by high transportation costs and limited resource endowment, is effectively excluded from such trade.
- In three of the four FSM states (i.e. all but Kosrae) there exist 'outer' islands that are either coral atolls or single coral islands. The outer islands participate in the cash economy to varying degrees, and constitute a special case when it comes to both fisheries development and living marine resource management. For most of the atolls, many of which are small by regional standards, the lack of regular transportation and resource limitations preclude the monetization of most coastal fishery resources. All states except Kosrae possess uninhabited or lightly-inhabited atolls (and islands, in the case of Chuuk) which have commonly been seen as 'storehouses' of marine resources, and whose existence further complicates management in those states.

- The main role of small-scale fisheries is likely to continue to be in providing subsistence protein, contributing to dietary health, and helping maintain rural lifestyles in the face of a tendency to urban drift or emigration. Artisanal fishing may be able to expand in some areas through local market development or by taking advantage of export opportunities to Guam and Saipan. Where marketing problems can be overcome, however, resource constraints will quickly limit commercial fishery expansion.
- There has been no significant documented attempts to quantify what the development potential of most inshore resources might be, except in regard to one or two specific fisheries such as for trochus. In general terms, however, this potential must be quite limited, and is unlikely to be sufficient to justify extensive infrastructure development. In addition, the importance of the contribution of coastal fisheries to subsistence living and dietary health should be recalled when considering commercialization and the development of export markets.
- One area of possible development potential is in linking the management of inshore resources to key activities in the tourism industry based on sound environmental management. A pristine marine environment is one of the underpinning sales opportunities for tourism development. It may be, that in some situations, there is greater potential benefit to be had from the closure or preservation of selected sites through the establishment of marine reserves, sanctuaries, or marine protected areas). For example, if key selected areas of coral bio-diversity or fish abundance were reserved as dive sites and marketed accordingly, it may be that there would be greater overall community benefit generated from income generated by the dive industry.
- This has been clearly demonstrated in Palau with an extensive Marine Protected Area (MPA) program. Primarily due to the efforts of the Pohnpei Conservation Society, a network of 11 MPA's, underpinned by legislation, are already in place in Pohnpei. The development challenge here is to link conservation efforts to tourism marketing and establish mechanisms to ensure direct benefits to communities.
- There may also be scope to further develop coastal pelagic fisheries. Deployment of Fish Aggregating Devices (FAD's) in coastal areas has potential to divert fishing effort from nearshore and reef based fishing to targeting of tunas and other coastal pelagic species. The emphasis in this scenario would likely be on diverting fishing effort from heavily fished resources rather than increasing overall fishing effort.
- Given the increasing focus on resource management and conservation, it must be concluded that there is very little real development potential in near-shore and coastal fisheries.

g Aquaculture

- Aquaculture has been the focus of technical and development attention in FSM, as well as in some neighboring countries, for at least 20 years. Numerous documents, reports and reviews exist, most of which emphasize the potential of specific forms of aquaculture for development as well as for other purposes, such as reef reseeding.
- A National Aquaculture Center (NAC) was established in Kosrae in 1991 to explore aquaculture potential and to undertake research, demonstration and training. Its primary work involved propagation of giant clams for farming and re-seeding in other states. In its early days the NAC was the operational base for aquaculture extension agents funded through the US Center for Tropical and Sub-Tropical Aquaculture (CTSA)/ Land Grant Program, but these have now relocated their activities to Pohnpei.
- Despite the activities of the Center, so far no private commercial culture operations for giant clam have commenced in FSM, there has been little reseeding activity carried out, and there appears to be little prospect of any such development in the foreseeable future. Other aquaculture initiatives have been and continue to be supported both by the Government and by several local and international organizations working in FSM, including CTSA, the College of Micronesia, Japan Overseas Cooperation Volunteers, and the Pohnpei Agricultural Training School, and the FAO South Pacific Regional Aquaculture Program.
- Sponge culture trials were begun in Pohnpei about 10 years ago and several pilot farms started in Pohnpei with donor funding support. There are now 9 established farms in operation but production volumes have yet to reach the levels required to attract export markets. The culture of Eucheuma seaweed was attempted in Pohnpei during the mid 1980's, but relatively low returns to farmers and other problems prohibited it from developing despite success in growing the seaweed. Black pearl culture trials began on Nukuoro atoll in Pohnpei state in 1995. Initial harvesting has reportedly yielded good quality pearls and several other ventures are in the early stages of development. Ventures in farming milkfish, tilapia, carp and prawns have been attempted or proposed but have to date not resulted in sustained commercial success. More recently, a Korean Joint Venture company (Hans Micronesia Inc) has reportedly commenced an operation whereby fry are imported into Chuuk for sea-cage grow-out and subsequent export. In Kosrae, a project is underway to develop capacity for the culture of mangrove crabs.
- Despite widespread investment and interest among both national and state governments in the commercial potential of various aquaculture pursuits, there has been very little commercial development. Traditional land tenure systems are a further impediment to the development of terrestrial aquaculture pro-

jects in some areas. Prospects for commercial activities have probably been overstated, and it seems unlikely that the sector will become a significant revenue earner for FSM, at least in the near future.

- 49 However, this is not to say that there is not potential for subsistence and artisanal aquaculture activities to be successful, either in income generation or simply for food production.
- Other aquaculture projects that have been investigated include trochus re-seeding and transplanting. Much has also been made of the potential for cultured clams in reef re-seeding or re-stocking programs. Re-stocking is viewed as a way to restore populations of vulnerable species such as giant clams that have been depleted by over-fishing. However, it is important to note that restocking will not have a beneficial effect in the absence of fishery management. If resources are depleted because they are being harvested before they get a chance to reproduce, the same thing will likely happen to re-stocked resources.
- In the regional sense, there is little, if any, evidence that re-stocking programs for tropical marine invertebrates (or most other marine species) makes any detectable difference to the wild populations, even when done on a very large scale. The small scale of hatchery operations and the potential absence of management or monitoring systems will likely mean that juvenile release programs will not have any meaningful impact on wild populations and therefore be unlikely to contribute in any significant manner to resource management or conservation. However, in a scenario where restocking activities are coordinated with community participation in management strategies (such as the establishment of marine reserves or protected areas), the restocking event is likely to be positive and focusing for communities.
- Ten years prior to the 2000 fisheries consortium, a review of aquaculture in FSM⁹ made the following comments:
 - The present status of aquaculture in the FSM indicated that the prospect for commercial activities has been exaggerated. Expectations have been inflated to unrealistic levels through uncritical assertions about the commercial viability of aquaculture;
 - On the evidence obtained in the course of the review, and from analysis of similar activity throughout the Pacific and Asia, aquaculture will not be a significant revenue earner for the FSM;

⁹ Anon. Evaluation of aquaculture projects and production of an aquaculture development plan for the Federated States of Micronesia. Report prepared for the FSM National Office of Planning and Statistics. Australian Planning and Training Associates (APTA) Pty.Ltd. 1990

- This emphasis on aquaculture, in terms of its commercial potential, has been to the detriment of the ability in the individual states and the nation as a whole to develop a coherent Fisheries Development Plan, of which aquaculture forms an integrated part, through the diversion of resources, manpower and funds;
- A number of projects identified as coming under aquaculture divert attention from addressing real concerns of resource conservation and management. Reseeding programs cannot substitute for conservation of stocks and control of fishing effort.
- These conclusions would appear to be still valid today. After at least 20 years of investment and technical support there is still not a single commercial aquaculture enterprise in FSM, and aquaculture activities have not yet had any demonstrable consequence in regard to resource conservation and management. Most aquaculture specialists in FSM agree that the future development of aquaculture in the country will revolve around high-value export products such as pearls, aquarium life, sponges, and perhaps organisms with pharmaceutical properties.
- Given the high likelihood of continuing support for aquaculture by FSM's development partners, it may be more appropriate for the Government to consider channeling its own resources into other development or conservation activities with more tangible or immediate benefits.
- In consideration of this, a review of the operation of the FSM National Aquaculture Center¹⁰ in 2000 concluded:
 - The NAC's focus on giant clam aquaculture is providing little or no economic development benefit to FSM;
 - There may be environmental or conservation benefits from giant clam culture operations in certain states (especially Chuuk) if these take place within the framework of a broader community-based coastal resource management initiative. However these benefits could be delivered more effectively and at lower cost through non-aquaculture solutions, or through state-level aquaculture facilities or arrangements;
 - Physical location of the NAC and associated transportation logistics and costs will make it difficult for the Center to assist the states by regular provision of seedlings or juveniles;
 - Uncertain markets and a lack of business experience within NAC mean that there is little prospect of the Center becoming self-financing, or even

¹⁰ Preston, G. Future Operations of the National Aquaculture Center. ADB TA No. 2832-FSM. 2001

- recovering a major portion of its operating costs, under present management arrangements;
- There may be scope for research into aquaculture development prospects based on higher-value species or products. However this would be strategic research involving high risks and a very long-term perspective. For research activities to be of any value, they would require a higher level of scientific, technical and management capacity than the Center presently embodies.
- The review noted that continued operation of the NAC by the Department of Economic Affairs (DEA) would constitute an indefinite commitment to financing activities and be unlikely to generate significant economic benefits. It was suggested that the DEA either divest itself of the NAC, or enter into a partnership with another organization better positioned to deliver research, educational and extension outputs, probably based on species other than giant clams.
- 57 The future operation of the NAC was given further consideration in the privatization study of 2000¹¹. This study concluded that, following a detailed market research study, FSM should seek out opportunities for possible joint venture partners and look to commercialize center activities.

h Coastal and Nearshore Resources and the Sustained Growth Strategy

- The level of employment (formal and informal) and income (in-kind and cash) activity in inshore fisheries is related to two essential factors: Compact funding levels and population growth. Historically, Compact funded Government and related jobs have provided attractive incomes, drawing labor away from activities such as subsistence fisheries. This has formally resulted in a reduced dependence on inshore fisheries as a source of food or cash income.
- However, the 2000 census shows a dramatic increase in the number of people engaged in subsistence and artisanal activity in fisheries and agriculture (table///). This indicates a refocusing of effort in subsistence fishing. Increasing effort in inshore fisheries as a cash or in-kind income source combined with rising populations has, in recent years, resulted in greater levels of overall exploitation. A combination of population increase and high unemployment could place an unbearable burden on inshore resources in some areas. . (this paragraph seems inconsistent with the preceding one?)
- Inshore fisheries and marine resources are seen by resource users as having a number of inherent advantages as a source of income and employment.

¹¹ Aries Group, Privatization of Public Enterprises and Corporate Governance Reforms. ADB TA# 3201 FSM

Harvesting of wild species and use for food or domestic and export sales is immediate compared to the growing period needed and seasonality of agriculture. Reliable figures do not exist on the supply of inshore fishery products for subsistence and domestic use. If incomes fall (as a result of a decline in Compact funding) there is likely to be greater activity and supply from inshore fisheries for food and cash purposes, especially from subsistence and artisanal activity.

- Increased emigration to locations such as Guam can provide a conduit for marine products from FSM, as well as expanding the commercial market for those products. Increased supply through viable and sustainable inshore fishing and aquaculture enterprises and improved processing, quality control and marketing could add value to the economy, but potentially at a high environmental cost.
- The overriding issue is thus, the environmental sustainability of resources. The inshore resource has, in many cases, already been depleted and the immediate focus required is resource preservation rather than development.
- However, as previously noted in relation to development potential, the inter-relationship between marine resource management and marine based tourism does offer potential for positive contributions to economic development. This is especially apparent in a scenario where infrastructure development programs cited in the tourism development plan of the IDP are implemented and tourism marketing strategies better developed to reflect the eco-tourism potential of established Marine Protected Areas.

5.1.3 Oceanic Resources

The Nature and Extent of Resources and Levels of Exploitation

- The Exclusive Economic Zone of the Federated States of Micronesia (EEZ) covers an area approximately 900,000 square miles across the Western and Central Pacific Ocean (WCPO). It is one of the largest EEZs under national jurisdiction in the WCPO and has a diverse tuna fishery which ranges from subsistence and artisanal operations to industrial scale longline, pole and line, and purse seine fishing.
- The main oceanic target species are skipjack tuna (*katsuwonis pelamis*), yellowfin tuna (*thunnus albacares*) and bigeye tuna (*thunnus obesus*) with the vast majority of fishing effort coming from the established distant water fishing nations (DWFN), the United States, Japan, People's Republic of China (PRC), South Korea, Taiwan.
- The extent of the tuna resource of FSM (as a portion of the resource of the WCPO) has the potential to vary greatly depending on fishing effort, the

migratory nature of the species and the climatic events known as *La Niña* and *El Niño* which effect sea temperature.

- During a La Niña period (such as 1995), surface tuna schools are most active in the western Pacific Ocean in the area of the FSM EEZ. In contrast, as was the case in 1998, the surface schools concentrate more to the eastern part of the central Pacific during El Niño periods. The impact of this variation in all methods tuna catches within the EEZ of FSM is given in Figure 1.
- As indicated in the table, FSM catches grew steadily to 253,174 metric tons (mt) in 1995 with subsequent significant declines through to 1998. An improved catch in 1999 of 178,473 has been followed by progressive declines to the lowest catch since 1985 in 2002 of 43,690. The catch trend improved with a reported 2003 catch of 161,810.
- During the first half of the 1990s the tuna catch in FSM generally followed an upward trend that occurred in the entire Western and Central Pacific Ocean (WCPO). In reflection of the *La Niña* and *El Niño* phenomena, the catch in FSM started declining in 1996 while overall WCPO catches continued to increase. The difference became most significant in 1998 and again in 2002, when the total catch of tuna in FSM's EEZ reached lows of 47,000 mt and 43,690 mt. In the 1998 instance, the same time, the total tuna catch in the WCPO jumped to an estimated 1,773,780 mt, the highest on record.
- The total catch of target tunas in the WCPO in 2000 was 1,852,746 mt. This was the second highest ever recorded for the region, after that of 1998. The tuna catch in the WCPO was 76% of the total estimated Pacific Ocean tuna catch of 2,452,746 mt and 48% of the world tuna catch of 3,832,118. This was the highest ever recorded.
- The nature and extent of the levels of tuna exploitation in FSM waters is in recent years is detailed in tables and figures provided as appendix 1 and summarized here, with the addition of historic data, as table 2.
- More than 80% of tunas are landed by large purse seine vessels. Of these, the data from 1999-2003 shows a predominance of landings attributable to Japan with 194,307 tons and between 34-36 active vessels in any one year. Taiwan operated 40-42 active vessels in any one year for 163,927 tons and Korea maintained 24-26 active vessels for 146,772 tons.
- The US reported catches totaled 4599 tons and those of FSM domestic vessels amounted to 3004 tons. The total catch for purse seine vessels fishing in FSM waters for the period was 562,509 tons.
- As indicated in table 2, longline fishing has shown a dramatic reduction in catches in the period 1999 2002 with a subsequent increase again re-

ported in 2003. The downward trend matches reported catch reductions in other WCPO fisheries such as Fiji, Samoa and Tonga.

- 75 The FSM longline fleet comprises vessels from Japan, China, Taiwan and FSM. The vessels target deep swimming large yellowfin and bigeye tuna, primarily for fresh chilled export to Japan.
- From total landings for the period 1999 2003 of 32,900 tons¹², the Guam based Japanese fleet vessel reported landings of 16,799 tons inclusive of by-catch. This fleet comprised 126 vessels in 1999, reducing to 110 and 66 in 2000 2001. The fleet further decreased to 61 vessels in 2002 but increased to 80 in 2003. The average catch per vessel in 1999 was 61.84 tons compared to 52.46 in 2003.
- The Taiwanese fleet comprised the largest number of vessels with 79 in 1999 and 123, 98, 58 and 69 in the3 subsequent years to 2003. These vessels landed a total of 6,357 tons for the period. Catches per vessel averaged only 12.46 tons per vessel in 1999 are remained low through to 2003 when a 20.7 ton average was achieved.
- The FSM based Chinese fleet reduced to 21 vessels in 2003 landing just 620 tons. This compares to a high of 54 vessels in 1999 for 1027 tons. These

Table 2	Tuna C	atches ir	the FSM	EEZ 1991	- 2003

Year	Purse Seine	Longline	Pole & Line	Total (MT)
1991	110,445	10,024	23,819	144,288
1992	127,645	12,987	3,176	143,809
1993	159,356	15,025	6,720	181,101
1994	187,496	15,770	6,473	209,738
1995	216,294	18,724	18,156	253,174
1996	139,731	11,081	1,054	151,866
1997	70,572	9,597	1,003	81,172
1998	73,027	9,216	1,026	83,268
1999	168,127	9,791	555	178,473
2000	114,372	9,080	3,814	127,266
2001	82,797	5,175	687	90,660
2002	40,884	2,806		43,690
2003	154,262	8,271	1,733	162,212

¹² Note: This figure does not include by-catch landings

vessels averaged 19 tons of landings for the 1999 fishing year but increased this to 29.5 tons in 2003.

- In pursuit of domestic capacity development in the longline fishery in the 1990's, FSM encouraged both public and private sector investment in longline vessels. Domestic vessel numbers reached 25 in 1999 for 487 tons of landed catch at an average of 19.48 tons. Domestic vessels numbers have generally declined with 18 in 2002 and 21 in 2003. In the 2004 fishing year, only 12 vessels were thought to be active in the domestic fleet. The 21 operational vessels in 2003 reported 413 tons for an average of 19.66 tons.
- As indicated in table 2, the Japanese pole and line fishing fleet has operated variously in FSM with catch highs achieved in 1991 and 1995 and a subsequent reduction in fishing from 2000 to 2003 where there were 6 licensed vessels and reported landings of 1733 tons.

b Institutional Arrangements And Resource Management

- Following a review and consultation process spanning some 10 years, the Marine Resources Act of 2002 (MRA 2002) was passed in to law as Title 24 of the FSM code.
- 82 The law established the National Oceanic Resource Management Authority (NORMA) (previously known as the Micronesian Maritime Authority (MMA) and the Micronesian Fisheries Authority (MFA)) as the national agency responsible for the management of oceanic resources from 12 200 miles in the FSM economic zone.
- The mission of Authority is to be an effective guardian and manager of the living and non-living marine resources in the exclusive economic zone of the Federated States of Micronesia for people living today and for the generations of citizens to come.
- The Authority is tasked to:
 - Ensure that these resources are used in a sustainable way;
 - Obtain maximum sustainable economic benefits from the resources; and
 - Promote economic security for the Nation through their use.
- The Authority is empowered to draft regulations for the management, development and sustainable use of fisheries resources and related activities in the exclusive economic zone, in relation to fisheries monitoring and control and to implement access agreements and fisheries management agreements. Other regulatory powers relate to confidentiality of information, compliance with regional arrangements, the issuance of citations and assessment of penalties.

NORMA is also tasked in the regulation and management of marine scientific management and training.

- In addition to the regulatory function, NORMA is also tasked with the provision of technical assistance in the delimitation of the exclusive economic zone, the negotiation and implementation of access agreements and fisheries management agreements and the issuance of fishing licenses.
- NORMA has a coordination role in the implementation of fisheries monitoring and control activities but active surveillance activity and the operation of patrol boats is carried out by the Maritime Wing of the FSM National Police under the Department of Justice.
- In a regional sense, FSM has a history of active participation in the programs of the regional fisheries agencies, the Oceanic Fisheries Program of the Secretariat for the Pacific Community and the Forum Fisheries Agency (FFA). As such FSM is a party to the 1982 Nauru Agreement Concerning the Management of Common Interest and the 1994 Federated States of Micronesia Arrangement for Regional Fisheries Access.
- 89 NORMA representatives have also represented FSM in all 7 sessions of the Preparatory Conference for the Establishment of the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific. FSM will host the new Commission which is established as the new coordinating agency for western Pacific oceanic fisheries management.
- In 2000 the FSM President directed NORMA (then MMA) representatives to establish an National Steering Committee in support of the development of a Tuna Management Plan for FSM. A comprehensive plan has subsequently been developed and approved and is now recognized as the guiding instrument for tuna resource management in FSM.
- 91 The specific goals adopted in the plan are to:
 - Ensure that the tuna catch does not exceed sustainable levels;
 - Obtain national revenue from foreign fishing access agreements;
 - Support development of FSM-owned and/or foreign FSM-based fishing enterprises;
 - Encourage investment in enterprises related to tuna fisheries;
 - Promote employment opportunities;
 - Enhance international relationships beneficial to FSM.
- The plan recognizes that tuna resource is shared with other countries in the region and is finite. It thus embodies principles relating to the precautionary approach to fisheries management. It is anticipated that the plan will continue to

guide the development and management of the tuna resource of FSM for the foreseeable future.

c Current Situation and Sector Performance

- The contribution of oceanic fisheries to the economy of FSM can be divided into benefits derived from activities as follows:
 - foreign vessel access and license agreements;
 - investment in shore based transshipment infrastructure and the provision of long line transshipment services for domestic based foreign long line vessels;
 - domestic owned and operated long line and purse seine vessels;
 - the purchase and on-sale or value adding of by catch;
 - services provided in support of purse seine transshipment;
 - the general provision of vessel support services in established ports;
 - employment opportunities in each of the above activities;

d Access Arrangements

By far the largest and most consistent contribution to the economy from the sector has been the income that has been derived from access fees. With the inclusion of a 2003 access fee return of \$13,473,183, total income for the period 1990 - 2003 is close to \$200,000,000. Figure 2 below shows annual fluctuations in access fee payments for the period. The downward spike of 1995

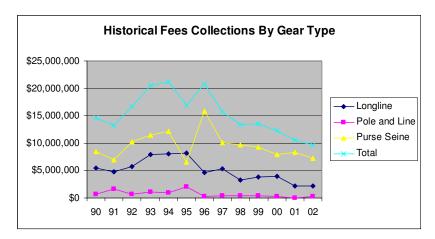


Figure 2. Historical Access Fee Collection by Gear Type

reflects a year where access arrangements with Taiwan were not successful and no agreement was reached. The peak income of 1994 reflects the presence in FSM that year of a large domestically based Taiwanese longline fleet. Similarly, the 1996 peak reflects a large payment from the US fleet of over \$6 million as part of the US multi-lateral access arrangement. Purse seine fees have stabilized with the implementation of 5 year access agreements with Koreas and Taiwan. However, fees did drop in 2000 as a result of reduced fishing effort due to depressed prices.

- More detailed data regarding access fees by fishing method and flag state for 2001- 2002 is given as part of appendix 2.
- In January, 2000 there were 7 bilateral and one multilateral foreign fishing agreements in place. In addition, there were 9 agreements with domestically-based foreign vessels. These agreements have remained relatively stable in recent years with 6 bilateral and 2 multilateral agreements (US Treaty and FSM Arrangement) and 8 agreements for domestically based foreign vessels comprising 6 purse seine licenses and 270 long line licenses.
- In addition to the revenue from both foreign and domestically-based bilateral arrangements, as party to the Forum Fisheries Agency-administered Multilateral Treaty with the United States, FSM receives a further estimated \$110,000 annually that is tied to fisheries development projects. The Japanese agreement also includes an annual payment of goods and services with an estimated value of \$550,000.

e Infrastructure and Long Line Transshipment

- 98 FSM National and State government investment in fishing vessels and infrastructure during the early 1990's is variously reported at between \$100 130 million. Much of this investment was channeled through a myriad of government owned corporations in each State with the intention that the establishment of fisheries infrastructure would stimulate State economies and foster further investment.
- 99 The various National and State entities established for fishing, vessel servicing and transshipment have ultimately accumulated high debt levels and large financial losses¹³ and have either ceased to operate or scaled back in their activities. Details of these entities and their current status are given as appendix 3.
- 100 Transshipment facilities for longline caught sashimi tuna were heavily utilized during the mid-1990's with the presence in FSM of the Chinese company, Ting Hong, and the domestic basing of more than 200 vessels across the 4

¹³ Burslem, W. FSM National Fisheries Corporation Review. 1999

States. However, Ting Hong operations departed FSM in 1996 leaving only 100 domestic based vessels and diminished utilization of the facilities. Ting Hong alone reported some 4500 individual transshipments in 1994¹⁴. By 2000, the number of transshipments across at FSM ports had reduced to 1004 and by 2002 this figure had further reduced to 774¹⁵. Utilization of facilities in Yap, Chuuk and Kosrae reduced to the extent that facilities in each Port are now inoperable and longline transshipments are no longer taking place. The longline fleets of Japan. Taiwan and China have opted to transship from Guam and only 21 Pohnpei base Chinese vessels continued to transship from Pohnpei in 2004.

f Domestic Operated Long Line and Purse Seine Vessels

- Details as to business structures and associated investments are given as appendix 3. It is apparent that Government and domestic private sector investment in longline and purse seine vessels has proved to be high risk. This has been especially apparent in recent years with a significant reduction in the number of operational vessels in the longline fleet.
- 102 In the longline fishery, domestic vessels (owned or domestically managed under agreements) rose steadily to number 25 in 1999. Since that time the number of operational vessels has decreased annually with only 18 vessels active in 2002 and 21 in 2003 with a further significant reduction to 2004 where only 12 vessels are reported operational ¹⁶.
- The State Governments of Pohnpei, Chuuk and Yap have all invested in the purchase of and operation of purse seine vessels. Pohnpei has 2 small seiners operated by the Caroline Fishing Corporation. Following issues relating to joint venture ownership and a period of receivership, the operational performance of these vessels has improved in recent times with higher international bulk tuna prices.
- 104 Chuuk State investment also involved complex joint venture arrangements. These ultimately led to the ownership of a single vessel, the *Nien Feioch*, by the Chuuk Public Fisheries Corporation. This vessel sank at the wharf in Chuuk in early 2004 and was uninsured.
- 105 Yap State also experienced difficulties with the operational management of their purse seine business. However, with a vessel purchased from South America and tight management, Yap's Diving Seagull company has performed well in recent years and is reportedly debt free in 2004 and able to pay dividends to the State.

¹⁴ Ting Hong Group. Review and Future Prospects of Ting Hong Operations in the FSM. 1996

NORMA. Annual Reports 2000 and 2001-02

¹⁶ Source: NORMA Annual Reports, 2000 and 2001 – 2002

- Under a foreign investment permit, Tri-Marine (FSM) established in FSM in 1999 as a wholly owned subsidiary of Tri-Marine International Incorporated, a large international integrated fishing and processing company. By 2004, Tri-Marine had 3 operational FSM registered vessels.
- An evolution in National direction in regard to sectoral investment is apparent. Fifteen years ago, the general perception was that, because of the weak private sector and other factors, development opportunities relating to tuna were in government investment in infrastructure and fishing and government participation in commercial activities.
- 108 Following a generally poor performance from these government interventions, the direction shifted to the idea that the most favorable opportunities were for domestic private sector companies to longline for fresh tuna.
- In subsequent years, numerous failed operations of this type appear to have resulted in an additional evolution in direction. This is essentially that tuna fishing itself is too risky and that value adding ashore and servicing of fishing vessels are the most important opportunities.

g The Purchase And On-Sale Or Value Adding Of By Catch

Outside of the construction of cold stores in Kosrae and Yap, major investment in processing and value adding capacity has been limited to the Pohnpei Fisheries Corporation (PFC) which was established as a Pohnpei State public corporation in 1993. PFC is engaged in two principal lines of business, the provision of ice, and processing and marketing of second grade tuna, marlin, and bi-catch. A review of PFC in 2000¹⁷ revealed significant cumulative loss, cash flow difficulties and an inability to source sufficient raw material to adequately utilize facilities. Despite recommendations to the contrary, PFC remains operational.

h Services Provided In Support Of Purse Seine Transshipment

- Since 1993 there has been a regional ban on at-sea in-zone transshipments of purse seine catches. This was intended to facilitate monitoring of catches, increase port usage, and generate revenue. In subsequent years, a large amount of tuna has been transshipped through FSM ports with an estimated 2400 individual transshipments in the period 1993 2003.
- The ports of FSM have different attributes for transshipment. In general, Chuuk has the best anchorage, simply because the lagoon is large. Pohnpei has the best facilities for supplies, service, provisions, and crew rest/recreation. Yap is not favoured because the fishing action is mostly located at considerable

¹⁷ Aries Group, Privatization of Public Enterprises and Corporate Governance Reforms. ADB TA# 3201 FSM

distance to the east and the anchorage is small. The harbour at Kosrae is also considered small. In recent years the choice of transshipment is often between Pohnpei and Majuro in the Marshall Islands, depending on the location of fishing. Transshipment in Chuuk has all but ceased in recent years due to issues relating to security and an attempt to increase the transshipment fee.

- 113 The majority of FSM transshipments in the past 2 years (130 in 2002 and 100 in 2003) have been in Pohnpei. The number of transshipments in a particular port in any given year cannot be guaranteed as decisions on transshipment location are most often made by the company operating the carrier vessels, in consultation with the purse seine vessel owners or managers. The carrier companies therefore try to place their carriers in the most advantageous position , given the location of the fishing fleet at the time, destination of the fish, and estimated size of the loads to be delivered. However other factors are also taken into consideration, such as the availability of licenses in the particular country concerned, weather conditions, and most recent experiences in that port.
- Purse seine transshipment does not require specific infrastructure other than general wharf facilities and port services associated with standard cargo handling. Transfer of fish from seiners to carrier vessels takes place at anchor but vessels do berth for clearance and provisioning. Purse seine transshipment contributes to local economies through the purchase of goods, services and labor as well as in the collection of fees and charges. The extent of spending in any single transshipment will depend on the goods and services available. An estimate of current and potential levels of spending is given in appendix 4.

i Employment And Employment Opportunities

- Formal employment in tuna fisheries or related activities was estimated in 2001¹⁸ to total some 614 jobs comprising jobs on foreign vessels (150), jobs on locally based vessels (86), jobs in domestic tuna enterprises (178) and jobs in artisanal vessel operations (200). This estimate is at odds with the 2000 census data which reports formal employment at 226. Possible reasons for this are that 200 of the reported 2001 jobs are essentially informal and many of the 178 reported jobs in domestic tuna enterprise are likely to be casual in nature.
- Analysis of the 2000 census and comparison with that of 1994 is summarized in table 3. It indicates a dramatic reduction in the numbers of persons formally employed in the fisheries sector from 646 (approximate to the 2001 report) to 226 and a corresponding significant increase in persons undertaking informal activity in fisheries and agriculture from 7,375 to 15,216. While the loss in formal employment is reflective of the general downturn in transshipment

¹⁸ Gillett,R and Lightfoot, C. The Contribution of Fisheries to Pacific Island Economies. 2001

and FSM port based fishing, it must also been seen as a serious indicator of the major problems facing the sector. Accepting the median incomes of the respective census periods, this reflects a loss of annual wage income in the vicinity of \$1.7 million.

117 The continued downturn in sectoral activity subsequent to the 2000 census suggests that levels of formal employment may have continued to decline in the period to 2004.

j The Economic Contribution Of Oceanic Fisheries To Fsm

- The real contribution of oceanic fisheries to the economy of FSM in any given year is difficult to define. Account must be taken of fluctuations in prices for purse seine caught species as well as the substantial variations in prices obtained for sashimi exports. There is also an issue to define retained value in the services provided to the sector and in the value of the subsistence sector contribution. This said, an estimate of the value of oceanic resources for 2001 and 2002 is presented in table 4.
- While these figures provide a reasonable estimate of the total value of the resource, they do not in any way take account of costs or contribute to the determination of profitability.
- 120 In reality, analysis of the detailed costs of production would reveal a very high production cost in achieving the overall value. This has been exemplified in the generally poor performance of domestic longline vessels. This is best exemplified in discussion of the financial performance of the Government fisheries assets (see appendix 3)

k Problems, Constraints and Issues

- The most significant problem with oceanic fisheries in FSM is the failure to date to fully realize the potential benefits associated with the exploitation of available resources.
- While FSM has enjoyed a reasonably consistent return from receipt of fisheries access fees, attempts to promote returns through infrastructure investment, transshipment, domestic fishing, value added processing, vessel servicing and employment have essentially failed to add significant value or return on investment. This is exemplified in the current non-operational or under-utilized status of infrastructure facilities across the States.
- 123 In order to examine the current constraints and issues in regard to achieving increased economic benefits, it is important to appreciate the wider international and regional context of oceanic fisheries performance in recent years.

Since 2000, Pacific Island domestic based sashimi tuna industries have experienced a downturn across the region. Operators in Fiji, Samoa, and Tonga have experienced declining catch levels (despite increasing fishing effort) and increasing competition from international suppliers to the principle market in Japan. Primarily as a result of supply, sashimi tuna market prices have tended to remain flat. In addition, the impact of the Asian economic crisis and the SARS epidemic have also had a negative impact on sashimi market prices. Coupled with post 9/11 security issues, increases in fuel prices and airfreight costs there has been an overall reduction to profit margins in sashimi tuna longlining.

Table 4 Estimated Value of Oceanic Resources to FSM in 2002

Item	Assumptions & Explanation	Est. Value 2001	Est. Value 2002
Total PS catch in FSM	82,797 tons @ \$800 ton in 2001 40,844 tons @ \$800 ton in 2002	\$ 66,237,600	\$ 32,675,200
Total LL catch in FSM	5,175 tons @ \$5000 ton in 2001 2,806 tons @ \$5000 ton in 2002	\$ 25,875,000	\$ 14,030,000
Access Fees	Combined total – all agreements	\$10,576,211	\$ 10,585,754
Domestic purse seine	FOB value from export data	\$ 6,212,328	\$ 5,454,868
Domestic based foreign PS	FOB value from export data	\$	\$ 635,717
Domestic longline	FOB value from export data	\$ 4,386,581	\$ 1,524,487
Domestic based foreign LL*	FOB value from ex- port data	\$ 1,519,085	\$ 1,181,177
Fines	Actual figures	\$ 697,000	\$ 2,220,000
LL transshipment	1036 @ \$ 5000 retained in 2001 774 @ \$ 5000 retained in 2002	\$ 5,180,000	\$ 3,870,000
PS transshipment	179 @ \$ 10,000 retained in 2001 135 @ \$ 10,000 retained in 2002	\$ 1,790,000	\$ 1,350,000
By-catch sales	\$ 500 per tranship- ment	\$ 518,000	\$ 518,000
Formal Employment	Year 2000 jobs @ 226 x \$ 4524	\$ 1,022,424	\$ 1,022,424
Informal employ- ment	1250 tons @ \$ 2900 ton	\$ 3,625,000	\$ 3,625,000
Total		\$35,508,629	\$ 31,987,427

- The supply of tuna for canning from purse seine fishing is essentially a commodity trade and is thus subject to significant market price variations. The very high regional catch levels of the late 1990's saw bulk tuna prices reduced to as little as \$350 mt in 1999 and 2000. Prices have subsequently stabilized in 2003 04 at between \$750 \$850 mt. As a result of the volatile nature of the market, commercial purse seine fishing is a high risk business, especially for small operators.
- The fisheries policies of FSM, as developed during the 1990's promoted foreign access arrangements, Government and private sector investment in infrastructure and fishing vessels, the provision of transshipment services, value added processing and employment as principle development strategies.
- 127 In considering development constraints, a1995 study¹⁹ on tuna industry development concluded:
 - The FSM labor pool is limited both in number and by range of current skills. The tuna industry specifically needs foreign skills and foreign management until Micronesians can be trained and can gain experience in the industry. Imports of foreign labor are discouraged by bureaucratic administration and the requirement to annually renew elaborate work permits
 - All non-service FSM State and National government enterprises that have been in operation for more than 2 years have proven unprofitable. The inability of these ventures to succeed in economic terms can be traced to a variety of reasons, primarily associated with government involvement in their operation. This is exemplified in the summary of SOE status provided as appendix 3.
 - For longline transshipment, the inability to extend airport runways in almost every state without major capital cost could be a development limitation in the future. Additional runway length allowing larger aircraft and improved payloads could be a key factor in achieving improved air freight economies of scale.
 - Though simple to administer and understand, Gross Receipts Tax (GRT) is a "cascading" tax and the prevailing tax regime is a disincentive to primary industry and manufacturing investment.
 - A very significant problem in the FSM is the difficulty in finding out exactly what the current law is.
 - The FSM currently exhibits a comparatively highly protected economy with relatively highly protected and highly priced resources. The FSM

¹⁹ Lucas, K. Tiller,S. Swan, J. The National Fisheries Policy Study. ADB TA# 2551 FSM

economy is further protected by investment and recruitment approval processes that emphasize sanctions and concessions as opposed to open, uniform treatment.

- While strategies to mitigate these constraints were reflected in policy documents, there has been limited success in addressing these issues. The principle issue is generally agreed to be that there is limited accountability in policy implementation and a lack of political will. This is particularly apparent at the State level, especially in relation to dealing with difficult issues such as the commercialization of State owned assets.
- In considering constraints in the two sub-sectors of the FSM tuna industry an FFA study²⁰ concluded that the main issues affecting profitability in the longline industry were vessel productivity as reflected in catch rates of target species, availability, reliability and cost of air freight, cost and efficiency of transshipment services in port, and the yen exchange rate. For the purse seine industry it was suggested that the main issues affecting the purse seine industry were the then current overproduction and resultant low prices, high operating costs, restricted fishing grounds, and the lack of skilled senior level labor.
- The development of domestic fisheries capacity throughout the Pacific region was reviewed in detail in 2003²¹. This review reiterated the perspectives put forward in 1995, and cited the principle constraints to include:
 - Reductions in air freight capacity and availability and the economic limitations of restricted freight volumes due to aircraft and runway limitations:
 - Increases in the cost of air freight due to escalating fuel costs;
 - A poor business environment and inadequate provision of services;
 - Government agencies with commercial involvement in the tuna industry detracting from the functioning of private sector tuna firms, especially the Economic Development Authority (EDA) of Pohnpei;
 - Requirements for local vessels fishing in FSM waters to undergo customs and immigration formalities and the high cost of these services;
 - High cost of operation: high prices for fuel, skilled labor; requirement to air freight in many parts/supplies;

²⁰ Gillett, R. Domestic Tuna Industry Development in the Pacific Islands -The Current Situation and Considerations for Future Development Assistance FFA Report 03/01

²¹ Gillet, R. Domestic Tuna Industry Development in the Pacific Islands - The Current Situation and Considerations for Future Development Assistance. FFA Report 03/01. 2003

- Other issues raised included fee variance, higher access fees compared to Palau and the Marshall Islands, the provision of conflicting consultancy advise, the adequacy of port infrastructure for vessel maintenance, the scarcity of skilled labor, declining catch rates, unclear legislation and unnecessarily high penalties for regulatory transgressions.
- The demise of transshipment services from FSM ports and the associated loss of income generating opportunities is a clear indication that FSM has failed to deal adequately with constraints and issues that have been on the table for a number of years.
- There has been a very large amount of technical assistance focused on the development of FSM's tuna industry. A list of such assistance prepared in 2003²² and covering the previous decade shows over 20 interventions by ADB, FAO, SPC, FFA, the World Bank, SPPF, FIAS, and others. There is a sense that outside assistance to tuna industry development is fatigued by the continued failure of FSM to address key issues.
- 134 It is clear that constraints to industry development have been widely documented, especially those relating to the lack of progress on privatizing government fishery companies and continued government monopolies in providing essential commercial services to the tuna industry.
- While much of this failure can be attributed to a lack of accountability and political will, there is an additional issue relating to lines of communication and the need to clearly define responsibilities in relation to policy implementation. In an attempt to address the constraints facing industry development, the Pohnpei Commercial Tuna Longline Operator Association was formed in 1998 with four members. The Association subsequently organized a successful initiative to eliminate the planned State tax on the export of fish. With Canadian financial assistance, the Association sponsored National Offshore Fisheries Conference in 2002 and established the FSM Offshore Fisheries Association. The industry voice of Pohnpei is thus complimented with a National (and therefore regional perspective). In 2004, a meeting in Suva, Fiji in turn established a Regional Association of Domestic Tuna Fisheries.
- With the formation of FSM association, there is a clear direction for an industry voice. However, the same cannot be said of Government. There are a range of often conflicting National and State agencies with varying responsibilities in processes to effect changes in policy or to establish a more conducive business environment. For a potential foreign investor in fisheries, there is no clear process or specific agency to facilitate the investment process.

²² Gillet, R. Domestic Tuna Industry Development in the Pacific Islands - The Current Situation and Considerations for Future Development Assistance. FFA Report 03/01, 2003

- The experience of Fiji and Papua New Guinea in the establishment of the Fiji Trade and Investment Board and the PNG Investment Promotion Authority is perhaps worthy of consideration in this context. In each case, a single national agency was established to facilitate and assist investors and lobby Government and other agencies in matters relating to the investment and business development climate.
- It is clear that further development of the sector cannot take place without additional investment. State governments, having previously invested large sums in fisheries projects, are reluctant to commit further investment. The domestic private sector has been similarly affected by poor sectoral performance.
- Investor confidence will continued to be constrained by an ongoing failure to address development issues and achieve progress with policy implementation. Perhaps the key requirement to address the sectors development issues is a clear political will to do so.

I Development Potential

- Given a scenario where the existing constraints and problems can be mitigated, there is potential for FSM to enjoy improved benefits from the exploitation of oceanic resources.
- 141 With the exception of access fees, the industry as currently portrayed has been in serious decline. The principle question is thus, what can be done to improve the situation? What possible strategic advantages are there for FSM in aspects of tuna industry development and how can these be realized into sustained domestic benefit?

i Strategic advantage

- While FSM's proximity to and shared ownership of tuna resources is a potential advantage, the departure of the foreign domestic based longline fleet suggests that proximity to the resources does not necessarily compensate for FSM being a high cost location from which to operate from.
- Generally, FSM does have well developed transshipment infrastructure. However, despite much of this being less than 10 years old, the facilities in Yap, Chuuk, Kosrae cannot be made operational without investment in refurbishment. This said, the under-utilized assets could represent a significant foundation for private sector development. The key requirement here is not the ownership of the facilities but the operational control. Recent rhetoric has focused on privatization of government facilities and businesses. This implies a change of ownership to the private sector and is thus unlikely to be acceptable to Government agencies. Perhaps the appropriate rhetoric is commercialization and a scenario where Government ownership is retained and facilities are leased out or man-

aged under joint venture. While Government experience in joint ventures to date has not been positive, this has perhaps been because of a lack of due diligence in entering into business arrangements.

- It is apparent that regional resource management arrangements in relation to tuna exploitation are an increasing international focus. The establishment of the new Commission for the Conservation and Management of Highly Migratory Fish Stocks in the WCPO will likely increase capacity and focus on resource management and sustainability issues.
- The establishment of Tri-Marine (FSM) as a domestic company and the associated registration of three vessels in FSM provides those vessels with access to the FSM arrangement for wider regional access. Are there other examples where domestic basing and registration of vessels can be encouraged on the basis that it may provide for preferential future access arrangements?

ii The need for investment

- In considering success in the tuna industry, the 2003 study of Pacific wide domestic tuna industry development²³ reported that the operators of almost all successful tuna fishing companies presently located in the region were originally either local non-tuna fishing businessmen, successful operators from other business or owners and managers of overseas fishing companies who moved into the country and invested in domestic development.
- Although the rhetoric to promote foreign investment has been in place for some time, it is clear that the constraints to such have yet to be comprehensively addressed. Importantly, the 2003 study noted that the issues and constraints for foreign investors were similarly faced by domestic investors. The study suggested that it would be more appropriate to think in terms of stimulating domestic investment through attracting foreign investment.
- In the case of FSM, opportunities for domestic investment are clearly limited and constrained by past experience, especially in relation to development or commercial bank investment. If it accepted that sectoral investment is fundamental to future development, then attracting foreign investment is also fundamental to any such development.
- Drawing from the key points raised in the study, it is suggested that there is a need for Government to provide a stable and reliable set of policy measures and a clearly defined trading environment. Importantly, a 1999 study

²³ Gillet, R. Domestic Tuna Industry Development in the Pacific Islands - The Current Situation and Considerations for Future Development Assistance. FFA Report 03/01, 2003

of the FSM foreign investment climate²⁴ noted that national and state legislation dealing with investment used "criteria that are discriminatory, not transparent, and time consuming. This report advised that decisions were likely to be made in a discretionary manner and that the various governments still believed that foreign investment could only be controlled by using excessive legislation.

150 Access to foreign investment opportunities will improve with greater attention to a facilitation process such as the investment promotion models of Fiji and PNG.

iii Perspectives on domestic development

- 151 In considering possible opportunities for domestic development, the 2003 study solicited opinion from industry operators and government officials. The resultant general themes can be summarized as:
 - Encouraging vertical integration in the industry (companies involved in catching, processing and marketing);
 - Expanding the services and facilities available to fishing vessels in FSM ports;
 - Improving the performance of Government owned facilities through a commitment to commercializing, investment and value adding;
- Specific activities or possible interventions related to these themes were suggested as:
 - A state-by-state assessment of the changes required to facilitate development and a related initiative to develop state fisheries policies and associated mechanism to assure adherence;
 - A 'tightening" of the FSM Arrangement for Regional Fisheries Access to encourage domestic development,
 - The need for committed strategies to attract investment and progress the commercialization of failed government fisheries enterprises;
 - Promotion and support to the role of Fisheries Associations in addressing issues;
 - A detailed survey of the operators of fishing fleets to determine what they like/dislike about FSM ports and an associated study to compare FSM port facilities and charges to those of other countries in order to increase competitiveness;

²⁴ Report if the Foreign Investment Advisory Service of the International Finance Corporation and the World Bank 1999

- The airfreight situation: in-depth analysis of options, including the achieving of economies of scale;
- An improved fisheries information strategy, so that the government can get relevant information to the fishing companies;
- A study on the need for the Pohnpei State EDA to continue to operate the Pohnpei transshipment facilities.;
- "Someone who knows what they are talking about" to do a realistic assessment of fisheries privatization in FSM;
- Re-focusing the Yap fisheries school on relevant skills;
- A study of the fisheries fuel and fuel tax situation;
- Establishment of a technical assistance fund that the industry can utilize as and when needed;
- Assistance with the establishment of contact with overseas investors;
- A careful economic analysis of the potential benefits for FSM from possible access fee reductions for domestic based vessels:
- Assistance with meeting US food safety standards (HACCP) requirements;
- While these are all valid activities, they are largely focused on information gathering and do not substitute for the activities needed to implement effective policies.

iv Access Fees

Potential improvements in the return to FSM from foreign vessel access and license agreements were studied in detail in 2000²⁵. Access fees are essentially demand driven and the potential to increase actual income will depend on the importance operators place on gaining access to a particular area and the extent to which they are prepared to pay for such access. The current access regime is termed one of regulated open access. No limits are in place on participation or catches, but some management measures are imposed on total vessel numbers and through the FSM arrangement. The total amount of access fees received per annum have fluctuated due to new entrants, changes in exchange rates, the opening of new fishing grounds, changes in fish prices and catch rates and the distribution of stocks. These matters will continue to influence access fees.

²⁵ McCoy, M.and Rodwell, L. A Review of the Current Fishery Access Regime in the Federated States of Micronesia and Analysis of Some Options for the Future. ADB TA No. 2832-FSM. 2000

188

- To date, discounts to access fees have not been successful in encouraging longline vessels to base in or offload in FSM, promote the development of domestically-owned fleets or encourage investment in FSM fisheries-related activities. However, promoting incentives for domestic basing remains a component for access negotiation. This is more apparent in a scenario where there is an increase in demand for access or where multi-year access is available.
- The implications for fisheries access in relation to the establishment of the new Fisheries Commission are difficult to determine until such time as the Commission is fully established. The possible implementation of new regional arrangements for the calculation of access fees and terms of licenses has potential to impact on the potential value of access.
- Given the potential for fluctuation, it is important not to consider annual access fees as a guaranteed dollar value.

v Transshipment

- There is potential to add economic value from the commercial operation of shore based transshipment infrastructure and the provision of long line transshipment services for domestic based foreign long line vessels. However, the re-establishment of domestic based vessels across each state could only be achieved with a committed strategy to address the range of issues and challenges that have long been documented but not yet addressed.
- 159 Future private sector investment in domestic owned and operated long line and purse seine vessels is unlikely in the short-term. However, foreign or joint venture opportunities might eventuate in a scenario where there are changes to the investment climate. Again, there is a requirement to address documented constraints and challenges.
- 160 Economic benefits from improvements to general fishing vessel servicing capacity could also be improved. These range from the supply of fresh produce and supplies to general vessel servicing and the provision of technical services.

vi Adding Value

There are also potential opportunities for commercial success in the purchase and on-sale or value adding of by-catch in both the longline and purse seine fisheries. This requires the identification of appropriate economies of scale and of possible niche markets. Again, it is perhaps most likely to be progressed through the identification of suitable business investors or partnerships with access to appropriate technical expertise and links to international markets.

vii Employment

All areas of potential sectoral development have the potential to provide new employment opportunities. More jobs at sea, in processing, in transshipment and in vessel servicing.

viii The challenge

- Importantly, none of this potential will be realized until there is sufficient awareness and political will to put in place and commit to a concerted strategy to deal with the issues and constraints to development. Priority steps are to remove government from the operation of business enterprise (not necessarily the ownership) and attract large scale investment partners.
- The economic performance of the oceanic fisheries sector in FSM is at a crossroads. Failure to address the major issues will only result in further stagnation and the unsustainable continuation of the status quo.

5.2 Strategic Goals, Policies and Outcomes

5.2.1 FSM Fisheries Policy Development Overview

a The Formulation of FSM Fisheries Policy

The process of developing a fisheries policy for the FSM was initiated with the declaration of the FSM EEZ in 1989 and was first articulated in a 1991 study. More detailed analysis was undertaken in 1996 for the consideration of the National Fisheries Summit of FSM in December, 1996. The recommendations of the National Summit resulted in the presentation of a National Fisheries Policy Document. The key elements of this policy were as follows:

b Policy Element 1: Private Sector to be Responsible for all Commercial Fisheries Investment and Operations

- Commercial Fisheries Development should be in the hands of the private sector:
- Government's role is to facilitate fisheries development by the private sector by creating a business environment conducive to private enterprise development;
- Phase out subsidies to all government owned fisheries enterprises, with the intent to privatize these as soon as possible

c Policy Element 2: Promote Micronesian-Incorporated Enterprises

 Promote ownership of fishing vessels and shore facilities by Micronesianincorporated enterprises (local and foreign capital)

190 FSM Strategic Development Plan

- Make a portion (at least 50%) of access fees available to finance (through loans, or loan guarantees) private commercial fisheries development in FSM
- Create other incentives to fisheries development, such as:
 - Tax breaks (on vessel fuel, for example),
 - Amend foreign investment rules (including immigration laws),
 - Reform fisheries and maritime laws.

d Policy Element 3: Manpower Development

• Develop a World-Class FSM Fisheries Manpower Development Program

e Policy Element 4: Ensure Conservation of Marine Resources and Preservation of the Marine Environment

• Ensure conservation of tuna and other marine resources, and preservation of the marine environment through active participation in international and regional bodies and institutions.

f Policy Element 5: Reform Institutional Management Framework

- Consolidation of responsibilities for fisheries policy development, management and enforcement under one well-financed, independent and autonomous body
- Increased cooperation and coordination among all jurisdictions (including private sector as well as government bodies)

g Policy Element 6: Reform of Laws and Regulations Inhibiting Fisheries Development

- Tax Laws (including incentives)
- Duties and Levies
- Regulation of foreign investments
- Labor laws
- Immigration laws and permits
- Maritime Code and relevant Conventions
- Fisheries Laws and relevant Conventions
- Land tenure laws

h Policy Element 7: Promotion of Value Added Investments

- Promote value added investments in:
- Fish and Fish Product Processing;
- Manufacturing;
- Marketing;
- Quality Control.

i Policy Element 8: Controlling Fisheries Access

- All longline vessels (delivering chilled tuna) must be FSM-based to be licensed;
- The need for uniform governing rules within each class of vessels based in FSM (and fishing in ESM waters);
- Long-term access arrangements should be used to encourage FSM¬ basing of foreign owned vessels.

j Policy Element 9: Promoting Public Awareness

- A public awareness program should be established, with careful thought to key audiences and how best to reach them;
- Stimulate FSM citizen's interest in fisheries through information programs.
- In the lead up to the 1999 FSM Economic Summit (Summit 2), these policy elements were expanded to detail strategies, activities and accountable agencies in two separate strategic policy framework documents covering oceanic and inshore fisheries. These are provided as appendix1..
- 167 These policy frameworks and detailed activity plans were subsequently adopted by the Summit and can thus be accepted as the agreed National fisheries policy for the period 1999 2004.

k Review of Policy Implementation

- The expected process in the lead up to the 3rd Economic Summit (3ES) would be that the 1999 framework would be tabled to both public and private sector stakeholders for review and comment, especially in relation to implementation progress, issues, current relevance and changing circumstance leading to consideration of possible modification of policy direction.
- In the case of inshore fisheries, the policy framework was reviewed in 2000 by the Coastal Fisheries Consortium and some minor changes to the policy framework were suggested.

In the context of the sectoral review in the present assignment, a summary analysis of progress in the various activities aligned with the policy elements for oceanic and coastal fisheries has been undertaken in the present assignment based on stakeholder consultation. This analysis is provided as appendix 2.

- 171 The review findings can be summarized as follows:
 - i In the case of oceanic fisheries:
 - <u>Policy Element 1</u>: There has been no substantive progress in privatizing
 or further commercializing fisheries related State Owned Enterprise or infrastructure. Infrastructure in Yap, Kosrae and Chuuk is shut down and
 that of Pohnpei is under-utilized. Subsidies are still in place to support
 SOE activities.
 - <u>Policy Element 2</u>: The commercial failure or poor performance of domestic private sector investments and a reduction in long line fishing profit margins across the region combine to make further investment both risky and unattractive. This is more apparent with the general lack of progress in establishing clear investment incentives.
 - <u>Policy Element 3</u>: While some planning activity has taken place, implementation of a coordinated approach to capacity and skill development is lacking. The re-opening of the MMFA is a positive step.
 - <u>Policy Element 4</u>: The passing of revised Title 24 legislation, the adoption of a Tuna Management Plan and the strengthening of NORMA have consolidated national capacity in the management of oceanic resources.
 - <u>Policy Element 5</u>: Some consolidation of responsibilities has taken place with the Title 24 revision. Communications between NORMA and Maritime Surveillance have improved. Responsibility for policy development remains fragmented and there is no National level agency mandated to facilitate industry development or investment.
 - <u>Policy Element 6</u>: Legal reform is a slow and consultative process. The
 revised Title 24 is a major achievement as is the adoption of certain maritime regulations. Laws and regulations relating to tax are under review,
 but those associated with duties, labor, investment, immigration and land
 are complex and multi-sectoral and require commitment political will and
 vocal sectoral lobby to move forward.
 - <u>Policy Element 7</u>: There has been no coordinated activity to assess opportunities or implement value adding opportunities. Strategies to add economic benefit through longline fishing transshipment have been frustrated by the inability to attract vessels. Opportunities to add economic benefit through purse seine transshipment have not been fully developed.

- <u>Policy Element 8</u>: FSM's capacity to manage fisheries access arrangements has consolidated and multi year licensing agreements are in place.
 Licensing concessions for domestic basing have not succeeded in attracting vessels. Issues with operational efficiency and air freight access contribute to Guam remaining the preferred transshipment port for FSM licensed long line vessels.
- <u>Policy Element 9</u>: There does not appear to have been any concerted effort to promote the sector promotion through public awareness activities.
- While the policy elements, in the main, continue to be relevant to sectoral development, it is apparent that there has been limited progress with implementation. Strategies to promote investment and sectoral growth have not been clear and private sector investment has not been successful. Domestic based foreign longline vessel numbers have dropped to a low of 20, SOE infrastructure is either closed or underutilized and remains the responsibility of Government agencies. The majority of long line transshipment activity has essentially transferred to Guam. Considering the time-span for policy implementation (1999 2004) the lost opportunity for economic benefit from the successful implementation of policy element activities is substantial.
- In situations where the activities associated with policy elements have been actively facilitated (such as in the preparation of a Tuna Management Plan by NORMA), policy implementation has been successful. In many cases, the absence of a directed facilitator or driver for activities would appear to have limited activity success. For example, in the absence of a committed driver to campaign for a fuel subsidy, there is no incentive for Government to establish such a subsidy.
- Policy elements that relate to wider fiscal management or changes in legislation (such as tax, labor laws, immigration laws, subsidies and duty) are much broader in application that fisheries and are thus more complex and challenging to achieve. Even if there is a strong driving influence from the fisheries sector, legislative process will be determined by wider political elements.
- It is thus apparent that, one of the key factors in policy element activity implementation is political will. This is most apparent in relation to the apparent failure to produce a result in relation to the performance and future direction of certain SOE's. Clearly, without the support of State Governments, an activity to promote private sector or investor management or ownership of these facilities will not succeed.
- 176 The principle policy elements of 1999 for oceanic fisheries remain relevant and are therefore projected into the revised policy matrix.

ii In the case of Coastal Fisheries

- Policy Element 1: Private Sector to be Responsible for Commercial Marine Investments and Operations: State level infrastructure continues to be managed by Government agencies. Less emphasis on commercial development in the sector is apparent.
- Policy Element 2: Promote Resource Owner and User Responsibility for Sustainable Artisanal and Commercial Development: Some progress with the establishment of fishers associations. Establishment and promotion of MPA's in Pohnpei, Kosrae and Chuuk
- Policy Element 3: Manpower Development: HR plan completed for fisheries management but State level access to training remains opportunistic. No coordinated approach to School curriculum is apparent.
- Policy Element 4: Ensure Sustainable Development of Inshore Marine Resources and Preservation of the Inshore Marine Environment: An increasing focus on MPAs and community management at State level is apparent. Inter-agency consultation and coordination remains an issue.
- Policy Element 5: Reform the Institutional Management Framework: The role of and work program of DEA fisheries was defined by the Coastal Consortium. However, clear determination of agency roles at State level has not been well defined.
- Policy Element 6: Reform of Laws and Regulations Inhibiting Fisheries Development: Focus is increasing inclined to fisheries management rather than development. State laws have been revised in Yap and Kosrae but review processes have stalled in Chuuk and Pohnpei.
- Policy Element 7: Promotion of Value Added Investments: In the artisanal and subsistence sector, there is generally an expanded use of ice (where accessible) to enhance fish quality. However, there are no known new developments in value added processing. The sector focus is increasingly on resource management as opposed to commercial development.
- Policy Element 8: Controlling Fisheries Access: There is increasing community awareness and involvement in consultations in relation to the management of resources and the establishment of Marine Protected Areas (MPA's) in Pohnpei, Kosrae and Yap.
- Policy Element 9: Promote Public Awareness of Marine Resource Conservation: There has been opportunistic distribution of information and resources from DEA to State level agencies. The most active agencies in public awareness promotion appear to be NGO's.

The determination of specific coastal fisheries policy is essentially a State level activity. As such, the national policy is primarily a statement of guiding principle rather than a blueprint for State level activity. However, there are common themes from State level that can be accommodated in the national framework. In the context of the current review, there is a distinct move away from resource development activities to a focus on resource management, conservation and aquaculture.

These changes from the principle policy elements of 1999 for coastal fisheries are reflected in the revised policy matrix.

Moving forward with Fisheries Policy

- 179 In determining the future direction of policy, it is perhaps useful to consider the scenario that FSM would like to achieve for fisheries in the next five year period. In a review context, it appears that there are no major differences from the overall objectives of the past five years.
- However, it is important to consider policy direction in relation to `lessons learned' from the previous period and also in relation to possible changes in the wider (international and regional) sector environment in the coming period.
- 181 The key lessons in relation to policy implementation are suggested as:
 - There needs to be clearly defined responsibility assigned to undertake activities associated with policy implementation;
 - The agency or entities assigned such responsibility should be required to account for progress in relation to activities undertaken;
 - In situations where a particular policy requires the wider endorsement of Government or legislative enactment, the implementation strategy should include activities that take account of the need to generate political will.
- Taking account of the findings of the situational analysis for the sector 182 and the intent of 3ES, the following policy themes are apparent:
- 183 For Coastal Fisheries:
 - An increasing focus on resource management strategies encompassing traditional practice and protected areas;
 - An increasing focus on ensuring resource exploitation is carefully managed and priority access is accorded to subsistence and low level artisanal activities rather than commercial fisheries:
 - An increasing focus on aquaculture activities at the subsistence and artisanal levels;
 - An increasing focus on community participation in management;

184 For Oceanic Fisheries:

- A continued emphasis on improving economic benefits, utilization of infrastructure and domestic commercial activity;
- In the context of the Tuna Management Plan, a more focused emphasis on resource management and monitoring;
- Acknowledgement of the urgent need to attract investment;

5.2.3 The Fisheries Policy Matrix Proposed by the 3rd Economic Summit

The Fisheries Policy Matrix proposed by 3ES is provided as appendix 3. It is apparent from consultations in the current assignment that policy framework as adopted by 2ES was not given major consideration in the lead up to 3ES. As such, the focus of 3ES fisheries consultations appears to have been more on determining suitable outcomes for the management of performance budgeting. In the absence of a review framework, the draft policy matrix endorsed by 3ES does not fully reflect the previously established policy framework. Given that this framework has developed from consultations dating back to 1991, this is a matter for serious consideration.

186 There principal areas of concern can be summarized for each proposed goal as follows:

a Strategic Goal 1. Inshore fisheries resources are well managed and economic utilization is maximized within sustainable levels.

While the intent of this goal is sound, the listed outcomes will be difficult to measure. It is also apparent that the given activities are not accounted to organizations or areas of responsibility. The role of the DEA fisheries Office is not defined and the importance of NGO activity in marine resource conservation is not considered.

b Strategic Goal 2. Increase aquaculture activities to supplement and enhance marine stocks for subsistence and marketing.

All previous policy direction in relation to aquaculture in FSM suggested that, while aquaculture development was possible, there were no examples in place of sustainable aquaculture activity. The history and current status of aquaculture activity in FSM in considered in the sector review as is consideration of such by the Coastal Fisheries Consortium. While there is possible potential for aquaculture development, it is difficult to accept the prioritizing of aquaculture as a key national goal, particularly if there is an implication of sustained economic benefit. Aquaculture is more appropriately placed as an activity in relation to coastal fisheries.

c Strategic Goal 3. Maximize the long term economic benefits to the FSM from its Exclusive Economic Zone.

The intent of this goal is sound. However, it does not define areas of responsibility or emphasize previous intent to commercialize/privatize Government assets. The responsibilities of NORMA are not considered and the activities are not considered in relation to existing income streams.

d Strategic Goal 4. The FSM Exclusive Economic Zone is well managed and economic utilization is maintained within sustainable levels

- The intent of this goal is also sound. However, it should be reflective of the NORMA role and of the Tuna Management Plan.
- 191 The 3ES matrix has been widely discussed with stakeholders in the current assignment. With a single exception, stakeholders endorsed the revision of the matrix to more clearly reflect sector policy direction and development priorities.

5.2.4 Outline of a Revised Policy Framework

- 192 In considering a broad policy framework for the sector, there are essentially two components the sustainable management of resources and the economic utilization of resources within sustainable parameters. If these are considered in relation to Coastal fisheries and Oceanic fisheries, there are 4 principle goals.
- Importantly, capacity to implement activities across all 4 principle goal areas is underpinned by human capital the ability to efficiently undertake activities in relation to policy components. In the 3ES matrix, activities relating to education, training and public awareness are outlined in each of the policy areas. In the proposed revised matrix, these have been combined into a single underpinning goal relating to building technical capacity across the sector.
- A revision of the 3ES policy matrix is proposed. It must be stressed that the intention is not to undermine the intent of the 3ES matrix. The revised matrix includes and expands on the activity framework of 3ES. The exception is with aquaculture where it is proposed that the 3ES goal be revised as a series of activities and outcomes under a broader coastal fisheries management goal.
- The principle justification for this is to ensure that aquaculture is considered in the context of its current economic value. This is not to ascertain that aquaculture does not have positive economic potential but to reflect the fact that the nature of this potential has yet to be identified.
- 196 A revised matrix comprising 5 goals is thus proposed.

5.2.5 Fisheries Sector Goals and Policy

a Mission Statement

197 The marine resources and fisheries of the FSM are managed and developed in consultation between designated authorities and stakeholders in a manner that ensures maximum possible economic and social benefit to the people of FSM and, at the same time, ensures sustainable resource exploitation and protects marine biodiversity.

- b Strategic Goal 1: Stakeholders and personnel contributing to fisheries and marine resource management and development are suitably trained and skilled to effectively participate in sectoral activities
 - i Policy framework
- The need for sectoral human resource development planning is recognized and supported;
- Fisheries and marine resource curriculum is included in school programs;
- Fisheries and marine resource programs at the COM are supported and opportunities for overseas scholarship are identified and pursued;
- Programs and courses at the Micronesian Maritime Academy are supported;
- Extension, public awareness and educational activities are included in National and State agency work programs;
- State agency personnel are provided with opportunities for skill development;
- Outcomes
- Human resource development plans are used as tools to promote the effective delivery of education and training programs;
- Improved knowledge of marine resource and fisheries matters in school graduates;
- Improved capacity in fisheries and marine resource management through improved access to relevant technical and tertiary education and strategic research;
- Improved income to FSM nationals through employment in fisheries activities;
- Increased community level awareness in regard to fisheries and marine resource management issues;

ii Analysis and Justification

- The importance of technical capacity, skill development and resource awareness at community level has been reflected in sector policy since 1995. However, to date there has not been a coordinated approach to addressing strategies to improve access to training, the development of school curriculum or improved general public awareness.
- Access to training and skill development opportunities for public sector employees is primarily ad hoc. Both at the National and State levels it is important to ensure that managers and employees are suitably skilled to efficiently undertake their assigned duties. Within each agency, there remains a need to fully document required skill levels and match these to skill development plans for employees. For example, a State fisheries department cannot adequately undertake species stock assessment unless staff are technically capable of doing so. Training needs must then be linked to identified training opportunities at national, regional and international levels.
- The need for improved awareness of marine resources and fisheries through school curriculum has been a policy theme in the sector since 1996. In the absence of a coordinated approach to this, little has been achieved to date. Completing activities in this area requires a coordinated approach between the Education Department, DEA fisheries and stakeholders. In reality, there is a wide variety of suitable curriculum material already available on a regional basis. The challenge is to access this material as teaching resources and to frame it in a manner that can be formally adopted into national curricula.
- At the tertiary level, there is a need to ensure suitably qualified graduates are available to fill technical positions in Government and in private capacities (including NGO's). Skill development through partnerships and cooperative activities with external institutions (universities, research institutions and NGO's) will serve to meet some research needs and to boost national capacity in aspects of research.
- Direct employment in commercial fisheries (as vessel crew and in seafood processing) requires an established certification system and an efficient training provider. Incremental increases in the number of FSM vessel crew has the potential to add real value to the private sector economy with 100 jobs equating to \$500,000. Committed support to the Maritime and Fisheries School in Yap should result in a regular supply of technically skilled vessel crews. Skill development in relation to seafood quality and aspects of business will benefit the subsistence and artisanal sector and ideally add better value to commercial sales. Compliance with food safety standards for export markets (HACCP) can be greatly improved with the introduction of a standard short course in quality

seafood handling. This type of course has proved very useful in contributing to regulatory compliance in other countries such as PNG.

Improving knowledge and understanding of marine and fisheries resources and the importance of their sustainability within communities requires activities within education and in the wider community. In the wider community, this can be as basic as the distribution of posters or as time consuming as a consultative process to establish community resource management mechanisms. Communities have a very important role to place in the future management of inshore resources. This role requires improved overall understanding as to the nature of resources and the range of options available for resource management.

iii Critical Issues for Implementation

The implementation of policy in relation to HR development has suffered from there being no clearly defined accountability for implementation. Responsibility is currently vested across COM, NGO's, the Education Department, DEA Fisheries and State fisheries agencies. The clear requirement is to development a coordinating capacity between agencies and for each to then accept designated tasks in relation to agreed activities.

The availability of committed budgetary support is fundamental to the implementation of the full range of activities outlined in this goal. Opportunities for funding in addition to core Government budgets will need to be identified in some instances, particularly in relation to community awareness type activities which are not linked to core budgets.

This goal presumes fisheries agencies are well managed and staffed by committed and motivated personnel. If this is not the case, achievement of the desired outcomes will be difficult.

- c Strategic Goal 2: Inshore and Coastal marine resources are monitored and managed in a consultative and participatory manner that respects traditional practice, utilizes established scientific methodology, sustains biodiversity and resource abundance.
 - i Policy framework:
- Responsible agencies have well developed work programs and are adequately resourced to undertake activities;
- National and State Agency relationships and activities are clearly defined;
- Regulatory systems are enacted to ensure well considered resource management practices are in place;
- The status of resources are monitored to identify potential overexploitation;

- Management systems are holistic and account for consultation in relation to wider resource management perspectives in areas such as coastal zone management, economic planning, land use, watershed management, tourism development, atoll management and biodiversity;
- Traditional practices are respected and traditional knowledge inputs are reflected in management and regulatory processes;
- Management systems include marine protected areas and community based management;
- Commercial activities are well defined, adequately monitored, exclusive to National participation and maximize national benefit;
- Aquaculture development opportunities are identified and assessed;

ii Outcomes

- Resource management and development agencies have clearly defined roles and complete work program activities in a cost effective and timely manner;.
- Information and communication flows between DEA Fisheries and State agencies and relevant stakeholders are optimized;
- Resource management plans for key inshore resources are in place in each State;
- Resource stock assessment information is available and utilized in resource management planning;
- Resource management plans include the establishment of at least Marine Protected Areas (MPA) or Marine Reserve in each State;
- Resource management plans include components of community based management, co-management and traditional management;
- Where appropriate to regulatory systems, a formal and informal enforcement capacity is in place;
- Opportunities for commercial aquaculture activities are evaluated and commercially viable activities are promoted and established;
- Opportunities for stock enhancement through aquaculture related activities are evaluated and activities likely to have a positive impact on the status of stocks are promoted;

iii Analysis and Justification

This goal relates to the responsibilities of designated State agencies in relation to resource management and sustainability. The policy framework promotes a coordinated approach to work planning and a focus on ensuring ade-

quate information is available to make decisions in relation to aspects of resource management. This is particularly apparent in relation to resource monitoring and the capacity to undertake valid assessments of the status of stocks. In cases where fisheries agencies are involved in service and commercial type activities (such as the sale of ice), options for divestment of business activities to the private sector are encouraged. Overall, agencies are expected to add value to communities in the efficient implementation of well planned work programs.

- A strong focus on community is implicit, as is the need to work closely with sector stakeholders including NGO's. The establishment of community endorsed Marine Protected Areas and reserves are proposed. These in turn sit within a wider framework of fishery and bio-diversity management plans. Establishment of a facilitating regulatory framework at State level (as is already the case in Pohnpei) will be a key consideration.
- 209 The concerns of the 3ES to monitor levels of exploitation and put in place management systems which preserve traditional and community subsistence access to resources are strongly reflected in the framework. There is increasing awareness in communities that some marine and fisheries resources are under pressure from over-exploitation. Community participation in resource management is viewed by many to be the most effective means by which levels of exploitation can be controlled.
- Establishing and maintaining effective community relationships will facilitate the identification of community management priorities. NGO's have proven very successful in some areas in community level consultations and their increased participation in management development processes is encouraged. In cases where community management plans are established, the need for technical or advisory assistance in management implementation should be considered. In order to provide technical information in support of resource management decision making, agencies must retain or be able to access capacity to undertake resource assessments. Priorities for assessment should be agreed with stakeholders and the results of assessment activities incorporated into decision making.
- There is a specific focus on the establishment of Marine Protected Areas. This requires a supportive legal framework and a comprehensive community consultation process whereby all stakeholders are involved and committed to the consultation and implementation process.
- While community management practices are strongly supported, they do not mitigate the need for more formal enforcement, especially in relation to specific rules. Even in community management scenarios, an enforcement capacity is required as an interface between communities and infringers. State level enforcement capacity does not imply a restrictive environment but a capacity to

make the public aware of regulations and the potential impacts of non-compliance.

- The role of the National Fisheries Office in the Department of Economic Affairs was well defined at the 2000 National Fisheries Consortium Meeting. The office is established to serve consultation, coordination and information needs for State fisheries agencies. It is also responsible for the operation of the National Aquaculture Centre in Kosrae. Repeating coastal fisheries meetings on a regular basis was strongly endorsed by the 2000 meeting as a means of promoting ideas and information exchange. DEA remains tasked with the planning and organization of such meetings.
- The 3ES reflected a strong concern to commit to greater efforts in the exploration of aquaculture opportunities as a means of diverting fishing pressure. While aquaculture developments to date have met with limited success, there is a concern to continue to assess opportunities and, where appropriate, to undertake trials and develop commercial capacity.
- Aquaculture as a means of reef seeding for clam and trochus is also proposed. While this may not directly contribute to population increase, reef seeding as a means of promoting community resource awareness or as a tool to promote closed areas is a useful resource management tool.

iv Critical Issues for Implementation

- State level fiscal support for the work programs of fisheries agencies needs to be at a level where monitoring and information gathering activities can be effectively undertaken. Strong management and direction will be required in State agencies to develop and achieve work programs.
- An enabling regulatory framework in each State will be required to effect a range of resource management and monitoring practices. The absence of such will likely result in dissipated and fragmented efforts in approaching management strategies.
- 218 Community and stakeholder consultation and commitment is a prerequisite to any community based management strategy. Coordination of efforts and combining efforts between State agencies and communities will be essential to implementation.
- In the case of aquaculture, the development of working relationships with research and development agencies will greatly assist State and national efforts to identify suitable aquaculture activities.
 - d Strategic Goal 3: Inshore and Coastal marine resources are effectively exploited to meet subsistence and artisanal needs and op-

timized stakeholder social and economic benefits within sustainable parameters.

i Policy framework:

- Commercial activities are well defined, adequately monitored, exclusive to National participation and maximize national benefit;
- Commercial activities are limited to the artisanal sector;
- Opportunities to divert commercial fishing pressure from inshore resources are identified and promoted;
- Artisanal fishers are encouraged to form Associations or collectives as a means of communicating more clearly with Government agencies;
- Small boat fishing activities are safe and boats are adequately equipped;
- Government infrastructure in place to support artisanal fisheries activity is operated on a commercial basis;
- Commercial opportunities for aquaculture development are encouraged;

ii Outcomes:

- Commercial fisheries activity takes place within the agreed resource management framework;
- Inshore commercial fishing effort is managed at sustainable levels;
- Alternative income opportunities for artisanal fishers are identified and realized;
- Representative associations or organizations are in place to promote the interests of artisanal fishers;
- Infrastructure in place in support of the artisanal sector is commercially managed;
- Small boat safety incidents are reduced;
- Commercial aquaculture activities are developed;

iii Analysis and Justification

The 2000 Coastal Fisheries Consortium consolidated a position of concern at State level (most particularly in Yap and Kosrae) that there could no longer be a substantive focus on development of fishing capacity in inshore and reef fisheries. This has subsequently been reflected in the limitation of reef fish exports in Yap and Kosrae. While it is not the intention to place widespread limitations on commercial activities, it is proposed that these be undertaken in a manner that protects subsistence interests and limits active participation to citizens.

- Commercial fishing activities need to be more closely monitored in terms of fishing effort and levels of extraction. Analysis of fishing effort is required as a means of providing information to effect recommendations and decisions relating to possible fishing effort restrictions. In situations where commercial effort is seen to be not sustainable, priority access to resources must be accorded to subsistence needs.
- As a means of decreasing fishing effort in inshore and reef areas, an increased focus on encouraging artisanal activity into coastal fisheries is proposed. Deployment of coastal Fish Aggregating Devices (FAD's) as a focus for coastal pelagic fishing has proven success in many countries. Workshops for fishers in support of this and to promote improved fish handling practice are suggested. Improving fish quality extends shelf life, limits possible waste and potentially provides improved market prices. Opportunities for fishers to identify alternative income sources such as charter fishing or guided reef tours will be considered, particularly in relation to potential increases in tourism.
- In order to promote more effective communication between Governments and stakeholders, support for the establishment of fishers organizations or associations is suggested. Representative associations will be better able to reflect operational concerns and participate in consultation than individual fishers.
- Infrastructure in support of small scale fisheries (ice machines, freezers and small fisheries depots) remains in the hands of Government agencies. While ownership of such infrastructure is not in question, the option of private sector (or fishing association) management of these facilities is proposed. Ideally, private management and operation of these facilities could, in itself, be a viable small business or income generator for fishing associations.
- The inclusion of improved sea safety as a desired outcome reflects a dual concern to save lives and to reduce the cost of search and rescue to the country. Accessing existing regional resources promoting small boat safety and actively distributing this material will help promote public awareness of sea safety issues and appropriate mitigation measures.
- 226 Commercial aquaculture activities offer another potential means of reducing commercial fishing effort. Given the identification of potential aquaculture activity, existing fishers are likely to be enthusiastic participants in development activities.

iv Critical Issues for Implementation

The role and capacity of State agencies to be proactive and dynamic in working with fishing communities is central to achieving the desired outcomes in relation to this goal. The commitment of fishers to sustainable activities and

their preparedness to seek and test alternatives requires strong and open communication through established channels.

- The provision of sufficient resources to agencies to undertake their assigned tasks is fundamental to success as is the commitment and technical capacity of agency managers and personnel. This is particularly apparent in relation to the monitoring of fishing effort and assessments of resource abundance.
- Focusing the efforts of fisheries agencies on activities as opposed to the management of infrastructure requires political direction and support and the vocal intent of stakeholders. In these are absent, there will likely be little change in current status.
 - e Strategic Goal 4: Oceanic resources are monitored and managed with best practice methodology to ensure harvest levels remain within sustainable parameters.
 - i Policy framework:
 - Resource management plans are supported and utilized as the basis for resource exploitation;
 - The FSM Tuna Management Plan is supported as the guiding principle for resource management;
 - Stakeholder participation in the formulation and review of oceanic fisheries management and development strategies is encouraged;
 - NORMA is supported as the national agency responsible for the management and development of oceanic resources;
 - The Maritime Division of the National Police is supported as the active agency in maritime surveillance;
 - Regulatory requirements in support of Title 24 legislation are developed and implemented;
 - Access arrangements are negotiated to effect the best possible advantage to FSM:
 - Fisheries Monitoring, Control and Surveillance activities are resourced and supported;
 - ii Outcomes
 - Fishing Catch and Effort in FSM waters is effectively monitored and information obtained is utilized in oceanic fisheries management decision making;
 - FSM is respected in the Pacific region and by DWFN's as a major stakeholder in the management of Pacific oceanic fisheries;

- FSM is able to sustain or improve fiscal returns from access arrangements:
- Sectoral communications and information exchange between stakeholders are open and transparent;
- Fishing activity in FSM waters is restricted to that undertaken by licensed and recognized operators;

iii Analysis and Justification

- This goal relates directly to the regulatory responsibilities and associated work program of the National Oceanic Resources Management Agency (NORMA). NORMA is the key national agency in the monitoring of oceanic fisheries in the FSM EEZ. As such, the agency is expected to meet national and regional obligations to collect fishing effort data and scientifically useful information. NORMA maintains an active observer program and associated port sampling and transshipment monitoring. Information is collated and forwarded to the Secretariat for the Pacific Community (SPC) for analysis and compilation into regional catch and effort monitoring initiatives. This work is critical to monitoring the overall health of the regions oceanic fisheries resources. In 2002, FSM adopted a Plan for the Management of Tuna. This plan outlines a framework for sustainable tuna fishing and FSM and is the major guiding influence on national oceanic fisheries policy.
- FSM is signatory to all the major regional and international initiatives for the sustainable management of oceanic fisheries. To meet its obligations in relation to these agreements, and to ensure an FSM perspective is tabled on the regional and international stage, NORMA is required to ensure representation at regional and international meetings. Such meetings also provide invaluable opportunities to work and interact with fisheries personnel from Pacific neighboring countries and the Deep Water Fishing Nations (DWFN). In order to ensure that relevant information is available to stakeholders, NORMA produces a regular newsletter and will develop an active website within the next year.
- One of the agencies key responsibilities is the negotiation and management of fisheries access arrangements and fishing vessel licenses. Access agreements account for a large component of national income from fisheries. Senior agency personnel are well experienced in access negotiation and take every opportunity to build indirect national benefit into agreements. The encouragement of domestic basing of foreign vessels, training and employment for FSM nationals and support for domestic investment are useful 'add-ons' to access agreements. Prompt issuing of licenses and publication of associated terms and conditions are part of the agencies responsibilities to industry with potential to reflect DWFN positions in access negotiations.

- Open communication with stakeholders, especially in regard to resource management issues, is another important NORMA function. Although not directly responsible for investment in the sector, NORMA is a key contact agency for potential investors. The provision of information services to potential investors and interest groups is an important facet of promoting oceanic fisheries. NORMA is also expected to provide technical advisory assistance to State agencies in matters relating to oceanic resources.
- Oceanic surveillance and enforcement activities are carried out by the Maritime Division of National Police but NORMA has overall responsibility for this important component of oceanic fisheries management. Active enforcement is vital to the framework of oceanic fisheries management and this requires both national and regional strategies. Participation in regional strategies for the operation of Vessel Monitoring Systems (VMS) is another agency obligation jointly shared with the Police Maritime Division.

iv Critical Issues for Implementation

- NORMA is a technically specialized agency with a requirement for a highly skilled, organized and motivated work force. There is a need to ensure staff levels are maintained and that suitably skilled individuals are quickly recruited when vacancies arise. This is particularly apparent in senior positions across the organization.
- It must be stressed that there are factors influencing the level of access fee income which are beyond the agencies control. Fluctuations in annual access fees cannot be ruled out, especially in regard to the migratory nature of the resource, climatic impacts on areas of fish aggregation and market price fluctuations.

f Strategic Goal 5: Oceanic resources are exploited in a manner that assures optimum economic benefit to FSM.

- i Policy framework:
- Investment in fisheries is actively encouraged;
- Commercial efficiency in public fisheries enterprise is encouraged;
- National participation in fisheries activities is supported and encouraged;
- Regulatory constraints to effective commercial activity are identified and reviewed;
- Economic and social benefits are prioritized in considering strategies for oceanic resource exploitation;
- Opportunities for value-adding are encouraged and promoted;

Domestic basing and transshipment by foreign licensed vessels is encouraged;

ii Outcomes

- A suitable climate for investment in the sector is in place;
- Government owned infrastructure is commercialized and profitable;
- FSM national participation in commercial activities related to fisheries is increased;
- Opportunities to add value to fisheries resources are identified and implemented;
- FSM ports are favored as transshipment locations;

iii Analysis and Justification

- This goal reflects the fisheries application of the five strategic goals of the private sector development strategic planning matrix. Improving the investment climate and promoting investment from experienced international operators are vital steps to the further development of domestic capacity in oceanic fisheries. This theme has been a mainstay of fisheries policy since 1996 and continues to be a major priority.
- The formation of the FSM Offshore Fisheries Association in 2002 has provided a collective voice for industry operators. However, there is no clearly defined Government agency to address industry issues in a comprehensive manner. Matters relating to the investment climate and the role of Government in business are multi-sectoral and not confined to fisheries. A holistic approach to dealing with these issues is required.
- 2002 was a poor performing year for oceanic fisheries. While landings in the FSM zone increased in 2003, domestic industry continued to decline. The closure of longline transshipment facilities in Yap, Chuuk and Kosrae, the withdrawal of foreign domestic based longline vessels and the continued operation of infrastructure by Government agencies are symptomatic of a crisis point in the domestic industry.
- As a result of this generally poor performance, the domestic investment climate is depressed. A focus on improving the investment climate through improving investment and promoting incentives is proposed. While this implies a multi-sector approach, there are fisheries specific actions to be taken. However, there is no clear agency assigned this task and National agencies will be required to work with the private sector to progress improvements to the investment climate.

- The challenge to commercialize the business operations of SOE's is an area that has had considerable attention and rhetoric but produced no results to date. Despite the privatization study and various commercial negotiations, there has been no successful privatization of National or State assets. The focus of the proposed activities in relation to SOE's is not on privatization in the sense of ownership or divestment of assets but on commercialization. The challenge is to seek out business partnerships and relationships that allow for the commercial operation of facilities and infrastructure. Joint venture or lease arrangements would allow for commercial use and provide an investment focus. At the State level, the immediate challenge is to work through the business options for the SOE's and identify possible opportunities for new business relationships. The major challenge is to revitalize the national transshipment infrastructure and reboost the numbers of domestic based vessels.
- The challenge to increase national participation in commercial fisheries activities requires a commitment to technical training and improved awareness in relation to opportunities in the sector. In the main, activities in relation to improving employment levels in the sector reflect those of Goal 1. Improved awareness in schools and committed support to the Yap Marine and Fisheries School and the College of Micronesia are fundamental to raising national awareness and contributing to technical skill development.
- 243 Consolidation of the FSM Offshore Fishing Association as a national representative organization has potential impacts in fisheries management consultation and in providing links to investment opportunities. This agency also links to a new regional association formed in 2004 to promote regional approaches to domestic industry development.
- The continued focus on identifying opportunities for value adding to by-catch and not export tunas is representative of the potential value of successful activities in this area. This is particularly relevant in relation to joint venture or investment based opportunities and links to international technical expertise and development capital. An assessment of niche markets for specialized products and possible technical partnerships for production will assist to identify strategies to move forward with value adding opportunities.
- Realization of improved value adding opportunities is underpinned by revitalizing transshipment commitments for foreign longline vessels. From more than 200 vessels in 1996, the domestic based fleet has shrunk to less than 30 operational vessels (domestic and foreign). Improving the environment for domestic transshipment and the expanded provision of transshipment services are key contributors to economic development and must remain a priority for the sector.

246 Improved facilities for Purse seine transshipment will also add economic value to FSM and could also be a source of raw material for value added production. Ensuring that FSM ports are favored locations for purse seine transshipment simply requires a commitment to consistent and available services.

Critical Issues for Implementation

247 The major challenge is to generate the National political will to prioritize commercial development in the sector through the establishment of an improved investment climate and the commercialization of infrastructure. Development in the sector cannot move forward without sound investment from skilled and well resourced business partners. Failure to give attention to these matters will undermine potential national economic benefits.

6 Tourism

6.1 Tourism Sector Review

6.1.1 Review of current situation and sector performance

- In emphasizing the potential that tourism holds for the FSM, the 1st Economic Summit established a visitor target of 100,000 persons per year from a base of 22,500 in 1996. Data supplied for the purposes of drafting this chapter show that arrivals of tourists, visitors, business visitors and those arriving for employment (the latter cannot be separated from the "business & employment" group but are relatively small in number), in the FSM were 17,252 in FY 2003, a marginal decrease from the 17,792 recorded in FY 1996. The 1996 figure represented the peak year in the 1996-2003 period. Although there is some doubt about the accuracy of these figures, there is no doubt that the FSM continues to under-perform as a tourism destination (Table 1), both relative to global trends and to those in the Pacific islands. The FSM has made little progress in achieving its targets. The reasons for this are discussed in section 1.3 below.
- Even based on current hotel capacity, the FSM is far short of reaching the 42,000 visitors it requires to achieve a successful (65% occupancy) utilisation of the hotel capacity it currently has (as set out in the National Tourism Marketing and Promotion Action Plan Final Report, based on the nation's 476

Table 1: Index of international tourist arrivals worldwide, in the Pacific and in the FSM, 1996-2003 (1996 = 100)

	Worldwide	Pacifica	FSMb
1996	100.0	100.0	100.0
1997	103.5	107.4	94.3
1998	106.3	111.5	78.3
1999	108.6	117.5	82.2
2000	114.7	84.0	99.4
2001	114.2	114.1	85.7
2002	117.3	na	97.7
2003	115.9	123.2	97.0

a comprising Cook Islands, Fiji, French Polynesia, Kiribati, New Caledonia, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu

b Financial years

Sources: World Tourism Organization; Tourism Council of the South Pacific/South Pacific Tourism Organisation; Department of Economic Affairs, Federated States of Micronesia

hotel rooms capable of receiving international visitors).

- The embryonic tourism sector of the FSM has found it difficult to move forward and has in reality done little more than hold its own over recent years. At the level of the individual states, according to the tourist arrivals figures supplied for this chapter, arrivals in the FSM as a whole are still below 2000 levels, as they are for Chuuk and Kosrae. There has been a marginal improvement in Pohnpei and Yap, although tourist arrivals to both states are below 1996 levels.
- The FSM's problems are not all of its own making. It should be acknowledged that, since the 2nd FSM Economic Summit in 1999, global tourism has experienced the most turbulent period in the sector's history. From a boom year in 2000 when global tourist numbers and expenditure reached an all-time high, the international industry has suffered from world economic slowdown as well as the fall-out from September 11, the SARS outbreak, a number of other major terrorist incidents and, most recently, concern over Asian flu. The ongoing threat from random terrorism continues to depress demand for some types of travel in some markets. For the second time in its history and twice within three years, world tourism declined in 2003. Nonetheless, foreign visitor arrivals in the Pacific islands rose by 23% from 866,000 in 1996 to 1,069,000 in 2002, demonstrating again how the FSM has under-performed.
- 5 The FSM's two dominant markets, Japan and the USA which, according to the National Tourism Marketing and Promotion Action Plan - Final Report, together account for over two-thirds of all arrivals, have been among the worst affected by the problems facing the international industry. The Japanese market has still not fully emerged from the economic difficulties it has been suffering since the late 1990s, and this market has been severely constrained by threats of terrorism and health concerns. In line with declines elsewhere, Japanese arrivals in the FSM declined by 5% between 2000 and 2003. Likewise, the US market has not recovered from the slowdown begun before 9/11 and arrivals to the FSM are down by nearly 8% over the three year period. The European market, by contrast, is steadily growing in importance for the FSM and over the 2000-2003 period increased by almost 11%.
- However, the recent difficult climate for the tourism sector apart, it is apparent that the FSM has so far failed to break the mould and move forward to become an internationally "recognised" destination in the way other small destinations such as Palau or the Cook Islands, for example, have begun to make their mark. The FSM appears to remain in limbo, with tourism affected by a "closed circle" in which tourism under-performs due to a lack of infrastructure, quality and promotion, providing a weak case for additional public or private investment in the sector, creating unfavourable word-of-mouth recommendations from those who do visit the FSM and thus perpetuating its under-performance.

The key issue for tourism in the FSM is to determine how best to break this circle - by investment, by promotion, by the creation of appropriate institutions, by stimulating private investment, by using public investment to leverage an acceleration of activity or by any other means?

6.1.2 Tourism's development potential

- Much has already been written on this subject and there is no need to repeat the same arguments at length here.
- In a nutshell, the FSM has much to offer the leisure tourist, and considerable development potential. This potential lies both on the main islands (and especially in Pohnpei and within the Chuuk lagoon), and also perhaps in the outer islands in the longer term (although it is obvious that the initial development effort should be focused on the main islands).
- The FSM clearly offers a range of physical attractions, and especially a very high quality marine environment for divers and non-divers alike. Much of the interior of the main islands offers attractive possibilities for those interested in scenery, jungle, plant and birdlife (the absence of common tropical risks such as malaria and poisonous reptiles is an advantage here).
- In addition, the traditional lifestyles, social structures and cultures of the FSM offer a range of interests to the visitor. It should also be emphasised that the unspoilt nature of the FSM is attractive to tourism markets that are increasingly seeking un-developed destinations (although there are also constraints in this context - see 1.3 below)
- In considering the development potential for tourism, however, there are some key questions that need to be considered.

Is there a market for what the FSM has to offer in the leisure tour-6.1.3 ism field?

- The FSM primarily offers the potential for eco-tourism, cultural tourism, water-based tourism, diving and various special interests (e.g. birdwatching, social anthropology, traditional plant medicines etc.). Sophisticated and experienced tourism markets are increasingly looking for something different, and especially for environments that are clean, pristine and unspoilt by overdevelopment. The FSM's very isolation and remoteness and the (mainly) high quality physical environment that it offers have the capacity a priori to attract visitors with the above interests.
- More positively perhaps, the FSM offers one of the finest diving environments on earth (and already exploits this asset to some extent in leisure tourism markets). It also offers exceptional physical beauty in some of the islands,

deep-rooted and unique social cultures, historical interests and an opportunity to relax far from the more pressured parts of the world.

While it is never possible to prove market potential categorically in advance, there is a strong case for stating that what the FSM could in theory offer to the world of leisure tourism represents a range of attractions to which tourism markets are highly likely to respond.

6.1.4 Can the FSM achieve the volume and value of tourism that would meet its apparent economic objectives for the sector?

- The current hotel stock would be filled to an acceptable average occupancy rate if some 46,000 visitors staying for five days on average came to the FSM annually. This represents a short-term objective of increasing current visitation levels by around two and a half times.
- Globally there are approximately 700 million international tourism arrivals a year at present. Simple arithmetic indicates that the FSM currently has a world market share of three thousandths of 1% and that it needs to raise this to seven thousandths of 1% to reach this target. This is unquestionably achievable given the appropriate actions set out in this chapter.
- On the value (economic contribution) side of the equation, the small physical size and limited absorption capacity of the FSM as a tourism destination means that, even at this early stage, planning must take into account the ceilings to growth in tourism that will apply in future. Even with steady product development and expansion of accommodation and other tourism facilities, islands such as Kosrae and Yap proper, and most of the out-islands in all states, will only ever be able to absorb small numbers of visitors (the volume potential for Pohnpei and the Chuuk lagoon is higher, but still limited).
- 19 It is therefore crucial that the "high end" characteristic of tourism is kept in mind at all times, and also that product development is focused on capturing and retaining tourists' expenditure to the maximum degree possible.
- The FSM certainly can achieve its objectives for tourism. However, in order to do so, a wide range of actions need to be taken simultaneously and in a planned and co-ordinated manner.

6.1.5 What key actions are necessary to achieve tourism's development goals?

- These are set out in detail in this chapter. However, there is one general point that should be emphasised at the outset.
- For tourism to play its full part in the development of the nation, a clear commitment to the sector needs to be made by all those involved social and political leaders, traditional leaders, the general populace. This means more than

paying lip service to the subject. Adequate resources - financial and personnel need to be devoted to the sector's long term development. Extraordinary efforts need to be made to present and promote the nation in such a way that its attractiveness to visitors is enhanced in parallel with raising the living standards but safeguarding the lifestyles of its residents.

- This chapter sets out a comprehensive program for the long term development of tourism. This program implies:
 - the tourism sector will require influential "champions" at the highest level of government to ensure that the proposed program is pushed through;
 - concerted action on all fronts simultaneously; it will not be enough to take action in one area (e.g. product development), but fail to take action in another (e.g. marketing and promotion);
 - real investment resources will be required over a sustained period that will demand that a higher priority should be given to tourism than hith-
 - product development and diversification will be needed to attract visitors;
 - an overall plan for these actions will be required; and
 - in order to gain the desired economic benefits, a special effort will be required to develop genuine inter-sectoral linkages.

6.1.6 Issues, problems and constraints

- 24 The FSM is physically a small nation. Even with optimum tourism sector development, it is unlikely ever to become a high volume destination for leisure tourists. Nor should it seek to do so. As the 2nd Economic Summit makes clear, the goal for tourism is to develop "high end, low impact" tourism. In an economic sense, this translates into a need to ensure that each visitor contributes as much financially to the FSM economy as possible.
- 25 A key issue in this regard is the maintenance of traditional values and lifestyles. Residents of each state are rightly concerned to ensure that tourism does not despoil or damage social and cultural sensitivities. While tourism will inevitably have an impact, a careful balance needs to be struck between sector development and sustainability in a social and cultural sense.
- By the same token, tourism's impact on the physical environment needs 26 to be carefully assessed and managed, although at present most of the environmental damage originates from within the FSM itself.
- 27 Also the FSM offers only a limited range of activities and opportunities for the visitor. Product development is a key area requiring attention as the industry develops. For example, potential activities such as walks/trails within the

main islands, or easy access to a beach from which the non-diver can enjoy the marine environment have in most cases not been developed. There are no public transport services other than taxis, few maritime transport services, and no sidewalks to attract the visitor or for the visitor to use. Visitor information is patchy in availability and quality (e.g. a visitor to Pohnpei could leave without being aware of the existence of Nan Madol, one of the Pacific's most important archaeological sites). There are very few urban/retail centres, restaurants or cafes providing the type of products and services, and the typical points of interest/assembly that appeal to most international visitors.

- The FSM is also isolated and, crucially, does not lie on any of the major long-haul air routes. Air access is both limited and expensive the latter primarily due to inter-island routes that are costly to operate and carry limited traffic volumes, in addition to the nation's reliance on a single carrier. Perhaps most crucially for the development of a national tourism "product", the State of Yap cannot be accessed directly from any of the other three States.
- While short runways preventing direct services from key Asian origin markets such as Japan and Korea certainly make tourism development a challenge, access from North America and Europe, though still expensive, is perhaps less of a problem given the absolute distances involved. Because the FSM has set its face against high volume tourism and is geographically remote, many of those who do elect to visit the country in a sense expect access to be relatively costly because of its very remoteness. Correctly managed, this could be turned to advantage.
- In addition to access issues, the FSM has a number of other constraints to developing a vibrant tourism sector. These include:
 - Poor infrastructure, both in terms of national services such as power, safe water and health services and within the tourism sector itself. For example, some hotels do not meet international standards.
 - Airport facilities and immigration/emigration procedures are poor and unwelcoming; in particular, the time required to pass through the airports and board a departing flight is grossly excessive relative to the volumes of traffic handled at any of the four main airports.
 - Visual and actual environmental standards are poor, damaging one of the key motivations for a foreigner wishing to visit the FSM in the first place.
 - Generally there is poor knowledge and ineffective international promotion of the FSM as a tourism destination, resulting in a low profile for the FSM and in a lack of competitiveness in terms of "brand recognition" compared with many other island nations in the Pacific with which the FSM nominally competes.

- Remedying these difficulties requires a concerted effort, although it should be emphasised that many of the basic infrastructure issues address first and foremost the interests of the residents - e.g. power, water and health services. Improvements in these basics, while unquestionably helpful in promoting the FSM as a tourism destination, rest primarily for their justification on national and residents' interests. Even improvements to transport infrastructure, notably to airports, are justifiable in part by raising the efficiency of the system for all users, not just for tourists.
- 32 One further apparent constraint needs to be mentioned. There is far from unanimity of commitment to tourism across all States. At the level of the general public, the importance of tourism needs to be made clear. At leadership level, full commitment to the sector's development needs to be made. At present, some of this commitment is patchy. The sector is unlikely to reach its full potential without widespread support within the nation.

6.1.7 The adequacy of the private sector regulatory environment as it relates to the tourism sector

Introduction

- 33 A general conclusion of the Private Sector Development chapter is that much remains to be done to create a dynamic and supportive environment for private investment and enterprise. This has implications for the tourism sector in a number of ways. In particular, the statement that "... the private sector can expect little insulation from inevitable shocks to the economy.." and therefore that factor markets need to be very flexible is especially important in a tourism context, since international tourism demand is susceptible to external shocks and influences as the experience of the last few years has demonstrated.
- Several other key points in the Private Sector Development chapter also have importance for tourism, notably:
 - the need to raise rewards to labour in the private sector relative to government employment;
 - the need to avoid too much bureaucratic interference in markets while at the same time ensuring adequate protection;
 - the understanding that a successful private sector needs reliable and costeffective infrastructure: and
 - the fact that foreign investment laws, other than in Yap, are unclear, inconsistent and un-transparent in their application.

- In this context, the key issues regarding the private sector and tourism relate to:
 - the hotel sector; and
 - small business support.

b The hotel sector

- The hotel sector is one of the two sectors within tourism most likely to involve (relatively) large-scale investment. (The other is aviation where, for the purposes of this analysis, it is assumed that the FSM is unlikely to invest in airline services, either privately or through government intervention, in the foreseeable future.)
- Development of hotel capacity new or refurbished is the area within tourism most likely to attract foreign investment. In this context, the need to make the process of foreign investment appraisal consistent and transparent is important, but so also is the need to set any investment project in the context of national and state planning controls and environmental protection. The proposal (in Strategic Goal 9) that an environmental impact assessment should be mandatory for any new tourism sector investment is clearly vital for any new hotel.
- Attracting foreign capital to the hotel sector in the FSM will be integral to the future expansion of tourism, but this might well be in two separate ways. The first relates to design and construction of the hotel building. This is an area where all the required skills are unlikely to be found within the FSM and where the attainment of standards appropriate to the hotel's grade will be essential in reaching the required quality levels.
- The second is in the area of hotel management, not least because of the marketing skills of foreign hotel companies that a local, independent hotelier would find hard to match. A foreign investor in a hotel building may well (a) not be a hotel operating company and (b) insist that professional hotel management is brought in as part of the deal. Hotel management companies will expect a contract of perhaps 15-25 years' duration and will be remunerated from a combination of a percentage of turnover and a percentage share of operating profits.
- Thus in both cases, the climate for and attitude towards foreign investment will be key in expanding the nation's hotel capacity when the time comes to do so. It is important that the provisions discussed in the Private Sector Development chapter are implemented with these considerations in mind.

c Small business support

- With the exception of hotels and aviation, most private sector activity in the FSM's tourism industry is likely to be built around small, locally-owned and mainly independent businesses. This is the key area within the FSM for spreading the beneficial impact of tourism widely across the economy, and is a positive advantage in that it will create and sustain jobs, secondary demand and linkages to other sectors.
- 42 Small business support is currently confused in the FSM and it is proposed to rationalise and improve it under the private sector policy program proposed. Also relevant is the diagnosis in the Private Sector development chapter that the banking system in the FSM - commercial and development banking has "a surplus of loanable funds".
- 43 Support to the small business community is likely to focus on several areas: business management, financing, marketing being the three most important. The proposed FSM Visitors' Authority (FSMVA) should have a signposting function to help small tourism businesses to gain access to such support as is available, but should not seek to acquire the skills required to provide that support itself. For example, small business management and financing issues are likely to be dealt with most effectively by the banking system and by specialists in small business management techniques.
- 44 In the area specifically of small business financing, it may be desirable for the FSM Development Bank to develop a "small loans window" for the tourism sector, possibly as part of a wider small loans operation, in order to assist in the financing of basic capital equipment (e.g. taxis or tourism boats). However, this falls outside the scope of this sector review.

The adequacy of the regulatory environment

- 45 The broad principles of private sector development and support as set out in the Private Sector Development chapter apply as fully to the tourism sector as to any other.
- 46 The essence will be to achieve what is proposed - transparency, support without excessive intervention, rational and balanced macro-economic management and the provision of effective infrastructure. From the tourism sector's viewpoint, there are two key questions:
 - does the proposed approach to private sector management help the FSM's tourism industry to be competitive on an international basis?
 - does the environment for private investment in tourism present encouragement to investors, especially to those from abroad?

- On the face of it, as an international tourism destination, the FSM is uncompetitive due to high access (airfare) costs. There is no doubt that local tourism industry operators regard this as a factor mitigating against the sector's rapid development. However, as argued above, air access costs are just one element in a more complex equation.
- In the longer term, the FSM will face tourism capacity constraints and thus competitiveness has to be defined in the context of the country's attractions and limitations.
- The *National Tourism Marketing and Promotion Action Plan* advanced the proposal that the FSM should work towards a position of creating a premium tourism destination in effect a destination that is capacity-limited and is capable of attracting only high-end tourists who will pay a premium for the privilege of coming to the country. While such a position is still a long way off, the issue of competitiveness should be seen in this light.
- From the investor's point of view national or foreign the competitiveness position of the industry will be determined by the return achievable on investments. Provided that the reforms of the private sector environment are implemented as planned, there seems no reason to fear that the tourism industry will not be competitive in this sense.
- As the range of fiscal instruments available to the government's macroeconomic management expands, there is the possibility that differential fiscal
 incentives to encourage growth in specific sectors of the economy could be introduced. For example, provisions for accelerated depreciation of certain types
 of investment or tax breaks on corporate profits might be considered to be justified. Such incentives could be used to encourage accelerated development of a
 sector such as tourism, but the ability to do so successfully will obviously depend on the progressive expansion of fiscal options open to government. At this
 stage, it is necessary to do no more than bear such longer-term possibilities in
 mind.

6.1.8 Infrastructure Development Plan - implications for tourism

The successful development of the tourism sector in the FSM is dependent in large measure on the development of public infrastructure across the nation. Although infrastructural improvements affect the lives of, and are naturally of primary importance for, the residents of the country, there are minimum levels of public infrastructure below which it is impossible for the tourism industry to flourish. In particular, tourists demand at least adequate standards of utilities, transport and health services in their holiday destination. However beautiful is the lagoon, for example, raw sewage floating on its surface is totally unac-

ceptable. Equally, while it is for the residents of each state that satisfactory hospital facilities are essential, visitors to the islands will expect to have available at least basic standards and services to cope with illnesses when they are away from home. Improvements will be needed if the image of the FSM as a destination is not to be damaged irreparably by bad word-of-mouth reports.

- The Infrastructure Development Plan 2003-2017 has outlined the major infrastructural developments that are necessary or will aid the development of the tourism sector within the FSM. The report notes that "much of the basic infrastructure that should be in place to provide a foundation for growth of the tourism industry (and related industries) remains "on the drawing boards". Major public sector infrastructural investment and development are thus integral to moving the tourism sector forward.
- 54 At the same time, with very few exceptions no public infrastructure proposal is dependent solely on the tourism industry for its justification. (A possible exception in the FSM would be the construction of specific harbour facilities for cruise ships - the IDP mentions this as a possibility in Kosrae, Pohnpei and Chuuk). In nearly all cases - transport infrastructure, power, water, waste disposal and treatment, health services, education - the primary justification for investment is the public interest. The Infrastructure Development Plan Volume IV deals with "Infrastructure Support for Tourism" not "Infrastructure whollydependent on or exclusively intended for tourism". This is a key difference.
- 55 That said, there are many important infrastructure projects that will have a direct bearing on the feasibility of developing a successful tourism sector. In summary, the Infrastructure Development Plan notes the following areas as of particular importance:

Air transport

- Rehabilitation of the runway, taxiway and apron pavement at Pohnpei airport is urgent and the airport is arguably unsafe. In terms of tourism to the FSM (quite apart from other considerations), a major air incident would bring any chance of developing the industry to a complete halt for at least five years.
- Passenger terminals in all four States need to be expanded and improved, with new baggage handling and flight security equipment installed.
- The question of runway extension in all four states is an ongoing one although runways are currently adequate (in terms of numbers) for current levels of visitor demand.
- The lack of a service between Yap and Chuuk makes intra-state travel difficult and inconvenient.

Only Ulithi of the outer islands has a satisfactory airstrip and service.
 Most of the FSM outer islands are effectively excluded from hosting tourists or reaching them by air "entails acceptance of a significant risk".

Roads and road transport

- Circumferential roads on Chuuk, Kosrae and Pohnpei are incomplete and in some cases in bad repair. Completing these would create a significant additional attraction for visitors, providing round island access with sea views and opening up new areas to visit.
- Few roads have pedestrian or bicycle routes and there is a lack of pavements in the main towns. Visitors generally prefer to walk or cycle when they are exploring a holiday destination; at worst, the roads are unsafe.
- There are virtually no boardwalks through mangrove or taro swamp areas, again hampering access for visitors.
- There are only unpaved circumferential roads in Tonoas and Fefen, islands in the Chuuk lagoon with considerable tourism potential. Other islands have no roads.
- There are virtually no public transport services, nor are tour buses available.

Sea transport and marine facilities

- There are no maritime transport services to the outer islands suitable for tourists. Most boats are in poor repair, or not operating at all.
- For privately owned boats, the FSM government does not undertake seaworthiness inspections nor does it ensure that vessel crews are qualified to operate passenger transport. According to the IDP a number of these private boats are "accidents waiting to happen".
- Dock facilities in the lagoon islands, particularly in the Chuuk lagoon, are inadequate. This hampers exploitation of tourism opportunities.
- Marine recreational facilities like tourism piers with direct access to vessels offering marine tourism services, and including shops and restaurants, are almost entirely lacking.
- Cruise terminals are entirely lacking. Should this be decided to be an appropriate sector for the FSM to develop, a main feature would be the opportunity provided to cater to the cruise ship passenger on local cruises and marine activities.

Public utilities

Electric power services do not generally provide a constraint to tourists at the current level. However, there are some areas of Kosrae and Pohnpei that do not have power and there are considerable shortages in Chuuk. Expansion of tourism will require services to be extended in the main islands and provided to many of the lagoon and outer islands.

Water

- Sewerage systems and treatment plants are generally inadequate and/or inoperative, causing surface water pollution, damage to the mangrove swamps and lagoons, and the possibility of water-borne illnesses.
- The position regarding water/waste water is one of the more serious deterrents to tourism development throughout the FSM.
- Potable water is not universally available.

Health facilities and services

- Hospitals in all four States require renovation, are generally badly maintained and the services provided are limited.
- Failure to make progress in all these areas will undoubtedly reduce the possibility of success in developing a modern tourism sector in the FSM.

Strategic Goals, Policies and Outcomes 6.2

6.2.1 Strategic Goal 1: Make tourism the leading economic activity in the

Analysis and justification

- 56 In addition to reflecting the characteristics of many other island nations - an open economy, slender resource base, small and fragmented domestic market and dependency on international transport services over which it has no control and which can achieve few economies of scale - the FSM has to contend with a history of near grant-dependency under the terms of the Compact of Free Association with the USA.
- As an integral though physically isolated part of the US economy, the FSM has no control over monetary policy. Macro-economic management is restricted to fiscal measures and variations in government spending, with the former offering few options given the very low tax base and narrow range of taxes applied.
- Compact funding has reduced the incentives to self-sufficiency and made it harder to engender proactive development of the private sector. There is

little commercial agriculture, a history of subsistence cropping, no significant manufacturing sector, and few modern service industries. The rich fisheries of the north western Pacific are indirectly exploited through licences granted to foreign commercial fishing fleets. While this latter sector provides a vital source of revenue, arguably its growth prospects are very limited as is the potential for raising the level of local value added. Some processing takes place, but there is pressure to export raw fresh fish to the major market of Japan which again limits the prosepcts for expanding local value added activities.

- Against this background the FSM has limited development options. Yet it is vital for the nation's future that rewarding jobs are created and maintained to retain the most talented young people. This is a task made infinitely more difficult by the FSM's automatic labour rights in mainland USA and other US territories in the Pacific such as Guam, which attract young people to live and work abroad in return for better living standards.
- Tourism offers one of the best arguably the best opportunity to develop the national economy. Although it has its dangers in terms of potential environmental damage and an adverse impact on island traditions, tourism's natural labour intensity, ability to stimulate other sectors (e.g. agriculture, construction, local services etc.), and to create revenue potential for the public sector through taxation appears to meet some of the key development imperatives of the nation.
- Perhaps even more persuasive is the counter-argument which asks what alternative economic activities capable of similar beneficial effects are open to the FSM? It is hard to think of any other sector that offers the prospect of the widespread potential benefits that a well-balanced tourism sector could contribute.
- For these reasons there is a strong a priori case for setting tourism as the leading development sector in the FSM. The remainder of this chapter sets out the steps that need to be taken both to achieve this and to avoid the many potential pitfalls that such a policy embraces.

b Economic policy implications

- Fiscal policy is the area over which the national and State governments have most control. A key objective therefore is to set taxation levels applied to the tourism industry and/or to visitors directly that achieve an acceptable yield to the public sector without unfairly penalising the industry or, more important, that are out-of-step with comparable destinations with which the FSM may compete.
- Other key areas are:
 - ensuring that the labour market is fluid and responsive to market realities;

- ensuring that foreign investment laws and practices are welcoming, respectful of FSM interests and transparent in their application;
- giving priority to public investment in services and infrastructure that benefit both residents and support tourism development (e.g. the provision of safe water in all main islands,);
- adopting planning practices that enhance the physical environment, facilitate new development and open up new opportunities for activities and points of interest for visitors (e.g. enhancing urban townscapes, creating retail centres that tourists will also find interesting); and
- providing incentives to raising standards and skills levels across the industry.

Critical issues for implementation

- 65 In order to give effect to a policy of setting tourism as a high priority, appropriate resources will have to be made available to those organisations responsible for developing the industry.
- Most areas of public investment have some relevance to tourism such as health, infrastructure, education etc. Specifically, however, there are two critical issues:
 - the creation and funding of the FSM Visitors Authority (FSMVA); and
 - the provision of tourism training services.
- The FSMVA emerges within this chapter as the key to developing the tourism sector. The Bill shortly to be placed before Congress for the FSMVA's creation proposes a viable operating and legal framework, but will be ineffective in practice unless adequate resources are devoted to it.
- A step increase will be necessary in funding to turn the FSMVA into an effective professional organisation. It will require investment in people which will mean:
 - increasing the number of staff relative to the existing FSMVB;
 - substantially raising the level of skills and experience; and
 - and almost certainly bringing in external expertise to bolster national capacities.
- 69 Most important, it will require the genuine political backing of Congress and a commitment to financial support far in excess of what has gone before.

- In the absence of an effective and fully-supported FSMVA, few of the medium-term objectives set out in this chapter will be achievable, but it is also important to remember that, given the appropriate backing, the FSM can achieve these ambitious goals and targets.
- The same applies to the importance of training (see Strategic Goal 11). In a nutshell, the College of Micronesia will require extra financial and probably teaching resources in order to be able to deliver the type of training across the industry that is required. As with the FSMVA, this will require greater political and budgetary support for investment in training resources than has been the case to date. The key element in this area is the proposal to impose quality standards, via the FSMVA, across the whole of the tourism sector by 2008. Again, this objective will not be attained without full support to the process of training and tourism skills development.

d Outcome measures and justification

- 72 Specific outcome measures are proposed to support this Strategic Goal. These relate in broad terms to:
 - doubling the current number of visitors by 2008 and increasing visitors by 5% a year thereafter;
 - generating gross income from tourism of \$25 mn by 2008 and raising this total by 7 % a year thereafter;
 - achieving year round occupancy rates in hotels of 50% by 2008 and 65% by 2010;
 - sustaining 1,250 jobs primarily by demand from visitors from abroad by 2008 and raising that total by 5% a year thereafter; and
 - formally positioning the FSM as a premium tourism destination by 2012 and ensuring that \$250 per day is spent on average by each foreign visitor by that date.
- Other measures can progressively be developed, relating to, for example, the performance of individual States and the support of other specified economic activities by the tourism sector. The above are national goals that should form the basis for initial planning of the re-vitalisation of tourism to the FSM.

6.2.2 Strategic Goal 2: Integrate tourism sector into national economic planning and development

a Analysis and justification

Strategic Goal 2 is directly related to Strategic Goal 1 but separated from it by the need to focus the attention of economic planners, national, State

and community leaders, and to integrate tourism into the heart of the nation's development effort.

- Thus, as part of raising tourism to become the most important economic activity of the country, it is essential that economic planning and budgeting accept that the sector's profile has been raised. In the longer term, the ability of the FSM to invest in, for example, physical and social infrastructure will in part depend on its ability to generate more of its own resources through taxation, rather than simply rely on grant-finance under the Compact. The case has already been made that tourism is one of the best ways of doing this.
- Strategic Goal 2 is therefore partly concerned with embedding tourism into the priorities of economic planners. It implies the specific analysis of the impact on and needs of tourism in all appraisals relating to public investment projects. The question needs to be asked "what will the impact be on the tourism sector and what does the tourism sector need in this area" when considering investments in infrastructure, education, health, agriculture etc. In some cases there may be no direct impact, but in most cases tourism will be affected to some degree because tourism and its effects cover, or have implications for, a wide variety of supporting economic activities.
- In addition to involving tourism in all such investment proposals, this Strategic Goal also proposes that each State, and ultimately the national government, should produce a detailed tourism development plan. Ultimately the FSM will need a framework for the development of the tourism sector nationally in order to set sectoral investment priorities. This task should be organised and overseen by the FSMVA in close collaboration with the Department of Economic Affairs, and should be carried out as soon as possible once the FSMVA is established, resourced and funded.

b Economic policy implications

- Few additional economic policy implications flow from this Strategic Goal that are not already set out under Strategic Goal 1, other than to ensure that tourism is given a suitably high priority in the planning process.
- Achieving that priority will, nonetheless, have implications for the budgetary processes of the national government, in order to ensure that tourism is adequately resourced.

c Critical issues for implementation

80 As with Strategic Goal 1 the first priority is to establish the FSMVA, since this is the organisation which is key to most of the actions proposed for the tourism sector. The draft Bill for the establishment of the FSMVA states that " the staff of the FSMVA shall initially be transferred from the Tourism Unit in

the Division of Sectoral Development of the Department of Economic Affairs". While this will ensure continuity with previous efforts to develop the tourism sector carried out by the former FSMVB, Section 1 of this chapter makes it clear that action is needed across a broad range of activities and involving a broad range of skills in order to achieve the potential that tourism offers.

- In this context it is likely that the FSMVA will need to supplement its skills and numbers with a range of specialists, some of whom are likely to come from abroad. An early task for the Board of the FSMVA will be to identify skills shortages and take the necessary steps to fill the gaps, most probably with the aid of technical assistance programs from external development finance institutions and agencies.
- Once the FSMVA is established, an early start will also be required to the tourism planning process. State governments and particularly State visitors' bureaux, co-ordinated by the FSMVA, will need to prepare development plans across all aspects of the tourism sector, to be incorporated into a national medium-term development plan by the FSMVA with such external assistance as may be necessary.
- The FSMVA will also need to work closely with national economic planners to ensure that the interests of the tourism industry are taken fully into account in broader investment and development planning programs.
- At national government level, tourism will need "champions" in order to ensure that the sector's priority remains high and that actions are pushed through. It will be desirable to designate a cabinet member and a national senator as having primary responsibilities for the tourism portfolio and to oversee the granting of the resources required to put the program proposed in this chapter into action. Without adequate political backing, the task of the FSMVA will be much harder to achieve.

d Outcome measures and justification

- In practical terms a minimum level of government funding for the tourism development effort via the FSMVA should be established as soon as possible. Clearly there are many priority areas for investment in the FSM, especially in basic infrastructure and services, and it would be unreasonable to expect tourism development to take an unbalanced priority position in this process. On the other, hand, the longer-term ability of the national and state governments to invest in the nation will partly depend on increasing the tax base, a process to which tourism can contribute.
- By 2006 it should have become automatic that tourism's interests are reflected in all relevant investment proposals, as argued above.

The FSMVA corporate plan should be completed by the end of 2005, and by 2007 the national government should have in place both a policy paper on tourism and a list of tourism sector investment priorities, based on the state and national tourism development plans.

6.2.3 Strategic Goal 3: Create an attractive and supportive environment for private sector tourism industry investors

a Analysis and justification

- Businesses in the FSM that supply and support the tourism sector are mainly private sector operations (the principal exceptions being the management of sites and attractions such as the Walung Marine Park in Kosrae, and Nan Madol in Pohnpei) which come under public sector control and responsibility. The central objective of the development of tourism is to expand that business base, create viable jobs and thereby maximise the capture of visitors' expenditures within the FSM.
- In assessing what the government can do to promote and encourage the private sector, it is appropriate to distinguish between small businesses (for example, owner-managed operations employing fewer than ten people), and larger enterprises.
- 90 In the latter case, most larger tourism enterprises will tend to be in the accommodation sector, establishing and running hotels, live-aboard dive boats and other forms of accommodation (informal guest houses, however, are more likely to come into the small business category).
- The proposals relating to private sector policy and to the environment for foreign investment are those most relevant to larger businesses. In these cases a supportive and welcoming environment for investors, as discussed above, are important. Government support can be provided in areas such as assistance with staff training and, in the longer term, the introduction of fiscal incentives to encourage expansion of the accommodation stock and potentially of other, larger-scale tourism businesses.
- The small business sector in tourism encompasses enterprises such as restaurants, taxi and car rental operations, local maritime transport for visitors, the handicrafts sector and retail centres and outlets designed to attract the visitor (e.g. the proposed waterfront development in Pohnpei that will combine a base for tourist boats offering transport services within the Pohnpei lagoon with a specialised retail/café development selling souvenirs and refreshments to visitors including domestic visitors).
- 93 Small businesses in most countries and sectors make use of publiclypromoted support mechanisms in a variety of ways. These can include advisory

services, assistance with training and the provision of training courses, help with business management and finance, marketing support and so on.

- There is scope for such services within the FSM, built upon existing organisations and programs, and clearly also a need for assistance to raise standards and skills within the tourism sector, whether related to vehicle operations, handicraft production, restaurants standards or any other activity that depends to a significant degree on demand from the visitor.
- At the same time it is important to make clear that support to small businesses does not mean "subsidy". The objective is to encourage the development of small business networks that are self-sustaining, financially viable and offer rewards to labour that are adequate to recruit and retain good quality, well-trained staff.

b Economic policy implications

- Beyond the general policy related to the encouragement of the private sector in all activities across the FSM, discussed in the Private Sector development chapter and summarised for tourism in section 1 above, there are few tourism-specific policy implications here.
- The key will be to provide the organisations and frameworks within which private sector support can operate. In this sense it is the FSMVA that is the pivotal organisation.

c Critical issues for implementation

- Implementation priorities arise in two areas at the level of national government and state government policy towards private sector support, economic management and the climate for foreign investment, and at the level of the FSMVA to put into place the tourism-specific support required.
- 99 General private sector development policy is dealt with in the Private Sector Development chapter prepared for the 3rd Economic Summit.
- The key once again in the tourism sector is to establish and provide resources for the FSMVA and ensure that it is capable of effective operation.

d Outcome measures and justification

- A number of practical steps need to be undertaken in order to create the supportive environment for private sector tourism businesses.
- Once established, an early task for the FSMVA is to provide an information and signposting service to the tourism sector to assist businesses to gain access to support available from elsewhere in the public and private sectors. This signposting function is both straightforward to develop and involves little in-

vestment on the part of the FSMVA other than time. It can thus be introduced early in the FSMVA's life.

- 103 Supporting this will be a more pro-active program on the part of the FSMVA in collaboration with specialists such as the FSM Development Bank and local development agencies, in assisting the States to identify and work up proposals for new tourism sector investment (at least one a year for each State is envisaged), and in acting as a source of information, promoting investment opportunities by means of information sheets and targeted actions to investors within the FSM and abroad.
- The FSMVA by 2008 should therefore have developed an active tourism project promotions arm, in conjunction with more general investment promotion offices within the FSM, with the specific aim of introducing projects to investors and vice-versa. Although the FSMVA is likely to be empowered by its controlling Act to invest in tourism ventures itself, the assumption is that it will only ever do so in a minor way as a means of leveraging private investment funds. Indeed, operationally it should be discouraged from taking any other than a very minor stake in commercial enterprises.
- 105 In the more general area of small business support, the FSMVA could use its financial autonomy to introduce a grant scheme to contribute a proportion of the costs of professional advice to small businesses in the tourism sector where such advice is provided on a fee basis (e.g. by accountants or lawyers). Such an approach would be consistent with small business support programs that exist in many other countries.
- In the longer term the FSMVA should extend its business support functions by helping to promote State-level private tourism business associations and developing membership categories and programs to serve these. The FSMVA will need to involve the private tourism sector as extensively as possible, through consultation, in its programs and activities, and it should also consider convening an annual national tourism sector conference by 2010 to formalise this approach.
 - Strategic Goal 4: Invest progressively in tourism product development in order to diversify and expand the range of attractions and activities for visitors.

Analysis and justification a

This Strategic Goal deals with tourism-related infrastructure as opposed to general public infrastructure which affects the tourism experience. Tourismrelated infrastructure includes natural and man-made visitor attractions, hotels, restaurants etc.

- One of the major limitations of the FSM at present is the lack of a well-developed range of activities and opportunities for the visitor. In most islands there is not enough for leisure visitors to do other than those whose stay is only a few days, and what there is to do is often difficult to access and poorly publicised. While new investment is hard to justify when visitor numbers are static or falling, product development initiatives are nonetheless as essential element in stimulating the market.
- In the realm of natural visitor attractions such as waterfalls, beaches, or marine parks, the FSM broadly is deficient in the standards of access and on-site facilities that it achieves (again there are exceptions, such as the Walung Marine Park in Kosrae, although in most such cases further improvements are always possible). Investment in such facilities need not be costly. For example, simple signage, car parking facilities, information points and the opening up of trails and footpaths can all make a big difference to the visitor experience and to the ease of access.
- Historical sites, whether archaeological in nature such as Nan Madol and Leluh, or purely historical, such as various World War II sites and ruins, likewise require investment in access, presentation, tidiness, visitor information and so on.
- In some cases these sites and this could include some of the FSM's key coral reef areas, should be susceptible to World Heritage Site designation, which brings with it a powerful marketing message to the world at large and of itself creates a demand to visit. However, not all of the FSM's many natural attractions would qualify for such an international status, but that does not prevent the FSM itself establishing a designation such as "FSM Site of Special Interest". This could be designated with special signage, be built into tourism marketing and promotional programs, and bring with it certain requirements for minimum standards of presentation and facilities. Many tourism destinations around the world make use of their own internal designations of this kind to attract visitors (for example countries such as Costa Rica make much of the very large proportion of their country which is designated as national reserves or national parks, combined with a clear message to the visitor about the importance the country attaches itself to conservation issues).
- The built environment also has an important part to play in expanding the range of activities and points of interest open to the visitor, and thus expanding the product on offer. This is especially relevant in providing improved marine recreations facilities and access to them. For example, there is a proposal to provide a small boat base (a series of pontoons) and associated craft, retail and café centre on the waterfront in Pohnpei. Similar opportunities exist in Weno on the waterfront, where small boat transport to adjacent islands could be combined with market facilities selling both fresh produce from the nearby islands and

providing outlets for local crafts. Small boat services could, for example, provide glass bottom boat tours, tours around and within the main lagoons, access to beaches within the lagoons and so on.

- At present, only Colonia in Yap presents anything approaching a "town centre" for visitors to explore. Although small, this provides a focus for shops, banks, cafes and restaurants towards which any visitor will migrate. Kolonia in Pohnpei is not developed in this way, Weno town is run down and unattractive, while Kosrae has no "town centre" to speak of. While urban planning has wider implications than merely addressing the interests of visitors, the impact on the tourism industry should always be considered in general development plans (Strategic Goal 2).
- 114 The overall tourism objective in such matters should be to offer the visitor plenty of things to do and places to visit. Visitors to the FSM, other than those who come primarily for diving, are likely to want to mix relaxation with activities, such as visiting interesting sites, taking a round-island tour where relevant, going on walks, exploring urban centres on their own and so on. In so doing they both spend more money and are likely to prolong their average length of stay. Under current circumstances most islands make little attempt to meet these objectives and often even fewer attempts to inform and make it easy for the visitor to engage in the activities available. Developments in these areas is fundamental to achieving tourism's full potential.
- 115 In the hotel sector, while some existing properties could be said to meet international expectations within whatever grade they aspire to, others do not. In the latter case, re-investment will be required to bring them up to standard, although such investment can only be justified when there is judged to be a reasonable chance of achieving steadily rising visitor numbers. (Service standards are dealt with under Strategic Goal 11 dealing with training).

Economic policy implications

- 116 Planning issues and policies are at the heart of this type of development, and highlight the need to deal with land ownership issues and to ensure that landowners understand the importance of tourism to the nation as well as its potential to generate revenue. (An example is to be found at the Kepirohi waterfall in Pohnpei, a site frequently visited by nationals and foreigners where the landowner makes a nominal entrance charge). Planning policy should be used in similar situations in all of the states to encourage this type of visitor activity.
- 117 In more major areas for investment, such as the hotel sector, in the longer term fiscal incentives could be provided to encourage hotel owners to upgrade their properties, although this would require a broader tax base than exists at present. In due course also, such incentives could be tied in with quality standards and operating licenses.

c Critical issues for implementation

- The proposed FSMVA is the key player in making progress in these areas, to the extent that it should initiate activities in conjunction with the State visitors' bureaux to carry out co-ordinated censuses of facilities and prepare prioritised plans for improvements. It should also act as co-ordinator for the identification of the 3-5 leading visitor attractions, activities or points of interest that will help to define the development plans for the tourism sector in each of the four states.
- The FSMVA should also take responsibility for developing tourism-related input to two national areas for action the designation of sites as "FSM Sites of Special Interest", (which may extend beyond those sites of interest mainly to visitors and may also depend on other arms of government, national or at state level, for implementation). The FSMVA similarly should provide the tourism industry perspective for applications for World Heritage Site status, and would be the organisation best placed to liaise with international organisations, companies, print media etc. with an interest in such matters, such as the US National Geographic organisation and specialised television channels in North America, Asia and Europe that might wish to make use of such designations in program making or in key publications.
- 120 The national and state planning authorities should take primary responsibility for the built environment, again with input from tourism sector interests. The Infrastructure Development Plan (IDP), for example, recommends that attention be given to sidewalks and bicycle tracks, both areas of direct potential for visitors but which also cover other arms of government and other interests, including those of residents, within the country.

d Outcome measures and justification

- Several measurable outcomes are proposed under this Strategic Goal.
- 122 Comprehensive inventories of tourism sites, attractions and services are to be produced by each state under the co-ordination of the FSMVA by 2006. This activity should be relatively simple to accomplish but would also require the design of standardised forms of reporting so that the results may be comparable and data collected in a consistent manner.
- By 2007 this process should lead to the production of outline and prioritised plans for future investment that will form part of the longer-term tourism sector planning process (Strategic Goal 1) as well as providing each state with a better understanding of its key selling points for the visitor and of what is required to bring these up to standard.
- Practical issues such as the establishment of proper signage can be achieved by 2006 (some states, notably Yap, are further advanced in this regard

than others), in 2008 there should have been established a national register of "Sites of Special Interest" with a view to formalising the system, erecting suitable signage and integrating the SSI designation fully into national tourism promotion and marketing initiatives.

Strategic Goal 5: By the progressive introduction of national quality standards, establish the FSM's tourism sector as of a sufficiently high standard in dive, eco- and cultural tourism to command a premium in global markets

Analysis and justification

- 125 There are three fundamental reasons why the objectives of the FSM's tourism development should be focused on quality and the creation of premium destination status.
- First, the States of the FSM are home to some of the richest and most deeply-embedded social and cultural traditions in the Pacific. While this a point of considerable interest for visitors, it also gives rise to understandable concerns among residents that tourism could damage societies, practices and standards. The FSM therefore has some key social and cultural "capacity limits" in the context of becoming an international tourism destination. These traditional values must be safeguarded as tourism develops since they represent a major reason why visitors wish to come to the FSM in the first place.
- Second, the FSM is both physically very small and, by and large, offers one of the most pristine environments available to international tourists anywhere on earth. The pristine nature of the FSM is already under threat from poor environmental practices within the nation itself (this issue is addressed in a separate chapter). On the assumption that general environmental standards can be raised to deal with these local problems.
- 128 This includes the reality that, ultimately, there will need to be a volumetric capacity limit placed on international visitor numbers to all of the FSM's islands - large and small - given the almost infinite potential supply of global international tourists. Tourism for the FSM represents the best option for raising living standards, creating employment, helping to retain talented young people within the nation and meeting the aspirations of residents for a better life. Therefore, the economic yield from tourism needs to be maximised.
- 129 Since absolute capacities are limited, it follows that each tourist must be encouraged to spend as much as possible within the FSM, which in turn leads to the conclusion that, eventually, tourism has to become an "up-market" activity attracting only high-spending visitors that respect the country's environment and its social and cultural characteristics. In order to achieve this, the FSM needs to

become a destination capable of charging a premium for the right to visit it, and in order to do that, standards must be high.

- Third, in order to be competitive, standards in any case need to be comparable to those within competing destinations. Generally, this is not the case at present. It is important to recognise, however, that this does NOT imply that all accommodation and services need to be of a "5-star" standard, but it does imply that quality has to be guaranteed at all levels. Eco-tourism hotels, for example, by no means need to reflect the high-tech standards of city centre 5-star hotels, but they do have to deliver their products and services at the highest professional and quality levels relative to their chosen market position.
- The same applies to tourism services. To take a simple example, many tourists to the FSM will make use of local water transport to reach places that they wish to visit. It is imperative that the standards of such services reach acceptable international levels, in areas such as safety equipment on-board, operating competencies of the boat-owner or captain, technical standards of the boat and its engine(s), and so on.

b Economic policy implications

- Most of the activities to be carried out under this strategic goal call for administrative rather than policy measures. However, in order to deliver a program of raising service standards across the board in the tourism sector, a key area of policy will be:
 - to ensure that the resources available to the training/educational institutions of the FSM are raised sufficiently to ensure that vocational and other training programs for tourism can be effectively carried out.

c Critical issues for implementation

- 133 Implementation of the components of Strategic Goal 5 requires that the national body responsible for tourism the proposed FSMVA take on a coordinating role and also take the initiative in developing a range of quality standards. The first key step therefore is to establish and adequately fund the FSMVA.
- The specification of standards in some cases is straightforward. Dive operations already have recognised global standards (PADI for example), and it should be a simple matter to make such standards compulsory throughout the FSM.
- In other sectors such as hotel grading and the award of quality standards to service industries, it will be up to the FSMVA with whatever specialist assistance is required, to design and introduce standards across the nation. Hotel grading will probably require international assistance (there is ample methodo-

logical guidance available from North American and European sources). The development of service standards in tourism businesses such as land and maritime transport will partly depend on the development and enforcement of vehicle standards, in which authorities other than the FSMVA should take the lead.

- The successful completion of certified training programs at all levels in the industry require initially the development and design of suitable courses and course modules, a role which should be led by the relevant educational bodies and especially the College of Micronesia.
- 137 Enforcement of tourism industry standards will require as a minimum the development of a compulsory licensing system to be administered by the FSMVA. This may require legislation, but may be able to be instituted on the basis of the passing of suitable by-laws by the FSMVA Board this issue needs to be resolved at an early stage by the Board since, if legislation is required, this will take time to frame and pass through Congress.
- 138 With the exception of dive operations whose standards can be imposed soon, Strategic Goal 5 envisages that the compulsory licensing and accreditation schemes discussed under this heading will not be fully implemented until 2008-2010, giving ample time to develop the various components. It is, nonetheless, worth emphasising that quality standards are key to achieving the longer-term goals of establishing the FSM as an up-market destination and enabling it to deliver what it promises.

d Outcome measures and justification

- Two key dates are proposed for measurable results under this Strategic Goal 2008 and 2010. In the longer term, it is envisaged that by 2012 plans will be implemented to establish the FSM as a premium destination.
- 140 There are several measurable outcomes under this heading:-
 - a hotel grading system is designed by 2007 and implemented by 2008;
 - tourist transport services and vehicles meet defined safety and operational standards from 2008 onwards;
 - all dive operations meet PADI standards by 2006;
 - the FSMVA should establish a tourism business inspectorate in 2008 to implement the proposed quality standards across the sector;
 - the FSMVA implements a policy as soon as is practicable after 2008 that only accredited tourism businesses will be included in official FSM marketing and promotional campaigns;
 - full industry accreditation schemes will be in place and operative from 2010; and

- in 2011, the FSMVA begins the formal process to establish the country as a premium tourism destination.
- The justification for these measures has been set out in 2.5.1 above. The assumption being made in proposing these measures is that, for the reasons explained, the FSM has no real alternative in tourism but to work towards the attainment of exclusivity and high standards, in order to maximise the benefits from tourism under circumstances where high-volume, continuously-expanding tourism cannot reasonably be accommodated.

6.2.6 Strategic Goal 6: Promote inter-sectoral linkages and maximise use of local produce and services

a Analysis and justification

- Identifying tourism as a national development priority implies that tourism can help to stimulate activity, wealth and job creation. However, a noticeable feature of the FSM to the visitor at present is the narrow range of local produce, products and services on offer, and the extent to which imported food, drink and artefacts are offered in hotels, restaurants and retail outlets. Perhaps the main exception is in Chuuk where a very active fresh produce market exists in Weno based on produce brought by boat from adjacent islands every day, even though the market physically is rudimentary.
- The better hotels in the FSM strive to make use of local produce, to offer menus based on local creativity, to use local products and styles in the design of buildings and generally to capitalise on the great potential of the nation to supply the tourism sector in these areas. At present, while it is inevitable that some items of food and drink will always have to be imported, the fact remains that:
 - there is often an absence of local fruit and vegetables available in hotel restaurants;
 - supplies of local fish in hotel restaurants appear to be irregular;
 - artificial flowers are commonplace in a country generously endowed with a wide variety of natural flowers and plants;
 - there are few good quality handicrafts available for sale;
 - there are virtually no visitor-related outlets or retail centres in which to sell them;
 - there are relatively few cultural centres to visit;
 - there is relatively little emphasis on the promotion and consumption of local goods and services; and

- there is relatively little information available automatically to the visitor to promote local goods and services.
- 144 The implications are twofold. First, an active program is required, in conjunction with those authorities concerned with agriculture and fisheries policy, to raise the selection of local goods and services available to the visitor, and to improve the reliability of supply. Second, the attitude of many FSM residents to the provision of locally-produced goods needs attention.
- It is important for the tourism sector to understand that few visitors come to a unique country such as the FSM in order to eat standard international, imported and often preserved food, to buy imported goods or to have their hotel rooms decorated with imported artificial flowers. Thus, in addition to the obvious economic case for maximising the value that tourism can add to the domestic economy by internalising the supplies of goods and services that visitors consume, there is also a strong case for promoting the understanding of where the interests of visitors lie and in facilitating their access to local products. A key starting point in reversing this situation will be to change the mindset of those working in the tourism industry and serving the needs of visitors.
- 146 The requirements under this Strategic Goal imply more than merely promoting the consumption of local produce. Development is also required in the production of handicrafts to increase the supply of locally-produced products, such as clothing, which can be over-printed locally to add value. The essence of this area of tourism development is to make positive efforts to create a range of goods and services that visitors will want to buy as part of their visit, and thus maximise local expenditure.

Economic policy implications

- 147 In the area of local fresh produce development, there are important policy implications for agriculture, horticulture, fishing and farming which extend far beyond the tourism sector and fall outside the scope of this chapter. The policy areas most likely to be involved to the benefit of the nation as a whole include developing incentives to local production, the development of marketing co-operatives and of inter-island transport services.
- In the development of arts and crafts and the production of artefacts for purchase by visitors, training and small business support services will also be relevant.

Critical issues for implementation

149 In addition to any initiatives that might be taken within other key sectors such as agriculture and fishing, the interests of the tourism industry must be identified, developed and promoted by a representative body. Again the coordinating role should be played by the FSMVA, but it will need to maintain close liaison with the State visitors' bureaux as well as with other arms of national and State governments.

- The most important first step is to identify opportunities within the tourism industry for the supply of, for example, fresh produce, and to coordinate the volumes involved. It is to be expected that the majority of such supplies will come from within each of the four States, although it may be that the regular air services between Chuuk, Pohnpei and Kosrae could be used to develop an air freight component (the position of Yap is far more difficult in this regard since trans-shipment in Guam would be required, and it may be that Yap would be better advised to extend its established marketing co-operation with Palau to the fresh produce area as well).
- Nonetheless, the FSMVA has an important role to play in identifying and promoting opportunities, and in undertaking positive consultation with government departments on how such opportunities can be turned into reality. At the very least, agricultural and fishing authorities need to be made aware of the tourism industry's needs and potential. Marketing issues could be eased by the creation of purchasing consortia by groups of tourism-dependent businesses in order to smooth the flow of supplies and reach volumes of interest to a regular commercial supplier.
- 152 The FSMVA may also need to develop a program with the tourism industry itself, such as identifying opportunities for the training of kitchen staff in the use of local produce and the development of menus suitable for visitors as well as in helping hotel and restaurant operators to understand the requirements of visitors.
- In the area of crafts and artefacts, again the FSMVA may need to act as catalyst. For example, it could analyse the range of products available to visitors in other Pacific islands states and develop diversification proposals for the crafts industry and its advisers to work on. Such an initiative would also help to identify any specific training and/or resource needs that could also be handled by the specialised business support agencies responsible.
- Without becoming involved directly in the provision of technical advice or support, the FSMVA again emerges as the key strategic player for the tourism industry under this Strategic Goal.

d Outcome measures and justification

Specific targets should be set in each state for the proportion of fruit, vegetables, fish, flowers and other consumables that should be sourced locally by 2008. It may ultimately be that this element could be one of many included in hotel and restaurant grading criteria and/or industry standards awards, but even

prior to that, targets would help to focus the minds of the tourism industry and the nation as a whole on the economic purpose of the tourism sector.

156 Encouragement should also be given to use local building techniques and materials in the construction of infrastructure such as hotels, restaurants, visitors' centres etc. that visitors will use, and a target should be set and monitored that each visitor to the FSM should spend at least \$50 on locally-produced artefacts and souvenirs on each visit.

Strategic Goal 7: Involve FSM residents in tourism sector development

Analysis and justification

- 157 Tourism can only become one of the main drivers of growth in the economy of the FSM if its development carries the backing and support of its residents. To achieve this, it is essential that there is a broad understanding of the advantages that tourism has to offer in terms of employment, income generation and economic development. At the same time, tourism's negatives need to be recognised and, in this context, the population must feel able to have a voice in the type of tourism that develops and the limits that need to be imposed.
- To engender support for the tourism sector among the local population, the contribution it can make to bettering their lives has to be made apparent. It is important that residents understand that a successful tourism industry will bring in revenue from abroad, including foreign exchange, which will enable the government to improve social conditions, education and health facilities, and develop necessary infrastructure that will improve living conditions. In terms of employment generation, it can be demonstrated that tourism offers the advantage of a high employment ratio and employs up to 100% more in indirect employment; it will provide much needed jobs close to home, encouraging young people to stay on the islands rather than go abroad to find work. At the same time, much employment is in SMEs based within local communities; these have the advantage of allowing a significant degree of local participation, as well as employing local labour. Tourism's ability to stimulate cross-sectoral linkages means that it generates related jobs in other sectors, often also within the local context.
- No development comes without disadvantages and these too need to be publicly addressed. On the potential downsides of tourism, residents are rightly concerned about environmental damage and adverse impacts on their traditions and lifestyles. It is important, therefore, that they recognise that tourism comes in many guises and that they understand that there are choices to make on the types of tourism that best suit development within each individual state.
- Each of the four States of the FSM is deeply aware of their individual social and cultural identities and the need to preserve these. They are equally

concerned that an influx of tourists could dilute and damage local cultures and bring in standards of behaviour and characteristics alien to them. Such concerns are rightly held and can only be alleviated by bringing them into the open and addressing them. There is little doubt that the proposed high revenue, small scale form of tourism development is the best way to create a sustainable industry that will be acceptable and provide minimum impact on ways of life. It is also significant that these traditional values are what attracts visitors to the FSM in the first place. An understanding of this will lead to a greater likelihood of gaining the people's support.

- An awareness of the ways in which tourism can help to preserve local skills and crafts, dances and festivals, (while at the same time creating employment), is an important factor in developing an understanding of tourism's advantages. It can also help the populations of the FSM to develop a pride in their own cultures, and stimulate greater interest in retaining and perpetuating local skills and knowledge.
- The issue of land ownership is a crucial factor in developing tourism throughout the FSM. Access to sites of interest, the opening up of forest walks and trails, and the availability of land for new development, for example, will be needed as the industry expands. New tourism products have to come on stream to provide additional attractions to make visits worthwhile and provide for longer lengths of stay. This can only happen with the willing consent of those involved. Expansion and progress is thus largely dependent on the co-operation and consent of those involved and can only be achieved if tourism is embraced as a legitimate and worthwhile mode of development.
- In particular, tourism within the FSM which commands a premium in global markets will not succeed unless it has the backing of the country's residents, the traditional leaders and the church; high end tourism cannot be successful unless there is a ready welcome to tourists, a pride among the local population in their society and culture, a willingness to share this with visitors, and a destination that is environmentally sustainable. This can happen only if the residents of the FSM have an understanding of the sector, what they can do to promote it, what it can contribute to the development of the country, what they need to beware of and what it offers them in personal terms. Public support is crucial to moving the industry forward.

b Economic policy implications

Administrative rather than economic measures per se are needed to address the crucial issue of public awareness. Programs and courses need to be developed, plans put in place for public consultation and meetings arranged, and publicity undertaken. The FMSVA will need to be the orchestrator of this, with

assistance from the national and State educational authorities, the COM and a variety of local bodies.

165 Such activities cannot be undertaken without the financial resources to develop these programs, as well as materials for them, and sufficient staffing levels to devote the required time to put them in place. This will fall primarily on the budget and manpower of the FSMVA, which will need to be adequately resourced to take this - among all its other tasks - into account. It may well be that the COM, in helping to design the programs, will also require government backing for this task.

Critical issues for implementation

166 Critical to the implementation of Strategic Goal 7 will be the ability of the newly established FSMVA to work closely with State education authorities, State VBs and the College of Micronesia to design and implement programs which explain the benefits, opportunities, pitfalls and choices that can be made in tourism development. Guidance from international organisations such as PATA and the experience of other small island states will be crucial in putting together appropriate programs and assessing the best ways to get the messages across.

167 The strategy for a public awareness campaign will fall into a number of different components. Information programs for adults, educational courses for secondary level children (and possibly primary level), consultation with community leaders, traditional chiefs and the church, and general publicity campaigns will all have a part to play. The first step will be to design supporting educational material and follow this with an ongoing program of public information dissemination and regular educational classes in schools. The overall program should be started in 2006 and be fully operational, including a tourism awareness page on the FSMVA website, by the end of 2008. Public awareness campaigns are never finished, however, and such activities need to be regarded as an ongoing and important means of involving those whose lives are affected and keeping them informed of new developments and plans.

d Outcome measures and justification

168 The key steps to implement Strategic Goal 7 will be to:

- design a tourism awareness program and prepare the required educational material for both adults and children by the end of 2007
- hold public awareness campaigns, including information meetings in all main settlements and media publicity, beginning in 2007 and held annually thereafter

- hold consultation meetings on tourism development strategies with key leaders, beginning in 2007 and continued regularly thereafter
- set up tourism awareness programs for students which enter the secondary school curriculum by 2008 and include at least one class per term devoted to the topic
- Such measures will form the first steps towards an ongoing program that
 will be required to gain the understanding of the people of the FSM of the
 implications of tourism, their participation and acceptance of tourism development plans and their ability to respond to the needs of tourists.

6.2.8 Strategic Goal 8: Promote the FSM in appropriate markets and market segments to realise the sector's potential

a Analysis and justification

- Recognising the importance of a professional approach to tourism marketing and promotion, the FSM commissioned Travel Research International of the UK to prepare a National Tourism Marketing and Promotion Action Plan which was completed in April 2002. One of the recommendations of that report, that a national tourism administration should be established, is now being put before Congress in the form of a Bill to establish the FSM Visitors' Authority (FSMVA), the key organisation for progressing the tourism sector in the country in future.
- International marketing and promotion of the FSM as a tourism destination raises the problem of the "closed circle" discussed at the beginning of this chapter. There is an argument that marketing and promotion would be premature if the tourism product on offer is not properly developed. It is suggested that visitors who come to the FSM may be disappointed and thus pass on adverse word-of-mouth recommendations, making it harder to develop the sector. The argument continues that it is necessary to invest fully in raising the quality standards, range of activities, accommodation stock and all the other aspects of the tourism industry that require attention, before money is spent on promotion.
- While this argument in some ways is logical, there are also a number of serious risks and pitfalls. The greatest risk is that the investment undertaken would fail to attract the planned number of visitors, or would be of a type inappropriate for the market. This would cause investment projects to fail and the credibility of the tourism sector would suffer. As discussed at the beginning of this chapter, it is preferable to take action on ALL fronts so as to move the tourism sector forward progressively. Provided that the required political and financial support is given, there is every reason to believe that this approach will succeed.

- 172 The primary role of the FSMVA is to promote and market the FSM as a leisure destination to key international tourism markets. The National Tourism Marketing and Promotion Action Plan identified these as North America, Japan/North East Asia, and Europe. Despite the upheavals in global tourism of the recent past, there is no reason for changing these priorities.
- (The Plan also proposed the appointment of a global marketing and promotional agent to achieve some early successes while the FSMVA was set up, but it is understood that it has not been possible to make this appointment. Provided that the FSMVA is established and resourced as proposed, it is assumed that this post will not now be filled.)
- 174 The FSMVA will be responsible for marketing the whole of the FSM (although Yap's co-operative marketing arrangement with Palau can be expected to continue). The most important element in this international marketing is to get the best value for money that can be obtained by acting on a national rather than a state basis. Marketing and promotion should be very carefully targeted, based on the appointment of marketing agents in each of the three key regions whose activities and performance should be carefully controlled and who will be required to carry out a range of very specific tasks.
- 175 At the centre of this program, the FSMVA will have a range of key tasks. These will include:
 - overseeing the role and performance of the regional marketing agents;
 - co-ordinating all national collateral and associated marketing material;
 - establishing a national photo library;
 - maintaining and developing the FSMVA website as an active tool in the country's tourism marketing and promotional program;
 - monitoring the results of marketing initiatives and modifying subsequent programs accordingly.
- 176 At the regional level the marketing agents will provide the interface between the FSM and the customer - either directly or through the travel trade in each region, or both. In particular, they will maintain regular contact with key actual and potential user groups, be responsible for the active representation of the FSM at key trade shows, and maintain and develop contacts with regional media who can assist in disseminating information about the FSM to the market.
- In essence the FSMVA will be the central player in a targeted and detailed marketing program. However, this chapter demonstrates that the FSMVA will also play a key role in the wider development of tourism in the country. To that extent, the promotional function now extends to embrace a wider range of tasks than just the marketing of the country as a destination.

b Economic policy implications

- The success of the tourism marketing and promotion program depends on adequate funding. This relates both to the funds made available to pay for promotional activity, and those made available to finance the FSMVA. In the longer term, a successful tourism industry can be expected to create expanding tax revenues to justify this commitment, and also should open up opportunities for the autonomous FSMVA to generate some of its own resources. However, in almost all countries, national tourism offices are primarily and predominantly funded by the public sector and there is no reason to expect the FSM to be any different.
- In order to set the FSMVA on the right path therefore, the public budgeting process should make adequate provision for the FSMVA's main tasks, and also commit to medium-term funding provided that this approach is consistent with general public budgeting procedures within the country. This in turn underlines the need for support at a senior political level.

c Critical issues for implementation

- Staffing levels and capacities for the success of this Strategic Goal are crucial (as they are for several other goals). The FSMVA itself must move rapidly to a level of staff with the right experience for the many tasks it has to discharge. It is probable that it will need to supplement staff resources from within the FSM with specialists from abroad, especially in the key areas of national tourist office management and detailed marketing techniques.
- The appointment of suitable marketing agents for each of the three main regions is also a crucial element in the successful execution of marketing campaigns themselves, as are the specific terms of their appointment. The National Plan set out in detail the performance targets that these agents would be required to meet and the quantifiable activities they would have to perform. The recommendations of the National Plan in this regard remain valid and should be used as the basis for negotiation with the people concerned as part of their employment contracts.
- Finally, timing is also critical for success. The tourism industry in the FSM and the process of accelerating its development should now be seen as an urgent priority in the context of the reducing and eventual termination of Compact funding. The commencement of marketing and promotional programs aimed at increasing the flow of visitors to the country is a vital and overdue step towards reaching tourism's potential.

d Outcome measures and justification

- Several measurable outcomes are indicated under this Strategic Goal. Visitor expenditures should rise by at least 7% a year from 2008, and visitor arrivals by at least 5% a year, as evidence of the success of the promotion and marketing program. Visitor satisfaction ratings should reach and be maintained at a minimum of 85%.
- In the specific realm of attendance at trade shows, a return worth at least ten times the costs of attendance should be demonstrated in order to justify future attendance at the same show. It is likely that, as the FSM becomes better known, that ratio should be raised by the FSMVA to ensure that continued attendance (the costs of which are usually relatively high) can be justified.
- 185 With the move towards greater use of the Internet for travel information and reservations, the FSMVA website should be seen as an important part of the promotional and marketing effort. The number of "hits" on this site should be counted as a proxy measure of its success (hits" do not necessarily equate to the volume of business done), and a rate of increase in website traffic should be negotiated and agreed as a further performance measure related to the promotional and marketing effort.
- A guiding principle of the marketing and promotional program should be that its results should always be open to measurement and question. The FSMVA should always be prepared to modify or change fundamentally its activities in this area. It should remain responsive to market changes, and develop its own expertise in the marketing and promotion of the sort of niche market activity that best suits the FSM. Accurate measuring and reporting of results of specific campaigns and initiatives is important in this process, as is the provision of regular feedback to the tourism industry itself of the success of specific initiatives.

6.2.9 Strategic Goal 9: Ensure that tourism is developed in an environmentally-sustainable manner and contributes actively to environmental conservation and cultural protection

a Analysis and justification

Strategic Goal 9 addresses the very essence of the FSM tourism "product". The country's tourism is based on the unique environmental and cultural attractions that it has to offer the tourist through its forests, coastlines, islands, lagoons, reefs and the varied cultures of the peoples of the four States. With tourism in an embryonic state, the country is largely unspoilt by tourism in the way that so many destinations have become; it has the advantage of representing a relatively clean sheet from which tourism can be developed. As such, it can assess developments elsewhere in the world, in Guam or the Maldives or Palau

for example, and take from their experience the factors that will help to move tourism forward in an environmentally sustainable way.

- During the research phase for the *National Tourism Marketing and Promotion Plan* it became apparent that although there was a universal acknowledgement in all four States that the nation's attributes need to be preserved, there was a general lack of understanding of what forms of tourism would best protect the environmental and cultural characteristics of the nation. Strategic Goal 9 (together with SG 5) addresses this issue.
- It is important to create an awareness among the community of the importance of preserving the natural attractions that the tourist enjoys and of conserving community skills, and that if this does not happen, assets, once destroyed, cannot be replicated. Already the FSM has ceased to become "pristine", with sewage in the lagoons, wrecked cars at the roadside, etc. It is essential, therefore, that all current activity and new development takes on the mantra of sustainability as its guiding light. At the same time, it is also important to ensure that crafts and local skills are passed on from one generation to the next; activities such as demonstrations within schools at primary and secondary level and the formation of handicraft associations can help perpetuate local crafts.
- Even if for no other reason, this makes sound business sense. Markets are increasingly demanding the reassurance of environmentally-friendly practices and evidence of conservation in destinations that purport to be eco-friendly. There is a growing number of tourists, particularly in Europe and North America, of the kind that the FSM is hoping to attract, who are actively concerned about protecting the environment. They look to tour operators to demonstrate environmental credentials and to destinations to demonstrate sustainable practices.

b Economic policy implications

- Developing and maintaining an environmental program does not take great investment but it does require organisation, commitment and the involvement of a variety of different organisations and government bodies. It extends to those working within the industry and those outside it. It may also mean that additional legislation is required to ensure strict environmental impact assessments specifically aimed at tourism developments and enhanced national building controls for new tourism structures.
- The resources required to put Strategic Goal 9 into practice will primarily come from the FSMVA. In essence, what will be required will be considerable time (ie staffing resources), and some financial reserves to implement the quality control, monitoring and awareness programs that will be necessary. Input will be required from government environmental authorities as well as private sector environmental organisations, education authorities, the COM, the state

VBs and community leaders in order to deal with the wide range of areas that need to be included in a conservation program.

Critical issues for implementation

- 193 Critical to the success of this Strategic Goal will be the degree to which measures that are put in place are enforced. While the FSMVA will be the key player in implementing the program, other agencies will also be actively responsible for ensuring that controls are set up and regulations adhered to.
- 194 Activity will fall into a number of distinct areas. Existing tourism businesses will be encouraged to follow environmentally friendly practices, if they are not already doing so, and a program of ongoing monitoring will be introduced. New undertakings will be required to demonstrate the environmental probity of the project and will have to undergo strict national environmental impact controls.
- 195 At a community level, actions to engender a sense of local pride will need to be undertaken. Courses on sustainability, environmental protection, cultural traditions, etc, with secondary school children will need to be put in place. Liaison with community leaders to bring them on board and training and persuasion among industry operatives on the wisdom of following protection measures will also be required.

Outcome measures and justification

- 196 Measurable outcomes for this Strategic Goal fall into four distinct areas - regulation, monitoring and training, accreditation and awareness.
- 197 Regulation will require that EIAs with specific provisions relating to tourism activity are carried out on any new development and strictly followed as from 2008 and that all existing tourism businesses comply with national standards designed for the tourism sector by 2010. An ongoing program of guidance and monitoring will lead to the introduction of an annual audit to ensure sustainability and require compliance by 2010.
- Environmental and cultural awareness, in the hands primarily of the FSMVA and the State VBs, is crucial to the success of this Strategic Goal. Much of the current environmental degradation comes from the population of the FSM rather than the tourist; only one aspect of this - trash, dumped cars, etc. - can be dealt with under the tourism program, however, since the far more pressing problem of sewage and waste-water falls under public infrastructure control (see Section 1.5). Some beautification programs are already under way (Kosrae, in particular, has worked hard on this) but greater efforts are required and it is recommended that each State has in place and enforces anti-litter legislation, as well as taking the initiative to remove all wrecked boats, cars, etc., by 2006.

- On the other side of the coin, it will be helpful to encourage environmental and cultural awareness among tourists to the FSM by developing local guide books on the flora, fauna and marine environment and information on the culture and lifestyles of the people of each of the four States. This should not be difficult to put together and it is envisaged that the FSMVA, working with the State VBs, will have this prepared by 2006.
- Two forms of accreditation are designed that will encourage tourism businesses to think in a sustainable way and help to develop their environmental awareness and compliance. A national "Green" award scheme should be introduced and a register drawn up of accredited tourism businesses such as boat operators, tourist guides, hotels, etc. This may take some time to develop since training and guidance to businesses and personnel may well be required. However, such a register will be useful for marketing purposes and it should be possible to produce by 2012. At the same time, the FSM and States should aim to gain global recognition and awards as prime eco-tourism and cultural destinations as sustainable practices become established across the tourism sector.

6.2.10 Strategic Goal 10: Put in place a reliable system of measuring tourism activity in the FSM to enable progress to be monitored accurately

a Analysis and justification

- At present in the FSM there is no definitively accurate source of data on visitor arrivals, length of stay, expenditure and other key measures of the tourism industry. For example, data on visitor arrivals provided by the Department of Economic Affairs for the preparation of this chapter differ fundamentally for the same years from data that were approved for use in the National Tourism Marketing and Promotion Action Plan. The latter showed that arrivals had fallen by 20.1% (4,317 fewer visitors) in 2000 compared with 1996. Data supplied for this chapter for leisure + business visitors show a decline of 0.4% (106 visitors). It is thus not possible to say with certainty whether visitor numbers are rising, static or falling.
- It should be a simple matter to devise a reliable and accurate system able to identify the nature of a foreign trip to the FSM. This could initially be done by means of well-designed immigration cards, and ultimately by interlinked immigration computers capable of producing data on a real time basis. The key is that the FSM government needs to know how many individuals come to the FSM, what is their primary trip purpose (leisure, business, visiting friends and relatives etc), how long they stay and which states they visit. Only then will it be possible to monitor accurately the progress of the sector against agreed targets. Since the FSMVA will be a national tourism organisation, it is national

data that are needed. State-level visitor data are also important but should be kept separate from assessments of national performance.

- Further knowledge on international visitors would also be very useful, such as expenditure levels, satisfaction ratings, hotel occupancy trends etc. These can best be addressed by a combination of data submitted by the hotel sector, compiling financial data from within the banking system (although this is difficult in the FSM since it is an integral part of the US dollar zone and therefore balance of payments data are not available for the vital US visitor segment who are "domestic" travellers in currency terms), or by the conduct of regular sample surveys, usually exit surveys carried out at the end of a visit.
- Accurate basic measures of visitor arrivals are needed urgently and should be regarded as a high priority. The responsibility lies with the immigration and statistical authorities, not with the tourism industry, although the FSMVA should advise on the nature of the data needed to monitor the industry's performance and inform future policy decisions.
- However, it is the responsibility of the FSMVA to determine other data needs and to set in motion the process of regular surveys and other statistical reporting methods in areas that fall outside the responsibility of others such as the immigration service and the financial authorities.

b Economic policy implications

- There is a need for an explicit expenditure provision to be made as soon as possible to fund the design and implementation of an immigration system that meets the requirements set out in the previous section. Although additional data on tourism are also required, accurate data on arrivals, lengths of stay, purpose of visit and national origins are essential building blocks for tourism planning. This should be regarded as an urgent issue and funded accordingly.
- Otherwise, this Strategic Goal is more to do with informing policymakers than in setting a policy agenda. There are no other direct economic policy consequences from putting in place reliable tourism information systems, except that economic policy is likely to be mis-informed in their absence.

c Critical issues for implementation

The urgent need under this Strategic Goal is for the immigration and statistical authorities to design and put in place a system for recording international visitors that meets the defined needs. This task need not await the establishment of the FSMVA. The current FSMVB and the Department of Economic Affairs will be able to advise on the basic needs of the tourism industry for accurate basic data. It should be agreed in the 3rd Economic Summit that a fully ac-

curate system should be in place and operational from the beginning of 2006 at the latest.

- In the longer term, the same authorities should plan for the introduction of a fully integrated real-time computer system at all the FSM points of entry that would enable arrivals and other key data to be input continuously and thereby enable up-to-date data to be available. The FSM is at an advantage in this regard compared to many other countries, in that arrivals volumes are small and likely to remain so and ports of entry relatively few. A computer based system should not therefore be very costly nor complex to commission, and would have other advantages such as those related to security and general immigration issues as well as serving the growing tourism sector.
- From the standpoint of the FSMVA, one of the organisation's responsibilities should be to prepare regular and timely reports on the tourism sector's progress, and to issue information bulletins on key statistical indicators. It should also be staffed in such a way as to permit the preparation of regular reports to State and national governments as a means of informing and adjusting tourism and other related policies.

d Outcome measures and justification

- By 2006 the bulk of this Strategic Goal should have been achieved. The new, accurate arrivals data system should be in place, the FSMVA should have established a reporting system from the nation's hotels on occupancy rates via the State visitors' bureaux and should have initiated the regular reporting of the sector's performance to government, the industry and the general public (e.g. through the FSMVA website).
- The extent to which the FSMVA as opposed to the nation's statistical office should be responsible for preparing and publishing these data should be negotiated between the parties concerned, but it is imperative that accurate data are made available as soon as possible after the close of the period (monthly data reporting should be the aim). issued on a regular and reliable basis. As a performance measure there is no reason why the arrivals data for month 1 should not be assembled and made public by the end of month 2.
- From the start of 2007 there should be a comprehensive and regular report issued by either the FSMVA or the statistical office on all aspects of the tourism sector, which implies that there should be a regular sample survey, probably based on departing visitors, in place and operative by that date.
- By 2012 the FSM should have converted all basic tourism statistics collected on arrival into a real-time computer system capable of producing immediate raw data to the public plus analysed data reports automatically within a

very short space of time after the end of the period (again within a month of the period's end).

6.2.11 Strategic Goal 11: Progressively develop tourism services that are acceptable to the international tourism market through structured training programs

Analysis and justification

- 215 As discussed in Section 1, tourism in the FSM has so far failed to make the necessary "quantum leap" to enable it to move forward on two fronts at the same time - to develop as a destination that is of an acceptable standard for an international market paying a high price to reach the FSM on the one hand and, on the other, to attract visitors in sufficient numbers to move the industry forward.
- 216 Integral to the first part of this equation is the welcome visitors receive and the standards of service they experience within the FSM. At present, staff in almost all segments of the industry are, for the most part, inadequately trained and woefully ignorant of what is required of them. If the FSM is to develop premier destination status by 2012 as is proposed, or even if it is to achieve standards to enable it to compete with similar destinations elsewhere in the world, the levels of achievement of workers within the industry need to be increased.
- In a few establishments within the FSM, notably the hotel sector, inhouse training has brought staff up to acceptable levels. However, well qualified staff tend to be the exception. Training is required by a host of service sector segments which include front and back-office staff in the hotel sector, food and beverage operatives, visitor bureaux staff, customs and immigration staff, tourist guides, etc, many of whom are without any form of training at all.
- Although there has been a recent decline in numbers, Japan remains the single most important individual source market for the FSM. Efforts have been made in some States to cater specifically for this market, but it is important that specialised training is more widely introduced to produce Japanese-speaking guides, front-desk staff, restaurant staff and so on.
- International tourism is a global business and the international tourist particularly one that is likely to visit the FSM - is generally an experienced traveller who is familiar with a wide variety of destinations and types of service (the Asian
- 220 approach to service differs quite markedly from the Caribbean style, for example, but each are nonetheless broadly of an adequate standard). What is not acceptable, however, is for tourists to be faced with poor standards and generally unskilled workers who have no concept of guest service, or of how to facilitate a visitor's stay.

It is for these reasons that Strategic Goal 11 is designed to address what is a fundamental weakness in the system. In most segments, this means starting from the most basic levels but over time the program is designed to advance training levels to provide mandatory certification by 2012. With such a program in place, it is envisaged that the visitor will meet appropriately qualified people ranging from immigration and customs staff as they enter the country, to hotel personnel and trained guides, through to qualified staff providing services such as hire cars or boat hire who can help to make their visit a pleasurable experience.

b Economic policy implications

- The relatively large-scale training program that is required to raise the tourism industry's skill levels across the board, will necessitate a dedicated budget and should be regarded as an urgent area for action. Initial training courses for a variety of sectors will need to be designed and implemented, intermediate training introduced and, in due course, more advanced courses and accreditation and certification requirements put in place.
- A number of different agencies will need to be involved in the design of training programs and with putting them into action. Leading the way will be the College of Micronesia working in collaboration with the FSMVA and the national education authorities. However, with the variety of sectors involved hotels, restaurants, car hire, taxis, retail, boat operations, customs and immigration, visitor bureaux staff a range of specialised bodies will have input for specific sectors (taxi driver training and accreditation, for example, will require, in addition to these core bodies, input from the department of transport). The experience of other destinations outside the FSM will also be helpful and their expertise should be sought in the design of different programs.

c Critical issues for implementation

- The most important first step for setting up improved training standards will be the design of a training program for each different sector, set out in an operational plan to cover a three year period, 2006-2008. Before this can happen, however, the FSMVA in collaboration with educational authorities and the COM needs to undertake an audit, defining the activities that require tailored training programs and identifying the different training delivery agencies, and their capacities, that already exist within the FSM. An issue of particular concern to small businesses is the need to provide on-the-job and special short course vocational programmes, since owner-managers and key staff cannot be spared for extended periods to attend lengthy training sessions
- Once these assessment tools are in place, an increased program of basic level training for hotel and other tourism sector staff can be set in motion

through appropriate establishments in each of the four States. The intention is gradually to increase skill levels, introducing intermediate and advanced level training over time. Training accreditation will, in due course, lead to a system whereby only businesses employing appropriately trained personnel will be accredited by the FSMVA and thus qualify for their "seal of approval". When tourism has developed to a sufficiently high standard, envisaged by 2012, only those establishments accredited by the FSMVA will qualify for inclusion in their promotional activities, national website etc.

Outcome measures and justification

226 The focus on improving the levels of service and training among all those who will come in contact with the tourist is an essential element in enabling the FSM's tourism sector to compete in an international industry and in moving it up-market. Several stages are envisaged by which progress can be monitored:

- a tourism industry training operational plan and a staff training program prepared by 2006;
- a study to identify special needs (eg language training) completed by
- new/additional training programs introduced over the period 2008-2010;
- FSMVA accreditation schemes become operative and transport service approval licences required by 2008;
- mandatory employee certification for all key tourism employees by 2008;
- introduction of certified training achievements by 2012

Activities and Outputs

6.3.1 **Commentary on Strategic Planning Matrix**

- 227 The mission statement to "progressively develop the tourism sector to become the leading sustainable economic activity in the nation and establish the FSM as a top quality, premium-priced international tourism destination by 2020" is both ambitious and contains several key concepts.
- 228 It suggests that tourism becomes a leading economic activity in the country, a radical change from the current position. It proposes that the FSM becomes a high quality, premium-priced destination for international visitors within the next 20 years, demanding an equally radical change.
- The Strategic Planning Matrix (SPM) sets out a range of activities and tasks that will help to bring these changes about. Before describing how the spe-

cific outputs are linked to the strategic goals and considering the issues of risk and potential weaknesses, it is important to emphasise the need to take action on all the issues mentioned in the SPM.

- 230 It is widely recognised that the FSM's tourism potential will only be realised if investments are made in the tourism product, in infrastructure, in promotion and in service standards. While the country's potential is clear, much remains to be done on all aspects of the tourism sector to bring the country up to standard and to ensure that promotional efforts are not undermined by adverse visitor reactions and word of mouth recommendations..
- Thus all of the 11 strategic goals are themselves inter-linked. What is proposed in the previous sections is a fully integrated program, all elements of which have to be tackled. This will be the only way to achieve the objectives set out in the mission statement and to enable the FSM to operate as a premium destination. maximising tourism's contribution to the nation.

6.3.2 The Strategic Goals

a Make tourism a leading economic activity in the FSM

- Specific targets are given for the scale that the tourism sector should reach within the next few years, leading to a position in 2012 where visitors' daily expenditure reaches US\$250 and the FSM is seen as a premium destination.
- 233 The process of achieving these measurable objectives relates in policy terms to the need for careful planning and execution. Each state should develop a tourism plan that identifies investment needs and priorities in order to provide a framework for developing its tourism sector. This will be amalgamated at national level into a national plan that will provide the guidelines for the medium/long-term development of the sector.
- Each plan, national and state-level will be updated according to progress made and will result also in the regular development of investment project proposals and identified priorities that should be used to promote investment in the sector.
- The most important element in this process is to establish a clear link in the minds of community leaders between tourism and their economic development prospects, a link that should reach national level as well. The central proposition of the tourism development plan is that the sector should take a leading position in national development plans and should become one of the most important sources of employment, government revenue and economic growth.
- In this context, Strategic Goals (SG) 1 and 2 are very closely linked.

b Integrate the tourism sector into national economic planning and development

As an integral part of achieving SG 1, SG 2 proposes to raise the profile of the tourism sector in the planning and financial management of the nation. Specifically this requires that at least 17% of the recurrent national budget should be devoted to the proposed FSM Visitors' Authority (FSMVA) by 2006, and that tourism sector interests should explicitly be included in all project investment proposals from the same date, including carrying out cost-benefit analyses of the impact on tourism sector interests of all relevant investment projects.

238 These goals are linked to a number of practical steps, the first of which is to establish the FSMVA and secure its adequate funding by 2005. The FSMVA, draft legislation for the creation of which is under preparation for Congress in April 2004, is the key organisation for the achievement of the tourism strategy. It is intended that the FSMVA should represent both tourism industry professionals within the FSM and should act as the national tourism body capable of blending the interests of all four states into a coherent national policy, plan of action and promotion and marketing program. The FSMVA, as proposed in its draft legislation, will have sufficient autonomy and skills (although international assistance in the latter area is also likely to be required - see Assessment of Risks and Weaknesses below), to play the leading role in the tourism sector's development and providing a bridge between government and the private sector As the FSMVA becomes established and operational, the national government (Department of Economic Affairs) in collaboration with the State governments and State visitors' bureaux, should produce a policy paper outlining the ways in which government will support the tourism industry, and setting out guidelines for the sector's development. This will assist in identifying the needs of the tourism sector, including those relating to more general physical infrastructure.

Thus in this set of tasks is embodied the principal planning elements that will set the industry's direction in the years to come. This process will involve national and state governments, the FSMVA representing the industry's interests, and ultimately other state- and national-level bodies with responsibilities in areas that are not tourism-specific (e.g. health services) but that have an impact on tourism and on the FSM's ability to be an international tourism destination. This process will involve a wide cross-section of interests and will play an important role in integrating tourism into the national planning and development process.

Create an attractive and supportive environment for private sector tourism industry investors

- Important though the role of government is in stimulating tourism sector expansion and setting the policy goals for the industry, much of the actual investment is likely to come from the private sector. As the under-developed private sector in the FSM expands generally in response to broader private sector stimulation, private businesses will provide most of the services consumed by visitors. Such businesses will represent the bulk of both value-added and employment created and sustained within the tourism sector.
- This Goal indicates specific outcomes in terms of the growth of the private sector, the emergence of new projects and the creation of employment. While these goals are relatively modest in absolute terms, they should lay the foundation for future expansion. The private sector development initiatives proposed generally for the FSM and covered in a separate chapter also apply to tourism, and the assumption is made that these linkages are understood by those advancing private sector reform.
- Outputs linked to these tourism sector goals are specific to the tourism sector of course. The FSMVA is again key. It is expected to develop an efficient signposting system that it can use to assist small tourism sector businesses in locating assistance, whether financial, management or marketing (although it is important to remember that the FSMVA is a tourism promotion agency for the nation, not a supplier of small business management support and expertise; such tasks are best done by specialists such as the FSM Development Bank and various small business support networks.)
- In addition to the signposting function, it will also be important to lobby governments national and state to ensure that supportive environments for private businesses are created to reflect tourism sector interests. Proactively, the FSMVA can assist in bringing forward private business proposals that will strengthen the tourism sector. There is a need to identify, co-ordinate and perhaps also to assist in the preparation of such projects and in advertising the opportunities that arise to private investors at home and abroad. These activities and outputs represent an entirely legitimate range of actions for the body responsible for promoting tourism's development nationally, and strengthen the FSMVA's role as lobbyist and bridge-builder for tourism vis-à-vis other sectors of activity.
- In parallel the FSMVA should support the creation of industry associations by providing specific membership categories and benefits, and promote debate through an annual conference.
- The central proposition of this Goal is therefore that, while the tourism sector sits within the broader private sector development framework, the

FSMVA should be responsible to ensure that its own characteristic needs are met and understood. (This Goal might also be seen as integral to and part of the broad sectoral objectives set out in SG 1 and SG 2 above).

d Invest in tourism product development in order to diversify and expand the range of attractions and activities for visitors

- The lack of activities and facilities for visitors to the FSM is marked and there is general agreement that investment will be required to improve these.
- As an important contribution to each state's tourism plan this Goal relates to raising accommodation capacities, preparing full inventories of existing tourism sites and facilities, and their state, and identifying the top 3-5 attractions or sites on which the future development of tourism at the state level will be based. State visitors bureaux and the FSMVA together have much to do to deliver these outcomes.
- The logical starting point is to list exactly what exists in the FSM and to indicate its physical state. This should include all accommodation, vehicles, physical sites and attractions and issues of access. Each State visitors bureau should compile these lists for co-ordination by the FSMVA.
- However, this is not purely an exercise in developing an inventory. For the tourism sector in the FSM to succeed it will be important to increase the range of attractions and activities open to the visitor on a systematic basis over time. This Goal is intended to identify where investment is needed, and also to provide the basis for relatively economical actions that can be achieved without major cost in the short-term, such as putting up a reliable system of signage.
- In the longer-term, it is suggested that, in addition to applying to UNESCO for designation of key sites as World Heritage sites, the FSM should develop its own domestic designation. This could apply either to man-made sites (e.g., some key World War II relics), to natural attractions such as waterfalls or coral reefs. Product development implies more than investment in new sites and facilities therefore; it includes improvement of existing ones.
- 252 Product development in terms of new facilities and attractions should mainly be led by private sector initiatives. The public sector should ideally provide the development framework, including perhaps some investment in physical infrastructure, that encourages the private sector to take the commercial risk. Although empowered to do so, the FSMVA should not generally act as a direct investor in product development except in circumstances of market failure/investor of last resort, and even in these cases great care should be taken to avoid unviable investments that could compromise the FSMVA's financial standing.

- e By the introduction of national quality standards, establish the FSM's tourism sector as of a sufficiently high standard in dive, eco- and cultural tourism to command a premium in global tourism markets
- The concept of establishing the FSM as a premium destination for leisure visitors rests on the understanding that capacities will always be limited, given the small size and limited resources of the nation's islands. Growth cannot indefinitely be based on an expansion of tourist volumes therefore. In order to maximise the financial and economic yield from tourism, the sector needs to attract high-end tourists those whose average daily expenditure is high in absolute terms. Following the experience of other countries with similar characteristics therefore, it is proposed that the ultimate goal should be to make the FSM into a premium destination.
- 254 It follows that quality must also be high in all aspects of the tourism "product", The specific outcomes of SG 5 include raising accommodation standards, dive standards, and standards of safety and quality in all aspects of the service industries used by visitors. The linkage between these outcomes and the outputs that are required is a direct one.
- 255 The FSM's tourism authorities, co-ordinated and managed by the FSMVA, should put into place a series of quality assurance schemes. By 2008 these should apply to all hotel stock. Dive standards already mainly meet international standards, which can be imposed on all dive operators by 2006 and be subject to annual licences thereafter.
- In broader terms at State level, standards need to be applied to taxis and water transport systems used by tourists. From 2010 it is proposed that all tourism facilities and services should require a formal standard/grading issued by the FSMVA. A key element in this process will be the introduction of a policy that only those businesses that meet these standards can be included in national marketing and promotional programs.
- 257 The system proposed also implies the creation of an inspectorate/licensing system that will be run by the FSMVA. It is important to stress that such a system should be impartially operated and result in the issuance of appropriate certificates, licenses and quality/grading marks as appropriate. International best practice in the design and implementation of such systems is likely to be required.

f Promote inter-sectoral linkages and maximise use of local produce and services

This Goal relates specifically to the process of ensuring maximum economic yield to the FSM from international tourism. If tourism is to become a leading economic activity then local value added is the key issue. This applies

not only to the creation of employment but also to the consumption of local produce and services.

- 259 In order to achieve this direct action will be required to facilitate the commercial supply of goods and services to the tourism industry. It will also require close liaison with activities in other sectors, notably in agriculture, horticulture and fishing, but also in the development of handicraft design and quality, and of cultural activities.
- Again the FSMVA will play the central role in close association with State tourism authorities and State governments. Positive action will be required to identify demand for specific goods, consumables and services in each State by the tourism sector. It will also possibly be necessary to facilitate the regular commercial supply of items such as fresh produce and fish to the tourism sector by means of purchasing consortia or co-operatives.
- Local supply policies should also encompass the encouragement of local designs and materials used in tourism buildings, the encouragement of local cultural centres and groups to include tourism as part of their development process, and assistance provided to handicraft producers in areas such as design, techniques and quality. All these issues will help to create and sustain an "FSM ambience" capable of attracting visitors, encouraging them to spend their money on locally-produced items, and meeting the target that each visitor spends at least \$50 per visit on handicrafts and locally-made souvenirs, in addition to consuming local produce in hotels and restaurants.
- The most important linkage under SG 6 is to ensure that the tourism authorities take the initiative on behalf of the nation and the tourism industry to promote local consumption actively. It will not be sufficient to be reactive; proactive action will be needed to reach the goals set out under SG 6.

g Involve FSM residents in tourism sector development

- Developing international tourism in the FSM requires that the concerns of residents are taken fully into account. While this is a requirement in most tourism destinations, in the FSM it is especially important because of the deep-seated religious, social and cultural characteristics of the country. FSM residents are rightly concerned that international visitors do not place unsustainable strains on traditions and established practices, whether these relate to access to private land, observance of local customs, respect for the environment or any other similar issue.
- At the same time many people in the FSM are not well informed about the benefits that tourism can bring. In particular, the capacity of international tourism to create jobs, incomes and additional business is not fully understood. For these reasons SG 7 sets out a series of outcomes related to raising the aware-

ness of tourism among FSM residents as a means of gaining support for its development.

- In order to achieve this the FSM tourism authorities at State and national level need to take positive action to promote the sector among residents and to raise awareness of the issues, potential and risks involved. Campaigns to achieve this should be carried out among adults and also in schools, since awareness and education in this context are very closely linked.
- It will be especially important to introduce the subject of tourism's potential to young people and to impress upon them both what is expected of residents in dealing with visitors from abroad and the opportunities for worthwhile careers that tourism can offer. Peer example in the FSM encourages young people to consider working in the USA instead of making their careers at home. In order to avoid a situation where the best and brightest leave the country for what they perceive to be a better life elsewhere, the FSM has to provide better opportunities at home. The tourism sector can be part of creating these opportunities.
- Similar attention needs to be given to introducing to traditional and community leaders the concept of tourism's potential. Traditional leaders in the FSM have an important role in leading opinion; their support for tourism, and their advice on how tourism should be developed while avoiding the adverse impact that some are concerned about, will also be important.

h Promote the FSM in appropriate markets and market segments to realize the sector's potential

- The National Tourism Marketing and Promotion Action Plan dated April 2002 sets out the detailed case for a more effective approach at national level to the marketing of the FSM as a leisure tourism destination. This plan focuses attention on the most promising national and regional markets for the FSM, proposes the establishment of a national tourism administration (the FSMVA as currently proposed), and sets out the logic for conducting marketing and promotional initiatives on a national basis in order to achieve the best possible economies of scale, as opposed to each individual State acting independently.
- The outcomes expected from these initiatives are both specific and measurable, relating to the increase in visitor expenditures, arrivals and satisfaction, addressing the rate of new tourism business achieved and to the coverage of the FSM as a destination in key media.
- The outputs required to achieve these outcomes are extensive and complex, but the essential element is again focused on the creation and actions of the FSMVA. It is expected that regional agents will be appointed in each of three countries/regions USA, Japan and Europe. In order to deliver the rising level of

business required to make the FSM a success as a leisure destination, specific actions and targets are required of each agent. This is an especially important aspect within SG 8. International representatives acting on behalf of the FSM need to demonstrate their effectiveness. In order to do so, they will have a series of measurable tasks set out for them, and their re-appointment by the FSMVA will ultimately be dependent on those targets being met.

- The FSMVA itself will also have a set of targets to meet in its primary role as the agency responsible for the marketing and promotion of the FSM abroad. These will include the development of on-line facilities and services, aimed both at the travel trade and the consumer, the production and dissemination of suitable collateral material, the active (and also measurable) promotion of the country at key travel trade fairs and marts, and the provision of library material for journalists to back up the use of travel media in the marketing effort.
- Although marketing and promoting the FSM is far from the only role to be carried out by the FSMVA, it is central to the process of raising the number of visitors and the value of in-coming tourism. The FSMVA is seen as having wider responsibilities than purely promotion, but the promotional function is a very important activity; one of its primary roles is to generate demand from key markets for leisure visits to the country.
 - i Ensure that tourism is developed in an environmentallysustainable manner and contributes actively to environmental conservation and cultural protection.
- The environmental quality of the FSM, albeit under threat from some actions within the country, is one of the main reasons why tourists will wish to make a visit. As Section 2 of this chapter makes clear, the many natural advantages and attractions that the country offers are an important resource for tourism, not least the lack of over-development that already afflicts many other tourism destinations, some of which may be direct competitors to the FSM.
- The tourism sector must therefore play its part in conserving the natural environment. Moreover, given the absolute lack of resources for environmental investment within the FSM, tourism offers a valuable potential source of income to pay for conservation measures. It also offers the prospect of providing an income stream to support other aspects of the FSM's attractions for the visitor, such as the maintenance of cultural practices and skills. Thus the "environment" in this context should be seen as something much wider than the physical attributes and landscape. From the visitor's point of view, the "environment" that he or she visits in effect means the whole range of attractions, activities and interests that enrich a visit to the country.
- The measurement indicators under SG 9 include the requirement to put in place active protection measures within the tourism industry, such as ensuring

that tourism businesses meet environmental standards and that environmental impact assessments are carried out for any new tourism investment project. It is also proposed that the FSM develops itself ultimately as a "World Park". The successful implementation of this latter proposal will provide a very powerful marketing tool to the FSMVA in its promotion of the tourism sector, but will also call for a real commitment to conservation measures that will need to be reflected across the whole nation, not solely by the tourism sector.

- Linking the outcomes under this Goal to the measurable outputs will once again be the primary responsibility of the FSMVA. On behalf of all four States and the tourism industry itself, the FSMVA will develop and impose the appropriate environmental standards on all tourism businesses, linking the achievement of these to the quality assurance procedures under SG 5.
- At the same time the FSMVA is not itself likely to include the skills needed to define and design the environmental standards themselves, and it will therefore be required to act on behalf of the tourism industry through liaison and co-operation with specialised environmental agencies and individuals. It is proposed that the FSMVA will introduce a national "Green Awards" scheme, and that each State visitors bureau will take responsibility to ensure that at least 30% of tourism businesses qualify for this by 2007, in addition to providing a regular audit to ensure that the necessary standards are maintained.
- The tourism industry is not solely responsible for environmental standards of course, and so under SG 9 there is a provision to promote beautification programs and anti-litter laws to give concrete expression to the principles of conservation. This also represents a very important point under SG 9 that environmental responsibility and conservation, in the interests of tourism, is more than just the payment of lip-service to a worthy concept; it demands positive action to give these principles effect.
- As with tourism awareness, the actions required in promoting environmental responsibility from the point of view of the tourism sector include the introduction of awareness sessions in schools, emphasising the importance of a high quality environment to tourism as well as to broader issues of quality of life and social responsibility.
- There is an important cross-over between tourism and planning in seeking to apply high environmental standards to tourism infrastructure, especially to buildings. The FSMVA should therefore actively liaise with the planning and building authorities to ensure that tourism's voice is heard in the establishment and management of environmental regulations in the building sector.
- Given the importance of the environment as an attraction and trip motive for visitors, the FSMVA is also seen as being responsible for producing guidance for visitors on the environmental standards and sensitivities that they

will find on their visit, and to disseminate these to all visitors through collaborative programs with the State visitors bureaux.

On a national basis, the proposal to designate the nation as a "World Park" and to use this both as a marketing tool and as the basis for raising national awareness of tourism and environmental issues should be seen as a major contribution to furthering the tourism sector. It would differentiate the FSM from most other destinations of a similar nature and has the capacity to make an important contribution to the process of creating the FSM as a premium destination in the world tourism market. Once again, however, it is important to underline the need to back up this exciting principle with tangible results.

j Put in place a reliable system of measuring tourism activity in the FSM to enable progress to be monitored accurately

- While it is clear that the FSM has under-performed as a tourism destination in recent years, there is a lack of clarity in the statistical data available of the precise evolution of the market. This partly reflects the federal nature of the country. One visitor who goes to all four states could be registered as arriving four times at least in the nation, giving a potentially misleading picture of visitor volumes. Also, it is not always clear which travellers come from outside the FSM and which are in effect domestic travellers residents of one State visiting another for example.
- The need for clear and reliable statistical data on the development of the tourism industry is vital, especially since it will be necessary to monitor progress against targets more directly in future as the volume of investment devoted to the sector increases. These are some of the reasons why SG 10 focuses on a radical improvement in the statistical recording of tourism.
- SG 10 contains specific outcomes, such as ensuring that tourism statistics are fully reliable and comprehensive from 2006 onwards, and that the nation as a whole puts in place by 2012 a system based on computer technology that will permit both accurate tracking of visitors and timely reporting of results. The size and limited entry points of the FSM will be an advantage in this area of action.
- In addition to national statistical collection by agencies such as the immigration authorities, regular surveys of visitors need to be carried out to estimate, for example, expenditure levels (the usual recourse to balance of payments figures via a central banking function is not open to the FSM since it is part of the US dollar zone), and also regular data on hotel occupancies.
- In short, SG 10 address the need for a reliable database in which policymakers can have confidence and which permits adjustments to be made to tourism policies and investment plans in the light of progress made.

- The tasks associated with these goals are practical. The tourism authorities should work with those responsible for immigration and national statistical procedures to design a paper-based immigration form that is capable of supplying the data required in the form specified. By 2007 this system should be able to produce regular and timely reports accurately charting the development of the sector, permitting the FSMVA to issue monthly tourism reports to the general public and more widely via the FSMVA's website. In the longer term these reports should be automatically compiled by the immigration department's computer systems, supported in their specification by the FSMVA and State tourism authorities in order to ensure that the data are produced in the appropriate style and with the required coverage.
- The FSMVA would take the initiative in designing and organising tourism sector sample surveys among visitors, and also in assisting the hotel sector to report on a monthly basis on occupancy rates and other key operational statistics as appropriate.
- An important function of the FSMVA will be to present its annual report to the Congress and the President; this improved statistical system will be essential in informing that report and providing a reliable source of information to monitor the industry's progress.

k Develop tourism services that are acceptable to the international tourism market through training programs

- As part of the drive for quality in the tourism industry, staff training is vital. This applies not only to hotel staff at all levels, but to all those who have direct dealings with visitors restaurant, retail, car rental, immigration and customs staff and so on. The outcomes under SG 11 are focused on ensuring that an across-the-board standard is achieved that directly contributes to the creation of a premium destination in the long term.
- To achieve these ambitious aims, specific training programs are indicated for hotel staff in all four states, who should have completed basic level training by 2008, as should also be the case for other tourism-related businesses. Intermediate and advanced level training should then be provided in the following years for selected staff members.
- Training and quality standards are closely allied, and the introduction of accreditation schemes for tourism sector workers will assist in this process. As the FSM moves towards becoming a premium destination, it will be desirable to incorporate training certification into the positioning of the FSM within global tourism markets.
- The execution of these programs will involve the educational establishment, and notably the College of Micronesia (COM), as well as the tourism

industry. The State visitors bureaux have an important role to play in preparing training plans and in assisting in the scheduling and management of local training programs. It is also important to note the need to ensure that training programs should be designed to make provision for small business owner/managers who will not be able to leave the running of their businesses in order to attend formal courses. This implies the need to prepare for the delivery of on-the-job training programs.

- This goal also implies that the resources available for training in the tourism sector should also be increased and appropriate skills provided, especially in the COM. Where necessary, additional tourism industry skills may have to be imported from outside the FSM if they are lacking within the country.
- In general, tourism industry training should be given a high priority within the industry, with the first certificates of competence being issued as early as 2006. However, it is envisaged that it will not be until 2010 that the full programs will have been completed, and thereafter there will be a continuing need to ensure that new entrants to the industry receive the appropriate training as they join.

6.3.3 Assessment of risks and weaknesses

- The objectives set out in this chapter for tourism in the FSM are undeniably ambitious. Their achievement will depend on the application of skills, resources and political backing at a far higher level than hitherto.
- 298 The need to take action in ALL the areas listed under SGs 1 11 cannot be over-emphasised. The task facing the FSM is to build a tourism industry into a leading player in the national economy from a relatively low base. While this will require time and effort, it is also important to stress that these goals are achievable given the will to do so.
- 299 There are several areas of potential risk within this program.

a Lack of political support

In order to establish tourism as a top development priority, active support will be required within the Executive and the Legislature, not least in order to secure the necessary funding. It is suggested that the responsibility for tourism should be clearly designated to senior figures in both the Executive and the Legislature, who are capable of arguing tourism's case and ensuring that adequate financial backing for the sector's development is secured. Without such leadership, the achievement of the goals set out in this chapter will be very difficult.

b Lack of public support

Allied to the above, the importance of tourism awareness among the residents, traditional and community leaders is also high. To some extent political support for tourism will rest on popular support. Again, without a measure of popular support success will be more difficult to achieve.

c Institutions

This chapter demonstrates the central role that will be played by the proposed FSM Visitors Authority. While State-level tourism authorities have a key role to play within their own States, without a national co-ordinating body it will be far harder to achieve economies of scale, planning and development. The argument for the creation of a national tourism administration (the proposed FSMVA) was made fully in the National Tourism Marketing and Promotion Action Plan and does not need to be repeated here. Nonetheless, a failure to establish the FSMVA, and to provide it with adequate funding, will handicap tourism development severely.

d Skills and resources

- The FSMVA will require a range of experience and skills that may not be wholly available within the FSM. The roles set out for the FSMVA in this chapter are diverse and demanding, and ultimately the FSMVA will be called upon to exercise a wide range of skills in developing and over-seeing the tourism sector. It would be dangerous to assume that the FSMVA could carry out its responsibilities without adequate staffing.
- In the National Tourism Marketing and Promotion Action Plan it was argued that specialist experience should be brought in initially to help to establish the FSMVA; the case for so doing remains strong. Also, as the FSMVA expands and recruits additional staff, training/work experience abroad may also be advantageous. This could be achieved by seeking assistance, in the form of secondment facilities, from experienced national tourism offices with which the FSM may be able to develop sponsorship (e.g by seconding FSMVA staff members for, say, six months, to work within specific sections such as marketing and promotion, quality assurance management etc.).
- 305 (The same may apply to training skills. It may be desirable to contract specialised hotel or tourism sector training organisations from outside the FSM to raise standards through training within the tourism industry).
- Potential weaknesses in the programs set out in this chapter ultimately relate to the question of financial resources. If the FSM is to achieve its long-term potential in tourism, substantial and sustained public investment will be required. Ultimately, the private sector can be expected to contribute a greater

share of tourism development capital but public investment in the areas set out in this chapter will initially be required to leverage private capital.

307 The FSM has something of a history in tourism of paying lip-service to the concept of tourism development but failing to back it up with resources (the inadequate funding of most of the State visitors bureaux is perhaps the most obvious example of this). This approach will no longer do if the goals for tourism are to be achieved.

7 Environment

7.1 Environment Sector Review

7.1.1 Background

- 1 Prior to 1999, environment was considered as a crosscutting sector by the FSM National and State governments, and was dealt with as such. However, planners for the 1999 FSM Economic Summit agreed to consider environment as a stand-alone sector. During the Summit, about thirty representatives of State and National government, no-profit organizations and community representatives, developed an Environment Sector policy matrix that included the following policy elements:
 - Encourage States to establish and support a system of conservation areas where special measures are taken to conserve biological diversity
 - Create sustainable financing mechanisms for environmental and sustainable resource initiatives
 - Expand and Promote Environmental Ethic
 - Support the Development of Environmental NGOs (non-government organizations) and CBOs (community-based organizations)
 - Create Strong Regulatory Climate when and where appropriate
 - Improve cooperation and coordination between different levels of government
 - Develop technical support for existing and future environmental programs
- 2 The Environment Sector was further recognized and supported when the FSM JCN and the US Government agreed to establish environment as one of the six focal sectors during negotiations for the new Compact of Free Association in 2000. A tentative budget of \$2 million/year was agreed on in principle, which has since then been made more flexible.

7.1.2 Assessment of the Environment Progress since 1999 FSM Economic Summit

3 Since the 1999 FSM Economic Summit, government agencies, NGOs, and other key players in the environment sector have made significant progress. The following section presents an assessment of the current situation and sector performance and an analysis of problems, issues and constraints for each of the policy elements identified during the 1999 Economic Summit.

- a Encourage States to establish and support a system of conservation areas where special measures are taken to conserve biological diversity
 - i Assessment of the Current Situation and Sector Performance
- Over the last four years since 1999, the number of protected areas in the FSM has doubled from 15 in 1999 to 31 in 2003 (Conservation International 2003). This demonstrates a substantial improvement in both government and community awareness and support for conservation in the face of growing environmental degradation. Another milestone was the completion of the National Biodiversity Strategy and Action Plan (NBSAP) project by the National government, in partnership with the State governments, NGOs, and community leaders, in April 2002. Funded by the UNDP-GEF, the NBSAP strongly advocated this policy element through adopting the development of protected areas as a major goal (NBSAP Theme 1 - A full representation of FSM's marine freshwater and terrestrial are protected, conserved, and sustainably managed). The Nature Conservancy produced a two year study which compliments the NBSAP and involved over one hundred experts representing the national and state governments, The Nature Conservancy and other non-profit conservation organizations, the US Forest Service, college and university scientists and local experts (TNC, 2003). The study identified 130 Areas of Biological Significance (ABS) within the FSM, of which 24 sites were identified as high priority Action Areas for immediate conservation action.
- Since under the constitution, State governments have jurisdiction over all land and marine areas within 12 miles of their respective islands and reefs, the successful implementation of this policy element has depended heavily on action by the State and Municipal governments. Pohnpei State made the most significant progress in establishing and supporting conservation areas with the passage and implementation of the 1999 Pohnpei Sanctuary Act (SL 4L-115-99, which designated 11 sites in Pohnpei State as sanctuaries for conservation purposes. In 2001, the State hired four Marine Conservation Officers to enforce the reserves, and added a lawyer at the Pohnpei Attorney General's Office to focus on conservation activities. Rules and regulations for the Sanctuary act were drafted and approved, and several successful prosecutions of violators in the marine sanctuaries have occurred. The Conservation Society of Pohnpei, working with the Pohnpei Divisions of Marine Development and Forestry and Marine Surveillance, has worked intensely with the communities in the vicinity of five of the marine sanctuary communities to strengthen local management and monitoring, with successful results both in increased local compliance and assistance in enforcement, as well as an increase in fish populations within the reserves.
- 6 In 2001, the Pohnpei Legislature provided \$120,000 to survey and mark the legal Pohnpei Watershed Forest Reserve (WFR) boundary (which had been

designated in 1987 by the Watershed Forest Reserve and Mangrove Protection Act - SL 1L-128-87) and subcontracted the Conservation Society of Pohnpei (CSP) and a private surveyor to carry out the work. Although legally designated in 1987, the reserve has been suffering from heavy encroachment by commercial sakau (Piper methysticum) growers, mainly as a result of the lack of a clear boundary and approved rules and regulations. The Department of Lands cooperated with Pohnpei AG office, CSP, and the island's five Municipal governments to develop rules and regulations for the act, which were approved in 2003. To date, 14.5 miles of WFR boundary line have been surveyed and marked. CSP and the Municipal Governments carry out quarterly monitoring of activity within the WFR, and provide survey findings to leaders at all levels of government and the traditional chiefs for action.

In other States, the community of Dalipebinaw in Yap set aside a 40 hectare tract of privately owned land as a school forest reserve in 2002, and four communities have committed to establishing community-based marine protected areas as part of a SPREP-sponsored International Waters Programme (IWP) project being undertaken by the State of Yap. The Kosrae Development Review Commission (DRC) has worked closely with the USDA Forest Service in Kosrae to document the biology of the unique Yela Terminalia Swamp Forest and develop alternatives to alleviate damage from the proposed completion of the circumferential road. In addition, DRC has proposed several stream watersheds as protected areas in the State's recently revised Kosrae Island Resource Management Plan, and the development of the Utwa-Walung Marine Park as both a conservation and recreational area continues under the supervision of Kosrae Division of Commerce and Industry.

Analysis of Problems, Issues and Constraints

While the State governments have made significant progress developing conservation/protected areas, the National government, mainly out of respect for State jurisdiction and to a lesser extent, due lack of staff resources and expertise, have not moved forward to develop or implement guidelines for the selection, establishment, and management of protected areas in the FSM. Also, while each of the States have adopted and are implementing various monitoring programs, the National government still needs to adopt a standard monitoring protocols to allow roll-up of resource and threat data on a national and regional level. Last, except for minor exceptions (ecotourism in all States, sponge farms and woodcarvings in Pohnpei), the National and State governments have not been able to successfully work with the private sector to support benefit-generating activities in conservation area communities.

b Create sustainable financing mechanisms for environmental and sustainable resource initiatives

Assessment of the Current Situation and Sector Performance

- The major accomplishment under this policy element was the creation of the Micronesia Conservation Trust (MCT), the region's first conservation trust fund, in 2002. Beginning in February 2001, in response to a recommendation from the 1999 Economic Summit, a group of 18 private and public sector leaders from the four FSM states—collectively representing the national government, state and municipal government agencies and legislatures, private businesses, local NGOs, and traditional leaders—formed a steering committee to develop a sustainable source of funding for the nation's environment strategy. During deliberations, the steering committee met with representatives of two other trust funds in the region—the Foundation for the Philippine Environment, and the Papua New Guinea Mama Graun Conservation Trust Fund. In November 2001, the steering committee agreed on a final draft of articles of incorporation and bylaws for MCT. The steering committee also authorized a public invitation for applications to serve on the first board of directors of the Trust Fund. Nominations were received for directors, and, in April 2002, a selection committee appointed the founding board of MCT. In a May 2002 board meeting, a 3-year strategic and financial plan and a comprehensive fundraising plan were completed and approved. The MCT is set up as a private non-profit corporation with a governing board that include members from national, state, and municipal governments, NGOs, business, and academic institutions. It works to mobilize funding from a variety of sources to build an endowment from which to provide long-term support for sustainable natural resource management in FSM. Recently, interest in the trust has been expressed by a number of donors, including the European Union, the US Department of the Interior, and several private foundations. The Trust places special emphasis on building the capacity of Micronesian organizations to design and manage conservation programs In addition, the MCT will provide a forum to bring together the national, state, and local governments with private enterprises and non-government organizations to collectively address the challenges of natural resource management in FSM, form public-private partnerships, and share experiences and best practices.
- 10 Other national accomplishments include the development a draft data-base/spreadsheet of all existing and proposed environmental projects by the President's Council on Environmental Management and Sustainable Development (SD Council) to encourage coordination and identify gaps. This database still needs to be expanded to include State activities.
- 11 Two States made some progress on improving access to conservation funding. In Yap, the Yap Community Action Program (YapCAP) recruited a fundraising specialist (Australian volunteer) to assist State and community environ-

ment fund-raising. Pohnpei State is also working to establish a royalty fee on all dredging and sand mining activities to support resource management. The Conservation Society of Pohnpei (CSP), a new NGO in 1999, is leading the nation in NGO fund-raising with a current staff of 19 and a budget of \$300,000/year, and has been assisting NGOs in the other States to improve their fund-raising capacity.

Analysis of Problems, Issues and Constraints

The Micronesia Conservation Trust's status as a private, rather than public, entity has created some confusion amongst certain sectors of the government. The National and State governments' strong support will be needed to get the MCT capitalized, and the government role in identifying and facilitating effective access to external sources of funding (bilateral, multilateral, international) is essential. Coordination between the government and the MCT needs to be further improved. Much more also needs to be done to develop in-country capacity (government and non-government) to identify financial needs, prepare proper funding proposals, secure funding, and manage budgets effectively. The MCT will be focusing on this capacity issue as they grow the trust and begin to give grants to the nation's conservation NGOs and community groups. None of the States made progress on the development of sustainable conservation funding mechanisms to cover the recurrent costs of conservation, although Chu'uk did initiate a dive fee and Pohnpei is working on the coral and sand dredging royalty fee. The National government needs to build their capacity to better assist the States in this regard.

1.2.3. Expand and Promote Environmental Ethic

Assessment of the Current Situation and Sector Performance

The States, especially Kosrae and Pohnpei, have led the way on expanding the nation's environmental ethic. On Pohnpei, the Conservation Society of Pohnpei (CSP) is taking a major role in environmental education at all levels of society. CSP has pioneered a program, Youth to Youth in Island Conservation, with several State government partners that connects school children with environmental projects on the island. Sixth grade classes spend the year working alongside local environment agency staff monitoring coral reefs, planting lowland kava, or establishing local medicinal plant gardens, and then come together to report their experiences at an Island-wide Science Fair at the end of the year. CSP also launched the "Green Road Show" last year, a mobile program bringing environmental issues to elementary schools around the island through skits, songs and discussions. Two Environmental Educators (EE) visit all primary schools in Pohnpei (public and private) four times during the school year, covering the 4 environmental topics selected: Watershed, Mangroves, Coral Reef, and Pollution and Waste Management. CSP also targets out of school youth with their Youth Conservation Corps (YCC) program. The YCC features a six-month conservation training, featuring an intensive training during which the youth visit and camp at all officially recognized Marine Protected Areas (MPA) and Reserves around the Island of Pohnpei. The participants for the YCC program are selected by leaders in their communities on the basis of being "at risk" for not completing their education and participating in unsustainable fishing practices.

- CSP, College of Micronesia Land Grant Programs, Pohnpei State government, The Nature Conservancy, and other local partners are also targeting the island's adult population to address the major cause of island deforestation the commercial cultivation of sakau in the upland forest. The successful "Grow Low" education campaign teaches sustainable methods of lowland sakau cultivation through workshops, demonstration farms, advertisements, videos, posters, and t-shirts. The program has reached more than 600 farmer participants and more than 150,000 plants are now growing in the field. Also on Pohnpei, the State EPA has actively sponsored island-wide clean-ups, publishes a regular newsletter, and through their Mr. Mwakelekel campaign, promote environmental education in the island's schools.
- In Kosrae, the Development Review Commission has made a substantial contribution to environmental awareness building through publication of a newsletter and numerous community consultations on various local and nation issues. The DRC also conducted a one year multimedia RARE campaign focussed on the Tuhram or Kosrae White-eye, the island's State bird. Chuuk, through the College of Micronesia, and Yap, through the Yap Environmental Stewardship Consortium (YESC) and the Division of Marine Resources, also carried out one year RARE campaigns on their State birds, the Uwaw (Chuuk Monarch) and the Gigiy (Yap Monarch). The RARE campaigns are especially effective because they reach all levels of society and build pride in each island's unique biological resources. The sponsoring agencies also learn and master various forms of environmental awareness raising. A local NGO on Chuuk, GATA (Guide and Assist through Awareness), has sponsored a touch football league on the State center of Weno through which they have raised young people's awareness and appreciation for the environment and social issues.

ii Analysis of Problems, Issues and Constraints

Although much has been accomplished in improving environment al education in the nation's schools, neither the National nor any State government has been able to develop a full environmental curriculum. Efforts are now being made, at least in Pohnpei, to partner the education departments with local NGOs and resource management agencies to develop a curriculum grade by grade. Some progress has also been made in increasing the local capacity to convert technical environmental information into easily understandable materials that

can be widely disseminated, however, many efforts are still being undertaken by outside consultants/volunteers with local counterparts. Public access to resource data and information (e.g., putting environmental laws on the Internet, creating WebPages for environmental agencies and organizations) is still in beginning stages. Hopefully the new NBSAP clearinghouse mechanism, funded by UNDP-GEF, will improve this deficiency. Environmental library resources are still inadequate, although COM-FSM central library has made a tremendous effort to gather and preserve environmental information published in and/or about the FSM. A conservation corner project currently being undertaken by the Conservation Society of Pohnpei and Peace Corps promises to improve environmental resource material in elementary schools.

d Support the Development of Environmental NGOs and CBOs

i Assessment of the Current Situation and Sector Performance

- Since 1999, the FSM National Government has made a substantial effort to more fully involve the NGO sector in policy development and projects, seating NGO representatives on the SD Council, Climate Change Country Team, and the NBSAP Task Force. They have also employed various NGO staff as local consultants on the nation's environmental reports, including the Climate Change communication, NBSAP, WSSD report, etc. State governments have also followed suit and Yap (Yap Stewardship Consortium) and Pohnpei (Pohnpei Resource Management Committee) have set up joint government/NGO/private sector consortiums to improve coordination and eliminate redundancies. Pohnpei has contracted the Conservation Society of Pohnpei and a local private surveyor to survey and mark the island's Watershed Forest Reserve, and are working closely with CSP to train the State's Marine Conservation officers and improve compliance and community involvement in the State's Marine Sanctuaries. In Kosrae, the DRC and Commerce and Industry are working closely with the Kosrae Conservation and Safety Organization to improve public awareness and management of the long-standing Utwa-Walung Marine Park.
- 18 To further develop the nation's conservation NGOs and improve NGO-government relations and coordination, the Nature Conservancy launched the Micronesia Leaders in Island Conservation (MLIC) network in Sept. 2002 to "strengthen the organizational and technical skills of conservation leaders and their organizations so they can better protect and manage important natural areas in Micronesia". MLIC is a peer learning network, and founding members were selected from a pool of government and non-government applicants from the Federated States of Micronesia and Palau on the basis of their demonstrated commitment to leading conservation activities in Micronesia. MLIC members attend leadership retreats, participate in learning exchanges and mentoring programs, carry out facilitated self-assessment of their organizations, and consult

with top conservationists working outside of their islands. Through these various programs, the participating organizations will be able to rapidly share successes and lessons learned, identify and address common needs for technical assistance and other support, and work together on local and national issues.

ii Analysis of Problems, Issues and Constraints

19 Environmental NGO growth in the FSM in the last four years has been impressive, and the National and State governments have been very supportive in that growth. The governments still, however, need to develop some type of tax-exempt status for NGOs, perhaps using Palau's NGO tax exemption law as a model. Also, while the National and State government have begun to make better use of NGOs and contractors, trainers, and general project partners, there is still a lot of room for expansion.

e Create Strong Regulatory Climate when and where appropriate

i Assessment of the Current Situation and Sector Performance

Over the last four years, a number of accomplishments have been made in improving the regulatory climate. Kosrae State updated the Kosrae Island Resource Management Plan KIRMP) through a highly participatory process. Pohnpei has pioneered a joint law enforcement agreement with the State's Municipal governments to allow them authority and provide support to enforce State laws, including those governing resource conservation. Pohnpei also hired on four Marine Conservation Officers to enforce State laws, especially those pertaining to the Marine Sanctuaries. The State also added a full-time environmental conservation lawyer in Attorney General's Office, and promulgated rules and regulations for the 1999 Sanctuary Act and the 1987 Watershed Forest and Mangrove Reserve law, allowing the two acts to be fully enforced for the first time. The State is also using \$250,000 from a fishing violation fee shared with the National government to further improve marine enforcement within the State's 12 mile zone. Chuuk State has increased surveillance for dynamite fishing, a major problem, and police are inspecting all fish for signs of dynamite damage before allowing fish to be exported. In Yap State, the Yap Environmental Stewardship Consortium (YESC) introduced legislation to incorporate environment and community input into the development review process and other improvements to existing legislation that is currently awaiting action by the Yap Legislature.

ii Analysis of Problems, Issues and Constraints

21 The National government has not yet established a national environment/natural resource management agency, and has not encouraged States to do so either. As a result, the environment sector straddles a number of agencies and divisions of agencies, which leads to problems in coordination and cooperation.

The National government still has not updated key legislation existing Title 25 to remove citations to Trust Territory Administration and clarify National Government's authority to set minimum standards for air and water quality, sanitation, and toxic waste management for States to follow, in furtherance of the National Government's authority to safeguard the public health. Neither has the National government adopted national legislation regulating bioprospecting (now known as genetic resource access and benefit sharing), although some progress has been made on drafting such legislation. Much work still remains to assist the States to develop legislation supporting the national commitments brought on by the various environmental treaties and conventions the FSM has seceded to over the last decade.

f Improve cooperation and coordination between different levels of government

i Assessment of the Current Situation and Sector Performance

After the 1999 Summit, the Sustainable Development Council was reconstituted and revitalized (including NGO participation for the first time), and the SD Secretariat was established in the Department of Economic Affairs. However, in recent years, the Council has met irregularly and has also suffered from a lack of credibility with the States due to transportation and communication challenges of getting State representatives to actively participate. When funding has been available, the National government has made efforts to send State government representatives to international meetings or training with or in behest of the National government. The most successful example of cooperation and coordination amongst different levels of government as well as NGOs and the private sector was the recent completion of the nation's National Biodiversity Strategy and Action Plan. To develop the NBSAP, a national task force partnered with State task forces and through two national workshops and intensive state consultation processes, produced a truly national action plan. The State governments and NGOs are now undertaking to develop State BSAPs to specify how the States will implement the national goals set out in the NBSAP. Through the NBSAP Add-On project, the National government is now partnering with the States to set up a clearinghouse mechanism to improve communication mechanisms to ensure information is broadly disseminated to all governmental and non-governmental agencies in the environmental sector.

ii Analysis of Problems, Issues and Constraints

23 Although a Secretariat was established for the National SD Council, no budget was created for Council activities. The SD Council needs to meet more regularly (at least quarterly), and be funded at least for basic costs, including one dedicated staff member. There was a recommendation from the Economic Summit to convene a National Environmental Conference to review and revise the

1992 NEMS (National Environmental Management Strategy) and update other key policies and legislation, however this never happened. The National government needs to work with the States and NGOs to find a way to bring the nation's Environment Sector players together on some sort of regular basis (every 2 years) to review progress, and reconfirm and prioritize goals. The Education and Health sectors have successfully accomplished this over the last few years, and the Environment Sector players should learn from their example. Last, communication mechanisms to ensure information is broadly disseminated to all governmental and non-governmental agencies in the environmental sector needs to be further improved - hopefully the proposed clearinghouse mechanism will effectively serve this purpose.

g Develop technical support for existing and future environmental programs

i Assessment of the Current Situation and Sector Performance

24 The National government has improved cooperation with the States and international donors to improve the availability of training opportunities and the participation of State agency staff. The National and State governments have also on occasion extended training opportunities to NGO and the private sector. However, overall training/capacity building in the environmental sector remains generally opportunistic, relatively uncoordinated, and severely under funded.

ii Analysis of Problems, Issues and Constraints

The 1999 Summit recommendation to conduct an assessment of technical training needs in the areas of waste management, environmental monitoring, chemical safety, resource management, emergency preparedness, and other areas has not been carried out. As a result, training for existing staff in the nation's environment sector remains uncoordinated and less effective than it could be. Although increasing graduate educational opportunities was a strong recommendation from the 1999 Economic Summit, little if any progress was made in making National and State education resources available to fund graduate and undergraduate scholarships in environmental studies. Also, the several students with environmental/resource management degrees that have returned to the FSM in search of employment opportunities have had a difficult time finding work in the government due to limited budgets and hiring freezes. Some of these students have since returned to the US to pursue other opportunities. The National and State government need to prioritize the development of technically competent environmental/resource management staff and the integration of these people into key government positions on their return to the FSM in order to ensure the continued building of the nation's environmental capacity.

iii Summary of problems, issues and constraints

- The lack of a central environment/resource management agency at the National and State levels has limited government effectiveness and coordination in the sector. The relative irregularity of meetings and lack of credibility at the State level of the SD Council has not improved the situation. The National government is trying to build better mechanisms to encourage the States to meet national guidelines and minimum standards in environmental areas, without exerting too much pressure on the States, but so far effectiveness has been limited. Because of the importance of a healthy environment to the basic social and economic welfare of the nation, the environment may be one area in which the National government needs to take a stronger stand in relation to the States. The nation has improved natural resource and threats monitoring, but there is still is no standard protocol in place and roll up at the national level is difficult or impossible, leaving key decision-makers with less than adequate information on the state of the nation's environment.
- 27 Privatization, as in other sectors, has also been slow. The National and State governments need to build stronger partnerships and make funding available to the NGO and private sector to carry out the environmental protection and resource management functions that these groups can perform more effectively and efficiently. The National government still has to legally establish some sort of tax-exempt status for NGOs to help them raise more resources from local private sources. Although government/NGO/private sector relations have improved considerably in the last few years, some distrust and lack of support still exists.
- 28 The recurrent cost of environmental protection and natural resource conservation (management, monitoring, enforcement, maintenance of facilities/infrastructure) continues to rise, but neither the National nor the State governments have been able to divert current sustainable funding streams (e.g., airport taxes, fines) or develop new sustainable funding mechanisms to offset these costs. The Nation must prioritize the mechanisms that tax resource users/developers/those who benefit from the resource for environmental protection and resource management costs of maintaining and preserving those resources. In addition, the National and State governments need to build their and their partners' capacity to access outside funding sources, and as well proficiently manage and report on projects at all levels.
- 29 Public awareness of the importance of the environment, and their role in sustaining it still needs to be improved considerably. A national environment curriculum would help, as would more environmental materials in local languages. Public access to information resources is still insufficient, including environmental materials available at libraries in the nation.

- 30 Both National and State government need to continue to update existing laws and fill in current legal and policy gaps, e.g., the lack of a national bioprospecting policy. Coordination for enforcement between National and State governments needs to be further improved, and the National government needs to increase its role both in creating minimum standards for all areas of environmental protection and resource management, as well as improving training for enforcement officers nation-wide.
- 31 Technical training programs need to be better coordinated with national priorities and actual staff needs, and the nation needs to improve support for technical graduate education and improve entry-level opportunities for returning youth.

iv Assessment of the sector's development potential

- 32 Overall, the Environment Sector, established as a separate sector only in 1999, has come a long way in the last four years. A number of the recommendations put forth by the delegates to the FSM Economic Summit were accomplished, and significant progress has been made on others.
- 33 Problems, issues and constraints are well-documented and understood by key agency staff in the sector, who are addressing these issues within the current government and funding framework. With the new funding currently available through Compact II and the strong emphasis international and bilateral donors are placing on the environment and poverty reduction, the Environment Sector is well-poised to move forward strongly in the next planning period.

7.2 Strategic Goals, Policies and Outcomes

- The *Environment Sector Strategic Plan* outlines the rationale and the need for a holistic approach to conserving and protecting the nation's natural environment. The purpose of this plan is to guide policy makers in allocating funds to support the development of environment initiatives, projects and programs deemed necessary to conserve and improve the natural environment and promote sustainable natural resource management. This Environment Sector Strategic Plan identifies nine areas as its strategic focus (strategic goals) on which environment sector funds will be based and allocated and clearly identifies specific outcome measures and suggested activities and outputs.
- 35 The FSM's environment has been steadily degraded as a result of:
 - population growth and migration;
 - over-harvest of fish and wildlife resources brought on by increasing economic expectations amongst the island populace;

- human activities such as land clearing, logging, dredging, mining, agriculture, uncontrolled disposal of wastes, burning, reclamation, and coastal/near-shore degradation;
- natural hazards such as those associated with extreme weather events, climate change, high tides and sea-level rise; and,
- competition with or predation by introduced alien species.
- This degradation has had serious impacts on both the natural environment as well as health and economic prosperity of the FSM's inhabitants and the nation as a whole. These threats are further magnified in the FSM due to the following factors:
 - inadequate technical capacity of National, State and local governments, NGOs, and communities;
 - inadequate financial resources, both from internal and external sources, dedicated to the sector;
 - inadequate monitoring programs and other feedback to decision-makers;
 - outdated National, State, and local laws and policies and insufficient enforcement.
- Current indicators suggest that the current government environmental agencies, partnerships, and policies are failing to adequately address these environmental challenges. It is anticipated that focusing on the nine strategic areas will bring about change in the sector as measured by the identified outcomes and output measures. The nine strategic goals that have been identified to improve the environment of FSM are:
 - mainstream environmental considerations, including climate change, in national policy and planning as well as in all economic development activities:
 - improve and enhance the human environment (improve waste management and pollution control);
 - reduce energy use and convert to renewable energy sources/minimize emission of greenhouse gases;
 - make FSM's genetic resources accessible for utilization and ensure benefits derived are equitably shared amongst stakeholders;
 - manage and protect natural resources/protect, conserve, and sustainably manage a full [functional] representation of the FSM's marine, freshwater, and terrestrial ecosystems;

- improve environmental awareness and education and increase involvement of citizenry of the FSM in conserving their country's natural resources;
- establish effective biosecurity (border control, quarantine and eradication) programs to effectively protect the FSM's biodiversity from impacts of alien invasive species;
- create sustainable financing mechanisms for environmental and sustainable resource initiatives; and,
- enhance and employ in-country technical capacity to support environmental programs.
- 38 These strategic goals will be reviewed annually but are unlikely to change, whereas the activities and outputs which are recommended in this document may change based on achievements, variations in environmental problems and political will. The FSM has adopted a performance-based budget and departmental resources will be assigned to achieve these goals, activities, and outputs.
- 39 The long-term vision for the FSM's environment sector has been stated best in the nation's recently completed National Biodiversity and Action Plan (2002):
- 40 The FSM will have more extensive, diverse, and higher quality of marine, aquatic, and terrestrial ecosystems, which meet human needs and aspirations fairly, preserve and utilize traditional knowledge and practices, and fulfill the ecosystem functions necessary for all life on Earth
- 41 Further, the recommended sector goals and activities have been developed based on the following basic principles developed during the NBSAP consultation process in all four States:
 - **Sovereign Rights** The people of the FSM hold the sovereign rights over their biological diversity
 - Community-based Approach The community is the basic management unit for biodiversity in the FSM – they have the right and responsibility to manage and sustainably develop their biodiversity resources for their benefit and that of future generations
 - Traditional Heritage We will build upon and utilize the rich traditional knowledge and experience of our ancestors to devise and implement strategies for the sustainable stewardship of our rich natural resources
 - **Ecological Integrity** We will strive to maintain and improve the diversity and quality of our ecosystems, conserving our biodiversity in-situ while enhancing our ecosystems' capacity to adapt to change

7.2.1 Strategic Goal 1: Mainstream environmental considerations, including climate change, in national policy and planning as well as in all economic development activities

a Analysis and Justification:

- 42 The key to sustainability of resource management and long-term environmental health is through the integration of environmental considerations and safeguards in economic planning and decision-making. This is a complex task that needs to be addressed at all levels of government. Lack of institutional capacity at all levels, limited infrastructure development, lack of coordination and integration of environment and conservation activities, limited economic alternatives, lack of political support and good governance, and limited funds pose major challenges to both economic development and environmental management and conservation in the FSM. Traditionally, environment and conservation have not been a national priority in the FSM, as they have not been part of the economic equation in FSM's development plans. Addressing basic needs such as alleviating poverty, food security and earning money for survival are often a more immediate priority. However, FSM and the other nations of the Pacific have become increasingly aware that as small island nations with limited resources, both the direct commercial exploitation of the nation's fisheries, tourism, and agriculture, and other important economic considerations like import substitution, subsistence, and general public health, depend on a healthy natural environment. There is a tremendous urgency to slow the rapid rate of resource extraction and environmental damage occurring in the FSM and neighboring countries. Environmental protection and conservation must become a priority for the National and State governments if we hope to maintain and improve our quality of life. Mainstreaming conservation recognizes that a successful conservation strategy will improve quality of life through a vibrant economy, a prosperous society and a healthy environment. Mainstreaming is defined as "making conservation everyone's responsibility. It makes conservation part of all aspects of managing the economy and society. It integrates conservation into all activities of individuals, government, private enterprise and civil society at local, national, regional and international levels" (SPREP, 2003).
- 43 An effective conservation strategy must involve all sectors in development through strong partnerships between conservationists and Governments, private sector and civil society. There must be participation from all levels of society. Mainstreaming also recognizes the three pillars of sustainable development and addresses all sectors in development:
 - ENVIRONMENT: Biodiversity and the natural environment
 - ECONOMY: Economic activity

- SOCIETY: People, their cultures, traditions, social situations and attitudes.
- 44 The identification and establishment of alternative resource uses, including promotion of market based alternatives with environmentally friendly or sustainable development business enterprises, and other innovations offer additional opportunities. Existing environment and conservation international conventions, effective private sector participation, and community based initiatives through effective participation and utilization of local authorities and churches are other options available in the FSM.

b Economic Implications

Mainstreaming environmental considerations, including climate change, in 45 national policy and planning, will not involve additional costs as the strategy calls mainly for better coordination between existing departments and levels of government as well as with traditional leadership, private sector, and local communities. Mainstreaming environmental considerations and climate change into economic development activities may involve increased up-front costs to governments, especially in developing infrastructure like roads, causeways, etc. to be more environmentally "friendly", e.g. less impact on the natural environment, and climate-proof, e.g., taking into consideration the future impacts of climate change. However, properly designed infrastructure will generate real benefits to the local population from the continued functioning of the natural ecosystems on which the people depend as well as the avoidance of the costs of having to rehabilitate the natural systems degraded by poorly planned infrastructure. The costs of "climate-proofing" government buildings and other infrastructure will also be more expensive in the short-term. However, these additional costs will eventually be off-set in the long-run by future savings in maintenance and replacement costs.

c Critical Issues for Implementation

The degree to which environment, conservation, and climate change considerations have been mainstreamed into the policy, planning and economic development activities varies considerably within the National government and between the States. However, the ability of governments to deal with resource management and environmental protection has generally decreased since the step down of funds for the first Compact. With flat or declining economies, the State governments have redoubled their efforts to develop economic infrastructure and opportunities, often with little regard for the environment. This has led to a refocus of government departments and resource management staff on economic development, as well as serious cutbacks in staff numbers and training opportunities, which have led to low morale within government resource man-

agement/environment departments and a loss of confidence in the agencies by the communities they serve. The recognition of environmental protection and sustainable resource management as a priority for State governments needs to be encouraged by the National government through various approaches such as long-term planning, tying development funding to sustainable development priorities, and long-term capacity building.

d Outcome measures, justification, and linkages

47 National environmental functions centralized in an office/division to better coordinate and assist the states in all aspects of the protection and sustainable management of the nation's ecosystems and natural environments by 2004

As a relatively low priority in National and State policy. Further, some important areas of resource management, e.g. wildlife management, are not represented at all in the current National and State government structure. The development of a national environment/resource management, are not represented at all in the current National and State government structure. The development of a national environment/resource management, e.g. wildlife management, are not represented at all in the current National and State government structure. The development of a national environment/resource management office/division will allow the nation to set broad policy goals and strategies, coordinate and assist environmental health and natural resource conservation activities, and otherwise assist states address their environmental implementation needs.

49 National Sustainable Development Strategy completed by 2005

50 The Commission on Sustainable Development, created as a unit under UN Department of Economic and Social Affairs (UNDESA) the 1992 Rio Earth Summit, has urged all nations to develop National Sustainable Development Strategies. The FSM has recently conducted and completed a national assessment report of the Barbados Plan of Action +10 which will be submitted in Mauritius at the Small Island Developing States (SIDS) meeting later this year. This document will serve as a template to create the National Sustainable Development Strategy, along with State inputs through the soon to be completed State Biodiversity Strategies and Action Plans.

51 State BSAP/sustainable development plans developed and implementation begin by all States by 2005

52 Because of the strong State authority over resource management within State jurisdictions (12-mile zone), the National Biodiversity Strategy and Action Plan completed in 2002 is only framework within which States can determine

their biodiversity conservation actions. With NBSAP Add-on funding from the UNDP-GEF, each State is currently undertaking participatory processes to develop State Biodiversity Strategies and Action Plans to mirror the NBSAP. These should be completed by the end of 2004.

53 Land-use and zoning master plans developed and implemented for all four state population centers by 2006

Development in the States' urban centers (Lelu/Tofol, Kolonia, Weno, and Colonia) has been haphazard at best, and increasing pressures as rural populations move to "town" for employment, education, and other opportunities currently represents a major threat to the natural environment and human health in these areas. Large percentages of urban populations are without access to sewer systems, sanitary latrines, and safe drinking water. Further, improper drainage, disposal of solid wastes in yards, streams, and shorelines, development of piggeries, stray dogs, and other environmental hazards combine to make urban living in the FSM unsafe. Each State should prioritize the development and implementation of land-use and zoning master plans for the State urban center, and then effectively enforce it.

55 100% of National and State financial assistance to municipalities for infrastructure and economic development promotes environmentally sustainable development practices by 2006

Municipal governments serve as the front-line decision makers in sustainable resource management and economic development matters. Currently, the amount and target of funds given to municipal governments for infrastructure and economic development is more often the result of political concerns rather than valid development priorities. With assistance from the National and State governments, each municipality should be encouraged to develop a long-term sustainable development plans and all funding from higher levels of government should focus on the implementation of these plans.

57 Environmental Impact Assessments (EIA) carried out for 100% of all government and non-government development activities to minimize adverse impacts of development on the nation's environment from 2005 onwards

The National and State governments have all enacted legislation requiring Environmental Impact Assessments (EIA) for development activities. However, EIA legislation is only randomly enforced, and in some cases, especially for large government projects, has been waived or ignored in the past. Often the cost of doing a development project the right way costs more than the government has available for the project. This situation frequently leads to decisions to go ahead with projects anyway, leading to unacceptable negative impacts on natural ecosystems and loss of ecosystem benefits to local communities in the vicinity of

development projects. The real costs of environmental impact must be fully assessed for all projects, private and public, and decisions made based on the real costs of the development, both current and future, in terms of it's impact on the natural environment. All four State EPA Boards and staff, who currently review and make decisions based on EIAs, need to be fully trained in EIA, environmental protection and sustainable development. Existing State development review processes (including foreign investment permitting) should be revamped to take into account environmental considerations and community input at all stages of project review .

59 100% of environmental violations successfully prosecuted by 2010

- Laws are only as effective as their enforcement. Although the National and State governments generally have a comprehensive set of legislation protecting the nations' environment, lack of enforcement is a major problem in all jurisdictions. Experience over the last four years in all jurisdictions has shown that the most effective enforcement efforts have been those that combine community/traditional authority with that of the government, e.g., Pohnpei's marine protected area system. To ensure compliance with legislation protecting the nations environment, State government agencies need to increase efforts to educate resource owners/users on their scientific justification. In addition, on islands where traditional leaders have authority, the State governments need to continue and increase cooperation with them to integrate traditional and modern approaches to the sustainable management of natural resources. Communities should continue to be the front line of defense for sustainable resource use. However, experience in the FSM has also shown that the State government also needs to be willing and able to step in when a community cannot handle a situation either because the illegal action is too culturally or economically controversial or the violator is too powerful. For these situations, the State environment protection agencies and natural resource management agencies must be strengthened to better enforce and prosecute offenders. Environmental Protection and Conservation Officers need to designated and/or increased in all States, and trained in legal procedures, evidence handling, and case development. The State governments should also designate at least one lawyer/prosecutor with in the government structure to focus fully on environmental cases.
- 61 Climate change adaptation strategies that address unacceptable risks to the natural environment and built assets, including those arising from natural hazards such as weather and climate extremes, variability and change developed and implemented (climate-proofing) in all states by 2010
- 62 Global climate change is a proven phenomena, and in the small islands of the FSM, this will mean increased extreme weather events (tropical storms, typhoons, and drought), high tides, and sea-level rise. Each State must work with the Municipal governments to develop and implement long-term plans for deal-

ing with the impacts of climate change, including the development of integrated environmental and resource management objectives that enhance resilience of coastal and other ecosystems to natural hazards; identification of structures, infrastructure, and ecosystems at risk and explore opportunities to protect critical assets; "climate proofing"

63 existing facilities and infrastructure; and integration of considerations of climate change and sea-level rise in strategic and operational (e.g. land use) planning for future development, including that related to structures, infrastructure, and social and other services.

7.2.2 Strategic Goal 2: Improve and Enhance the Human Environment (Improve waste management (reduce, recycle, reuse) and pollution control)

a Analysis and Justification

- Pollution from the improper disposal of both solid and liquid wastes, mainly from domestic sources are a serious and growing threat to coastal and marine inshore areas on all islands. This is especially true for population centers where people live in over-crowded conditions with only minimum sewage treatment. Existing sewage treatment and disposal systems were constructed during the Trust Territory government, and are mostly poorly constructed and were not designed to service the current population in the fast-growing district centers. There is also inadequate attention to, and insufficient funding for routine maintenance of water systems, including monitoring. Coliform contamination of surface and ground waters is common, presenting a continued health hazard to populations with no other source of water for drinking and food preparation. The provision of 24 hour potable water has not been achieved except in a few urban areas and surrounding communities. Outer islands are particularly vulnerable as the presence of a freshwater lens makes it unwise to use septic systems for waste disposal.
- Inadequate disposal of solid waste and lack of suitable landfill sites are also a major pollution issue in urban centers, and to a growing extent, in rural areas. The adoption of western food, beverages, and other products (cars, refrigerators, computers, air conditioners, etc.) on all islands has created concentrations of solid wastes that are major eye-sores, sources of continued pollution, and breeding grounds for rats, flies, and mosquitoes. Existing dumpsites are not adequately maintained, nor do any sites, with the exception of Pohnpei, have specific practices in place for dealing with hazardous materials. In rural areas garbage is dumped along roads, in streams, or in lowland marsh areas. On some high islands, solid waste is dumped in the mangrove zone to create land for community or private use, causing human health hazards from water pollution

and reducing the health of the mangrove forests and their function as fish nurseries and nutrient regulation.

The existence of persistent organic pollutants (POPS) is another pollution problem faced by the FSM. In 1992, the FSM signed the Basel Convention on Transboundary Movement of Hazardous Wastes and Their Disposal, and has also signed the Waigani Convention to Ban the Importation of Hazardous and Radioactive Wastes. The nation also signed the Stockholm Convention on Persistent Organic Pollutants. SPREP, under the "Persistent Organic Pollutants in Pacific Island Countries (POPs in PICs)" project, estimated that approximately 130 tons of PCB liquids and 60 tons of pesticides (although only about 3 tons of POPs pesticides) are currently in the FSM (SPREP, 2003). Many other hazardous wastes were also identified as well. In addition, quite a large number of contaminated sites were discovered, including six locations of buried pesticides. POPS are characterized by persistence in the environment, resistance to degradation, and acute and chronic toxicity. The lipophilic character of these substances causes them to be incorporated and accumulated in the tissues of living organisms leading to body burdens that pose potential risks of adverse health effects. The continued existence of these hazardous wastes in the FSM poses a serious health risk to the FSM population and natural environment.

b Economic Implications

Overall, improving the management of environmental pollution and hazardous wastes will require a larger investment of funding than that currently made by State governments. Activities to reduce the importation of potential pollutants and wastes are the exception, and the only costs would be an increase public education activities. Government savings in the long run in terms of reduced solid waste problems and pollution would more than offset any costs. The private sector may be negatively affected over the short-term by having to import less polluting alternatives to banned products, but these costs could be passed onto consumers. Handling wastes and pollution that are already in the nation, e.g., establishing and/or upgrading, and managing safe waste disposal sites, recycling, improving sewage treatment systems and promoting sanitary latrines, and improving drinking water quality in rural areas will be more expensive in terms of both human and financial resources. The agencies to handle these tasks already exist in each State, but they will need to be upgraded in both budgets and technical capacity. However, the alternative is to slowly be taken over by our own waste! Of all the investments the Nation can make, the pay-off on this strategy in terms of improved human health and quality of life is the highest.

c Critical Issues for Implementation

Currently, the National agency that oversees the improvement of the human environment is the Department of Health and Human Services. National legislation exists (1984 Environmental Protection Act), and the National government coordinates foreign assistance and sets minimum standards for air quality, water quality, and waste management. States have Environmental Protection Agencies (although in Kosrae the agency is named the Development Review Commission) that are responsible to see that national standards are met or exceeded, and provide development review and permitting function. Previously, these agencies were linked with the USEPA, but since the Nation's independence, the State EPAs have been integrated into the State government structure. As result, State government leaders thus exert varying degrees of control over each State EPA, including appointing the State Boards. This has sometimes hindered the effectiveness of some State EPAs. In order to address this strategic goal, EPAs will need to further strengthened in terms of staff capacity and budgets. In addition, they should be more closely aligned with and supported by the National government to assure their objectivity in assessing State development decisions.

d Outcome measures, justification, and linkages

69 Ratification of the Stockholm POPs Convention by the FSM National Congress by 2004

70 The FSM government has not yet ratified the Stockholm Convention, which requires actions at the national level aimed at managing and eliminating POPs. One specific obligation for countries is the development of a National Implementation Plan (NIP). This activity has already begun for the FSM through assistance from SPREP. Given that POPs are used and emitted in a variety of economic sectors, including industry, manufacturing and agriculture, the development of appropriate responses is a complex undertaking. It will require a comprehensive approach and actions at various levels.

71 Importation of POPs into the FSM reduced by 70 % by 2010

The most effective way to deal with POPs in a small island nation like the FSM is to never allow them into the country in the first place. Therefore, the frontline of defense against pollution is to reduce imports of these substances. Both the National and State governments must strengthen and enforce laws and regulations controlling transboundary pollution and transport of hazardous substances. Also, in keeping with the nation's obligations under the UNFCC, all imports of ozone-depleting substances (CFCs, etc.) should prohibited as soon as possible, including all motor vehicles manufactured before 1996. National and State legislation is needed to ban the further import of POPs. The National and State governments also need to consider limiting or banning other non-

biodegradable packaging and other materials, e.g., glass (1 million year life), Styrofoam (500 year life), and plastic bags (10-50 year life).

73 Solid wastes reduced by at least 10 % in all states, through reduced imports, recycling, and other methods by 2010

State governments need to establish and encourage waste reduction initiatives and the effective use of recycling programs for aluminum, glass, and paper in all state centers, as well as supporting the development of other alternatives, e.g., composting of organic wastes, etc. Some states (Pohnpei and Kosrae) have already begun charging a tax on aluminum can imports to help subsidize recycling costs. Opportunities also exist for other waste-reducing industries, e.g., a local handicraft/industry designing and developing shopping bags to replace disposable plastic bags, which could also be sold for tourists as souvenirs from an "environmental-friendly" FSM. The National and State government should lead the way by establishing a 100% recycling policy for all government offices throughout the nation.

75 Safe solid waste disposal sites designated, established and managed in 100% of State centers and 50% of rural municipalities by 2010

Each Municipality should designate, establish and/or upgrade, and manage easily accessible safe waste disposal sites on all populated islands, and encourage their effective use suitable. These sites should be conveniently located and well-prepared to prevent any run-off into surrounding water bodies or leaching into ground water. The dump sites should be set up to separate recyclable wastes for collection and recycling, organic wastes for mulching, and hazardous wastes (like petrochemicals, batteries, and other chemicals) for transport to a safe disposal site. If possible, Municipal governments should contract with private business to actually manage the sites. To maximize the dumpsite effectiveness, urban municipalities should also encourage and promote the development and effective use of solid waste collection systems.

77 At least 50% of households in urban areas served by effective public sewage treatment plants by 2010

78 State Governments in partnership with urban Municipal governments and semi-autonomous public utility commissions need to improve sewage treatment facilities in main population centers. The focus should be on increasing the number of homes with connection to sewage system in urban centers, and well as reducing the amount of untreated sewage discharge into lagoons in all States. Sewage outflows also need to resited outside the barrier reefs to limit negative impacts on the marine environment in all State centers.

$79 \quad 100\%$ of urban households and 50% of rural households with access to sanitary latrines by 2010

80 Currently, a large percentage of the nation's urban and rural population does not have access to sanitary latrines. During the cholera outbreaks in Chuuk and Pohnpei, both States made concerted efforts to provide sanitary latrines to all households, but since the outbreaks the situation has worsened again. State government, in partnership with Municipal governments, churches and NGOs, must continue to provide and encourage the use of sanitary sewage disposal in all rural areas (septic tanks, water seal toilets, composting toilets, etc.)

81 Coastal marine water quality (measured by PPM fecal coliform) around urban centers improved by 100% by 2008

82 Coastal marine water quality in the vicinity of urban population centers in the FSM has declined greatly over the last few decades. Runoff from roads, runoff and leachate from dumpsites, trash, unsanitary latrines, and improperly sited sewage outflows are just a few of the contributors to this decline. Since the majority of the State's populations live near and make use of these waters for food and recreation, they represent a major health issue and environmental challenge. State governments need to work on improving coastal marine water quality by minimizing urban pollution sources outline above.

83 100% of FSM communities will have ample access to safe drinking water supplies by 2020

The FSM has a high incidence of water-borne disease, including alarming out-breaks of Cholera in Chuuk and Pohnpei in the last two decades. The Cholera outbreak in Pohnpei began in April, 2000 resulting in more than 2,400 hospital visits, 540 hospitalizations, and 19 deaths. At least 3/4 of the population lacks access to "safe" water, and water-borne diseases are the third largest cause of death in the nation. Similar threats to water quality from other types of nonpoint pollution are also common in the islands. For urbanized State centers, centralized water systems have been constructed and are slowly being improved. However, the given the low GDP, importance of traditional style of local governance, and physically fragmented nature of the nation all discourage costly centralized "solutions." State governments, in partnership with Municipal governments, churches, NGOs and others, need to improve management of forested surface catchments and aquifers to meet projected water supply demands and improve community water systems in rural areas to assure access to safe drinking water supplies. This includes the improvement of roof catchments, sand filtering and other low-cost, low-tech methods, and the construction of low cost, low-tech solar desalination pilot plants on atolls where drought is a possibility. State governments should work with local Public Utilities Commissions to allocate a percentage of water revenues to watershed management and improvement (e.g. reforestation and educational programs). The National government, in partnership with the States and the USGS, should also reestablish a hydrologic monitoring system for the FSM to monitor long-term surface water quantity and quality

85 Increase preparedness for pollution emergencies (oil spills, chemical leakage, etc.) in all States by 50% by 2010

86 Pollution emergencies present a real threat to both human and environmental health in the small islands of the FSM. The State of Yap suffered two oil spills in the last two years (Ulithi and Colonia Harbor), and local and National government response was in both cases unsatisfactory. It's just a matter of time before the FSM suffers a major oil spill. Mobil/Exxon and Shell, the nation's two major petroleum importers, have developed emergency response plans for pollution emergencies caused in the course of their business, but as was evidenced in the Yap spills, for all other spills, the State government must be prepared to handle the brunt of the containment and clean-up efforts. All States must work to increase preparedness and skills/capacity of relevant government and private sector agencies to rapidly respond to pollution emergencies (e.g., oil spills, ship grounding, natural disasters, etc).

87 Reduce damage to natural resources and human infrastructure and health from local pollution emergencies (in terms of dollar loss) by 50~% by 2010

As above, through increased preparedness and upgrading of skills/capacity of relevant government agencies to rapidly respond to pollution emergencies, the overall economic, environmental, and health impacts should be decreased substantially over the next few years.

7.2.3 Strategic Goal 3: Reduce energy use and convert to renewable energy sources/Minimize emission of greenhouse gases

a Analysis and Justification

89 The FSM was one of the first countries to sign and ratify the United Nations Framework Convention on Climate Change (UNFCCC), and the nation remains concerned about the role that impacts of climate change may have for the natural and socio-economic well-being of the country. Even though the FSM is not a significant contributor to the global emissions of greenhouse gas (GHG), the nation recognizes its obligations to join with other responsible nations in a concerted effort to undertake reasonable source-oriented mitigation measures in order to control the emissions of GHG into the atmosphere. Under the UNFCCC each signatory country is obligated to:

Develop, update and periodically publish and make available to the Conference of the Parties (COP), their national inventories of anthropogenic

- emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol;
- Use comparable methods for inventories of GHG emissions and removals;
- Incorporate GHG Inventory results along with other requirements of the UNFCCC into a National Communication report to be presented to the COP
- 90 To fulfill these obligations, the FSM conducted the nation's first baseline GHG inventory in 1997 (for the year 1994) and then presented results at COP4 in 1998 (Furow, 1999). This study identified the energy sector (electricity generation, transport, industry, household cooking, etc.) as the principle source of GHG emissions in the FSM (99% of all emissions, which totaled 235.972 Gigagrams). The FSM has committed to maintaining at the same level or reducing GHG emissions, through response strategies combine both adaptation and mitigation benefits One example is the conservation of critical terrestrial and marine habitats to improve their survival and continued health in the face of climate change (adaptation) while also potentially enhancing the nation's ability of sustain or increase its natural sinks for carbon dioxide (mitigation).
- At present, a number of constraints still exist. States still continue to subsidize their respective utility corporations, although cost recovery and user pays is an emerging practice. No standardized technical and operational procedures exist due to the small fragmented nature of the nation's energy sector and the absence of an effective coordinating and oversight mechanism between the National and State governments and energy sector players. Existing alternative energy programs are not sustainable in terms of local expertise or sufficient funding for maintenance and replacement. Also, due to the relatively smallness and remoteness of the FSM as a market, the nation is limited in its' ability to negotiate with oil companies to take more responsibility for the collection, removal, and disposal of waste oil and other petroleum wastes.
- 92 The FSM's proposed approach to reducing energy-related GHG addresses three categories:
 - Demand-side management activities aimed at reducing energy consumption at the level of the user (e.g. energy conservation strategies, design and use of energy-saving appliances and technologies, various measures targeted at ground transportation, and education and training programs);
 - Supply-side management activities aimed at reducing the use of fossil fuels (e.g., increasing the efficiency of existing energy systems, increased

- use of renewable energy sources such as biomass, coconut oil fuel, solar and wind power); and
- Sink Enhancement activities aimed at increasing local sinks for removing carbon dioxide from the atmosphere with particular emphasis on development of appropriate forestry management systems.

b Economic Implications

Since the largest import for the State governments currently is petroleum products, mainly for electricity generation, this strategy should reduce government spending over the long-term. However, at this point, renewable energy source technology like hydro, solar, wind, and solar-wind hybrids are still more expensive than diesel systems to install initially. However, long-term savings in terms of lowering the purchase and use of petroleum products as well as indirect benefits of reducing the chance of oil spills and other pollution emergencies and lessening the FSM's contribution to global climate change will more than pay back the higher initial investment. Lowering vehicle imports and improving public transportation would mainly affect the private sector, and the government would reap savings by not having to deal with improved transportation infrastructure for increased traffic or disposing of abandoned cars and related solid wastes. State governments in partnership with Municipal governments and NGOs are already undertaking improving the management and conservation of the Nation's natural forest and coral reefs, and the main need is for improved coordination. There will be some related costs for recurrent activities that the State governments are not currently sufficiently undertaking dealing with including regular coral reef monitoring and air photography/vegetation surveys, enforcement of current development restrictions and EIA, and public education.

c Critical Issues for Implementation

As a developing country, the reduction of overall energy use will be politically difficult given that many of the FSM's citizens do not yet have access to electricity, motorized transport, and other energy developments. However, with proper education and increased public awareness and eventual elimination of all energy subsidies, the reduction can be accomplished. The National and State governments will need to set a strong example to the other sectors by cutting down their own energy use first and promoting energy efficiency in their own structures and daily operations. The growing problems presented by the import of cheap Japanese cars into the nation could be curbed somewhat by adding an vehicle disposal tax, which could then be used by the government to collect and recycle the vehicles (perhaps to the Asian scrap metal market) once they are no longer operable. The improved management of forests and coral reefs will require National and State governments to better coordinate and work closely with Municipal governments, traditional leaders, and communities. Public awareness

and understanding of the important roles of forest and coral reefs will also need to be improved.

d Outcome measures, justification, and linkages

95 Decrease the import and use of imported petroleum fuels by 50% by 2020

A large portion of the nation's import debt as well as most of the emissions of GHG from the FSM are attributable to the import and use of imported petroleum fuels. Therefore the most important action the Nation can take over the next two decades is to decrease the amount of petroleum fuels being brought into then nation through a coordinated program of reducing and eventually eliminating energy subsidies, converting to renewable energy sources, promoting energy efficiency in buildings, transportation, industry, and household cooking, supporting public transportation, and other means.

97 10% of electricity in urban centers and 50% in rural areas will be generated using renewable energy sources by 2020

The FSM abounds in possible sources of renewable energy - solar, wind and hydro - but these have only been minimally developed to date. The opportunity to make use of renewable energy sources, especially in the FSM's rural areas where electric power is only just being developed, are numerous. The National and State governments should take advantage of the latest renewable energy technologies and international funding programs like GEF and the EU to establish or convert existing electric power systems to renewable sources.

99 100% of new public and 50% of private buildings in the FSM will meet US standards for energy-efficiency by 2006

100 Many of the public and private buildings in the FSM have been designed and constructed without consideration for energy use efficiency. The National and State governments should improve energy efficiency of the house designs being recommended and funded by the USDA and state housing assistance programs, and provide other incentives for the use of alternative and renewable energy sources and energy efficiency mechanisms in government and private sector buildings and development projects.

101 Private motor vehicle ownership/number of vehicles will decrease by 10% by 2010

102 Vehicle ownership in the FSM, especially in urban centers, has skyrocketed in the last two decades, mainly as a result of "dumping" of used vehicles in the Pacific island countries by Japan. Many of these vehicles do not meet minimum US pollution standards, are contributing to crowded and dangerous conditions on the nation's roads, and eventually end up abandoned on the roadside.

The Nation, in partnership with the State government must institute minimum efficiency standards for all petroleum product consuming vehicles and equipment in the FSM. States, in partnership with urban Municipal governments also need to work with the private sector to improve public transportation in State population centers and discourage private vehicle use, including through educational programs. The establishment of a State or National vehicle disposal tax, which could then be used by the government to collect and recycle the vehicles (perhaps to the Asian scrap metal market) once they are no longer operable, would be an important activity.

103 The FSM will have a net gain of area covered by forests between now and 2020

104 The US Forest Service carried out the last comprehensive vegetation survey in the early 1980's. Pohnpei State in particular was found to be suffering from rapid deforestation and conversion to agriculture, mostly sakau (Piper methysticum). Updated vegetation work carried out by The Nature Conservancy in partnership with the State government in 1995 and 2002 demonstrated a loss of more than 2/3's of the main island's forests in just 20 years. While other States have probably had lesser rates of forest clearing and conversion, the nation's remaining forests are in grave danger of being totally lost in the next 20 years. The National and State governments need to better monitor their remaining upland and mangrove forests, and undertake planning, regulatory, educational and other initiatives that will ensure the preservation of remaining native forests and agroforests for watershed protection and as a carbon sink. The States should also actively promote and encourage reforestation activities in degraded and deforested lands and undertake educational and other initiatives that will lead to the substitution of common secondary forest tree species for firewood for household cooking needs to protect remaining mangroves and native forests.

105 The FSM will have a net gain of area and health status of coral reefs between now and 2020

106 While the FSM has only 271 sq. miles of land area, the nation's coral reefs and lagoons make 10 times the amount of area (2,700 sq. miles) spread across 1,000,000 sq. miles of ocean. The nation's coral reefs are important resources for the nation's subsistence and commercial well-being, providing food, medicines, recreation, and tourism opportunities, In addition, the nation's coral reefs provide a largely unmeasured sink for carbon dioxide which benefits the entire world. The National government and the States should further expand educational and other initiatives that prevent the degradation and destruction of coral reefs

107 The FSM will remain a net importer of greenhouse gases through 2020

108 The national GHG inventory carried out in 1997 should be repeated every three years or so to monitor our emissions and report to the global community on

our progress in meeting international requirements. To date, initial calculations suggest that the FSM is a net importer of GHGs - in other words our forest and coral reef sink store more GHGs than we produce through the burning of petroleum products, agriculture and livestock raising, etc (John Mooteb, personal conversation). The Nation's long-term goal should be to maintain this favorable balance both to retain our influence in the global climate change community and for the greater good of the future of our nation and planet.

7.2.4 Strategic Goal 4: Enhance the benefits of the sustainable use of the FSM's genetic resources and ensure benefits derived are fairly shared amongst stakeholders

a Analysis and Justification

109 Genetic Access/Benefit sharing (ABS) is a contentious issue because of the split between developed countries who have the technology and the developing countries who lack the technology but own the resources. The notion prior to World War II was that genetic resources are a common heritage for all mankind, but at that time only developed countries were involved in formulating international law. The development of the Convention on Biological Diversity (CBD) and the larger participation by developing countries in developing international law brought to the forefront the notion of sovereign rights over genetic resources and also traditional knowledge. Traditional knowledge is a more intangible component, and recently the World Intellectual Property Organization (WIPO) has reached an agreement with UNESCO and CBD to handle this issue worldwide. Currently, the FSM does not have specific legislation specifically addressing ABS, however several existing laws pertain to genetic resources and traditional knowledge, e.g., Title 34 addressing consumer protection, Title 35 on copyright, Title 23 on Resource Conservation (endangered species), Title 25 on environmental protection, Title 32 regulating businesses, Title 26 on historical sites and Title 22 relating to quarantine (see www.fsmlaw.org for full details). The Department of Justice is reviewing the relevant Conventions and will draft resolutions for consideration by FSM Congress for ratification. Internationally, the World Intellectual Property Organization (WIPO) has reached an agreement with UNESCO and CBD to handle Traditional Knowledge. An intergovernmental Committee has been formed to address this issue. At the Pacific regional level, SPREP deals with biological and genetic resources while SPC and UNESCO handle cultural resources with the Treaty on Folklore being finalized by these latter partners. The FSM has already been subject to exploitation of its genetic resources and traditional knowledge, so this is an urgent issue for the Nation.

b Economic Implications

110 Assuring that FSM's genetic resources accessible for utilization and ensure benefits derived are equitably shared amongst stakeholders should not result in any additional expenditures by the State and National governments. The agencies that will develop and enforce access agreements already exist, and with training should be able to develop the capacity to deal with this issue. The main costs involved in this strategy are building the National and State capacity and political will to deal with this issue, and increased public awareness.

c Critical Issues for Implementation

111 Although the Nation must develop a national ABS policy covering the regulations on transfer and movement and procedures, the States actually control and manage the nation's genetic diversity and traditional knowledge pertaining to it within their respective 12 mile zones. In providing access, a number of issues will arise that the States may not have the capacity to deal with, e.g., negotiating with experienced collectors/pharmaceutical companies. Some terms that should be negotiated include purpose/use of the material, conservation guidelines, minimizing impact on non-target species, social and cultural considerations, and other administrative provisions such as duration and termination of agreement. Enforcement of material access terms (MATS) are usually difficult. Some benefits that may be negotiated also can include conservation, sample fees, milestone payments, royalties, capacity building or infrastructure. Royalties are currently usually about 2.5 to 3 % of profits. Resource owners or communities should ensure rights are clear and protected and that information is always available where possible. Therefore, the negotiation of MATS will need to be done in partnership between the National and the State governments to assure success.

d Outcome measures, justification, and linkages

112 Access to genetic resources in the FSM enhanced to support economic development and improved quality of life

113 The National and State government must develop complimentary national and state laws and policies on ABS which assure that the nation's genetic resources and traditional knowledge are accessible but benefits are equitable and accrue to the actual owners of the resources, the people of the FSM. The National government should also develop a model genetic access agreement in partnership with the States to prepare for foreign commercial interest in the nation's biodiversity.

114 Fully document traditional knowledge and practices pertaining to the FSM's genetic resources by 2020

115 The need to fully document the FSM's traditional knowledge and practices has been emphasized many times (FSM 2002, SPREP 1993), however to date, only some progress has been made. The strong cultural value and difficulty of collecting traditional knowledge and the fear that documenting this knowledge makes it easier to exploit are two reasons for the lack of progress so far. Still, every day, FSM elders die and take another bit of the Nation's collective traditional knowledge with them. To assure that the this valuable resource is preserved for the benefit of future generations and the world, the National and State Governments should allocate funding to collect traditional knowledge in whatever form is appropriate in some central location. Access to this information should be accessible, but terms of accessibility need to be worked out between the government and the actual "owners" of the knowledge. WIPO (World Intellectual Property Organization) has established protocols for the collection and archiving of traditional knowledge that should be adopted by the FSM. The FSM National History and Archives Unit currently deals with this issue, but have not yet addressed knowledge relating to biological resources. To further the collection and preservation of traditional knowledge and support ABS efforts, all State Foresters, State Marine Resources and State Agriculture Chiefs should be trained in ethnobotany and genetic access and benefit sharing. Traditional knowledge databases should be established and maintained in all states. Other activities that can improve can promote and protect the process of passing down traditional knowledge through generations should also be implemented.

116 All research on the FSM's traditional knowledge and genetic resources is permitted and monitored to ensure that benefits are equitably shared by 2006

117 Currently, the FSM National Agriculture Unit of the Department of Economic Affairs issues permits for bringing plants, animals and plant products and animal products from outside FSM. The FSM States issue permits for interstate traffic. The Agriculture Unit also collaborates with the FSM National History & Archives Unit of the Department of Health, Education and Social Affairs in the research application process, especially if related to agriculture. Researchers apply for entry permits from FSM Immigration and include a research proposal that is reviewed by the Unit with a resulting recommendation to be returned to Immigration. In the past, most foreign researchers have worked in the areas of archeology, geology, geography and the social sciences. Recently, however, researchers in the life sciences have become more prevalent. The current research proposal load has begun to overwhelm the Unit, and this has led to increased collaboration with Department of Economic Affairs and the State governments to review proposals. The decision for approval now rests with the States. There are a lot of gaps in the current research approval process, and issues include the lack of expertise to review proposals and a lack of coordination between States and the National Government, exacerbated by the fact that visitors can come for 30 days without a permit. The review process also requires some improvement and monitoring after the permit is issued.

7.2.5 Strategic Goal 5: Manage and Protect the Nation's Natural Environment/Protect, conserve, and sustainably manage a full and functional representation of the FSM's marine, freshwater, and terrestrial ecosystems

a Analysis and Justification

118 The FSM's total area consists of 607 islands (total land area 271 square miles) and 2,700 sq. miles of coral reefs and lagoons located over more than 1 million square miles of ocean. These important resources are the foundation for the nation's long-term economic self-sufficiency. The geographic complexity and isolated nature of the nation's islands have led to the development of extremely high levels of endemism of flora and fauna. The biodiversity of the FSM is globally important, and includes over 1000 plant species (of which 200 are found nowhere else on earth), 119 bird species, and 27 native reptiles. Its reefs are the home to over 1000 species of fish and 350 species of hard corals (Smith 2001, Edward 2002). However, the extreme vulnerability of island ecosystems and species to impacts such as habitat destruction and invasive species has resulted in the FSM biodiversity being amongst the most endangered in the world. The FSM NBSAP (FSM 2002) identified the major threats to the FSM's biodiversity and natural environment are human induced and include invasive alien species, habitat alteration and loss, destructive harvest techniques and overexploitation of natural resources. The impact of extreme natural events such as cyclones, drought and fire may also be significant at times. The future impact of climate change and sea level rise is uncertain at this stage but could be significant, especially on the low lying islands and atolls which could disappear completely.

119 Pacific island biotas are particularly vulnerable because the biota evolved in the absence of mammalian predators, grazing herbivores and many of the diseases that evolved on larger land masses. Furthermore, the small size and isolated nature of the FSM islands results in increased vulnerability to disturbances that may be relatively minor on a larger land mass. Threats to the nation's natural environment are on the increase. Although population growth has slowed due to heavy out-migration to the US (Hezel 2003), there is increasing commercialisation and globalisation of the FSM economy. Coupled with these changes in socio-economic systems has been an erosion of traditional knowledge and traditional systems of resource management.

120 The outcome of the combination of extreme fragility and increasing threat is that the biological diversity the FSM is one of the most highly threatened in the world. At the same time, there are a number of constraints to mounting an

306

effective response to environmental threats in the FSM, including a low level of technical infrastructure and expertise, a lack of current information on the state of natural resources and biodiversity, a poor understanding of environmental issues amongst the general population, and poor integration of environmental issues in national development planning.

Economic Implications

121 Improving stewardship of the FSM's natural resources, including the establishment of special protected areas, will require a greater investment from both the National and State governments. The National government's role of assisting the States to improve general planning for sustainable land and coral reef management and to develop and implement guidelines for the selection, establishment, and management of conservation areas, while providing and/or facilitating technical and financial assistance, will require at least one full-time staff position at the existing Department of Economic Affairs or in a new Environment Department. The State government role continues to shift from the western model of resource "owner and manager" towards a partnership role with the local communities - creating a legal framework for community-based conservation and the development of protected areas, assisting with overall management coordination and monitoring, and provision of technical and financial assistance and capacity building. This will necessitate further reorganization of the existing or reinstating new State government resource management agencies, including adding more technical/scientific positions and eliminating activities and positions that are better undertaken by the private sector, e.g. plant and animal nurseries, provision of supplies, equipment services, etc.

122 The nation's communities will need coordinated National and State government support in terms of technical and financial assistance for design, planning, management, compatible enterprise development, and monitoring. While some funding assistance can be expected from the international community in the short term, the FSM and State governments must assess and help create longterm conservation financing mechanisms to support the recurrent costs of government, community, and NGO conservation efforts.

Critical Issues for Implementation

123 According to the joint opinions of the National and State Attorneys General on National-State environmental responsibilities under the Constitution, the State governments have jurisdiction over all land and marine areas up to 12 miles out. Therefore, while the National government can provide overall coordination, encouragement, and facilitation of technical and financial assistance, the actual establishment of conservation areas will need to be undertaken at the State and Municipal level. The States also differ in respect to their actual control of terrestrial and marine resources (Table 1).

124 In Yap and Chuuk, terrestrial and inshore marine candidates for conservation areas will be located entirely on privately owned or community-controlled areas. Even in Pohnpei, where the majority of the "public" lands and waters are located, most areas are under some form of community or private control. An example is Pohnpei island's extensive upland forests, which although legally designated as public lands, are claimed by the traditional paramount chiefs as "luen wehi" (left-over kingdom lands). To complicate the situation, most of the easily accessible "public" forest areas are actually controlled by residents of adjacent communities who use them for production of sakau (Piper methysticum) and hunting. This situation dictates that the State governments work closely Municipal governments, traditional leaders, NGOs, and community leaders in identifying, designing, managing, and enforcing conservation areas. The on-going development of State Biodiversity Strategies and Action Plans (SBSAPs) in co-

Table 1. Summary of Land and Marine Tenure in the FSM States

State	Terrestrial tenure	Marine tenure
Chuuk	All land is privately owned	Mangrove forests and inshore ma- rine areas are privately-owned or controlled by communities, while outer reef and open lagoon areas are public property
Kosrae	Previously, all lands above 100 meters (Japanese line) were considered public watershed forest reserve, but 1996 Constitutional amendment returned all land to private owners	Mangroves and lagoon "below the high tide mark" are considered public lands
Pohnpei	Nearly 50% of the island, including most of the mountainous interior and large coastal swamps are considered public lands	Mangroves and lagoon "below the high tide mark" are considered public lands
Yap	All land is privately or clan owned	Mangrove and lagoon areas are village-owned and controlled

ordination with municipalities and communities may be the best vehicle to accomplish this, and the National and State governments should devote sufficient resources to this important undertaking.

d Outcome measures, justification, and linkages

125 A nation-wide system of community-led marine, freshwater, and terrestrial conservation areas where special measures are enforced to conserve biological diversity is developed and implemented by 2010

126 The continued health and functioning of the FSM's entire natural environment is imperative to the nation's sustainable future, and policy, planning and economic development efforts should focus on maintaining the nation's entire natural environment as well as rehabilitating areas that have been degraded in the past, However, experience from other countries has shown that in order to maintain the nation's biodiversity and long-term ecosystem health, the FSM also needs to move forward with the development of a national system of community-led marine, freshwater, and terrestrial conservation areas where special measures are enforced to conserve biological diversity. The State governments, in partnership with the National and Municipal governments, NGOs, traditional leaders, and local landowners, have established a number of conservation or protected areas over the years. Currently, 32 protected areas covering about 10 square kilometers of land and sea are legally designated (Conservation International, 2002). Although, the actual area under protection in the FSM compares favorably with other Pacific nations, the current sites are with few exceptions not well-enforced and their effectiveness (i.e. representativeness and functionality) is generally unknown. The Federated States of Micronesia's (FSM) National Biodiversity Strategic Action Plan (NBSAP) (FSM 2002) sets a clear conservation objective:

127 a full representation of the FSM's marine, freshwater, and terrestrial ecosystems are protected, conserved, and sustainably managed, including selected areas designated for total protection

128 As part of the NBSAP process, an ecoregional plan entitled "Blueprint for Conserving the Biodiversity of the Federated States of Micronesia" (The Nature Conservancy 2003) was also completed by The Nature Conservancy in partnership with the National and State Governments, UNDP-GEF, USDA Forest Service, and the USDOI Office of Insular Affairs. The blueprint identifies and prioritizes 130 areas of biodiversity significance (ABS) in each State. These ABS contain the FSM's best remaining biodiversity and the critical habitats that sustain these island ecosystems, and are prime candidates for establishment and management as protected areas. Nearly all are highly threatened by overharvesting, destructive infrastructure projects, or invasive species. Addressing

these threats depends on increasing awareness and action by the growing populations of Micronesians dependent on these resources.

129 The National and State governments need to facilitate the development of protected areas by developing and implementing guidelines for the selection, establishment, and management of protected areas, including appropriate educational programs. The National government should also further assist the States, Municipalities and communities to identify and further delineate high priority "areas of biological significance", and support the development and implementation of conservation management plans for these areas. Finally, the National government should assist the States to develop and implement programs/policies that recognize, promote, and support community ownership and stewardship of natural resources and natural areas in all states, perhaps through the development and implementation of the State Biodiversity Strategies and Action Plans (SBSAPs).

130 Conservation areas contribute at least 10% of the total national economy through successful compatible enterprises including ecotourism, non-timber forest products, and mariculture.

131 The establishment of conservation areas implies limited or no uses of the resources to which a community formerly had full access. Conservation area design therefore needs to consider livelihood security for the local populations living in or in the vicinity of the conservation area. If not, experience shows that support for conservation amongst the local population soon wanes and conflicts escalate. The State governments, in partnership with the Municipal Governments, NGOs, and private sector must assist local communities located in the vicinity of conservation areas to develop environmentally compatible economic development enterprises to increase community support for conservation and assure sustainable livelihoods.

$132\,$ At least $20\%\,$ of the nation's coral reefs are protected as "no-take" reserves by $2020\,$

133 Coral reefs are the mainstay of the FSM's subsistence economy, and provide a myriad of benefits to the nation's inhabitants. The State governments, especially Pohnpei, have already made efforts to set aside portions of their reefs as protected areas, both to allow for recovery of various species within the areas themselves, and for the spill-over effect into surrounding reef areas. The US Coral Reef Task Force has set a goal of protecting 20% of US reefs as "no-take" reserves by 2010 (USCRTF 2000). This percentage has been arrived at as an estimate of the amount of reef that needs to be protected to assure biological sustainability of the entire reef system. Since the Freely Associated States have the largest area of coral reefs of any U.S.-affiliated entities, there is a lot of interest amongst US Federal agencies in working with the FSM, Palau and ROMI

to develop marine protected areas. In neighboring Palau, US and Australian government agencies, in partnership with The Nature Conservancy, are working to design and establish biologically connected marines networks that are resilient to climate change-caused coral bleaching. The methodologies established in Palau will be highly applicable to the FSM. The National government should work with the State and Municipal governments, NGOs, the College of Micronesia, and local communities, to establish biologically connected marine protected area networks in all four states with the goal of protecting at least 20% of the FSM's reefs in no-take reserves. This will entail rapid marine resource assessments carried out in high island reefs and outer island reefs, as well as biological reef connectivity studies. State governments should also work with Municipalities to improve education and compliance related to marine protected areas. A large contribution to sustainable management of the nation's reefs could be made by effectively banning the use of destructive fishing technology, e.g., monofiliment gill nets, underwater flashlights, SCUBA, fish poisons, etc,

134 Deforestation/Agricultural conversion rates are decreased to 0% by 2010

135 After centuries of human impact, the dominant vegetation types on most of the FSM's islands are now human induced or anthropogenic plant associations ranging from agroforests and secondary forest to grassland and savanna. Perhaps as much as three quarters of the original vegetation of the FSM has been damaged or destroyed. The forested area varies significantly from island to island but tends to be highest on the younger, steeper volcanic islands with higher rainfall such as Pohnpei and Kosrae. The most well documented case in the FSM is the conversion of 2/3's (~15,000 Ha >5,000 Ha) of Pohnpei's native rainforest mainly for the commercial cultivation of kava (Piper methysticum) in the last 20 years. The loss of native intact forest has led to plummeting bird and plant populations, e.g., the Micronesian Pigeon has experienced a 75% population decline since 1983 (Buden, 2000). Pohnpei State has led the way in the FSM with the legal establishment of the Watershed Forest Reserve, almost half which has been surveyed, marked and is now enforced. Other States, in partnership with Municipal Governments, NGOs, traditional leaders and communities need to increase public awareness of the role of forests in protecting the nation's water supply and terrestrial biodiversity and establish and enforce Watershed Forest reserves on all high islands.

136 No plant or animal species endemic to the FSM will go extinct, and endangered and threatened species status will improve between now and 2020

137 The preservation of all species is given high priority by FSM's NBSAP, for economic as well as cultural reasons. Many of the FSM's species have not been fully studied, and little is known about their biology, key threats, and manage-

ment needs. The National government, in partnership with the States, should take the lead in the establishing and periodically updating a national biodiversity database, followed by an update the national endangered species law, which is highly outdated and mostly ignored. The National government should work with the State Governments, NGOs, College of Micronesia and regional universities and research centers, and US Federal agencies like NOAA and the US Fish and Wildlife Service to identify endangered or threatened species in the FSM, promote research on their biology, and establish species recovery plans.

138 Comprehensive nation-wide biodiversity health and threat abatement monitoring program established and implemented by 2008

139 Monitoring is an integral component of natural resource management, and State governments and NGOs have implemented a number of marine and terrestrial monitoring programs. However, methodologies used are numerous and often non-compatible. Further, monitoring results and trends do not reach the key decision-makers on each island and State. The National government should work closely with the State governments, College of Micronesia, and NGOs to identify key ecological indicators to monitor trends and conditions of marine and terrestrial biota, and regularly assess their status. These should include at the very least standard fish and coral monitoring protocols, vegetation mapping using aerial or satellite photography, and forest bird surveys. To compliment this scientific monitoring and build community awareness and support, State governments, in partnership with Municipal governments, NGOS, and communities should

140 devise and set up community-based resource monitoring systems and, through education and training, assist communities to use this information for decision-making.

Strategic Goal 6: Improve environmental awareness and education and increase involvement of citizenry of the FSM in conserving their country's natural resources

Analysis and Justification

141 Effective long-term environmental health and sustainable resource management in the FSM will require an informed and supportive citizenry. Although much has been done by all States in the last few years, there is still a need to continue and further increase environmental awareness at all levels, including school children, villagers and politicians. The need for increased awareness is particularly acute at the village community level. It is the resource owners that decide what activities will occur on their land, and it is therefore they that have the greatest impact on the FSM's natural environment. If such awareness raising does not occur, or is insufficient, the chances of implementing environmental health and resource management programs on the private lands and waters that make up the majority of the nation's inshore natural resources are greatly reduced.

b Economic Implications

142 The improvement of school environmental curriculum, increasing community environmental awareness and participation, and involving communities and their leaders more fully in development decisions could involve added costs for both the National and State Governments, but the payoffs in terms of increased community support and involvement should more than make up for the cost. Also, current government staff and infrastructure with the help of existing and potential NGO and private sector partners can handle the majority of these activities. Non-government partners not only offer considerable expertise in many of these areas, but can also access funding not available to the government. The use of local consultants as much as possible will also help to minimize costs and further build the nation's capacity. Many excellent educational materials have been developed over the years, but the current funding situation is such that many have gone out of print and are no longer available. Funds must be made available to update and reproduce these materials, as well as develop new materials. Teachers must be trained to use the materials that exist - without training they will be reluctant to integrate environment into their regular class work. State government extension officers from Health, Land, Agriculture and Marine Resource Divisions also need to be trained in environmental considerations so that they can contribute not only to economic development but to the long-term sustainable management of the nation's natural resources.

c Critical Issues for Implementation

143 The vast distance across the FSM, coupled with the diversity of cultures and languages, create special challenges for public awareness building, information sharing, and citizen participation in environmental and development decision-making within the country. The National government will need to play an advisory and coordinating role, while the States take on the actual tasks of increasing public awareness and involvement in environmental management. States should better support environmental awareness and sustainable resource management through their departmental organizational structures, including increasing interagency cooperation and coordination. Teachers and government extension agents need to be trained to better deliver environmental messages in their daily interaction with a wide cross-section of the nation's population.

d Outcome measures, justification, and linkages

144 Resource management and environmental studies are integrated into all levels of the nation's education curricula by 2010

145 The children of today are the decision-makers of tomorrow, and as such children must be exposed to and informed about environmental issues from their earliest years. Some environmental education is already included in primary and secondary education curricula within such broad subjects as geography and science. The Conservation Society of Pohnpei and State government partners are expanding two innovative educational programs in Pohnpei schools, Youth to Youth in Environment and the Green Roadshow, that are already serving as models for the other States. Traditional knowledge should also better integrated into the environmental curriculum. These practices ensured the long-term protection of the islands' natural resources for centuries and are still highly relevant today. The National and State governments should work to bring together educators, representatives of State and National Departments of Education and local NGO and outside environmental experts to develop an appropriate environmental curriculum for the nation's schools.

146 Community environmental awareness improved and citizen involvement in conservation and environmental activities increased to 80% by 2010 (measured by public awareness surveys)

147 The State governments already have a number of community educators/extension agents working in such agencies as EPA, Health, Agriculture, Forestry, and Marine Resources. In addition, there are a number of other institutions in the FSM that are playing and could expand their role in community environmental education. For example, NGOs are contributing greatly to the building of public awareness and involvement in all States. The churches are also playing a growing role in shaping community attitudes on the environment and the use of natural resources. The State governments should coordinate more closely NGOs, churches and other groups to implement public educational programs that support good practices in environmental health, sustainable resource management, and waste management and disposal. In addition, all parties should work harder to educate and involve the FSM's traditional leadership in conservation activities in States where traditional leaders still exist.

148 Public awareness and understanding of the consequences of climate change increased to 80% by 2010 (measured by public awareness surveys)

149 The impacts of climate change will have a major impact on the FSM, however community awareness of the possible impacts of climate change as well as the actions that communities need to take to mitigate or adapt to these impacts is still very low. The National government should take the lead on and work closely with the State governments, NGOs, and the private sector to develop and implement public awareness and understanding of the consequences of natural hazards including those related to extreme weather events, climate variability and change and sea-level rise and the possible actions that need to be undertaken by the nation.

150 Sharing and transfer of environmental information between government, private sector, communities and NGOs improved 100% by 2008

151 Although information sharing in the FSM continues to improve as technologies such as the Internet, telephone, and television are adopted by and extended to a larger section of the nation's population, still more can be done. The National government should take the lead in developing a national clearinghouse mechanism (computer nodes, web page, etc.) with nodes in key locations in the States for disseminating and sharing biodiversity, climate change, and other environmental information and activities. The National and State government should also work with schools and private libraries to expand existing public library resource materials on environmental issues, for example, expand COM resource materials and collections on environmental issues. In addition, the National government should identify training opportunities and work closely with the States and NGOs to increase local capacity to convert technical environmental information into easily understandable materials that can be widely disseminated.

7.2.7 Strategic Goal 7: Establish effective biosecurity (border control, quarantine and eradication) programs to effectively protect the FSM's biodiversity from impacts of alien invasive species

a Analysis and Justification

152 Invasive and alien species are arguably the major threat to Pacific biota and native ecosystems, and nearly all the globally threatened species in the FSM are threatened by alien invasive species. Ever since humans first colonized islands of the FSM up to 3,000 years ago, introduced plants and animals have had a significant impact on native biota. The early Micronesian colonists deliberately introduced a number of plants and animals for food, medicines, building materials and ornamentation. Some of these deliberate introductions, and other species that were introduced accidentally, became pests. Examples include pigs, dogs and Pacific rats (Rattus exulans). However, following European colonization from the mid 19th Century onwards, hundreds more species were introduced, many accidentally. Now, in the FSM, there are more introduced flora and higher vertebrates than native species and the nation is full of examples of alien species that have become serious pests.

153 The classic example of the impact of an introduced predator, is the brown tree snake (Boiga irregularis). In the past 40 to 50 years, this predator from the Papua region has caused the extinction of nine of eleven native species of forest birds and the apparent extinction of three skink species and two species of gecko on Guam. The snake has now spread to Saipan and there are serious fears that if the snake were to spread to the FSM it would cause similar devastation. The most widespread introduced animals currently present in the FSM are goat (Hir-

cus capra), pig (Sus Scrofa), dog (Canis familiaris), cat (Felis catus), pacific rat (Rattus exulans), norway rat (Rattus norvegicus), ship rat (Rattus rattus), and mouse (Mus musculus). Rats are particularly serious pests and consume a wide range of prey including fruits, seeds, insects, snails, lizards and birds, including eggs and nestlings. Pigs, goats and cattle cause habitat disturbance by eating tree seedlings and thereby slowing forest regeneration and reducing native plant diversity. Both dogs and cats prey on seabirds and landbirds particularly surface nesting species, while cats also prey on skinks and geckos. The impact of feral animals on bird populations received attention by Buden (2000) who compared bird surveys that were conducted in 1983 and 1994. Buden (2000) suggested that cats and rats were largely responsible for a 65-80% decline in most species of birds. Other species reported from parts of FSM include Rusa deer (Cervus timorensis), Rattus tanezumi (Flannery 1995), monitor lizard and the red junglefowl (Gallus gallus) (Buden 1996). The monitor lizard (Varanus indicus) was introduced in the hope that it would control rats. It became established and is reported to have become common and widespread but now is relatively scarce and restricted to a few areas on Pohnpei and Kosrae. The Cane Toad (Bufo marinus) is present on Pohnpei and many of the other islands in FSM. Its introduction is said to have been made in the hope of controlling the monitor lizard! It is also believed to be contributing to mosquito control in the FSM, and therefore is probably still being activity distributed.

154 Arthropods are the most numerous invasive species on islands and ants probably pose the greatest arthropod threat to conservation in the Pacific. The potentially most damaging ant invaders include the bigheaded ant Pheidole megacephala, the long legged or crazy ant Anoplolepis longipes, the Argentine ant Lineopthema humile, little fire ant Wasmannia auropunctuta and others. Characteristics of ants that make them so destructive include the formation of large, non-competitive multi-queen colonies, the ability to hitchhike readily, highly aggressive behavior and the limited number of effective control options. Introduced ants have decimated all lowland native vertebrates and invertebrates such as crabs, snails and aquatic and semi-aquatic invertebrates by predation, direct competition and by creating favorable conditions for other invasive biota.

155 Introduced land snails have decimated native snail species on many islands in the FSM. The high islands have the highest snail diversity, and are therefore at greatest risk from introduced snail species. The carnivorous rosy wolf snail, Euglandina rosea, was introduced to control another introduction, the giant African snail (Achatina fulica), but has unfortunately decimated native land snails. On Pohnpei the flatworm Platydemus manokwari was also introduced to control the Giant African snail and has also impacted native species. Neither of the two introduced biological control agents appears to be effective control of A. fulica populations.

156 Hundreds of plants have been introduced to islands of the FSM and several have become serious threats to native habitats of the nation. The impacts of invasive plants on native flora and vegetation include decreased dominance of native species, decreased overall species richness, fewer vertical tiers of plants, and a lower range of biodiversity overall. Many of the invasives are heliotropic and are more successful than native species in forest clearings from where they may spread into the forest. The spread of invasive plants has been hastened by habitat degradation on islands from typhoon damage or agricultural activity. Some of the most aggressive weedy invaders include the following:

- trees and shrubs: African tulip tree (Spathodea campanulata), wild tamarind (Leucaena leucocephala), red sandalwood tree (Adenanthera pavonina), Lantana camara, Clerodendrum spp, Chromolaena sp., and the giant sensitive plant (Mimosa invisa);
- the climbing vines Merremia peltata, Mikania micrantha and Coccinea spp;
- the grasses Pasapalum, Imperata, and Pennisetum spp;
- the creeping herbs Costus sp. and Wedelia trilobata.

157 Other potentially destructive alien invaders include introduced fishes, amphibians and crustaceans which can impact on native biodiversity by altering habitats, competing for food and living space, introducing pathogens, hybridization with native species and socio-economic and environmental impacts.

b Economic Implications

158 In early 1999 scientists from the Cornell University in the United States reported that foreign plants and animals were damaging various parts of the U.S. ecosystem to the extent of about \$123 billion a year! This cost was determined by estimating the economic consequences of irreversible ecosystem damage, loss of amenity, and mitigation measures. The national situation was deemed so serious that an Executive Order was passed by then President Clinton for the coordination and support for the control of exotic species across the country and the strengthening of quarantine protocols. Although similar figures do not exist for the FSM, the severity of the problem is probably no different (and may be much greater proportionally) than in the United States. Invasive species are costing the nation's governments, private sector, and communities millions of dollars in ecosystem damage, lost crops and livestock, and mitigation/control every year. Experience from other countries shows that so far, the record of controlling invasive plant species, whether on islands or continents, consists of few clear victories, some stalemates and many defeats. Instructive, if expensive lessons have nevertheless been learned. The cheapest and most effective control alien invasive species is to totally prevent their arrival in the FSM. For species already in the FSM, early detection of an invasive species' presence can make the difference between being able to employ feasible eradication strategies and the necessity of retreating to a defensive strategy that usually means an infinite financial commitment. Obviously, a substantial increase in resources for exclusion and early detection of exotic species would be the most profitable investment. However, if an exotic species is already widespread, then species-specific biological control is usually the only practical way of switching between defensive and offensive strategies. Therefore, the Nation's increased investment in quarantine inspection and enforcement, better screening procedures, and improving procedures and barriers to invasive species at the nation's airports and seaports is a small price to pay compared to allowing more invasive species and become established to enter the FSM.

Critical Issues for Implementation

159 For both plants and animals, the extent of an infestation, its configuration in the landscape, and the amount of resources available to managers are key issues. Over the last several years, the National and State governments have greatly improved their coordination on quarantine and invasive species control and eradication, thanks in a large part to the SPC Plant Protection Officer's dedicated efforts. National and State government leaders' recognition of the tremendous threat of invasive species has also improved considerably, although State governments must devote substantially more staff time and funding to address this key issue. Public (including private sector) awareness, although also improving still needs to be substantially improved.

d Outcome measures, justification, and linkages

160 Introduction of new alien invasive species into the FSM and transfer of existing alien species across state borders and between islands within States totally prevented between now and 2020

161 As discussed above, the introduction of alien invasive species to the FSM is probably the largest long-term threat to the nation's natural environment. The National government and State government must update or develop and implement national and state laws and screening processes for alien species introduction to minimize their impact on the nation's biodiversity, and continue to strengthen further the enforcement capacity of all laws and regulations relating to alien species introductions. The National and State governments should cooperate to further develop educational programs, including those to improve general awareness amongst the population to reduce the chance that invasive species are spread from one island to another, either accidentally or deliberately. Although much has been accomplished, the National government must continue to improve screening of all international and domestic watercraft and aircraft entering the nation's ports and traveling within the nation. The National government should also assist the States to establish and train interagency rapid response teams to deal specifically with the possible accidental introduction of the Brown Tree Snake. The National government should also consider working in partnership with the States and the private sector to improve physical barriers to alien species introduction at all ports and airports in the nation.

162 Control, and if feasible, eradication programs for top ten invasive species instituted in all states by 2008

163 Each State should establish invasive species task forces to improve coordination between groups and agencies working on invasive species and develop rapid response plans. The State task forces will also identify and evaluate invasive species present in their respective states and develop control/eradication plans for priority species. The task forces, in partnership with State government agencies, NGOs, and the private sector, will work to control and eradicate (where feasible) priority invasive species, especially those that have been introduced but have not yet become widely established. The national government should also sponsor a review of biological control agents for invasive plants in FSM, in terms of what has been introduced, and what successes (and failures) there have been, and recommend future options for the control of widespread species.

7.2.8 Strategic Goal 8: Create sustainable financing mechanisms for environmental and sustainable resource initiatives

a Analysis and justification

164 Currently, the majority of the funding support for conservation and resource management activities undertaken by the FSM and State governments, NGOs, and other entities is from external sources, mainly through the Compact Environment Sector or other bilateral sources (primarily the US, Australia, and Japanese governments). For the near term, the FSM will remain dependent on external conservation assistance, and efforts should be made to improve access to funding resources by State and local governments, community groups, and NGOs. However, both local and international donors are increasingly concerned with building increased in-country long-term conservation funding. The FSM government, in partnership with the States, needs to assess and create long-term conservation financing mechanisms to support the recurrent costs of government, community-based and NGO conservation efforts. A number of different long-term funding mechanisms have been developed in other countries that may be applicable to the FSM (Table 2).

Table 2. Examples of Conservation Finance Strategies and Tools (Source: IUCN)

Strategy	Tools	
Tax Incentives for	Income tax deductions for conservation contributions.	

Strategy	Tools
Conservation	Tax deductions for certain kinds of land use.
	Tax exemptions for conservation activities or properties devoted to conservation (such as land used for private nature reserves).
Economic Incen- tives	Allocation of tax revenue in a way that rewards conservation (e.g., to jurisdictions that have significant land in protected areas).
	Fees to support conservation (e.g., fees for the use or extraction of natural resources like minerals, timber, and water).
	Control access to shared resources (e.g., government could use a combination of regulation and limited ownership rights to provide incentives for conservation of shared resources such as fisheries).
	Trading of development permits (e.g., government can create tradable permits for development of a given area that can be used in conjunction with 'credits' for conservation activities).
	 Performance bonds (e.g., for development projects with a high risk of environmental damage, governments could require ad- vance payment of a 'bond' to pay for environmental mitigation if it is later needed).
	Eco-labeling (e.g., consumers and governments can promote 'green' products through the use of a system of labeling that allows purchasers of a given product to evaluate its impact on the environment).
	Biodiversity prospecting and other benefit-sharing mechanisms (e.g., incentives for biodiversity conservation can be created by resource use agreements, such as in the pharmaceutical industry, that provide a portion of revenues generated to be returned to the country, region, or community where that resource is found).
	Elimination of perverse incentives (e.g., subsidies or other incentives that encourage the overexploitation of resources).
	 Identification and support of economic alternatives to unsus- tainable resource use, especially in areas of growing environ- mental scarcity.
	Sustainable use of resources for local and national income generation. This can help biodiversity projects become eco- nomically viable and sustainable for local populations.
	Ecotourism
Environmental Trust Funds	Environmental trust funds or revolving funds from locally generated revenues (e.g., tourism revenues, tourism taxes and licensing fees).
Private Sector Partnerships	Eco-enterprises, concessional or contingent loans (to help start biodiversity projects), micro-credit systems, bankable commer- cial projects and venture capital funds in the biodiversity area.

Strategy	Tools
Legal Tools to Promote Private	Promoting/facilitating donations of land, money or other assets to conservation organizations.
Conservation	 Promoting conservation easements (whereby landowners retain ownership of land, but use it for limited purposes while permanently removing their right to use it for non-conservation purposes).
	 Promoting/facilitating conservation agreements (whereby land- owners enter a legal agreement to manage property according to specific conservation terms, often in exchange for payment).
	Promoting/facilitating land exchanges (whereby property owners can exchange property that is significant for conservation reasons with a different property or equal value, but lesser conservation significance).

b Economic implications

165 While the long-term strategy for funding of conservation activities in the FSM is focused on in-country sources, for the near future the nation will continue to be dependent on external financial assistance. In nearly all cases, the National and State governments need to increase budgets for natural resource management in order to deal with growing environmental threats and lack of technical capacity. The development and support of the Micronesia Conservation Trust provides a extraordinary opportunity to the nation to support private involvement in environmental protection and sustainable resource management at substantial cost savings to the government. In addition, MCT will be able to leverage additional outside funding, thus multiplying the national investment in the fund several times over. The National government should coordinate closely with the States to ensure that they are able to access external funding sources to guarantee at least a minimum level of resource management. Government support for the establishment and capacity building of NGOs and community-based organizations will also help bring in additional external conservation funding as a growing number of international donors prefer to provide funding to these groups rather than governments.

c Critical issues for implementation

166 Developing sufficient sustainable conservation finance mechanisms in the FSM will require a coordinated effort involving the National, State and local governments, NGOs and the private sector. Successful funding mechanisms will involve new non-conventional public-private partnerships, and the government may not be the controlling partner in some of these relationships. In many cases, the private sector and NGOs can do a lot more conservation work than the government can with the same amount of money, and the National and State government.

ernments must be willing to support and promote this new model of publicprivate partnership.

Outcome measures, justification, and linkages

167 Micronesia Conservation Trust (MCT) capitalized with \$20 million, and providing \$1 million/year in grants to organizations and communities throughout the FSM by 2020

168 Over the past few decades, most conservation funding in the FSM has been provided directly to the National and State governments. However, as the government role evolves away from management and enforcement towards a partnership role with the local communities and NGOs, the FSM government needs to support the development of sustainable sources of in-country conservation funding for environmental and sustainable development initiatives undertaken by local partner organizations and communities. On the recommendations from the 1999 FSM Economic Summit, a group of 18 private and public sector leaders from the four FSM states - collectively representing the national government, state and municipal government agencies and legislatures, private businesses, local NGOs, and traditional leaders - formed a steering committee in February 2001 to create the Micronesia Conservation Trust (MCT) as a sustainable source of funding for conservation activities in the FSM. In April 2002, a selection committee appointed the founding board of MCT and during the first board meetings in May 2002, a 3-year strategic and financial plan and a comprehensive fundraising plan were completed and approved.

169 The Micronesia Conservation Trust is a private corporation with a governing board that includes members from national, state, and municipal governments, NGOs, business, and academic institutions. It's goal is to mobilize funding from a variety of sources to build an endowment from which to provide long term support for sustainable natural resource management in FSM. The Trust places special emphasis on building the capacity of Micronesian organizations to design and manage conservation programs, and providing a forum to bring together people from national, state, and local governments with private enterprises and organizations to collectively address the challenges of natural resource management in FSM, form public-private partnerships, and share experiences and best practices.

170 The MCT will manage a program of grants to support the goals of FSM's National Biodiversity Strategy Action Plan. The Trust will finance innovative and effective projects that will:

- support community awareness about biodiversity conservation and related environmental education programs;
- support the conservation of priority natural biodiversity resource areas;

- strengthen the ability of communities, community organizations, government agencies, conservation and development NGOs, and other appropriate organizations to conserve FSM's biodiversity and sustainably manage its natural resources for the benefit of future generations; and
- support biodiversity conservation advocacy.

171 The National and State government need to should fund directly and assist in securing foreign assistance for the Micronesia Conservation Trust to strengthen and empower resource owners and local communities to manage their resources sustainably. The most promising opportunities for foreign assistance currently are the European Union Euro\$700,000 non-state actors fund being dedicated to conservation in the FSM, and the possible extension of the GEF Small Grants Program (SGP) funding of \$200,000/year with MCT as the incountry administering mechanism. The MCT Board will need the strong support of the National and State governments to secure a position as the administering mechanism for these funds.

172 Access to outside funding and technical assistance by the government and non-government conservation agencies increased 100% by 2010

173 The ability of government and non-government agencies and local communities to access outside technical assistance and funding is improving, but still needs developing. The National government in particular can facilitate effective access to external sources of funding (bilateral, multilateral, international) for environmental and sustainable initiatives through establishing a database of all existing and proposed environmental projects to encourage coordination and identify gaps, developing in-country capacity (government and non-government) to identify financial needs, prepare high quality funding proposals, secure funding, and manage budgets effectively, improve access to GEF funding windows for government and civil society, and granting tax-exempt status for NGOs and other financial incentives to encourage NGO fund-raising and development.

174 Sustainable conservation funding mechanisms to support conservation activities in all states implemented and covering at least 25% of the States' environmental project costs by 2010

175 With the assistance of the National governments, State governments should be encouraged to develop and implement sustainable funding mechanisms (see Table 2 above) to cover recurrent environmental management and conservation costs and leverage additional conservation funding from other sources.

7.2.9 Strategic Goal 9: Enhance and Employ In-Country Technical Capacity to Support Environmental Programs

a Analysis and justification

176 The long-term environmental management and sustainable development of the FSM depends on a strong cadre of local technical staff in the National and State governments, NGOS, and the private sector. Many opportunities for formal and informal training exist both locally and abroad through the generous support of the US, Australia, Japan, New Zealand, Israel, and other government and private donors, and these have helped slowly develop the nation's technical capacity over the last decade or so. However, a large portion of these training opportunities currently being offered are based more on donor priorities and/or existing capacity building programs than the actual needs and ability of the FSM participants. In addition, there are still too few FSM citizens pursuing university and advanced degrees in technical fields (e.g. biology, engineering, chemistry, physics, geology, hydrology, ecology, etc.). The result is that the nation is still highly dependent on outside technical experts, a strategy that is expensive, does not generally foster in-country capacity, and can result in inappropriate projects and approaches.

b Economic Implications

177 Long-term capacity building of the nation's government, NGO and private sector in environmental management and sustainable resource management will require additional commitment and investment on the part of the both the National and State governments. Much of the short-term training costs can be covered by foreign donors, but the National and State governments need to but more effort into developing individual training assessments for government and non-government technical staff and effectively transmit those needs to the donor community. Promoting technical University and graduate education can be accomplished either by expanding the amount of money available for scholarships or within existing means by adding technical environmental fields to the National and State education priorities governing the use of existing scholarship resources to environment and resource management.

c Critical Issues for Implementation

178 Current employee evaluation systems in place in the National and State governments do not adequately allow supervisors and staff to set individual development goals and identify critical training needs. These systems may need to be updated on a national level, and supervisors trained in employee development to properly address this strategy. The College of Micronesia has done an admirable job attempting to meet the nation's human development needs, but cannot continue to do so with limited funding and further budget cuts. The National and

State governments will need to prioritize support to further build COM into the country's central training and higher educational institution, or risk the College's eventual demise. Environmental health and sustainable resource management/science need to added to the National and State government's current scholarship priorities if the nation is truly serious about building internal technical capacity.

d Outcome measures, justification, and linkages

179 Staff of State government and non-government environmental organizations will be technically competent and highly capable to deal with all environmental challenges facing the nation by 2010

180 The National government, in cooperation with the States (perhaps under the auspices of the Sustainable Development Council) should conduct a national assessment of technical training needs for all existing and potential government, NGO, community, and private sector organizations involved in managing and protecting the nation's environment, and then work with local and outside donors/technical agencies to develop long-term environmental training programs targeting key needs. Whenever possible, training should be offered in-country training so that the maximum number of people can participate. Periodic follow-up training should be offered to assure that participants master the skills and knowledge. The National and State governments, in close partnership with the College of Micronesia, should build local service provider networks to provide cost-effective trainers and resource people to help build local technical capacity.

181 The College of Micronesia will emerge as the regional training "center of excellence" in environmental protection and natural resource management by 2010

182 The College of Micronesia, as the nation's only institution of higher learning, should be encouraged and provided support to develop formal (up to B.Sc. degree level) and informal conservation, resource management and environmental protection training programs.

183 Government and non-government organizations throughout the country will be linked together in strong networks and actively sharing best practices/successes, lessons learned, and opportunities for assistance by 2010

184 Due to their limited size and resource base, most NGOs in the FSM perform their work with minimal training and in relative isolation from other groups. They often require assistance with a wide range of activities including strategic planning, governance, human and financial management, resource mobilization, impact assessment and performance reporting. The Micronesia Leaders in Island Conservation (MLIC), a peer learning network for the region's con-

servation leaders, was launched by The Nature Conservancy and the Packard Foundation in January 2002. Its purpose is to leverage conservation work in Micronesia by increasing the success, effectiveness, and number of its conservation leaders in the nonprofit and government sectors. MLIC's approach is the creation of a support structure that fosters shared self-directed learning to address priority organizational and technical needs. Currently 10 leaders from State government conservation agencies and NGOs in the FSM are participating in the network. The National and State governments should assist with the expansion of this network and provide support to include more conservation leaders from the FSM. SPREP, IUCN, and The Nature Conservancy are also developing an Invasive Species network for the Pacific, and the National and State governments and NGOs should help determine the right participants for this network when it is launched early next year (2004).

185 At least 10 new FSM conservation/environment leaders are nurtured and developed by 2010

186 The nation's current environment and conservation leaders are too few and lack the necessary technical skills and abilities to take on all the nation's environmental challenges. The National and State governments, in close partnership with the College of Micronesia and other regional educational institutions, must proactively expand the pool of current conservation professionals in the FSM, and begin developing the next generation. The National and State governments should compile, evaluate and disseminate information on environmental training opportunities and scholarships and work with COM to identify suitable candidates. They should further establish and fund graduate (M.Sc. and Ph.D.) and undergraduate scholarships in environmental studies, with the requirement that students return to the FSM upon completion of their studies for a fixed period (e.g., 2-3 years of service for every year of scholarship). Last, the National and State governments, in partnership with NGOs, should establish and provide internship opportunities for promising students and recent graduates with National and State government and NGOs.

7.3 Activites and Outputs

187 In this section, a narrative description of the Environment Sector matrix is presented, indicating the linkage between the strategic goals/outcome measures and the delivery of specific outputs. The rationale of the activities and outputs is indicated through the description of linkages. This section also provides an assessment of risks and weaknesses to inform the anticipated ex post performance evaluation efforts.

- 7.3.1 Strategic Goal 1: Mainstream environmental considerations, including climate change, in national policy and planning as well as in all economic development activities
 - a Activities and outputs, linkages, and rationale
- 188 Consolidate national environmental programs under a central office/division with responsibilities including coordination of environment and natural resource conservation activities and assistance to states in addressing their environmental implementation needs
- 189 Resource management and long-term environmental health can only be achieved with the integration of environmental considerations and safeguards in economic planning and decision-making. Currently national environmental functions are located amongst several agencies, and thus environmental concerns are not always fully represented in national policy and decision-making. Combining these functions in single national office or division would greatly facilitate coordination and improve assistance to the states. Output is: all national environmental programs combined into an office/division by end 2004 and appropriate services/functions decentralized/transferred from the National to the State level.

190 Strengthen the President's Council on Environmental Management and Sustainable Development (SD Council) through stronger state and NGO representation

191 In recent years, the President's Council on Environmental Management and Sustainable Development (commonly known as the SD Council) has met irregularly and has also suffered from a lack of credibility with the States due to transportation and communication challenges of getting State representatives to actively participate. Still, an effective coordinating body connecting the national, state government and non-government environment agencies is needed. Outputs include: the conduct of quarterly meetings of the SD Council, State representatives appointed by Governors added to the SD Council membership and their participation in quarterly meetings ensured, core staff (at least one professional and one administrative) assigned full-time to SD Council activities, a sustainable indicators program developed and implemented by the FSM Environment Office/Division and the SD Council, and the program piloted in one State.

192 Develop combined State BSAP/ Sustainable Development Plans

193 Under the NBSAP Add-On project funded by the UNDP-GEF, each State will be developing State Biodiversity Strategies and Action Plans (BSAP). Outputs include: the establishment of Natural Resource Stewardship Councils in at least one state by 2005, with community representatives designated by traditional leaders and communities, biodiversity clearinghouse nodes established and sustained in all States by 2005, and communities provided support for envi-

ronmentally sustainable projects/ programs and individuals assisted with projects that utilize land and marine areas for highest value use provided in all States.

194 Improve land-use and sustainable development planning in urban centers

195 Development in the States' urban centers (Lelu/Tofol, Kolonia, Weno, and Colonia) has been haphazard at best, and increasing pressures as rural populations move to "town" for employment, education, and other opportunities currently represents a major threat to the natural environment and human health in these areas. Each State must prioritize the development and implementation of land-use and zoning master plans for the State urban centers, and then effectively enforce them. Outputs include land-use and zoning plans developed in all four urban centers (Lelu-Tofol, Kolonia, Weno, and Colonia) by 2007; GIS (Geographic Information System) centers established and competently staffed in all four states with nodes in key government offices (Lands, Planning, EPA, Forestry, and Marine) by 2006; information compiled in GIS systems categorizing land and near shore waters according to their highest value; and, all key natural resource information (digital elevation model (DEM), soils, vegetation, rivers, wildlife populations, etc.) updated and digitized for each state by 2010.

196 Promote and support sustainable land use and development planning in rural areas and outer islands

197 Municipal governments serve as the front-line decision-makers in sustainable resource management and economic development matters. Currently, the amount and target of funds given to municipal governments for infrastructure and economic development is more often the result of political concerns rather than valid development priorities. With assistance from the National and State governments, each municipality should be encouraged to develop a long-term sustainable development plans and all funding from higher levels of government should focus on the implementation of these plans. Outputs include: pilot longterm vision and sustainable development plans developed for at least 2 communities/municipalities in each state by 2006; outreach and incentive schemes to encourage communities/ municipalities to adopt environmentally friendly development developed and launched in at least one State by 2008; regular (quarterly) consultation process between state government and traditional leader councils established and implemented in Yap, Pohnpei, and Chuuk; and, at least 2 traditional sustainable resource management practices identified and promoted in each state.

198 Strengthen State Environment Protection agencies to better assess development projects, and enforce and prosecute offenders

199 State governments have all enacted legislation requiring Environmental Impact Assessments (EIA) for development activities. However, EIA legislation is only randomly enforced, and in some cases, especially for large government projects, has been waived or ignored in the past. The real costs of environmental impact must be fully assessed for all projects, private and public, and decisions made based on the real costs of the development, both current and future, in terms of it's impact on the natural environment. EPA Boards and staff, who currently review and make decisions based on EIAs, need to be fully trained in EIA, environmental protection and sustainable development. Outputs include; fully trained State EPA Boards in all four States in environmental protection and sustainable development, lawyer/prosecutors recruited and hired to support each State EPA by 2006; doubling of the EPA staff in each State designated as fulltime enforcement officers by 2005; EPA enforcement officers in all States trained in legal procedures, evidence handling, case development, etc. by 2006; EIA legislation improved and strengthened in all States by 2006; National standards for Environmental Impact Assessments & clearinghouse & standards for EIA expertise developed by 2006; roster of certified technical assistance for EIAs and other environmental planning developed by 2006; a consortium of local and outside expertise to conduct EIAs in place by 2006; successful prosecutions for pollution, illegal earthmoving/landfill, and other infringements of environmental laws and regulations improved by 50% by 2006; and, improved laboratory facilities in all four states to handle basic environmental contamination testing of water and soil by 2006.

200 Revamp existing State development review processes (including foreign investment) in all states to take into account environmental considerations and community input at all stages of project review

201 Existing State development review processes vary between States, but in general do not provide sufficient opportunity for community input. Some efforts are being made to improve the transparency of development review processes, as well as to better integrate environmental considerations, but further efforts need to be made. Output is: development review processes with strong environmental criteria and involving community input adopted in two states by 2006.

202 Draft necessary implementing legislation for international conventions to which the FSM is already a party

203 The FSM has acceded to a number of international conventions regarding the environment, however, implementation has been delayed due to the lack of national policy and legislation supporting these agreements. Output is: National legislation developed and passed to support FSM commitments under all major international environment conventions – Climate Change, Biodiversity, Desertification, Transport of Hazardous Wastes, etc. by 2008.

204 Develop and implement integrated coastal environmental and resource management plans to enhance resilience of coastal and other ecosystems to extreme hazards exacerbated by climate variability and sea level rise

205 With the exception of Kosrae, States have not yet adopted coastal resource management plans to assure coordination and successful resource management. Output is: coastal management plans developed for four state centers by 2008.

206 Integrate considerations of climate change and sea-level rise in strategic and operational (e.g. land use) planning for future development, including that related to structures, infrastructure, and critical assets supporting social and other services

207 Global climate will mean increased extreme weather events (tropical storms, typhoons, and drought), high tides, and sea-level rise. Each State must develop and implement long-term plans for dealing with the impacts of climate change, including the development of integrated environmental and resource management objectives that enhance resilience of coastal and other ecosystems to natural hazards; identification of structures, infrastructure, and ecosystems at risk and explore opportunities to protect critical assets; "climate proofing". Outputs include: existing facilities and infrastructure "climate-proofing" assessments and improvement plans developed for all States by 2010; and, 100 % of new government facilities and infrastructure designed and constructed to be "climate-proof" from 2005 onwards.

Activity	Risks/Weaknesses	Risk Management
Consolidate national environmental programs under a central of- fice/division	States may look on national consolidation as a threat to their constitutional authority	Assure that new of- fice/division's mandate focuses on "coordina- tion", and does not usurp State authority.
Strengthen the President's Council on Environmental Management and Sustainable Development (SD Council)	States may view National SD Council as a threat to their resource management authority Cost of active State participation (travel and communication) may be unwieldy	Work closely with State Governors to understand "coordination and informational sharing" mandate of SD Council and carefully select State representatives Take advantage of other national initiatives that bring together the State and National government resource management agencies to hold SD Council meetings

Activity	Risks/Weaknesses	Risk Management
Develop combined State BSAP/ Sustainable De- velopment Plans	Lead State resource management agencies have limited planning capability	Provide planning train- ing and support to State resource management agencies
Improve land-use and sustainable development planning in urban cen- ters	Current land tenure situation does not allow for easy transfer of land Current enforcement ability of States in insufficient	Encourage highly participatory methods of community land-use planning in urban centers Assist States to develop urban land-use plan incentives and enforcement
Promote and support sustainable land use and development planning in rural areas and outer islands	Lead State resource management agencies have limited planning capability Policies encouraging sustainable land use and development at municipal level are lacking State control over municipal plans and budgets is limited	Provide planning training and support to State resource management agencies Through National funding appropriations and policy, encourage sustainable land-use and development National government improves coordination with States regarding government and infrastructure funding to municipalities.
Strengthen State Envi- ronment Protection agencies	Lack of qualified staff and prospective staff Limited autonomy of State EPA offices in some States	Provide environment scholarship opportunities to agency staff and island youth Encourage States to establish and/or confirm autonomy of State EPAs
Revamp existing State development review proc- esses (including foreign investment) in all states	Government and private sector resistance to mak- ing review process more cumbersome	Integrate environmental considerations into "stream-lined" review processes
Draft necessary imple- menting legislation for international conventions to which the FSM is already a party	States maintain control over resource management within the 12 mile zone, not National Government States may not be aware of international treaty re-	Provide enhanced opportunities for State governments to understand and formally approve international conventions

Activity	Risks/Weaknesses	Risk Management
	sponsibilities	
Develop and implement integrated coastal envi- ronmental and resource management plans	Lead State resource management agencies have limited planning capability	Provide planning train- ing and support to State resource management agencies
Integrate considerations of climate change and sea-level rise in strategic and operational (e.g. land	Lead State resource management agencies have limited planning capability	Provide planning train- ing and support to State resource management agencies
use) planning for future development	Limited infrastructure budgets may limit State compliance with envi- ronmental considerations in project design	Through cost/benefit analysis assistance to States and Municipalities, demonstrate the long-term benefits of integration of climate change considerations into design and construction of public projects.

7.3.2 Strategic Goal 2: Improve and Enhance the Human Environment (Improve waste management (reduce, recycle, reuse) and pollution control)

a Activities and outputs, linkages, and rationale

208 Limit and control importation and transport of polluting and hazardous substances into and within the FSM

209 One of the largest challenges facing small island nations like the FSM is pollution, much of it imported from the outside world in the process of economic development. Import of polluting substances needs to be minimized and both the National and State governments must strengthen and enforce laws and regulations controlling transboundary pollution and transport of hazardous substances. Outputs include: National laws and regulations controlling transboundary pollution and transport of hazardous substances adopted by 2005; all imports of ozone-depleting substances (such as CFCs and including other substances not yet determined) prohibited from 2005 onwards; National and State legislation to ban the import of POPs (persistent organic pollutants including polychlorinated biphenyls (PCBs)) and other hazardous chemicals adopted and enforced by 2006; at least one state bans import of Styrofoam products and/or plastic bags by 2006; and, at least one local handicraft/industry within FSM designing and developing shopping bags (which could also be sold for tourists as souvenirs from FSM) by 2006.

210 Establish and enforce national minimum standards for pollution and hazardous wastes, including POPS

211 POPs (persistent organic pollutants) offer a particularly acute danger to the FSM's human health and environment. The FSM government has not yet ratified the Stockholm Convention, which requires actions at the national level aimed at managing and eliminating POPs. Given that POPs are used and emitted in a variety of economic sectors, including industry, manufacturing and agriculture, the development of appropriate responses is a complex undertaking, and will require a comprehensive approach and actions at various levels. Outputs include: National Implementation Plan for POPs completed by 2005; central temporary storage site for hazardous wastes designated and all hazardous wastes stored until they can be properly disposed of in all States; all existing POPs in the FSM identified and safely disposed of (through AusAID assistance program) by 2006; minimum pollution standards for imported vehicles adopted and enforced by 2006; and import of all motor vehicles manufactured before 1996 prohibited (due to global ban on CFCs).

212 Assess contaminated (e.g., oil, heavy metals, PCBs) lands in all States and undertake clean up operations

213 A number of contaminated sites exist in the FSM, most dating from the Trust Territory administration. These sites pose continued human health and environmental danger. Outputs include: inventory and assessment of contaminated lands in all States completed by 2005; and, clean up plans developed and implementation begun by 2006.

214 Promote the development and effective use of waste reduction initiatives, solid waste collection systems, and recycling programs for aluminum, glass, and paper in all state centers

215 State governments need to establish and encourage waste reduction initiatives and the effective use of recycling programs for aluminum, glass, and paper in all state centers, as well as supporting the development of other alternatives, e.g., composting of organic wastes, etc. Outputs include: develop Integrated Waste Management Plan focusing on source reduction, reuse, recycling, composting, land filling, incineration, and disposal of hazardous wastes all States by 2010; waste management and reduction campaigns conducted in all States by 2006; hazardous waste (waste oil, batteries, etc.) collection services established in one State by 2006; solid waste collection services serving 75 % of the population in all State urban centers by 2006; 50% of solid waste collection services privately-managed by 2008; aluminum recycling centers established and operating in at least two states by 2006; glass recycling centers established and operating in at least two states by 2006; 100% of government office aluminum, glass,

and paper wastes are recycled by 2008; and, 100% of imported cans recycled nation-wide by 2006.

216 Designate, establish and/or upgrade, and manage easily accessible safe waste disposal sites on all populated islands, and encourage their effective use

217 Waste disposal sites need to be established and improved in both state centers and outer islands. Outputs include: all four state urban centers will improve or establish and properly manage a designated waste disposal site (separating hazardous wastes, plastic or other impervious liner, composting, covering with soil, etc) by 2010; 50 % of the nation's outlying municipalities will improve or establish and properly manage a designated waste disposal site (separating hazardous wastes, plastic or other impervious liner, composting, covering with soil, etc) by 2020; and, private companies will manage 50% of waste disposal sites (SGOV, SLEG, SEPA, MG

218 Remove and/or recycle abandoned cars and other bulky solid wastes (computers, air conditioners, stereos, microwaves, washing machines, and other items with electronic components that require special disposal) on all islands

219 The growing cash economy and exposure to western commodities has led to a great increase to abandoned vehicles and other e-wastes. These bulky, non-biodegradable items threaten to overwhelm solid waste collection and disposal efforts, especially in the state urban centers. Outputs include: at least two States launch a fund financed by a tax on vehicle importers to finance the cost of removing abandoned vehicles by 2006; all abandoned vehicles will be removed from public areas and safely disposed of (including use as artificial reefs) in all States by 2008; and, tax incentive created to encourage local or foreign entrepreneur to crush vehicles and export them to Asia for the scrap metal market.

220 Improve sewage treatment facilities in main population centers and resite sewage discharge locations outside the barrier reefs to limit negative impacts on the marine environment in all state centers

221 Currently, human sewage is presents a major environmental and public health problem, especially in the nation's urban centers. Outputs include: increase the number of homes with connection to sewage system in urban centers to 50 % by 2006; and, reduce to 0% the amount of untreated sewage discharge into lagoons in all States by 2008.

222 Develop and implement urban storm water management plans in urban centers

223 High rainfall coupled with large hard-surfaced landscapes leads to high run-off rates and pollution in the nation's urban centers, posing both an envi-

ronmental and health hazard. Output is: storm water devices in urban centers (e.g., litter traps, sediment traps, oil/water separators) installed and/or improved in all State centers by 2008.

224 Provide and encourage the use of sanitary sewage disposal in all rural areas (septic tanks, water seal toilets, composting toilets, etc.)

225 With a few exceptions, sanitary facilities are both substandard and limited in both urban and rural areas within the nation. Output is: 100% of households in all States will have access to some form of sanitary latrines (temporary or permanent) by 2010.

226 Improve management of surface catchments and aquifers to meet projected water supply demands, including educational programs for landowners and other key stakeholders

227 A clean water supply is a basic need for a healthy community, but many areas of the FSM have not yet attained this basic standard of living. The first step in a clean water supply is source water protection and management. Outputs include: limited-access Watershed Forest Reserves established above 50 % of village water systems catchments on high islands by 2010; increase to 50 % the number of households connected to a safe water supply system in all States by 2006; decrease by 50 % levels of contamination of groundwater aquifers and surface waters by 2010; watershed management fund from public water system revenues established in at least one state by 2006; and, in partnership with USGS and WERI, reestablish and monitor a system of stream gauges in all four States by 2006.

228 Continue to improve and extend centralized water systems in urban centers, and improve community water systems in rural areas to assure access to safe drinking water supplies

229 Waterborne disease continues to be the major public health challenge in the nation. Clean water must be extended to all of the nation's urban and rural communities. Outputs include: public water systems extended to 250 additional households in each main island by 2006; water subsidies eliminated in all States by 2010; 80 % of FSM rural households have access to safe drinking water (including roof catchments, sand filtering, and other low-cost, low tech methods) by 2010; and, low tech solar desalination plants are established on at least 4 populated outer islands in each FSM State by 2008.

230 Increase preparedness and skills/capacity of relevant government and private sector agencies to rapidly respond to pollution emergencies (e.g., oil spills, ship groundings, natural disasters, etc)

231 Pollution emergencies, especially oil spills, represent a major potential threat to each island's environment and public health. Outputs include: at least

two states will establish and train an inter-agency pollution emergency rapid response team by 2006; develop and implement legislation for the prevention, control and removal of oil spills in all States by 2008; oil spill contingency plans developed and implemented in all States by 2006; national response plan to large oil spill events developed by 2006; and, develop methods of waste/spilled oil collection and disposal in all States by 2008.

Activity	Risks/Weaknesses	Risk Management
Limit and control importa- tion and transport of pollut- ing and hazardous sub- stances	 Lack of enforcement ability by key agencies Lacks of support and/or understanding of issues by private businesses 	Improve National laws and regulations controlling trans- boundary pollution and transport of hazardous sub- stances
		Involve private busi- ness in law devel- opment and en- forcement
Establish and enforce na- tional minimum standards for pollution and hazardous wastes	 Lack of enforcement ability by key agencies Lacks of support and/or understanding of issues by private businesses 	Complete and implement National Implementation Plan for POPs with private sector participation
Assess contaminated lands in all States and undertake clean up operations	 Lack of capacity by key government agencies Limited financial re- sources for expensive clean-up operations 	Access assistance and training from Australia and US sources
Promote the development and effective use of waste reduction initiatives, solid waste collection systems, and recycling programs	 Lack of profitable market for recycled materials Lack of public support 	Develop Integrated Waste Management Plans in each State Subsidize recycling efforts to make them profitable
Designate, establish and/or upgrade, and manage easily accessible safe waste dis- posal sites on all populated islands	Lack of suitable sites Lack of public support for establishment of new waste disposal sites	Work closely with States to identify best sites for waste disposal Build awareness of links between wastes and public health
Remove and/or recycle	Lack of profitable market	States launch a fund

Activity	Risks/Weaknesses	Risk Management
abandoned cars and other bulky solid wastes on all islands	for recycled materials Lack of local capacity to deal with vehicles and other bulky e-waste.	financed by a tax on vehicle and elec- tronic appliance im- porters to finance the cost of removing abandoned vehicles and appliances
Improve sewage treatment facilities in main population centers and resite sewage discharge locations outside the barrier reefs	Lack of funding to under- take needed improve- ments to current sewage disposal systems	Work with foreign donors (e.g., US, Japan, EU, Austra- lia) to prioritize and fund improvements in urban sewage systems
Develop and implement urban storm water manage- ment plans in urban centers	Lack of funding to under- take needed improve- ments to current storm water management sys- tems	Work with foreign donors (e.g., US, Japan, EU, Austra- lia) to prioritize and fund improvements in storm water man- agement
Provide and encourage the use of sanitary sewage disposal in all rural areas	Lack of funding to im- prove sanitary sewage disposal systems	Work with foreign donors (e.g., US, Japan, EU, Austra- lia) to prioritize and fund rural sewage disposal
Improve management of surface catchments and aquifers to meet projected water supply demands	Lack of public support to set aside watershed catchments	Establish watershed management fund from public water system revenues Build awareness of links between watershed management and water quality/public health
Continue to improve and extend centralized water systems in urban centers, and improve community water systems in rural areas	Lack of funding to improve and extend water systems Public unwilling to pay for water	Work with foreign donors (e.g., US, Japan, EU, Austra- lia) to prioritize and fund water supply improvements
Increase preparedness and skills/capacity of relevant government and private sector agencies to rapidly respond to pollution emergencies	Lack of capacity by key agencies to support rapid response team	Assess outside training and support (including private companies like Mobil and Shell).

7.3.3 Strategic Goal 3: Reduce energy use and convert to renewable energy sources/Minimize emission of greenhouse gases

Activities and outputs, linkages, and rationale

232 Decrease the use of imported petroleum fuels through improved energy efficiency, energy conservation, elimination of energy subsidies, and public education

233 Although the FSM is not a large per capita consumer of petroleum products compared to more industrialized nations, petroleum imports represent one of the largest government expenditures on all islands. Efforts must be made to decrease the nation's dependency on expensive imported petroleum products. Outputs include: 100% of all housing development funded by the US or FSM and State Governments shall meet minimum US standards for energy efficiency from 2006 onwards; all electricity subsidies in the FSM eliminated by 2010; all states fully enforce new pollution standards through existing vehicle inspection and maintenance programs from 2006 onwards; 100% public and private motor vehicles in the FSM will meet minimum efficiency and pollution standards by 2006; and, 100% of energy generation in the FSM will meet USEPA and other relevant standards by 2008 (SDEA, SPUC)

234 Provide public transportation in State population centers and discourage private vehicle use, including through educational programs

235 Private vehicle ownership and use has skyrocketed in recent years, fueled by Japan's practice of dumping used cars in Pacific island nations. In urban centers, roads are increasingly congested, public health is declining, and petroleum use continues to increase steadily. Public transportation is needed especially in urban centers and their environs. Outputs include; at least one state will establish a public transportation system on the main island which will be regularly used by at least 30% of the island's population by 2010; vehicle ownership per capita will decrease by 50% by 2010; and cycling paths will be established in one urban center by 2008.

236 Increase the use of solar power, wind, and/or solar/wind hybrids for alternative power generation schemes, especially in rural and remote communities, through incentives and public education

237 Alternative energies offer a viable alternative to expensive and environmentally damaging petroleum-based technologies. The nation needs to increase their investment in alternative energy generation. Output is: solar and/or wind power systems will be established and operating on at least two outer islands in each state by 2008 (EU-funded energy project).

238 Provide incentives for the use of alternative and renewable energy sources and energy efficiency mechanisms in government and private sector buildings and development projects

239 Proper building design, taking into account the latest developments in tropical architecture, could substantially reduce the use of petroleum-generated energy. Outputs include: 100% of new public buildings will be energy efficient from 2005 onwards; new public buildings will integrate at least one alternative energy source (solar, wind, hydro-electric) to generate at least 50 % of energy needs; and, 25 % of existing public buildings will be refurbished with energy efficiency mechanisms by 2010.

240 Undertake planning, regulatory, educational and other initiatives that will ensure the preservation of remaining native forests and agroforests and ensure reforestation for watershed protection and as a carbon sink

241 Avoiding deforestation and preserving existing forests as a carbon sink is one important way the FSM can contribute to decreasing global warming and climate change. Outputs include: National government, in concurrence with all States, adopts policy of no net loss of forests and mangroves by 2006; limited-access Watershed Forest Reserves established above 50 % of village water system catchments on high islands by 2010; reforestation will be undertaken successfully in at least 50% of the nation's degraded watershed areas by 2020; and, ban or gradual ban of use of mangroves for fuel wood in all States adopted and enforced by 2006.

242 Undertake educational and other initiatives that will prevent the degradation and destruction of coral reefs

243 Besides their substantial contribution to ecosystem protection and the subsistence and cash economy, the Nation's coral reefs represent a large carbon sink. Protection will further contribute to decreasing global warming and climate change. Output is: the National government, in concurrence with all States, adopts policy of no net loss of coral reefs by 2006.

244 Upgrade local capacity to carry out operation and maintenance of all renewable energy hardware

245 Renewable energy generation will demand new skills and competencies amongst the nation's workforce. Output is: local utilities and private sector staff in all States able to operate and maintain renewable energy hardware by 2008.

Activity	Risks/Weaknesses	Risk Management
Decrease the use of imported petroleum fuels through	Lack of public support for enerav efficiency and de-	Build awareness of linkages between

Activity	Risks/Weaknesses	Risk Management
improved energy efficiency, energy conservation, elimi- nation of energy subsidies, and public education	creased dependence on petroleum fuels	petroleum-based energy use, national economy and global warming.
Provide public transporta- tion in State population centers and discourage private vehicle use	Lack of public support and use of public trans- portation	Establish tax on vehicle importers to finance the cost of removing aban- doned vehicles
		Cut all fuel subsidies so that consumers pay the full price of generated power and fuel
Increase the use of solar power, wind, and/or solar/wind hybrids for alternative power generation schemes through incentives and public education	Expense of adopting alternative energy tech- nologies will discourage private and public entities from adopting them.	Provide cash and other incentives for the use of alternative and renewable energy sources and energy efficiency mechanisms
Provide incentives for the use of alternative and re- newable energy sources and energy efficiency mecha- nisms in government and private sector buildings and development projects	Expense of adopting alternative energy tech- nologies will discourage private and public entities from adopting them.	Provide cash and other incentives for the use of alternative and renewable energy sources and energy efficiency mechanisms
Undertake planning, regula- tory, educational and other initiatives that will ensure the preservation of remain- ing native forests and agro- forests and ensure reforesta- tion for watershed protection and as a carbon sink	Lack of public support to set aside forests as pro- tected areas, especially on private lands	Provide financial incentives (e.g., tax breaks, preferred government services, etc.) for the conservation use of private lands
Undertake educational and other initiatives that will prevent the degradation and destruction of coral reefs	Lack of public support for marine conservation	Establish a commu- nity-led national sys- tem of marine pro- tected areas
		Involve community in monitoring of fish re- covery in protected areas
Upgrade local capacity to carry out operation and	Lack of capacity to main- tain and operate alterna-	Assess outside assistance to train in-

Activity	Risks/Weaknesses	Risk Management
maintenance of all renew- able energy hardware	tive energy technologies	country staff in alter- native energy tech- nologies

7.3.4 Strategic Goal 4: Enhance the benefits of the sustainable use of the FSM's genetic resources and ensure benefits derived are fairly shared amongst stakeholders

a Activities and outputs, linkages, and rationale

246 Draft and adopt mechanisms and legal framework regulating access to traditional knowledge, other forms of intellectual property, and genetic resources in the FSM so that the value of these resources is preserved for FSM citizens

247 The FSM's biodiversity and the traditional knowledge surrounding it are now recognized as a valuable and unique resource. Currently, the FSM does not have specific legislation specifically addressing ABS (access and benefit sharing), however several existing laws pertain to genetic resources and traditional knowledge. The FSM has already been subject to exploitation of its genetic resources and traditional knowledge, so this is an urgent issue for the Nation. Outputs include: National legislation adopted protecting the FSM's biodiversity and intellectual property and ensuring equitable sharing of benefits from any utilization, including enforcement protocol and penalties, by 2006; National bioprospecting coordinating expert panel established by 2005; process for the collection of biological specimens needed for scientific studies which complies with international regulations on the transport of biological specimens established by 2005; and, a model genetic access agreement negotiated and completed between the National and at least one State government and one private sector firm by 2008.

248 Encourage and assist individuals, families and communities to secure their traditional knowledge and enhance it where appropriate

249 The need to fully document the FSM's traditional knowledge and practices has been emphasized many times, however to date, only limited progress has been made. The strong cultural value and difficulty of collecting traditional knowledge and the fear that documenting this knowledge makes it easier to exploit are two reasons for the lack of progress so far. Still, every day, FSM elders die and take another bit of the Nation's collective traditional knowledge with them. To assure that the this valuable resource is preserved for the benefit of future generations and the world, the National and State Governments should allocate funding to collect traditional knowledge in whatever form is appropriate in some central location. Outputs include: all State Foresters, and State Marine

Resources and Agriculture Chiefs trained in ethnobotany and genetic access and benefit sharing by 2006; capacity of local staff in archaeology, museum/ curator, and other indigenous knowledge-based disciplines improved in all States by 2008; traditional knowledge databases established and maintained in all states using World Intellectual Property Organization's (WIPO) recommended protocol by 2006; and; classes/training in ethnobotany and related subjects offered at College of Micronesia campuses in 2 States by 2006.

250 Document, improve, and enforce the current national research permitting process to assure that intellectual property rights and genetic resources are protected

251 Currently, the FSM National Agriculture Unit of the Department of Economic Affairs issues permits for bringing plants, animals and plant products and animal products from outside FSM. The FSM States issue permits for interstate traffic. The Agriculture Unit also collaborates with the FSM National History & Archives Unit of the Department of Health, Education and Social Affairs in the research application process, especially if related to agriculture. Researchers apply for entry permits from FSM Immigration and include a research proposal that is reviewed by the Unit with a resulting recommendation to be returned to Immigration. In the past, most foreign researchers have worked in the areas of archeology, geology, geography and the social sciences. Recently, however, researchers in the life sciences have become more prevalent. The current research proposal load has begun to overwhelm the Unit, and this has led to increased collaboration with Department of Economic Affairs and the State governments to review proposals. There are a lot of gaps in the current research approval process, and issues include the lack of expertise to review proposals and a lack of coordination between States and the National Government, exacerbated by the fact that visitors can come for 30 days without a permit. Outputs include:100% of research on the FSM's traditional knowledge and genetic resources is approved and monitored by the FSM National Government and respects the nation's policies in this regard by 2008; develop and implement a scientific code of conduct for all biodiversity and bioprospecting research in the FSM; research permit process that includes provisions for hiring local associates in order to assure the local capacity is developed and supported in conjunction with research on genetic resources and traditional knowledge (NBSAP) for permitting adopted by 2008.

Activity	Risks/Weaknesses	Risk Management
Draft and adopt legal framework regulating access to traditional knowledge, other forms of intellectual	Lack of expertise by local resource management agencies	Assess outside assistance (e.g., SPREP, UNDP-GEF) to train local

Activity	Risks/Weaknesses	Risk Management
property, and genetic resources in the FSM		staff and assist in drafting legislation.
Encourage and assist individuals, families and communities to secure their traditional knowledge and enhance it where appropriate	Lack of cooperation/desire from local experts for documenting traditional knowledge	Train government resource managers in ethnobotany and genetic access and benefit sharing Establish and maintain traditional knowledge databases in all states using World Intellectual Property Organization's (WIPO) recommended protocol Offer classes/training in ethnobotany and related subjects offered at College of Micronesia campuses
Document, improve, and enforce the current national research permitting process to assure that intellectual property rights and genetic resources are protected	Lack of local expertise to review research proposals Lack of coordination between States and the National Government	Establish a National bio-prospecting coordinating expert panel Develop and implement a scientific code of conduct for all biodiversity and bioprospecting research in the FSM Develop a research permit process that involves both State and National input

- 7.3.5 Strategic Goal 5: Manage and Protect the Nation's Natural Environment/Protect, conserve, and sustainably manage a full and functional representation of the FSM's marine, freshwater, and terrestrial ecosystems
 - a Activities and outputs, linkages, and rationale
- 252 Assist states, municipalities and communities to identify high priority "areas of biological significance", and support the development and implementation of conservation management plans for these areas

253 The continued health and functioning of the FSM's entire natural environment is imperative to the nation's sustainable future, and policy, planning and economic development efforts should focus on maintaining the nation's entire natural environment as well as rehabilitating areas that have been degraded in the past. As part of the recent NBSAP process, an ecoregional plan entitled "Blueprint for Conserving the Biodiversity of the Federated States of Micronesia" (The Nature Conservancy 2003) was completed by The Nature Conservancy in partnership with the National and State Governments, UNDP-GEF, USDA Forest Service, and the USDOI Office of Insular Affairs. The blueprint identifies and prioritizes 130 areas of biodiversity significance (ABS) in the FSM. These ABS contain the FSM's best remaining biodiversity and the critical habitats that sustain these island ecosystems, and are prime candidates for establishment and management as protected areas. Nearly all are highly threatened by overharvesting, destructive infrastructure projects, or invasive species. Addressing these threats depends on increasing awareness and action by the growing populations of Micronesians dependent on these resources. Outputs include: genetic resources, natural communities & ecosystems inventoried and support provided for state biodiversity nodes by 2006; 50% of government and NGO conservation area managers are trained in, adopt, and apply conservation area planning methods for their specific sites by 2008; 50% of the FSM municipalities legally designate at least one marine or terrestrial site (using the ABS sites identified in ecoregional plan developed under the NBSAP) as a conservation area by 2010; limited-access Watershed Forest Reserves established above 50% of village water system catchments on high islands by 2010; and; deforestation/agricultural land conversion rates will decrease by at least 50% on all high islands in the FSM by 2006.

254 Establish and enforce biologically connected marine protected area networks in all four states with the goal of protecting at least 20% of the FSM's reefs in no-take reserves

255 Experience from other countries has shown that in order to maintain the nation's biodiversity and long-term ecosystem health, the FSM also needs to move forward with the development of a national system of community-led marine, freshwater, and terrestrial conservation areas where special measures are enforced to conserve biological diversity. Current marine protected areas in the FSM, where they exist, are generally not well enforced and their effectiveness (i.e. representativeness and functionality) is generally unknown. Outputs include: rapid marine resource assessments carried out in 100% of the high island reefs and 25% of the outer island reefs by 2010; biological reef connectivity studies undertaken and completed in at least two states by 2010; reef resilience to climate change-caused coral bleaching will be integrated into the MPA network design process in at least one state 2010; at least two Municipal governments in each state will successfully manage and enforce a conservation area in

their locale, in partnership with traditional leaders and State government by 2008; successful prosecutions for infringement of laws designating and managing of conservation areas will be increased by 100 % by 2006.

256 Develop and implement programs/policies that recognize, promote, and support community ownership and stewardship of natural resources and support for natural areas in all states, including environmentally compatible economic development enterprises

257 The Nation's local communities and their leaders, by virtue of their de facto ownership and/or traditional stewardship of natural resources, must be the central stakeholder in any attempt to protect and improve the FSM' natural environment. Efforts to educate and support communities in natural resource conservation and sustainable use need to be greatly increased. Outputs include: with National government assistance, State BSAPS completed for all four states and implementation begun; sustainable timber harvest determined for all FSM forests types and unsustainable logging and logging which deprives the culture of the natural resources it needs for its materials culture (traditional houses, canoes, etc.) controlled in all States by 2008; policies encouraging & supporting in-situ conservation of traditional agrobiodiversity in support of land use sustainability and nutritional health adopted in all States by 2008; analyses of nutrient content of traditional crops compiled and disseminated in all States by 2006; a law recognizing and supporting community-led conservation area designation and management is adopted by at least one State by 2006; 100 % conservation area management plans will integrate at least one traditional resource management practice (NDEA, SMRD, COM, MG, NGO); at least one successful ecotourism enterprise is established for 50 % of all conservation areas in the FSM by 2010; and; appropriate mariculture enterprises (sponges, giant clams, pearls, etc.) are successfully established at 50 % of the marine protected areas (MPAs) by 2010.

258 Limit the use of destructive fishing technology, e.g., monofiliment gill net, underwater flashlights, SCUBA, fish poisons, etc.

259 The introduction of modern fishing technology and the commercialization of in-shore marine resources has had a major impact on fisheries health in the FSM. All States need to control fishing technology to ensure the long-term sustainability of their inshore resources. Outputs include: prohibit the export of monofilament gill nets with gaps less than three inches in width by 2006; all States prohibit fishing with SCUBA by 2006; at least two states prohibit night fishing with flashlights by 2008; and; harvest and transport of threatened and endangered species by non-traditional means prohibited in all States by 2010.

260 Identify key ecological indicators to monitor trends and conditions of marine and terrestrial biota, and regularly assess their status, and set up

community-based resource monitoring systems and, through education and training, assist communities to use this information for decision-making

261 Monitoring is an integral component of natural resource management, and State governments and NGOs have implemented a number of marine and terrestrial monitoring programs. However, methodologies used are numerous and often non-compatible. Further, monitoring results and trends do not reach the key decision-makers on each island and State. The National government should work closely with the State governments, College of Micronesia, and NGOs to identify key ecological indicators to monitor trends and conditions of marine and terrestrial biota, and regularly assess their status. Outputs include: standard fish and coral monitoring protocols established by the National and State governments and monitoring teams trained in all States by 2006; state fisheries agencies, in partnership with NGOs and Municipal governments implement standard state-wide fish and coral monitoring program by 2007; with support from the national government, each state update vegetation maps by 2008 using aerial or satellite photography and repeat no less than once very five years afterwards; with support of the National government, each State will undertake new forest bird and fruit bat surveys by 2008, and repeat no less than once every five years afterwards; and; establish and manage a community-based monitoring network in at least one State by 2006.

262 Identify endangered or threatened species in the FSM, promote research on their biology, and establish species recovery plans

263 The preservation of all species is given high priority by FSM's NBSAP, for economic as well as cultural reasons. Many of the FSM's species have not been fully studied, and little is known about their biology, key threats, and management needs. The National government, in partnership with the States, should take the lead in the establishing and periodically updating a national biodiversity database, followed by an update the national endangered species law, which is highly outdated and mostly ignored. Outputs include: FSM Endangered species law is updated and adopted by 2007; keystone species, natural communities and ecosystem processes identified, linkages documented, and their condition and trends monitored in all States by 2008; and; develop and implement species recovery plans for at least one threatened or endangered species in each state by 2006 (in partnership with US Fish and Wildlife Service).

Activity	Risks/Weaknesses	Risk Management
Assist states, municipalities and communities to identify high priority "areas of bio- logical significance", and	Lack of technical exper- tise amongst key re- source management agencies	Work with States and NGOs to update the 2002 "Blueprint" document
support the development and		 Access outside sup-

J	П	T	v

Activity	Risks/Weaknesses	Risk Management
implementation of conserva- tion management plans for these areas		port and training in Conservation Area Planning (e.g., The Nature Conservancy)
Establish and enforce biologically connected marine protected area networks in all four states with the goal of protecting at least 20% of the FSM's reefs in no-take reserves	Lack of community sup- port and participation	Develop National standards and support for the establishment of marine protected areas Provide financial and other incentives to communities establishing and supporting marine protected areas
Develop and implement programs/policies that recognize, promote, and support community ownership and stewardship of natural resources and support for natural areas in all states, including environmentally compatible economic development enterprises	Lack of community awareness and support Lack of environmentally sustainable economic development opportunities	Complete State BSAPs using highly participatory process Provide support to community mariculture and ecotourism activities in MPA communities
Limit the use of destructive fishing technology	Lack of support amongst local fisherpeople	Build awareness of linkages between improved technology and declining inshore fishery resources
Identify key ecological indi- cators to monitor trends and conditions of marine and terrestrial biota, and regu- larly assess their status, and set up community-based resource monitoring systems and, through education and training, assist communities to use this information for decision-making	Lack of expertise by local resource management agencies	Access expertise and training in re- source monitoring from outside organi- zations (e.g., SPREP, LMMA, etc.)
Identify endangered or threatened species in the FSM, promote research on their biology, and establish species recovery plans	Lack of expertise by local resource management agencies	Access outside assistance and training to better understand keystone species, natural communities and ecosystem processes and develop species recovery plans (e.g., US Fish and Wildlife

Activity	Risks/Weaknesses	Risk Management
		Service, University if
		Hawaii, University of
		Guam)

- 7.3.6 Strategic Goal 6: Improve environmental awareness and education and increase involvement of citizenry of the FSM in conserving their country's natural resources
 - a Activities and outputs, linkages, and rationale
- 264 Bring together educators, representatives of State and National Departments of Education and local and outside environmental experts to develop an appropriate environmental curriculum for the nation's schools

265 The children of today are the decision-makers of tomorrow, and children must be exposed to and informed about environmental issues from their earliest years. Some environmental education is already included in primary and secondary education curricula within such broad subjects as geography and science. The National and State governments should work to bring together educators, representatives of State and National Departments of Education and local NGO and outside environmental experts to develop an appropriate environmental curriculum for the nation's schools. Output is: a nation-wide environmental curriculum featuring the FSM's unique environment and biodiversity will be developed and implemented in schools throughout the FSM by 2010.

266 Implement public educational programs that support good practices in environmental health, sustainable resource management, waste management and disposal, awareness and understanding of the consequences of natural hazards including those related to extreme weather events, climate variability and change and sea-level rise

267 The State governments already have a number of community educators/extension agents working in such agencies as EPA, Health, Agriculture, Forestry, and Marine Resources. In addition, there are a number of other institutions in the FSM that are playing and could expand their role in community environmental education. For example, NGOs are contributing greatly to the building of public awareness and involvement in all States. The churches are also playing a growing role in shaping community attitudes on the environment and the use of natural resources. The State governments should coordinate more closely NGOs, churches and other groups to implement public educational programs that support good practices in environmental health, sustainable resource management, and waste management and disposal. In addition, all parties should work harder to educate and involve the FSM's traditional leadership in conservation activities in States where traditional leaders still exist. Outputs include: carry out at least one conservation public awareness campaign in each state each

year; carry out at least one climate change public awareness campaign in each state each year; establish and implement regular (quarterly) consultation process between state government resource managers and traditional leader councils in Yap, Pohnpei, and Chuuk State by 2006; and; National government, in partnership with the State governments, produce annual "state of the environment" report and present to traditional leaders councils from 2008 onwards.

268 Improve the dissemination and sharing of information on biodiversity, climate change, and other environmental information and activities between different levels of government and with the general public

269 Although information sharing in the FSM continues to improve as technologies such as the Internet, telephone, and television are adopted by and extended to a larger section of the nation's population, more can be done. The National government should take the lead in developing a national clearinghouse mechanism (computer nodes, web page, etc.) with nodes in key locations in the States for disseminating and sharing biodiversity, climate change, and other environmental information and activities. The National and State government should also work with schools and private libraries to expand existing public library resource materials on environmental issues, for example, expand COM resource materials and collections on environmental issues. In addition, the National government should identify training opportunities and work closely with the States and NGOs to increase local capacity to convert technical environmental information into easily understandable materials that can be widely disseminated. Outputs include; clearinghouse mechanism (state computer nodes, web page, etc.) with easily-accessible state nodes successfully implemented, regularly updated, and used regularly by the public by 2006; environmental reference collection established and/or improved in major State and National environmental agencies (e.g. EPA, MRMD) by 2006; College of Micronesia campus library environmental literature collections are improved and updated (measured by a doubling of library resources) by 2010; and; at least one information dissemination specialist in each state will be trained and supported by 2008 (in partnership with SPREP).

Activity	Risks/Weaknesses	Risk Management
Develop an appropriate environmental curriculum for the nation's schools	Lack of expertise by local resource management agencies	Bring together educators, representatives of State and National Departments of Education and local NGO and outside environmental experts to develop an appro-

Activity	Risks/Weaknesses	Risk Management
		priate environmental curriculum
Implement public educational programs that support good practices in environmental health, sustainable resource management, waste management and disposal, awareness and understanding of the consequences of natural hazards climate change and sea-level rise	Lack of expertise by local resource management agencies	Improve coordination between all resource managers and edu- cators to deliver key environmental mes- sages to general public
Improve the dissemination and sharing of information on biodiversity, climate change, and other environmental information and activities between different levels of government and with the general public	Lack of expertise by local resource management agencies	Develop national information clearing- house mechanism with nodes in each State

- 7.3.7 Strategic Goal 7: Establish effective biosecurity (border control, quarantine and eradication) programs to effectively protect the FSM's biodiversity from impacts of alien invasive species
 - a Activities and outputs, linkages, and rationale
- 270 Develop and implement national and state laws and screening processes and improve screening at all ports for alien species introduction and genetically modified organisms (GMOs) to minimize their impact on the nation's biodiversity
- 271 The introduction of alien invasive species to the FSM is the biggest long-term threat to the nation's natural environment. The National government and State government must update or develop and implement national and state laws and screening processes for alien species introduction to minimize their impact on the nation's biodiversity, and continue to strengthen further the enforcement capacity of all laws and regulations relating to alien species introductions. Outputs include: National alien species screening process in place in all FSM ports of entry by 2006; National GMO policy adopted and enforced by 2008; increase quarantine staff at all ports of entry by 50% by 2008; deputization program for State resource management personnel to augment existing quarantine officers instituted in all States by 2006; and; legislation to require ships to empty ballast water at sea before entering FSM waters or to take other appropriate precautions to prevent the introduction of invasive and potentially harmful marine organisms instituted nationally by 2005.

272 Through training and education, further develop national enforcement capacity of all laws and regulations relating to alien species introductions

273 Much has been done to improve the enforcement capacity of the FSM n the area of alien species introduction. However, more remains to be accomplished. Outputs include: penalties on National quarantine laws increased by 100% to further discourage violations; and; increase prosecutions for violation of quarantine laws by 100% by 2008.

274 Improve general awareness amongst the population to reduce the chance that invasive species are accidentally or deliberately spread around FSM

275 The National and State governments should cooperate to further develop educational programs, including those to improve general awareness amongst the population to reduce the chance that invasive species are spread from one island to another, either accidentally or deliberately. Output is: carry out a public awareness campaign to women's' groups in all States on the threat of invasive species/diseases through the deliberate introduction of ornamental plants by 2006.

276 Increase local capacity to address biosecurity, particularly the ability at the State level to identify, control and eradicate alien invasive species

277 Since invasive species eradication and control are basically State responsibilities, capacity to address issues must be improved substantially at that level. Output is: at least 2 permanent positions focusing on invasive species control established and hired in each state by 2006.

278 Develop and implement effective quarantine and inspection protocols and, where possible, physical barriers to alien species introduction (lighting, fencing, traps, dogs, etc.) at all ports and airports in the nation

279 The most efficient and economically sound method for controlling invasive species is to never allow them to enter the country in the first place. National government must work in partnership with the States and the private sector to improve physical barriers to alien species introduction at all ports and airports in the nation. Outputs include: develop and train an interagency Brown Tree Snake Rapid Response Force on all islands with ports of entry by 2006 (in partnership with the USGS); institute a policy that all arriving containers, vehicles and other cargo from Guam or the CNMI must be quarantined for three days by 2006; and; with USGS and USFWS assistance, improve one State port/airport to be Brown Tree Snake-proof by 2008.

280 Establish invasive species task forces in each state to improve coordination between groups working on invasive species to identify and evaluate

species present in the FSM and develop control/eradication plans for priority species, including rapid response plans for each state

281 Because of the interdisciplinary nature of invasive species control practices, inter-agency coordination is imperative for success. Outputs include: all four states establish and fund inter-agency Invasive Species Task Forces to deal with priority invasive species by 2006; and; develop rapid response plans for the five most serious invasive species threats after the Brown Tree Snake by 2008; invasive plant and animal database updated and widely disseminated to all State resource management agencies and private sector by 2007; and; develop control eradication plans for the top ten invasive species in each State by 2008.

282 Control and eradicate (where feasible) priority invasive species, especially those that have been introduced but have not yet become widely established

283 Even if invasive species have entered the FSM, effective eradication and/or control can still be economically realized with early detection and action. Many of the invasive species present in the FSM have not yet reached epidemic proportions and can be controlled with fairly minimal inputs. Outputs include: State Governments prioritize invasive species control and eradication in annual budgets from 2005 onwards; State Governments develop control and eradication protocols involving local communities, traditional leaders, and resource owners; and, complete review and recommendations for biological control in the FSM (what has been introduced, successes and failures, and future options) and widely disseminate by 2008.

Activity	Risks/Weaknesses	Risk Management
Develop and implement national and state laws and screening processes and improve screening at all ports for alien species introduction and genetically modified organisms (GMOs)	Lack of expertise by local resource management agencies	Access outside support and training (e.g., SPC Plant Protection Service, SPREP, USGS Brown Tree Snake program, US Fish and Wildlife Service, etc.)
Through training and education, further develop national enforcement capacity of all laws and regulations relating to alien species introductions	Lack of expertise by local legislative bodies	Access outside support and training (e.g., SPC Plant Protection Service, SPREP, USGS Brown Tree Snake program, US Fish and Wildlife Service, etc.)

etc.)

7.3.8 Strategic Goal 8: Create sustainable financing mechanisms for environmental and sustainable resource initiatives

a Activities and outputs, linkages, and rationale

284 Fund directly and assist in securing foreign assistance for the Micronesia Conservation Trust to strengthen and empower resource owners and local communities to manage their resources sustainably, as well as to improve the long-term viability of local and national environmental and sustainable programs

285 The Micronesia Conservation Trust was established in 2002 and has been adopted as the national funding mechanism for implementation of the nation's NBSAP. The MCT long-term funding goal is to develop an endowment of \$20 million which can generate sustainable grant funding of about \$1 million/year. Outputs include: the Micronesia Conservation Trust will be established and endowed with at least US\$10 million by 2010; all States will establish subaccounts within the MCT to help support state environmental priorities by 2010; GEF Small Grants Program provides \$250,000/year grant money through the MCT from FY05 onwards; and; MCT will access assistance from at least one other GEF grant window (PDF A, PDF B, medium-sized, or large grants) and other multi- and bilateral donors by 2006.

286 Facilitate effective access to external sources of funding (bilateral, multilateral, international) for environmental and sustainable initiatives

287 Effective environmental and natural resource management in the FSM can only be realized with substantially increased funding, much of which will need to be raised from outside sources besides the Compact revenues. Outputs include: through the clearinghouse mechanism, regularly provide information on environmental grant opportunities to State governments and NGOs from 2005 onwards; increase external environmental funding (excluding US government) by 100% by 2010; hold fund-raising, proposal-writing, and project management workshops for government and non-government environment personnel in all States beginning in 2006 and biannually thereafter; maintain and expand existing SD Council database to include project information from all States by 2005; and, secure at least one GEF medium-sized grant every year and one GEF large grant every three years from 2005 onwards.

288 Provide legal and financial incentives to encourage NGO fund-raising and development

289 The FSM's non-profit (NGO) sector has a largely undeveloped potential to bring in substantial financial resources for environmental and natural resource management, both from within the country and outside. Much of this funding is not accessible to government agencies so represents new resources. Outputs in-

clude: adopt national tax-exempt status for non-profit organizations to increase private sector support and donations from individuals and businesses by 2006; and, at least one strong and effective state-wide NGO will be established in each state to engage local communities, the government and private sector in innovative and highly successful conservation partnerships by 2006.

290 Develop in-country sources of funding and investment for environmental and sustainable initiatives, including resource rentals and/or royalties, user fees for tourism activities, environmental bonds for development projects, and special taxes for visitors and tourists

291 A number of opportunities exist for generating in-country revenue in support of environmental and natural resource management. State governments need to take a lead in identifying and developing sustainable conservation funding mechanisms. Output is: at least one local conservation revenue source will be established in each state that will effectively leverage additional resources (bilateral, private foundation, and other) to assure conservation success by 2010.

Activity	Risks/Weaknesses	Risk Management
Fund directly and assist in securing foreign assistance for the Micronesia Conser- vation Trust	Insufficient donors interest and support	States establish sub- accounts within the MCT to help support state environmental priorities
		National government to put forward the MCT as the preferred funding mechanism for EU non-state actor funds, GEF Small Grants Program, and other possible funding sources
Facilitate effective access to external sources of funding (bilateral, multilateral, international) for environmental and sustainable initiatives	Lack of expertise by local resource management agencies	Seek support and training from in- country (e.g., Col- lege of Micronesia) and outside sources
Provide legal and financial incentives to encourage NGO fund-raising and development	Lack of government sup- port for tax-exempt status and other incentives	Build awareness of existing and poten- tial financial contri- bution of a healthy NGO sector to the national economy

Develop in-country sources of funding and investment for environmental and sustainable initiatives

- Lack of government support to use in-country revenues for conservation and environmental purposes
- Build awareness amongst the Nation's leaders of the true costs and benefits of a healthy natural environment.

7.3.9 Strategic Goal 9: Enhance and Employ In-Country Technical Capacity to Support Environmental Programs

a Activities and outputs, linkages, and rationale

292 Assess technical training needs in the areas of waste management, drinking water quality, environmental monitoring, chemical safety, resource management, and emergency preparedness, and identify/develop training programs

293 Lack of capacity is a major constraint to environmental and natural resource management in the FSM. Training for government and NGO resource managers is a key need, but efforts to date have been largely uncoordinated and donor-driven. Outputs include: training needs assessment completed by 2006; comprehensive training program developed and implemented by National government by 2007 (in partnership with US Government agencies and SPREP); through the clearinghouse mechanism, regularly provide information on environmental training and scholarship opportunities to State governments and NGOs from 2005 onwards; and, National regulations requiring approval of visiting researcher's proposals, presentation of research finding to the public, and provision of copies of all reports/products; and contribution to the development of local capacity by hiring a local guide & assistant, affiliating with a local agency, NGO or institution, and/or contributing to a scholarship fund for local students studying environmental subjects established by 2005.

294 Build local service provider networks to provide cost-effective trainers and resource people to help build local technical capacity

295 Currently, most technical assistance and training is carried out using trainers and other resource people from outside the FSM. This is expensive and unsustainable in the long-term. Opportunities exist, especially through such institutions as the College of Micronesia, to develop in-country expertise. Outputs include: environment service providers network established and actively providing in-country training and technical assistance by 2008; a cadre of EIA specialists trained and national network/ consortium of certified expertise developed by 2006.

296 Develop formal (up to B.Sc. degree level) and informal conservation, resource management and environmental protection training programs at the College of Micronesia

297 Training is only a partial solution to the Nation's current human resource shortage in the area of environmental and natural resource management. The long-term solution lies in increasing the education levels of key government and non-government resource managers. Outputs include: two environmental training programs/year developed and delivered by College of Micronesia to government and non-government agency staff; two year A.S. degree program in resource management and/or environmental science/health offered at all four state campuses by 2008; four year B.Sc. degree program in resource management and/or environmental science/health developed and delivered at COM-FSM Palikir campus by 2010.

298 Promote nation-wide and regional learning networks of local conservation and environmental leaders to promote peer learning

299 Studies have shown that adults learn best when coupled with peers and mentors in day-to-day learning situations. Output is: the Micronesians in Island Conservation (MLIC) peer learning network will be expanded to include at least 16 conservation leaders (currently 10) from the FSM by 2008 (in partnership with The Nature Conservancy, NOAA, and other agencies).

300 Establish and fund graduate (M.Sc. and Ph.D.) and undergraduate scholarships in environmental studies, with requirement that students return to the FSM upon completion of their studies for a fixed period (e.g., 2-5 years of service for every year of scholarship – to be determined by individual States)

301 The Nation's future environmental leaders will be faced with new and complicated challenges that will test even the FSM's best and brightest minds. The Nation, in coordination with the States, needs to build the next generation of conservation leaders through providing graduate educational opportunities. Output is: provide at least two graduate degree scholarships/year (M.Sc. or higher) in resource management/environment to deserving FSM students from 2005 onwards.

302 Develop nationwide (government and NGO) environmental intern program to provide training and career opportunities

303 To ensure that the Nation will have the environmental leaders that it will need in the future, efforts must be made to expose young people to environmental work opportunities early in their careers. Output is: offer ten in-country resource management/environment internships/year to FSM students at the College of Micronesia or studying abroad from 2005 onwards.

b Assessment of risks and weaknesses

Activity	Risks/Weaknesses	Risk Management
Assess technical training needs in the areas of waste management, drinking water quality, environmental monitoring, chemical safety, resource management, and emergency preparedness, and identify/develop training programs	Lack of in-country exper- tise to assess needs and deliver training programs	Assess outside support and training to develop in-country expertise and training capability (e.g., through the College of Micronesia)
Build local service provider networks to provide cost- effective trainers and re- source people to help build local technical capacity	Lack of in-country exper- tise	Assess outside support and training to develop in-country expertise and training capability (e.g., through the College of Micronesia)
Develop formal (up to B.Sc. degree level) and informal conservation, resource management and environmental protection training programs at the College of Micronesia	Lack of faculty expertise and other resources to offer these types of pro- grams through COM	Forge strategic part- nerships with other Universities in the region, e.g., Univer- sity of Guam, to offer in-country academic programs up the B.Sc. level
Promote nation-wide and regional learning networks of local conservation and environmental leaders to promote peer learning	Lack of financial and human resources to maintain a learning net- work	Assist Micronesians in Island Conserva- tion network to ac- cess bilateral and in- ternational financial assistance
Establish and fund graduate (M.Sc. and Ph.D.) and undergraduate scholarships in environmental studies	Lack of available finan- cial resources for gradu- ate-level scholarships	Prioritize environmental studies for existing scholarship resources Work with bilateral and international donors to increase graduate scholarship opportunities
Develop nationwide (government and NGO) envi- ronmental intern program to provide training and career opportunities	Lack of funding for in- ternships	Work with bilateral and international do- nors to increase funding for internship opportunities

358

8 Health

8.1 Health Sector Review

8.1.1 Introduction

1 The current health care system in the FSM is due to the system set up by the U.S. Navy and the U.S. Department of the Interior (DOI) in the region after the islands reverted to U.S. control after the second world war. A central hospital, staffed by expatriate doctors was established on the main islands with subdispensaries built on remote islands, staffed by health assistants and visited occasionally by field ships. For more comprehensive information on the FSM health system, refer to the ADB funded reviews of the FSM health sector performed in 1999 and 2003.

a Organizational Structure of the Health Care System

- 2 The structure of the health care system in FSM mirrors the government structure and as there are three levels of government (National, state and municipal), there are three levels in health care.
 - i Responsibilities: national, state and municipal level
- 3 **National level**: At the National level, the Division of Health (DOH of DHESA) has no direct role in the provision of health care services, but is limited to health planning, donor coordination, technical and training assistance. In its coordination and technical assistance role, it has considerable influence on the provision of many preventive medicine and public health programs, which are funded in a large part by the U.S. Department of Health and Human Services (DHHS) and coordinated/managed through the FSM-DOH. It also has an implied role in quality assurance and health standards.
- 4 **State level**: The Department of Health Services (DHS) in each state is responsible for running state curative, preventive and public health services, including the main hospital, peripheral health centers, and primary care centers, generally called dispensaries. Most DHSs have minimal capabilities for planning and programming, and have structurally weak management systems. There is a main hospital in each state and these are directly accessible only to residents of the urban (state) centers. For residents who live on the outer islands, access is difficult because of the lack of public transportation between the islands. Dispensaries typically are located in island municipalities based on population, need and political considerations.
- 5 **Municipal level**: In the municipalities (including the outlying islands (OI)), there are dispensaries similar to health clinics (posts). These dispensaries

are part of the state health department, but their day-to-day operations are under the supervision of the mayors in which the dispensaries are located. Services that can be provided at the dispensaries through the health assistants staffing the dispensaries are mainly diagnosis and treatment of common ailments. The more advanced cases are referred to the central hospitals.

ii State based delivery systems

The state-based delivery systems for health are an effective way of administering health in the FSM. Given the geographic dispersal, remote nature and cultural diversity of many island communities, these state-based systems for health delivery of services have the best chance of developing more responsive and effective services to meet the needs of the community. However, there is a need to have a collaborative approach between the states and DHESA to achieve national standards of health care and reporting. The constitutional responsibility conferred upon the states to provide health services with the control of the bulk of health budgetary provisions means that there is a political barrier to DHESA enforcement of policy directions. DHESA as the national body for health policy development has a limited capacity to impact on state policy and planning frameworks. As a consequence, there is little national coordination that may help to deliver more effective and more cost efficient services. The partnership between national and state levels for health services could be improved through strengthened collaboration and cooperation. It is important with the new reporting requirements of Compact II to achieve national coordination.

b Health Planning and Expenditure

- Health services, including primary, preventive and public health and secondary (state hospital) health services, in the past were financed through a mixture of funds associated with the original Compact grant (the 1986 Compact of Free Association which expired in October 2003), U.S. Federal Programs separate from the Compact, state funds and user fees and insurance and grants from bilateral, multilateral, and non-government donors. Compact-associated funding was usually the largest contributor to health sector funding.
- The phase-down in Compact funds, which began in 1996, precipitated serious problems in the delivery of health services and the amount of funds allocated by the states and national governments in FY1999 for health was nearly 27 percent less than in FY1996. In 1996, the FSM Government moved (with the assistance of the international community, particularly the ADB) to proceed with an economic reform program aimed at stabilizing public finances, removing obstacles to foreign investment and private sector development. With this also came a large down-sizing of the public sector. In an attempt to balance budgets and promote self-sufficiency, most states voluntarily reduced their health workforce through early retirement programs and cut many of their health programs

and services. This led initially to a rationing of health services and deterioration in the quality and breadth of health services in most states, including reductions in health personnel at the national and state level, shortages of drugs and equipment, inadequate maintenance and decreased health services. In most states, the health workforce decreased by as much as 10-30%. Unfortunately, many essential personnel were retired prematurely and/or inappropriately and ad hoc program cuts were made without a strategic overview of the health system or consideration of essential services. The downsizing and streamlining of the various states' department of health services lead to the more efficient use of personnel and funds in most states, but has not yet led to improved quality of care or services.

- 9 State expenditure allocations are on average 65% to curative services including dental, 10% to public health, 10% for administration, and 15% for overseas referrals. On a national level (including insured referrals and public health programs), 50% are allocated for curative services, 20% for public health and prevention, 10% for administration, and 20% for referrals. Personnel costs are a very high percentage of core Compact funding (about 90% in the case of Chuuk, 52% in Yap and 68% in Pohnpei). Significant reductions were made through early retirements and reductions in salaried hours, and Yap and Pohnpei also contracted out some services that were formerly salaried. Chuuk maintained high staffing levels but cut wages, while Pohnpei reduced staff and maintained high wages. Pohnpei has half the employees of Chuuk but pays twice Chuuk's average wages. The smaller states have relatively higher non-personnel budgets. This may be related to higher fixed costs due to diseconomies of scale, but also to the higher proportion of their health budgets spent on drugs and medical supplies - 21% for Yap and 15% for Kosrae versus 7% for Chuuk and 10% for Pohnpei. The Chuuk budget for drug supplies is grossly inadequate by the WHO standards for basic health services, Pohnpei's is barely adequate, but Yap and Kosrae are adequately funded. Travel budgets are insufficient given the distances involved in some states, particularly for supervision of PHC activities.
- 10 Only 0.2% to 3% of state health budgets are used for fixed assets, and there is no depreciation account in any state budget. Only Yap explicitly budgets for maintenance, at 3%. This means that fixed assets essential to health services cannot be adequately maintained or replaced. Off-island referrals have been the most contentious health issue in the past, causing accrual of enormous state debts and many internal disharmonies in the communities. Current referrals appear to be managed better than in the past both by states and the FSM-National Health Insurance Program (NIP) by screening cases and using lower-cost providers, but they still account for 20% of all health expenditures. This funding for tertiary care could be used to provide improved on-island care to more than the 200-odd patients who are referred annually.

Table 1 Compact and U.S. grant funding for health to FSM governments, FYs 1999, 2004

	FY 1999 (U.S. \$ million)	FY 2004 (U.S. \$ million)
Chuuk	2.3	4.7
Kosrae	0.8	1.5
Pohnpei	2.0	6.0
Yap	2.0	3.0
FSM government	1.5	0.6
Total-Compact	8.6	15.6
U.S. DHHS categorical grants	2.6	2.6
Total	11.2	18.2

Under the terms of Compact II, FSM will receive funds from the U.S. until 2023. Each state in turn will receive a block grant from the FSM national government to cover costs of all aspects of government, including health. Each state will have considerable autonomy in its provision of programs and use of funds. The health budget for 1999, excluding revenues from international donors, was \$11.2 million and in 2004, will be approximately \$18.2 million (refer to Table 1).

c Projected Compact II Funding for Health

12 The most important factor affecting the FSM health care system in 2004, will be the health component of Compact II. Table 2 shows the breakdown of Compact II funding for the health sector in 2004. It is likely that most state DHS will have budget in excess of the health budgets of the last few years and health services in FSM should not face drastic economic hardship and shortages in the coming years. However, just because there is some funding allocated until 2023, does not mean that health reform is not urgently required. Health services

Table 2: Health Sector Budget to FSM State and National Governments 2004 (Thousands of Dollars)

Strategic Goal Chuuk Kosrae Pohnpei Yap National Total Improve PHC Improve SHC 3,425.4 937.6 76.8 2,157.3 1,145.5 354.5 5,361.7 Improve SHC 3,425.4 688.4 3,479.1 1,575.0 116.0 9,284.1 Sustainable 328.5 74.4 353.0 161.1 77.5 994.6 Financing Mechanism TOTAL 4,691.7 1,529.6 5,989.4 2,881.6 548.0 15,640.5		-		•			
Improve SHC 3,425.4 688.4 3,479.1 1,575.0 116.0 9,284.1 Sustainable 328.5 74.4 353.0 161.1 77.5 994.6 Financing Mechanism	•	Chuuk	Kosrae	Pohnpei	Yap	National	Total
	Improve SHC Sustainable Financing Mechanism	3,425.4 328.5	688.4 74.4	3,479.1 353.0	1,575.0 161.1	116.0 77.5	9,284.1 994.6

whether urban or rural, are generally of poor quality and are currently unsustainable.

- 13 The major spending priorities agreed upon by both the U.S. and FSM representatives in compact negotiations are health and education. The Fiscal Procedures Agreement of Compact II indicates that the grant "shall support and improve the delivery of preventive, curative and environmental care, and develop the human and material resources necessary for the Federated States of Micronesia to perform these services. It further states that priority should be given to establishing sustainable funding mechanisms for operating a community-based system with emphasis on prevention, primary care, mental health, substance abuse prevention, and the operation of hospitals to provide secondary care at appropriate levels and reduce reliance on medical referrals abroad". Thus, although there is no pre-specified health sector funding level, the intent of Compact II is clearly that health should be supported at state and national levels to the degree necessary to provide such services effectively, efficiently and efficaciously.
- Compact II differs from the original Compact in that it requires performance-based budgeting, with detailed and specified budgeting, planning and reporting requirements attached to the yearly grant to FSM, as well as penalties attached for poor performance. It also requires: clear performance indicators (to measure program progress and success towards "economic development and budgetary self-reliance" goals), long-term rolling development plans (five years) with annual operational plans tied to annual performance and budgets, annual program and fiscal audits, annual review and consultation with the U.S. This consultation will focus on program and performance objectives for the upcoming year, program and sector evaluations, quarterly trust fund reports and other types of reports and reviews, as specified in the Compact II grant documents. Unsatisfactory program and project performance, financial malfunctioning or irresponsibility, and/or failure to follow the jointly-agreed program implementation, reporting and fiscal requirements can precipitate funding and disbursement restrictions, funds can be withheld from projects and programs, or the grant assistance provided in Compact II can be suspended.

d U.S. Federal (Categorical) Program Grants to Health

15 Funding and program emphasis from U.S. Federal Programs and bilateral, multilateral and non-governmental donors are predicted to remain relatively unchanged or slightly decreased from 1999/2000 levels, with the exception of loan funding from the ADB to support primary health care development. The ADB project, known as the Basic Social Services Project (BSSP), will provide approximately \$6.2 million to health and education, of which health will likely receive approximately \$2 million. Each state, however, will determine how much of their loan will be applied to health or education within their state. At

this time, Chuuk state has not agreed to participate in the program, nor has Yap. Only Pohnpei, Kosrae and the FSM DHESA have chosen to participate in the BSSP. If Yap and Chuuk do not participate, it is likely that additional project monies that would have gone to those states will be offered to the participating departments, according to usual FSM allocation protocols.

e User Fees and Cost Recovery in Hospitals and Dispensaries

The health departments of all FSM states have attempted various costrecovery strategies, including user fees, wage controls and generic drug purchases, with varying levels of success. Typically outpatient fees run from \$2.00 (Yap) to \$5.00 (Pohnpei). Kosrae and Chuuk charge for medicines, but not for outpatient visits. Most states officially charge for inpatient services and for x-ray and laboratory, but these services are also undercharged compared to their real costs, and fees for such services are poorly collected. Most states do not charge for public health visits, whether at the hospital or the dispensaries. Primary health care visits at dispensaries are also free, whether or not a physician sees the patient. Thus, in all states of the FSM, user fees for health services are theoretically charged but rarely actually collected (even in part).

17 Under Compact user fees were approved in all state hospitals, but were collected sporadically. In Chuuk, user fees are collected, but must be returned to the state treasury so collections remain minimal. Other states have limitations on the amount of the user fees collected that can be used by health department or on what the fees can be used for. Where limits are applied as to the maximum amount the health department can receive from fee collection, often fees are collected at that level only. It is not surprising that collection of such fees is irregular. Under the Compact II agreements, user fees are to be kept and used with the health sector. This may provide increased motivation for the improved collection of fees. However, states can still specify how and where in the health sector such funds can be used. Allocated wisely, user fees can be a significant resource to state health departments.

f What has been achieved since 2nd Economic Summit

18 The 2nd FSM Economic Summit (1999) proposed a series of health sector policies and related strategies, programs and activities that would guide the direction and scope of health services delivery in the period of economic uncertainty in the years leading up to the end of the Compact. The policies were: a) prioritizing of health care services; b) developing sustainable health care financing; c) developing a comprehensive human resources for health work plan; and d) supporting appropriate infrastructure development, including both health facilities and health systems development. These policies were meant to provide a guideline for national and state health services with which to plan and implement health services. Despite clearly stated strategies, there does not seem to have

been much headway in the achievement of the goals. The lack of achievement may be attributed to poor management and a lack of adequate or appropriate targeting of funds. However, there were two significant meetings held that involved key staff from the DOH of the DHESA and the DHS from each state, i) the FSM Secretary DHESA and Directors DHS and key stakeholders were involved in the *Health Strategy and Policy Meeting* in 2003 that identified key health status improvement outcomes ('strategic focus') for the next 5 years and the Drug Policy Meeting in 2003 that endorsed the National Drug Policy.

g The 3rd Economic Summit

19 One of the requirements of Compact II (2003-2023) is that FSM submits a national strategic development plan (SDP) to the U.S. 3 months after Compact II becomes effective (e.g. February 2004). FSM also agreed upon health sector outcomes to be achieved in the first five years of the Compact II (consultations among the FSM States directors of health, key staff from other FSM departments, and U.S. DOI technical staff). The Strategic Goals agreed were: to improve primary health care services accessible to the public; to improve secondary care services provided at the hospitals; and to have a sustainable health care financing mechanism. Specific outcome measures were endorsed and will also be reported on. The ADB approved a small scale technical assistance to review the health sector in FSM and prepare in consultation with key stakeholders the Health Strategic Development Plan (Rodgers et al, 2003) to inform discussion and debate at the 3rd Economic Summit (March 2004). During the Summit, the Health Sector Strategic Plan was accepted with minor changes. It was envisaged that the FSM national, state and municipal governments, would base their health sector funds allocation on the five accepted strategic foci (1) improve primary health care services; 2) improve secondary health care services; 3) prioritize health promotion and services for major health problems; 4) develop a sustainable health care financing mechanism; and 5) improve capacity and accountability systems).

h Health Insurance

Originally, the National Health Insurance Program of FSM (NIP) had two functions: 1) to provide additional funds to states to support and improve primary and secondary health care, and 2) to support limited overseas referrals. Support to the state health departments was through a capitation fee, paid periodically (supposedly monthly) and supposedly proportionate to the enrollment in each state. Additionally, it was intended to encourage the development of local private medical practice in the FSM by the re-imbursement of private medical services. Poor management and planning in the early years of the NIP led to massive over-expenditures for overseas referrals, and subsequently minimal and irregular capitation payments to the states. Initially there were few guidelines

for out-of-state referrals, and people were often sent for minor or chronic conditions, along with multiple family members and caregivers, all at the expense of the NIP. Guidelines were soon developed but political pressure was often applied to the state health departments and inappropriate referrals continued.

- 21 In 2000, there was considerable dissatisfaction with the NIP in the states. NIP management was unresponsive and opaque to queries as to priorities, costs and planning for health care. By 2002, the NIP had been successful at least in encouraging the development of private medical practices in Yap, Chuuk and Pohnpei. Unfortunately, it did this at the expense of the state health departments. Private physicians were paid fee-for-service by the NIP, while health departments still received minimal capitation payments. Even among private medical practitioners, there were frequent complaints that NIP did not pay in a timely manner, nor did they pay appropriately to their NIP-provider agreement.
- In 2003, at the meeting of state health directors and DHESA senior staff in Chuuk, dissatisfaction with the NIP by the state health departments and DHESA was almost universal. The need for as large a risk pool as possible to support health services in the FSM had also become more widely understood, and it was clear that a risk pool approximating the adult (and working) population of the country was needed to support a financially viable health insurance program. Health directors stated there would be support to the NIP, only if reforms were untaken by NIP and its managers to make it more transparent and responsive, and to focus increasing amounts of its collections to improving health care in the states. Some reforms to NIP were undertaken in 2003 and a change in the management of the NIP. Policy and oversight of the NIP was removed from the government and placed under a private board, appointed by the President of the FSM. It is expected that the changes in management will lead to increased transparency, responsiveness, and a focus on improving primary and secondary health care.
- Considerable economic growth needs to occur to increase the number of those in employment and with medical insurance. The potential risk pool (or those formally employed and receiving salaries) is small by commercial standards (estimated at about 20,000 people maximum), and thus is very sensitive to variations in the economy. The rather high dependency and unemployment levels found in the 2000 census indicate that many people working within the formal sector are supporting many others and may not be able to afford health insurance. A downturn in the economy would further shrink this risk pool and thus the number of people able to pay health insurance premiums. It would be more sustainable to have a higher level of health care, with a greater variety of services and technologies, funded not through the government but through an insurance scheme and user fees is needed in the FSM.

i Funds from Multilateral, Bilateral Agencies and NGOs

- Additional funds are received from WHO (\$20,000), UNICEF (\$60,000) and UNFPA (\$20,000) for specific health activities or commodities. UNFPA provides contraceptives to complement the MCH/FP program of DHHS, which provides no commodities. WHO provides technical assistance to problems areas, such as communicable diseases, health planning and laboratory, and cold chain commodities. Such technical assistance is provided through consultants, workshops and long term training abroad. UNICEF provides a broad range of assistance for women and children, including vitamin A supplements, oral rehydration solution, training in CRC, child prostitution. UNICEF has recently been working in Chuuk to try and improve the dispensary services, particularly to the OIs. One of the key areas being focussed on is training the health assistants to give immunization.
- 25 Australia's bilateral program to FSM (approximately USD1 million in 2003) has concentrated on education and training, through the provision of scholarships, and provided support to small health projects as well as providing health volunteers and medical specialist teams, disaster relief and a small grants scheme supporting community organizations. Australia has also provided a statistician to give technical assistance has been funded for a 2 year period in the national Department of Economic Affairs. Japan has provided funds for capital projects, such as hospital renovations, and for equipment. China has also periodically provided some ad hoc support in the health sector.

j ADB Basic Social Services Project (BSSP)

Communities will be heavily involved in planning and delivering health services (and education services) in FSM in a project for which ADB has approved an US\$8 million loan (total project cost of US\$11.7 million). The ADB loan will come from its concessional Asian Development Fund and is repayable over 32 years, including a grace period of eight years. The interest rate will be one percent per annum during the grace period and 1.5 percent per annum thereafter. The executing agency will be the DHESA and the project will run from 2004 to 2006. The BSSP is expected to provide more effective, accountable and cost-efficient services to poor households and vulnerable groups. The first phase of the project focuses on building up capacity and strengthening institutions at national and state levels, enabling the health department to initiate health sector reforms including extending the health insurance.

k Private Sector, Community and NGO Participation in Health

27 The presence of the private health sector consists of primary health clinics with their own pharmacies. The patients attending are mostly those who can afford to pay out of their own pockets or those enrolled in an insurance program. The private health sector in FSM has shown considerable growth over the past

few years. There are several local physicians in private practice in Pohnpei. One polyclinic employing multiple local physicians has been established, with a laboratory, x-ray and pharmaceutical capability. Additionally, they are reported to have some holding beds, which can be used to observe patients overnight. There are multiple pharmacies in Pohnpei as well, although most seem extremely poorly stocked. Chuuk now has a private medical clinic, which employs several overseas physicians, and there are several small pharmacies as well. Yap has one part-time physician. Kosrae is the only state at this time that does not have a physician in private practice.

- The growth of private practice in FSM has been a mixed blessing for state health departments. Although they theoretically decrease the health department's patient load and burden, in fact the more serious cases are often referred to the hospital for admissions, x-rays, laboratory and medicines, which are supplied at the same low cost or no-cost basis as regular patients receive. Physicians in Pohnpei and Yap are allowed to admit patients to the hospital, in return for standing call periodically at the respective hospitals. This has generally worked well, despite some private physicians taking advantage of the situation and not showing up, or using the time to see private patients.
- The biggest problem for the state health departments is that the FSM National Insurance Program (NIP) treats patients seen by private physicians differently from those seen by hospital physicians. Private physicians are paid a feefor-service for each patient, with the fee closely representing the physicians time and costs. The health department is paid on a capitation basis, and with heavy utilization receives nowhere near its cost basis. Additionally, it appears that NIP pays health department capitation fees last, after paying out-of-country referral fees and in-country private physicians' fees. Consequently, capitation payments vary widely and are difficult to predict or rely on. Since NIP payment policies are opaque, it is impossible for states to determine how much they should be receiving, verses how much they are receiving. This is one reason why the state health departments are not big supporters of the NIP.
- 30 Although every state in the FSM has a number of NGOs and community groups, there are very few local NGOs and community groups that are involved extensively in health. The FSM Red Cross, which now has chapters in each of the FSM states, provides training in first aid, nutrition and home visits, as well as other health topics. The Micronesian Seminar, a pastoral institute of the Catholic Church in Micronesia, acts as a sort of a social think tank for social and cultural issues, has an extensive library and produces articles and brochures on key social and health issues. It has been important in raising awareness of health and education issues over the last 20 years. Numerous religiously affiliated and community groups provide intermittent fundraisers for various purposes including health, but few of them are actively involved in health.

31 There are some international NGOs working in FSM. The Pacific Missionary Aviation (PMA) has a base in FSM and provides air services to the outer islands of Yap and Chuuk, including free medical evacuations and cut-rate fees for medical personal on official travel. They also provide air services to the OI of Pohnpei and a commercial service from Pohnpei to Chuuk. Numerous groups and individuals some with religious affiliations, provide specialty medical care on a regular basis in the various states. This includes large and organized groups, like Canvasback Missions, which send regular medical and dental teams to the OI and rural areas of FSM, and donor-supported eye teams from Japan and Australia.

8.1.2 Rationale For A Strong Focus On Improving People's Health

32 The 2001 Report of the Commission on Macro-Economics and Health: Investing in Health for Economic Development provides a strong rational for maintaining a focus on improving people's health as an important determinant of development in low-income countries. Disease is a drain on society and health investment can accelerate economic growth. The poor share a disproportionate burden of avoidable deaths and suffering and are more susceptible to diseases because of malnutrition, inadequate sanitation, lack of clean water and are less likely to have access to medical care. Poverty incidence is estimated to be high with approximately 40% of the FSM population falling below the national poverty line. Basic social services are failing to reach the poorer strata of society, the OI and rural areas and FSM has poor health indicators. In addition, FSM is a tourist destination and access to health services in the case of unexpected illness or accident is seen as an important criteria to possible tourists.

a Poverty and Health

33 Poverty incidence is estimated to be high with approximately 40% of the FSM population falling below the national poverty line. Basic social services are failing to reach the poorer strata of society, the OI and rural areas and FSM has poor health indicators. Improvements in the health of the population of FSM will bring considerable economic gain, particularly to the poor. To improve health, there needs to be multi-sectoral action, with the community taking more responsibility for its own health. In the long term, increased community participation should lead to better understanding of individual's role in health, ultimately lead to healthier lifestyles, less disease burden and a greater potential for productive labor and economic return. As health or ill health is also the result of socioeconomic circumstances, there is a need to increase employment opportunities, particularly in rural areas, by private sector investment in agriculture, fisheries, industries, handicrafts, business or tourism.

b Women and Health

Women's health is affected by biological, social, economic and cultural factors. In developing countries they spend a significant amount of time bearing and rearing children but have limited access to family resources and are generally more financially constrained when they become ill. It is important to focus on women as they have special needs throughout their lives (high burden of reproductive health, gender based violence and discrimination within the household in the allocation of resources for nutrition and health care) and women also have the primary responsibility for ensuring medical care for their children. Strengthening health services targeting women and children will reduce the constraints on the time of the women, improve their health and help correct gender-based inequities.

c Progress towards Millenium Development Goals

35 Improvement in health is directly related to achievement of the Millennium Development Goals (MDGs), set by 147 heads of State and Government in 2000 for reducing poverty, hunger, disease, illiteracy, environmental degradation, and discrimination against women by 2015. The Millennium Declaration led to the formulation of goals, numerical targets and quantifiable indicators - the MDGs where efforts are on achieving significant and measurable improvements in people's lives. FSM has shown little progress towards meeting the MDGs by 2015 - poverty incidence is estimated to be high, basic social services fail to reach the poorer strata of society, the outer islands and rural areas and FSM has poor health indicators. FSM does not seem to be clear about the role of MDGs within the health development agenda, especially at the program and state levels. There is a need to have mechanisms to track progress on goals and targets and to improve data quality and data collection

8.1.3 Health Consumers In The Fsm

a Demographic data

Approximately 97% of the population of the FSM are Pacific Islanders, mostly Micronesians of various ethnic derivations, with a very small number of Polynesians. The remaining 3% are mostly expatriate residents from Asian nations, the United States and Japan. Each of the four states exhibits its own culture and traditions, but common cultural and economic bonds exist that reach back to antiquity. Although more than seven languages are spoken in Micronesia, English is the official language of government and commerce. The 2000 Census showed a total population of 107,008 with a fairly even distribution of male and female. The population is young with a median age of 18.9 with 40% of the total population below 15 years of age.

Table 3: Health Indicators for Micronesian Jurisdictions 2002

	Yap	Kosrae	Chuuk	Pohnpei
Population	11,000	7,300	53,000	34,000
% of population less than 15 years of	41%	43%	46%	44%
age				
Birth rate	2.9%	2.7%	3.5%	3.3%
Total fertility rate	3.7	4.2	5.6	4.3
Infant Mortality rate	3.9%	4.9%	5.3%	4.2%
Child mortality rate	1.2%	1.7%	1.8%	1.3%
Life Expectancy at birth	67	65	64	66.5
% of 2 years old (1997) fully immu- nized	95%	95%	65%	72%
% of 2 years old (1999) fully immu- nized	80%	95%	60%	60%

Note: Figures taken from FSM 2000 census

Population growth has decreased to less than 1 per cent in 2000 from 1.9 per cent in 1997. While crude birth rate and fertility rates are still high compared with developed countries, the number of children born per woman has decreased. The total fertility rate was 4.5 per cent in 2001 but varied considerably between states. In 1997 it was 4.7 and in 1973, it was 8.2. The fertility decline has happened in the absence of economic development seen in other countries with similar declines. The decline may be attributed both to the high infant mortality rate of 21.8 (2001) per 1 000 live births, the emigration, family planning, education of parents, employment of women, the new retirement program and job opportunities in the US where many men and especially women move to.

High population growth adversely affects health indicators such as infant and maternal mortality, and also offsets economic growth. Prenatal care is slowly improving in the state centers and is being expanded to remote areas. Death and illness due to diarrhoea and acute respiratory infections still form a large proportion of infant mortality and morbidity. The crude birth rate in 2001 was 23.0 as compared to the 22.3 (2000), 20.9 (1999) and in 1997 was 23.5 per 1 000 live births. The rates of both crude birth and the fertility rates continue at the same levels, which reflects a need for increased family planning coverage. Life expectancy at birth for both male and female was 67.2 while male alone was 66.6 and female was 67.7. Thus, the census (2000) confirmed that there has been little change in the demographic indicators for the FSM since the mid 1990s. The population continues to grow, increasing numbers of individuals and families continue to migrate and the state birthrates are stable but high. The dependency ratio remains close to 50%, and the fertility rates, infant and child mo-

Table 4.a Leading Cause of Hospital Admissions, 1999 (Rate is per 100,000)

	#	Rate
Pregnancy related conditions and delivery	2093	2886.30
Respiratory problems	1040	1434.60
Endocrine and metabolic related conditions	830	1144.50
Infections and parasites	477	657.70
Genitourinary diseases	439	605.30
Digestive related conditions	382	526.70
Circulatory problems	380	524.00
Skin problems	373	514.30
Injury and poisoning related conditions	289	398.50

Table 4b Mortality Rates by Disease Category, 2002 (Rate is per 100,000)

	#	Rate
Diseases of the circulatory system	84	78.5
Endocrine/metabolic disease/condition	51	47.7
Diseases of digestive system	50	46.7
Diseases of respiratory system	47	43.2
Cancers (all forms)	46	43.0
Perinatal disease/conditions	15	14.0
Genitourinary	13	12.1
Disease of the nervous system	8	7.5
Diseases due to injury/poisoning	2	1.0

rality rates and life expectancy at birth all vary by state, but remain approximately unchanged when pooled for small numbers from the late 1990s.

b Disease Trends

The major causes of morbidity and mortality (refer to Table 4) were non-communicable diseases such as heart disease, diabetes, hypertension, obesity, chronic lung disease, cancer, prematurity, complications of pregnancy and labour, and malnutrition. However, respiratory diseases, skin diseases, gastrointestinal diseases, otitis media and other infectious diseases—combined-- are the leading causes of the hospital admissions. NCDs have replaced infectious and immunizable diseases as leading causes of morbidity and mortality among adults and even children in FSM. NCDs are chronic in nature and related to lifestyle choices, and as such are preventable. Preventable cancer morbidity and mortality likewise continue to grow. Cervical cancer is now the leading cancer in FSM. Head and neck cancer, once only common on Yap, has increased in the

other states due to the spread of betel nut chewing to the other island states of FSM. Liver cancer, associated with Hepatitis B infection, is gradually falling, due to widespread Hepatitis B vaccination in newborns, children and health workers but is still common over age 40. All of these cancers may be considered diseases of lifestyle; all could be prevented.

8.1.4 Delivery Of Health Services

a Primary Health Care

- 40 There is an urgent need to focus attention on improvements in the quality of primary health services as this is the base of health care in FSM. The primary health care (PHC) system (which includes the dispensary/health center system and the public health team (PH team)) is responsible for delivering primary, preventive and public health services to both the rural and urban populace in FSM. In recent years, primary, preventive and public health care services have been deteriorating throughout FSM. A field mobile PH team from the public health division at the DHS usually provides public health services to municipalities and communities using the dispensaries and HA's as the nexus of activities. These teams are supposed to visit each dispensary on a regular schedule, but have seldom done so in the last few years because of funding constraints, poor management and supervision and lack of supplies. Appropriate investments and administrative and support practices need to be put in place so that the quality of the health services is delivered at appropriate state, national and international standards.
- 41 Super Dispensaries, thought to be the way of the future, have not proven to be successful. These super dispensaries were to be staffed by a physician, nurses and other health personnel, have a pharmacy, a small laboratory and possibly an X-ray unit, as well as a means of communicating with the DHS and the main hospital to deal with most emergencies in the field. The plan was to utilize these super dispensaries as permanent outreach sites for immunization and other public health programs. The political will to support these more expensive dispensaries, despite their potential to improve delivery of health services, has been absent from most states. Additionally, severe budget cuts in the health sector, implemented by most states since CY 2000, have landed directly on PHC. Most states have chosen to support hospital services rather than PHC, despite increased utilization and costs to the hospital. Thus, super dispensaries were converted to regular dispensaries on Pohnpei, and never really implemented on the Chuuk OI. Yap has implemented one super dispensary. This dispensary has additional staff and equipment, although no x-ray services and only a part-time physician. Delivery of PHC and public health (PH) services is hindered by a lack of medicines, supplies, equipment, inadequate management, supervision

and training and lack of visits by the PH field teams. This has lead to increasing dissatisfaction among patients as to the quality and quantity of services.

42 The secondary health care system (services delivered at the hospital clinic and inpatient services in urban state centers), is receiving approximately 70% of patients that could have been handled at the PHC level or who have received improper, insufficient and/or inadequate PHC services at the dispensaries (usually because the dispensaries do not have adequate drugs or medical supplies and equipment). Patients are opting to go straight to the hospital rather than go to the dispensary and receive a prescription that will need to be taken to the hospital to be filled anyway. Given the limited financial and institutional resources available at state hospitals, they cannot effectively deliver such services and also secondary and tertiary health services as well. This failure at the PHC entry point to health services adversely affects the efficiency and effectiveness of health care delivery at all levels. This in turn has led to increased demand for out-of-country referrals by patients and the cost of referrals has further compounded funding deficiencies. Improving the quality of PHC services is an essential starting point for improving the quality of health services in FSM.

b Delivery of Primary Health Care in FSM States

- 43 PHC systems vary considerably between states, though, in all states, it is evident that there has been a deterioration of the PHC system since the step down of funds for the first Compact. Travel for support, monitoring and supervision of dispensaries, as well as for the PH team have been minimized. Medicines are routinely in short supply at dispensaries (and hospitals), morale is low, and there has been a general loss of confidence in the dispensaries by the communities they serve.
- 44 **Yap**: Dispensaries on the main island of Yap remain closed, although there has been a concerted effort to re-open two of them. Consequently, there has been a steady increase in the number of patients seen at the hospital and in the severity of their diseases. Clearly minor ailments, easily treated at the PHC level are progressing untreated into major illness, requiring more intensive care and hospitalization. The 16 dispensaries on the outer islands (OI) of Yap have fared somewhat better despite support, monitoring and supervision trips being decreased. Radiotelephones are available but some medicines have been in short supply. One super dispensary is functional, but only partially equipped and staffed. The relatively effective function of the PHC dispensary system in the OI of Yap reflects the strong community involvement and political will of the OI groups. A lack of female health assistants remains a problem in some communities.
- 45 **Chuuk**: The PHC situation in Chuuk appears to have worsened recently. There are a total of 81 dispensaries in Chuuk. In Chuuk lagoon, many dispensa-

ries are not functional, and Health assistants can be found only on payday, or have disappeared. Land disputes remain common, dispensaries have poorly trained staff, and are chronically short of drugs and supplies. There is virtually no supervision, monitoring or support visits to dispensaries. PHC is understaffed and under-supported at the health department level. Morale is poor at all levels, and community support is minimal to non-existent. Utilization rates at the hospital, for both outpatient and inpatient services, are higher than when PHC was more functional, and anecdotal evidence suggests that like Yap and Pohnpei, more patients are coming to the hospital much sicker than before, with diseases that could have been treated earlier and more fully at the dispensary level. The situation in the OI of Chuuk is somewhat better, where greater community and chiefly involvement have generally kept the HA working and the dispensaries open, and without land disputes. Drugs and supplies remain a serious problem however, and there is little supervision, support and monitoring of the OI dispensaries by the health department. A lack of female health assistants remains a problem in some communities.

UNICEF has recently been working in Chuuk to try and improve the dispensary services, particularly to the OIs. 10% (9) of the total dispensaries were included in the UNICEF project. UNICEF worked in dispensaries from Lagoon islands (which can be reached fairly easily from the main island of Weno by speedboat) and the OIs (far more difficult to reach and accessibility is mostly by ship). Meetings with community leaders were held in some islands and health committees formed. Training at the site (in the dispensary) was provided to all health assistants and deficiencies identified for further training. All health assistants (in smaller groups) were brought to Weno and training provided for two to three weeks and follow-up visits to all dispensaries were made to check on the work of health assistants. One of the key areas being focussed on is training the health assistants to give immunization as the outreach teams are only going to the islands on an infrequent basis. The immunization coverage in all these dispensaries has markedly improved over the last year. In 2003, another six dispensaries have been included in the project and the same types of activities are being carried out.

47 **Pohnpei**: There are a total of 9 dispensaries and 2 aidposts in Pohnpei. In 1999, the Pohnpei health department planned to convert all rural dispensaries on Pohnpei to super dispensaries, staffed by nurses, physicians and sanitarians, and supported by daily messenger service from the hospital for laboratory services and medicine. With continuing budget restrictions and political concerns, the health department withdraw all physicians and nurses from the dispensaries and rationed drugs available to rural dispensaries. At the present time, dispensaries are staffed by health assistants, little or no medicines are available, and sick patients generally by-pass the dispensary to go directly to the emergency room or hospital. Community participation, which was high with the initial establish-

ment of the super-dispensaries, health assistants withered. Utilization rates at the hospital for both outpatient and inpatient services are higher than in the PHC days, and antidotal evidence suggests that like Yap and Chuuk, more patients are coming to the hospital much sicker than before with diseases that could have been treated initially at the dispensary level. The OI of Pohnpei have fared somewhat better. Almost every dispensary health assistants a radiotelephone, so medical consultations can be undertaken and some support, monitoring and supervision functions undertaken. Drugs and supplies have generally been available with only minor shortages. There is generally strong community and political support for the dispensary and health assistants in the OI of Pohnpei.

Kosrae: Kosrae does not have OI, and most of the population live within two hours travel from the hospital. Nevertheless, not all Kosraeans have disposable income or connections to be able to reach the hospital or its clinics. Consequently, the Kosrae health department has established 4 PHC/public health satellite clinics, located at municipal buildings in the various villages. A physician and various nurses from the hospital staff these clinics. The clinics are not open every day in every village, but are open on a regular schedule. Outreach to the village and surrounding areas are the responsibility of the team holding clinic. In practice, this approach seems to be working fairly well. Clinics occasionally are not held on time, or are cancelled. Outreach may miss remote clients. Drugs and supplies reflect availability of such items in the hospital pharmacy. Given these circumstances, Kosrae usually has the best health statistics in the FSM.

c Prevention/Public Health

- 49 Public and preventive health services in the FSM, with the exception of environmental health, are usually delivered by vertical programs funded categorically by the U.S. DHHS. These programs are administered by the states, but funded by grants to the national FSM DOH, which monitors the programs to some extent and supplies technical assistance to the states. It also provides regular reports to the DHHS, as to the progress of each program. Each state health department also provides counterpart funds for the most public and preventive health programs. The reporting requirements for these grants are extensive and separate, and often interfere with consolidated management and implementation of these programs.
- At the present time, the following public health programs are categorically funded by the DHHS: a) immunizations, b) maternal and child health (MCH), including Children with Special Health Needs, and School Health, c) family planning (FP), d) sexually transmitted diseases (STD), e) Human Immune Virus Infection/Acquired Immune Deficiency Syndrome (HIV/AIDS), f) Tuberculosis (TB), g) substance abuse and mental health (SAMH), and h) preventive health programs focused on lifestyle diseases, such as obesity, diabetes, hypertension and cardio and cerebral vascular diseases representing most non-communicable

diseases (NCD). DHHS also provides common vaccines to FSM yearly, sufficient for its needs. Most of the funding received from DHHS in categorical grants is for MCH, Immunization, FP and SAMH, and for personnel for the programs. Very little funds are received for NCD, the leading health problem and killer in FSM and very little funding is allocated by the state or the state health department for prevention of NCDs.

- Lifestyle diseases, resulting from poor nutrition, risky behaviors and substance abuse, are among the leading causes of death in the FSM and are increasing (refer to Table 5). An excess of calories in a diet deficient in proper vitamins, minerals, protein and certain fats leads to obesity, which in turn precipitates diabetes and cardiovascular diseases and ultimately hypertension, heart disease and stroke. Smoking leads to chronic lung disease and to various cancers, including lung cancer. Betel nut chewing, either alone or in combination with tobacco, marijuana, and various solvents, including alcohol, leads to increased head and neck cancer. Promiscuous sexual behaviors lead to the spread of HPV and HBV, causing an increase in cervical cancer (HPV) and liver cancer (HBV), as well as HIV/AIDS and other STDs. In the "abusing society" of FSM, the percentage of obesity is higher at all age groups than in the U.S., as is the percentage with hypertension. Mid-life mortality is rising and has been noted to account for almost 1/3 of total mortality in some states, again a rate much higher than in the U.S.
- Despite the seriousness of lifestyle diseases and the high rate of associated morbidity and mortality, funding for NCDs in the preventive health programs from DHHS and the FSM states is quite small. Consequently, there is insufficient support and training for prevention, health promotion, control and treatment of NCD, and not enough appropriately trained staff, especially health educators. Prevention of NCDs, as well as control and treatment of them, needs to be made a national, state, community and individual priority. At the state and national level, sufficient funding is needed for program support for prevention and health promotion activities. This means support of trained health educators, funds for prevention and health promotion programs through all available media systems, and for support for community initiatives. It means interagency and interdepartmental cooperation, as well as partnerships with the private sector. NCDs are the major danger to the health of FSM, and it needs the full focus of the people of FSM, including government, the private sector and the public. Effective prevention strategies will eventually lead to a decrease in lifestyle diseases with concomitant marked savings to the health sector.

Table 5: Major Causes of Death, 2002

	<u> </u>					
		Yap	Kosrae	Chuuk	Pohnpei	Total
Adults	Diabetes	6	8	19	20	53
	Hypertension/Heart Disease	0	11	42	37	90
	Stroke	3	2	19	14	27
	Chronic Lung Dis- ease	7	0	16	9	32
	Cancer	18	1	16	24	51
	Suicide/Homicide	4	1	3	1	9
	Accidents/Injuries	2	5	27	7	41
Children	Prematurity	0	2	2	0	4
<15 years	Pneumonia/Other infections	0	0	4	4	8
-	Malnutrition	0	0	3	0	3
	Accidents/Injuries	0	0	22	2	24

Source: Amato Elymore (DOH statistician)

53 Categorical Grants from the DHHS

The categorical programs supported by DHHS grants pay for staff at both the national and state levels. At the national level, the programs are under the Secretary of DHESA. The day-to-day administration and management of the programs is under the direct control of the national coordinator for each program, who works closely with and provides oversight and technical assistance to the program coordinators at the state level. In each of the four states, public health programs are administered under the direction of the State Director of Health Services through the Division of Public Health Services (in some states called the primary health care division). Public health services to date are provided at no cost to clients, although several states have discussed charging fees for certain public health programs.

Public health teams in all states report a lack of sufficient funds for travel, supplies and medicine, as well as insufficient personnel, dissatisfaction with multi-tasking, and lack of support from senior state health officials. Morale is reportedly low and absenteeism high among the public health staff. These complaints are basically unchanged from 1999, although may have worsened to a degree since that time. Despite complaints of a lack of supplies and medicines, the PH programs are insulated from some of the budget-cutting associated with the PHC and hospital programs. It is clear, nevertheless, that state funding to PH programs for travel, supplies, medicines and personnel has decreased and that it is more difficult than ever to deliver such programs to remote areas and OI. Public health programs seem to lack effective management, supervision and

planning, more at the state than national level but also suffer from decrease operational funding.

i Maternal and Child Health

- The MCH Programs provide primary care and preventive services to pregnant women, mothers and infants; preventive and primary care for children; and services for children with special heath care needs. Pregnant women are provided with prenatal care services where they are theoretically screened for pregnancy risks such as GC, syphilis, HIV/AIDS, hepatitis Clamydia (occasionally), cervical cancer, and anemia, and their tetanus booster is updated. Nutrition education and dental services are also provided. Family planning services are provided to women who deliver in the hospital and attend post-partum clinics. Well-baby care is provided to infants in Public Health clinics which includes growth monitoring; developmental screening; immunizations; nutrition education; and counseling. Children with special needs (CSN) are seen at a weekly CSN Clinic, staffed by a CSN physician.
- 57 Minimal MCH (and FP) services are provided by the health assistants at the dispensaries, due to lack of supplies, training and/or supervision, as well as cultural problems related to the use of male health workers for female-related health conditions. Only about 45% of women in Chuuk deliver in the hospital and many that deliver outside the hospital do so without the assistance of a qualified mid-wife. Many deliver without prenatal assessment or care. Teenage pregnancy is noted to be on the rise, although pregnancies in other age groups are not. In 2002, Micronesia Seminar reported births to women under 19 years of age as a percentage of all births were 8% in Kosrae, 9% in Chuuk, 14% in Yap and 18% in Pohnpei.
- Cervical cancer was the leading cause of cancer in 2002, as predicted in the Human Resource Study of 1999. It is now crucial that PAP smears be incorporated in all MCH programs and be offered to all women when they become sexually active, or at 18 years of age and every three years afterwards. Given that human papilloma virus (HPV) is so widespread in neighboring Pacific island countries, it is likely that this virus is also a major contributor to cervical cancer in FSM. Consequently, MCH programs should warn about transmission of the sexually transmitted disease, and encourage behaviors to interrupt transmission, including safe sex practices and the use of condoms.

ii Immunization

59 Island epidemiology is different from that of a large continental landmass as the populations of the islands of the FSM are too small to support the continuous circulation of many vaccine preventable diseases (VPD). Diseases such as pertussis and measles occur only as unpredictable intermittent outbreaks,

when they are imported from "off-island." The FSM provides the following childhood immunizations in all four states: Diptheria Pertussis Tetanus Vaccine (DPT), Oral Polio Vaccine (OPV), Measles Mumps and Rubella Vaccine (MMR), Haemophilus Influenza type B Vaccine (HIB), Hepatitis B Vaccine (HBV), Bacille Calmette Guerin (a Tuberculosis) Vaccine (BCG), Pneumococcal vaccine is also provided to adults 55 years of age and older. VPDs such as diphtheria, tetanus, polio, measles and others, can be prevented by a relatively cheap series of vaccinations costing perhaps several hundred dollars for complete or long lasting immunity. These diseases appear to be under reasonable control with high rates of vaccination and immunization in most states. The 2003 immunization coverage for 2 year olds was 74%, an increase on the 2001 rate of 63% but less than the 81% in 2000, and an improvement on the 61% reported in 1997. The 2003 immunization rates for 2 year olds vary by state and coverage rates are reported to be approximately 91% in Kosrae, 89% in Yap, 76% in Pohnpei and 68% in Chuuk (refer to Table 6). Immunization rates for school age children is even higher (refer to Table 7). The VPD that is endemic and causes the most morbidity and mortality in the FSM is Hepatitis B. In the 1980s, studies found that 30%-60% of the FSM population had been infected with Hepatitis B and 10%-30% were chronic carriers. Since 1989, Hepatitis B vaccination has been part of the routine childhood immunization schedules.

60 Budget limitations, cancelled voyages and inclement weather and staff scheduling conflicts have reduced some visits, especially on islands or villages remote from the state hospital, to below the minimum needed to complete the primary immunization. Thus, immunization series are reasonably complete near

Table 6: Immunization Coverage for Two-Year-Olds in FSM on children born in 2000, March 2003

Two-Year-Old Cohort	Chuuk	Pohnpei	Kosrae	Yap	FSM
Denominator	1422	1031	211	274	2938
Completed DPT3	90%	91%	99%	96%	92%
Completed DPT4	68%	77%	91%	87%	75%
Completed OPV3	84%	90%	99%	96%	88%
Completed MMR1	90%	91%	94%	97%	91%
Completed MMR2	52%	75%	79%	98%	66%
Completed HBV3	85%	92%	97%	95%	89%
Completed HiB1	97%	96%	97%	100%	98%
Completed BCG *	63%	62%	85%	NA	64%
Completed DPT3,	84%	88%	93%	95%	87%
OPV3, HBV3, MMR1,					
Completed DPT4,	68%	76%	91%	89%	74%
OPV3, HBV3, MMR1					

Table 7:	Schools Surveys: Immunization Coverage for First Grade Stu-
	dents in FSM, 2002 Enrollment

First Grade Cohort	Chuuk	Pohnpei	Kosrae	Yap	FSM
Denominator	1375	1147	125	299	2946
Completed DPT3	86%	91%	99%	100%	90%
Completed DPT4	79%	86%	98%	100%	85%
Completed OPV3	89%	91%	99%	100%	92%
Completed MMR1	99%	90%	100%	100%	96%
Completed MMR2	80%	84%	96%	99%	84%
Completed HBV3	91%	90%	98%	100%	92%
Completed HiB1	88%	NA	99%	100%	91%
Completed BCG	NA	NA	52%	NA	NA
Completed DPT3,	86%	89%	98%	100%	89%
OPV3, HBV3, MMR1,					
Completed DPT4, OPV3, HBV3, MMR1	79%	85%	98%	100%	84%

the various state capitals and have improved significantly over the last few years, although in the OI, there are still children missing out on immunization and morbidity and mortality can result from vaccine preventable diseases. Immunization is one of the most successful and popular programs offered by the PH team. Several states have been relatively successful in training MCH and immunization staff in data compilation and analysis; with improved travel funding more complete coverage and reporting should be possible in the remote islands and villages of these states:

- **Pohnpei**: Immunization rates are lower in Pohnpei than in other states (except Chuuk). The OI of Pohnpei usually have good immunization rates, while it is in the rural areas that immunizations are missed. This appears to be due to two factors: a lack of penetration to the most remote areas and a lack of community understanding regarding vaccinations and lack of community support.
- **Kosrae**: Kosrae has excellent immunization rates, by any standards.
- **Yap**: Immunizations rates in Yap are better than many U.S. states.
- **Chuuk**: Immunizations rates in Chuuk are consistently lower than the other states. UNICEF has recently been working in Chuuk and trained the health assistants to give immunization as the outreach teams are only going to the islands on an infrequent basis and immunization coverage has improved.
- Maintaining the cold chain at a clinic site on a remote island without electricity, which can only be reached by a boat, is also challenging. In 2003, ten gas powered vaccine refrigerators were delivered to Chuuk. Training programmes on VPDs, vaccine safety and monitoring and cold chain system has

also been carried out in Pohnpei and Chuuk. Cold chain equipments have been ordered based on the recommendations of the UNICEF cold chain consultant for all the four states and training on cold chain system and maintenance and operation was undertaken by UNICEF. More gas operated refrigerators are being purchased by the National Immunization Program through WHO/UNICEF with JICA funding.

The use of public education campaigns to increase and maintain awareness of the importance of immunizations is desperately needed for the entire population, including the development of education materials in local languages. Targeted campaigns are also needed in low coverage areas, especially in the islands of Chuuk Lagoon. Missed opportunities continue to be a problem and the immunization staff need to be encouraged to immunize every child fully at every encounter. Training activities are planned that will place heavy emphasis on this issue. The 2004 DHHS grant budget application is for \$753,924 in financial support and \$1,565,865 for direct assistance (vaccines)

iii Family planning

The FSM FP program focuses on the health issues facing FSM women of childbearing age (15 44 years), especially teenagers. It concentrates on the following objectives: (a) to increase awareness regarding population problems; (b) to make family planning methods readily available to all and assure that they are supplied by competent health personnel; (c) to increase retention rates of family planning users; and (d) to improve the health status of mothers and children through health education, better nutrition and proper services and medical care delivery. Contraceptive prevalence nation-wide remains low, ranging between 25-35% using only modern long-term methods, and 30-50% using all methods. Reliable contraceptives are readily available only in the urban centers of most states and are difficult to access for teens due to confidentiality and privacy issues. It is generally agreed that there is an unmet demand for increased contraception in most states and that most women would prefer to have fewer children.

68 Effective contraception is not being widely delivered in rural areas and the OI due to lack of sufficient funds for travel, supplies and medicines and lack of training of health assistants in family planning technologies, although this situation appears qualitatively to have improved. Custom and tradition in the male to female relationship in some areas continues to block dissemination and use of contraception. Also, in almost all areas, given the "small town" atmosphere and inquisitiveness, it is highly unlikely that unmarried or teens truly can access such technologies in a confidential manner. With the recent discovery that cervical cancer is a leading cause of cancer in the FSM, it is imperative that FP, like

MCH, concentrates on increased PAP smears for women when they become sexually active and to encourage safe sex practices.

iv STD and HIV/AIDS

- 69 The STD and HIV/AIDs program in FSM is small and minimally funded. The focus of the program includes surveillance and health education. Most state hospitals are not able to perform STD testing, especially the ones requiring complicated and expensive testing kits. Medical officers and nurses indicate that STDs are more common than reported in most states and that they are both under-reported and under-treated. Teens and young adults are a particularly difficult group to reach for prevention and treatment activities as confidentiality and privacy is often lacking in many clinic settings.
- Recent reports underestimate the prevalence of such STDs, as well as of the HPV, as capability for diagnosis of such diseases is available only at state hospitals and is often expensive and requires complicated testing procedures. The relatively low levels of sexually transmitted diseases such as gonorrhea (10%), Chlamydia (18%), and syphilis (no cases) are mostly documented from prenatal visits in one state and are considered to be totally inaccurate. Many health providers in several states recall recent cases of syphilis and one of the medical staff at a college reported that many young people were reporting with symptoms of syphilis but that they would not go to the hospitals for privacy reasons. The true prevalence of HIV/AIDS is also not known. AIDS is diagnosed clinically based on presenting signs and symptoms (usually people presenting at inpatient clinics already have full blown aids). Between 1999 and 2002, there was a total of 25 cases HIV/AIDS in FSM. Most of the new cases were from Chuuk. For example, in Chuuk alone there are 22 HIV cases, of which 9 have been confirmed by Western-Blot, 2 have moved off island, 8 have died and 3 are waiting confirmation. This may be due to the high degree of movement of the Chuuk population to Guam and other overseas destinations. Given the very high rate of other STDs and the inadequate diagnosis and treatment capabilities in most states, the establishment and spread of HIV in some populations of the FSM is a real possibility.
- 71 It is suggested that the increase in the STD rate is due to the shift in the economy from subsistence living to wage earning, coupled with urban drift, and associated changes in lifestyles, behavior, values and beliefs, has created disruption to traditional control of island's societal norms and family unity. Urbanization also brings mental stress, opportunity for substance abuse and sexual contacts often with multiple partners.

v Tuberculosis and Leprosy

Tuberculosis and leprosy are still pervasive throughout the FSM. Tuberculosis has been a major cause of morbidity and mortality in the past in the FSM. While the mass campaign eight years ago helped in raising public awareness about the seriousness and deadliness of these two diseases, the challenge still remains in diagnosing new cases and completing their treatment. In recent years, however, public health programs have managed to lower rates to more manageable levels. Eradication or even adequate public health control, is far from established. From 1998-2000, 189 new cases of leprosy and 394 new cases of tuberculosis were registered. The prevalence rate of leprosy is among the highest in the Pacific (31.2 cases per 10,000 population).

vi Nutrition and Vitamin A Deficiency (VAD)

73 Economic development in FSM has come with westernization, primarily a transition from a subsistence to a moneyed economy. This transition has undermined the use, development and appreciation of local resources including food. Food and beverage items account for the top ten imports and in a country which fresh fish is plentiful, canned fish is one of those top ten. Imported food has become the standard diet despite the danger this poses to their economic survival (with a downturn in the economy, people will not be able to afford to eat) and for their health. Generally, the population lives on white rice, canned meat which has an excess of fat, canned fish and softdrinks. A large proportion of babies are also bottle feed in the first few months. This diet has lead to high rates of obesity, diabetes and hypertension and Vitamin A deficiency in islands where the supply of papayas and mangoes should make this a rarity.

VAD has been described in FSM, especially Chuuk, for many years but was verified in blood/ serum surveys in 1992. Subsequent surveys revealed high levels of VAD, using WHO standards, in all FSM states. Malnutrition attributed to a poorly nutritious modern diet replacing a healthier traditional diet, as well as anemia and heavy worm load, was also noted in children about the same time. Anemia was found to be common among pregnant women, newborns and infants. Consequently all states, in cooperation with the WHO and UNICEF, initiated a twice-a-year vitamin A supplementation program in conjunction with an anti-worming program for children aged 1-12. Iron and vitamin A supplementation is also now provided to pregnant women. A family food and nutrition project was also started, in an attempt to encourage consumption of more traditional diets. The VAD prevention and anti-worming program appears to be working well with coverage of children 1-12 years old at 85%. The addition of an antihelminthic, usually mebendazole, has proved popular and supportive to the VAD prevention program, as the parents can actually see the worms being expelled ("the medicine actually does something") and are eager to return for the next dose.

vii Substance Abuse and Mental Health (SAMH)

75 Ill health and dysfunction due to substance abuse and mental illness have increased in all states of the FSM over the last few decades. This trend appears to have accelerated over the past few years due to rapid societal change, family disintegration, and economic downturn associated with more people pursuing fewer jobs and higher expectations. FSM has one of the highest suicides rates in the world, increasingly severe law and order problems, and widespread polydrug abuse. Violence, suicide and drug abuse are problems in all states. Child abuse and neglect is also rising. Substance abuse is so widespread and pervasive throughout the FSM that mental health specialists refer to it as an "abusing society." Head and neck cancers have risen, lung cancer is among the top five cancers, chronic obstructive lung disease is common and alcohol cirrhosis and alcohol related mental health problems are also a problem.

The extent of the problem is hard to document, with most state statistics poor or absent. SAMH and PHC workers agree that mental health and substance abuse problems have risen even since 1999. The most commonly abused substances in the FSM are tobacco, alcohol, betel nut, solvents and marijuana. Alcoholic beverages have been legally available for over 30 years and in this comparatively short period, social problems associated with alcohol abuse have developed. Alcohol consumption is high for males (less so for females) in all states, except perhaps Kosrae. The problems associated with alcohol abuse is domestic violence, fighting and general public disruption, crimes committed while drunk and drink driving associated injuries and accidents. Tobacco and alcohol abuse and their chronic disease sequelae - hypertension, heart disease, chronic lung disease and cancer - are major contributors to death and disability in the FSM. Abuse of betel nut, in conjunction with alcohol and tobacco often soaked with other solvents, is everywhere on Yap, and is rapidly spreading and reaching higher levels in the other states. Abuse of modern designer and prescription drugs occurs, but does not appear to be as common. Abuse of alcohol, marijuana and tobacco is common among professional and educated people, as well as the general population and gives a bad example to young adults.

Mental health problems are thought to be increasing as people are not coping with the dramatic cultural and societal changes occurring but prevalence estimates are unreliable due to the lack of data and professionals to diagnose mental illness. There are no true psychiatric wards or appropriate holding rooms available at the hospitals for violent patients. Jails now refuse to admit psychiatric patients for holding purposes only. In rural areas, it is reported in some states that severely mentally ill patients who are violent are often chained inside houses. In traditional terms, if a mentally ill patient causes damage to another, the family and clan is held responsible. In the 1999 Lowry study, it was noted that many of these cases are well controlled with psychotropic drugs, but without

regular supplies of such drugs, the patient must frequently be restrained in this manner.

There is general discussion about using PHC workers to dispense SAMH medicines after training, but this has not been seriously implemented in states.

d Secondary/tertiary care

The secondary health care system (services delivered at the hospital clinic and inpatient services in urban state centers), is receiving approximately 70% of patients that could have been handled at the PHC level. State hospitals have a limited budget and they can not effectively deliver primary as well as secondary and tertiary health services. The hospital based support network is also the backup services for PHC and public health. PHC services can not function without support. They must have facilities and personnel from which they obtain expert advice and medicines, supplies and equipment. PHC providers must be able to refer cases beyond their capabilities to those with higher qualifications and skills. If this second tier of health care is not working, then support to PHC and PH interventions in rural areas will not work. Medicines, supplies and equipment will be in short supply, no funds will be allocated for travel, no training will take place, and PHC services will disintegrate. Thus, second tier health services are also essential to implementation of PHC services.

80 There are a total of 4 government run hospitals in the FSM (Chuuk – 125 beds, Kosrae – 35 beds, Pohnpei – 116 beds, Yap – 50 beds) plus a 36 bed private hospital (Genesis) in Pohnpei. The state hospitals in all FSM states can potentially provide secondary, as well as low-level tertiary care (care provided by a specialist who requires a complex understanding of disease etiology, complex training and skills and often special equipment and support). Serious problems that limit the level of care that the hospital can provide include: a shortage in some medical professions, a lack of appropriate ongoing training and a lack of repair and maintenance even in some recently renovated hospitals. The major immediate barrier to service delivery in FSM hospitals is the lack of supplies, drugs and equipment. All states but Kosrae show some evidence of cutting PHC drugs and/or services to support hospital services. The increase in inpatient and outpatient utilization at hospitals has resulted in increased costs and overcrowding.

- Quality assurance (QA) programs and approaches need to be incorporated in all health services. The use of inappropriate personnel or poor management practices have resulted in operational problems in important hospital units such as laboratories, x-ray units, pharmacies, housekeeping and supply units. In some hospitals, problems also occur in their clinical care divisions and public health units. All hospitals are under utilized for their size and have a bed capacity in excess of their needs. All are inappropriately utilized as well and people are frequently admitted for social or other reasons rather than medical need. Most personnel are under utilized due to malfunctioning of the various support units. While standards for practice have been established for FSM nurses, with requirements for continuing and basic education, such standards have not been established for physicians, dentists or pharmacists, the allied health professions or for health assistants. For these and others, there are no basic requirements for education or for continuing training in their practices. There is also no formal requirement relating their training to their type of practice.
- To provide efficient, best-practice secondary and tertiary care, it is necessary that the state hospitals: be well designed and maintained; that data based decision making practices occur at the management level; medical, nursing, professional laboratory and x-ray technicians and support staff are appropriately trained in procedures and guidelines to enable quality control; include a working, equipped laboratory, functional x-ray equipment and a full-service pharmacy. Without sufficient funds and political will, it is difficult to provide highlevel secondary care at any state hospital, and impossible to provide tertiary care, even if physicians, staff and facilities are capable of it. Consequently, tertiary care is clearly out of the range of most states in the FSM until adequate funding is available for quality primary and secondary health care services and appropriate training has been initiated. If the basic hospital units were working properly and utilization was appropriate; all hospitals could provide a much higher level of care. Once state hospitals start functioning at their full capabilities, there would likely be no need for a national referral hospital. A cost benefit analysis (CBA) also needs to be completed to look at the feasibility of either upgrading the 4 state hospitals or having a tertiary hospital in either Pohnpei or Chuuk.

e Out of Country referrals

Out of country referrals have been part of the FSM health system since the Trust Territory of the pacific Islands (TTPI) days and are basically bankrupting the health care system. Typically, in TTPI days patients were referred to military health facilities in Honolulu or Guam, with costs mostly absorbed by the U.S. military or the TTPI administration. Following the signing of the Compact, these facilities began expecting payment for patient care. By the mid 1990s most states had run up extensive debts for medical referrals to Guam and Hawaii. Not pre-negotiating the cost of treatments, or setting ceilings on the type

of treatment exacerbated the costs of such referrals. For instance, in 1999, Chuuk had a referral budget of \$300,000, spent \$1 million on referrals and had an estimated \$5 million owed from previous years. The other states appeared to be better off: Kosrae had a referral budget of \$100,000, spent \$100,000 on referrals and only had an estimated \$500,000 owed from previous years; Pohnpei and Yap both had referral budgets of \$300,000 and spent less (\$200,000) on referrals.

84 25% of the health services budget goes on referrals to benefit a small proportion of the population. This is not sustainable and needs to be addressed immediately. When patients are often sent off-island for medical services and little funding is provided to increase the capacities of local facilities and local health professionals, then inequities will grow and a large proportion of health funds will be spent overseas. Referrals are often ill-advised (e.g. in the case of terminally ill patients) and have often been made by politicians who are not basing their decision on medical considerations. The major cost of referrals is because many referrals are for chronic diseases that are basically ameliorable but untreatable and drag out for years. Care both in-country and out-of-country of people with NCDs, despite NCDs being preventable in most cases, is taking funds away from other health priority areas.

85 Continued overseas referrals are not an economic alternative for the treatment of NCDs. The economic choices for FSM are to ration overseas referrals for NCD health care, to make serious investments into primary and secondary prevention of NCDs and improve the ability of the state health systems to treat NCDs. Four things must happen for a sustainable health care financing mechanism to become a reality:

- Referrals to foreign medical facilities must be virtually ended.
- All employees must become members of the NIP.
- Considerable economic growth must occur so that user fees can be collected equitably. Prospects of having to pay for medical services could re-enforce the adoption of healthy lifestyles.
- The community must change its attitude that they have a right to free services and that health is a government responsibility.

f Health Workforce and Performance

86 The ratio of physicians to population updates as of 2003 (approximately 1/1739) and nurses to population (1/360) is better than that found in other South Pacific countries with comparable demographics and health statistics. The states have trained local physicians to fill the need for essential medical specialists. Nurses and allied health professionals (such as laboratory, x-ray and supply technicians and morticians), dentists and allied dental health professionals are in

short supply. There are no fully trained pharmacists in FSM, the acting pharmacists in most states have limited training to short courses and on-the-job training. There is a shortage in all states of non-physician health administrators and financial officers. There are no nutritionists/dieticians, which is particularly of concern, given the high morbidity and mortality from obesity, diabetes and nutrition related diseases. Recruitment of qualified personnel for bachelor level education should be a high priority. In the FSM, the health sector is constrained in the delivery of appropriate services by the quality of staff and the lack the training in appropriate procedures and guidelines to enable quality control and assurance of quality services. Some states have employed human resource development managers and prepared health workforce development plans to address these issues.

Improved and expanded nursing education is the long-term key to improved rural health services in the FSM. Health assistants should be gradually replaced over the next twenty years with more professional level health staff, preferably nurses or other mid-level health workers. Nurses should have an expanded role in public and preventive health as well as hospital-based medicine. There is a great need for nurses with advanced degrees such as nurse practitioners, nurse administrations and nurse nutritionists. Overall nursing capabilities and skills need to be upgraded through in-service and continuing education. Some attempt has been made to meet nursing requirements through distance education from Guam. The College of Micronesia (COM) in Pohnpei is starting a 1 year nursing training course in 2004, but there is also a need for the opportunity for career ladder training in the field of nursing similar to what the Fiji School of Medicine offers in health science degrees. The programs are divided into modules that beginning in year two of training offer exit points that correspond to different qualifications. There is a need to offer scholarships in key areas possibly through grants from bilateral and multilateral donors for pharmacists and nutritionists as well.

88 Most continuing education efforts, are focused mainly on physicians. Physicians in most states have access to telemedicine learning opportunities and teleconferencing opportunities via the internet, but this is rare in nursing, pharmacy, dentistry or the allied health professions. Nurses and allied health professionals (such as laboratory, x-ray and supply technicians, and morticians) are not only in short supply, but often inadequately trained and receive almost no inservice or continuing education. Pharmacists (actually Pharmcol technicians) generally have no internet access and teleconferencing is rare, although there is continuing education for pharmacists in terms of out-of-country short courses offered by international and bilateral agencies. Most state hospitals are planning to, or have initiated quality assurance programs. This hopefully will have some effect on the deteriorating quality of care found in most of the hospitals.

89 Wages for health workers are almost as low as can be set without loosing most of the health workforce. Health workers at all levels, in all states, are demoralized and discouraged not only with their own pay, but with the lack of support to the hospital and medical services. Under Compact II, no direction is given as to remuneration of health workers. However performance-budgeting principles permit and encourage rewards for improved performance, and clear improvements in health sector performance could prompt state governments to increase wages.

8.1.5 Drug Supply And Policy

- 90 ("Drug" encompasses medicines, vaccines, intravenous infusions, family planning aids and dipstick reagents)
- 91 The biggest barrier to service delivery in all FSM hospitals is the severe lack of supplies, drugs and equipment, largely due to poor management systems. Hospital supplies, including medicines, are frequently unavailable, as none of the health facilities, exercise control over inventories, and there appears to be no automatic reordering procedure or essential formulary for the hospitals. Drug purchases are usually made by each state independently of the others, usually without the advantages of the economies of scale found in group purchasing. Brand name drugs are often purchased instead of generic equivalents. Procurement of pharmaceutical and medical supplies at present is not cost efficient, nor is drug use managed wisely or appropriately. Considerable savings estimated at greater than 40% of present costs, can be obtained through improved procurement practices and rational drug management. It is appropriate to establish a national working group to establish sustainable cost-efficient procurement and rational drug management practices.
- A workshop, attended by health officials, lawmakers, private businesses and other stakeholders was convened in September 2003 through technical assistance of the WHO to review and finalize the draft *National Drug Policy*. The FSM draft (as amended 19 September 2003) *The National Drug Policy* was endorsed at the workshop and it was recommended that it be made into law. The policy has two main objectives:
 - to ensure the equitable and consistent availability of acceptable quality, effective and safe essential drugs at an affordable price; and
 - to promote and rationalize the therapeutically sound and cost effective
 use of these drugs by health professionals and consumers through the
 provision of drug utilization information, training of health professionals
 in appropriate drug prescribing and education the public in drug use and
 storage.

- The National Drug Policy and its recommendations will be financed through the ADB BSSP loan and Compact II resources will be also be used to defray some of the associated costs with implementation of the policy. One objective of the BSSP, is to improve the efficiency and efficacy of drug purchases, with consequent lowering of overall costs to health departments. The FSM state health departments will also have to allocate a proportion of the resources to ensure a minimal level of care in each state. The aims of the National Drug Pol
 - to ensure that the Drug Administration Services Section of DHESA are adequately staffed and equipped to supervise the implementation of the National Drug Policy (eg. drug registration, licensing, inspection, information, training, adverse drug reaction and poisons information):
 - to establish a National Standing Drug Advisory Committee, comprised of the Secretary of Health, all State Directors as well as medical and pharmaceutical experts to enable informed decisions, and a consumer organization. The Committee will select drugs for the public sector in accordance with the essential drugs concept, defined by WHO (selected with regard to public health relevance, evidence on efficacy and safety, and comparative cost-effectiveness);
 - to produce the National Formulary containing all the drugs selected for use in the public sector to be distributed to all National and State health institutions and consultations will be between the National Standing Drug Advisory Committee and the State Hospital Drug Committees to ensure correct, efficient, cost-effective handling and use of drugs in hospitals;
 - to obtain the necessary quality and quantity of drugs, which will meet the health needs of the population, at the lowest possible cost. Drug procurement will be carried out on world-wide open purchase system by generic name and according to the National Formulary. Priority consideration will be given to drugs for PHC and control of endemic diseases;
 - to ensure availability of sufficient quantities of essential drugs through Drug Inventory control (accurate and systematic recording, monitoring and reporting of stock levels);
 - to ensure the prompt, safe and efficient supply of drugs to end-users and the maintenance of quality and security of drugs in storage, a Drug Storage Procedures Manual will be produced, and that unwanted drugs are disposed of efficiently, safely and correctly;
 - to ensure drugs are prescribed, dispensed, and used rationally in order to maximize the therapeutic benefit to the patient and reduce loss, misuse and wastage using Standard Treatment Guidelines and with adequate patient counseling;

- to ensure that there is the appropriate number of adequately trained personnel and that all health workers involved in diagnosis, prescribing and dispensing of drugs receive relevant theoretical and practical training; and
- to support research and development activities which will facilitate the achievement of the objectives of the National Drug Policy.

8.1.6 Environmental Health

- 94 The environmental health program is minimal and insufficient for the problems encountered. Water is safe to drink in only three towns (Colonia on Yap, Kolonia and Palikir on Pohnpei) in the FSM. Water supplies to these towns are managed by utility corporations, and are chlorinated and therefore considered reasonably safe (although less so than in previous years). Water supplies to all other municipalities and all rural water sources are considered potentially unsafe due to animal and human contamination. Only 41% of the population in 2000 had access to a clean water source. Sanitation is also a problem even in those towns with good water (less than half of the population have access to an appropriate source of sanitation with pit latrines the most common sanitation in the outer islands). Waste management services are putting an increased strain on the environment and disposal of chemical wastes left over from agriculture and commercial projects is also a serious problem. Disposal of chemical wastes left over from agriculture and commercial projects is also a serious problem. Food inspection, internationally and between states, appears to be working well.
- 95 The responsibility for environmental health and sanitation, although vitally important to PHC, is divided between each state's Environmental Protection Agency (EPA) or its equivalent, and the state health department. Although there should be no conflict in responsibility between the two, in several states the EPA has taken their mandate to include home water and sanitation issues. Consequently, water and sanitation have often been inadequately managed by both agencies. Promotion of clean water, good hygiene and sanitation at the village and home level is an important aspect of PHC. The health department needs to refocus its attention on this issue as an essential part of PHC services.
- Olimate variability and change, including sea-level rise, are important determinants of health and of growing concern in FSM (as it is in all Pacific Island countries). The impacts are mostly adverse. Climate variability and change can result in reduced quality and quantity of water supplies, loss of coastal resources, reduction in ecosystem productivity and a decline in agricultural productivity. Potential health impacts which have been identified include: vector-borne diseases (such as dengue fever and malaria), water-borne diseases (such as viral and bacterial diarrhoea), diseases related to toxic algae (such as ciguatera fish poisoning which is important in FSM where the protein source is predominantly fish), food-borne diseases, food security and nutrition, heat stress, air pollution, and extreme weather and climate events (such as cyclones, high tides, droughts

and storm surges). Especially on atoll islands of FSM, storm surges can result in injury and drowning. The adverse impacts of many of these events will be exacerbated by sea-level rise. Thus, climate change should be an important consideration when assessing environmental health issues and the consequential priorities for the health of people in FSM.

Several environment-related diseases of public health importance are endemic to various states of the FSM, or have the potential to cause epidemic outbreaks with the right environmental circumstances. For these diseases, there are existing hosts, intermediate hosts or vectors already present in the FSM that allow or predispose residents to disease transmission and outbreaks. These diseases include leptospirosis, filariasis, dengue fever, typhoid and cholera. For example, dengue fever (Dengue Hemorrhagic Fever) sweeps through the region in epidemic form generally every 3-6 years, but can be prevented though mosquito source reduction and personal protection measures, such as screening of houses, protective clothing and mosquito repellants. Water-borne diseases, including cholera, typhoid and leptospirosis, are common cause of epidemics in the FSM. These outbreaks are in large part due to poor hygiene and the unprotected water supplies found in most states. Neither national nor state health departments have programs to deal with the diseases noted above, or the onslaught of an infectious disease epidemic. Such epidemics in the past have proven expensive, often using significant amounts of the states' health budget and overtaxing the health system. A contingency plan for each state, and at the national level, is needed for such epidemics.

8.1.7 Infrastructure

- 98 The physical condition and design of all hospitals in the FSM are generally adequate for the provision of secondary and low level tertiary care, although most hospitals are behind in maintenance, repair and renovation activities. This is in spite of the U.S. DOI providing a US\$2 million grant in 2001 for the rehabilitation of the four state hospitals and the provision of a one-year training program on hospital maintenance. The principal problems of health sector infrastructure are: the hospitals are in poor condition; many pieces of equipment are out of order; Hospital boards are either non-existent or inept, and do not exercise any control over hospital performance standards, cleanliness, or maintenance of facilities; there is a high incidence of water-borne disease, due to the delivery of polluted water by many small water supply systems; access to medical services is problematic as transportation is difficult and expensive for rural patients; and the Community does not take responsibility for the repair of the dispensary.
- 799 Transportation problems, especially lack of ambulances, are major causes of limited access to health services and patient dissatisfaction, as well as poor health outcomes. On the large islands (Pohnpei and Kosrae), public transportation is weak or non-existent away from the government centers. Although trans-

port of serious ill patients to the hospital is a problem in several states, this problem could be dealt with by better roads and ferry services. There are some international NGOs assisting with transportation, eg. Pacific Missionary Aviation (PMA) provides air services to the outer islands of Yap and Chuuk, including free medical evacuations and cut-rate fees for medical personal on official travel. They also provide air services to the OI of Pohnpei and a commercial service between Pohnpei and Chuuk. Operation of the PMA medical ship has been providing medical services to many of the OI. The single vessel, however, is unable to serve all OI, and the frequency should be increased. A second medical vessel is needed and PMA indicates that it would be able to furnish sufficient medical staff for two vessels.

100 In 2004, the ADB BSSP project will include two phases: a state-level institutional reform phase; and an investment program for upgrading facilities and establishing systematic maintenance programs for those states successfully completing the first phase. It is important to upgrade the curative health system, to minimize the needs for referrals to foreign medical facilities, and to increase the effectiveness of medical services. Two approaches have been discussed in FSM in recent years for achieving the second broad objective: either establishing and developing a national referral hospital in one of the states, probably Pohnpei or Chuuk, to make foreign referrals largely unnecessary, or transforming what are

Table 8: FSM Health Sector Capital Investment Program, FY 2003-17

Health Sector Development Programs by State	Cost (\$US)
FSM MEDICAL SHIP Chuuk State Hospital Rehabilitation Chuuk State Hospital Expansion and Modernization Chuuk State Dispensaries Total Chuuk Health Sector DP	\$1,200,000 \$1,700,000 \$3,000,000 \$4,130,000 \$8,830,000
Kosrae State Hospital Kosrae Dispensaries Total Kosrae Health Sector DP	\$1,100,000 \$100,000 \$1,200,000
Pohnpei State Hospital and Ancilliary Facilities Rehab.& Upgrade Pohnpei State Hospital Expansion and Modernization Pohnpei State Dispensaries Total Pohnpei Health Sector Dp	\$1,548,000 \$3,000,000 \$470,000 \$5,018,000
Yap State Hospital Rehabilitation and Upgrade Yap State Hospital Expansion and Modernization Yap State Dispensaries Total Yap Health Sector Dp	\$1,352,000 \$2,460,000 \$673,000 \$4,485,000
Total FSM Health Sector Development Plan	\$20,733,000

essentially four state health systems into a national system, with, among other things, the development of specialization in medical services among the four state hospitals. Discussions at 3rd Economic Summit favored a CBA to be completed to decide on the issue. Table 8 summarizes the Infrastructure Development Plan (2003 to 2017) for FSM.

8.1.8 Health Information: Statistics And Planning

101 Good financial reporting (how resources have been used), monitoring and auditing are critical functions of effective delivery of services. They provide essential data along with insights for drawing lessons; setting priorities; assessing whether activities are being implemented as planned and reaching stated objectives; managing activities; and offer assurance that funds are used for agreed purposes. The foundation for developing system accountability is a system-wide information system that collects and disseminates data for public scrutiny and enables data based decision making. It is critical to share and disseminate health sector information, so that civil society can act as a "watchdog". The accountability of the health systems to communities can only be ensured though, if the communities begin to participate in the decision making processes as well. Health sector reporting is also a necessary requirement of the Compact II and is fundamental to the production of the annual Poverty Reduction Strategy Report and feeds into the MDGs reporting.

102 At a management level, the FSM health sector is weakened by the absence of data based decision making practices. The absence of reliable data is the primary cause of this problem. This is in part due to the level of education, experience and training of health statistics technicians in each state, inasmuch as they seem incapable of generating at the state level the type of reports needed to improve decision making. This is also due to inadequate systems in place at the state level, such as lack of backup of files, frequent computer crashes and poor state level supervision and support. The problem is also compounded by a lack of expertise in how to utilize such data to inform the planning of service delivery and consequently a lack of commitment to ensuring adequate resources are provided for more efficient service delivery. The application of rational management techniques will require the development of managerial capacity so it can systematically manage its information database to guide its decision-making practices. For example, if the health information system is functioning well then decisions can be made on up to date information based on accurate financial reports and the incidence, morbidity and mortality of diseases. A quicker response time and more efficient use of resources allows for improvement in quality of management decisions and in health planning.

103 Technically, the health information system structurally reaches throughout each state to the smallest village. Functionally, however, there is generally under reporting of vital statistics and other health statistics outside urban areas.

Only 70% of births are recorded and 46% of deaths, largely due to inadequate recording at the dispensary/community level. Additionally, failures in collection of morbidity and mortality data occur due to computer failures or "crashes". Public health statistics are often inadequately recorded at the state level and the problem carried over to the national level. Pohnpei has excellent data at the hospital and public health levels and at the dispensary level on the main island, with each health assistants sending the data in daily as all dispensaries on the main island have a computer that can be linked to the main system. The OI dispensaries have a limited number of patients and prepare their reports manually and send them in regularly.

104 Data provided to the national health statistics office (NHSO) from some of the states are neither complete nor accurate, and standard reports are often behind schedule and associated with major caveats due to the reliability of the data. The statistics system at the national and state levels could improve with infusion of technical assistance, appropriate funding and dedication. The proposed ADB BSSP (commencing 2004) will provide technical assistance to improve health statistics collection and use. However, there is an urgent need for FSM to use additional funds to gain technical assistance in financial reporting and statistical/information systems to complement the BSSP and to meet Compact II reporting requirements in a timely fashion.

8.1.9 Constraints To The Effective Delivery Of Health Care

105 The five major constraints currently affecting the quality of health care and health services delivery in FSM are: 1) the significant level of poverty combined with poor performance of the economy; 2) poor management, financial reporting and information systems in the health sector; 3) the rise in NCDs has placed a heavy burden on health systems; 4) the high cost of doing business over long distances: Remote Islands; and 5) the belief that health is government business rather than an individual and community responsibility.

The significant level of poverty combined with poor performance of the economy

106 Improvement in health is directly related to poverty. One way of assessing poverty is to consider FSM's achievement of the MDGs, which are focussed on reducing poverty, hunger, disease, illiteracy, environmental degradation, and discrimination against women by 2015. Poverty incidence is estimated to be high with approximately 40% of the population falling below the national poverty line (Chuuk 50%, in Yap 13%, in Pohnpei 35% and in Kosrae 29%), basic social services fail to reach the poorer strata of society and FSM has poor health indicators. Only 41% of the population have access to clean water and less than 50% to appropriate sanitation and the participation of women in decision-making or higher level positions remains very limited.

107 The level of poverty is expected to increase if the economy consistently performs poorly. Since the health sector review in 1999, the FSM economy, in both the public and private sectors, has faltered. Most states show either a slight decline or a flattening in growth, despite a slight increase in funding associated with the continuation of the Compact II negotiation period. This poor performance is of greater concern because of the rather high dependency and unemployment levels found in FSM. The 2000 Census indicates that many people working within the formal sector are supporting many other family members. A downturn in the economy would further exacerbate the ability the employed to support basic requirements for their families and the payment of health insurance premiums as well.

ii Poor management, financial reporting and information systems in the health sector

108 Good financial reporting (how resources have been used) is critical to effective implementation of services and for accountability in the use of resources. Cross cutting constraints are lack of transparency and governance issues, poor government financial management, and a relatively poor private sector investment environment. Common symptoms of poor quality in public health sectors are a lack of essential drugs, inaccessible health facilities or absent staff, nonfunctioning vehicles and equipment and dilapidated premises. All these symptoms exist in varying forms across FSM. Poor quality is due to allocative and technical inefficiencies and occurs when required inputs (physical and human) are lacking, when resources are not targeted to real health needs, and when proper procedures are not used. Independent audits (where an independent external auditor expresses opinion on reliability of the annual financial report and compliance with the rules governing the use of funds) would provide assurance on reliability of financial reports and that resources are used for intended purposes.

109 Reporting and monitoring provides essential data along with insights for drawing lessons, setting priorites, assessing whether activities are being implemented as planned and reaching stated objectives, managing activities and offer assurance that funds are used for agreed purposes. There is a need to share and disseminate information, and make it openly available to the public so civil society can act as a "watchdog". The accountability of the health systems to communities can only be ensured though, if the communities begin to participate in the decision making processes as well. Health sector reporting is also a necessary requirement of the Compact II and is fundamental to the production of the annual Poverty Reduction Strategy Report and feeds into the MDGs reporting.

ii The rise in NCDs has placed a heavy burden on health systems

110 The major causes of morbidity and mortality in FSM are the non-communicable diseases (NCDs) of lifestyle and modernization and most of these NCDs could be prevented by modifying a few specific risk factors. These lifestyle diseases include those associated with over and improper nutrition, a sedentary lifestyle and substance abuse and include such things as diabetes, hypertension, heart and vascular disease, stroke, cancer and lung disease. Even among children, the infectious but vaccine preventable diseases of the past have been supplanted by prematurity, newborn complications and malnutrition (often themselves caused by lifestyle diseases of the mother or family) as the major causes of death. These NCDs are also causing a huge economic burden as treatment costs are high.

111 NCDs are among the most expensive of diseases to treat. Patients with these diseases need constant care, expensive medicines and frequent oversight, and need it for years. Compared to the vaccine preventable diseases of childhood that killed rapidly and without remorse, the chronic diseases drag on for years, destroying the quality of life and financially ruining both the patient and the health system. Thus, FSM will need additional funds to adequately control, treat and prevent NCDs/lifestyle diseases in addition to funds for control of vaccine preventable disease and other basic public health measures. Effective prevention strategies will eventually lead to a decrease in lifestyle diseases with concomitant marked savings to the health sector. There is an urgent need to integrate health promotion into the health system and make it a priority to direct efforts to modify individual behavior and environments that contribute to over-and under weight, unhealthy diets, tobacco use, unsafe food, physical inactivity substance abuse, domestic violence and mental problems.

iv The high cost of doing business over long distances: Remote Islands;

112 The FSM consists of four major island groups forming the states of Kosrae, Pohnpei, Chuuk and Yap. The 607 islands (65 of these are uninhabited), which constitute the FSM, encompass more than one million square miles of ocean and a total land area of only 270.8 square miles. The 2000 Census showed that the total population was 107,008 with a fairly even distribution of male and female. Pohnpei island alone constitutes about one-half of the total land area and is home to about one-third of the population, while more than half the population live in Chuuk State, which consists of many small atolls and lagoon islands. The distance from the eastern most state of Kosrae to the state of Yap in the west is more than 1,500 hundred miles. One international carrier provides transportation between the major islands and the cost of round trip air travel between the states is often in excess of one thousand dollars. Communications, travel, and logistical coordination within and between the states are by small boat or periodically by ship. Thus, travel costs represent a barrier to the

supervision, support and training of health workers and access to services by patients living on remote islands.

113 Despite the geographical separation between and within the states compounding the costs of doing business, the FSM National government is committed to some level of quality health care for all. They hope to accomplish this through prioritization of health care services with a focus on community based primary and preventive health care service and careful consideration will be needed for infrastructure investments. State health departments have indicated that PHC has generally taken the brunt of reduced budget cuts, usually through the elimination or minimization of expensive supervision and PH team visits to remote and OI dispensaries. Funding shortfalls in several states have also necessitated reduction of essential drug supply to rural dispensaries, and a marked decrease in credibility and use of rural dispensaries. This refocus of fiscal priorities is believed in some states to be due not so much as to funding shortfalls as to poor management and priority-setting at the senior DHS levels and to poor inter-departmental coordination (mainly between the Health and Finance) at the state level. There is an urgent need to refocus fiscal priorities to the PHC level.

The belief that health is government business rather than an individual and community responsibility

114 When FSM was part of the Trust Territories of the Pacific Islands (TTPI), primary, secondary and even some tertiary care was provided mostly free by the TTPI administration. Thus, historically, people of FSM have viewed free health care as an entitlement. The constitution reinforces this belief and its bylaws also clearly state that "no one in need of medical care shall be denied such care because of inability to pay all or any part of any fee established." Since the late 1990's, it has become increasing apparent to many citizens of FSM that to obtain quality health services, of the type provided in Hawaii and Guam, some participation and personal contribution to financing of health services is required and there is an urgent need to expand the national insurance program.

115 The quality of health services is of major interest to almost all peoples of FSM. Most people, in a 1999 quality of care survey by Jeff Benjamin (currently Secretary of Health), indicated that the overall quality of care and services received was poor; very few people interviewed thought that the state hospitals had qualified personnel, treated patients well, or were clean. The high demand and use of out-of country referrals even for rather routine medical services reflects this opinion. In another survey of dispensary services undertaken by the Micronesian Seminar, many people indicated that they would be willing to pay for improved services. So although, most people remain unwilling to pay for health services as they are now perceived, surveys reveal a willingness to pay for improved health services.

116 A feeling of community "ownership" of health services, whether it be a rural dispensary or the state hospital is rare. Health in general is viewed as the government's business. Very few local NGO's are involved in health to any extent. Likewise there is little assumption of personal responsibility for health. If one is sick, the health system should fix it. A change in attitude is urgently required, particularly with the rise in NCDs that are largely preventable by the individual or community taking responsibility. The community must be mobilized and educated to take greater responsibility and interest in health, with the dispensary health worker acting as a resource person and facilitator. In the FSM, community involvement and participation in local dispensaries is often lacking as State hospitals are seen as the providers of superior quality service reflecting the absence in many cases of pharmaceuticals and medical care at the local dispensary level. For communities on outer islands, the local dispensary may be of irreplaceable value but this may not translate to community support if it is perceived as an instrument (and the responsibility) of government. All states are promoting greater community participation in health, in delivery of health services and in dispensary management and support. None of the structures and arrangements has proven effective as yet. Community participation in health and health care is essential to delivery of prevention services and support of PHC services.

8.2 Strategic Goals, Policies and Outcomes

117 This section of the chapter outlines the rationale and the need for a new direction of health sector development in the FSM. The review identified and the 3rd Economic Summit endorsed five areas for strategic focus (strategic goals) on which health sector funds are to be based and allocated and clearly identified specific outcome measures. The Strategic Planning Matrix for Health and suggested activities and outputs are also detailed in Sections 3 and 4 of this chapter. The purpose of the Matrix is to guide policy makers in allocating funds to support the development of health initiatives, projects and programs deemed necessary to advance the public's health.

118 Poor quality is a key problem of health services in the FSM and all available indicators suggest that primary health care (PHC) as well as secondary health services are failing to adequately address people's health needs and requirements. It is expected that focusing on the five strategic areas will bring about change in the sector. These strategic goals will be reviewed annually but are unlikely to change, whereas the activities and outputs which have been suggested may change based on achievements, variations in health problems and political will. The FSM has a performance-based budget and departmental resources will be assigned to achieve these strategic goals and measure the identified outcomes (health status change or output measures).

8.2.1 Strategic Goal 1: Improve Primary Health Care Services

a Analysis and justification

119 There is an urgent need to focus attention on improvements in the quality of primary health services as this is the base of health care in FSM and it has been deteriorating over the last few years. The PHC system is responsible for delivering primary, preventive and public health services to both the rural and urban populace in FSM. Hospital clinics and inpatient services are receiving approximately 70% of patients that could have been handled at the PHC level or who have received improper, insufficient and/or inadequate PHC services at the dispensaries/health centers. One of the major reasons is that the dispensaries/health centers do not have adequate drugs or medical supplies and equipment. Given the limited financial and institutional resources available at state hospitals, they cannot effectively deliver such services and also secondary and tertiary health services as well. This failure at the PHC entry point to health services adversely affects the efficiency and effectiveness of health care delivery at all levels. Improving the quality of PHC services is an essential starting point for improving the quality of health services in FSM.

b Policy Implications

120 Appropriate investments and administrative and support practices need to be put in place so that the quality of the health services is delivered at appropriate state, national and international standards. It is obvious that an increased level of funding is needed to support supervision, supply and training of health service providers and the provision of medicine and other supplies, so that at least adequate services can be delivered in all states. As the existing PHC network is countrywide, a properly operating PHC system would contribute significantly to ensuring the health of the people of the FSM.

c Critical Issues for Implementation

121 Appropriate funding must be allocated for the adequate supply of drugs, medical supplies and equipment and for the travel costs of the PH teams so that they can adequately supervise, support and train the health assistants in the dispensaries/health centers.

d Outcome Measures and Justification

- Utilization of basic PHC services provided at the dispensary/health center level increased by 20%
- Utilization of basic PHC services provided at hospital outpatient clinics is decreased by 50%

- Improved performance of health workers in delivery PHC/PH services as demonstrated by:
 - immunization rate of all 2-year old children is increased to 85%
 - contraceptive prevalence increases to 50%,
 - at least 3 MHC visits reported for all pregnancies
- Hypertension screening and monitoring undertaken at 50% of PH/PHC encounters
 - 50% of overweight/obese patients receive diabetes screening, nutrition counseling
 - PHC monitoring/supervision dispensary/health center visits according to schedule 90% of time
 - 100% increase in PH promotion visits from baseline on monthly dispensary/health center report form
 - quality practices and techniques and a full range of services are in place for 75% PHC unit and PH teams in all States
- 80% of dispensaries/health centers report no major drug/medical supply shortages in last year
- At least 75% of all bio-medical equipment is functional at all times
- Dispensaries/health centers in good operating condition
- Community involvement in management and support of dispensary/health center
- Increase the percentage of mothers that breastfeed from 66% to 75%.

8.2.2 Strategic Goal 2: Improve Secondary Health Care Services

a Analysis and justification

122 Without sufficient funds and political will, it is difficult to provide high-level secondary care at any state hospital, and impossible to provide tertiary care, even if physicians, staff and facilities are capable of it. Consequently, tertiary care is clearly out of the range of most states in the FSM until adequate funding is available for quality primary and secondary health care services and appropriate training has been initiated. If the basic hospital units were working properly and utilization was appropriate; all hospitals could provide a much higher level of care. Once state hospitals start functioning at their full capabilities, there would likely be no need for a national referral hospital.

123 Most laboratories, as well as other hospital units, are incompletely functioning because of equipment problems and lack of appropriate technology. An

efficiently and appropriately designed hospital ensures rapid and timely patient support and flow, is cost efficient and facilitates quality delivery of care and services. Appropriate maintenance and housekeeping ensures that the hospital can function as designed delivering quality patient care without physical or health risks. The pharmacy/supply office must have all medicines and supplies necessary for all of the expected diseases, procedures and complications likely to be seen by the staff, and the x-ray and laboratory departments must be capable of performing all procedures necessary for the various medical services offered. Supplies and medicines should be purchased using mechanisms to eliminate unnecessary costs.

b Policy Implications

124 The major immediate barrier to service delivery in FSM hospitals is the lack of supplies, drugs and equipment. All states but Kosrae show some evidence of cutting PHC drugs and/or services to support hospital services. The National Drug Policy and its recommendations will be financed through the ADB BSSP loan and Compact II resources will be also be used to defray some of the associated costs with implementation of the policy. One of the aims of the Policy is to establish a National Standing Drug Advisory Committee, comprised of the Secretary of Health, all State Directors as well as medical and pharmaceutical experts to enable informed decisions, and a consumer organization. The Committee will select drugs for the public sector in accordance with the essential drugs concept, defined by the World Health organization. These drugs are selected with regard to public health relevance, evidence on efficacy and safety, and comparative cost-effectiveness and to produce the National Formulary containing all the drugs selected for use in the public sector to be distributed to all National and State health institutions.

125 Given the history and circumstances of FSM's small population with heavy out-migration often of its trained personnel, the development of human resources is important. The health workforce is a critical element in improving the health system. The FSM needs to prepare a strategic workforce plan. Formal, measurable standards of care and benchmarks need to be developed at the strategic, policy level as 'standards for health improvement', associated with outputs, and at an operational level for quality assurance, continuous quality improvement, protection of the public and feedback to the community, government and staff.

c Critical Issues for Implementation

126 The secondary health care system is receiving approximately 70% of patients that could have been handled at the PHC level. The hospital based support network is also the backup services for PHC and public health. PHC services can not function without support. They must have facilities and personnel from which they obtain expert advice and medicines, supplies and equipment. PHC

404

providers must be able to refer cases beyond their capabilities to those with higher qualifications and skills.

127 A cost benefit analysis (CBA) also needs to be completed to look at the feasibility of either upgrading of the 4 state hospitals or having a tertiary hospital in either Pohnpei or Chuuk.

d Outcome Measures and Justification

- QA practices and techniques in place in all states
- Average length of hospital stay is decreased
- Hospital acquired infection rate is decreased
- Appropriate number of trained key health personnel (e.g. doctors, pharmacists, dieticians, physical therapists, nutritionists, health practitioners, nurses, Health assistants, administrators)
- Pharmacy and medical supply personnel trained in procurement policies and procedures
- Rational pharmaceutical and supply management principles and practices are adapted by all states
- Availability of essential drugs and medical supplies is increased.
- Functionality increased (down-time decreased) of biomedical equipment.
- Referral processes based on equity and strict application and cost of outof country referrals held to 5% of health budget
- All newly constructed facilities in compliance with approved standards
- All facilities have maintenance cost set aside for each facility
- Access to hospital services is increased
- Improve local health services to minimize off-island medical referrals.

8.2.3 Strategic Goal 3: Prioritize Health Promotion And Services For Major Health Problems

a Analysis and justification

128 The major causes of morbidity and mortality in FSM are the NCDs of lifestyle and modernization. Poor nutrition, risky behaviors and substance abuse are among the leading causes of mortality. An excess of calories - in a diet deficient in proper vitamins, minerals, protein and certain fats - leads to obesity, which in turn precipitates diabetes and cardiovascular diseases and ultimately hypertension, heart disease and stroke. Smoking leads to chronic lung disease and to various cancers, including lung cancer. Betel nut chewing, either alone or in combination with tobacco, marijuana, and various solvents, including alcohol, leads to increased head and neck cancer. Promiscuous sexual behaviors lead to the spread of HPV and Hepatitis B causing an increase in cervical cancer and liver cancer, as well as HIV/AIDS and other STDs.

129 Despite the seriousness of lifestyle diseases and the high rate of associated morbidity and mortality, funding for NCDs in the preventive health programs from the U.S. DHHS and the FSM states is small and there is literally no consistent state or national support for programs to prevent this expensive set of diseases. Most of the funding received from DHHS in categorical grants are for MCH, Immunization, FP and SAMH, and for personnel for the programs. Very little funds are received for NCD, the leading health problem and killer in FSM and very little funding is allocated by the state or the state health department for prevention of NCDs.

b Policy Implications

130 Relevant stakeholders should decide on a minimum package of essential health services for FSM. This would contain those health programs and services that concentrate on diseases that are of major public health importance, are major causes of illness and disability, have the greatest social and economic burden and most affect the quality of life. Prioritizing such a list rationalizes the choice of services for funding and implementation and assists in program planning and budgeting. Lower priority services would require careful assessment as to their contribution to improving health, and cost implications. All services would be community-based where possible and stress both primary and preventive health care and be implemented in cooperation with the community, other governmental agencies and the private sector. With a clearly defined minimum package of essential services, essential formulary and management efficiencies, health services could be provided in a more cost-effective way.

131 In 1999, a National Plan of Action for Nutrition 2000-2005 for FSM was designed. The Plan is consistent with international agreements and commitments, particularly the Children's Summit and the Suva Declaration on Sustainable Human Development in the Pacific. It is important to encourage community participation and involve the churches, the women's and consumers' associations. The FSM has previously had a National Food and Nutrition Commission representing key sectors at the national level but due to staff change it is currently not functioning. It is recommended that the NFNC be formed again and that the main functions would be:

- the assessment of the food and nutrition situation in the country;
- the formulation of policies and strategies to provide guidance in the planning of food and nutrition programs and projects
- the coordination of food and nutrition programs and projects

monitoring and evaluation.

c Critical Issues for Implementation

132 NCDs are among the most expensive of diseases to treat. Patients with these diseases need constant care, expensive medicines and frequent oversight, and need it for years. Compared to the vaccine preventable diseases of child-hood that killed rapidly and without remorse, the chronic diseases drag on for years, destroying the quality of life and financially ruining both the patient and the health system. Thus, FSM will need additional funds to adequately control, treat and prevent NCDs/lifestyle diseases in addition to funds for other health measures. Effective prevention strategies will eventually lead to a decrease in lifestyle diseases with concomitant marked savings to the health sector.

d Outcome Measures and Justification

- Consensus agreement on nation-wide health outcome priorities and a minimum package of essential services
- 95% of all 2-year olds will be fully immunized
- Contraceptive utilization prevalence rate increases to 70% from 55% of all childbearing age women
- At least 3 MHC visits reported for all pregnancies
- Hypertension screening and monitoring undertaken at 50% of PH/PHC encounters
- 50% of overweight/obese patients receive diabetes screening, nutrition counseling
- Most people know common preventable causes of diabetes, hypertension and other NCDs.
- Substance abuse decreased
- Prevalence of STDs decreased
- Number of children <5 years with VAD is decreased
- Number of women and children with iron deficiency anemia is decreased
- Increase public awareness about the health risks of being overweight
- Increase appropriate services for mental illness
- Fundamentals of PH achieved: clean water, sanitation and garbage disposal available to 100% of FSM people by 2020.
- Prevalence of diarrhoeal diseases is decreased
- Incidence of dental caries is decreased by 10% among school-aged

- Conduct epidemiological surveillance as an early warning system to prevent outbreaks of communicable disease and other diseases requiring public health action
- Conduct assessments of climate-related health risks including vectorborne and water-borne diseases and institute relevant early warning and public education programs

8.2.4 Strategic Goal 4: Develop A Sustainable Health Care Financing Mechanism

a Analysis and justification

133 A higher level of health care, with a greater variety of services and technologies, funded through an insurance scheme and user fees is needed in the FSM. Originally, the NIP had two functions: 1) to provide additional funds to states to support and improve primary and secondary health care, and 2) to support limited overseas referrals. Poor management and planning in the early years of the NIP led to massive over-expenditures for overseas referrals, and minimal and irregular capitation payments to the states. Considerable economic growth needs to occur to increase the number of those with medical insurance. The potential risk pool (or those formally employed and receiving salaries) is small by commercial standards (estimated at about 20,000 people maximum), and thus is very sensitive to economic variations in the economy.

134 Out of country referrals are basically bankrupting the health care system. Most states have run up debts for medical referrals to Guam and Hawaii. The major cost of referrals, and in fact health care in the country, is because many referrals are for chronic diseases that are basically ameliorable but untreatable and drag out for years. Care both in-country and out-of-country of people with NCDs, despite NCDs being preventable in most cases, is taking funds away from other health priority areas. Given the present health demographics, NCDs will continue to increase, and those with NCDs will continue to live longer. Continued overseas referrals are not an economic alternative for treatment of NCDs. The economic choices for FSM are to ration overseas referral for NCD health care, to make serious investments into primary and secondary prevention of NCDs and improve the ability of the state health systems to treat NCDs.

b Policy Implications

135 Health policy and health services, and their financing and financial management, are integral to achieving improvement in the health system of FSM. An overall strategy for health care planning and financing needs to be developed in order to ensure sustainable funding resources to support priority policy reforms in the health sector. This includes health insurance, user fees and other

sources of funding such as earmarked taxes and increased efficiencies in delivery. Many services may be privatized or corporatized (e.g. security, ambulance, janitorial, kitchen and perhaps pharmaceutical services) bringing about improvement in both service delivery and revenues. Improvements in management and planning (such as a system of program budgeting based on cost analysis, budgeting and financial planning) will also improve the use of scarce resources available to the health sector. The heath care financing mechanism should allow the greatest majority of people access to reasonable levels of health care. If possible and financially feasible, a safety net for the poor should be developed to ensure access for vulnerable groups.

c Critical Issues for Implementation

136 Health system reform is necessary as FSM's health system is unsustainable under the present arrangements. 25% of the health services budget goes on referrals to benefit a small proportion of the population. This is not sustainable and needs to be addressed immediately. Referrals to foreign medical facilities must be virtually ended. All employees must become members of the NIP. Considerable economic growth must occur, so that user fees can be collected equitably and efficiently. The community must change its attitude that they have a right to free services and that health is a government responsibility. Treating curative services as an entitlement tends to increase the demand for those services and reportedly many hospital stays are not related to health problems, and do not have doctor authorization.

d Outcome Measures and Justification

- States and National Government agree to basic elements for universal health insurance
- Universal health insurance prototype established, with aim of gradually including all FSM citizens
- Number of individuals enrolled in NIP increased.
- Feasibility for health reform assessed in all states, including safety net for the poor.
- Equitable access to health services to all FSM citizens (regardless of location or economic status)
- Cost efficient and appropriate co-payment/user fee system in place in all states
- Privatization of appropriate health services undertaken successfully in all states
- Off-island medical referral decreased to 5% of health budget

 Community assumes responsibility for maintenance and repair of 95% of dispensaries/health centers

8.2.5 Strategic Goal 5: Improve Capacity And Accountability Systems

a Analysis and Justification

137 Good financial reporting (how resources have been used), monitoring and auditing are critical functions of effective delivery of services. They provide essential data along with insights for drawing lessons; setting priorities; assessing whether activities are being implemented as planned and reaching stated objectives; managing activities; and offer assurance that funds are used for agreed purposes. The foundation for developing system accountability is a system-wide information system that collects and disseminates data for public scrutiny and enables data based decision making. It is critical to share and disseminate health sector information, so that civil society can act as a "watchdog". The accountability of the health systems to communities can only be ensured though, if the communities begin to participate in the decision making processes as well. Health sector reporting is also a necessary requirement of the Compact II and is fundamental to the production of the annual Poverty Reduction Strategy Report and feeds into the Millennium Development Goals reporting.

b Policy Implications

138 All states will introduce a uniform health information and management system. Standardized software will be introduced into all state health administrations that will be capable of producing nationally compatible data to monitor health issues and performance of the health system. Training will be provided at state and national levels to develop in-house skills for the long-term implementation of the health information and management system.

c Critical Issues for Implementation

139 If the health information system is functioning well then decisions can be made on up to date information based on accurate financial reports and the incidence, morbidity and mortality of diseases. A quicker response time and more efficient use of resources allows for improvement in quality of management decisions and in health planning.

d Outcome Measures and Justification

- Performance based planning and budgeting established in all state DHS
- 95% of DHS managers trained in data based decision making using locally generated data

- Cost efficient procurement policies and procedures for pharmaceuticals and medical supplies established in states and DHESA
- Financial management and planning training plan developed for key permanent management personnel in state DHS
- Appropriate positive incentives in place to encourage the desired behaviors of organizations and individual managers
- Health Statistics units at National and State levels competently staffed
- Establishment of National and State health information system (HIS) working group
- Analysis and monitoring of health needs from statistical data
- Improved reporting of vital, health and management statistics (Decrease in DMF rate (Decay, Missing and Filled))
- 80% of vital events occurring in rural areas reported on time
- Establish a nursing school at COM-FSM

8.3 Activties and Outputs

140 This section of the chapter outlines the rationale, the inherent risk and gives a description of the suggested activities and outputs of the Strategic Planning Matrix for Health (refer to Section 3). These activities and outputs may change from year to year based on achievements, variations in health problems and political will.

8.3.1 Strategic Goal 1: Improve Primary Health Care Services

- 141 Possible activities for improving PHC Services
 - Activity 1: Supervise, monitor evaluate and train health assistants in key public health and PHC services using continuous quality improvement (CQI) principles
 - Activity 2: Improve quality and frequency of delivery of public health/prevention services by PH field team
 - Activity 3: Supply essential drugs, medical supplies and equipment to dispensaries/health centers and for field trips
 - Activity 4: Maintain PHC facilities in good working condition
 - Activity 5: Establish partnership between communities, Health assistants, PH teams, youth groups and state health department for delivery of PHC services.

a Activity 1: Supervise, monitor, evaluate and train health assistants in key public health and PHC services using continuous quality improvement (CQI) principles

i Rationale

142 At the PHC level, dispensary workers are poorly trained and educated, support and supervision is episodic, irregular and incomplete, and community support is almost absent except for some OIs. The responsibilities of health assistants in the rural areas are important but they are not adequately trained and supervised to really deliver quality health services. To be relevant to the community it serves, the dispensaries must be able to deliver a broad array of basic curative, preventive and public health services in a culturally acceptable, consistent and efficient manner. Without adequate supervision and training, the rural health assistants provide substandard and occasionally dangerous medical and public health practice. Appropriate investments and administrative and support practices need to be put in place so that quality health services are delivered at appropriate standards. The failure at the PHC entry point to health services adversely affects the efficiency and effectiveness of health care delivery at all levels and hospitals are receiving approximately 70% of patients that could have been handled at the PHC level if dispensaries were functioning properly.

143 There is also under reporting of vital statistics and other health statistics outside urban areas. Only 70% of births are recorded and 46% of deaths, largely due to inadequate recording at the dispensary/community level. Morale is low and absenteeism high.

ii Description of activity

144 The objective of the activity is to improve the quality of PHC and to increase the professionalism and morale of the rural health workers. The scope of the activity will be at the PH and PHC level in all DHS, but it will also include the DHS managers supporting PHC. Included in the CQI will be a focus on improving the Health Information Systems (HIS) at the PHC level and encouraging community involvement in PHC. All states will introduce uniform health information and management systems where meaningful and relevant data for the communities is collected.

145 Adequate funds are needed to support regular and frequent supervision, supply and training of the health assistants in the key public health and PHC services by the PH team. To improve the performance of health assistants and the PH team and the quality of care of PHC services, there needs to be a focus on quality of services, using CQI principles, including such approaches as continuous process analysis, problem identification, realistic prioritizing of change activities, strong customer orientation and standards of practice, audits of practices, regular training based on weaknesses identified in audits, increased and

onsite supervision and training and the establishment of clearly defined and realistic job descriptions for the PHC workers as well as performance based contracts for health assistants. CQI stresses actual team building, using the team and the community in identifying key problems and potential changes.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: At least three (combined) supervisory, monitoring and training visits per year to each dispensary	Inadequate resources committed to tasks
Output 2: Health assistant present at dispensary on official business 90% of time	Absenteeism exceeds proper limits
Output 3: Health assistant provide assistance to PH field team 95% of time and considered useful by PH team	Personnel poorly trained
Output 4: Sufficient personnel at state health department level to supervise, train health assistants	Insufficient funds provided by states to support PH team
Output 5: CQI techniques incorporated into PHC and PH management practices	Inadequate resources committed to tasks
Output 6: Curriculum established for Health assistants	Inadequate resources committed to tasks
Output 7: 95% of health assistants trained in: • public health • environmental health • family planning (including condoms, birth control pills and FP promotion and education) • SAMH including dispensing of SAMH medicines • PHC including using PHC drug formulary update • STD-HIV/AIDS treatment and preventive measures	Inadequate resources committed to tasks
Output 8: Establish community health profiles.	Staff insufficiently trained to collect statistics

b Activity 2: Improve quality and frequency of delivery of public health/prevention services by PH field team

i Rationale

146 The PH team plays an essential role in delivering and improving the quality of the primary, preventive and public health services in FSM. Resources for appropriate staffing and training of PH field teams needs to be a priority. It is necessary for the PH team to be appropriately staffed and trained so that they can not only provide service delivery, but also supervision and on-going training of the health assistants. The PH teams, while generally qualified, have insufficient supplies and equipment to service the populations they must cover and usually miss scheduled visits to rural areas and OI because of lack of travel funds or management support. When they do travel, the PH team usually has insufficient time to provide essential services, supervise and train the dispensary health worker, and mobilize the community in support of health. Despite the role of NCD's in morbidity and mortality in FSM, little preventive health or health promotion services are provided. PH team morale is low and absenteeism is high.

ii Description of activity

147 Resources for implementation of public health programs needs to be a priority. The PH team should make regular visits and visits should include not only service delivery but also training and supervision of the health worker. Visits should take place on schedule so as to minimize community disruption. Cancellation of travel should be closely scrutinized and approved only for limited reasons, such as weather or transport breakdown. Management tools need to be developed to ensure that the field teams are working appropriately and efficiently. Most importantly, adequate and appropriate supplies and medicines must be available at the dispensary/health center (see Activity 3).

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: PH teams fully staffed	Insufficient funds provided
	by states to staff PH team
Output 2: PH teams capable of delivering	Personnel poorly trained
wide range public health services through	
multi-purpose public health training of per-	
sonnel	
Output 3: 3 field trips/year/community	Insufficient funds provided
budgeted and authorized.	by states to support PH team

c Activity 3: Supply essential drugs, medical supplies and equipment to dispensaries/health centers and for field trips

i Rationale

148 The secondary health care system is receiving approximately 70% of patients that could have been handled at the PHC level and one of the major reasons for this is that the dispensaries do not have adequate drugs, medical supplies and equipment. Patients are opting to go straight to the hospital rather than go to the dispensary/health center and receive a prescription that will need to be taken to the hospital to be filled anyway. The PH team also experiences frequent shortages of essential drugs, equipment and medicines. There is no essential drug formulary for dispensaries and inappropriate and even dangerous drugs can be dispensed to health assistants who don't use the drugs, or even worse, use them without knowing what they are for. DHS in all states need to develop essential dispensary and outpatient formularies, and improve procurement of medicines and supplies. The FSM National Drug Policy was endorsed at a workshop held in 2003 and one of the recommendations was that drug procurement will be carried out on world-wide open purchase system by generic name and according to the National Formulary (which still needs to be devised). Priority consideration will be given to drugs for PHC and control of endemic diseases. Part of the management system problem facing all FSM health services is the lack of standardization in equipment and supplies and unfunded maintenance contracts.

ii Description of activity

149 PHC formulary will be revised according to rational pharmaceutical management principles and implemented in dispensaries in all states. To support essential PHC services, adequate funds are needed for the provision of medicine, medical supplies and equipment so that services can be delivered at the dispensaries and by the PH team.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: Sufficient essential antibiotics, analgesics, FP supplies etc available at all dispensaries/health centers >11 months per year	Insufficient funds provided by states
Output 2: Sufficient drugs and supplies available for 95% field visits	PHC formulary not revised
Output 3: Sufficient and functioning bio- medical equipment	Insufficient funds provided by states

d Activity 4: Maintain PHC facilities in good working condition

i Rationale

150 An Infrastructure Development Plan has been devised that details the need for new PHC facilities or the improvement of existing facilities. Many PHC facilities are in poor condition, some have been renovated by U.S. military personnel but rarely has the community been involved. All states are promoting greater community participation in the support of the dispensary.

ii Description of activity

151 Following implementation of the Infrastructure Development Plan, new PHC facilities will be built or existing facilities improved. Community responsibility for maintenance of local facilities should be augmented by funding programs providing matching grants to communities that can offer monetary or labor contributions for maintenance of facilities.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: 90% of dispensaries/health centers in good operating condition	Insufficient funds provided by states
Output 2: Community contributes to maintenance and repair of 95% of all dispensaries/health centers	Communities not prepared to contribute to maintenance

Activity 5: Establish partnership between communities, health assistants, PH teams, youth groups and state health department for delivery of PHC services.

i Rationale

152 In most states, there is very little community involvement in health at this time. Most people consider "health" to be the government's responsibility, not theirs. Communities provide little help to their local dispensaries, either in terms of in-kind labor, and other types of support. State hospitals are also seen as the providers of superior quality service. For communities on OI, the local dispensary is of more value and it has been shown that community and chiefly support has resulted in better utilization of and support for the dispensary. Community participation in health and health care is essential to the delivery of prevention services and support of PHC services. Most communities are also unclear about the role of disease prevention in health. There is little understanding of lifestyle diseases, despite lifestyle and it's sequelae being the major cause of morbidity and mortality in the FSM. To improve primary, preventive and public health services, the communities must be mobilized to support their PHC services, in-

corporating healthy behaviors and lifestyles into their lives and to become responsible for their own health.

ii Description of activity

416

153 The objective of the activity is to increase community involvement in (primary, preventive and public) health services and to encourage increased responsibility for their own health among the general population. The activity will be undertaken in all states, with maximum focus on rural communities and will focus on removal of administrative barriers to community participation and the creation of incentives that will encourage communities to become more involved. Cultural barriers to community participation in decision making will be addressed through community information campaigns. Performance monitoring of local services by communities will become possible through improvements in health information systems that will be specifically designed to offer meaningful and relevant data to communities. The accountability of the health systems to communities can only be ensured if the communities they serve begin to participate in the decision making processes of those systems. The decision-making role of communities will be gradually expanded through regulatory changes at the state levels that will devolve to community bodies both financial responsibilities and input into the hiring of key staff. Community responsibility for maintenance of local facilities will be augmented by funding programs providing matching grants to communities that can offer monetary as well as labor contributions for maintenance of facilities.

154 The UNICEF project designed to improve dispensary services in Chuuk has been very successful at involving the community in support of PHC services. Meetings with community leaders were held and health committees formed. Community Awareness through Health Education has also been promoted as one of the activities. Lessons can be learnt from the experiences and achievements of the UNICEF activities.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: Council meets 2 + times per year with participation of health department (or functioning Health Advisory Boards)	Communities insufficiently mobilized to participate in dispensary management
Output 2: Community financial and in- kind support for repair and maintenance	Communities not prepared to contribute to dispensary maintenance
Output 3: Build in tax incentives for private sector to promote in-kind support and business environment.	Private sector not interested in support health initiatives

8.3.2 Strategic Goal 2: Improve Secondary Health Care Services

- 155 Possible activities for improving secondary health care services
 - Activity 1: Establish quality assurance (QA) for all hospital departments and activities and all health department personnel
 - Activity 2: Provide regular continuing education for health professional staff
 - Activity 3: Ensure adequate medical and pharmaceutical supplies are available for hospital, PH team, and PHC program and maintain equipment in good working condition
 - Activity 4: Develop infrastructure plan to ensure adequate facilities and maintenance and ensure access to hospital services
 - Activity 5: Construction of a new hospital for Kosrae and other infrastructure development for the other States.
 - a Activity 1: Establish quality assurance (QA) for all hospital departments and activities and all health department personnel.
 - i Rationale

156 Quality assurance (QA) programs and approaches need to be incorporated in all health services. The use of inappropriate personnel or poor management practices result in operational problems in important hospital units such as laboratories, x-ray units, pharmacies, housekeeping and supply units. In some hospitals, problems also occur in their clinical care divisions and public health units. All hospitals are under utilized for their size and have a bed capacity in excess of their needs. All are inappropriately utilized as well and people are frequently admitted for social or other reasons rather than medical need. Most personnel are under utilized due to malfunctioning of the various support units. If the basic hospital units were working properly and utilization was appropriate; all hospitals could provide a much higher level of care.

ii Description of activity

157 Standards of practice need to be developed and codified for all health and allied health professions. A comprehensive and customized approach for establishing minimum educational requirements and appropriate continuing education for all levels of health workers should be developed for all states to support quality.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Targer Output	Nisks

Target Output	Risks
Output 1: QA established in all state hospitals	Institutional commitment to health CQI introduction is not maintained
Output 2: QA training for management, planning and reporting for all senior personnel and supervisors provided in all state hospitals	Institutional commitment to health CQI introduction is not maintained
Output 3: Practice standards established for security, food services, maintenance, renovation/repairs, management, house-keeping /custodial, laundry, ambulance, embalming, prosthesis	Staff do not adhere to stan- dards
Output 4: Practice standards established for staff of laboratory, x-ray, mental health, pharmaceutical, paramedical, medical supplies, inventory, and management staff.	Staff do not adhere to stan- dards
Output 5: Practice standards established for professional staff (nurses, dentists, doctors, physiotherapists, hospital administrators, health information staff) and ratios of health workers to patients and population	Staff do not adhere to stan- dards
Output 6: Conduct periodic qualitative surveys.	Inadequate resources com- mitted to tasks

b Activity 2: Provide regular continuing education for health professional staff

i Rationale

158 In the FSM, the health sector is constrained in the delivery of appropriate services by the quality of staff and the lack the training in appropriate procedures and guidelines to enable quality control and assurance of quality services. Some states have employed human resource development managers and prepared health workforce development plans to address these issues. Most continuing education efforts, are focused mainly on physicians. Physicians in most states have access to telemedicine learning opportunities and teleconferencing opportunities via the internet, but this is rare in nursing, pharmacy, dentistry or the allied health professions. There is a need to offer scholarships in key areas possibly through grants from bilateral and multilateral donors for pharmacists and nutritionists as well.

ii Description of activity

159 A careful and complete health workforce analysis of present and future workforce needs of each state of the FSM for the next 20 years needs to be made. This analysis must take into account future dispensary staffing needs, an aging and poorly trained workforce in the allied health sciences, an increasing role for nurses in public health, rural health, clinical care and administration, and health administration needs as well as medical specialty needs. Teleconferencing and telemedicine access would benefit almost all levels of health professionals. States should establish computer resource rooms at hospitals or departmental administrative areas that are open to nurses, doctors, dentists, pharmacists and others in order to meet professional education needs and assist with professional problems. Use of telemedicine is particularly applicable to FSM, given the geographical distances and costs of transport. It would be more cost effective than sending people abroad or using long distance telecommunications for continuing training.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: Long term relationship established with medical school	Inadequate funding for scholarships
Output 2: Distance education established at all state hospitals	Inadequate resources com- mitted to tasks
Output 3: Scholarships offered are for key health personnel that are required in FSM (e.g. pharmacists, dieticians, physical therapists, nutritionists, medex, dentists, nurses and health practitioners)	Health workforce analysis not completed Inadequate funding for scholarships
Output 4: Pharmacy and medical supply personnel trained in procurement policies and procedures, including financial management, records	Inadequate resources com- mitted to tasks
Output 5 Schedule of onsite training and workshops established for all health workers in each state	Inadequate resources com- mitted to tasks

c Activity 3: Ensure adequate medical and pharmaceutical supplies are available for hospital, PH team and PHC program and maintain equipment in good working condition

i Rationale

160 The biggest barrier to service delivery in all FSM hospitals is the severe lack of supplies, drugs and equipment. Hospital supplies, including medicines, are frequently unavailable, as none of the health facilities, exercise control over inventories, and there appears to be no automatic reordering procedure or essential formulary for the hospitals. Brand name drugs are often purchased instead of generic equivalents and drugs are often purchased in small amounts from retail drug companies rather than through bulk purchases from wholesale companies. There is also no standardization of hospital equipment, instruments, and supplies among the four states making laboratory, x-ray and other medical equipment different in every state. There is no commonality of parts or supplies and most equipment requires separate maintenance contracts from their particular manufacturer. Considerable savings estimated at greater than 40% of present costs, can be obtained through improved procurement practices and rational drug management.

ii Description of activity

161 The DOH will work with DHS in each state to follow the recommendations of the National Drug Policy and establish the National Standing Drug Advisory Committee and the National Formulary. DOH and DHS will review and revise drug and medical supply formularies for the hospital and dispensaries in each state to improve procurement of medicines based on medical practice and using principles of rational pharmaceutical management and to establish and implement efficient procurement practices, with special emphasis on inexpensive and reliable vendors of high quality drugs. Rational drug management, financial management, planning and procurement policies and practices will be institutionalized in each state through training, supervision and support to state supply and pharmacy divisions. Laboratory equipment and supplies will also be standardized. New equipment should be bought according to existing standards only and with long term fully funded maintenance contracts.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: Essential National Formulary established for hospitals	Insufficient commitment to establish drug formulary
Output 2: Training delivered to medical supply, pharmacy personnel and second tier DHS managers in each state	Personnel do not attend training

Output 3: Adequate drugs are available to meet PHC and PH team needs without rationing.	Inadequate resources are committed to tasks
Output 4: Inventory management program established for all health department equipment (e.g. lab, x-ray)	Inadequate resources are committed to tasks
Output 5: Standardized equipment list developed for FSM	Inadequate resources are committed to tasks
Output 6: Service contract developed for new equipment purchased	Inadequate resources are committed to tasks
Output 7: Regular and preventive maintenance schedule established for all equipment	Inadequate resources are committed to tasks

d Activity 4: Develop infrastructure plan to ensure adequate facilities and maintenance and ensure access to hospital services

i Rationale

162 The physical condition and design of all hospitals in the FSM are generally adequate for the provision of secondary and low level tertiary care, although most hospitals are behind in maintenance, repair and renovation activities. Each state should have a master plan for maintenance and renovation of their health facilities, with a clear cost center for needed works as these are essential to ensure quality health services. Funding to support maintenance, renovation and repairs remains problematic and sources of funds need to identified (external funds or from with the national budget, eg. a revolving fund allocated only for maintenance, renovation and repairs might be set up at the national level to insure that such work is not delayed). Once basic maintenance, repair and renovation services are instituted and up-to date, the physical plants and design of all state hospitals are capable of providing secondary and low level tertiary care services.

163 Transportation problems, especially lack of ambulances, are major causes of patient dissatisfaction and poor health outcomes. On the large islands (Pohnpei and Kosrae), public transportation is weak or non-existent away from the government centers. Although transport of serious ill patients to the hospital is a problem in several states, this problem could be dealt with by better roads and ferry services.

ii Description of activity

164 Each state must prepare a master plan for maintenance and renovation of their health facilities. A revolving fund allocated only for maintenance, renova-

tion and repairs should be set up. Funding for support of maintenance, renovation, repairs and replacement is being addressed in the Infrastructure Development Plan (IDP). Also being addressed in the IDP is the need for roads, ferry services and possibly another medical ship that will visit the OI to provide medical care.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: Development plan established for new facilities (1-2 yrs.)	Inadequate resources are committed to tasks
Output 2: Preventive mainte- nance/repair/replacement program estab- lished all states.	Inadequate resources are committed to tasks
Output 3: Omnibus system established on major island States	Inadequate resources are committed to tasks
Output 4: Ambulance service established on major island States	Inadequate resources are committed to tasks

e Activity 5: Construction of a new hospital for Kosrae and other infrastructure development for the other Sates

i Rationale

165 It has been suggested that a new hospital is required in Kosrae and this has been endorsed at the 3rd Economic Summit.

ii Description of activity

166 Appropriate plans will be prepared to build the hospital in Kosrae that will service the population appropriately. Funds will be allocated for the purpose.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: New facilities are built in cost effective and timely manner	Inadequate funds are allo- cated

8.3.3 Strategic Goal 3: Prioritize Health Promotion And Services For Major Health Problems

167 Possible activities to prioritize health promotion and services for major health problems:

- Activity 1: Establish NCD Prevention and Control Programs in all states and promote healthy lifestyles, places and healthy choices
- Activity 2: Establish Prevention and Control programs for communicable diseases (TB, Hepatitis, STDs, Hansen's Disease and HIV) in all states
- Activity 3: Make MCH/FP/immunization a priority in all states.
- Activity 4: Establish a nutrition program in all states focusing on both NCDs, benefits of breastfeeding and on child nutrition
- Activity 5: Establish substance abuse and mental health prevention services in all states
- Activity 6: Strengthen surveillance and monitoring functions of the environmental health program (water, hygiene, sanitation, and food safety) and strengthen enforcement of sanitation regulations
- Activity 7: Conduct a comprehensive dental health and preventative program

a Activity 1: Establish NCD Prevention and Control Programs in all states and promote healthy lifestyles, places and healthy choices

i Rationale

168 The major causes of morbidity and mortality in FSM are the NCDs and these diseases are the most expensive of diseases to treat. Thus, prevention of NCDs, as well as control and treatment of them, needs to be made a national, state, community and individual priority. At the state and national level, sufficient funding is needed for program support for prevention and health promotion activities. This means support of trained health educators, funds for prevention and health promotion programs, support for community initiatives, interagency and interdepartmental cooperation, as well as partnerships with the private sector. There is an urgent need for an emphasis on prevention and promotion of NCDs to bring about behavior and lifestyle changes. The minimum package of essential health services should include health education/promotion programs for the prevention and control of lifestyle-related NCDs such as obesity, diabetes, substance abuse and STD/HIV/AIDS. Prevention of substance abuse and obesity needs to begin early and at home and be reinforced in school and the community.

ii Description of activity

169 Prioritization of health services requires a review of the health services package in order to assess contributions to maintaining the health and well being of the population versus the cost of supporting services. Each state needs to initiate a health education program and employ a qualified health educator ori-

ented predominantly towards prevention of NCDs. These health and education programs should be promoted in settings where people live, work and learn to modify risks of unhealthy lifestyles/environment.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: Review health services, decide on outcome priorities and agree on a "minimum package of essential services"	No agreement on "minimum package of essential services"
Output 2: Each state has health education program and a qualified health educator oriented predominantly toward prevention of NCDs	Insufficient funds provided by states.
Output 3: School health program estab- lished in all schools	Insufficient funds provided by states
Output 4: Good Health promoted in settings where people live, work and learn to modify risks of unhealthy lifestyles/environment	Individuals are not willing to change lifestyle to improve health
Output 5: Exercise program promoted and infrastructure (sports and recreational facilities: gym, tracks, courts with lighting for night use)	Individuals are not willing to change lifestyle to improve health
Output 6: Health workers and teachers complete physical examinations annually.	Heath workers and teachers do not have adequate re- sourcing and time to com- plete the examinations

b Activity 2: Establish and Support Prevention and Control programs for communicable diseases (TB, Hepatitis, STDs, Hansen's Disease and HIV) in all states

i Rationale

170 Tuberculosis and leprosy, although significantly decreased, are still pervasive throughout the FSM. While the mass campaign over 10 years ago helped in raising public's awareness about the seriousness and deadliness of these diseases, the challenge still remains in diagnosing new cases and completing their treatment.

171 The vaccine preventable disease that is endemic and causes the most morbidity and mortality in the FSM is Hepatitis B. In the 1980s studies suggested

that 30%-60% of the population had been infected with hepatitis B and that 10%-30% were chronic carriers. Since 1989, Hepatitis B vaccination has been part of the routine newborn and infant immunization program. The school immunization laws of the FSM (last revised in 1997) require a complete series of Hepatitis B vaccine.

172 Most state hospitals are not able to perform STD testing, especially the ones requiring complicated and expensive testing kits. Teens and young adults are a particularly difficult group to reach for prevention and treatment activities as confidentiality and privacy is often lacking in many clinic settings and nurses working with adolescents reported that even those presenting with symptoms were hesitant to go to the hospital for adequate testing. Recent reports and a pilot study suggest that the prevalence of syphilis, as well as HPV, is underestimated and is increasing. HIV/AIDs infection occurs sporadically in all states and is generally attributed to infection obtained elsewhere, and brought into the FSM upon the return of those living overseas. Given the very high rate of other STDs and the inadequate diagnosis and treatment capabilities in most states, the establishment and spread of HIV in some populations of the FSM is a real possibility.

173 Cervical cancer was the leading cause of cancer in 2002. The rising incidence of cervical cancer may be directly related to the incidence of the HPV, a STD. HPV infection is extremely common in neighboring Pacific island countries, and is associated with cervical cancer and an increased susceptibility to HIV/AIDS. With regards to HPV, PH programs report that they do not have the pap smear kits to test women of child bearing age – only women who present with symptoms are tested.

ii Description of activity

174 Each state needs to initiate a health education program and employ a qualified health educator oriented predominantly toward prevention of communicable diseases. Pilot studies to establish the prevalence of STDs (including HPV) need to be completed. The STD program needs to work with MCH and FP to develop a comprehensive approach to preventive HPV infection, and increase PAP smears to prevent cervical cancer.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: Each state has health education program and qualified health educator oriented toward prevention of communicable diseases	Inadequate resources are committed to tasks
Output 2: Pilot study completed to establish	Inadequate resources are

prevalence of STDs committed to tasks

c Activity 3: Make MCH/FP/immunization a priority in all states.

i Rationale

175 Little in the way of MCH services are provided at the PHC level by health assistants, and given the budgetary restrictions on travel in most states, it is likely that MCH is provided less frequently than desirable by the PH team to the OI populations. Cervical cancer was the leading cause of cancer in 2002. It is crucial that PAP smears be incorporated in all MCH programs and be offered to all women when they become sexually active and safe sex practices and the use of condoms are encouraged.

176 Vaccine preventable diseases such as diphtheria, tetanus, polio, measles and others, can be prevented by a relatively cheap series of vaccinations costing perhaps several hundred dollars for complete or long lasting immunity. These diseases appear to be under reasonable control with reasonably high rates of vaccination and immunization in most states. The 2003 immunization rates for 2 year olds vary by state and coverage rates are reported to be 91% in Kosrae, 89% in Yap, 76% in Pohnpei and 68% in Chuuk. Immunization rates for school age children is even higher. Budget limitations, cancelled voyages and inclement weather and staff scheduling conflicts have reduced some visits, especially on islands or villages remote from the state hospital, to below the minimum needed to complete the primary immunization. Thus, immunization series are reasonably complete near the various state capitals and have improved significantly over the last few years, although in the OI, there are still children missing out on immunization and morbidity and mortality can result from vaccine preventable diseases.

177 The FSM FP program focuses on the following objectives: (a) to increase awareness regarding population problems; (b) to make family planning methods readily available to all, and assure they are supplied by competent health personnel; (c) to increase retention rates of FP users; and (d) to improve the health status of mothers and children through health education, better nutrition and proper services and medical care delivery. Nation-wide contraceptive prevalence remains low, ranging between 25-35% using only modern long-term methods. FP services are being delivered effectively only at the state centers, due to lack of privacy and confidentiality (especially teens and young adults) and in some areas male where only male Health assistants are present.

ii Description of activity

178 In pregnant women and children, a minimum package of essential services should focus on safe motherhood, including safe delivery, prevention of vaccine

preventable diseases in mother and child, and appropriate birth spacing/family planning.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks	
Output 1: Comprehensive women's health program (women of child bearing age receive PAP smears and have access to FP techniques)	Inadequate resources are committed to tasks	
Output 2: Immunization reaches 95% of targeted populations	Inadequate resources are committed to tasks	
Output 3: Enforce statutes requiring immunization for all school age children.	Inadequate resources are committed to tasks	

d Activity 4: Establish a nutrition program in all states focusing on both NCDs, benefits of breastfeeding and on child nutrition

i Rationale

179 In the FSM, nutrition problems are due more to the consumption of inappropriate foods than inadequate food supplies. Poor nutrition and an excess of calories - in a diet deficient in proper vitamins, minerals, protein and certain fats - leads to obesity, which in turn precipitates diabetes and cardiovascular diseases and ultimately hypertension, heart disease and stroke. People in the FSM, starting in childhood, are eating the wrong foods. There had been a shift away from exclusive breastfeeding with the detrimental effect on the health of babies. However, UNICEF has been working closely with the hospitals in FSM in working towards Baby Friendly status, which includes encouraging breast feeding exclusively for at least the first 6 months. This has resulted in more women breastfeeding and for longer. Diets of both adults and children are not nutritious; and it is especially important for growing children to receive a well balanced diet.

180 Traditional root vegetables and fruit have been replaced by white rice and flour products and foods high in sugar (e.g. softdrinks). The locally grown fruits and vegetables (once the staple of the local diet) are high in fiber and nutrients and low in calories, whereas with the introduced foods, the reverse is true. The high level of malnutrition in the FSM is attributed not only to a poorly nutritious modern diet replacing a healthier traditional diet, but also heavy worm load. Iron deficiency anemia and VAD are common among pregnant women, newborns and infants. Consequently all states, in cooperation with WHO and UNICEF, initiated a twice-a-year vitamin A supplementation program in conjunction with an anti-worming program for children aged 1-12. The VAD and anti-

worming program appears to be working well with coverage of 1-12 years old at 85%.

ii Description of activity

181 Strong health promotion programs, targeted for different age groups, with the message "to eat more local foods", combined with an effort to improve production of local foods and the quality of imported foods will lead to a stronger healthier population in the FSM. Support of the Baby Friendly hospitals (with its encouragement of breastfeeding) ensures children have a better start to life. There is the need to develop the technology and systems applicable to small scale agriculture, particularly of traditional foods at household and community levels and to reduce costs to the consumer of traditional foods. There is an urgent need to employ nutritionists and dieticians and nutrition promotion programs should be joint efforts with other government departments, including agriculture, education, finance and commerce. Women's and youth groups, private company's and NGOs need to work together to ensure the prevention message gets out.

182 WHO has been developing a global strategy on diet, physical activity and health (WHO – Diet, Food Supply and Obesity in the Pacific) and it may be appropriate to extend the project supported by WHO in Fiji and Tonga to include FSM – the project encouraged people to reduce fat, eat less sugar, salt, more fish and vegetables and fruit, root crops to replace refined cereals of white rice and flour and address cultural factors that favor overeating such as feasting. Physical activity (eg. one hour per day at school, such as sport, dance, martial arts – more parks) is also encouraged.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks	
Output 1: Nutrition programs established at all levels including national and/state and PHC levels	Inadequate resources No nutritionists/dieticians	
Output 2: PH team promote good nutrition on half of their field trips	Inadequate resources are committed to tasks	
Output 3: IDA identified and treated	Inadequate resources are committed to tasks	
Output 4: VAD programs delivered in all communities	Inadequate resources are committed to tasks	
Output 5: Conduct periodic nutritional surveys	Inadequate resources are committed to tasks	

e Activity 5: Establish substance abuse and mental health prevention services in all states

i Rationale

183 Ill health and dysfunction due to mental illness and substance abuse have increased in all states of the FSM over the last few decades. This trend appears to have accelerated over the past few years due to rapid societal change, family disintegration, and economic downturn associated with more people pursuing fewer jobs and high expectations. FSM has one of the highest suicides rates in the world, increasingly severe law and order problems, and widespread polydrug abuse. Violence, suicide and drug abuse are problems in all states. Child abuse and neglect is also rising. The most commonly abused substances in the FSM are tobacco, alcohol, betel nut, solvents and marijuana. Alcohol consumption is high for males (less so for females) in all states, except perhaps Kosrae. The problems associated with alcohol abuse are domestic violence, fighting and general public disruption, crimes committed while drunk and drink driving associated injuries and accidents. Tobacco and alcohol abuse and their chronic disease sequelae – hypertension, heart disease, chronic lung disease and cancer are major contributors to death and disability in the FSM.

184 Little or no substance abuse or mental health services, including outreach, health education and preventive activities, are provided to rural areas and the OI, except in the brief visits of SAMH personnel with the PH teams. Some states are experimenting with peer councilors for remote schools and communities to assist with SAMH problems. Most SAMH services are provided at the state urban centers and at the state hospital, and, despite its potential, little is provided by the PHC. There is general discussion about using PHC workers to dispense SAMH medicines after training, but this has not been seriously implemented in states.

ii Description of activity

185 A program focused on SAMH should be initiated by each state with training for the health assistant, PH team and councilors and programs in schools.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: 95% of schools to receive SAMH program services	Inadequate resources are committed to tasks
Output 2: SAMH medicine/supplies available in 95% dispensaries/health centers	Inadequate resources are committed to tasks
Output 3: 80% of villages receive SAMH health promotion/training	Inadequate resources are committed to tasks

Output 4: Legal interventions established to prevent spread of tobacco, betel use, and other substance abuse, including ratification of the Framework Convention on Tobacco Control.

Lack of political will to prohibit substance abuse

f Activity 6: Strengthen surveillance and monitoring functions of the environmental health program (water, hygiene, sanitation, and food safety), including risks related to climate variability and change and strengthen enforcement of sanitation regulations

i Rationale

186 The environmental health program is minimal and insufficient for the problems encountered. Water is safe to drink in only three towns and water supplies to all other municipalities are considered potentially unsafe due to animal and human contamination. Only 41% of the population in 2000 had access to a clean water source. Sanitation is also a problem even in those towns with good water (less than half of the population have access to an appropriate source of sanitation with pit latrines the most common sanitation in the OI). Inadequacies in waste management practices and services are placing an increasing strain on the environment. Disposal of chemical wastes left over from agriculture and commercial projects is also a serious problem.

187 Climate variability and change, including sea-level rise, can result in reduced quality and quantity of water supplies, loss of coastal resources, reduction in ecosystem productivity and a decline in agricultural productivity. Potential health impacts which have been identified include: vector-borne diseases (such as dengue fever and malaria), water-borne diseases (such as viral and bacterial diarrhoea), diseases related to toxic algae (such as ciguatera fish poisoning which is important in FSM where the protein source is predominantly fish), food-borne diseases, food insecurity, heat stress, air pollution, and extreme weather and climate events (such as cyclones, high tides, droughts and storm surges). Especially on atoll islands of FSM, storm surges can result in injury.

ii Description of activity

188 A sustained community information campaign to address environmental issues such as water supply, waste management and disposal of excreta should be initiated. Improving and protecting water and promoting hygiene and sanitation is an important function in PHC. At the individual house level, and in rural villages and OI it is vitally important for the health of the people that this function is supported by PHC workers. The lack of someone at the village level encouraging water supply protection and good hygiene and sanitation practices can lead to epidemics from water-borne disease, as well as from skin infections and

toxic poisoning. Many urban communities are littered with garbage and refuse, which provide food sources for rats and other vermin and create a potential public health risk. Education and clean-up campaigns could be successful in addressing these issues. Food inspection programs appear to be working well and should be continued.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: Health education programs present in all states (promotion of safe water, hygiene and sanitation, and food safety)	Inadequate resources are committed to tasks Communities are not prepared to change behaviors to protect the environment
Output 2: Surveillance, monitoring and education of environmental health program (including visits to communities/public awareness)	Inadequate resources are committed to tasks
Output 3: 95% of environmental health workers in each state receive appropriate water and sanitation training	Inadequate resources are committed to tasks
Output 4: 95% food establishments have food safety training and routine inspections	Inadequate resources are committed to tasks
Output 5: Public health risks related to climate variability and change documented and findings included in relevant health, education and public awareness programs.	Inadequate resources are committed to tasks

g Activity 7: Conduct a comprehensive dental health and preventative program

i Rationale

189 Oral health is a major problem associated with improper nutrition and abuse of betel nut, tobacco and other substances. Dental caries among children in the 3-5 year old age group are 3 times higher than in the U.S. This is due to the high intake of imported foods which are high in sugar and inadequate oral hygiene. All states need dentists and allied dental health professionals, as well as dental programs that particularly target the young. Each hospital in the FSM contains a dental clinic but these hospitals are directly accessible only to residents of the urban (state) centers. Preventive dental health services are also provided at Public Health clinics as well as in the schools, by staff from the Dental

Division and the MCH Program. MCH Program staff work closely with the Dental Health Divisions of each state, the Family Food Production and Nutrition (FFPN) Program (a UNICEF-supported program located at each State Department of Agriculture), parents support groups, church leaders, women's groups, and community and traditional leaders. Some groups and individuals, provide dental care on a regular basis in the states (eg. Canvasback Missions sends regular dental teams to the OI).

ii Description of activity

training on infection control

95% equipment is functional

Output 3: Adequate dental supplies and

190 An adequately resourced comprehensive dental health and preventative program that targets schools is needed. Training of dentists and technicians in infection control and other training could be addressed through telemedicine at the hospitals. Appropriate graduate programs are also needed to train dentists.

Target Output	Risks
Output 1: 95% schools participate in a comprehensive dental health	Inadequate resources are committed to tasks
Output 2: 95% dental assistants receive	Inadequate resources are

committed to tasks

committed to tasks

Inadequate resources are

iii Output targets and risks (* Outputs reportable on quarterly basis)

8.3.4 Strategic Goal 4: Develop A Sustainable Health Care Financing Mechanism

191 Possible activities to ensure a sustainable health care financing mechanism:

- Activity 1: Develop appropriate and acceptable health insurance and health maintenance schemes for FSM with aim of including all FSM citizens
- Activity 2: Increase enrollment (after necessary statutory amendments):
- Activity 3: Phase I: Mandatory for national/state government employees (2-3 years), Activity 4: Phase II: Mandatory for private sector (2-4 years)
- Activity 5: Standardize and update a fee schedule for all of the FSM, with State health departments to keep Program Income
- Activity 6: Consider other sources of funding

a Activity 1: Develop appropriate and acceptable health insurance and health maintenance schemes for FSM with aim of including all FSM citizens

i Rationale

192 A higher level of health care, with a greater variety of services and technologies, funded through an insurance scheme and user fees is needed in the FSM. Poor management and planning in the early years of the NIP led to massive over-expenditures for overseas referrals, and subsequently minimal and irregular capitation payments to the states. Some reforms and a change in the management to NIP were undertaken in 2003. Policy and oversight of the NIP was removed from the government and placed under a private board, appointed by the President of the FSM. It is expected that the changes in management will lead to increased transparency, responsiveness, and a focus on improving health care.

ii Description of activity

193 Develop an appropriate and acceptable health insurance scheme for all FSM citizens and ensure that the current management and operation of the NIP is responsive to the need of the state hospitals/health departments. Collect data on causes of leading medical referral cases to ensure policies are transparent.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks	
Output 1: Change the current management and operation of the plan to be responsive to the need of the state hospitals/health departments (i.e., remunerate on time), and collect data on causes of leading medical referral cases	National and state govern- ments cannot reach agree- ment on universal health insurance scheme	
Output 2: NIP policies transparent and easily understandable	National and state govern- ments cannot reach agree- ment on universal health insurance scheme	
Output 3: NIP policy change: payments focus on state health program reimbursements	National and state govern- ments cannot reach agree- ment on universal health insurance scheme	
Output 4: Consider health maintenance programs other than regular health insurance programs, in order to provide univer-	National and state govern- ments cannot reach agree- ment on universal health	

sal coverage	insurance scheme
--------------	------------------

b Activity 2: Increase enrollment (after necessary statutory amendments::

Activity 3: Phase I: Mandatory for national/state government employees (2-3 years);

Activity 4: Phase II: Mandatory for private sector (2-4 years):

i Rationale

194 All FSM national government employees have the choice to enroll in the current health insurance plan (52% of the premium paid for by FSM National and 48% by employees). They can also purchase insurance for their families at nominal rates. In addition, NIP is open to all state employees, employees of public corporations, and to private corporations with greater than five employees, and employees' families. Fees, compared to subscriber income for the NIP, are quite nominal, even by FSM standards, except at the lower salary scales. There is also a supplemental policy at a higher premium, more oriented to out-of-country referrals. Though open to both public and private sectors, NIP enrollees are mainly government employees and their dependents. As of 2003, a total of approximately 17,000 persons (15 percent of the population of FSM) are covered.

ii Description of activities

195 Encourage development and implementation of the NIP making it attractive to both private and public sector. It should support secondary and tertiary care in country and have strictly adhered to criteria for out-of country referrals, as needed. Once the basic elements for a universal health insurance is agreed to by the state and national governments, a concerted effort should be made to encourage new members to join NIP.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: Number of government employees with NIP has increased	A downturn in the economy means that fewer can afford insurance
Output 2: Number of private sector employees with NIP has increased	A downturn in the economy means that fewer can afford insurance

Activity 5: Standardize and update a fee schedule for all of the FSM, with State health departments to keep Program Income

i Rationale

196 The health departments of all FSM states have attempted various costrecovery strategies, including user fees, wage controls and generic drug purchases, with varying levels of success. Under the Compact II agreements, user fees are to be kept and used within the health sector. This may provide increased motivation for the improved collection of such fees. States can specify how and where in the health sector such funds can be used. Allocated wisely, user fees can be a significant resource to state health departments.

Description of activity

197 National and state governments are to reach an agreement on how to standardize user fees and have an appropriate cost recovery mechanism in place.

	<u> </u>	/-	<u> </u>			
111	Output targets and risks	/ ^	()utnuts r	enortable i	an allarferi	v hasis)

Target Output	Risks
Output 1: Law changed in all states and national government	National and state governments can- not reach agreement on universal users fees
Output 2: Fee schedule and ex- emption study completed (1-2 yrs.)	Inadequate resources are committed to tasks
Output 3: Increase in amount of fees for services (if appropriate) at the hospitals	Patients aren't prepared to pay for services
Output 4: Improvement in the collection of fees at the hospitals	Patients aren't prepared to pay for services
Output 5: Inclusion of safety net for the uninsured citizens in the health reform program	Government/political/institutional commitment to improve quality and efficiency of health sector is weak

Activity6: Consider other sources of funding

Rationale

198 Other sources of funding include the private sector and the placing of taxes on cigarettes and alcohol. As the habitual use of cigarette and alcohol contributes to ill health and dysfunction, it is appropriate to consider a "sin" tax on these items, which when collected would be diverted to health promotion activities. However, as suggested by Micronesia Seminar (the NGO "Think Tank" of the FSM), the FSM government needs to not rely on taxes from alcohol and tobacco as there is then a vested interest in increasing those sales to increase revenue. The "abusing" group can also become destructive to themselves (suicide) and to the society (violence, spread of STDs) if they become bored and too often resort to mood altering substances. It is preferable for the young to focus their energies on sports and other healthy behaviors and therefore it is necessary to have sports/recreational facilities that also have health counseling centers attached that give advice to the young.

ii Description of activity

199 A study on the feasibility of other sources of funding and how this funding can best be used to promote healthy practices among the young should be completed. A concerted effort is needed by government agencies, the community, the private sector and others to promote healthy living practices at all ages, but especially in the youth of FSM. Health promotion programs are not cheap, but they are much cheaper than the cost of treating chronic diseases or having the young engaging in destructive behaviors.

iii	Output targets and risks	* Outputs reporta	ble on quarterly basis)
	carpar targete arra mente	o alpaio . opo. ia	ore or quarterly bacie,

Target Output	Risks
Output 1: Implement "sin" tax (e.g. tax on alcohol, cigarettes and "unhealthy" food items to be diverted to health promotion activities)	States and National Govern- ment cannot agree to appropri- ate taxes
Output 2: Identify private sector funding to support health promotion activities, including sports, recreational, health counseling centers.	Private sector insufficiently motivated to support sports/recreational facilities
Output 3: Establish tax incentives for private sector to promote in-kind support and business environment.	Private sector insufficiently motivated to support sports/recreational facilities

8.3.5 Strategic Goal 5: Improve Capacity And Accountability Systems

200 Possible activities to improve capacity and accountability systems:

- Activity 1: Improve management skills of health service administrators
- Activity 2: Establish appropriate Management information systems (MIS), including health data reporting in all state health departments
- Activity 3: Develop core set of indicators
- Activity 4: Strengthen Public Health surveillance system in the FSM

- Activity 5: Ensure technical assistance/consultancy available for above areas in all states
- Activity 6: Develop curriculum and seek funding for Nursing school

a Activity 1: Improve management skills of health service administrators

i Rationale

201 At a management level, the health sector is weakened by the absence of data based decision making practices. The absence of reliable data is the primary cause of this problem, but it is also compounded by a lack of expertise in how to utilize such data to inform the planning of service delivery and consequently a lack of commitment to ensuring adequate resources are provided for more efficient service delivery. The application of rational management techniques will require the development of managerial capacity so it can systematically manage its information database to guide its decision-making practices. For example, if the health information system is functioning well then decisions can be made on up to date information based on accurate financial reports and the incidence, morbidity and mortality of diseases.

ii Description of Activity

202 The objective of the activity is to strengthen system accountability within the health sector. The scope will include all states and the DOH, DHESA. This activity attempts to make the information system work, thereby improving health decision making and monitoring and improving the quality of health services. Improvements in the quality of health services will be monitored and advanced through improved reporting of vital health statistics and the effective use of such information for decision making. New software will be procured and installed in each state, and staff trained in data reporting and analysis. At the national and state levels, timely, appropriate and accurate reports will be available for decision making by government, international organizations and civil society to bring about overall improvement of health and well being in the FSM.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: Health service managers trained in fiscal planning and management	Government/political/institutional commitment to improve quality of health planning and management is weak
Output 2: Health service administrators trained in use of manage-	Inadequate resources are committed to tasks

Target Output	Risks
ment information systems.	
Output 3: Health service administrators trained in performance based planning and budgeting	Inadequate resources are committed to tasks

b Activity 2: Establish appropriate Management information systems (MIS), including health data reporting in all state health department;s

Activity 3: Develop core set of indicators;

Activity 4: Strengthen Public Health surveillance system in the FSM

Rationale

i

The collection and

203 The collection and maintenance of health information in the FSM needs to be improved. Technically, the health information system structurally reaches throughout each state to the smallest village. Functionally, however, there is generally under reporting of vital statistics and other health statistics outside urban areas. Only 70% of births are recorded and 46% of deaths, largely due to inadequate recording at the dispensary/health center/community level. Additionally, failures in collection of morbidity and mortality data occur due to computer failures or "crashes". Public health statistics are often inadequately recorded at the state level and the problem carried over to the national level. Pohnpei has excellent data at the hospital and public health levels and at the dispensary level on the main island, with each HA sending the data in daily as all dispensaries on the main island have a computer that can be linked to the main system. The OI dispensaries prepare their reports manually and send them in regularly.

ii Description of activity

204 All states will introduce a uniform health information and management system. A working group needs to develop a plan of action that will improve collection, processing and use of data at the state and dispensary levels. Standardized software will be introduced into all state health administrations that will be capable of producing nationally compatible data to monitor health issues and performance of the health system. Training will be provided at state and national levels to develop in-house skills for the long-term implementation of the health information and management system. Additionally, health information assistants should be recruited to cover informatics duties at the national and state health statistics office to ensure that a huge loss does not result if the Statistics Officer is away or leaves the position. Performance monitoring of local services by communities will become possible through improvements in health informa-

tion systems that will be specifically designed to offer meaningful and relevant data to communities.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: MIS personnel recruited	Government/political/institutional commitment to improve quality health statistics is weak
Output 2: MIS used as basis for QA program all states	Inadequate resources are committed to tasks
Output 3: State and national statistics officers trained in use of systems and reporting	Inadequate resources are committed to tasks
Output 4: State and national statistics systems and equipment working effectively, backed up and standardized	Inadequate resources are committed to tasks
Output 5: Disease reporting to international agencies to meet international health treaty obligations.	Inadequate resources are committed to tasks
Output 6: A reference library containing all health related reports at National and State levels	Inadequate resources are committed to tasks
Output 7: Establish mechanism and procedures for prioritizing disease and health indicators for surveillance	Inadequate resources are committed to tasks

c Activity 5: Ensure technical assistance/consultancy available for above areas in all states

i Rationale

205 Data provided to the national health statistics office from some of the states are neither complete nor accurate, and standard reports are often behind schedule and associated with major caveats due to the reliability of the data. The statistics system at the national and state levels could improve with infusion of technical assistance, appropriate funding and dedication. The proposed ADB BSSP (due to commence 2004) will provide technical assistance to improve health statistics collection and use. However, there is an urgent need for FSM to use additional

440 FSM Strategic Development Plan

funds to gain technical assistance in financial reporting and statistical/information systems to complement the BSSP and to meet Compact II reporting requirements in a timely fashion.

ii Description of activity

206 Funds should be allocated to gain technical assistance in financial reporting and statistical/information systems to complement the BSSP and to meet Compact II reporting requirements.

iii Output targets and risks (* Outputs reportable on quarterly basis)

207 Target Output Risks

Target Output	Risks
Output 1: TA in fiscal planning, management and reporting, health statistics and use of information in year one	Inadequate resources are committed to tasks
Output 2: TA assistance in other areas as needed.	Inadequate resources are committed to tasks

d Activity 6: Develop curriculum and seek funding for Nursing school

i Rationale

208 Improved and expanded nursing education is the long-term key to improved rural health services in the FSM. Health assistants should be gradually replaced over the next twenty years with more professional level health staff, preferably nurses or other mid-level health workers.

ii Description of activity

209 The COM-FSM should train adequate numbers of nurses for their expanded role in public and preventive health as well as hospital-based medicine including continuing education. COM-FSM in Pohnpei is starting a 1 year nursing training course in 2004, an appropriate curriculum should also be developed for further nurse education. The relevant funds needs to be allocated.

iii Output targets and risks (* Outputs reportable on quarterly basis)

Target Output	Risks
Output 1: Open the school in 2006	Inadequate political will and resources committed

9 Education

9.1 Education Sector Review

9.1.1 Key Indicators of Educational Achievement

a Literacy Status

According to the FSM 2000 Census about 92% of the population aged 10 years and over were reported literate. The proportion literate decreased as age increased, showing better education for the younger generation. A differential in literacy status was notable among the older generations but was significantly reduced for the younger generations. For that segment of the population under the age of 45 there was hardly any differential between the sexes. One interesting observation is that literacy rates declined by 1.5 percentage points between 1994 and 2000. This could be an anomaly reflecting the inherent problems of family self reporting on literacy status. But could also reflect the impact of immigration.

b Educational Attainment

During the period 1980 –2000 the number of people aged 25 years and over that have completed some level of education has increased, while the number not completing any level has decreased significantly. The proportion of persons with no schooling decreased from about 25% in 1980 to about 12% in 2000. That is, one in four people in 1980 had not received any education 1980

Table 1: Literate Population of FSM, by Sex: 1980, 1994 & 2000

	Total	Males	Females
1980			
Total 10+ years % literate	48,792 88.9	24,705 90.3	24,087 87.6
1994			
Total 10+ years % literate	74,322 93.9	37,661 94.8	36,661 93.0
2000			
Total 10+ years % literate	78,056 92.4	39,302 92.9	38,754 91.9

Source: 2000 FSM Census of Population and Housing

compared to one in eight people by 2000. A similar significant ratio of improvement is evident in those completing a higher level of education (secondary or higher) – rising from 25% in 1980 to about 51% in 2000. The reduction in the number of people with no education may reflect in part the impact of emigration from the mid-1980's onwards. Many of these laborers may not have had any education.

The improvement in educational attainment for females in the FSM is pronounced. The proportion of females with no school dropped from 30 % in 1980 to 15% in 2000. Meanwhile, the proportion of females with at least high school education increased from 12% in 1980 to 30% in 2000.

9.1.2 Structure of Education and Training Systems

The overarching policy framework for education in the FSM is provided by the national constitution. The constitution provides a very broad framework for guiding the development of education in limiting itself to defining the purpose of education "preserve the heritage of the past" and "respect the diversity of cultures". It did not clearly delineate the powers and responsibilities of the states and the national government. A constitutional convention in 1990

Table 2: Educational Attainment of FSM Population 25 years and over, by sex: 1980,1994, and 2000 (percent)

	1980	1994	2000
Total	100	100	100
No school	24.8	14.6	12.3
Pre-school	-	8.1	.0
Elementary	49.9	30.3	36.0
High school	17.3	28.7	32.3
College	8.0	18.2	18.4
Males	100	100	100
No school	20.2	11.7	9.8
Pre-school	-	6.9	1.0
Elementary	44.9	24.5	30.4
High school	22.5	31.8	34.4
College	12.5	25.2	24.4
Females	100	100	100
No school	29.5	17.6	14.6
Pre-school	-	9.4	1.0
Elementary	55.1	36.3	41.3
High school	12.0	25.5	30.3
College	3.4	11.2	12.7

Source: 2000 FSM Census of Population and Housing

sought to clarify the national/states issue by proposing that for education the role of the national government be limited to "setting minimum nationwide standards, coordinating state activities and foreign government assistance, providing training, technical assistance and support for post-secondary education programs".

a National Level

- Responsibility for carrying out the functions of the national government in education rest with the Division of Education. This Division of Education is part of the Department of Health, Education and Social Affairs (DHSA). The DHSA is headed by the Secretary who has overall responsibility for the operations of the department.
- The DHSA has two divisions health and education. Each division is headed by an Assistant Secretary who has sectoral responsibility for policy development and operational matters. The Division of Education works in collaboration with the State Departments of Education (SDOE), and the College of Micronesia (COM) in planning, development and promotion of national education goals that will stimulate economic growth and social development. These broad goals of the department are pursued through the activities of the two offices within the division the Office for Education System Support and the Office of Vocational and Adult Education. Both are located within the same physical space and the work activities of both often overlap.

b Chuuk

The State Board of Education is appointed by the State government to provide overall leadership and guidance for the education system from preschool through to high school and some elements of vocational education. The Board of Education is also responsible for the appointment of the Director of Education. The day to day administration for the education system rests with the Director of Education. The Director reports to the Board of Education and is responsible for the implementation of the overall policy directions set by the Board. There are four divisions working under the Office of the Director.

c Pohnpei

- The state Board of Education is appointed by the State government to provide overall leadership and guidance for the education system from preschool through to high school and some elements of vocational education. The Board of Education has been responsible for the development of the current Five Year Plan for education in Pohnpei state.
- 9 The day to day administration of the education system rests with the Director of Education. The Director reports to the Board of Education and is

responsible for the implementation of the overall policy directions set by the Board. In practice, the Office of the Director is the critical policy making and implementation unit within the state structure. There are four divisions working under the Office of the Director.

d Yap

- The SDOE underwent an extensive re-structuring during the late 1990's. The department has adopted the name State Enterprising Education Department (SEED) to indicate its intention of breaking with previous bureaucratic processes. The principal innovation has been to devolve greater power to the district levels. The state is divided into four districts that correspond to the four major language groups on Yap. The districts have been renamed 'Innovation Zones' and are headed by 'Inclusive Education Coordinators'. This is a new title for the former district inspectors—the intention is to promote a cultural change in the operation and functions of the district officers towards more innovation and flexible delivery of education services. A key function of the Coordinators is to provide mentoring to the school principals.
- At the central state office the SEED structure has the following separate offices (i) Director's Office, (ii) Special Programs, (iii) Curriculum Designers and Instruction, (iv) Vocational Education, and (v) YapStar.

e Kosrae

- The Director's Office of the Department of Education has the primary policy making function and responsibility for the allocation of resources within the department. To fulfill its role it (i) establishes policies and procedures for resource distribution, (ii) sets policies for curriculum standards for all grade levels in math, science and language arts, (iii) defines state certification standards for teachers, (iv) undertakes monitoring and evaluation of performance against departmental goals and objectives.
- The Division of Instructional Services provides instruction at the preschool, elementary and secondary levels and organizes training of school principals. It also has some responsibility for cooperating with the curriculum development and evaluation division in developing the core academic program.
- The Division of Curriculum Development & Evaluation is responsible for (i) development of curriculum materials in subject clusters (mathematics, science, language arts, vocational education), (ii) evaluating and monitoring students progress, (iv) providing training to teachers to assist them in the implementation of curriculum standards, (v) development and maintenance of a comprehensive student data base.

The Division for Facilities and Special Services is responsible for administering and coordinating the departmental budget, construction and maintenance of school, library services, counseling services and staff development. The division is unique compared to other states because it has in-house capacity for the maintenance and repair of school buildings and facilities. Its perennial problem is that insufficient funds are made available for it to carry out the maintenance and repairs.

9.1.3 Public Expenditure on Education

a Sources of Finance

- It is not so much the volume of funding that presents the greatest barrier to further education sector development but the structure of financing. The FSM is largely dependent on external sources of funding for its education system without these funds the system in its current form would collapse. The external program funding is received through fragmented and unstable revenue sources.
- 17 Compact assistance began in 1987 and is distributed according to set formulas across the states. The formula is based on 70 percent of funds being distributed on a per capita basis between the states and the remaining 30 percent are distributed evenly amongst the four states. For education, Compact assistance is available from three funding sections; section 211(a), a special block grant under 221(b) and scholarships for post-secondary education under section 216(a)(3).
- Section 211(a) provides the bulk of funds and allows considerable autonomy in the allocation of money. During the previous period of the Compact(1996-2001), \$40 million was available to education under this section. However, there is a provision that 40 percent of funds be used for 'development purposes' and the remainder be used for operating requirements (recurrent expenditure).
- 19 Section 221(b) was created to offset the loss of access to certain Federal

Table 3: Typical Annual Distribution of Compact Funds for Education, 1996-2001

Compact Section	\$ million	
Section 211 (a) Section 221 (b) Section 216 (a) 3 Total	8 7 2 17	

Source: National and State Proposed Budgets

grant programs – the FSM still enjoys access to both the grant programs and section 221 (b) funds. This special block grant is limited to the education and health sectors and is valued at \$7 million per annum.

20 Section 216(a)(3) funds provide scholarships for post secondary education and total approximately \$2 million annually. The funds are distributed to the states who are responsible for administration.

b U.S. Federal Grants

- In addition to the Compact funds the education sector in the FSM has been eligible to receive funding from a range of US federal government programs. In education, funding is provided for many areas including special education, teacher training, adult education, vocational education and curriculum development. Some of these funds go directly to the national government, others directly to the states while others flow through independent institutions such as PREL.
- Many programs are well conceptualized, internally consistent and logical but not always adapted to the FSM context. All current programs are subject to change and possible termination. Where these programs are used as adjuncts to the core financing of an educational system (as they are in the US) their unstable nature is not threatening to the education systems. However, in the FSM these programs have become essential to the delivery of education services. Despite these limitations the money that has flowed from these U.S. federal grants has managed to provide the extra cash that can fund activity that is in some ways innovative. It is often times the only source of finance that enables the education sector to provide for something more than teacher salaries
- Local revenue on the other hand constitutes a very small part of all finances. At the national level, funding is provided for the office of vocational and adult education and the T-3 training program. In some states no local revenue is used for funding education.

c National Education Budget

The national education budget provides resources for the Division of Education within the Department of Education, Health and Social Affairs. The Division of Education is comprised of the Education Support System and the Office of Vocational and Adult Education. Funding for both these offices is provided from Compact 211 funds. The Office of Vocational and Adult Education has a national office and a presence in each of the states.

National Education Proposed Budget by Office and Federal Pro-Table 4: grams, 2004

\$
89197
250415
77185
24949
38962
24949
36872
542529
548813
72001
65380
40000
228421
100000
1,054,615
1,596,774

Source: Proposed Budget 2004, FSM,

25 The bulk of the budget at the national level (76%) is sourced from US federal grants. These programs provide an annual stream of funding for education. They are however uncertain in their size and continuity and create problems for long term planning which is a key function of the Division of Education.

d Pohnpei budget

- 26 Education consumed approximately 24 percent of the operations budget of Pohnpei state in 2003 (this was considerably down on the 33% share it consumed in 1999). The high share reflected the high staff component of education with more than 44 percent of all state employees being employed within the education branch. This reflects a high degree of resource commitment on the part of the state towards the education sector and human resource development within Pohnpei.
- 27 Elementary education and pre-schools absorb 68 percent of the education budget with secondary accounting for 26 percent as shown below. The

Table 5: Pohnpei State Education Budget by Division, 2003

Item	Appropriation (\$ million)	Proportion of total educa- tion budget (percent)
Pre-school & elementary education	3.86	68
Secondary	1.48	26
Administration	0.31	6
Total	5.65	100.0

Source: Proposed Executive Budget Fiscal Year 2000, Pohnpei State Government

structure of expenditure across sub-sectors seems well balanced and the component of administration costs is reasonably balanced.

28 Expenditure for personnel absorbs more than 90 percent of the total education budget leaving approximately \$540,000 to cover other items such as travel, materials and maintenance.

e Chuuk budget

- The 2002 regular budget allocation for education was approximately \$5.98 million. The total budgeted recurrent expenditure for Chuuk in 2002 for core services and activities was \$25.76 million. The SDOE also received additional funds through Federal grants but these are not show as part of the state budget papers. As a guide however, in 1999 federal grants were estimated at approximately \$2 million. In addition, there were also special block grants for education totaling approximately \$1.4 million.
- Elementary education consumed 63 percent of all funds and secondary 27 percent of all funds. The state budget does not show expenditure of federal

Table 6: Chuuk State Education Budget, 2002

Item	Appropriation \$	Proportion of total education budget (%)
'ersonnel	5762000	96
ravel	12600	0
Contractual Services	15000	0
CE	186000	3
otal*	5977300	100

^{*} No break down has been possible of 221(b) funds

Source: Chuuk State Budget Year 2002, Chuuk State Government

Table 7: Yap State Education Budget, 2003

•	-	
Item	Appropriation \$	Proportion of total education budget (%)
Personnel Travel	1427054 34150	54 1
Contractual Services	521720	20
OCE	508440	20
Fixed assets	137770	5
Total*	2,629,134	100

^{*} No break down has been possible of 221(b) funds Source: Yap State Budget Year 2003, Yap State Government

funds. Salaries account for 96 percent of the state budget for education. Most of the funds are consumed by the elementary and secondary school salaries leaving very little for instructional materials and maintenance.

f Yap budget

31 The Yap state budget is notable for the relatively smaller share of funds

Table 9: Yap State Core Education Budget by Division, 1998*

	Appropriation \$ million	Proportion of Total Education Budget (percent)
DOE Administration	77,175	3.2
Curriculum & Instruction	181,548	7.4
Doe Budget & Supply	32093	1.3
Yap High School	427288	17.5
Outer Islands High School	200702	8.2
OIHS, Woleai	75414	3.1
Yap Proper Elementary	522182	21.4
Neighboring Islands Elementary	574665	23.5
Outer Islands Cultural Program	131314	5.4
Yap Proper Cultural Program	25071	1.0
Student Assistance	195350	8.0
Total	2442802	100.0

^{*} This does not include federal programs

Source: Executive Budget Fiscal Year 2003, Kosrae State Government

that are allocated for personnel salaries. Even when including contractual services as a disguised form of salaries, Yap still spends less than 75% of its budget for this item.

Expenditure for core SDOE functions have traditionally been focused on elementary education. Elementary schools on Yap proper received 21 percent of funds and the outer islands received 24 percent. The 45 percent of total education funds available for elementary education is less than that made available in other states which average around 60 percent. There is a large component of funds going to curriculum and instruction and this reflects the intensive efforts of SDOE to develop its own curriculum. The high schools combined received 29 percent of funds with Yap High School receiving 18 percent of all education funds.

g Kosrae budget

- 33 Education expenditure accounts for approximately 30% of the total state budget. On a divisional basis, Kosrae shows a comparatively low share of expenditure for instructional services (37 percent) which incorporates teacher salaries. However, this masks the salaries component within the federal programs.
- There are 234 full time employees within the SDOE in Kosrae representing 45 percent of all state employees (538).

9.1.4 School-age populations projections - limited growth

35 The entire population of a nation is the target group of an education system. Beginning from pre-school through to adult education programs, education systems and planners need to take account of the size and location of the population groups they are trying to reach. Most governments aim for high participation rates within their elementary and secondary education systems. Education systems.

Table 10: Kosrae State Education Budget by Division, 2003

Item	\$	Proportion of total education budget (%)		
Director's Office Instructional Services	131287 1367721	4 37		
Curriculum Development	190310	5		
Facilities and Services	125631	3		
Federal Programs	1901987	51		
Total	3,716936	100.0		

Source: Executive Budget Fiscal Year 2003, Kosrae State Government

Table 11: Elementary School Aged Children (6-13 years), 1994-2010

					•		, .		
State	1994	1995	1996	1997	1998	1999	2000	2005	2010
Kosrae	1745	1728	1702	1660	1584	1562	1507	1410	1559
Pohnpei	7332	7352	7399	7465	7529	7583	7626	7708	8167
Chuuk	12741	12768	12780	12798	12826	12841	12834	12876	13865
Yap	2377	2352	2329	2312	2303	2297	2294	2299	2388
Total	24195	24200	24210	24235	24242	24283	24261	24293	25979

Source: ADB Human Resource Development Study, 1999

tion absorbs considerable amounts of the state's human and financial resources. By measuring the current and projected population base for the elementary and secondary education systems, education policy makers can define the current and potential demand for resources in these sectors.

Projections for the school age population are presented here based on analysis of data from the 1994 census. These projections show very little growth in the elementary school age population cohort. From 1994 to the year 2010 the national elementary age cohort is projected to grow from just over 24,000 to less than 26,000 persons. This represents a growth in the cohort of approximately 0.5 percent per annum. On a state level, both Yap and Kosrae record a drop in the total elementary school aged population cohort between 1994 and 2010. Chuuk is the only state that records a significant increase in population which will occur in 2005-2010. The accuracy of the projection for Chuuk in this latter period may be questionable.

Aggregate growth in potential for elementary education is minor. This should mean that relatively few funds will be required to extend educational coverage. What the population data does not show is the internal movement of populations within and between island states. For example, if there is significant movement of school aged populations from outer island or remote areas to central areas there may well be a need for the reallocation of resources within each

Table 12: Secondary School Aged Children, 1994-2010

				_					
State	1994	1995	1996	1997	1998	1999	2000	2005	2010
Pohnpei Chuuk	3496 5289	3444 5444	3409 5617	3401 5777	3416 5903	3452 5998	3485 6049	3703 6247	3772 6280
Yap	1079	1098	1120	1138	1148	1147	1140	1123	1127
Kosrae	704	736	770	798	824	836	841	757	683
Total	10568	10722	10916	11114	11291	11433	11515	11830	11862

island state.

As with the elementary school population, there is minimal growth for secondary education population cohort projected over the period 1994-2001. The total target cohort for the secondary system grows a little over 1200 students during a 16 year period from 1994 to 2010. The only significant growth in potential demand is to be found in Chuuk: the Chuukese secondary education cohort grows by almost 1000 during the period 1994-2010. These figures however need to be updated by an analysis of the more recent data collected from the

Table 13: Public Elementary School Enrollments by Sex, FSM: SY 1997/1998 to 2001/2002

1007/1000 to 2001/2002					
	Male	Female	Total		
FSM					
1997-1998	8,721**	7,695**	24,037		
2000-2001	8,465	7,636	16,101*		
2001-2002	8,806	7,986	16,792*		
Yap					
1997-1998	1,126	968	2,094		
2000-2001	1,149	989	2,138		
2001-2002	1,531	1,391	2,922		
Chuuk					
1997-1998	6,726	5,940	12,666		
2000-2001	6,518	5,867	12,385		
2001-2002	6,470	5,802	12,272		
Pohnpei					
1997-1998	Na	Na	7,621		
2000-2001	Na	Na	Na		
2001-2002	Na	Na	Na		
Kosrae					
1997-1998	869	787	1,656		
2000-2001	798	780	1,578		
2001-2002	805	793	1,598		
Caurage Da		anativa atataa			

Source: Dept. of Education in the respective states.

^{*} Not including Pohnpei

^{**} Pohnpei split by gender not available as at October 2003

Elementary Education

Enrolment trends

39 Public school enrolment trends for elementary education show stable enrolment patterns with the exception of Yap in 2001-2002 which had a nearly 50% increase in its enrolments for that year.

Elementary schools

- 40 There are 166 elementary schools in the FSM of which more than 50% are located in Chuuk. Kosrae has the smallest system with only seven schools of which one is private. While the actual number of schools is small, the number may need to be reduced further to increase the efficiency of the system. Villages are seen as the natural catchment area for a school. In some cases provision of elementary education at a village or hamlet level is often driven by noneducation related factors - including furthering village prestige and/or securing an important stream of government derived income via the employment of teachers who resided within the village. A school consolidation program may prove beneficial to the efficiency of elementary schools.
- 41 The elementary school network is small in terms of aggregate number of providers. This suggests that coordination of the schools and communication between school and SDOE should be easier than for larger systems. However, the education system is beset by the problems that affect the public administration of all types of services in micro-states. These include;
 - geographical dispersal of schools and populations makes contact difficult and costly
 - the schools are managed on a fragmented basis by the different SDOEs
 - the government administration structure exists parallel to an older and sometimes contending traditional power structure

Table 14: Elementary Schools by State, 2001-2002

State & Year	Elementary Schools		
National	166		
Yap	33		
Chuuk	90		
Pohnpei	36		
Kosrae	7		

454 FSM Strategic Development Plan

Table 15: Language Arts Results-Mean Score by percentage and academic year

	1995	1996	1997	2000
Grade 6	49%	52%	51%	52%
Grade 8	61%	61%	59%	57%

• economies of scale impinge on quality aspects of service delivery

iii Learning outcomes of elementary schools

The learning outcomes of elementary schools are very poor. The FSM National Standardized Test results are the most useful guide to the quality of the education provided by the public elementary system. The purpose of these tests is to assess and evaluate the outcome of the National Curriculum Minimum Standards and to identify positive educational trends and progress in the learning attainment The result based analysis is intended to allow individual FSM States to determine their own program of instruction while ensuring accountability toward national goals. The tests are applied to grades 6, 8, and 10 in the FSM public elementary and secondary schools. The moderated results for language arts were better than for mathematics. The table below shows the national results and their relatively static trend during a 5 year period between 1995-2000.

When these results are benchmarked against U.S. standards the weak-

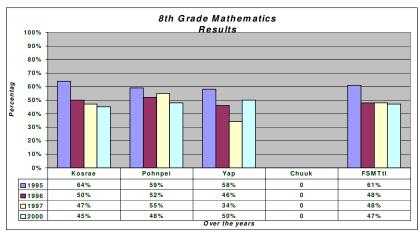


Figure 1: 8th Grade Mathematics Results

Table 18: Number of Secondary Schools

State & Year	1997-1998	2001-2002
Total	24	28
Yap	4	4
Chuuk	14	18
Pohnpei	5	5
Kosrae	1	1

ness of the learning outcomes is fully revealed. For example, a comparison of graded content area reading comprehension for 8th grade with U.S. standards showed the extent of the discrepancy in educational performance between the two systems. Comparisons with US student performance for the period 1995-1997 in reading and comprehension reveal the weakness FSM student performance. FSM grade 8 students were achieving approximately 63% of US standards for grade 2 and 39% against expected grade 6 standards.

National Mathematical performance at grades 6 and 8 were lower than for language arts. During the testing period 1997 –2001 national grade 6 mathematics performance ranged from 38 percent to 40 percent, while national grade 8 mathematics performance ranged from 47 percent to 48 percent.

9.1.5 Secondary Schools

a Enrolment trends

- Public school enrolment trends for secondary education show some growth patterns particularly in Yap and Chuuk. Lack of recent data from Pohnpei was unable to complete the national picture for secondary education.
- The secondary sector is the most likely to experience an expansion of effective demand for its services in the years to come. The ADB Human Resource Study, 1999 calculated the secondary level Gross Enrolment Ratio (GER) for 1997-98 to be approximately 61%. The GER of 61.3 percent indicates that the actual coverage gap is likely to be considerably higher given above the level school age enrolments as a result of repeaters and returning drop-out students. Given the near universal coverage of the elementary system the transition rates to high school are quite low.

- Access to the secondary level is often related to the distance of the nearest secondary school from communities. The small number of secondary schools cater for a widely dispersed client base. The exception is Kosrae state and until recently it had a very high participation rate at the secondary level. An emerging factor has been the tightening of entrance requirements by public schools, the most dramatic impact being felt at Pohnpei. The drive to promote quality at the secondary level has been pursued by excluding the weakest students from gaining entry. This policy reflects the real concern by the secondary school and SDOE that the low caliber of student being produced by the elementary system is eroding the capacity of the secondary level to reach basic standards for any of its graduates.
- However, in the medium to longer term the number of enrolments at the secondary level will tend to increase as the universalisation of secondary education becomes a more desirable objective for communities. This will place greater

Table 19: Public Secondary School Enrolments by Sex*, FSM: SY1997/1998 to 2001/2002

State ¹ & Year	Total	Male	Female
FSM			
1997-1998	5,110	na	na
Yap			
1997-1998	707	361	346
2000-2001	821	458	363
2001-2002	822	462	360
Chuuk			
1997-1998	2,382	1,106	1,276
2000-2001	2,399	1,122	1,277
2001-2002	2,904	1,525	1,379
Pohnpei*			
1997-1998	1,320		
Kosrae			
1997-1998	701	380	321
2000-2001	868	532	336
2001-2002	714	381	333

Source: Dept. of Education in the respective states.

^{*} Pohnpei data not available as at October 2003

^{**} Pohnpei split by gender not available

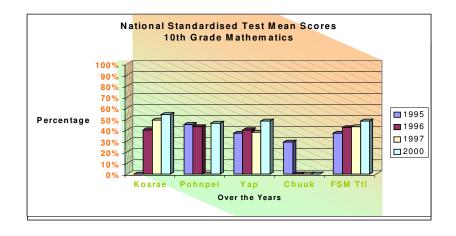
pressure on schools and their facilities.

b Learning outcomes of secondary schools

- Similar to elementary schools the learning outcomes of secondary schools are very poor. The FSM National Standardized Test results are the most useful guide to the quality of the education provided by the public elementary system. The moderated results for language arts were better than for mathematics. The chart below shows the national results and their trend upwards during a 5 year period between 1995-2000. As for elementary schooling, performance is considerably better in language arts than mathematics.
- 50 For mathematics secondary schools, the mean score or students has remained well under 50% during the period 1995-2000. There has however been a moderate improvement of the mean score during that period. This does suggest some improvement in outcomes albeit coming from a very low benchmark.

9.1.6 School Teachers

- Teachers are critical to the delivery of a quality education system. There is universal agreement on this point in the FSM as in other countries. The FSM has allocated considerable resources (mostly Compact and Federal funds) to the training, professional development and payment of teachers within the education system. The quality of teaching however remains a vexed issue at all levels.
- The supply of teachers has stabilized and is possibly in decline across the FSM. Incomplete data at the national level does not permit detailed analysis beyond 1997-98, but the leveling off of enrolments has had a stabilizing effect on the demand for teachers. There is also an apparent improvement in the effi-



- The number of unqualified teachers at all educational levels continues to act as a serious impediment to the improvement of educational quality. Nearly 30 percent of teachers nationally do not possess any post-secondary qualifications. The situation is particularly critical in Yap and Chuuk where more than 39 percent of teachers do not possess a degree from a post-secondary institution.
- All states have issued directives and guidelines requiring unqualified teachers to obtain their Associate Arts (AA) and Associated Science (AS) degrees or lose their place as teachers. In practice, most teachers have not obtained their qualifications and the SDOEs have not replaced the teachers. The failure to implement this policy has been due to a lack of qualified teachers to replace the unqualified and partly a reluctance by the SDOE to engage in conflict with

Table 19: Elementary Teachers by State: SY 1995-96 to SY 1997-98

rabio for Elomonially roadin			
School	1997-98	1996-97	1995-96
FSM	1,486	1,526	1,540
Elementary Private Elementary1	1,393 93	1,402 124	1,426 114
Kosrae	120	132	134
Elementary Private Elementary	116 4	128 4	129 5
Pohnpei	350	377	368
Elementary Private Elementary	328 22	326 51	330 38
Chuuk	814	814	830
Elementary Private Elementary	766 48	766 48	782 48
Yap	202	203	208
Elementary	183	182	185
Private Elementary3	19	21	23

Notes:

¹ May include preschool

² In SY97-98 27 teachers were reported and added to total; no sort on school level

³ Includes high school

Table 20: FSM Teachers by Degree Status, 1998-99

Qualification (%)	Yap	Chuuk	Pohnpei	Kosrae	FSM Total
No degree	40.2	39.5	11.3	8.9	29.0
AA/AS degree	48.8	45.8	70.9	58.3	54.5
BA/BS degree	10.0	13.3	17.0	31.5	15.5
MA/MS degree	1.1	1.3	0.8	1.2	1.1
Ph.D.	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0

Source: Position Paper Critical Issues Affecting Education within FSM, Makir Keller, Executive Director Special Education Programs

teachers and school communities.

- Due to a shortage in the supply of qualified teachers, the state and national governments have accepted an AA or AS degree from the College of Micronesia (COM) as the basic prerequisite for teaching. However, most AA and AS graduates have not received any instruction or practical experience in teaching as part of their two year courses at the COM. These graduates cannot be expected to be as effective within the classroom as graduates who received training in the theory and practical aspects of pedagogy. This has resulted in the wide spread perception that the teachers with an AA/AS degree are not necessarily superior to those without an AA or AS degree. This view was expressed by principals, state education officials and community organizations. This is not surprising given that the majority of teachers have not received any teacher training.
- All states have (i) a large number of uncertified teachers, and (ii) a large number of certified teachers that have not received the training to properly undertake their duties as teachers. The SDOEs are constantly encouraging teacher certification according to the current criteria.

9.1.7 Instructional Materials at Schools

- The primary instructional tool available to teachers is the curriculum framework, produced by the SDOEs. The frameworks list the curriculum program goals and sub-goals, defined as competencies to be achieved within a specific subject area. In many cases some detail is given suggesting an outline for each course section. Beyond this list of educational objectives and outcomes, teachers may find themselves left to their own devices. As many teachers have no pedagogical training, their ability to turn the curriculum framework into a teaching program must be questionable.
- There is a shortage of adequate textbooks and other instructional materials in all states. All divisions of elementary education reported a textbook shortage in schools. The development of state specific curricula requires the de-

velopment of specific textbooks however, the economies of scale have apparently prevented this happening. Where textbooks have been produced there is generally no budgetary allocation for the publication of textbooks. The end result is that textbooks seem only to be used by teachers to help them structure lessons. This greatly affects the ability of children to continue their learning out of school and to involve their families in the learning process through homework.

59 The SDOE curriculum divisions have attempted to fill this void in instructional aids by assembling collections of material to assist teachers. Inservice training sessions provide a mechanism for developing and distributing these materials.

9.1.8 College of Micronesia

- The COM is a multi-campus institution with the national campus located in Palikir, Pohnpei and branch campuses located in each state. Originally established to develop teacher in-service teacher training in 1963, the COM now defines its mission more broadly "to provide educational opportunity academic, vocational and technical- for all people". The COM was originally part of the Community College of Micronesia (CCM) that included campuses in Palau and Marshall Islands. It established itself as an independent public corporation in 1993.
- The COM is governed by a Board of Regents appointed by the FSM government. The Administration is headed by the President who reports directly to the Board of Regents. The President is responsible for the day to day administration of the institution. Reporting directly to the President are two Vice-Presidents (one responsible for instructional activities and the other for student affairs. In addition to a national campus the COM-FSM is comprised of four state campuses.

Table 21: Revenue and Expenditure Patterns of COM-FSM (\$ million)

Revenue/Expenditure	1994	1995	1996	1997	1998	2004
Total Revenue Tuition fees compo- nent	3.9	4.45	4.57	5.56	6.57	9.90
	2.2	2.52	2.43	2.41	3.19	4.8
Total Expenditure Wages and salaries component Surplus/(Deficit)	3.9	3.79	4.40	4.83	5.70	9.9
	2.2	1.90	2.1	1.86	2.13	N/a
	0	0.66	0.18	0.75	0.87	0

Source: COM - FSM (proposed budget 2004), HRD Study (1999)

- Tuition fees have always been the biggest single source of income for the COM and account for close to 50 percent of all revenues. It is important to note the tuition fees component is subsidized by the US Pell grant system. Students who attain and maintain satisfactory academic performance are entitled to grants from the US government. In this way the COM revenues from tuition fees do not represent a sustainable source that is independent of US government assistance. Even still, the COM-FSM has budgeted for a \$ 4 million dollar injection of revenue from government in order to balance its proposed \$9.9 million expenditures for the year 2004. On the positive side, wage related costs have been consistently kept to around 50 percent of all expenses revealing a healthy component of non-wage related expenditure.
- The COM awards Associate Degrees to students who complete a two year program of study (many students however need to complete preparatory courses before beginning the degree program).

Associate of Arts Degrees (AA)

Liberal Arts (LA)

Liberal Arts/Health Career Opportunity Program (LCHOP)

Liberal Arts/Education

Liberal Arts/Media Studies

Micronesian studies

Teacher preparation

Associate of Science Degrees (AS)

Accounting

General Agriculture

Business Administration

Computer Information Systems

Early Childhood Education

Hotel and Restaurant Management

Marine Science

Teacher Education-Elementary

- Certificates of achievement are also awarded to students completing a one year program of study. Third year certificates of achievement are offered in subject areas including;
 - Elementary education
 - Special Education
 - Educational Leadership Academy
- 65 Certificates of achievement are also offered in some other select subject areas including;

- Pre-school Teacher Education
- Vocational Education Programs

Enrolments are distributed across the national campus at Palikir on Pohnpei and the four state campuses. The national campus enrolls approximately 800 full-time students per semester in either degree programs or programs leading to a certificate of achievement. COM –FSM Chuuk serves approximately 670 part-time students each semester, offering degree programs in teacher education as well as four certificate of achievement programs. COM-FSM Pohnpei enrolls approximately 300 students each semester in various degree and certificate programs. The COM-FSM Kosrae and Yap campuses are both significantly smaller each enrolling between 100-150 students per semester.

9.2 Strategic Goals, Policies and Outcomes

9.2.1 Introduction

- The ongoing task for the education sector is to improve the quality of education and to make education relevant to the economic and social needs of the FSM. The education system has made significant efforts at addressing these complex needs. However, the elementary and secondary school systems are having great difficulty in producing graduates with the knowledge and competencies needed either for productive participation in society or to pursue further studies.
- The issues to be addressed by the education sector have been grouped into five strategic goals. A rationale is provided for each of the strategic goals, accompanied by an outline of planned activities to improve the current situation and the outcome measures that may be used to assess attainment of the strategic goals.

9.2.2 Strategic Goal 1: Improve the quality of learning in the FSM

a Rationale

- While the education system has achieved near-universal coverage in basic education, the quality of education is varied across levels. The available performance indicators for learning attainment suggest the elementary level is failing to produce graduates of the standard expected by either the national or state education standards frameworks.
- The FSM National Standardized Test results are the most useful national guide to the quality of the education provided by the public elementary system. Tests for language arts and mathematics during the period 1995-2002 show performance to be especially low in mathematics. Language arts during the same period showed higher scores for Grade 6 and Grade 8, with a steady na-

tional score improvement across Grades 6, 8 and 10 suggesting developmental growth in the English language.

- The public secondary system is inheriting students from the elementary system who are already lagging well behind in performance. This critical failure at the entry point of the education system makes any ongoing education problematic. The quality problems of the secondary system are also highlighted by weak performance in the National Standards Tests. Mathematics scores were shown to be particularly low across the three testing years 1995-2002.
- The vocational education and post-secondary systems also have problems with the quality of their educational outcomes. Both are critically affected by the weaknesses of the secondary education system. In vocational education, the quality of teaching and the poor facilities are further impediments to producing high quality graduates.

b Proposed Activities

- Improving the quality of the education system means improving its outcomes in terms of providing foundation knowledge (such as literacy and numeracy) as well as making it more relevant to the life long experiences of its students. There are three activities for this strategic focus area:
 - Provision of instruction and support services by schools the instruction
 provided by teachers in schools remains the most significant aspect of
 education service delivery. The states retain their primary responsibility
 for provision of classes in all public schools and play a supporting role
 for the functioning of private schools
 - Provision of materials for instruction and out of school administrative support – the state and national departments of education will continue to provide the essential resourcing of schools and teachers. Existing materials will be revised and new ones introduced as required.
 - Development of a school maintenance scheme by each state this will enable states and schools to monitor the condition of their physical facilities. It will also allow them to plan and budget for their upkeep and to seek the participation of communities in this process.

9.2.3 Strategic Goal 2: Improve the quality of teaching in the FSM

a Rationale

74 International research indicates that the teacher and the quality of teaching are among the most important forces in the educational process, perhaps even the most important. The importance of teacher professional growth in the process of national development has been well documented in the literature.

The data available for teachers in the FSM shows that many teachers have a significantly lower level of qualification than is required by existing standards. Further, that the training they have received is unlikely to have included a pedagogical component. Whether the immediate task is that of building community participation, or of coping with a lack of textbooks and materials, or managing increasingly large classes, or struggling with totally inadequate infrastructure, the teachers in the FSM are largely on their own – isolated personally, professionally and, in the context of outer islands, even culturally isolated.

- The number of unqualified teachers at all educational levels continues to act as a serious impediment to the improvement of educational quality. Nearly 30 percent of teachers nationally do not possess any post-secondary qualifications. The situation is particularly critical in Yap and Chuuk where more than 39 percent of teachers do not possess a degree from a post-secondary institution.
- High levels of teacher absenteeism and low levels of teacher motivation are recurring problems across all states. While the impact of this phenomenon may vary in its impact across schools it remains a significant problem within all of the states. The official reasons for absenteeism are similar across all states funerals, significant community celebrations, sickness and attending to sick family members. However, valid reasons for teacher absenteeism may be abused by many teachers.
- Teachers, like professionals in other fields, require in-service training and professional development programs that specifically target their needs and also the developing needs and requirements of the system as a whole. Teacher guides, manuals, modules and other materials can all play a role in improving teacher classroom effectiveness, but regular training is essential if those materials are to create and provide for the desired impact.
- Training is essential also if teachers are to move beyond the limitations of their own experience and embrace new methods that are more suitable to the needs of a modern and diversified society and economy. Many developing countries have experienced and are experiencing the problems that now beset many FSM teachers. They are being encouraged to promote student cognitive development and intellectual skills but they themselves are products of a hierarchical, authoritarian tradition of teaching encountered during their own school days and while undertaking teacher training programs. Teachers must be able "to comprehend subject matter for themselves, be able to elucidate subject matter in new ways, recognize and partition it, clothe it in activities and emotions, in metaphors and exercises, and in examples and demonstrations, so that it can be grasped by students." The ongoing professional development of teachers must not only provide the basics of new methods but also encourage a vision that allows a teacher to take a role alongside the student rather than a role in center stage a role as facilitator and guide within the learning process. The teacher's

role in the future must be as much about ensuring that students "learn how to learn" as much as it has been about learning this fact or that. In the longer-term, this approach is essential if the quality of student learning is to be maximized.

In order for this approach to bear fruit, it will also be essential to provide ongoing professional development programs for head teachers. School principals must have the necessary expertise to effectively allocate resources, including personnel, and to mentor and support teachers so as to maximize learning opportunities for all children.

b Proposed Activities

- Introduction of a revised teacher certification system the current system for recognizing teacher qualifications has significant weaknesses. A national system is to be introduced that will be based on the consideration of actual competencies required by individuals in order to perform effectively as teachers.
- Develop action guides for teachers based on curriculum frameworks for core curriculum areas the guides will be particularly useful for teachers experiencing difficulties in developing lesson plans and organizing their schedule to cover the requirements of their given syllabus
- Introduce performance oriented employment conditions for teachers a review of existing legal and administrative frameworks governing conditions of teachers will be undertaken. The review will lead to legislative and administrative reform to introduce performance oriented employment conditions for teachers.

9.2.4 Strategic Goal 3: Consolidate performance monitoring and data based decision-making system

a Rationale

- 80 To be effective, education requires planning, monitoring and evaluation, and education management information (EMIS) systems to be in place and functioning in order to target, track and assess the many ingredients that compose quality education and effective schools.
- Educational planning is, at base, directing appropriate resources to appropriate targets to accomplish the stated government goals and strategy. Good planning requires accurate and timely information, correct allocative guidelines, and regular analysis of problems and progress. The lack of adequate education data impedes sound decision-making at all levels in the education system. The education sector currently lacks a reliable system for the regular and systematic collection and dissemination of information and data. The current EMIS system suffers several shortcomings:

- Data quality and accuracy: Inconsistent methods for data collection and statistical calculation are employed, with no means of error checking or validation. There is no consistent data collection instrument, and existing instruments neglect important areas of information.
- Fragmented databases: There is no one database that consolidates most
 of the information needed to analyze the education system. Other data
 bases, developed as one-off surveys conducted for U.S. federal programs
 or periodic surveys conducted by other government agencies (e.g. Population Census), often contain education-related data but may not be readily obtained or easily combined with existing education systems data.
- IT equipment: There is unequal local education office access to IT equipment and trained human resources to prepare material in forms accessible to decision makers.
- The transparency of the education system needs to be enhanced through a regularized periodic reporting system. Government policy makers will be in a better position to assess the internal and external efficiency of the system if the process and educational outcomes of the education system are transparent. This will enable a better understanding of required improvements, through better allocation of funds and hence improved cost efficiencies.
- A national school based reporting system can monitor progress made in improving the quality of education, and can identify concerns and proposed solutions. Setting clear and attainable goals for student performance will make the education system accountable to the community through an effective reporting system.

84

466

85 Outcome Measures – Consolidate performance monitoring and data based decision-making system

b Proposed Activities

- Review and consolidate existing state, and national efforts for the establishment of education management information systems there is a diversity of education management information systems across the states making it difficult at present to collect and analyze data at a central level. A synthesis of the existing approaches will result in an integrated data base for the FSM that will enable policy makers to (I) monitor and compare progress, and (ii) better diagnose weaknesses.
- Introduction of a school accreditation system that specifies the benchmark standards required for any school to attain in order to be accredited by government as meeting minimum service requirements the quality of

education is greatly affected by the school facilities, systems, human resources and interactions with communities. The school accreditation system will establish the required standards that all schools in the FSM will need to attain in order to be considered to be meeting the minimum requirements of the schooling system.

9.2.5 Strategic Goal 4: Strengthen participation and accountability of the education system to communities

a Rationale

The education system needs to be made more accountable for the type and quality of the educational system. National and state education offices, schools, principals and teachers need to become accountable for educational outcomes and student achievement. In order to ensure accountability, the education system needs to be more transparent and inclusive in its operations.

The cultural distance that exists between the schooling system and communities is the result of various historical and institutional factors. There is a cultural gap between the traditional system of learning and the schooling system introduced through the process of colonization. The traditional system relied on families and the community assuming responsibility for imparting knowledge and cultural values. The educational structures and values introduced by the various colonial administrations and institutions were alien to the traditional society. Remnants of this alienation still exist because current education practices do not sit comfortably with practices of learning and teaching within the family/community. The public school today continues to be seen as an institution of the government and this limits the participation of community members. Various other specific factors may limit community participation:

- Lack of formal education for parents means they may lack the interest or confidence to become involved in school or homework activities
- The experience of education for some parents was alienating and they
 may not have found the schooling process relevant to their day to day activities.
- Community participation tends to be limited to forms of engagement such as social events at school and school maintenance because these are understandable within traditional cultural norms
- School facilities are not designed to encourage community use
- Parent and Teacher Associations (PTAs) can be weak organizations because they may exclude important members of the community
- In rural areas, distance from schools can affect the participation of some parents and communities

Parental and community participation in schooling is a fundamental part of any effective learning system. Communities need to support and be involved in education if the spirit of the education process is to be kept alive. Community involvement is essential in making the education system ultimately accountable to parents and the community.

b Proposed Activities

- School funds to be managed with participation of the community legislation to be enacted in all states enabling school committees that include parents to manage school funds. Training to be delivered to communities to enable them to participate effectively on these committees.
- Community input into selection of principals legislation to be enacted
 permitting the participation of communities in the selection of school
 principals. Guidelines and training to be produced to assist community
 representatives to participate in the selection process.
- Annual state competition recognizing excellence in educational performance of students, schools, teachers and communities each state to organize competitions that are open to all schools from main and outer islands. The purpose of the competitions will be to promote community recognition of the outstanding efforts within the education sector.

9.2.6 Strategic Goal: 5: Education is relevant to the life and aspirations of the FSM people

a Background

The education system has for too long been viewed as a stepping stone towards the attainment of a salaried government position. Parents, communities and staff within the education system have not sufficiently focused on the broader relevance of the education system. In terms of employment, the education system has not been able to adequately satisfy the skill requirements of the local and international productive sectors. Feedback from employers participating in vocational education programs suggests that many students lack the personal qualities and attitudes needed to gain and retain employment within the private sector.

More broadly, those students that do not proceed beyond basic education are inadequately prepared to function within their own communities. Education has been heavily focused towards academic subjects with the intention of producing graduates capable of assuming post-secondary studies. In fact, many students do not proceed to undertake further formal studies and their education is completed without them obtaining a grounding in certain functional skills that may be needed for their day to day activities.

Unfortunately, the low quality of education also hinders the participation of FSM students within the post-secondary system. The problem is particularly pronounced for those students pursuing degrees in technical and science fields.

b Rationale

- An effective and relevant education system must take account and meet the needs of the local economy and the development needs of the local productive sectors. The development of the private productive sector in the FSM is the most viable and sustainable site for future employment growth. To assist in the development of this sector it is essential to develop the human resource base of the FSM to meet the emerging skill requirements of enterprises.
- The education system must also produce graduates who are able to effectively participate in the emerging global economy in the domestic and international labour markets. Parents and communities want their children to have the option of working locally and abroad. The standard of education therefore has to rise to meet comparable international performance in key subjects such as English language, mathematics and science.
- The education system also needs to cater for the very different needs of those students who will be engaged in a peripheral way with the modern global economy. These students have semi-subsistence livelihoods with more acute needs in terms of practical skills and possibly traditional knowledge.

c Proposed Activities

i Career Education Programs

- It is important that students be provided with practical information regarding potential employment opportunities both within and outside the FSM. Career education programs need to be designed and implemented in schools that focus on the need for economic growth and social development.
 - ii Provide vocational and technical training to out of school youths and adults
- The pursuit of education as a life long activity can be enhanced through the more effective coordination and delivery of formal and informal education and skill training programs. Particularly important is the linking of programs for out of school youth and the secondary, post-secondary and adult education systems. Pathways need to be provided so that young people who exit the education system early, can effectively re-enter at a later point in their working lives. The design of such courses for out of school youth needs to be properly articulated with the basic education system and be recognized by the post-secondary and vocational education systems.

- An assessment of skill training programs will help to determine the effectiveness of the current system in meeting the needs of industry and the objective of life long learning. The establishment of national and state councils is a concrete measure to be considered for improving the coordination of formal and informal skill training programs.
 - iii COM provides continuing education to local businesses, government and communities
- All the COM campuses need to play their role in providing education that meets the needs local business, governments and individuals. Such courses need to include a mix of short courses that are non-academic in nature and geared to very specific training needs of the workplace or community setting.
 - iv COM to develop and deliver degree programs and certificates to prepare students for the job market or transfer to higher institutions of learning
- All COM campuses (but the FSM campus in particular) will continue to seek improvements in the quality of their academic program. The prestige of its flagship academic courses will help to further the reputation of the institution and generate future demand.

9.3 Activities and Outputs

- 9.3.1 Strategic Goal 1: Improve the quality of learning in the FSM
 - Activity 1: Provide instructional and support services for schools
 - i Rationale
- The process of educating children is a complex process that involves a wide array of participants. Parents, families and neighbours are teachers as are elders in the community. In the FSM as in other countries in the Pacific, the responsibility for educating the youth of its society has changed over a relatively short time from being the immediate and sole responsibility of community members. As the goals of education have become more complex the importance of the formal education system has also increased in importance.
- The school is now a critical instrument that has the potential for providing children and young adults with the concepts and skills to thrive in modern society. Now that the socialisation process of education has been institutionalised through the formal school classroom, a central task of government is to provide an adequate supply of teachers.
 - ii Objective and Scope
 - To provide an adequate supply of teachers to all schools

To provide the appropriate administrative services that enable schools to operate effectively

iii Description of Activity

- 102 Teachers need to be made available for schools to be able to function. A class can always be conducted under a tree, but a class cannot be conducted in the most expensive classroom without a teacher. This is the essential supply side pre-condition for the education process to commence. The formal education system is responsible for providing the teachers and ensuring that the supply of their services is available within the classroom. This means that problems of absenteeism need to be monitored and contained and where it does present as a problem then mitigating strategies are put in place.
- 103 This activity also requires a whole set of interacting administrative support processes be undertaken. For example, teachers need to be identified, credentialed, appointed, allocated to schools, replaced, paid and monitored.

iv Output Targets and Risks

Target Output	Risks
Adequate numbers of teachers appointed to schools	Inadequate supply of qualified teachers for all schools and islands
Required annual classroom instruction hours delivered by teachers	Absenteeism exceeds proper limits
Lesson planning undertaken by teachers	Teachers are not capable of developing lesson plans Teachers are not motivated enough to prepare lesson plans No supervision by principal to ensure that lesson plans are being developed
In-service teacher training (hours) undertaken by required teachers	Absenteeism exceeds proper limits
School level administrative support services (filing, data input, contracts, purchase requisitions, etc)	Inadequate resources committed to these tasks Personnel are poorly trained
State level administrative support (monitoring, payment, clerical records)	Inadequate resources committed to these tasks Personnel are poorly trained

b Activity 2: Provide materials and equipment for instruction and administrative support

i Rationale

- While resources alone are not a guarantee of effective schooling, international research shows that a critical mass of resources and inputs is required to provide the basic building blocks of instruction and allow teachers to adopt less rigid and more responsive instructional strategies. Additional resources are likely to have the most impact on student outcomes in resource-poor schools, while the returns diminish as spending rises in well-resourced schools.
- 105 Learning can occur in modest facilities as easily as in elaborate. In other words, additional expenditure on already excellent schools may not be warranted in terms of improved student outcomes. In contrast, the effectiveness of increased expenditure—if concentrated wisely and managed well--will be significantly higher in poor schools, and serve to reach the FSM's national student outcome objectives.
- Although numerous research studies have linked individual inputs with learning outcomes and measure relative impact, educational experts agree--and the literature supports--that multiple interventions (e.g. learning packages, school-based management, teacher training, and testing) that support the school, the teacher and the student will have the greatest impact on student participation and learning outcomes.

ii Objective and Scope

- Supply and deliver in a timely fashion to schools the appropriate student and teacher materials for instruction
- Provide the necessary administrative support the central and in-school levels to facilitate the proper functioning of the school system

iii Description of Activity

- All state DOEs have the following functions represented as part of this activity (i) management and administrative support, (ii) schools supervision elementary and secondary, (iii) evaluation and testing and (iv) special or support services.
- Management and support encompasses the responsibilities for budget and finance, personnel and transportation services. At the state DOE level, many of the directors responsible for these functions lack the appropriate training to assume some of these responsibilities. Most have come via a career path through teaching and then administration and are particularly under-prepared for the tasks related to fiscal management.

- 109 All states have a division for elementary schools and a division for secondary schools. These divisions liase primarily with principals on administrative matters. Problems and issues related to curriculum will be communicated by curriculum specialists through their chiefs to the directors of elementary and secondary education.
- Evaluation and testing is largely concerned with instruction. Evaluation activities are generally limited to the administration of standardised tests in various grades to develop benchmark data on academic success and instructional performance.
- 111 Special or support services are those that normally cannot be classified within the framework of the state DOE organisation. These are typically related to new initiatives or services that don't fit under instructional services or other administrative services.

iv Output Targets and Risks

Target Output	Risks
Maintain inventory of all office equipment	Schools do not complete reports – especially outer islands
Develop annual plan and budget	None
Compile quarterly and annual fiscal reports	Reporting from schools is not timely to meet quarterly target
Compile annual performance report	None
Annual report on student testing and scoring – incl. items analysis	Technical capacity at state and national levels is not strong enough to enable effective analysis
Report on allocation and financing of scholarship Award	None
Efficient supply of all textbooks and other instructional materials for students	Insufficient supply of materials
Efficient supply of teacher guides and other instructional materials for teachers	Insufficient supply of materials
Maintenance of science and computer lab equipment	Technical knowledge of equipment is too weak at schools to identify maintenance needs Insufficient budget

c Activity 3: Development of a school maintenance scheme (SMS) by each state

i Rationale

The condition of school facilities is acutely affected by the absence of any systematic maintenance program. Minimal financial allocations for maintenance and repairs are budgeted for at the state level. The current ad hoc maintenance procedures are unable to address the outstanding needs of schools and are ultimately inequitable and unsustainable. Structured programs for facilities improvement need to be implemented to address the need for maintenance, renovation and construction of new facilities to support quality student instruction.

ii Objective and Scope

- Development of a Facilities Inventory (FI) for the state and school levels to identify current and future maintenance needs
- Development of a School Maintenance Scheme to fund maintenance activities based on matching community contributions

iii Description of Activity

- Facilities Inventory (FI) is developed for the state and school levels to identify current and future maintenance needs
- FI is designed, field tested and finalised for use at state and school levels
- FI Report is compiled identifying current and outstanding maintenance activities. Costings are provided and projections developed for future 5 year maintenance costs. Priority maintenance activities are identified.
- FI Report recommendations and priorities are adopted by state legislature
- FI is updated on annual basis with contributions from the schools and confirmed with state DOE inspections of facilities
- Funding guidelines and operational procedures developed for a School Maintenance Scheme (SMS). SMS will offer grants to schools to fund maintenance activities based on agreed level of community contributions.
- Review of project effectiveness after one year of FI operation
- This activity is being supported by the technical assistance to be provided by the ADB Basic Social Services (BSS) loan. Short term technical assistance will be provided by an international School Maintenance Expert. The activities of the expert are proposed to include the following:
 - Develop Facilities Inventory (FI) for the state and school levels to identify current and future maintenance needs

- Implement the field testing and finalisation of the FI for use at state and school levels
- Design training, and train trainers to implement FI at school level
- Oversee the development of the FI Report at state level identifying current and outstanding maintenance activities. Costings are provided and projections developed for future 5 year maintenance costs. Identify priority maintenance activities.
- Development of guidelines for maintenance and updating of the FI, and for SDOE inspections
- Develop funding guidelines and operational procedures for a School Maintenance Scheme (SMS). SMS will offer grants to schools to fund maintenance activities based on matching community contributions.
- Develop monitoring and evaluation guidelines for the SDOE personnel implementing the SMS

Output Targets and Risks

Target Output	Risks
Facilities Inventory (FI) is developed for the state and school levels FI is designed, field tested and finalised	TA is not forthcoming or delayed
FI Report is compiled identifying current and outstanding maintenance activities.	Outer island schools not properly assessed
FI is updated on annual basis with contributions from the schools and confirmed with state DOE inspections of facilities	Staff turnover Outer island schools not visited
At least 75% of FI targets for mainte- nance activities are accomplished	Targets are set too high Poor community mobilisation in support of targets
Funding guidelines and operational procedures developed for a School Maintenance Scheme (SMS).	TA is not forthcoming or delayed
Initial capitalisation of SMS followed by annual disbursements	Delays at state political level in capitalising the funds
SMS is operationalised and accessed by more than 75% of schools	Community contributions are not provided
Community contributions account for at least 50% of actual maintenance expenditure for school facilities	Community/school organisations are not established Information outreach program explaining the SMS is ineffective

9.3.2 Strategic Goal 2: Improve the quality of teaching in the FSM

a Activity 1: Introduction of a teacher certification system

i Rationale

- Research has shown that the greatest single impact on student learning and achievement is teacher quality. The purpose of the FSM Teacher Certification System is to ensure that all practising teachers possess the necessary knowledge and skills to provide quality instruction. The underlying principle of the FSM Teacher Certification System is that to be effective teachers, a person needs the knowledge of what they are to teach (content), the skills needed to teach effectively (how to) and the desire to teach (want to).
- 115 Can a teacher be a good teacher without having all three components (knowledge, skills and desire)? The answer is complex, but in general a well-qualified teaching will need to process to a high degree all three components. A teacher who has skills and desire but does not process the content knowledge will not be able to provide the full richness of a subject to students. A teacher who has knowledge and desire but no skills will not know how to effectively convey his knowledge to students. A teacher who has knowledge and skills but not desire is likely to be just passing time in the classroom and will have little concern if students learn. Each teacher will have different levels of knowledge, skills and desire. It is the role of a teacher certification system to help ensure that teachers process at least the minimum knowledge, skills and desire to be effective teachers.
- The main standard for entering the teaching profession in the FSM is an AA or AS degree teachers must meet this standard before they teach. In actual practice however, because of shortage of teachers and inconsistent application of this standard, teachers without these degrees are recruited and teaching in schools in the FSM.
- 117 Compounding this problem is the weakness of the selection criteria themselves. Possession of an AA or AS degree does not in itself indicate qualification or ability to teach. Most AA and AS degrees do not include any component related to teaching and there is no screening of potential applicants using other indicators of teaching potential.
- There is justified concern that the current teacher certification system is no longer effective. The current teacher certification system in the FSM is a legacy of the Trust Territory of the Pacific Islands (TTPI) times. It was originally adopted over 30 years ago at a time when few teachers had an education background and there was deemed a need for teachers' skills to be upgraded. At that time there was not COM-FSM and few students were college graduates.

The original plan was for all teachers in the TTPI over a 5-year period to gain AA/AS degrees in education (at the time the program started the training institutes only provided degrees in education). At the end of the original 5-year period the program was extended and has continued to be extended ever since. The assumption that all teachers could obtain an AA/AS degree in a 5-year period was wrong. Even today we still have a substantial percent of teachers (~30%) who do not process an AA/AS degree.

ii Objective and Scope

- Develop a new teacher certification system that:
 - provides recognition for the key required competencies of teaching
 - establishes the requirements for a training system to provide the appropriate pre-service training for new recruits and in-service training for current teachers that do not meet the current requirements.

iii Description of Activity

121 The revised FSM Teacher Certification System is to be based on three components: Content competency, Teaching competency and Academic background.

iv Content Competency Component

- To be certified all public and non-public school teachers from preschool through grade 12 must pass the FSM National Standardized Test for Teachers (NSTT).
- All new teachers wishing to teach in the FSM School System must pass the FSM National Standardized Test for Teachers (NSTT) prior to beginning teaching.
- To continue teaching existing teachers must pass the FSM National Standardized Test for Teachers (NSTT) within three (3) years of the effective date of these regulations.

v Academic Component

- To be certified all public and non-public school teachers from preschool through grade 12 must possess an AA/AS degree or equivalent from an accredited Institute of Higher Education.
- All new teachers wishing to teach in the FSM School System must possess a AA/AS degree or equivalent from an accredited Institute of Higher Education prior to beginning teaching.

To continue teaching existing teachers must possess an AA/AS degree or equivalent by October 1, 2007.

vi Teaching Competencies Component

- To be certified all public and non-public school teachers from preschool through grade 12 must pass a written examination for teaching competencies and satisfactorily demonstrate use of core teaching competencies through actual classroom observation (s).
- All new teachers wishing to teach in the FSM School System must pass the written examination for teaching competencies prior to teaching in the FSM School System and within 1 year satisfactorily demonstrate use of core teaching competencies through actual classroom observation (s).
- To continue teaching existing teachers must pass the written examination for teaching competencies and satisfactorily demonstrate use of core teaching competencies through actual classroom observation (s) within three (3) years of the effective date of these regulations.

vii Types of Teacher Certification

Teacher certification in the Federated States of Micronesia will be of six (6) types.

viii Provisional Certificate

A three (3) year non renewal provisional teaching certificate may be issued upon request of the respective State Director in situations where no qualified teachers are available.

ix Basic Certification

- A Basic certificate is issued for a three (3) year period. To be issued a basic certificate an individual must:
 - Pass the FSM National Standardized Test for Teachers (NSTT).
 - Pass a written examination for teaching competencies and satisfactorily demonstrate use of core teaching in the classroom through observation
 - Possess an AA/AS degree or equivalent from an accredited Institute of Higher Education.

x Intermediate Certification

- An intermediate certificate is issued for a four (4) year period. To be issued an intermediate certificate an individual must:
 - Pass the FSM National Standardized Test for Teachers (NSTT).

- Pass a written examination for teaching competencies and satisfactorily demonstrate use of core teaching in the classroom through observation
- Possesses a BA/BS degree, or AA/AS degree plus 21 credits in education
- A person holding a basic certificate does not have to retake FSM National Standardized Test for Teachers (NSTT) or the written examination for teaching competencies to obtain an intermediate certificate.
- A person holding a basic certificate is still required to satisfactorily demonstrate use of core teaching in the classroom through observation to obtain an intermediate certificate.

xi Advanced Certification

An advanced certificate is issued for a five (5) year period. To be issued an advanced certificate an individual must:

- Pass the FSM National Standardized Test for Teachers (NSTT).
- Pass a written examination for teaching competencies and satisfactorily demonstrate use of core teaching
- Possess an MA/MS degree, BA/BS in Education, or BA/BS degree plus 30 credits in education course work. Advanced certificates are issued for a period of five (5) years.
- A person holding an intermediate certificate does not have to retake FSM National Standardized Test for Teachers (NSTT) or the written examination for teaching competencies to obtain an advanced certificate.
- A person holding a intermediate certificate is still required to satisfactorily demonstrate use of core teaching in the classroom through observation to obtain an advanced certificate.

xii Master Level Certification

136 A master certificate is permanent. To be issued a master certificate an individual must:

- Pass the FSM National Standardized Test for Teachers (NSTT).
- Pass a written examination for teaching competencies and satisfactorily demonstrate use of core teaching
- Possess an MA/MS degree plus 21 hours of education course work, BA/BS in Education plus 21 hours of content area course work, or BA/BS degree plus 45 credits in education course work.

- A person holding an advanced certificate does not have to retake FSM National Standardized Test for Teachers (NSTT) or the written examination for teaching competencies to obtain a master level certificate.
- A person holding an advanced certificate is still required to satisfactorily demonstrate use of core teaching in the classroom through observation to obtain a master level certificate.

xiii Traditional Knowledge/Skills Certification

137 Upon the recommendation of the Director, the Secretary may grant a Traditional Knowledge/Skills Certificate to any individual who, because of unique knowledge and experience in traditions, history, cultures and traditional technologies of the FSM is especially qualified to teach those traditions, history, cultures and traditional technologies. A person under this category may be so qualified regardless of whether he or she possesses academic credentials. A Traditional Knowledge/Skills Certificate shall be valid for such duration as the Secretary, in consultation with the Director, determines in each case, provided that such a certificate shall be valid for no more than three years.

xiv Endorsements

Special endorsements may be added to the FSM Teacher Certification System. The National Division of Education will maintain a listing of endorsements and requirements for the endorsements. Endorsements may only be awarded to individuals who hold a valid FSM Teaching Certificate.

xv Validity of Existing Certificates

All existing teachers will be awarded Provisional Certificates on the effective date of this regulation. Teachers will be required to provide official college transcripts within 6 months of the effective date of the regulations. The NDOE and/or State will evaluate the transcript and determine the academic background for certification purposes within one year of the effective date of the regulations. Each individual teacher is responsible to provide the proper documents such as degree, official college transcript etc. for certification.

xvi Output Targets and Risks

Target Output	Risks
Finalisation of new regulations for teacher certification	Lack of state agreement
Guidelines for implementing the new certification requirements issued by NDOE	None

Target Output	Risks
Certification testing system for teachers put in place	Resistance from teacher lobby groups
State policies and guidelines developed for administering the new system – including sanctions and incentives	Resistance from teacher lobby groups Ineffective incentives put in place Inability to propose sanctions
Training for in-service teachers to be provided – administrative arrangements (leave and replacement teachers where needed) and training provision	Some older teachers may not be pre- pared to undergo further training Training cannot be provided at the right times Teachers do not benefit from the training
Transitional policies established for teachers not meeting requirements	Some older teachers may not be pre- pared to undergo further training

b Activity 2: Develop action guides for teachers based on curriculum frameworks for core subject areas

i Rationale

Many teachers have no pedagogical or subject area training and are provided little guidance in terms of curriculum delivery in the classroom. The provision of action guides that can be used by teachers with little or no training will assist in the delivery of the curriculum to all students. Resources to assist curriculum delivery will also improve the quality of education delivery.

ii Objective and Scope

- 141 The objective of the project activity will be:
 - To translate the current curriculum frameworks into clear action guides for teachers in classrooms and into learning experiences for students

iii Description of Activities

- Review of teacher needs in terms of action guides for curriculum delivery
- Overall plan developed for implementing curriculum frameworks into clear action guides for teachers in the classroom
- Establish a Curriculum Working Party (CWP) comprised of curriculum specialists and experienced teachers at the state levels to develop action guides from curriculum frameworks
- Resource materials tested in classroom settings
- Refinement of action guides by CWP
- Joint workshops convened with teachers and principals for training in the use of the action guides

482 FSM Strategic Development Plan

• Review of usage of action guides after one year of operation

iv Output Targets and Risks

Target Output	Risks
Overall plan developed for implementing curriculum frameworks into clear action guides for teachers in the classroom	Weak understanding of what are clear action guides Teachers of highly variable competencies make guides difficult to standardise
Resource materials tested in classroom settings	Insufficient testing at outer island set- tings Weak feedback from piloting teachers
Joint workshops convened with teachers and principals for traini	Schools do not participate
Refinement and modification of resource materials into teaching guides for core subject curriculum frameworks	Technical assistance is available to assist in the process
Curriculum guides published and distributed to 100% of elementary schools	Distribution by principals to teachers takes place Outer island schools receive their share Guides are looked after and utilised by teachers
Evaluation of new resources after one year of implementation	Consistent evaluation is undertaken across states

c Activity 3: Introduce performance oriented employment conditions for teachers

i Rationale

The management and administrative systems of education need to be reviewed to deal with internal inefficiencies. The problem of low teacher motivation and morale has detrimental effects on the quality of education. Persistent absenteeism and inadequate classroom management and teaching performance can be addressed through the introduction of performance based employment conditions for teachers.

ii Objective and Scope

- The objectives of the project activities will be:
 - To reform the existing administrative framework and procedures governing the employment conditions of teachers
 - To provide incentives for teachers to perform to the best of their ability

 To put in place monitoring mechanisms and sanctions for teachers who are not performing their duties

iii Description of Activity

- This activity has begun to be initiated in Kosrae and Pohnpei states. The initial steps taken in both states have generated considerable controversy within and outside the education community. In both cases, the preferred orientation of the administrations has been to move towards performance based contracts. This is the strongest form of performance based employment structure as it exposes employees to the harshest possible sanctions.
- The effective implementation of policies in relation to the terms of service of teachers will need to pay careful attention to the various possible interventions that strike the appropriate balance between sanctions and incentives. Tasks related to this activity include the following:
 - Review the existing legal and administrative framework and procedures governing the employment conditions of teachers
 - Initiate a public policy dialogue between state DOEs, teachers the legislature and community members on the issues surrounding employment of teachers and performance
 - Prepare state based reports reviewing the current employment conditions of teachers.
 - Provide detailed recommendations for legislative and administrative reform that will introduce performance oriented employment conditions for teachers
 - Undertake public consultations to harness and maximise public and political support for proposed reforms
 - Provide training to state DOE staff for the implementation of new legislation and administrative procedures concerning employment conditions
 - Review the impact of the new employment conditions for teachers on absenteeism and other identified problems after one year of operation.

iv Output Targets and Risks

Output Target	Risks
State legislature enacts legislation providing performance oriented incentives and employment conditions for teachers	Lack of consultation with teacher representatives Initiative is politicised by non education factors Focus of change is skewed towards

484

Output Target	Risks
	sanctions and little on incentives
Changes in the regulations and administrative procedures for the recruitment and employment of teachers are introduced	Weak drafting of regulations under- mines the intent of the changes Lack of consultation with teacher rep- resentatives
School performance reports on teachers submitted by 100% of schools	Principals do not co-operate with the new procedures System is abused by principals to target teachers for non-performance related reasons
State-wide annual teacher attendance improves by at least 25% on last year of pre-reform period	Lack of consultation with teacher representatives provokes absenteeism
Training provided to state DOE staff for the implementation of the new legislation, regulations and procedures	None

This activity is being supported by the technical assistance to be provided by the ADB Basic Social Services (BSS) loan. Extensive short term technical assistance are intended to be provided by an international Education Human Resource Expert. The activities of the expert are proposed to include the following:

- Review the existing legal and administrative framework and procedures governing the employment conditions of teachers
- Work with state based working parties to open a public policy dialogue between state DOEs, teachers, the legislature and community members on the issues surrounding employment of teachers and performance
- Assist the state working parties prepare state based reports reviewing the current employment conditions of teachers.
- Provide technical advice and support to enable detailed recommendations for legislative and administrative reform that will introduce performance oriented employment conditions for teachers
- Liase with the Offices of the State and National Attorney General to ensure a viable legal position for the introduction of performance oriented employment conditions of teachers
- Draft the personnel procedures and guidelines for each state to operationalised the performance based employment conditions for teachers
- Provide training to state DOE staff for the implementation of new legislation and administrative procedures concerning employment conditions

9.3.3 Strategic Goal 3: Consolidate performance monitoring and data based decision making system

- 147 The objectives of the activities will be:
 - To develop a school based performance monitoring education management information system that is applied nationally, and is understood by the community, schools and SDOEs
- To establish data based decision making processes from the school to national levels of education administration
 - a Activity 1: Review and consolidate existing state, and national efforts for the establishment of education management information systems
 - i Rationale
- 149 For an education system to be effective, it requires planning, monitoring and evaluation, and education management information (EMIS) systems to be in place and functioning in order to target, track and assess the many ingredients that compose quality education and effective schools.
- 150 Educational planning is--at base--directing appropriate resources to appropriate targets to accomplish the stated government goals and strategy. Good planning requires accurate and timely information, correct allocative guidelines, and regular analysis of problems and progress. As is evident from earlier studies commissioned by the Asian Development Bank, adequate planning mechanisms and methods, as well as related systems of data collection and collation, are not in place across the states.
- Analysis of the current EMIS system shows that it suffers several short-comings:
 - Data quality and accuracy: Inconsistent methods for data collection and calculation are employed, with no means of error checking or validation. There is no consistent data collection instrument, and existing instruments may neglect important areas of information, such as school physical and material inventories, school quality attributes.
 - Fragmented databases: There is no one data-base that consolidates most of the information needed to analyze the education system.
 - IT equipment: There is unequal local education office access to IT equipment and trained human resources to prepare material in forms accessible to decision makers.
- In short, there is a diversity of education management information systems across the states making it difficult at present to collect and analyse data at

a central level. A synthesis of the existing approaches will result in an integrated data base for the FSM that will enable policy makers to (I) monitor and compare progress, and (ii) better diagnose weaknesses.

ii Objectives and Scope

A synthesis of the existing approaches will result in an integrated data base for the FSM that will enable policy makers to

- monitor and compare progress
- better diagnose weaknesses.

iii Description of Activity

- Review and consolidate existing state, national and regional efforts for the establishment of education management information systems – including the data base design undertaken by PREL
- Work with schools and state administrations to identify key educational performance indicators that are relevant and understandable at the school/community level
- Design and field test a school based performance monitoring system.
- Develop a decision-making system based on the school performance monitoring system
- Provide information, technical support and customised software to operationalize the performance monitoring and decision-making system
- Undertake training of state education personnel, school staff and selected community members on the implementation of the data based decision making system
- Provide technical input for the compilation of the first annual state and national performance monitoring reports

iv Output Targets and Risks

Output Target	Risks
National review of education management information systems	Delays due to other priorities
Finalise a school based performance monitoring system	IT compatability issues are not resolved Failure to get state and national agreement on format and analysis
Complete training of SDOE personnel, school staff and selected community members	Staff turnover

Output Target	Risks
Produce annual state and national performance monitoring reports	State tensions over comparability of data Delays by some states delay the produc- tion of national report

b Activity 2: Introduction of a school accreditation system

i Rationale

- Severe under-resourcing of schooling results in a poor quality, nonsupportive educational environment, in which adverse conditions—physical, material and human—are detrimental to student learning, teacher motivation and performance, and parental satisfaction and demand for schooling. In FSM schools (as in other developing countries) instruction often takes place in dark and inadequate classrooms that typically provide inadequate shelter and little possibility for student-centred learning.
- The stock of instructional materials is in short supply in many schools, but most acute on the outer islands. The policy of apportioning learning materials (e.g. libraries) and instructional aids to main island schools means that it is unlikely—if not impossible—for outer island school sites to access and borrow these materials on a timely or flexible basis, given both competing needs and geographic distances. Moreover, household poverty diminishes the chance that students in these campuses will have the textbooks and school supplies to overcome the material-deficient classroom.
- 156 Compounding general deficiencies in instructional materials, the schools on outer islands do not attract the more highly qualified and experienced teachers.

ii Description of Activity

- 157 A minimum school quality level as required by accreditation criteria sets a floor or minimum set of attributes that a school must achieve within a short time frame, as a benchmark of its progress toward attaining optimal standards. Fundamental quality level criteria can be used to guide resource allocation within the schooling system over the short term so that quality improvements can be systematically targeted at the poorest and most disadvantaged schools.
- The states and national DOE will work together to elaborate the framework conditions and appropriate indicators that will be used to apply school accreditation policy. An initial workshop convened by the national DOE has identified a preliminary list of conditions to be considered for adoption.
 - School be in active operation

- Developed statement of purpose
- Management system in place with description of duties and responsibilities
- Chief administrative officer is qualified as a school administrator
- School plan includes clear objectives for student learning and assessment plans to measure progress
- Acceptable admissions policy
- Qualified instructional staff
- Plans to provide extra-curricular activities
- Viable funding base

iii Output Targets and Risks

Output Target	Risks
Agreed national accreditation standards	Failure to reach consensus Standards are unrealistic
Implementation framework adopted	Failure to reach consensus
Accreditation standards applied to all schools in FSM consistently and fairly	Different state contexts are not adequately catered for in the standards
Guidance provided to schools not meeting standards	DOE officers cannot provide suitable advice
Targeted assistance made available to schools to assist them meet the standards	Outer island schools remain off the accreditation radar
Annual and national state reports produced on the accreditation status of all schools – including report on improvements required	Political concerns delay the release of reports

9.3.4 Strategic Goal 4: Strengthen participation and accountability of the education system to communities

a Activity 1: School funds to be managed with participation of the community

i Rationale

159 Parental and community participation in schooling is a fundamental part of any effective learning system. There needs to be an increased involvement of communities and other broader social structures in the education process in the FSM. All state education systems are attempting to promote greater community participation in schooling. The variability in community structures across and

within states demands a variety of strategies be employed for integrating communities and the schooling process. Various models of community participation are presently being trialed throughout the FSM and it will be important to monitor their achievements and possible extension to other sites.

Improved partnerships between schools and communities will lead to a more effective educational system and greater support (economic and moral) for local schools. These strategies offer the potential to both help improve the quality of education and to help reduce the cost to government of education.

ii Objective and Scope

- The objectives of the activities will be:
 - To develop a regulatory framework to enable community participation in the management of schools and school based funds
 - To train school personnel and community members in school management procedures.

iii Description of Activities

- Draft legislation to enable school funds to be established and managed with participation of the community and to enable community input into the selection of principals
- Regulations developed to provide guidelines on the operation and management of school funds
- Design and delivery of training for schools and communities on the establishment, operation and use of school based funds and selection of principals
- Establishment of school funds using guidelines on operation and management
- Review of community involvement in school management after one and two years of operation
- This activity is being supported by the technical assistance to be provided by the ADB Basic Social Services (BSS) loan. Extensive short term technical assistance are intended to be provided by an international Community Participation expert. The activities of the expert are proposed to include the following:
 - Undertake community consultation across all states to assess community motivation for school participation

- Prepare detailed plan for development of community participation in management of school funds and selection of principals
- Undertake consultation with church and NGOs on community participation in education institutions
- Assist SDOE with the development of community mobilisation campaign to precede establishment of community participation mechanism
- Draft legislation to enable school funds to be established and managed with participation of the community and to enable community input into the selection of principals
- Develop regulations to provide guidelines on the operation and management of school funds
- Design and delivery of training for schools and communities on the establishment, operation and use of school based funds and selection of principals
- Develop monitoring system to assess community participation

iv Output Targets and Risks

Output Target	Risks
Legislation adopted	Not all states proceed with the activity
Regulations put in place and operationalised	Delays between legislation being passed and regulations being developed Inconsistency between legislation and regulations
Completion of training for at least 50% of schools and communities	Training is not well organised
School based funds established and operating in at least 50% of schools	Too few schools and communities show interest in the activity
State reports on performance of education system document the existence and operations of school based funds	None

b Activity 2: Community input into selection of principals

i Rationale

School leadership is one of the key factors determining the success of any school at the elementary or secondary levels. This applies most strongly for a country such as the FSM where schools can be in remote locations far from the oversight of the central administration. The teachers of such a school are likely to be inexperienced and have had little or no experience with an education sys-

tem that is performing well. Under such circumstances, the role of the principal becomes more critical to the success of the school. The community has an important role to play in selecting a principal to ensure that he or she is compatible with that community and that they enjoy its support. The commitment of the principal to the school and the community is likely to be enhanced if that community has had a role in their selection.

ii Description of Activity

The objectives of the activities will be:

• To develop a regulatory framework to enable community participation in the selection of school principals

iii Description of Activities

- Draft legislation to enable community input into the selection of principals
- Design and delivery of training for schools on the selection of principals
- Review of community involvement in school management after one and two years of operation

This activity is being supported by the technical assistance to be provided by the ADB Basic Social Services (BSS) loan. Extensive short term technical assistance are intended to be provided by an international Community Participation expert as listed in the previous activity.

iv Output Targets and Risks

Output Target	Risks
Legislation adopted	Not all states proceed with the activity
Regulations put in place and operationalised	Delays between legislation being passed and regulations being developed Inconsistency between legislation and regulations
Completion of training for at least 50% of schools and communities	Training is not well organised
Adoption of regulations to enable community input into the selection of principals	
100% of all new principal appointments incorporate community input into selection process	

c Activity 3: Annual state competition recognising excellence in educational performance of students, schools, teachers and communities

i Rationale

There is very little public recognition of those outstanding efforts of students, teachers, schools and communities within the education system. One important potential motivating force in education is the public recognition that individuals, institutions and communities can receive for their special efforts. The current detachment of many communities from the public education system needs to be addressed so that the partnerships between schools and communities can be strengthened for the benefit of all FSM students.

ii Objectives and Scope

- Establish and fund high profile annual state academic competitions
- Institute a community information campaign to publicise the competition and the value of public education

iii Description of Activities

- SDOE to establish academic competition committee
- High profile political and community representatives to endorse the competition and publicise its importance to their constituencies
- Competition designed to incorporate a recognition of diverse achievements of students, teachers, schools and communities
- Presentation ceremonies and awards designed to incorporate traditional aspects marking recognition and achievement within each of the states.
 For example, issuing of special stone money awards in Yap
- Annual state presentation ceremonies to be widely publicised and broadcast with electronic media

iv Output Targets and Risks

Output Target	Risks
100% participation of all public schools in the academic competition	Outer island schools find it difficult to participate
Improvement on state performance in the National Standardised Tests for core subjects	Improvements are produced for top range students and mean performance is not substantially improved
Academic competition is established as a maior cultural/community event of	Weak schools disengage from the process

Output Target	Risks
the social calendar	Political intervention undermines the credibility of the competitions

9.3.5 Strategic Goal 5: Education is relevant to the life and aspirations of the FSM people

a Activity 1: Continue to develop FSM career and technical education programs in schools

i Rationale

It is important that students be provided with practical information regarding potential employment opportunities both within and outside the FSM. Career education programs need to be designed and implemented in schools that focus on the aspirations of children, the need for economic growth and those opportunities that are realistically present for youth.

ii Objectives

- Offer career programs that assist secondary students to transition smoothly to further education and/or employment
- Provide technical education alternatives to academic subjects in schools to help retain students in the system and to provide possible pathways for them to move into paid employment or post-secondary technical training

iii Description of Activities

Career counselling is provided at the secondary level by a number of inschool and out of school staff. Career awareness programs are provided from years 9-12 for all students. Job fairs are organised where the school organises meetings with employers on the island and they have a chance to explain their requirements. On the job training is provided for selected students in partnership with employers and other vocational programs such WIA and T-3 programs. All of these initiatives are highly dependent on access to U.S. federal grant money.

The introduction of vocational education within the secondary system is aimed at giving graduates the skills to be employed in a wide range of occupations outside of the public sector. Yap high school has been one of the most innovative and pioneering in its expansion into vocational education and training. It offers courses in business, construction, auto mechanics, agriculture and home economics. There have been some creative attempts to apply the skills learnt in the courses and to generate income for the school from the vocational courses. The agriculture program sells produce at the local market to generate income. The courses are run for a short time (1-2 years) on private land and the land is

then returned to the private owner for their use. The agricultural course helps in a limited way to disseminate new agricultural techniques and practices to the community. The construction program is designing and building the new dormitory space for teachers. The home economics course has assumed responsibility for the school canteen.

- The other state public schools are not as advanced as yap in the provision of technical education. All high schools suffered from similar problems implementing their vocational education curricula. These include; (i) inadequate and insufficient facilities and materials to effectively provide instruction, (ii) lack of labour market information and feedback systems to allow the schools to specifically tailor the courses to meet market need, (iii) no tracer studies of students to measure the effectiveness of the vocational education courses.
- Labour market information needs to be collected to better understand the job market and the kind of training that needs to be provided. The labour market information system needs to be simple in design so that it can be operated at little cost but can actually measure the opportunities and constraints for labour across the islands.

iv	Output	Targets	and	Risks

Output Target	Risks
Labour market information system established with annual updates, by 200?	Inadequate and insufficient facilities and materials to effectively provide instruction Lack of labour market information and feedback systems to allow the schools to specifically tailor the courses to meet market need No tracer studies of students to measure the effectiveness of the vocational education courses.
Secondary students receiving career education information	
Secondary students participating in technical education courses	

b Activity 2: Provide vocational training and general education to out of school youths and adults

i Rationale

172 The pursuit of education as a life long activity can be enhanced through the more effective coordination and delivery of formal and informal education and skill training programs. Particularly important is the linking of programs for out of school youth and the secondary, post-secondary and adult education systems. Pathways need to be provided so that young people who exit the education system early, can effectively re-enter at a later point in their working lives. The design of such courses for out of school youth needs to be properly articulated with the basic education system and be recognized by the post-secondary and vocational education systems.

173 Objectives

- Provide pathways for youth who do not complete their schooling to benefit from formal education at a later stage in their life
- To provide vocational training and life-skills to youth and young adults that can improve their earning capacity and quality of life

ii Description of Activity

174 Efforts in vocational training have been largely driven by the National Trades, Training and Testing Program (T-3), the Workplace Investment Act (WIA) – formerly the JTPA programs and the classes provided by the COM state campuses.

The stated objectives of the T-3 program are:

- To upgrade the skills of existing tradesmen
- To train high school children and those not reaching high school so they may find employment in the FSM or abroad
- To provide short term training for quick job placement
- To work cooperatively with the JTPA and COM to provide quality vocational training

The T-3 programs have been active in promoting trades related to electricity, mechanics and construction. The programs are geared towards interested individuals form both government and private sectors. The program provides training at three levels; (I) basic training for 3-4 months, (2) intermediate level for 4 months, (3) advance level for 1 month. Subsequent to passing the advance level, the student is classified as a journeyman.

177 The WIA programs cover three target groups (I) younger youth (14-18 years old), (ii) older youth (19-21 years old), and (iii) adult and dislocated workers. WEI structures its services into three categories.

178 Core services relate adult and dislocated workers and involve job development activities, job clubs, job referrals, counselling, and job search activities. Intensive services provide case management for individuals, group counselling, employment experience, short term pre-vocational services and internships.

496 FSM Strategic Development Plan

Training is the final step and includes adult education programs, occupational skills, on the job training, and entrepreneurial training.

iii Output Targets and Risks

Output Target	Risks	
Youth receiving work related training	Training is of a poor quality Support services are not relevant to the FSM context	
Youth receiving support services		
Adults receiving work related training		
Adults receiving support services		
Tradesepeople qualified to a journey- man standard	Qualified trainees go off island to seek employment Training delivered does not match the priority skill needs of the FSM	

c Activity 3: COM to provide continuing education to local businesses, government and the community at large

i Rationale

All the COM campuses need to play their role in providing education that meets the needs local business, governments and individuals. Such courses need to include a mix of short courses that are non-academic in nature and geared to very specific training needs of the workplace or community setting.

ii Objectives

- Produce job ready and competent graduates from vocational programs
- Provide graduates that meet the skill needs of local businesses and government

iii Description of Activity

- 180 Chuuk COM sees vocational education as an emerging priority. It remains limited in its capacity to spread into this field given the lack of space and facilities it has for academic courses. Some vocational education in the broadest sense is provided through its book keeping and accounting course. It offers GED preparation for high school drop-outs and an intensive English/Mathematics programs. Chuuk COM runs an upward bound program serving 60 students annually in co-operation with Chuuk High School.
- The outstanding achievement of the Pohnpei campus is in providing short term courses targeting the needs of local business. Pohnpei COM has been very active in moving towards providing vocational education and training. It has worked hard at establishing links with national and state public departments

and authorities so that it can meet their training needs. It provides flexible course delivery and has supplied specifically designed training to Telecom, Pohnpei Dept of Education, and a number of embassies. It has also helped provide apprenticeship standard courses (in plumbing, auto mechanics and electricians) for the Power Company of Pohnpei. It is continuing to be approached by other public and private sector entities seeking in-service training for their employees. The campus offers certificate courses in vocational education – specifically in electronics, construction electricity and carpentry.

- 182 Kosrae campus offers GED preparation for high school drop-outs and an intensive English/Mathematics programs. Kosrae has traditionally had the least emphasis of any of the COM campuses for vocational education type programs. It is now planning to provide vocational programs in agriculture and carpentry.
- 183 Yap campus provides an Intensive English Language Program (IEP) that is very popular. Many of the students use the campus to pursue preparatory courses before transferring to the national campus in Pohnpei. Yap COM management is targeting vocational education for increased attention. It offers GED preparation for high school drop-outs and an intensive English/Mathematics programs. It will continue to stay active in offering business related courses to support the Yap Business Incubator Program. It has also provided computer training to Telecom staff and is looking at establishing relationships with the private sector.

d Activity 4: COM to develop and deliver degree programs and certificates

i Rationale

All COM campuses (but the FSM campus in particular) will continue to seek improvements in the quality of their academic program. The prestige of its flagship academic courses will help to further the reputation of the institution and generate future demand.

ii Objectives

- To develop and deliver degree program and certificates to prepare students for the job market
- To develop and deliver degree program and certificates to prepare students for transfer to institutions of higher learning

iii Description of Activity

185 The COM-FSM national campus is focusing on delivering an academic program. It is concentrating efforts on improving the quality of its graduates and

is moving towards three year and four year programs leading to Bachelor degrees. This is currently possible through an MOU with the University of Guam.

- The Pohnpei campus is located on the site formerly used by the national campus in Kolonia. In some ways it is used as a preparatory institution by the students before progressing to the large campus.
- 187 Chuuk campus offers a two year Degree program leading to an AA or AS degree in Elementary Education. This degree is taken as a pre-service course as well as in-service by a smaller number of enrollees. In-service training is provided during the summer break or through normal classes where teachers have been granted leave to undertake training. Chuuk also offers a third year program for principals and teachers in cooperation with the Chuuk State Leadership Academy (CSLA). The CSLA has been established by the Board of Education and the SDOE to provide further training for principals and teachers earmarked for principal positions. The CSLA selects the teachers and makes arrangements with the SDOE to arrange leave for the trainees.
- 188 Yap has the smallest of the COM campuses and offers degree programs in Elementary Education and Early Childhood Studies. The remainder of courses offered by the campus are either certificate or non-credit courses
- 189 Kosrae offers an associate degree program teacher education (elementary level) and all other course offerings certificate of achievement programs in general studies or vocational programs outlined above.

10 Gender

10.1 Gender Sector Review

- 1 The Chapter on Gender covers a wide range of social programs currently administered under the FSM Department of Health, Education and Social Affairs (HESA). Section 1.1 begins with a review of progress made by the FSM Gender Development (GD) programs in the FSM from the period 1992 –2003, with particular emphasis on implementation of the FSM Gender Policy Matrix (GPM) adopted at the 2nd FSM Economic Summit in 1999. Section 1.2 describes current issues and existing constraints impeding effective and efficient operation and programming. Section 1.3 looks at capacity building and institutional strengthening priorities, particularly in the areas of gender mainstreaming, trade, trade facilitation, policy advocacy, taxation, and small micro-enterprise development (SMEs). Section 1.4 outlines prevailing conditions that discourage women from seeking leadership position and offer alternative means to improving women's chances of getting into elective office. Section 1.5 examines the efficiency of the judicial, legal, and political systems in addressing and protecting human rights, especially women's and children's human rights. Sections 1.6 and 1.7 focus on youth affairs, with particular attention paid to maximizing youth participation in national and state development processes. Section 1.8 gives a general view of the status of the elderly. This section also proposes constructive measures for the provision of social benefits and protection for the FSM elderly population. Section 1.9 addresses the special needs of disabled persons and persons with special needs.
- Section 2 describes enabling environments, policy considerations and key institutional measures recommended for improving and strengthening gender development and mainstreaming capacities of women, youth, the elderly and persons with disabilities and special needs. Section 3 presents the gender strategic policy matrix (GSPM) envisage to guide and assist implementation of the outcome of the 3rd FSM National Economic Summit's gender strategic plan (GSP). Section 4 establishes linkages between the GSPM and the overall FSM infrastructure development plan (IDP).
- 3 The Concluding Section summarizes critical issues and highlights recommendations that warrant immediate decision-making and implementation.

10.1.1 Description of Gender Development and Recent Performance

a Women and Development

4 The FSM Gender and Development (GAD) program started out as a nationally based regional women's "communication exchange and information clearinghouse" project in 1992. The project hired a national women informa-

tion officer (NWIO) to execute the project and helped established the 1st FSM National Women's Advisory Council (NWAC) to oversee implementation of the project in FSM and to provide supervision for the NWIO. That same year, the women leaders met formally for the first time at the inaugural 1st FSM Women's Conference held in Pohnpei, FSM. To date, FSM Women's Leaders have met five time, with the recent FSM Women's Conference held in Yap, FSM in 1999.

5 In 1993, FSM institutionalized the operation and renamed its project

Table 1: Comparative Operation Performance, FSM Gender Affairs, 1992-2004

	2004					
States	Official Name	Year Est.	Budge t	Staff	Operation	Mandate
Chuuk	Women's Affairs SAG- Women's Affairs	1997	1999 - 2004	01	Space Sal- ary/Wage s	 Coordinate Women's Affairs Advisory
Kosrae	Women's Interest WIO	1995	1999- 2004	01	Space Sal- ary/Wage s	Coordinate Women's Affairs Advisory
Pohnpe i	Women's Interest WIO	1994	1999- 2004	01	Space Sal- ary/Wage s	1. Coordinate Women's Affairs 2. Advisory
Yap	Women's Interest WIO	2003	2003- 2004 10,000	01	Space Sal- ary/Wage s	1. Find Funds 2. Relocate YWA 3. Build Train-
FSM	Women's Interests	1992	1999- 2004	01	Space Sal- ary/Wage	ing halls 4. Advisory 1. Promotes Women's Affairs
	Women's Development Program	1998- 2004			s Budget	 Information Dissemination Women's Focal Point Advisory

officer, National Women's Interests Officer (NWIO) and the operation, Women's Interests Desk. The objectives for the Women's Interests Desk were "information dissemination" and "coordination" of women's activities and programs. Achievements of this period included a draft Women's Policy and Policy Framework and the NWAC Constitution. The NWAC Constitution established as one of its primary objectives the "promotion of women's cultural, economic, legal, political, religious and social development". These have not been reflected in the mission and development objectives of the women's programs. The Women's Interests Desk was upgraded to a Women and Development Unit in 1998 and recently renamed the Women's Development Program. The Department of HESA continued to host the women's development initiative since its inception in 1992.

While these positive developments are encouraging, the women's programs continue to suffer from lack of institutional capacity to effectively advocate, promote and support women's development programs. This weakness stems from many factors but primarily due to two factors: absence of an official gender policy and strategic development framework and inadequate, insufficient levels of core operation budgets. Table 1 below provides comparative performance data on women's programs from 1999 – 2004.

b Policy Developments since the 2nd FSM Economic Summit

- At the 2nd FSM Economic Summit in 1999, women leaders introduced a gender policy matrix (GPM) that proposed to broaden opportunities and create spaces for women's participation in national development and governance. The GPM focused actions on the following policy elements:
 - Address the under-representation of women in decision-making
 - Enhance the human resources of the nation by ensuring the full participation of women
 - Ensure women's access to capital
 - Protect women's property rights
 - Address discrepancies in compensations
- 8 The strategies adopted to guide decision-making and to execute the GPM are outlined under each of the policy elements.
- 9 Policy Element 1: Address the under-representation of women in decision-making
- Proposed activities to be implemented to achieve policy element 1 included:

- Establishing cabinet-level women's offices at both national and state levels
- Adopting national and state policy to include women on all decisionmaking bodies
- Encouraging women to run for political offices
- Policy Element 2: Enhance the human resources of the nation by ensuring the full participation of women
- The activities to be pursued included:
 - Addressing the issue of reproductive responsibilities
 - Enhancing the career development of young women
 - Passing legislation to make both parents legally responsible for the rearing and financial support of all children
- Policy Element 3: Ensure women's access to capital
- 14 The Gender Committee identified two critical areas which women felt were needed. They included:
 - Making sure the national wealth is well-spent
 - Providing technical and marketing assistance
- Policy Element 4: Protect women's property rights
- The Gender Committee acknowledged that women were more disadvantaged when it came to marital property rights. Prevailing social norms granted men property rights, including rights to raise children in paternal homes even in situations where the women is the primary financial provider. One major activity the Gender Committee wanted to see adopted was:
 - Ensuring that the law adequately protects women's property rights
- 17 Policy Element 5: Address discrepancies in compensations
- 18 The issue on "equal pay for equal work of equal value" was seen as a major employment deterrent for working women. Women testified that men paid more for the same work did than women. One activity women recommended to see acted upon was:
 - Avoiding gender-based discrepancies in compensation
- 19 Implementation Status

- Almost six years later, most of the GPM elements, strategies and activities remained un-implemented. Women's affairs and development activities remained ad hoc, low key, and for most of 1999 to 2001, dormant. During this period, FSM lost two of its first proactive gender advocates and leaders. The National Women's Advisory Council was also silent. In 2002, a new NWIO was hired to take over the responsibilities for Women's Affairs and to reactivate gender-mainstreaming activities for the nation.
- On the positive side, Chuuk State passed a gender resolution at its First State Leadership Conference in 2000. The resolution recognized women's positive contribution to family life. Kosrae State enacted its maternity/paternity legislation in 2000. The Government of Yap hired its first Women's Interest Officer in January 2003. A major victory was achieved in October 2003 when the FSM Congress ratified the "Convention on the Elimination of All Forms of Discrimination Against Women" (CEDAW) at its 11th Regular Session. This important milestone signified a new beginning for the FSM women, particularly in relation to women's human rights and the judicial and legal systems.

c Gender and Macroeconomic Policy

- FSM macroeconomic policy is primarily directed towards sustaining economic development and achieving economic growth and self-reliance for the Federation. Resources, both human and financial are heavily invested in these areas. These are reflected in plans and in allocation of resources, both domestically generated and infused through the US-FSM Compact and other foreign aid. The underlying principle is that outcomes from economic development will "trickle-down" to other sectors and thereby, improving social conditions and situations for all people.
- This principle is enshrined in FSM Macroeconomic policies and development agenda. Even the GPM Policy Element 3 endorsed implementation of Policy Element 4 of the public sector management policy matrix (PSMPM), namely, to ensure our national and state capital investment budgets are spent wisely and responsibly by:
 - Establishing a professional review process for all government capital investments
 - Continuing dialogue and redrafting of appropriate legislation in each of the four states
 - Convening policy dialogue and presentations with political and public sector leadership
 - Applying performance budgeting principles on PSIP and other capital projects

Neither the GPM and/or the PSMPM offered specific recommendations as to how women's access to financial resources and technical assistance was to be achieved. There was also no policy on women's economic empowerment in any of the FSM macroeconomic policies and development plans.

d Relevance of Gender Mainstreaming on Achievement of FSM Macroeconomic Policies

- The absence of a FSM policy and strategic development framework on women makes it difficult for policy and decision-makers to take women's affairs seriously. Women's programs and services remain understaffed, underresourced and marginalized. As a result, women's productive contribution to society are unrecognized, undervalued and under-utilized. Engendering macroeconomic policies and the economic development agenda in general will ensure sustained economic growth and self-sufficiency for the nation and for its people.
- Gender mainstreaming is extremely relevant to achieving FSM macroeconomic policies and for ensuring that their impact and outcomes do indeed, "trickle-down" to the micro-levels (community and family levels). The recent ADP Poverty and Hardship Assessment identified major hardships for the common people. These included:
 - Poor access to quality and affordable basic services (water, health, education, transportation, roads, etc)
 - Lack of income (lack of employment opportunities, no job creation incentives, etc)
 - Lack of participation (in areas of decision-making, planning, politics and trade)
- These findings support the position that "trickle-down" effect does not offer a practical model on which to base sound economic policy-making decisions. Major shifts in policies, leadership and economic agenda are required to ensure sustainable livelihoods and reciprocally, achievement of economic growth and self-reliance are realized for and by all stakeholders.
- 28 Experience elsewhere have shown that:
 - The more inclusive and participatory are the development policies, agenda and decision-making processes and structures the more equitable the benefits of economic development.
 - The more gender friendly and responsive are the economic processes, structures and mechanisms, women's productivity increases (i.e., provisions for paid maternity leaves, nursing centers, day care centers, etc.), resulting in improvement in quality of life for their families

- More women own, manage and run successful micro-businesses that have created jobs, generate family income, improve standards of living, improve quality of life, provide for basic needs, to name a few.
- Women's active participation in economic development is a prerequisite for economic equity and economic justice. They bring into these processes not only their knowledge and skills but also the "heart" and "soul" that ensure social justice for all. Women's exclusion from the policy and decisionmaking process bears significantly on limiting the capacity of FSM to successfully achieved its stated macroeconomic polices adopted at the 2nd FSM Economic Summit. Engendering these processes and structures at all level is likely to result in a more equitable and just development regime.

e The Impact of Financial Instability on Gender Development

- 30 Declining public finances and government's restructuring programs during the final phase of Compact I prevented additional expenditures and/or creation of new positions and/or functions in the public service. Implementation of the GPM was on the lowest priority list and consequently put aside in favor of more strategic economic priorities.
- 31 It is hope that financial restraints impose by Compact II will not necessarily impede implementation of the priority gender SPM outcomes, especially the allocation of resources to meet the operational requirements of the proposed Division of Gender and Social Affairs (GENSA), inclusive of the youth, senior citizens, disabled persons and associated activities and programs.
- 32 It is further recommended that additional funding for GENSA be negotiated as integral components of FSM country programs with the Asian Development Bank, European Union, UN Agencies and other development partners.

f Financial Commitments for Gender Development

- Although FSM has made public policy commitments for the advancement of women in FSM, these commitments cannot be realized until adequate gender budgets are provided for in governments' regular budget processes and/or included as priority components of FSM external development cooperation programs. Again, investment of resources toward gender empowerment is not likely to receive priority status until FSM adopts its official gender policy and development agenda. Financial commitment to gender development has remained at its post -1999 level.
- Again, FSM can access financing support through its non-US donors such as ADB, EU, Japan, Australia, New Zealand and so forth. To do this, Gender has to be prioritized as an enabling project for poverty reduction, environmental justice, sustainable development and achievement of the UN Millennium

Development Goals (MDGs) and other global and regional economic and social agenda.

35 FSM needs to improve and strengthen its resource mobilization and strategic partnership portfolio in order to proactively negotiate extra-donor assistance and/or to attract renewed donor interest in social program funding in the FSM.

Youth and Development

The 1999 Gender Policy Matrix did not cover Youth. However, Youth 36 and Sports had been in existence and fully integrated into government operations and programs since Compact I. There existed various draft youth development documents compiled jointly by national and external youth initiatives and consultants. These policy documents can provide basis for compiling a Youth Policy Matrix for purposes of the FSM Strategic Development Plan.

37

38 Should the consolidation of women, youth, senior citizens, children and disabled persons under the proposed Division of Gender and Social Affairs materialized, then GENSA will have the official mandate to coordinate and assist the Youth Operation as required. A detailed institutional strengthening plan on youth is provided under strategic goals 6-7 in Section 3 of this Chapter.

The Elderly and Senior Citizens

- 39 The 1999 Gender Policy Matrix did not cover the Elderly population.
- Currently there is no national operation addressing the issues of the elderly (senior Citizens), except for public service retirees who received some social benefits from the FSM Social Security Administration. At the States' level, some level of programs and services are provided. It is vital, therefore, that follow-up discussions be carried out between these stakeholders to clarify issues, roles and functions appropriate for each. A FSM-wide study on the status of Senior Citizens and the elderly population is called for under this Chapter so that appropriate intervention programs can be instituted.

Disabled Persons and Persons with Special Need

- 41 The 1999 Gender Policy Matrix did not cover persons with disabilities and special needs.
- 42 Although the Divisions of Education and Social Affairs at national and States Government do provide limited services to specific target populations, there is urgent concern that existing programs and service and lack of awareness on the issues and needs of disabled persons and persons with special needs do not extend to adult and elderly populations.

A substantive policy objective is provided under the Gender SPM Objective 9 to address this oversight.

10.1.2 Description of Gender Development in the FSM: Issues and Constraints

a Gender Policy and Strategic Development Agenda

- FSM has taken initial policy measures to meet its international commitments on women and to work nationally towards the full integration of women and girls into FSM Society. These are evident by:
 - Ratification of the Convention on the Rights of the Child (CRC), 1993
 - Adoption of the Pacific Platform for Action on Women (PPA) in 1994
 - Cairo Platform for Action on Population and Development, 1994
 - Adoption of the Global Platform for Action on Women (GPA) in 1995
 - Ratification of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW Convention) 2003
- However, FSM has yet to nationalize these enabling measures or adopt its own national social policies that will trigger harmonization of these global commitments at national and state levels.
- On the program implementation level, the 1995 5th FSM Women's Conference adopted its priority list of critical areas of concerns (CACs). This list was later developed as the Draft 1995-1997 Women's Plan of Action. This draft document has not been finalized and/or approved as the official FSM Plan of Action for Women. Refer to the Reference section for specific information on these CACs.

b Administrative and Institutional Capacity

- National and States' Women's mechanisms exist as a "one-person" operation in a small office space provided as "in-kind" contribution by its host agencies. The National Women's Program budget consists of travel and office supplies. The NWIO's salary is included in the Department of HESA's annual budget. There is no budget for programs and/or services for women. The same situation is repeated at the State Women's Programs.
- The FSM women's mechanisms need adequate and separate core operation budgets that adequately provide for operation and programs needs. Lacking these essential institutional strengthening components, the women's operation struggle daily to effectively respond to and address routine and emergent critical development needs of women. With increasing commitments and obligations

arising from global, national and regional women's development agenda, FSM needs to urgently address:

- Chronic under-staffing of the National and States' Women's Operations
- Inadequate Office spaces, office equipment and office furniture
- Lack of annual core gender operation budgets
- Implementation of Post 3rd FSM Economic Summit GSPM

c Gender Budgets and Resource Allocation

- The GSPM recommendations for provisions of adequate levels of core gender budgets in Governments' regular budgets and in external cooperation programs cannot be underscore. At present, there is no secure core funding for women's affairs or program in Governments' regular budgets. Likewise, there are no provisions for women's development agenda in existing governments' bilateral and multilateral aid packages. Table 2 gives a summary of financial allocations to gender activities since 1999.
- Women's mechanisms are expected to provide assistance and support to women's activities, groups and programs with little or no budget. Implementation of GSPM is reliant on securing financial commitment from Government and/or through FSM external development cooperation programs.
- Information on State Gender budgets and operations are currently unavailable. These will be subject to future gender budget audits and provided in the gender program audit reports scheduled for fiscal year 2005 and 2006.

Table 2: Summary of Gender Share of National Budget, 1999-2003, FSM Gender Affairs

Budget Category	Approved 1999 Budget	Approved 2003 Budget	Approved 2004 Budget
Office Rental	Space provided in-kind	Space provided in-kind	Space provided in-kind
Human Resource	19,400	19,400	19,431
Travel	None	7,366	18,601
Fixed Asset	None	None	None
Contractual Services	None	None	None
Consumable	In-kind	In-kind	7,000
Total Budget	19,400	26,766	44,032

Data provided by FSM Gender Development Office.

d Data and Information Management System

- There is certainly improvement in the flow and exchange of information on women and between women today than 10 years ago. However, the management and storage of institutional memory is a major handicap. The quality and frequency of communication exchange and information dissemination is also problematic. Contributing factors include:
 - Poor information, communication and technology capacity
 - Lack of Equipment, Soft Wares and ICT skills
 - Lack of Media and Media Presentation Skills
 - Poor documentation, information management and research capacity
 - Lack of funding
- The GSPM prioritizes training on media, information management and research to enhance capacity for greater gender awareness and to strengthen gender policy advocacy and mainstreaming skills at all levels.
- 54 ICT strengthening activities are specified under Strategic Goal 5 in the SPM.

e Political Will and Leadership Commitment on Gender

The ratification of the CEDAW Convention last year conveys a clear message that FSM accepts its leadership and political responsibilities for the advancement of women's affairs, particularly in regards to women's human rights and equal opportunity provisions. Exactly when and how this leadership accountability is to take place remains uncertain. Other policy recommendations remained unimplemented to this date. However, outcomes of the 3rd FSM Economic Summit's Gender SPM promises a way forward in the right direction.

10.1.3 Gender, Trade and Economic Empowerment

- Women are often left out of trade and trade related activities for the simple reason that their presence at this level of dialogue is absent. The 1999 GPM adopted at the 2nd FSM Economic Summit committed Government with the responsibility for ensuring that technical and marketing assistance are provided for women. The Beijing global platform for action women (GPA) mandated national governments to:
 - Facilitate women's equal access to resources, employment, markets and trade (Strategic Objective F.2)
 - Provide business services, training and access to markets, information and technology, particularly to low-income women (Strategic Objective F.3)

- Strengthen women's economic capacity and commercial networks (Strategic Objective F.4)
- National governments are obligated to comply with the specific actions required by these strategic objectives. These include:
 - Enhance rural women's income-generating potential by facilitating their equal access to and control over productive resources, land, credit, capital, property rights, development programs and cooperative structures
 - Increase the participation of women, including women entrepreneurs, in advisory boards and other forums to enable women entrepreneurs from all sectors to contribute to formulation and review of policies and programs being developed by economic agencies and banking institutions
 - Ensure that international labor standards such as International Labour Organization (ILO) Convention No. 100 on "equal pay" and workers' rights apply equally to female and male workers
 - Recruit women for leadership, decision-making and management and provide training programs, all on a equal basis with men
 - Use gender-impact analysis in the development of macro and microeconomic and social policies in order to monitor impact and restructuring policies.
- There are considerable differences in women's and men's access to and opportunities to exert power and influence over economic processes and structures. FSM women are virtually absent and poorly represented in economic decision-making, including the formulation of financial, monetary, commercial and other economic policies as well as tax systems and rules governing pay. Insufficient attention to gender analysis has meant that women's contributions and concerns remain too often ignored in economic structures such as financial markets and institutions, labor markets, taxation and social security systems. As a result, many policies and programs continue to contribute to inequalities between men and women. Where progress has been made in integrating gender perspectives, programs and policy effectiveness has also been enhanced.

a Building Trade and Trade Facilitation Capacity

Priorities have to be established to ensure women are capacitated to take full participation in the market economy, trade and economic decision-making, vis-à-vis, policy dialogues, policy-making, programming and impact assessment. Gender-impact analysis applied to the development of macro and micro-economic and social policies is vitally important for these reasons:

- It allows practical assessment and monitoring of the impact of globalization, trade liberalization, foreign aid and FSM restructuring policies and programs on women.
- It can elicit discriminatory practices by employers on the basis of women's reproductive roles and functions, including refusal of employment and dismissal of women due to maternity leave and pregnancy and breastfeeding responsibilities.
- It can facilitate efforts to close the gap between women and men's pay and take steps to implement the principle of "equal remuneration" for equal work of equal value by strengthening legislation, including compliance with ILO laws and standards
- It can encourage equal access for women to effective job training, retraining, counseling and placement services that are not limited to traditional employment areas
- It can help create non-discriminatory support services, including investment funds for women's businesses, targeting women in trade promotion programs
- 60 Building women's capacity in the areas of trade, trade facilitation, marketing and fiscal management is particularly attractive as women's entrepreneurs and micro-business owners are becoming viable employers and income generation sources for rural and remote island people and communities throughout FSM. Table 3 provides a list of women owned and women headed businesses and SMEs in FSM.

Sustainable Livelihoods, Trade and Economic Policy Coherence

Women and children are often the unwilling victims of globalization, 61 trade liberalization, structural adjustment programs and trade related policies and practices. Macroeconomic policies supporting private and productive development of FSM natural resources have to be sensitive to gender, indigenous rights and resource owners' affinity to their ancestral heritages, cultures and traditional knowledge to ensure that sustainable resources development and cash-cropping management benefit current and future generations of FSM people. Women are active in a variety of economic areas, which they often combine, ranging from wage labor and subsistence farming and fishing to the informal sector. However, institutional and customary barriers to capital, credit and technology impede the economic progress of women.

Women contribute to development not only through remunerated work but also through a great deal of unremunerated work. On the one hand, women participate in the production of goods and services for the market and household consumption, in Agriculture, Fisheries, food production and/or family enterprises, yet these activities are unremunerated, undervalued and under-recorded. On the other hand, women still also perform the great majority of unremunerated domestic and community work such as caring for children and the elderly, preparing food for the family, protecting the environment, providing health care and voluntary social services and so forth. This type of work is often not measured in quantitative terms and is not valued in national accounts. In spite of its exclusion from national statistics and limited social recognition, women's domestic and community work is the glue that holds families, communities and nations sustainable over the centuries. Thus investing in women's economic empowerment makes good economic sense.

c Small Micro-Enterprise Development and Entrepreneurship

- With limited and scarce natural resources and collective property rights, great distances to markets and high costs of exporting and importing goods and commodities, FSM comparative advantage for ensuring sustainable livelihood for its people and for creating realistic employment opportunities is through entrepreneurship and small micro-enterprise development (SMEs). Macroeconomic policies have to be based on developing capacities in this area as well as encouraging resource owners to realize the financial values of their natural resources and assets.
- Promoting and supporting women's self-employment, the development of small enterprises and strengthening of women's access to credit and capital and promoting women's entrepreneurship, including as appropriate, non-traditional and mutual credit schemes as well as innovative linkages with financial institutions are crucial to developing women's economic independence and for ensuring economic stability and reliance for families and communities throughout FSM.
- Small micro-enterprises development, home-based businesses and entrepreneurship training in the following areas will be crucial to building and

strengthening women's economic capacity and independence. Priority training include:

- Strategic Planning and Financial Management
- Product Design, Packaging and Marketing
- Assets Development
- Pricing and Inventory
- Cash Flow Management
- 66 Table 4 provides a preliminary list of existing women owned, women headed businesses and SMEs in FSM.

d Need for Flexible Livelihood and SMEs Micro-Financing Programs

- 67 Providing flexible micro-financing programs and entrepreneurship training targeting this level is likely to generate needed sources of community revenues and family incomes not possible before. Appraisal of existing microfinancing schemes and business development practices are needed to harmonize the financial needs and requirements of this type of venture with mainstreamed and/or specialized business development services.
- 68 National and States' Governments, Bank of FSM, FSM Development Bank, States' Business Development Centers and locally based private banking institutions need to:
 - Structure their services to reach rural and urban women involved in micro-businesses, small and medium enterprises, with special attention to atrisk young women, low income women, ethnic and racial minorities and indigenous women who lack access to capital and assets.
 - Invest capital and develop investment portfolios to finance women's business enterprises

- Give adequate attention to providing technical assistance, advisory services, training and re-training for women connected with the entry to the market economy
- Provide business services, including marketing and trade information, product design, technology transfer to women's business enterprises, including those in export
- Develop flexible funding arrangements to finance intermediary institutions that target women's economic activities
- Promote self-sufficiency and increased capacity in and profitability of women's economic enterprises

Lack of flexibility of loan lending, collateral requirements and cumbersome application processes often discourage women entrepreneurs and homebased SMEs from accessing business financing from existing financial institutions and specialized business development services. Creative financing programs complete with training and technical services are ideal for this type of venture.

e Special Needs of Women in the Work Force

Women, due to their special biological make-up, require special employment protections and provisions. They need to be protected from workplace hazards. They need to be given time to breastfeed and they need to be given paid maternity leave to protect their health and ensure positive outcomes of their pregnancies. The specific enabling policy recommendations towards this end include:

- Providing flexible work schedules and alternative working arrangements
- Enacting paid maternity and paternity leaves
- Providing breastfeeding rooms and children nurseries
- Providing tax exceptions, incentives and financing for "home-based" baby-sitting and formal child care services

Women's, health, performance and productivity in the workplace are closely linked with their reproductive functions and roles. The public service system regulations exclude maternity leave entitlement, paid or otherwise, for women employees, from its public service system. Both private and public service sectors do not provided maternity provisions in their hiring and social benefits packages. At the policy level, Congress placed reservation on the CEDAW compliance provision on paid maternity leave and/or maternity leave entitlement for women on purely eco-political grounds and without sound statistical bases and cost-benefit analysis.

72 This exclusion policy is "unfriendly" towards women employees, contrary to basic and "inalienable" women's human rights, i.e., reproductive rights and a violation of international human rights conventions (CEDAW and CRC) and labor laws.

10.1.4 Gender, Governance and Leadership Development

73 Despite the general acceptance for the need to create gender balance and equality provisions in civic and public processes, especially at the policy and decision-making levels, a gap between "de jure" and "de facto" equality persists.

Table 6: Women in Decision-Making and Leadership Roles, 1999-2003, FSM.

State	Branch of Government	Level of Influence	Number
Chuuk	Executive Legislative Judiciary	Cabinet/Administration Politics/Legislation Law/ Enforcement &	01 00 00
Kosrae	Private Sector Executive Legislative Judiciary	Protection Corporate Cabinet/Administration Politics/Legislation Law/ Enforcement & Protection	00 N/A N/A N/A
Pohnpei	Private Sector Executive Legislative Judiciary	Corporate Cabinet/Administration Politics/Legislation Law/Enforcement & Protection	N/A N/A 01 N/A
Yap	Private Sector Executive Legislative Judiciary	Corporate Cabinet/Administration Politics/Legislation Law/ Enforcement & Protection	N/A 02
FSM	Private Sector Executive Congress Judiciary	Corporate Cabinet/Administration Politics/Legislation Law/Enforcement & Protection	02 00 00
Total	Private Sector	Corporate	02 08

Provisional Information provided by women's programs.

The actual participation of women at the highest levels of national and states' decision-making has not changed since FSM signed onto the Beijing Global Platform for Action (GPA) in 1995. Women continued to be under-represented at the legislative, cabinet and highest levels of corporate sector and other economic and social institutions. Traditionally assigned gender roles limit women's choices in education and careers and compel women to assume the burden for household responsibilities. Initiatives and programs aim at increasing women's participation in decision-making and elective offices have not been instituted for this to happen.

The lack of human and financial resources for leadership training, policy advocacy and support for women in leadership and political careers prevent women from seeking professional careers in these areas as well as in other traditionally male-dominant roles. Table 6 provides current information on Women in Decision-Making and Leadership Roles.

a Under-Representation of Women in Power and Decision-Making

Women's influence and impact on policies and decision-making is nil due to their poor participation in power and decision-making processes. The GSPM addresses this issue as one of its priority strategic development goals. Of vital importance is the establishment of the multi-sector FSM Commission on the Status of Women, a policy forum on gender development, mainstreaming and policy advocacy. Detailed activities, programs and outcomes are provided under SPM Objective 1 and 4 in Section 3 of this Chapter.

b Creating Leadership and Management Opportunities for Women

- To build women's management and leadership capacity, women need both on the job mentoring and formal training in these areas. Of critical importance is addressing the cultural and social stereotype attitudes, beliefs and practices prevalent in FSM society. Both men and women have to be sensitized, at all levels, on the issue of gender so that both realize and accept the unique gifts that both can brings and/or contribute to building families, communities and the nation.
- 77 The Gender Mission Statement said, "empower women to be self-reliant and productive members of FSM Society." It is not about discrimination but about:
 - Giving women the opportunity to contribute as best they could though affirmative actions
 - Recognizing and valuing the special talents, skills and experiences women brings to public and private lives

- Bringing balance and harmony to family, work and public and private enterprises.
- Instilling self-confidence, self-esteem, self-reliance, security and dignity of the human person
- Team building and forging strategic partnership based on mutual acceptance and trust

The GSPM also provides specific policy recommendations and actions 78 towards ensuring women have these opportunities and spaces opened and/or created for them.

10.1.5 Gender, Human Rights and the Judicial, Legal and Political Systems

- 79 The GPA reaffirms that all human rights-civil, cultural, economic, political and social, including the right to development- are universal, indivisible, interdependent and interrelated. The human rights of women and the girlchildren are inalienable, integral and indivisible part of universal human rights. The full and equal enjoyment of all human rights and fundamental freedoms by women and girls is a priority for Governments and the UN and is essential for the advancement of women.
- Every person should be entitled to participate in, contribute to and enjoy cultural, economic, political and social development. Thus, in order to protect the human rights of women, it is necessary to avoid resorting to reservations and to ensure that reservations are not incompatible with the objectives and purposes UN Conventions or are otherwise incompatible with international law. The gap between the existence of rights and their effective enjoyment derives from:
 - Lack of commitment from FSM leaders and decision-makers to commission independent appraisal and review of the FSM laws and regulatory frameworks to eliminate discriminatory provisions and to create enabling legislations that provide human rights protection for all.
 - Lack of appropriate recourse mechanisms at national and State levels, especially protection orders, shelters for the abused persons; rehabilitation of victims and perpetrators of abuse and violence to name a few.
 - Inadequate Resources and Human Rights Education Programs
 - Lack of understanding the difference between the principles of "de jure" and "de facto" equality
 - High legal Illiteracy among FSM citizens, leaders, policy-makers and law enforcement agencies.

- Competitive and often discriminatory Application of customary and statutory laws
- Full realization of human rights is to be achieved through systematic changes and harmonization of FSM laws with the CEDAW and CRC conventions as well as other universal human rights instruments.
- In addressing the enjoyment of human rights, all actors and stakeholders must promote an active and visible policy on mainstreaming gender sensitivity in all policies and programs so that before decisions are made, an analysis is made of the effects on women and men, respectively. Sensitizing and raising gender awareness for the police, service providers, policy-makers, politicians and so forth are critical to eliminating abuse and violence from the home, work, public and private spheres.
- Domestic violence is prevalent in FSM and yet, the laws and police seem not to be able to provide protection and safety for the victims. Reforming these systems and frameworks are necessary so that appropriate protective laws and safety measures are adopted and enforced. One such measure is that of a "No Drop" Policy which essentially allows the formal legal system to process allegation of abuse or violation with "due process" regardless of whether the victim suddenly recants or drops the charges. Additional measures are detailed in the appropriate SPM in section 3.

a Relevance of FSM Laws and Legal Frameworks on Gender Mainstreaming

- Women who continuously live under abusive, violent and discriminatory environments are deprived of their productive contribution to family, community and nation. The ratification of the CEDAW Convention last year creates opportunities for improving, reforming and engendering FSM laws and legal frameworks. The GSPM offers policy recommendations that will result in more specific protections and safeguards for women's human rights.
- It is also necessary to completely review the FSM national and State laws and regulatory frameworks to ensure they are relevant and non-discriminatory. At present, there are no specific measures that adequately offer women, children, the elderly and disabled persons protection and safety from abuse and violence.

b Efforts to Harmonize National Laws and Regulatory Frameworks

FSM ratifies both the CEDAW and the CRC as part of its foreign policies. These Conventions obligate FSM to harmonize its national laws to the provisions of these human rights instruments. These are legal obligations that have to be complied with.

FSM made certain reservations on the CEDAW Convention. These reservations must be studied with the aim to removing them in a timely manner. Efforts also must be taken to lobby FSM to ratify the Optional Protocol to the CEDAW Convention and the Declaration Against Violence Against Women (DVAW). The CEDAW Optional Protocol recognizes the right of an individual to take human rights violation to UN and the International Court of Justice (ICJ) for redress. The DEVAW defines the parameters and scope of behaviors that constitute gender-based abuse and violence. DEVAW further clarifies roles and obligations of global and national governments toward eliminating gender violence and protecting women's human rights.

c Human Rights, Public Safety and the Rule of Law

- Violence Against Women and girls is an obstacle to the achievement of equality, development and peace. The long-standing failure to protect and promote women's human rights and fundamental freedoms in the case of violence against women and girls is a major public and social concern.
- Domestic violence, abuse of children and discrimination perpetrated within the homes and in intimate relationships do not receive proper attention by the police and the law enforcement agencies due to prevailing cultural, religious and social stigmas or "taboos". Often the "rule of law" does not apply in these cases. Women and children are regularly treated as possession or tradable goods and as such their human rights are routinely abused and violated. When they are abused, violated, maimed or killed, the law enforcement agencies often disassociate themselves from applying "due process" of the law, leaving the victims' lives at risk in the hands of their abusers. Adoption of anti-domestic violence laws and application of "No Drop" Policy will be welcome safety measures for those at risk for abuse and violence.
- 90 The GSPM proposes specific actions and policies to address these issues. Refer to Section 3 for detailed information.

10.2 Strategic Goals, Policies and Outcomes

10.2.1 Strategic Goal 1: Enhance and promote the cultural, economic, legal, political and social development of women and children through out their life cycles

a Analysis and Justification

The most recent situational analysis on the status of women was done more than ten years ago. In 1999, the Beijing +5 Progress Report was produced. This latest Report documents FSM compliance with the GPA and PPA. The overall impression is that very little had changed since 1999 but more commitments and obligations are regularly added to the women's development agenda.

- It is vitally important that FSM undertakes a situational analysis on the status of FSM women to have a clear picture of what women are facing, how they are living and how they are coping with life and to generate baseline data on women to assist gender strategic planning and programming. Findings can also guide annual budgeting, programming of resources and the delivery of programs and services targeted populations.
- The GSPM contains policy recommendations for action on this objective. For specific details, refer to Section 3 in this Chapter.

b Gender Policy Implications

- FSM has allowed gender mainstreaming to progress at its own pace and according to the direction of the staff executing the operation. No particular attention or priority was attached to the gender operation, except for the usual hosting responsibilities. As a result, Gender Affairs remains low status, low key, under-resourced and under-represented in decision-making and programming. Policy implications for changing Governments' perception and improving its status and roles include:
 - Establishment of effective mechanisms for engaging women in the democratic and development processes.
- This stated outcome can be achieved in two ways. First, through having gender representation in high level national and states' policy and decision-making processes and structures. This means that the head of the Gender operation must be a cabinet level executive and the gender operation be upgraded to the proposed Division of Gender and Social Affairs (GENSA). The second way is to create a gender policy forum that regularly meets to discuss policies and decisions and then feed into the EPIC and States' Leadership Forum. The proposed gender policy forum is tagged as the FSM Commission on the Status of Women. The Commission must be:
 - Established through legislation and exists as a legally mandated gender policy forum
 - Multi-sector and multi-disciplinary in its membership to allow comprehensive coverage on gender issues
 - Based on merit, skills and experience to maximize effectiveness and impact of gender mainstreaming agenda
- 96 Establishing formal dialogues with Governments and engaging policy and decision-makers is a pre-requisite action to reach consensus on reorganizing the current Division of Social Affairs to that of the Division on GENSA.

- Adoption of official gender policy, strategic development agenda and action plans to guide FSM gender budgeting, programming and implementation of FSM commitments for and compliance with national, regional and global gender development platforms for action on women
- A second post- 3rd FSM Economic Summit priority implementation task is to operationalize the FSM gender SPM. Specific activities include the following:
 - Formulation and drafting of Gender Policy, Gender Development Agenda and Gender Action Plan
 - Recruitment and hire of additional professional staff
 - Realignment of existing staff, duties and responsibilities
 - Generation of baseline gender disaggregated data, databases and purchase of information management systems' equipment and facilities
 - Negotiation on establishment of national multi-sector Commission on the Status of Women (CSW)
 - Convening of biennial women's leaders caucus, conference and policy forum
 - Commissioning of gender studies, surveys and research on cultural, economic, legal, political and social status of women
- The above activities are expected to contribute to the achievement of the following major results:
 - Division of GENSA legalized and operational
 - Official Gender Policy legislation enacted
 - FSM Gender Development Agenda & Action Plan adopted
 - FSM Commission on the Status of Women legislation enacted

c Critical Issues for Implementation

99 The major constraints for implementation are primarily financial resources, institutional capacity and leadership action.

i Financial Resources

Implementation of the Gender SPM relies on timely allocation of adequate financial resources. Under the present Compact II financial environment, Gender SPM resource requirements may be difficult to secure but not totally impossible. Alternative financing schemes can be developed and negotiated with FSM traditional partners and/or with new donor agencies. But to do this

requires adoption of a proactive FSM external resource mobilization strategy and program plan.

ii Institutional% Capacity

101 FSM national and states' gender operations are presently weak due to chronic shortage of staff, inadequate operation space, under-budgeted operation and absence of official gender development policy and action plans. The FSM-wide gender operations require separate core operation budgets that allow provisions for the following:

- Recruitment and hire of additional professional and support staff
- Setting up of separate office spaces that meets its operating requirements
- Administration costs, including overheads, office rent and other Consumable
- Travel (domestic/international)
- Fixed Assets (office equipment, furniture)
- Contractual and Professional Services
- Programs and Projects

Enhancing this capacity is critical to successful gender mainstreaming and delivery of gender programs and services. For additional details, please refer to Section 3: Gender Strategic Policy Matrix under this Chapter.

iii Decision-Making

Achievement of the Gender SPM and success of the 3rd FSM Economic Summit rests with FSM policy and decision-makers. It is imperative, therefore, that an output of the Summit includes a "SMART" Monitoring and Performance Assessment Mechanism (MPAM) whose task is to evaluate, monitor and report on progress made on the implementation of the 3rd FSM Economic Summit's nine (9) SPMs. The MPAM must be conducted on a regular basis to monitor achievement and to generate output performance indicators.

d Outcome Measures and Justifications

Two mutually reinforcing outcomes are identified under strategic Policy Objective (PO) 1: establishment of the Division on Gender and Social Affairs (GENSA) and the creation of the National Commission on the Status of Women (NCSW). GENSA gives gender affairs a high profile and a credible image, both of which are vital to enhancing FSM gender advocacy and mainstreaming capacity. NCSW provides a credible authority on gender and serves as the policy and decision-making forum on gender affairs. Outcome measures include:

- Existence of the Division on Gender and Social Affairs in HESA
- Official Gender Development Agenda, Gender Policy and Gender Action Plan adopted
- Commission on the Status of Women established
- Additional staff hired, office equipment purchased and installed and office furniture purchased

Refer to the gender Strategic Policy Matrix (SPM) for additional information.

10.2.2 Strategic Goal 2: Enhance the Leadership Capacity and Roles of Women

a Analysis and Justification

There are very few women serving in high-level management and leadership roles. Fewer that 5 women occupied high-level policy and decision-making posts at national and state levels. This situation exists for many reasons but the most critical ones are cultural and social. More studies are needed in this area to identify the underlying root factors and to institute appropriate actions to remove these cultural biases and social barriers.

b Gender Policy Implications

107 Persistent cultural and traditional values and practices hinder women's active participation in power and decision-making processes and structures. Policy directions that can facilitate increase women's participation in private and public office include:

- Establish mechanisms for engaging women in leadership and political processes at all levels
- Provisions for leadership training for women, youth and people with disabilities and special needs
- Assignment of specific number of positions and/or seats in leadership and political systems to be filled only by skilled and qualified women candidates and applicants.
- Provision for leadership and political empowerment education and training for women leaders
- Assurances that qualified women are put forth for leadership positions and electoral office
- Ensure women are actively involved in policy and leadership dialogues, exchanges and training programs

c Critical Issues for Implementation

108 FSM women are generally comfortable to leave private and public affairs to the men to handle. This is a historic fact and an evolutionary process. The primary reasons why women shy away from actively seeking and filling public offices are:

- Pervasive cultural, social and traditional gender-based biases and stereotypes
- Lack of Support Systems for women in leadership roles
- Poor leadership and management capacity and skills
- Low self-esteem and lack of self-confidence
- Lack of "will power" for leadership and public offices.

d Outcome Measures and Justifications

The greater are the increases in the numbers of women serving on high level decision-making positions at the executive, legislative and judiciary branches of government and in the civil and corporate sectors, the greater are the chance that strategic goal 2 is to be achieved. Other measurable indicators include:

- Quota for women in leadership and management positions adopted
- Changes in public attitudes, behaviors and practices towards women running for public offices
- Enhanced leadership and management capacity and effectiveness
- Women's Leadership Profile available
- Women's Leadership Training provided regularly
- Numbers of women in leadership and political officers have increased from earlier years
- More women candidates registering for political and leadership roles
- By 2010, the Assistant Secretary for GENSA will be a woman.
- By 2015, there will be a woman ambassador and at least 4 woman in FSM Congress and state legislatures
- Availability of gender baseline data, disaggregated statistics and status report available

10.2.3 Strategic Goal 3: Mainstream Gender Issues into Decision-Making, Policies and Strategic Development Plans

a Analysis and Justification

- The female population of FSM is more than half. Yet only 5 women are tasked to serve this entire population in the formal public sector. They have no additional help. Their funding is minimal. They have no formal programs to pursue. And they often do not have the gender and development (GAD) experience and knowledge necessary to be effective in advocating gender issues among women, let alone, with policy and decision-makers who are predominantly men.
- In addition, gender is a poorly understood subject throughout FSM. Men understand gender to mean women. Issues dealing with gender are viewed as women's issues, and women's issues are no different than everyone else's. Men do not see any need for treating women differently or for having women's involvement in public life because they are there to take care of everything outside of the home and women to take care of domestic affairs. Gender upsets this balance and brings confusion. Resisting women's development is due to this misunderstanding and lack of awareness about the gender development agenda.
- The Gender SPM provides policy measures and activities that will help improve understanding about gender and contribute to achieving a more balance and equitable situation between men and women. Improve relations is vital to achieving the FSM economic and social development agenda specified under the Strategic Policy Matrixes adopted at the 2004 3rd FSM National Economic Summit.

b Gender Policy Implications

- 113 Gender policy advocacy and mainstreaming capacity can be enhanced through concerted efforts from the policy level to the management level and to the program implementation level. Policy directions to assist with this include:
 - Ensure that official FSM gender policy and strategic development agenda are established through legislation at all levels
 - Ensure that Opportunities for Women's Leadership Development are prioritized in HRD and Capacity Building Initiatives and Programs
- Gender policy advocacy and mainstreaming capacity and effectiveness can also be achieved and/or strengthened by addressing and achieving Strategic Policy Objective 1 and 2 activities.

c Critical Issues for Implementation

The critical issues for implementation are similar to those identified under Strategic Policy Objective 2. These include:

- Budget Constraints
- Institutional Capacity
- Political and Leadership Support
- These constraints are adequately explained under the same heading 2.1.3 on page 24.

d Outcome Measures and Justifications

- 117 FSM gender policy advocacy and mainstreaming capacity can be enhanced through internal and external capacity building, gender training and formal structured dialogues. Greater acceptability of gender issues is likely to result in less rejection of gender by planners, policy-makers, decision-makers, government officials, leaders and so forth. Positive gender mainstreaming is achieved when:
 - Gender policy advocacy and mainstreaming capacity is enhanced
 - Gender mainstreaming is acknowledged as integral for sustainable development and responsive governance
 - Gender mainstreaming overcomes negative cultural, political, religious, social and traditional attitudes.
 - Gender perspectives are reflected more and more in decisions, policies and programs
- Specific outcome measurement indicators include but not limited to:
 - Improved role and status of women's programs by FSM people
 - Adequate level of core gender operation budgets secured in Government Budget and Cooperation Programs
 - Commission on the Status of Women established
 - Enhanced image, role and status of women's affairs
 - Improved policy advocacy and negotiation skills
 - Removal of CEDAW reservations by 2010
 - SPM Compliance Report produced and GPA and PPA Reports updated
- Refer to the Gender SPM Section for specific and additional information.

10.2.4 Strategic Goal 4: Maximize Women's Contribution to and Participation in Democratic and Development Processes by Creating Opportunities for women's Active Involvement.

a Analysis and Justification

As home managers, health giver, peacemakers, social service providers, educators, mentors and so forth, women, over the years, have learnt to develop advocacy, management, leadership, decision-making and peace building skills. Naturally these skills enable women to deal with responsibly associated with domestic and community work, the result is that family and community welfare are maintained and enhanced. Building upon these experiences and skills, women can learn to become strong and committed public and private leaders and decision-makers. The sustainable future of FSM rests upon maximizing the complementary roles and functions of men and women in the development process, at home, in the community and at state, national and international arenas.

b Gender Policy Implications

- 121 Comparative advantages can be realized by utilizing the un-dapped resources and skills women posses. Policy implications toward achieving gender SG4 include but not limited to the following:
 - Facilitating women's equal access to resources, employment, markets and trade
 - Harmonizing national laws, policies and programs to encourage economic and political empowerment of women
 - Eliminating all forms of abuse, discrimination, harassment and violence against women and girls in the work force and in the private and public spheres
 - Addressing unequal treatments and discrepancies in compensation/benefits for women in the public and private service sectors
 - Ensuring macroeconomic policies and trade policies are gender inclusive and gender-sensitive.

c Critical Issues for Implementation

- 122 The "unconscious" exclusion of women from public and private affairs is but a matter of "conditioned" training and learnt behavior. Critical issues for implementation include but not limited to the following:
 - Access to resources, employment, markets and trade
 - Marital property rights
 - Collective Rights versus Individual Rights

- Lack of paid maternity leave legislation and benefits
- Lack of flexible SMEs and Home-Based Business Funding Schemes
- Accession to ILO laws and standards as appropriate and relevant
- 123 Also refer to Section 3: Gender Strategic Policy Matrix for additional information.

d Outcome Measures and Justifications

- 124 A safe home, work, school and other public places, strengthened women's economic capacity and independence and harmonized work and family responsibilities for both men and women are the primary outcomes of Gender SG4. Outcome performance indicators include:
 - Paid maternity and paternity legislation enacted
 - Anti-domestic violence and Anti-abuse of women and girls in intimate relationships bills or law enacted
 - No Drop Policy Adopted
 - Gender Studies offered at COM-FSM
 - Gender Sensitization Training (awareness, analysis, budgeting, planning, etc) conducted
 - Flexible and alternative micro-finance schemes provided
 - Customary and Constitutional Law Review and Revisions
 - Increased to 18 years the legal age of consent and marriage
 - Domestic Violence Report produced
- Refer to Gender SPM Section for additional information.

10.2.5 Strategic Goal 5: Strengthen the Institutional Capacity of the Women's Programs in FSM

a Analysis and Justification

Provision for adequate office space, additional staff and secure core operation budgets are critical to improving the role, status and credibility of the FSM national and States' Gender Affairs in the public eye and internationally. Strengthen capacity enables Gender Development Officers to carry out their responsibilities and provide ongoing support to women in their jurisdictions.

b Gender Policy Implications

Policy required include but not limited to:

- Ensuring upgrading of National and States' Women's Programs/Offices/Positions to cabinet level status is achieved
- Ensuring that adequate Core gender budgets are integrated into regular government budget processes and External Development Cooperation Programs
- Achievement in all 5 gender SPM Goals will result in a more accountable, effective and transparent gender mainstreaming mechanism. Implications for policy actions include:
 - Gender policy advocacy and mainstreaming capacity prioritize in HRD Education & Training Programs
 - Effective mechanisms to build, strengthen and localize gender technical and advisory capacity
 - Information dissemination, public relations and information and communication technology gaps be addressed and resolved
 - Upgrade Gender Affairs to Cabinet-Level Status
 - Ensure professional staff of the Gender Affairs are appropriately named to ensure acceptance by regional and global counterparts
 - Provisions for adequate office space be provided to ensure ease of operation
 - Resource commitments be legislated to ensure sustainability of operation
- 129 Also refer to Section 3: Gender Strategic Policy Matrix for additional information.

c Critical Issues for Implementation

- 130 The National and States' Gender Development mechanisms suffer from poor image and low credibility within Government. Additional constraints are:
 - Inadequate operating space or office
 - Core gender budgets are not provided on a program basis
 - Decision-Making is slow and often ineffective
 - Status is low at national and states' level
 - No Official Gender Policy and Development Agenda

d Outcome Measures and Justifications

Adequate and secure core gender budgets improve and strengthen "institutional capacity" for effective and efficient program administration and man-

agement is a must. This means hiring of an appropriate mix of professional, technical and support staff to run the gender operation and to improve institutional effectiveness and impact. Additionally, Information, Communication and technology skills, capacity and institutional memory have be enhanced through documentation, research, ICT and media training and publication to ensure sustainability of operation. Likewise, expanding alliances, networks, partnerships and relations are critical to improving FSM gender image and profile, especially at global and regional levels. These capacities can also be strengthened through ongoing public advocacy, regular structured dialogues, solidarity building and improved communication and information with and between strategic stakeholders such as FSM national and states' governments, SPC Women's Bureau, UN Agencies and other civil society gender agencies. Outcome measurement indicators include:

- High Profile and Status achieved by GENSA and NCSW is boosting confidence and moral of staff and FSM women
- Enhanced Institutional Capacity, Effectiveness and Impact achieved through provision of secured core gender budgets, additional staff, additional equipment and furniture and bigger office space
- Effective Programming and Service Delivery achieved through adoption of official gender policy, development agenda and action plans
- Improved Communication and Information realized through production of gender newsletters, gender status reports, email connectivity, website and ICT and media training
- Enhanced Relations and Partnership accomplished through regular women's conferences, caucuses, meetings, trainings and policy dialogues.
- Also refer to the gender SPM Section for additional information.

10.2.6 Strategic Goal 6: Strengthen the institutional capacity, effectiveness and impact of Youth Organizations

a Analysis and Justification

133 Programs and services for youth have been ongoing for some time, both at government and non-governmental levels. There are official youth offices in all four FSM states and the National Government. These offices are funded on ongoing basis through special US federal programs and services as projects or as part of Government social programs. Faith based organizations, US Peace Corps, Boys Scouts, Girls Scouts, FSM Olympic Sports, SPC Youth Bureau, PMA and other locally based international organizations, such as the Salvation Army have formal youth activities as part of their regular community programs or social services.

- Important are these programs and services are, they primarily exist to address youth social problems and, to some extend, offer rehabilitative services and/or alternatives social skills. Programs such as T3, PMA Youth Program, PATS, Job Corps, Land Grants and WIA offer productive skills development training for youth but it is not clear to what extend these activities have had on the marketability of these youth in the formal private and public labor forces. Experiences to date indicate that youth are not actively involved in the dialogues, planning, formulation, implementation, monitoring and evaluation of these activities.
- Gender Strategic Goal 6 offers constructive activities that if funded and properly managed, can result in a youth development portfolio that is youth directed and managed. To enable youth to take an active role in their development, a FSM-wide appraisal of the status of youth, including youth programs and services have to be conducted to elicit the realities of youth today and to appropriately mainstream youth in development activities and programs. A current baseline data on the Status of Youth is also useful for youth development programming.

b Youth Policy Implications

- The FSM has one of the youngest populations in the Pacific region with a median age of 18.9. A young population places extreme pressures on national and state budgets. A major challenge for FSM is to clearly identify issues affecting youth and to develop with youth, appropriate responses to these issues. If the situation is not addressed effectively, it will have a major impact on the well being of young people. Policy implications include:
 - Mainstream Youth in Planning, Delivery, Promotion, Monitoring and Evaluation of Youth Programs and the National Youth Policy
 - Adoption of National Youth Policy and Action Plan
 - Strengthening Youth Consultation and Dialogue Processes
 - Adequate Allocation of Core Resources for Operations and Programs
- To help young people develop the necessary skills and appropriate attitudes, they need to effectively face the challenges of life while at the same time actively participating in the development of the nation. FSM can do this by creating enabling conditions that give young people:
 - A sense of direction and purpose
 - A say in decisions which affect them
 - Equal opportunity to navigate the complexities of life and to contribute to national development

c Critical Issues for Implementation

The 2004 Draft National Youth Policy identified the following critical issues or areas of concerns for policy action:

- Education there is a need to promote more suitable non-formal and informal educational initiatives
- Adolescent Health there is a need to strengthen health education and promotional programs aim at addressing youth health
- Economic Development there is a need to create and maintain structural solutions to promote the participation of youth in the development of the economy through the development of more youth training programs to foster self-employment and income generation activities
- Institutional Strengthening, Capacity Building and Coordination there is a need to improve coordination of youth programs and activities at national, state and local levels and strengthen national and local youth organizations and networks
- Adolescence is a difficult stage of life when young people go through the human development process of progressing from a young person to a mature adult. Helping them achieve positive outcomes for their efforts during this period will give them confidence to progress to a lifetime of continuing personal growth.

d Outcome Measures and Justifications

- The National Youth Policy Mission Statement "To create an environment in which all young men and women of the Federated States of Micronesia are inspired to become responsible and self-reliant members of the community through the development of their full mental, social, spiritual and physical potential" is a sound guiding principle for youth empowerment. The outcomes below supports this guiding principle:
 - Adopt National Youth Policy
 - Strengthen Youths Councils, Organizations and Programs
 - Develop Full Potential of FSM Youth
 - Adequate Allocation and Provision of Budget

10.2.7 Strategic Goal 7: Strengthen Youth Development through Social, Economic and Political Participation

a Analysis and Justification

141 Refer to 2.6.1

b Youth Policy Implications

- In addition to 2.6.2, the following are the specific recommended policy implications for Strategic Goal 7 above:
 - Provision for leadership and political empowerment, education and training for youth leaders
 - Recognition of formal processes and structures for dialogue and engagement with youth

c Critical Issues for Implementation

- In addition to those critical issues described under 2.6.3, the following two issues below are specific to Strategic Goal 7:
 - Lack of positive Role Models and Mentors
 - Absence of Youth in Youth Policy and Decision-Making Processes and Structures

d Outcome Measures and Justifications

- Specific to Strategic Goal 7, the following outcomes are envisaged to facilitate progress youth empowerment and participation:
 - Increase participation of youth leaders in the economic, political and social activities, dialogues and programs
 - Improve networking, partnerships and collaboration with strategic stakeholders
 - Improve MIS, information and communication capacity
- Also refer to Section 3: Gender Strategic Policy Matrix for details.

10.2.8 Strategic Goal 8: Establish social protection and social welfare services for senior citizens

a Analysis and Justification

Social welfare and protection services for the elderly require additional research to establish sound basis for addressing the needs of this growing population. Strategic Goal 8 is included as a starting point for dialogue and programming on the issues and needs of elderly people in the FSM.

b Senior Citizens' Policy Implications

FSM does not provide specific social welfare programs or services as part of its social affairs administrations. The FSM Social Security Administra-

tion pays out social benefits to beneficiaries and retirees of the public and private service systems. Strategic Goal 8 is recommended to address this issue through the following:

- Create an office for senior citizens at national Government
- Create a National Senior Citizens Policy

c Critical Issues for Implementation

148 Critical issues for implementation are not specified. Constructive multidisciplinary dialogues and discussions on the topic are highly recommended as part of the post-3rd FSM Economic Summit implementation activities.

d Outcome Measures and Justifications

- The issues and concerns of senior citizens are not well defined during the discussions of the Gender Committee or the closing plenary. Urgent studies on the situation of the elderly is required if their needs are to be properly addressed. However, Strategic Goal 8 envisages the following to start this process:
 - Creation of the National Senior Citizens Office at HESA
 - Improvement of senior citizens benefits and protection
 - Adoption of National senior citizens policy
 - Establishment of senior citizens development program
- Refer to Strategic Goal policy matrix under Section 3: Gender Strategic Policy Matrix of this Chapter.

10.2.9 Strategic Goal 9: Address the special economic, political and social needs of disabled persons and persons with special needs

a Analysis and Justification

- This is another new topic that was not discussed in the Gender Committee process. The issue was brought up at the closing plenary. The issue of disability is not addressed as a comprehensive program for all disabled persons or for persons with special needs. Generally, existing programs and services are targeting children and not all disabled persons per se.
- Since there is limited information on FSM disabled persons, the situation and needs of this most disadvantaged group as presented in this Chapter is just a superficial overview. In-dept analysis and studies are urgently needed before meaningful programming is to take place. Strategic Goal 9 is an attempt to bring focus on the needs of disabled persons and their potential contributions to society if mainstreamed properly into development activities.

b Disabled Persons' Policy Implications

- Disabled persons are not likely to be present at any development activities so their concerns, issues and needs are not part of any discussions. The implications for policy include:
- Establish effective mechanisms for engaging disabled persons and persons with special needs in the democratic and development processes
- Adopt official policy, strategic development agenda and action plan on disabled persons and persons with special needs to guide FSM development agenda on people with disabilities and special needs
- Ensure building, roads, construction and transportation plans, decisions, policies and legislation are disabled friendly

c Critical Issues for Implementation

- Disabled persons can speak for themselves if given the chance and/or opportunity to do so. For them to contribute meaningfully to debates and discussions on development issues, they must be provided with supportive physical and social environments. Major constraints impeding disabled persons' participation include but not limited to:
 - Inadequate Programs and Services for the Disabled
 - Absence of Disabled Persons Policy and Development Agenda
 - No formal engagement with mainstream development partners
 - No Disabled-Friendly building, transportation, communication and roads
 - No Disabled- Friendly Employment programs and services

d Outcome Measures and Justifications

- Again, the following outcome measures are intended as starting points for FSM national and states' governments to focus priority actions on. These initial outcomes can facilitate immediate integration of disabled persons into mainstream economic and social development activities, programs and services. Recognizing disabled persons positive contribution to society will build and strengthen disabled persons' self-worth and self-confidence. These will further strengthen their will to be productive and self-reliant members of society.
- Thus the outcomes envisaged through Strategic Goal 7 include:
 - Adopt FSM-Wide policy on disabled persons and persons with special needs
 - Mainstream disabled persons and persons with special needs into ongoing and regular public and private activities, programs and services

536 FSM Strategic Development Plan

 Recognition of the positive contribution of disabled persons and persons with special needs



The President Palikir, Pohapei Federated States of Micronesia

Foreword

Work on the Strategic Development Plan (SDP) started late in 2003, as the FSM entered a new phase of its development with the implementation of the amended Compact. While the new fiscal procedures required the FSM to transmit a Strategic Development Plan to the U.S. to provide the framework on which to base the annual requests for the Compact sector grants, the FSM more importantly required a process to identify its development strategy for the new era.

In March 29-April 2 the FSM convened the 3rd FSM Economic Summit. The Summit was attended by four hundred participants representing the four FSM states, the traditional leadership, private sector, National and State governments, non-government organizations, churches, women's and youth groups, government officials, as well as representatives of foreign governments and donor institutions. The theme of the Summit was, *The Next 20 Years: Achieving Economic Growth & Self-Reliance.* The objectives of the Summit were several:

- To achieve consensus on an overall strategy consistent with the theme of achieving economic growth and self-reliance,
- To build awareness of the economic structure of the amended Compact provisions and the likely impact on the FSM economy, and
- To improve implementation and monitoring of the outcome of the planning process.

The Summit can be said to have successfully achieved the first two, while commitment and determination will be required in the detailed planning process to ensure successful implementation and monitoring. The Summit participants were presented with two sets of materials: draft sector chapters, and sector planning matrices. Both were debated in committee and the matrices were adopted by the Summit. This material has now been consolidated, included in the SDP, and adopted by our Congress.

The Summit provided the opportunity for the leadership to consider the progress attained during the first 17 years of the Compact. While implementation of the Compact was successful and saw the entergence of a stable democracy, economic growth was disappointing. The leadership concurred that the FSM could attain a better result during the 20-year period of the amended Compact, and adopted a "Sustained Growth Strategy". While it was recognized that the strategy would entail sacrifice and commitment, it was felt that only through adopting a more aggressive reform agenda could the FSM provide the type of environment that our citizens could hope to find gainful economic opportunities at home, and avoid the need to migrate to neighboring territories.



The SDP comes in three volumes. Volume I is the major component of the Plan and presents on overview of the FSM economy, discussion on the macroeconomic framework in light of the Sustained Growth Strategy, and the need for fiscal adjustment in the medium and long term. Volume I also presents discussion on the policies and development strategies for each sector of the economy. Volume II contains the sector planning matrices adopted at the Summit together with a statistical appendix. These first two volumes are complementary and should be used in cross-reference with each other. Volume III is the Infrastructure Development Plan (IDP) and is an integral component of the overall planning framework for the FSM.

I would like to take this opportunity to thank the many donors and individuals who have supported and made the preparation of the Strategic Development Plan possible. Both the Asian Development Bank and the U.S. Department of Interior provided valuable funding to support the development of resource material for the Summit and subsequently the Plan. I would also thank the many citizens of the PSM who participated in the Summit and for their valuable contribution that helped formulate the policies and strategies contained in this document. I thank the individuals of the Department of Economic Affairs responsible for the many hours of hard work required to produce this document. I am confident the SDP will provide a sound basis for the development of our nation as is embarks on the next phase of our development.

iv

FEDERATED STATES OF MICRONESIA'S



The Next 20 Years:

ACHIEVING ECONOMIC GROWTH & SELF-RELIANCE

Vol II: Strategic Planning
Matrices and Appendices

Table of Contents

Volume I	Polices and Strategies for Development	
Table of C	Contents	ii
Terms and	d Abbreviations	iii
Foreword		iv
1.	The Macroeconomic Framework	1
2.	Private Sector Development	27
3.	Agriculture	55
4.	Fisheries	103
5.	Tourism	159
6.	Environment	211
7.	Health	297
8.	Education	379
9.	Gender	437
Volume II	Strategic Planning Matrices and Appendices	
Appendix	A Strategic Planning Methodology	1
Appendix	B Sector Planning Matrices	13
1.	Private Sector	13
2.	Agriculture	29
3.	Fisheries	39
4.	Tourism	59
5.	Environment	83
6.	Health	115
7.	Education	127
8.	Gender	141
Appendix	C Statistical Tables	159
1.	Gross Domestic Product	159
2.	Tourist and Visitor Arrivals	164
3.	Employment by Industry	167
4.	Commercial Banking Survey	178
5.	Consumer Price Index	179
6.	Balance of Payment and External Debt	186
7.	General Government Finances	189

Terms and Abbreviations

ADB Asian Development Bank

AusAID Australian Assistance for International Development

CFA Compact of Free Association

c.i.f. Price of traded goods inclusive of cost, insurance, and freight

COM College of Micronesia

CPUC Chuuk Public Utility Corporation
CSG Core Stake Holder Group
DOE Department of Education

DTC&I Department of Transportation, Communications and Infrastructure

EEZ Exclusive Economic Zone

EPIC Economic Policy Implementation Council FAA US Federal Aviation Administration FIAS Foreign Investment Advisory Service

FFA Forum Fisheries Agency
FMI Fisheries and Maritime Institute
f.o.b. Free on board price (traded goods)
FPA Fiscal Procedures Agreement
FSM Federated States of Micronesia
FY Fiscal Year: October 1 – September 30

GDP Gross Domestic Product
IDP Infrastructure Development Plan
IMF International Monetary Fund

IPIC Infrastructure Planning Implementation Committees

MOU Memorandum of Understanding
NDE National Division of Education
NGO Non-Government Organization
NSC National Steering Committee

PFTAC Pacific Financial Technical Assistance Center

PMU Program Management Unit PPA Pohnpei Ports Authority

PSIP Public Sector Infrastructure Program
PTA Parent Teachers Association
PUC Pohnpei Utilities Corporation
SDP Strategic Development Plan

SEPA State Environmental Protection Agency

SGS Sustained Growth Strategy

USAID US Agency for International Development

USDA US Department of Agriculture US DOI US Department of Interior

UNDP United Nations Development Programme

VAT Value-Added Tax

WTO World Tourism Organization YSPA Yap State Ports Authority

YSPSC Yap State Public Service Corporation

Appendix A: Strategic Planning Methodology

A.1 Review of the Planning Process in the FSM

- In 1995 and 1996 the FSM and four states underwent the first round of Economic Summits and participatory planning process. The Summit process was initiated to achieve broad-based understanding and consensus for reform measures needed to adjust to the changing economic circumstances facing the FSM. Most importantly the FSM was preparing for the large declines in Compact funding resulting from the second step-down. The nation was also beginning to consider the implications of the Compact economic assistance negotiations that were looming on the horizon.
- That first round of Summits was instrumental in changing the mindset prevalent at the time, especially in consolidating the realization that the public sector could no longer be relied upon to be the leading provider for the goods, services, and livelihood of the peoples of the FSM. It was clear that the FSM would need to reduce its reliance on external assistance and that the private sector would need to be the leading force in securing needed economic growth and jobs. Coupled with the broad development principals adopted at the FSM-wide level, the state summits also under went a more detailed planning process. Each state formed a core group of sector committees (agriculture, fisheries, education, health, etc.), which identified key sector objectives, strategies to achieve the objectives, and sets of projects and programs that would be adopted to implement the strategies.
- The policy objectives of the 1st FSM Economic Summit were implemented throughout the period 1996-1999. The second Compact step-down entailed a severe reduction in external funding and required a series of painful adjustments implemented through the Public Sector Reform Program (PSRP). The major component of the PSRP was the implementation of an Early Retirement Program (ERP), but this was supplemented through a series of supporting programs aimed at restructuring the public sector and providing an environment more supportive to private sector development. As the PSRP neared completion it was decided to convene a 2nd FSM Economic Summit during September 1999, to maintain the reform momentum as the nation entered into negotiations for the renewal of the Compact with the U.S. The 2nd Summit adopted a similar structure although Kosrae state was the only state to conduct a state version. However, while the first Summit had been landmark in changing the mindset of the nation, the timing of the 2nd Summit coincided with a substantial element of reform fatigue resulting from the painful fiscal adjustments just completed. With the fiscal situation largely stabilized and concentration focusing on the Compact economic negotiations, the timing was not conducive to maintaining significant reform momentum.

- The structure of the 2nd Summit largely followed the first, although each sector was presented with a draft strategic policy matrix, entailing a hierarchy of policy elements, strategies to attain the objectives, and series of programs and activities. To monitor and ensure implementation the Economic Policy Implementation Council (EPIC) was created during the Summit deliberations. At the first few meetings EPIC was presented with an update of the progress with the implementation of the policy matrices, but this was shortly abandoned as other more critical issues captured the attention of the Council. The creation of EPIC was a milestone in the development of policy in the FSM. However, early progress in monitoring the implementation the Summit resolutions and sector matrices was not maintained.
- While the nation had undergone a round of two sets of Summits, behind the scenes each government was introducing a **performance budgeting process**. Instead of focusing attention on line inputs during budget hearings, legislators were now asked to review budgets by strategic goals, activities, and the delivery of outputs. Budgeting was becoming focused on deliverable results rather than purely on the line-item inputs purchased to attain the outputs. However, progress has been slow and after five years or more of implementation there remains considerable scope for improvement. Perhaps of greatest importance there is no comprehensive audit process to ascertain if the outputs committed for delivery have, in fact, been produced.
- At the same time as the FSM was making its first attempt to introduce performance budgeting and management of public sector resources, the new arrangements under the Fiscal Procedures Agreement (FPA) of the amended Compact requires performance budgeting and reporting. The new FPA, in effect, requires that the FSM implement performance budgeting. Importantly it is up to the FSM to design the specific elements of the system. The system proposed to achieve compliance is outlined in these notes and has been addressed in a series of leadership meetings and conferences of budget and finance officials in the FSM. While adopting many of the features of the previous systems the key difference is identification of **quantifiable performance measures** that can be used to clearly monitor the attainment of a strategic goals (by measuring outcomes) and the delivery of goods and services (by measuring outputs). Elements of the FSM's Planning and Budgeting System.

A.2 Elements of the System

A.2.1 The Demand Side: Desired Outcomes of Public Policy

The critical starting point in any system of government is to define the key desired outcomes of public policy and public expenditure. Figure 1 indicates the elements and hierarchy of the planning and budgeting system under discussion. On the left-hand (demand) side of the system are broad areas of

public policy: sector mission statements, strategic goals, and policies. While not exhaustive, in the 3rd FSM Economic Summit nine sectors working groups have been identified:

- Private Sector Development
- Public Sector Management
- Education
- Health
- Agriculture
- Fisheries
- Tourism
- Environment
- Gender
- Note: **Infrastructure** has been addressed through lengthy and participatory preparation of the Draft Infrastructure Development Plan (IDP). The IDP will be reviewed and possibly amended by a special sub-committee of sectoral representatives. Each sector will be asked to review sector-specific components of the IDP to ensure consistency with the strategic planning matrices.
- The list of sectors does not necessarily coincide with government departments, although in certain cases there is a unique match, such as with education and health. In the system being adopted by the FSM, each functional sector has a "Mission Statement". The mission statement is a broad statement of the sector's objectives. As an example using the private sector, the mission statement proposed is: to facilitate the development of an environment supportive of a competitive and growing private sector, and in the case of health: to promote and maintain a holistic system of health care that will provide an optimum quality of life for its citizenry. Mission statements are broad statements of principle and will not likely change significantly over the planning period.
- Beneath the statement of mission "**Strategic Goals**" have been defined as broad areas of critical importance. In the case of the private sector, the first strategic goal is: to create a sound economic policy environment to support outward-oriented, private sector-led growth, while the second is: to improve the competitiveness of the factors of production to promote private sector development. In the development of the strategic planning system in the FSM it was found desirable to permit a further layer of definition of public policy, which has been simply referred to as "Policy". In many, but not all, cases these involve legislative action. Returning to our private sector example and in the case of the first strategic goal there are four associates policies:

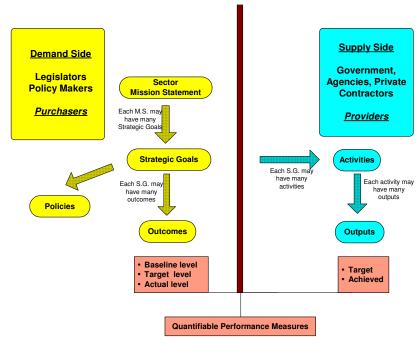


Figure 1: Strategic Planning Methodology

- Maintain financial stability.
- Improve fiscal accountability, transparency and performance management systems.
- Establish an effective system to disseminate information and promote public-private sector dialogue.
- Adopt trade and tax policies consistent with improving the international competitiveness of FSM-based producers.
- Having carefully defined the set of strategic goals and policies for a particular sector, it is necessary to have some method of determining if, over time, they have been achieved. To do this we define the term "Outcome". An outcome is a quantifiable measure (sometimes referred to as a performance measure) of a particular strategic goal. An outcome must be quantifiable. There may be more than one outcome measure for a particular strategic goal. Returning to our example of the private sector the outcomes for the first strategic goal are:

- Fiscal stability is maintained [fiscal balance as % of GDP for each government and consolidated]
- External debt remains at prudent levels [(a) total external debt as % of GDP, (b) debt service as % of total export of goods and services]
- Tax policy does not discourage internationally competitive production
 [(a) average effective tariff rate on imports, (b) import taxes as % of total
 taxes]
- Export production increases [\$ value of exports]
- Tourism sector grows [number of tourist arrivals]

Finally, in the case of outcomes we need to distinguish three levels. First is the original level or "Baseline Level" from which we wish to evaluate performance during the planning period. Then there is the established "Target Level." It is understood that the target will be set on the basis of the level of resources available to influence improvements and/or the level of political will to make needed policy changes. The third level is the "Actual Level" at some future point of evaluation. Through the process of monitoring (and perhaps audit) there will be a comparison of targeted versus actual achievement of the outcome measures.

A.2.2 The Supply Side: Provision of Public Sector Goods and Services

- So far the discussion has talked of the objectives of public policy, but it has not indicated how the strategic goals, policies and outcomes are to be attained. In the strategic planning approach the objectives of policy are achieved through the delivery of public goods and services produced with public funds and human resources. Government departments may deliver the services or they may be produced by the private sector under contract. In either case, managers in the private or public sector are given access to funds and resources, and are effectively contracted to **undertake a set of well-defined activities** and to **deliver specified outputs**. In the FSM there is as yet very limited use of contractual relations in the provision of public goods as exists in other parts of the world. However, the FSM is implementing in practice a nascent form of what is sometimes referred to as the "purchaser—provider" model.
- Figure 1 also indicates the hierarchy of activities and deliverable outputs on the right-hand or "supply" side of the diagram. For each strategic goal there may be one or more activities that can result in the attainment of the goal. "Activities" are the programs, processes and tasks undertaken by a department or agency and leading to the accomplishment of the strategic goal. "Outputs" are produced and delivered by the department or agency as a direct result of their activities. Properly specified, outputs must be quantifiable. Importantly, the delivery of outputs must also be within the direct and immediate control of the

managers responsible. For example, in the private sector example under the first strategic goal: "to create a sound policy environment to support outward-orientated, private sector led growth" there are several activities:

- Formulate and implement sound economic policies
- Improve financial management quality and timeliness to better support private sector development
- Proceed with tax reform agenda at national and state levels
- Expand public information dissemination on key indicators and establish improved public—private sector dialogue
- In turn associated with each of the above activities there are groups of outputs. In the case of the first activity several outputs have been identified:
 - Complete annual FSM Economic Review including review of PSD progress (1)
 - Complete annual State Economic Reviews (4)
 - Complete annual Economic Briefing for FSM Government at JEMCO meeting (1)
 - Complete annual Compact Report (1)
 - Etc...
- Each *output* is quantifiable and its delivery is under the control of the responsible manager. For each output there corresponds two performance measures: a "**target level**," for and the "**actual level**" attained during the reporting period.
- Outputs differ in nature from Outcomes. Outputs come under the direct control of the responsible agencies and will be measured as often as monthly or quarterly. In the case of outcomes it is likely that their measurement will be less frequent and the movement of the outcome measure will be affected by many factors that are outside the control of the manager. In the above example, the output defined as the preparation of annual economic reviews is the direct responsibility of staff working in the Department of Economic Affairs. Given sufficient resources they can (and should) deliver the target level. On the other hand, the attainment of the Outcome of fiscal stability, as measured by the deficit as a share of GDP, will be influenced by variety of factors, such as legislative appropriation levels, unanticipated revenue shortfalls, and other factors that are beyond the control the Department concerned. In the strategic planning exercise it is critical that the concepts of Outcomes and Outputs are clearly distinguished.

A.2.3 Organizations

18 Organizations are defined in the system as the units that undertake the required activities and produce the deliverable outputs. Organizations will frequently be governments, their departments and agencies; although the private sector or non-government organizations (NGOs) may also be considered as an organization. Usually in a government there may be many levels, from the departmental level, to divisions, and subordinate sections. Any of these elements in the system may contribute to the delivery of a given activity and there need not be a unique relationship between an organizational unit and an activity. For example both the education and health departments may be jointly responsible for an activity to improve health education and awareness in the outer islands. While there is a need for integration of planning and coordination of activities, practical considerations need to be taken into account. Where there is such overlap, it is quite likely best for an activity to appear in both the education and health sector policy matrices, and subsequently in the performance budgets of both the education and health departments of a particular government. This will simplify monitoring and reporting.

A.2.4 Resources and Inputs

In order for organizations to undertake activities and deliver outputs, access to resources is required. Governments may appropriate funds for outlays on payroll, purchase of goods and services, subsidies, transfers, and capital items. These outlays or expenditures are often referred to as inputs, and these were the center of focus of traditional line-item budgeting. In performance budgeting attention is directed to the activities and outputs in order to achieve an agreed upon strategic goal. In the full-blown purchaser—provider model, the legislative body will appropriate the needed resources (acting as a purchaser) for specific strategic goals and the organizations (acting as providers) will undertake the activities and deliver the outputs which, taken together can be reasonably expected to lead to achievement of the strategic goals.

A.3 The FSM Strategic Planning Process

A.3.1 The Strategic Development Plan

The FSM Strategic Development Plan (SDP), while similar to many development-planning exercises, is specifically designed with detailed implementation in mind. The plan outlines a list of key strategic goals. However, associated with each strategic goal is a set of outcome performance measures through which it will be possible over time to monitor the success of the plan. The FSM SDP goes further in that it also outlines the activities and deliverable outputs, which, under reasonable assumptions, can be expected to lead to the achievement of the identified strategic goals. To each output is also associated a

quantifiable performance measure, so that during plan execution it will be possible to monitor if the activities and outputs have been fully implemented.

- During the ongoing monitoring process it will be possible to determine if the SDP strategic goals have been achieved; furthermore, over time it will be possible to improve the accuracy of cost estimates to deliver specified levels of outputs. If the outcomes have been achieved it will be possible to fine-tune the delivery of activities in the most cost effective way. If, however, the outcomes have not been achieved, managers will first be asked if they undertook the planned activities and delivered the target level of outputs. If not, why not? If the activities were undertaken and the outputs were delivered as targeted, then reviewers (e.g. legislators and senior policy makers) will need to look deeper into why the expected impact on the outcome measure did not occur. In other words, the SDP provides a means not only to monitor progress, but a means over time to improve the management of public sector resources.
- The FSM Strategic Development Plan will be comprised of a set of sector chapters. The layout of each chapter has been designed according to a specific template. Each chapter begins with a review of the sector, including: an assessment of the current situation and sector performance, analysis of problems, issues and constraints, and assessment of the sector's development potential. Building on the introductory review, the second section presents the sector strategic goals, which are supported by a descriptive rationale. Each strategic goal has been further elaborated if needed through appropriate sector policies. In order to assess performance in attainment of the strategic goals, a list of the associated outcome performance measures has been presented and is discussed at the end of the section. In the case of the FSM SDP the outcome baseline and target measures have been specified where it is meaningful to do so at a national level. Since many outcomes are state specific, the associated baselines and targets have frequently been left unspecified.
- The third section details the sector Strategic Planning Matrix (SPM), and indicates the activities and outputs associated with each strategic goal (see Appendix 1.) The SPM is the heart of the strategic plan and provides a working manual for each sector. Since activities and outputs are state specific the associated targets have only been specified when meaningful. The fourth section describes the SPM and the linkage between activities and outputs with the strategic goal. The linkage indicates how the delivery of the activities and outputs is assumed to contribute to the attainment of a strategic goal. This section also provides an assessment of linkage risks and weaknesses to facilitate the anticipated ex post performance evaluation efforts. Finally a fifth section references the Infrastructure Development Plan (IDP), and identifies the list of infrastructure projects that are critical to the fulfillment of the sector strategy. The

list distinguishes between those projects whose major function is to directly support sector development and those whose purpose is indirect or crosscutting.

A critical element in the preparation of the Strategic Development Plan is the convening of the third FSM Economic Summit. The Third Summit is planned to breakout into sector committees, which will have access to the draft chapters and strategic planning matrices. Each committee will debate the SPM in detail scrutinizing element by element with the intention of determining an acceptable matrix for the FSM that has wide endorsement from all states of the federation. On finalization of the Third Summit the recommendations of the sector committees and revised matrices will be presented to the Summit for endorsement and subsequent integration into the SDP.

A.3.2 Planning in the Federation: Need for State Variance

- While the FSM SDP provides a blueprint for the nation's development, many elements of the plan will have been deliberately generalized to allow for variation across the four states. It is hoped that there can be coherence and relative uniformity wherever possible and whenever appropriate. However, it would make nonsense of the planning process to insist that a "one-size-fits-all" approach could possibly work for all five of the national and state governments. Thus, while it is expected that there can be broad agreements on mission statements, strategic goals and the outcome measures of each strategic goal, it is fully understood that the five governments will fine-tune where needed to fit their specific needs. Since baseline levels differ across the states, surely target levels will be set differently. Where one state may place greater priority (and resource allocation) to achieve a greater improvement in, for example, infant mortality rate improvements; another may have already made progress in that area and want to focus on reducing the prevalence of certain lifestyle diseases.
- The FSM planning and budgeting system will be uniform as a "process." It should lead to greater accountability and improved allocation of scarce public resources. But at the same time it will enable each of the five governments to "demand" public goods and services according to the priorities of the legislative bodies and policy makers. It is therefore anticipated that each state will develop its annual performance budgets using as a guide the outcomes of the 3rd FSM Economic Summit and the FSM SDP. It may be the case that one or more states will develop their own state-level SDP following in line with the FSM SDP. Whether each state will opt for a participatory process such as a Summit is for each state to decide.

A.3.3 The Annual Budget Process

Finally, the implementation of the FSM SDP will take place through the annual budget process. The budget will draw on the plan for direction and in

particular from the identified strategic goals and policies. The list of activities and outputs, which may be undertaken in phases and delivered over a number of years, will require detailed specification for the upcoming budget year. While the SDP will clearly indicate the direction of development policy over a number of years, it is not intended to be cast in stone and it is anticipated that annual budgets may depart from the direction planned as circumstances necessitate.

A.4 Glossary of Terms

- Activity: Programs, processes, tasks, and what a department does that, if achieved, will lead to accomplishing the strategic goal; activities can be specified as major service areas or groupings of related services.
- Infrastructure Development Plan (IDP): the IDP is the FSM's long-term planning document for public investment in infrastructure. The document has been drafted to cover a 20-year period; while recognizing that priorities outlined and the specific projects in each sector will be updated through the annual budget process. The IDP is comprehensive in that it covers all anticipated sources of investment, including local revenues, Compact sector grants, and other donor finance. With respect to Compact funding, the IDP is considered as a part of the Development Plan required under Compact section 211 (c) and specified in further detail in the Fiscal Procedures Agreement Article V (1)(e).
- **Inputs**: Financial and physical resources used to produce an output. Physical resources include human and material resources, typically measured in dollars such as salaries, cost of computers, travel, or other expenses. Inputs were the focus of traditional line-item budgeting.
- Mission Statement: Describes what an organization currently does as its
 core function, how well it performs the function, for whom the function is
 provided, and when the function is provided. The mission does not often
 change.
- Outcome: The outcome is measured in order to indicate whether the strategic goal was accomplished. The outcome can also be considered the impact or the change attributable to an intervention, such as an action or process (e.g. policy, program, project, investment). It is noted that the outcome may be affected by factors outside of the control of the manager assigned to achieving improvements. There are three "levels" of outcome measures that will be collected and reported:
 - Baseline level: measurement at the outset of the planning period; required to establish the level from which improvements will be made

- Target level: Number that indicates the level to which improvements are planned for during a specified planning period (perhaps 3-5 years).
- Achieved level: Number that indicates the actual change in the outcome measure during the planning period. This may be measured at periodic intervals as part of the budget monitoring and reporting process.
- Outputs: Units or quantity of work completed or delivered. Work completed includes goods and services provided by the government such as number of patients seen at the hospital, number of tickets issued, number of licenses revoked, or number of grant reviews completed. In the FSM budgeting system, the Output is the lowest level that may be associated with costs or budgets. It is also clear that the delivery of the output must be under the immediate and direct control of the manager assigned. During the budget formulation process, outputs may be developed based on actual outputs produced in previous years as well as historical data on costs. Improvements in efficiency would be demonstrated by achieving more outputs for the same cost or the same level of outputs with reduced costs. There are two "levels" of output measures that will be collected and reported:
 - Target level: quantity of the deliverable outputs expected (committed) to be produced during the planning period (usually annual, broken down by quarter).
 - Achieved level: quantity of the deliverable outputs actually produced during the planning period.
- Performance Measure: quantifiable measures that can be collected in a
 consistent and reliable manner. In the FSM system, performance will be
 measured at two levels: outcome measures to determine achievement of
 (long-term) strategic goals; and output measures to verify the delivery of
 (committed) outputs (units of work). Over time measures of efficiency
 (unit cost measures) may also be added to the system.
- Policy: A course or method of action selected from among alternatives, and in light of given conditions designed to guide and determine present and future decisions and actions; a course of action, guiding principle, or procedure considered to be expedient, prudent, or advantageous.
- Strategic Development Plan (SDP): The document which outlines the FSM's broad economic strategy and sectoral development policies. The SDP is comprised of descriptive narratives of each sector and the SPM

12 FSM Strategic Development Plan

for each sector. In addition to being the primary national economic planning mechanism of the FSM, the SDP also provides the means of complying with the requirement under the Amended Compact section 211 (c) to prepare and maintain a "Multi-Year Rolling Development Plan." As indicated therein, "the Development Plan shall be strategic in nature … updated through the annual budget process."

- Strategic Planning Matrix (SPM): a matrix or table used to present in summary form a sector's planning framework and including: mission statement, strategic goals (and policies), activities, and outputs.
- Strategic Goal: High level, long term goals established in the FSM economic summit that drive the performance-based budget. What an organization needs to achieve to fulfill its 5-10 year strategy for mission accomplishment. The strategic goal will likely be stated in such a manner that it is not in itself measurable; however, one or more outcome measures should be identified for each Strategic Goal to determine progress along the way and to ultimately determine if the strategic goal is achieved.

Appendix B-01: Private Sector Strategic Planning Matrix

Draft Mission Statement:

To facilitate the development of an environment supportive of a competitive and growing private sector.

Strategic Goal 1 Create a sound economic policy making environment, in full consultation with the private sector, to support export-oriented, private sector-led growth.

- > Maintain financial stability.
- > Improve fiscal accountability, transparency and performance management systems.
- > Establish an effective system to disseminate information and promote public-private sector dialogue.
- > Adopt trade and tax policies consistent with improving the international competitiveness of FSM-based producers.

Outcomes	Activities	Outputs
1(i) Fiscal stability is maintained [fiscal balance as % of GDP for each government and consolidated]	Formulate and implement sound economic policies.	1.1.1. Provide for timely and transparent processes for the conduct and completion of economic studies under the amended Compact, or as required by EPIC and other sources (5)
1(ii) External debt remains at prudent levels > [(a) total external debt as %		1.1.2. Provide for widely publicized notices, prompt availability and ready access to reports required by the amended Compact, EPIC briefings and the other economic reviews (5)

Outcomes	Activities	Outputs
of GDP, (b) debt service as % of total export of goods		1.2.1. Uniform FMIS software adopted and implemented in all five governments
•		1.2.2. Quarterly financial reports all completed and submitted timely (4 reports consolidating all 5 governments)
internationally competitive production		Complete quarterly revenue and expenditure reports including analysis of fiscal stance to-date of all five
(a) average effective tariff		governments (20)
rate on imports, (b) import taxes as % of total taxes]		 1.2.4. Annual audits completed timely and disseminated via website (5)
1(iv) Export production increases > [\$ value of exports]		Annual audit response/action reports completed and disseminated via website (5)
1(v) Tourism sector grows > [number of tourist arrivals]		1.2.6. Annual report summarizing fiscal position and timeliness of payments to creditors by each government (5)
[number of tourier arrivalo]		1.2.7. Establish interest rate payment policy for late payment by Government to vendors (5)
In future: > Total investment as % of GDP	Proceed with tax reform agenda at national and state levels, in	Tax reform alternatives papers produced and disseminated widely (5)
> Tourist expenditures (\$) and	full consultation with the private	1.3.2. Tax policy reform forum completed in all four states
tourism value-added as % of GDP	sector.	1.3.3. Draft legislation completed for national and state tax reform (5)
> Agriculture expenditures (\$)		1.3.4. Public hearings on tax legislation completed in all states(4)

Private
Sector
Strategic
Planning
Matrix

Outcomes		Activities	Outputs	
	and tourism value-added as % of GDP	Expand public information dissemination on key indicators		include private sector presentations and gue on key PSD issues (2)
>	Fisheries expenditures (\$) and tourism value-added as	and establish improved public:private sector dialogue.	4.2. FSM (and state) focus on PSD is) Public Information releases increase sues (5)
>	% of GDP Manufacturing expenditures		4.3. FSM President (PSD issues (1)	designates institutional contact point for
	(\$) and tourism value-added as % of GDP		4.4. Website develop	ped to focus on key PSD issues and or dialogue (1)
				ommerce and relevant NGOs active in uding participation in annual PSD Forum
			4.6. Facilitate the orginterest groups	ganization and operation of private sector (5)
			sector interest g	art-ups and ongoing operations of private groups and their representative activities in logues with the government (5)
			4.8. Facilitate the co groups at the na	ordination of private sector interest ational level (5)

Strategic Goal 2 Improve the competitiveness of the factors of production to promote private sector development.

- Review labor market restrictions such as minimum wages.
- > Resolve alien labor recruitment and retention issues to ensure access to sufficiently skilled labor for FSM enterprises.
- > Strongly encourage wage restraint in the public sector.
- > Reduce the "push" factors leading to emigration of productive workers.
- > Introduce programs to encourage remittances and return of skilled Micronesian workers and entrepreneurs.
- > Improve the effectiveness and public outreach of institutions that support an efficient use of land.
- > Facilitate the use of land as collateral for commercial lending.
- Reduce the risks of bank lending to domestic businesses.
- > Reduce transaction costs for banks and businesses in the event of loan default or business insolvency.
- > Expand access to bank financial services and products to a broader range of enterprises.
- > Give priority to Micronesian products, Micronesian owned businesses and Micronesian labor in government procurement and public contracting.
- > Consult with the private sector on the selection of foreign aid and other outside funded projects.
- Continuing subsidies to achieve desired social outcomes are provided in economically efficient and cost-effective manner (e.g. outer-island transport).

Outcomes	Activities	Outputs
----------	------------	---------

Outcomes	Activities	Outputs
2(i) Private sector employment growth	2.1. Improve the quality of the labor force and the functioning of	2.1.1. Skill gap analysis report completed for potential productive and export industries in each state (4)
[(a) number of private sector employees, (b) \$ value of	labor markets.	2.1.2. Survey instrument completed to identify academic, vocational, and adult training needs in each state (4)
private sector wages]		2.1.3. Workers trained under WIA (#tbd)
2(ii) Reduced distortion in labor		2.1.4. Workers trained under Job Corps (#tbd)
market due to relative wage levels in public sector		2.1.5. Curriculum elements designed to enhance "work and business ethic" and improve career/vocational counseling
[ratio of average public and private sector wages]		in schools (4)
2(iii) Increased lending as a result of improved use of land as		2.1.6. 2.1.6. National and state scholarship programs revised to target targeted study areas
collateral		2.1.7. 2.1.7. Develop methodologies and data bases for measuring the levels of remittances and external
> [\$ value of		transfers to support emigrants overseas (1)

Outcomes		Activities	Outpu	uts
leaseh lending	old/mortgage secured g]	2.2. Promote improved economic use of land.	2.2.1.	Leasehold mortgage legislation passed in remaining states (3)
	d lending of mobilized or business investment		2.2.2.	Model leases completed for each state and disseminated to relevant parties (4)
(b) tota	tio of loans to deposits, al commercial lending		2.2.3.	Simplified mortgage foreclosure regulations promulgated (4)
as % o 2(v) In Future:	of GDP]		2.2.4.	Information system for registering and providing access to information on land registration, leases, sales and related transactions established in each state (4)
Ratio of sector	of public and private wages categorized by		2.2.5.	Parcels of land surveyed and titles properly registered (#tbd)
1	ponding skill levels. number and value (\$) of		2.2.6.	Cost recovery policies established for publicly provided land survey services (4)
	ered land sale and transactions.		2.2.7.	Land dispute caseload reduced by final resolution of cases (#tbd)
transac	number of secured ction on active register tlue (\$) of security		2.2.8.	One hundred percent of public and private land records digitized and stored both offsite and in secure vault onsite in each state (4)
> Busine (measi	ess confidence rising ured through quarterly ni-annual sample		2.2.9.	Public education programs on the role of land in private sector led economic development completed in each state (4)
survey	·		2.2.10	Land arbitration/mediation training completed land use zoning for targeted commercial activities (4)

Outcomes	Activities	Outputs
	2.3. Improve the functioning of the financial sector.	2.3.1. Revised loan guarantee schemes resulting in increased lending for competitive domestic productive activities (#tbd)
		2.3.2. Leasehold mortgage legislation passed in remaining states (3)
		2.3.3. Model leases completed for each state and disseminated to relevant parties (4)
		2.3.4. Simplified mortgage foreclosure regulations promulgated (4)
		2.3.5. Secured Transaction law enacted at the national and/or state level (#tbd)
		2.3.6. Secured transactions registry operational on an FSM-wide basis (1)
		2.3.7. Small claims court operational in states where beneficial and cost of debt recovery transactions reduced (#tbd)
		2.3.8. reduced interest rate loans for targeted export industries
		2.3.9. FSMDB and commercial bank loan officers will continuously improve skills for small and rural lending and appraisal for targeted sectoral lending]
		2.3.10. Encourage banks to utilize the technical services of local, regional and international service providers for independent appraisals and preparation of loan packages (5)

Outcomes	Activities	Outputs
	2.4. Review existing laws and regulations to determine consistency with granting priorities to Micronesian products, Micronesian owned business and Micronesian labor in government procurement and public contracting.	Modify laws and regulations to ensure consistency with the granting of priorities to Micronesian owned businesses and Micronesian labor in infrastructure development and maintenance projects (5)
	2.5. Consult with the private sector on the selection of foreign aid and other outside funded projects.	2.5.1. Ensure the dissemination of information and conduct meetings with the private sector prior to the selection of foreign aid and other outside funded projects (5)
	2.6. Improve subsidy policies	Continuing subsidies for social objectives to be redesigned to improve economic efficiency and targeting and establish program timelines (#tbd)

Strategic Goal 3

Improve the environment for direct investment and expand entrepreneurial and business development support services.

- > Improve the corporate regulatory environment.
- Revise, if necessary, foreign investment laws and regulations to improve attractiveness.
- Government support at the level of private enterprises should be directed toward participation, facilitation, coordination, information dissemination, and broad-based advisory and training services Any subsidized financing to private enterprise should be done on the bases of programs for particular sectors and not to individual enterprises.
- > Support for entrepreneurial development and export promotion should be provided to new entrepreneurs or to small and microenterprises.
- > Seek country to country and international agreements to promote foreign investment within the FSM.

Outcomes	Activities	Outputs
		•

Outcomes	Activities	Outputs	
3(i) Increased domestic and foreign investment	3.1. Improve the environment for domestic and foreign	3.1.1. Review and revise, if necessary, investment laws (5) 3.1.2. Review and revise, if necessary, investment regulations	
(a) number of existing domestic and foreign investor enterprises, (b) gross turnover of existing domestic and foreign investor enterprises In future:	investment in private enterprises.	(5) 3.1.3. FSM Investment Guide updated, printed and disseminated via mailings and website (1) 3.1.4. Complete follow-up Investment Seminar for national and state participants (1)	
		3.1.5. Complete seminar and public outreach on "benefits from foreign investment" in each state (4)	
 Foreign Direct Investment (\$) Total number and value (\$) of 		3.1.6. Trade mission to promote export products and investment opportunities (1)	
commercial bank and FSMDB lending to enterprises (aggregated by		3.1.7. Summary report of the Registrar of Corporations detailing aggregate indicators and trends in domestic and foreign enterprise (1)	
annual turnover and/or employment level).		Institutionalize the annual reporting by foreign investors to monitor the effectiveness of current policies (1)	
 Number and value (\$) of business support services 		3.1.9. Complete external review of corporate governance regime at national and state levels (5)	
provided to the private sector (measured by fee collection where service fees are charged).		3.1.10. Voluntary private sector commercial practice standards completed in collaboration with private sector stakeholders (#tbd)]	
5.14.95 <i>4</i>).		3.1.11. Coordinate, consolidate and streamline business reporting requirements among government agencies (5)	
	3.2. Improve training and business development services available for potential new enterprises.	3.2.1. Potential new/small entrepreneurs trained in business development through a variety of courses (#tbd)	
		3.2.2. New/small businesses receive loans from FSMDB or commercial banks (#tbd)	

Outcomes	Activities	Outputs
	3.3. Improve training and business development services available	3.3.1. Existing businesses assisted through interaction with business development support service providers (# tbd)
	for existing enterprises.	3.3.2. Funding and marketing support secured for new export- oriented activities of existing enterprises (#tbd)
	3.4. Coordinate all projects and programs.	3.4.1. NGO and international organizations activities integrated with existing and new support activities in each state (4)
		3.4.2. Potential new support under NGO and international organizations integrated with ongoing activities (4)
		3.4.3. Market information bulletin completed and disseminated in all four states (4)
		3.4.4. Encourage the establishment of one-stop centers for the dissemination of business information and the receipt and handling of complaints from the business community (5).
	3.5. Commence a dialogue with the U.S. Government and other nations and international organizations for the extension of incentives for foreign investors.	3.5.1.

Strategic Goal 4 Reduce the direct role of the government in the economy. Policies required:

- Maintain wage discipline in the public sector including public enterprises.
- > Strongly pursue opportunities to privatize or otherwise transform existing public enterprises.
- > Discourage new investments in public enterprises and eventually eliminate subsidies to commercial public enterprises.
- Strongly discourage government from continuously engaging in and strongly encourage the government to divest itself from commercial activities in which the private sector is engaged.

Outcomes	Activities	Outputs	
4(i) Government recurrent expenditures decline in	Maintain expenditure discipline in government.	4.1.1. Annual budget message establishes short and medium- term expenditure targets in each government (5)	
importance > [operating expenditures as %		4.1.2. Annual fiscal review monitors expenditure outcomes in comparison to targets (5)	
of GDP] 4(ii) Government wage bill growth is restrained		Public sector wage restraint policy is established and disseminated to government and public enterprise employees (#tbd)	
[wage bill as % of operating expenditures]	4.2. Improve subsidy and transfer policies.	4.2.1. Subsidy reduction plan for all commercially-oriented public enterprises is completed and disseminated by	
4(iii) Subsidies and transfers to public enterprises decline		legislative bodies (5)	
subsidies and transfers as %	4.3. Implement public enterprise reform including privatizations.	4.3.1. Public Enterprise Reform program updated in each state (4)	
of government expenditures] 4(iv) Public Enterprises decline in		4.3.2. Public enterprise reform transformations completed (#tbd)	
importance ➤ [public enterprise value-added	4.4. Improve corporate governance among public enterprises.	4.4.1. Establish mechanisms to ensure transparency and accountability of the activities of boards of directors of public enterprises (5)	

P_{T}
ivate
Sector
Strategi
c Pla
anning
Matrix

Outcomes	Activities	Outputs
as % of GDP] 4(v) Private sector increases in importance [private sector value-added as % of GDP]	4.5. Continuously monitor activities in the government and private sector to determine where there is duplication between government endeavors and the private sector.	4.5.1. Undertake such steps, when it is deemed necessary, to divest the government of services in areas where the private sector is engaged (5)

Strategic Goal 5 Provide efficient and cost-effective economic infrastructure to support competitive private sector development.

- Fully consult with the private sector in the allocation of amended Compact sector grants to infrastructure development and maintenance.
- > Establish effective infrastructure plan implementation council (IPIC) in each government.

Outcomes	Activities	Outputs	
5(i) Public investment remains adequate	5.1. Implement efficient and priority- based infrastructure projects.	5.1.1. Infrastructure Development Plan (IDP) is adopted and allocation of resources matches identified priorities in all	
[public investment as % of total government		states under supervision of Infrastructure Project Implementation Councils (IPICs)(4)	
expenditures] 5(ii) Expenditure on infrastructure		5.1.2. Infrastructure project feasibility assessment procedures are developed and implemented (1)	
maintenance increases		5.1.3. Project Management Unit is operational at the national	
> [value (\$) of maintenance		and/or state level	
expenditures] 5(iii) Utilities price and collect		5.1.4. Annual economic review reports on infrastructure investment levels (private and public) (1)	
charges reflecting capital and current costs of production	5.2. Monitor the effectiveness of infrastructure operations and	5.2.1. IMF funds are utilized to meet high priority needs in all states (4)	
[cost recovery of utilities as % of total cost of production]	maintenance.	5.2.2. OMIP plans are completed for new and existing infrastructure including yearly update and monitoring reports (4)	

Private
Sector
\cdot $Strategic$
Planning
Matrix

Outcomes		Activities	Outputs	
In futu	n future: > Average cost of electricity for commercial users compared to Pacific region benchmark (%)	5.3. Existing and new infrastructure is operated on efficient and cost-effective principles.		National and state officials release annual report on public enterprise performance for each state (4)
A				Public utility and telecommunications quality performance and price structures are monitored (on a comparative regional basis) and annual reports disseminated widely (4)
 Average cost of telecommunications for commercial users compared to Pacific region benchmark (%) 	telecommunications for			Performance monitoring reports completed for private firms implementing contracts to manage infrastructure (5)
	to Pacific region benchmark	5.4. Emerging needs for infrastructure are anticipated and planning and resource allocation are modified accordingly		Annual update report on infrastructure priorities takes account of private stakeholder and general public inputs in all states (4)

2

Appendix B-02: Agriculture Strategic Planning Matrix

Mission Statement:

The agriculture sector, including forestry, shall provide: (i) food security, cash incomes and healthy livelihoods; and (ii) opportunities for domestic and export markets, while promoting environmentally sustainable production within a stable and consistent policy framework

Strategic Goal 1 A well resourced and properly focused agriculture sector operating within a stable and consistent policy framework

Policies:

- Adherence to an agreed policy framework based on solid information
- > Allocation of an equitable Government budget share to agriculture
- > Equitable allocation of Government budget for agriculture between staff salary related costs and operating expenses
- > Delivery of effective education to rural population
- > Raising the image of agriculture as a worthy and satisfying career choice
- > Affordable farm monitoring system established
- > Invest in border protection and agricultural quarantine

Outcomes		Activities	Outputs	
1(i)	Agriculture sector policy reflects the views and priority needs of all major	DEA and State Agriculture staff run open meetings in State capitals and major rural centers to ensure policy	1.1.1.	An agreed agriculture sector policy document that is formally signed by representatives from all sector stakeholders in all States.

Outco	omes	Activities	Outputs	
1(ii)	stakeholders by Dec. 2006. Public investments in agriculture sector are agreed by private sector and farmers in relevant States before	documentation reflects priority stakeholder needs; DEA meets other relevant stakeholders to present investment proposals for approval	1.1.2.	An agreed agriculture sector investment plan that is formally signed by representatives from all sector stakeholders in all States.
1(iii)	expenditure is approved)Less waste of scarce public resources	Finance staff meet with budget and DEA staff to develop funding program for agriculture	1.2.1.	Agriculture gets a level of funding that recognizes its status as a "priority productive sector" with 67% increase over 4 years.
1(iv)	Budget share allocated to agriculture increases to 3% of total by 2009		1.2.2.	Private sector funding allocations under Compact 2 recognize the legitimate needs of subsistence agriculture for funds.
1(v)	75% of agriculture extension services are undertaken by civil society and community groups on contract basis by	Government reviews agriculture service delivery and agrees to allow contracted extension service delivery	1.3.1.	Agriculture service delivery reviewed and re-structured to ensure not more than 50% of expenditures are spent on salaries, wages and associated staff costs by 2007
1(vi)	2007. vi) Better educated rural population, equipped to improve traditional farming systems to meet demands of declining Compact support,	extension service delivery	1.3.2.	Agricultural extension is modeled on existing examples of community based delivery with Government role mainly funding and monitoring outcomes by 2007
			1.3.3.	NGOs and community groups are advised in advance of policy shift and asked to consider bids for service delivery contracts
	attains at least 50% high school completion rates by 2015	Rural education services are reviewed to focus on quality teaching and learning results	1.4.1.	Rural teachers re-training completed by 2010; Rural teacher absenteeism reduced to 10% by 2010; Rural education infrastructure re-constructed by 2010
1 (vii) 1 (viii)	Rates of youth migration are contained at 2004 levels Quality agricultural data available on real time basis	3	1.4.2.	Government education funds are allocated for vocational agriculture education – services contracted where appropriate.
	to all stakeholders including non-government	1.5. Awareness campaign run to highlight commercial	1.5.1.	Commercial agriculture is seen as a viable and recognized career alternative for disadvantaged youth

Agriculture
Strategic
Planning
Matrix

Outc	omes	Activities	Outputs
1(ix)	Subsistence families and traditional farmers in FSM adequately protected from introduced weeds, pests and diseases Export market access is enhanced by adequate certification on country by country basis.	agriculture as a profitable and worthy profession	
1(x)		1.6. New HIES undertaken to act as baseline study; Simple monitoring system is established within community extension groups; Small number of farmers randomly selected for in-depth tracing of relevant issues over time; Export data provided by Quarantine service on quarterly basis	1.6.1. Agricultural data base established and maintained 1.6.2. Data gathered, analyzed and distributed 1.6.3. Annual agricultural data report available within 6 mths of year end.
		1.7. Quarantine service is properly resourced and equipped to undertake task.; Staff training continues on regular basis; Establish bilateral trade/quarantine agreement	 1.7.1. Inspection facilities constructed in each State near port or airport. 1.7.2. Fumigation facilities constructed in each state. 1.7.3. Heat treatment facilities built on basis of throughput feasibility in relevant States with markets where fruit fly is issue. 1.7.4. Volume of produce exported under agreement 1.7.5. Number of agreements established

Strategic Goal 2 Increase production of traditional farming systems for home nutritional and traditional needs and cash incomes

- > Development of a flexible, affordable extension service specifically designed to deliver quality services to traditional farmers
- ➤ Elimination of Vitamin A deficiency among the FSM population
- > Develop more focused, HH food security strategy for agriculture in Chuuk
- > Replace some imported foods with local product

Outc	omes	Activities	Outputs	
2(i)	75% of agriculture extension services are undertaken by	2.1. Government reviews agriculture service delivery to traditional	2.1.1.	Revised extension and research approach to traditional farmers is developed and accepted.
	civil society and community groups on contract basis by 2007.	farmers and agrees to allow contracted extension service delivery; NGOs and other civil society groups present proposals to a state selection team for assessment.; Communities mobilized to participate in livelihoods extension approach; Recognition and publicity for farmers achieving regular sales of fresh produces to local markets; Sites provided by	2.1.2.	Agriculture focus groups formed and covering 50% of all rural municipalities by 2006
2(ii)	A livelihoods approach to traditional agriculture with		2.1.3.	Food security issues in poor households are reduced by 75% by 2009
	community ownership results in a 10% increase in		2.1.4.	Farmer cash earnings from agriculture rise by 25% by 2009
	production and the consumption of local foods		2.1.5.	R&D programs being undertaken and results broadly disseminated through extension groups.
	and 10% increase in quantity of local produce sold in local markets by 2009.		2.1.6.	Private nurseries established and collaborating with researchers and community extension staff to identify ideal products
2(iii)	Vitamin A deficiency levels less than 10% by 2009	farmers for extension and applied research activities;	2.1.7.	Revised research/extension help farmers adapt systems to incorporate feasible new options
2(iv)	50% reduction in infant	Increase availability and quality	2.1.8.	New local markets built as required
2(v)	mortality by 2010 Reported morbidity rates	of identified improved planting materials through private sector	2.1.9.	Traditional farmers have better understanding of

Outco	omes	Activities	Outputs	
2(vi) 2(vii)	among all age groups reduced by 50% by 2010 Agriculture program in Chuuk better reflects the pressing food security issues there. Food insecurity reduces by 30% by 2009	nurseries; Review local market infrastructure and establish as needed; Streamline and defragment duplicated support services; HIES undertaken in 2009 to monitor production and profitability outcomes	2.1.10.	technical, market and business challenges and opportunities. Eliminate duplication of support services among government, non-government organizations and the private sector.
2(viii) 2(ix) 2(x)	Cooked foods exports increase by 30% by 2009 5% reduction in HH expenditure on imported foods by 2010 in FSM Tourism and visitor industry using local foods in 20% of meals presented by 2010.	2.2. Conduct community-level awareness programs and initiatives on the nutritional value of local produce; Nutritional agriculture program integrated with school curriculum; Home garden programs encouraged among women's groups	2.2.1. 2.2.2. 2.2.3. 2.2.4. 2.2.5.	Awareness of nutritional health is delivered with community livelihoods approach Yellow flesh fruits are eaten daily Schools deliver nutrition programs Women's groups home gardens established Production and price of local fruits rises with demand
		2.3. Review by State agriculture staff to identify key issues and possible solutions; Review is presented to community leaders for input and adjusted to reflect these suggestions; Food processing courses designed, staff recruited	2.3.1. 2.3.2. 2.3.3.	Chuuk agriculture program review completed Reduced HH expenditure on food Food processing workshops run
		2.4. Awareness campaign undertaken on financial and health benefits of local food consumption; Home technology courses for women on interesting and varied ways of	2.4.1. 2.4.2. 2.4.3. 2.4.4.	Reduced HH expenditure on food More varied menus and diets based on local food. Higher profile for local foods as premium products Program to present local foods to growing tourism industry as part of the FSM travel experience

Outcomes	Activities	Outputs
	presenting local foods; Provide cash benefits for families identified by community extension group leaders as having achieved 25% expenditure reduction on food imports; Training programs for local chefs to introduce new recipes for local foods; Recognition awards for restaurants that present local foods to guests on regular basis	

Strategic Goal 3 Increased volumes of saleable surpluses to be marketed by the private sector into local and regional markets

- > Establishment of regular dialogue between stakeholders (Government, private sector and growers)
- > Recognition of the separate roles of stakeholders.
- > Encouragement of niche commercial crops for import substitution and export
- > Manage the coconut industry for the benefit of both producers and processors
- > Differentiate extension services between commercial farmers and traditional farmers
- > Develop small-scale agriculture/food production units and industries

Outc	omes	Activities	Outputs	
3(i)	More collaborative approach to domestic and export marketing by 2007 results in	3.1. Meetings held quarterly – on State basis or product basis as agreed; Summary notes of key discussion points available	3.1.1.	Relevant Government, Chamber of Commerce (or other), and farmer rep's meeting 1/4ly to discuss issues – together and bilaterally as appropriate.
	greater market volumes and higher prices		3.1.2.	Proceedings from the meetings (3.1 (i)) are published & distributed to all stakeholders within 1 month of meeting.
3(ii)	Higher cash returns for		3.1.3.	Greater market access for FSM exports
	commercial farmers and exporters		3.1.4.	Assured access to air and sea freight services at fair prices
3(iii)	key inputs including farm		3.1.5.	Improved supplies of farm supplies at local level
	supplies and freight services by 2007	marketing on ers results in	3.2.1.	In accordance with Output 1.1.2:
3(iv)	More efficient marketing on behalf of growers results in greater market volumes and		3.2.2.	Government provides enabling environment1.
3(10)			3.2.3.	Farmers' produce quality product in consistent quantity in response to market requirements
	higher prices		3.2.4.	Private sector fills most other roles in the marketing and

Outcomes		Activities	Outputs
3(v)	Higher cash returns for commercial farmers and exporters		supply chain.
3(vi) 3(vii) 3(viii) 3(ix) 3(x)	Export receipts for agriculture increase by 2% annually compound from 2009 Import value of fruit and vegetable able to be grown in FSM decreasing by 2% annually by 2009 Higher cash returns for commercial farmers and exporters. 50% increase in rate of new land titles registered Future structure of coconut oil industry is established within private sector framework that offers social protection to OIs by 2006	3.3. Collaborative marketing strategy and funding shares agreed; Conduct market research & undertake promotions; Collect and provid information on marketing, management, and technical standards; Provide research back up (incl SPC/FAO sources) to meet priority needs of commercial farmers; Provide prize incentives for top farmers to visit countries; Review productivity of land survey & title program – consider contracting out; FSM DB	3.3.3. Number of promotional programs conducted 3.3.4. Appropriate data on standards disseminated to commercial farmers within 1 month of being gathered 3.3.5. Research data from SPC/FAO investigated & disseminated 3.3.6. Tag formers visit they DL commercial forms
3(xi)	20% higher cash returns for outer island (OI) farmers by 2007	reviews product range to provide for commercial farmer needs.	
3(xii)	At lest 3 new employment opportunities in each OIs by 2006 Nil direct subsidy payments	3.4. Business plan prepared with input from all stakeholders; Private sector investors accept the social aspects of the	 3.4.1. Coconut oil extraction and marketing business understood and accepted by all stakeholders 3.4.2. Public/private sector oil extraction business established 3.4.3. Oil extraction plants operating with skilled staff and
3(xiv)	to coconut producers by 2006 (v) 20% reduction in out	coconut crop in Ols; Oil extraction plants established in	000 000 gallens assent all sold annually by 2007

Agriculture	
Strategic	
Planning	
Matrix	

Outco	omes	Activities	Outpu	ıts
	migration rates from OIs to main islands or USA by 2010.	each OI; Courses run in OIs to ensure premium quality grade	3.4.4.	Closure of CDA by 2006
3(xv)	Coconut crop export receipts up by 10%	oils are produced	0.5.1	COM FCM approvative received and extension convice
3(xvi)	Value of commercial agriculture activity grows by	3.5. Develop capacity within FSM COM to provide quality, timely extension service on product by	3.5.1.	COM FSM cooperative research and extension service re-structured to differentiate between traditional and commercial farmer needs by 2007
	5% per year from 2007	product basis; Provide small- business development training	3.5.2.	Commercial growers receive specialized extension
3(xvii)	Number of commercially focused agriculture enterprises increases by 25% per year on 2004 baseline.	to support development of small farm business enterprises.		service by 2007
3(xviii)	(i) Value of agriculture exports increases 2% per year from 2006	3.6. Technical back up expert support needs identified by private sector; Government	3.6.1.	New food processing and value-adding businesses established and functioning entirely in private sector environment
3(xix)	5 new jobs created per year from 2006	finds & provides experts; Business plans written; FSM DB provides investment funds		
3(xx)	Food imports reduced by 3% per year from 2006	,		

Strategic Goal 4 Promote environmentally sound and sustainable production.

- > Establish effective mechanisms to control invasive species
- Discourage slash and burn farming/deforestation

Outo	omes	Activities	Outputs
4(i) 4(ii)	farmers by 10% technologies that minimize the farming practices	farming practices 4.1.2. Extension services include organic farming advice	
		4.2. Ensure environmentally sustainable production in practiced; Community and private sector leaders actively encourage environmental issues in agricultural production	4.2.1. Number of public education programs4.2.2. Number of workshops administered in communities4.2.3.

3

Appendix B-03: Fisheries Strategic Planning Matrix

Mission Statement:

The marine resources and fisheries of the FSM are managed and developed in consultation between designated authorities and stakeholders in a manner that ensures maximum possible economic and social benefit to the people of FSM and, at the same time, ensures sustainable resource exploitation and protects marine biodiversity.

Strategic Goal 1

Stakeholders and personnel contributing to fisheries and marine resource management and development are suitably trained and skilled to effectively participate in sectoral activities

- > The need for sectoral human resource development planning is recognized and supported
- > Fisheries and marine resource curriculum is included in school programs
- > Fisheries and marine resource programs at the COM are supported and opportunities for overseas scholarship are identified and pursued
- > Programs and courses at the Micronesian Maritime Academy are supported
- > Extension, public awareness and educational activities are included in National and State agency work programs
- > State agency personnel are provided with opportunities for skill development

Outo	omes	Activities	Outpu	Outputs	
1(i)	Human resource development plans are used as tools to promote the effective delivery of education and training	1.1. HR plans are prepared for each National and State marine resource and fisheries agency; HR plans are used to guide agencies in planning staff development activities;	1.1.1. 1.1.2. 1.1.3.	HR planning strategies are in place for fisheries agencies Skill levels of staff in public sector organizations are documented and training and development needs identified Training needs are identified and matched to	

Outcomes	Activities	Outputs	
programs Measurement indicator(s): Access to training opportunities for employees of fisheries	HR skills matrixes are developed for key stakeholder groups; HR skill matrixes are used to plan stakeholder skill development activities	opportunities to training	
organizations are improved A minimum of 8 State employees access technical training in any one year 1(ii) Improved knowledge of marine resource and fisheries matters in school graduates Measurable indicator(s): Curriculum is in place in the School system School assessment results Curriculum workshops completed (1 in each state) 1(iii) Improved capacity in fisheries and marine	1.2. Curriculum documents are accessed (or prepared) for school programs. Resource material from regional sources (USP, COM, NGO'S) is identified accessed and combined in a coordinated curriculum; Resource material appropriate to the curriculum is accessed (or prepared) and combined in a coordinated curriculum; Curriculum is adopted as an educational standard for delivery in school programs; Workshops (at least 1 in each state) are delivered for school teachers to build confidence in curriculum delivery	1.2.1. Curriculum documents for marine resource and fisheries are completed and incorporated into the national curriculum 1.2.2. Teaching resource materials are prepared and distributed to Schools 1.2.3. Marine and fisheries curriculum is formally adopted into National curriculum 1.2.4. A curriculum development workshop program is completed and implemented	
resource management through improved access to relevant technical and tertiary education and strategic research Measurable indicator(s): Number of tertiary graduates	1.3. COM programs in fisheries and marine resources are promoted and developed; Partnerships are developed and fostered for relevant applied research activities; International scholarship	 1.3.1. Increased COM programs and enrolments in fisheries and marine resources 1.3.2. Increased applied research activities and reporting 1.3.3. Increased FSM student enrolment in international courses and programs is achieved 1.3.4. NGO's are recognized as having a key role in knowledge 	

Outcomes	Activities	Outputs	
with fisheries and marine resource related qualifications (at least 5 per year) Number of technical graduates with relevant practical skills (at	opportunities are identified and accessed; Support to NGO providers of fisheries and marine resource related technical training	and capacity building	
least 20 per year)	1.4. Micronesian Fisheries	1.4.1. Increased numbers of MFA courses and graduates	
1(iv) Improved income to FSM nationals through	Academy course program for crew training is prepared on an annual basis; Course program	1.4.2. Increased levels of employment of FSM nationals on commercial fishing vessels (national and international)	
employment in fisheries activities	is circulated to relevant agencies and students are	1.4.3. Training courses are available to upskill subsistence and artisanal fishers for more effective production	
Measurable indicator(s): Numbers of persons employed	recruited; Courses are delivered as scheduled;	Increased skill levels of employees in shore based seafood processing and service activities	
 Numbers of persons employed in fishing activities increases (at 	Graduates are employed on	1.4.5. Revised food safety standards agreed and adopted	
least 200)	commercial fishing vessels; Training needs for subsistence	1.4.6. Enhances stakeholder skill levels in aspects of seafood	
 Number of persons trained at the Micronesian Fisheries Academy increases (at least 40 per year) 	and artisanal stakeholders are documented and suitable training opportunities are identified; Courses to promote food safety, HACCP, quality seafood handling and value adding are identified, promoted and delivered	quality and value adding	
 Number of persons employed in shore based seafood processing or services (at least 200 jobs) 			
1(v) Increased community level awareness in regard to fisheries and marine	In association with NGO's and stakeholders, appropriate workshop and community	Workshop resource materials to assist with awareness promotional activities are produced, distributed and available to facilitators	
resource management issues	awareness programs are developed to promote	1.5.2. A core group of skilled community resource management facilitators are in place	
Measurable indicator(s)	community based resource management practices; In	1.5.3. Community based resource management plans are	

Outcomes	Activities	Outputs
Community based resource management plans are established (at least 1example in each State)	association with NGO's and stakeholders, program facilitators are identified and supported to undertake a facilitation role; Strategies for community engagement are agreed and coordinated with relevant agencies and NGO's; Opportunities for community engagement are identified and undertaken	developed and implemented

Strategic Goal 2

Inshore and Coastal marine resources are monitored and managed in a consultative and participatory manner that respects traditional practice, utilizes established scientific methodology, sustains biodiversity and resource abundance.

- > Responsible agencies have well developed work programs and are adequately resourced to undertake activities;
- > National and State Agency relationships and activities are clearly defined;
- > Regulatory systems are enacted to ensure well considered resource management practices are in place;
- > The status of resources are monitored to identify potential over-exploitation;
- > Management systems are holistic and account for consultation in relation to wider resource management perspectives in areas such as coastal zone management, economic planning, land use, watershed management, tourism development, atoll management and biodiversity;
- > Traditional practices are respected and traditional knowledge inputs are reflected in management and regulatory processes;
- Management systems include marine protected areas and community based management;
- > Commercial activities are well defined, adequately monitored, exclusive to National participation and maximize national benefit;
- > Aquaculture development opportunities are identified and assessed;

Outcomes	Activities	Outputs
2(i) 1. Resource management and development agencies have clearly defined roles and complete work program activities in a cost effective and timely manner. Measurement indicator(s): Work plan documents Work plan review documents Budget reports	2.1. Stakeholder consultation is undertaken to prepare annual work programs for all agencies; Work programs are prepared, agreed and implemented; Work programs are utilized in the preparation of agency budgets; Stakeholder consultation is undertaken to review agency performance; Agency commercial activities are	2.1.1. Stakeholder meetings are conducted by each agency to assist in work program preparation 2.1.2. Work program documents are prepared for all agencies 2.1.3. Agency budget documents are prepared in support of work program activities 2.1.4. Work program review reports are produced annually by each agency. 2.1.5. Agency commercial activity reports are produced for all relevant agencies

Outcomes	Activities	Outputs
Commercial activity evaluation reports 2(ii) Information and communication flows between DEA Fisheries and	evaluated in relation to costs and options to divest certain functions to private sector interests 2.2. DEA Fisheries disseminates	2.2.1. Regular information bulletins are distributed from DEA to
State agencies and relevant stakeholders are optimized Measurement indicator(s) Information bulletins distributed (at least 2 per year) Consultation report (at least 1 every 2 years) 2(iii) Resource management plans for key inshore resources are	relevant information to State agencies from international agencies, regional agencies and stakeholder groups; State agencies utilize DEA Fisheries to assist in gathering information relevant to agency work program activities; DEA and State agencies participate in regional and international meetings and consultation	State agencies and stakeholders 2.2.2. Annual fisheries and marine resource consultations are facilitated 2.2.3. Reports of meetings and consultations are distributed to State agencies and stakeholders
in place in each State Measurement indicator(s): Community based management activities in place (at least 1 in each State) MPA's are established (at least 1 in each State) 2(iv) Resource stock assessment information is available and utilized in resource management planning Measurement indicator(s):	2.3. Community and stakeholder consultation in regard to resource management issues and possible mitigation strategies; Community based management priorities identified in each State and strategies for implementation are agreed; The role of National and State agencies and NGO's in support of community management implementation is identified; Assistance is provided to communities to implement management plan	Resource management plans for particular species are established in each state and include components of community based management as well as Marine Protected Areas. Agency roles in providing strategic support to the implementation of management plans are clearly defined and include NGO's

Ŧ
is
he
3
isheries
es Strategic Plan
7.7
ıt
õ
ic
P
la
7
z.
$\frac{3}{2}$
>
Ž
atri

Outcomes	Activities	Outputs
Resource assessment reports completed (at least 2 in each State per annum) Community management plans and MPA's in place in each State 2(v) Resource management plans include the establishment of at least Marine Protected Areas (MPA) or Marine Reserve in each State Measurement indicator(s)	2.4. In consultation with stakeholders, priorities for resource assessment are identified.; Strategies to implement resource assessment activities and resources required for implementation are identified; Resource assessments are undertaken and reported; The results of resource assessments are used in resource management decision making	 2.4.1. Key resources or those deemed to have potential for over-exploitation are identified and monitored and stock assessment reports are produced. 2.4.2. Practices for monitoring levels of exploitation of key resources are established and regular monitoring is achieved
 MPA's are established and recognized by regulatory authorities and stakeholders Marine reserves are established and recognized by regulatory authorities and stakeholders 2(vi) Resource management plans include components of community based management, comanagement and traditional management Measurement indicator(s): Community based management plans are in place and 	2.5. Stakeholder and community consultation is undertaken to promote Marine Protected Areas and Marine Reserves; The roles of stakeholder agencies in promoting and implementing MPA's or reserves is defined and complimentary agency roles are agreed; The regulatory environment in relation to recognition of protected areas and reserves is reviewed; Where appropriate, regulatory changes are drafted and proposed for enactment.	Community based strategies for the establishment of marine protected areas and marine reserves are agreed and reported 2.5.2. Regulatory systems are enacted at the State level in support of MPA and Marine Reserve Strategies
recognized by regulatory	2.6. Community level consultation is	2.6.1. Community based strategies for resource management,

Outcomes	Activities	Outputs	
authorities and stakeholders 2(vii) Where appropriate to regulatory systems, a formal and informal enforcement capacity is in place Measurement indicator(s): Number of infringement prosecutions Number of infringements reported by communities or stakeholders	undertaken to promote community-based management of inshore resources; Consultation empowers communities to make resource management related decisions with full knowledge of management options incorporating traditional knowledge; Traditional knowledge and information is collected and reported	co-management and traditional management are agreed and reported 2.6.2. Regulatory systems are enacted at the State level in support of community proposed management strategies	
2(viii) Opportunities for commercial aquaculture activities are evaluated and commercially viable activities are promoted and established. Measurement indicator(s): Aquaculture production is increased Aquaculture production has a demonstrated positive effect on the economy (range – import substitution, local sales, export) 2(ix) Opportunities for stock enhancement through aquaculture related activities	2.7. A formal enforcement capacity exists within designated State agencies to monitor compliance with formal rules associated with regulatory systems; Where formal regulations are in place, information as to the nature of the regulation is published and distributed to stakeholders; The designated agencies have access to resources to allow them to undertake adequate compliance monitoring; Community monitoring of compliance is encouraged and recognized	 2.7.1. Within each State there are designated and adequately resourced agencies with responsibility for monitoring compliance with formal rules and regulations associated with resource management. 2.7.2. Communities are made aware of the formal rules and encouraged to participate in compliance monitoring. 	
are evaluated and activities	Active programs are in place for the development and	2.8.1. Commercial aquaculture development opportunities	

Fish
isheries
ies Strategic Pla
ateg.
ic F
lanı
ing
Mat
atrix

Outcomes	Activities	Outputs
likely to have a positive impact on the status of stocks are promoted. Measurement indicator(s): At least 1 reseeding activity is undertaken	evaluation of aquaculture opportunities; Opportunities for foreign investment, joint venture, technology transfer and market development are evaluated; Commercial aquaculture development is supported by key infrastructure (hatcheries, distribution of juvenile stock); Links are maintained to regional and international aquaculture programs and initiatives; Training is provided to industry entrants in commercially viable aquaculture technology; Protocols are established for environmentally sound practice in relation to introduced species	strategies are identified 2.8.2. Commercial aquaculture business and investment plans are identified 2.8.3. Aquaculture development plans are agreed and strategies for implementation are in place 2.8.4. Technical skills in aquaculture are developed through training and technology transfer
	2.9. Active programs are in place for the development and evaluation of aquaculture activities likely to promote stock enhancement; Opportunities to implement stock enhancement strategies are evaluated; Stock enhancement related aquaculture development is supported by key infrastructure (hatcheries, distribution of juvenile stock); Links are	Stock enhancement related aquaculture development strategies are identified Stock enhancement related aquaculture development plans are documented and implemented Technical skills in aquaculture are developed through training and technology transfer

Outcomes	Activities	Outputs
	maintained to regional and international aquaculture programs and initiatives; Training is provided to stakeholders in aspects of stock enhancement related aquaculture; Protocols are established for environmentally sound practice in relation to introduced species	

Fisheries Strategic Planning Matrix

Strategic Goal 3 Inshore and Coastal marine resources are effectively exploited to meet subsistence and artisanal needs and optimized stakeholder social and economic benefits within sustainable parameters.

Policies:

- > Commercial activities are well defined, adequately monitored, exclusive to National participation and maximize national benefit;
- > Commercial activities are limited to the artisanal sector;
- > Opportunities to divert commercial fishing pressure from inshore resources are identified and promoted;
- > Artisanal fishers are encouraged to form Associations or collectives as a means of communicating more clearly with Government agencies;
- > Small boat fishing activities are safe and boats are adequately equipped;
- > Government infrastructure in place to support artisanal fisheries activity is operated on a commercial basis;
- > Commercial opportunities for aquaculture development are encouraged;

3.

Out	comes	Activities	Outpu	uts
3(i)	Commercial fisheries activity takes place within the agreed resource management	Inshore commercial fishing effort is monitored by the responsible agencies and takes	3.1.1.	Inshore commercial fishing activity is confined to artisanal fishers operating within a managed framework Commercial benefit from artisanal fisheries effort is
	framework	place within an agreed	3.1.2.	retained within local communities.
Mea	surement indicator(s):	management framework; Commercial fishing effort is		
>	Stock assessment reports show fishing effort is sustainable	restricted to FSM citizens operating within an agreed		
A	Reported catch levels remain constant CPUE in inshore fisheries is	resource management framework; Mechanisms for consultation with artisanal stakeholders are established		

Outcomes	Activities	Outputs
monitored and remains constant 3(ii) Inshore commercial fishing effort is managed at sustainable levels Measurement indicator(s): Stock assessment reports show fishing effort is sustainable Reported catch levels remain	3.2. Catch levels are monitored to obtain CPUE estimates; Estimates of sustainable fishing effort are prepared and utilized as a tool in resource management planning; Any identified sustainability issues are communicated to stakeholders and mitigation strategies agreed	 3.2.1. Commercial fishing effort is monitored in the context of sustainability estimates. 3.2.2. In situations where sustainability issues are identified a capacity exists to identify and implement an appropriate mitigation strategy.
constant > CPUE in inshore fisheries is monitored and remains constant 3(iii) Alternative income opportunities for artisanal fishers are identified and realized Measurement indicator(s) > Fishing income is substituted by income from alternative sources > (FAD fishing, tourism, aquaculture) 3(iv) Representative associations	3.3. State level FAD programs are established to encourage fishers to fish offshore for pelagics as opposed to fishing the reef; Opportunities for small charter fishing business development are appraised and developed; Opportunities to add value to landed fish are assessed (ie; improved local markets, improved fish handling); Workshop programs to promote alternative activities are organized and implemented.	 3.3.1. Potential opportunities for the diversification of fishing effort from inshore resources are assessed and those with the potential for alternative income generation are identified and promoted. 3.3.2. Artisanal fishers are made aware of potential alternative income generating activities.
or organizations are in place to promote the interests of artisanal fishers Measurement indicator(s): Fisher or community level	3.4. State agencies consult with fishers and community groups to establish possible benefits of setting up stakeholder organizations or associations; In situations where groups wish	Stakeholder representative organizations are established as liaison and consultation focal points for artisanal fishers.

Outcomes	Activities	Outputs
associations or organizations are established in each State 3(v) Infrastructure in place in support of the artisanal sector is commercially managed	to establish organizations or associations, State agencies act to facilitate the establishment process; Representative organizations are established and registered	
Measurement indicator(s): Contract or lease arrangements are in place for the commercial operation of fisheries infrastructure (at least 2 across the Country) (vi) Small boat safety incidents are reduced Measurement Indicator(s) A documented decline in the number of small vessels reported missing	3.5. Opportunities to pass management and commercial operation of infrastructure are reviewed; Where suitable opportunities are identified, plans for transition to new management arrangements are agreed and implemented; Transparent processes are identified to evaluate expressions of interest for contract or lease arrangements are implemented	 3.5.1. Government owned infrastructure is operated on a commercial basis by private sector parties or fishers representative organizations. 3.5.2. Infrastructure is effective utilized for community benefit.
 The annual cost of search and rescue deployments is reduced by 20% 3(vii) Commercial aquaculture activities are developed Measurement indicator(s): Aquaculture production is increased 	3.6. Sea safety promotional material is sourced from SPC and distributed to each State; Promotional material is distributed to communities; Options for improved small boat safety are assessed and strategies for programs in each State are identified.	3.6.1. Attention to sea safety issues results in improved community awareness and a decrease in the number of sea safety issues.3.6.2.
Aquaculture production	3.7. Active programs are in place for	3.7.1. Opportunities for the development of sustainable

Outcomes	Activities	Outputs
contributes at least \$50,000 pa to the economy.	the development and evaluation of aquaculture opportunities; Opportunities for foreign investment, joint venture, technology transfer and market development are evaluated; Commercial aquaculture development is supported by key infrastructure (hatcheries, distribution of juvenile stock); Links are maintained to regional and international aquaculture programs and initiatives; Training is provided to industry entrants in commercially viable aquaculture technology; Protocols are established for environmentally sound practice in relation to introduced species	commercial aquaculture are identified and projects for aquaculture development are identified. 3.7.2. 3.7.3. Technical skills in aquaculture are developed through training and technology transfer

Strategic Goal 4

Oceanic resources are monitored and managed with best practice methodology to ensure harvest levels remain within sustainable parameters.vest in tourism product development in order to diversify and expand the range of attractions and activities for visitors

- > Resource management plans are supported and utilized as the basis for resource exploitation
- > The FSM Tuna Management Plan is supported as the guiding principle for resource management
- > Stakeholder participation in the formulation and review of oceanic fisheries management and development strategies is encouraged
- > NORMA is supported as the national agency responsible for the management and development of oceanic resources
- > The Maritime Division of the National Police is supported as the active agency in maritime surveillance
- > Regulatory requirements in support of Title 24 legislation are developed and implemented
- > Access arrangements are negotiated to effect the best possible advantage to FSM
- > Fisheries Monitoring, Control and Surveillance activities are resourced and supported

Outcomes	Activities	Outputs
4(i) Fishing Catch and Effort in FSM waters is effectively monitored and information obtained is utilized in oceani fisheries management decision making Measurement indicator(s) 20 Observer trips 100 port sampling reports 90% of fishing effort monitored by log sheet	4.1. Fishing catch and effort in FSM waters is monitored by NORMA from a range of sources: - an active observer program, - an active port sampling program, - monitoring of transshipments, - collection of log sheets; Fishing catch and effort data is documented and analyzed; NORMA consultation with SPC in regard to data collection and analysis; Fishing catch and effort data is utilized in effecting	 4.1.1. Observer Trip reports 4.1.2. Port sampling and transshipment reports 4.1.3. Log sheet data entry 4.1.4. Annual Stock assessment reports produced based on statistical, scientific and biological information 4.1.5. An annual review of the tuna management plan

Outcomes	Activities	Outputs
CPUE by fleet measured and compared to target levels 4(ii) FSM is respected in the Pacific region and by	fisheries resource management decision making; Oceanic resources are managed in accordance with the Tuna Management Plan	
DWFN's as a major stakeholder in the management of Pacific oceanic fisheries Measurement indicator(s) FSM % of regional catch levels is sustained or increased 4(iii) FSM is able to sustain or improve fiscal returns from access arrangements Measurement indicator(s) Annual income from access	4.2. FSM is represented in regional and international forums relevant to the management and development of oceanic fisheries resources; FSM participates in all processes relating to meeting obligations and responsibilities under national law, regional and international treaties and arrangements, conventions and agreements; Meeting reports and information are made available to stakeholders	 4.2.1. FSM perspectives are reported at the Forum Fisheries Committee, the SPC Heads of Fisheries Meeting, the Western Pacific Tuna Commission, the Western Pacific Fisheries Council, the FAO Committee on Fisheries 4.2.2. FSM stakeholders are informed as to matters of interest and importance from regional and international meetings
licensing is sustained or increased	4.3. Fisheries access agreements are negotiated, concluded and	4.3.1. Bilateral Fisheries access agreements with Japan, Taiwan, Korea, Philippines
 Gros revenue of shore based facilities is sustained or increased 	implemented; Where possible, access agreements include strategies to promote service	4.3.2. Multi-lateral access agreements with USA and FSM arrangement
	benefits to FSM; Increased use	4.3.3. 200 long line vessel licenses
Transshipment activity levels are sustained or improved (1000 long line transshipments and 120 purse seine	of FSM ports for transshipment is included in access negotiation; Licensing procedures are timely and efficient	4.3.4. 200 purse seine vessel licenses

Ŧ
ï
isheries
7.
es
S
Strates
ıŧ
00
дic
P
lan
77
Ξ÷
00
Z
a_1
Ť.
\varkappa

Outcomes	Activities	Outputs
transshipments) 4(iv) Sectoral communications and information exchange between stakeholders are open and transparent Measurable indicator(s): Number of enquiries received (at least 20) Number of web site hits (at least 500) 4(v) Fishing activity in FSM waters is restricted to that undertaken by licensed and	4.4. Production of regular newsletters by NORMA; Assistance to States with economic and technical fisheries appraisals; Tuna Industry organization participation in sectoral consultations in technical, social and political matters relating to National fisheries development; NORMA web site developed with links to relevant agencies (SPC, FFA, NOAA, WPFMC, Tuna Commission) 4.5.	 4.5.1. 2 annual Norma newsletters produced and distributed 4.5.2. 2 fisheries appraisal reports produced annually 4.5.3. 2 annual industry consultations 4.5.4. Live website on line by the end of 2005.
recognized operators Measurable indicators A minimum of 50 sea days of vessel patrols 100% of licensed vessels have active ALC reporting	4.6. Coordinated inter-agency strategy for surveillance and enforcement developed in consultation between NORMA and the Maritime Division of National Police; Regional liaison in regard to the regional registry and regional surveillance activities maintained with FFA and other PIC's; Participation in boundary delimitation consultations; Enforcement of ALC protocols	 4.6.1. Agency surveillance strategies 4.6.2. Vessel patrol plans 4.6.3. Vessel registry information is available on demand. 4.6.4. Agreed EEZ boundaries are reviewed 4.6.5. Effective vessel tracking systems are maintained

Strategic Goal 5 Oceanic resources are exploited in a matter that ensures optimum economic benefit to FSM.

- > Investment in fisheries is actively encouraged
- > Commercial efficiency in public fisheries enterprise is encouraged
- > National participation in fisheries activities is supported and encouraged
- > Regulatory constraints to effective commercial activity are identified and reviewed
- > Economic and social benefits are prioritized in considering strategies for oceanic resource exploitation
- > Opportunities for value-adding are encouraged and promoted
- > Domestic basing and transshipment by foreign licensed vessels is encouraged

Outcomes	Activities	Outputs		
5(i) A suitable climate for investment in the sector is in	5.1. Improve the regulatory climate for investment in fisheries: - tax	and the second s		
place Measurement indicator(s)	incentives, - duty and import tax incentives, -export concessions, -fuel tax	5.1.2. The procedure for investment in fisheries is well defined and accessible.		
 Domestic investment of \$ 500,000 per annum for 3 years 	concessions, - improved or simplified process for vessel	5.1.3. An information product of guidelines for investment in fisheries is produced and distributed to potential		
 Foreign investment of \$1,000,000 per annum for 3 years 	clearance, - customer service training for personnel dealing with transshipment vessels; Improve the process of	investors.		
5(ii) Government owned enterprise is commercialized and profitable	investment approval: - document the current investment approval process, -			
Measurement indicator(s)	review options for the establishment of a Investment			
Infrastructure in each state is	Promotion Authority; Promote			

Outcomes	Activities	Outputs
operational and under management agreements with commercial operators Infrastructure facilities produce positive financial results Numbers of transshipments are	incentives for development in FSM fisheries: - produce investment guideline booklet or pamphlet, - participate in trade/investment promotion, - advertise investment , opportunities	
maintained or improved (1000 long line transshipments and 120 purse seine transshipments) 5(iii) FSM national participation in commercial activities related to fisheries is increased Measurement Indicator(s) Numbers of persons employed on vessels is increased to at least 200 Number of persons employed in shore based activities is	5.2. Complete SWOT analysis of all non-performing SOE's and associated infrastructure and review existing operations, constraints and business opportunities; Review strategies and opportunities to commercialize and privatize state operated fishing enterprises; Promote potential commercial benefit as a means to generate a will to commercialize; Implement plans to commercialize facilities	 5.2.1. For each SOE, business development opportunities are identified (or a lack of opportunity is confirmed). 5.2.2. Plans for possible commercialization are outlined. 5.2.3. Business development strategies for state owned enterprise are identified and agreed 5.2.4. Formal arrangements for commercialization are promoted and concluded 5.2.5. Productive SOE business activity is undertaken
increased to at least 300 5(iv) Opportunities to add value to fisheries resources are identified and implemented Measurement indicator(s) At least 1 investment in value added processing is identified Range and volume of value	5.3. Consolidate the role of the FSM Offshore Fishing Association as a key stakeholder in fisheries management and development; Promote careers in fisheries and marine resources in Schools (see goal 1); Promote and support FSM institutions engaged in fisheries related education and training (see	 5.3.1. A closer working relationship is achieved between Government agencies and the private sector 5.3.2. Information as to careers associated with fisheries is available in Schools 5.3.3. An agreed national strategy to promote support to FSM institutions engaged in fisheries related training 5.3.4. FSM participants in national, regional and international training courses

Out	comes	Activities	Outpu	uts
E (v)	added product is increased (3 products with 100mt a year total production)	goal 1); Identify and assess opportunities to access sponsored technical training and education (see goal 1)		
>	FSM ports are favored as transshipment locations surement indicator(s) 1000 long line transshipments per year At least 120 purse seine transshipments	5.4. Review international market opportunities for value added tuna and by-catch products; Identify possible markets for product range that could be produced in FSM; Review supply opportunities in relation to possible products and assess potential production economics; Identify product, supply and market formula and plan production activities; Complete business and investment plan and commence business activity	5.4.1. 5.4.2. 5.4.3.	Strategies for the commercially viable development of value added products in FSM are identified. Investor support is available to support value added product development Value added production is initiated
		5.5. Review current constraints to FSM transshipment and identify mitigation strategies; Identify opportunities to resurrect and commercialize transshipment facilities; Identify opportunities for improvement in air-freight operations; Identify opportunities to improve port services for both purse seine and long line transshipment.	5.5.1. 5.5.2. 5.5.3. 5.5.4.	Strategies to improve services and facilities for longline transshipment are identified and implemented. Strategies to refurbish non functional transshipment facilities for commercial activity are identified. Strategies to improve air-freight economics and availability are identified. Strategies to improve services and facilities for purse seine transshipment are identified

Appendix B-04: Tourism Strategic Planning Matrix

Draft Mission Statement:

Progressively develop the tourism sector to become the leading sustainable economic activity in the nation, and establish the FSM as a top quality, premium-priced international tourism destination by 2020

Outc	omes	Activities	Outpu	ıts
1(i)	Gross income of \$25 mn from tourism by 2008 and growth of 7% per annum on average (in current prices) thereafter	1.1. Formulate and implement state and national tourism development plans in collaboration with relevant state entities.	1.1.1.	All states to produce 10 year tourism development plan by 2006 covering inventory of existing facilities and attractions plan for new facilities, attractions, locations and
1(ii)	International tourism arrivals of 35,000 by 2008 and growth of 5% per annum thereafter			 tourism infrastructure outline investment requirements (public and private)
1(iii)	Year-round average hotel occupancy rates of 50% by		1.1.2.	human resources development plan Produce a statement of tourism sector policy guideline by 2006
1(iv)	2008 and 65% by 2010 Sustained total employment of 1,250 jobs in tourism		1.1.3.	Work with appropriate state entities to produce a coordinated national tourism development and promotional budget plan by 2007
	related activities by 2008, rising by 5% a year on	1.2. Establish structure and	1.2.1.	Have national tourism body established by 2005

Outcomes Activities Outputs		uts		
1(v)	average thereafter The FSM will be positioned	responsibilities, plan to market and promote tourism in	1.2.2.	FSM produces updated marketing and promotion plan based on development coordination with state VBs.
(1)	as a premium priced tourism destination by 2012 where	collaboration with relevant state entities.	1.2.3.	FSM co-ordinates plan for state and national marketing with state VBs
	the average expenditure per person per day (excluding airfare) is \$250.		1.2.4.	Implement annual international tourism marketing program from 2006 (see SG 8)
	, .	Formulate and implement active tourism sector investment promotion program	1.3.1.	State governments to monitor progress on tourism industry growth, adjust existing plans and forecasts as necessary and identify future supply side requirements
		in FSM and abroad as key part of national investment	1.3.2.	Identify sites and projects from state and national tourism planning process for tourism sector growth
		promotion program	1.3.3.	State and national governments identify and plan for public infrastructure investment
			1.3.4.	Each state prepares tourism project prospectuses by 2007
			1.3.5.	Annual revision and update of plans and projects in each state from 2008 (see SG 3)

To
urism
Strategic
c Plan
ning i
Matrix

Strat	Strategic Goal 2 Integrate the tourism sector into national economic planning and development					
Outcomes		Activities	Outpu	Outputs		
2(i)	A maximum of 17% of recurrent national government budget devoted to funding national tourism body from 2006.	2.1. Establish an appropriate administrative structure at national level by 2005 Appoint a member of cabinet and a member of the national	2.1.1.			
2(ii)	Tourism industry impact assessment incorporated in all relevant state and national government project investment proposals from	Congress to take direct responsibility for overseeing government action and funding allocations for the tourism sector	ı			
2(iii)	2006 Tourism sector cost benefit appraisal included in all relevant state and national public infrastructure investment proposals from 2006	National tourism development promotional budget plan integrated with other key sector investment priorities	2.2.1.	Draft tourism sector policy paper produced by Department of Economic Affairs by first half 2006		
			r 2.2.2.	Key tourism projects prioritized within national investment plans by 2007		
		2.3. Lobby for the tourism sector's interests to be taken into account in national investment planning (eg in relation to wate supply, airport development, health facilities)		By 2007, each state VB would prepare statement of tourism sector's requirements in all key areas of development investment (eg health, sanitation, infrastructure ect.) > state VBs to prepare		

Strategic Goal 3 Create an attractive and supportive environment for private sector tourism industry investors **Activities** Outcomes Outputs 3(i) Each state has a network of 3.1. FSM establishes a signposting 3.1.1. FSM develops and distributes an information sheet of tourism businesses in function for the tourism industry available support services within the FSM for tourism accommodation, restaurants, by 2007 to assist private sector sector businesses by 2007 ground and maritime businesses to access all FSM provides a telephone/e-mail service to tourism transport, and appropriate forms of assistance sector to refer specific enquiries to appropriate agencies. handicrafts/souvenirs that is from existing institutions in and institutions and companies by 2007 outside the FSM; and a support profitable, expanding 3.1.3. With appropriate international financial assistance, FSM function to work with State and At least one proposal for a establishes by 2010 a programme of grant assistance to national legislative bodies on new tourism sector small businesses and FSM members to contribute to the issues of land tenure. investment project a year costs of securing advice and business support where fee immigration, licensing and tax received each year in each payments are required. or fiscal incentives state from 2007 Effectively lobby state and national legislative bodies to 3(iii) Creation of 1.250 new selfcreate a supportive environment for investment in the sustaining tourism jobs by tourism sector. 2008, with a 5% annual increase thereafter 3.2. FSM introduces by 2008 a 3.2.1. FSM in 2007 develops and distributes tourism project function to identify and promote development guidelines to assist the private sector in new tourism projects, working preparing proposals for new tourism projects directly with the State tourism 3.2.2. State tourist offices commence work in 2007 in offices, and in association with conjunction with the tourism industry and State national and/or international governments to identify investment opportunities in the development finance tourism sector institutions FSM co-ordinates State efforts and compiles indicative 3.2.3. investment opportunities list commencing in 2008 and updated annually thereafter

\mathbf{T}
0,
Tourisi
=
۲.
S.
7
7.
Strates
7
α
ŧ
à
31.
\mathcal{C}
_
_0
2
7
anı
nni
nin
nning
nin
ning
ning Mo
ning
ning Matr
ning Mo

Outcomes	Activities	Outputs	
		3.2.4.	Regular FSM project opportunity briefings issued for each State to the private sector by 2008
		3.2.5.	Dissemination of FSM project briefings and tourism investment opportunities directly to potential FSM and foreign investors from 2008
		3.2.6.	FSM issues semi-annually project briefs and tourism market assessments to the banking and investment community in the FSM and abroad, and to international development finance institutions, from 2008
	3.3. Each state establishes a private tourism and hotel association by 2006	3.3.1.	FSM establishes an affiliation mechanism/ membership category for tourism industry associations by 2008
		3.3.2.	FSM convenes annual tourism conference for all tourism stakeholders
	3.4. Use State SBDCs to assist current and potential tourism sector entrepreneurs with business plans, market and financial analyses and general business advice	3.4.1.	100 current or potential entrepreneurs in tourism-related activities will visit/be assisted at SBDCs in the FSM annually

Strategic Goal 4 Invest in tourism product development in order to diversify and expand the range of attractions and activities for visitors

Outcomes		Activities	Outputs
4(i) 4(ii)	Accommodation capacities at various grading levels expanded to meet rising demand and to maintain at least 50% average annual occupancies Complete inventory of land and water transport services, urban, rural and coastal facilities, cultural centers and attractions used by tourists completed by 2006	4.1. Accommodation All state VBs to compile inventory of accommodation capacities and facilities FSM to co-ordinate accommodation inventories and produce national listings State VBs to prepare indicative accommodation expansion projects with support from FSM by 2007	 4.1.1. List all hotel rooms and hotel facilities by 2006 4.1.2. Preliminary assessment of existing standards (international or non-international), with specialist hotel sector input if necessary, also by 2006 4.1.3. Outline plan for upgrading existing accommodation stock by 2007 4.1.4. Outline plan for accommodation expansion by state and possible location by 2008 (integrated with tourism development plans (see SG1)
4(iii) 4(iv)	Top 3-5 sites/attractions that define tourists' purpose of visit identified in each state and set as main focus of product development by 2006 Outline product development plan in each State completed by 2006 (see SG1)	4.2. Transport All state VBs to compile inventory of transport equipment and services available to visitors by 2006 FSM to prepare national inventory of transport equipment and services available to visitors by 2007 State VBs to prepare outline expansion projects with support from FSM by 2008	 4.2.1. List of taxis available, vehicle ages and conditions for each state by 2006 4.2.2. List of rental vehicles available, including ages and conditions for each state by 2006 4.2.3. List of passenger and dive boats available, ages, conditions and safety equipment for each state by 2006 4.2.4. Outline plan for tourism transport sector expansion by state by 2008 (integrated with tourism development plan (see SG 1)

Outcomes	Activities	Outputs
	4.3. Urban/rural/coastal sites All state VBs to compile inventory of existing sites and	4.3.1. A list by state of all current urban, rural and coastal facilities and sites of interest to tourists completed by 2006
	facilities accessible and of interest to visitors by 2006	4.3.2. Outline development plans to improve access and attractiveness of targeted 3-5 sites in each state completed by 2007
	FSM to compile national inventory or list by 2007	4.3.3. Indicative longer term development plan for opening up
	 State VBs to identify apparent gaps in product range and sites with future potential with 	or constructing additional sites and facilities (eg craft centers, water taxi bases, beach facilities, retail etc) for international visitors prepared by 2008
	support from FSM by 2008	4.3.4. Specific plans for infrastructure and service
	 FSM to prepare outline product development plan by 2007 	improvements, eg marinas, cruise ships, out island facilities, also completed by 2008
	(integrate with national tourism development plan - see SG 1)	4.3.5. Signage erected in each state to all accessible tourist sites by 2006
	 Each state to identify top priorities for infrastructure 	4.3.6. Pedestrian/vehicular access to all key tourist sites established by 2008
	improvement relative to its unique selling points	4.3.7. Mooring buoy network for dive and snorkel boats established in main islands by 2009
	Each state to implement investment in at least one new tourist site or attraction (eg opening up a forest walk) every two years, commencing 2008	
	4.4. Cultural and historic centers and attractions	4.4.1. Submission to UNESCO re World Heritage Site applications by 2008
	 Seek World Heritage Site status as appropriate eg Leluh, major 	4.4.2. A national Site of Special Interest register established by 2008 by type (eg cultural, marine, historic etc)
coral reefs, etc. in agree	coral reefs, etc. in agreement	4.4.3. By 2010 official "SSI" signage in place at all designated

Outcomes	Activities	Outputs
	with landowners Compile inventory of lesser sites and designate as "Site of Special Interest" Identify and develop cultural activities in each state eg traditional dances, plant medicine, that revenues from tourism could help to sustain	sites 4.4.4. Access and guides to and printed material and visitor centers (if appropriate) for top 3-5 sites in each state completed by 2010

Strategic Goal 5

By the introduction of national quality standards, establish the FSM's tourism sector as of a sufficiently high standard in dive, eco- and cultural tourism to command a premium in global tourism markets

Outc	Outcomes		Activities		Outputs	
5(i)	Raise accommodation standards and grade according to internationally accepted levels by 2007	5.1. >	Accommodation FSM to work with international specialists to develop hotel grading system by 2007	5.1.1.	Mandatory accommodation grading scheme in place by 2008	
5(ii) 5(iii) 5(iv)	All dive operations carry internationally recognized accreditation by 2006 Land and water transport safety procedures meet internationally acceptable standards by 2008 Tourism industry standards raised sufficiently to charge a premium to international	5.2. >	Dive States to compile list of all dive operations and their accreditations and submit to FSM by no later than 2005 FSM to issue statement of minimum required dive standard (PADI or equivalent) to all dive operations by 2006	5.2.1. 5.2.2.	All dive operations to be licensed by FSM government to international standards by 2006 Annual renewal of FSM dive license thereafter	
	visitors by 2012 (see SG 1)	5.3. A	Transport Develop taxi testing and inspection system by 2008 Develop car rental inspection system by 2008 Develop tourist passenger boat standards by 2008 Apply above standards to taxi, car rental and tourist boats in	5.3.1. 5.3.2. 5.3.3.	State governments implement regular taxi licensing and inspection system by 2008 Rented cars to meet taxi standards by 2008 Specification of technical safety standards for tourist boats for 2008 eg life saving equipment on board, communications and navigational aids, regulations for operations outside protective reefs, crew competence etc. National boat operators' license system introduced by	

Outcomes	Activities	Outputs
	2008	2008
	5.4. General FSM with national and state governments establishes tourism industry inspectorate by 2008 to cover: > accommodation > transport > tourism service industry eg retail, restaurants, handicrafts etc. FSM introduces national tourism industry accreditation and licensing system in 2010 Introduce a requirement that only businesses accredited by the FSM can be included in national/state level promotion and marketing In 2011 FSM initiates debate with public and private stakeholders in all states on how to drive tourism consistently upmarket	 5.4.1. Tourism Service Industry Quality Accreditation from 2010 5.4.2. Tourist Boat, Car Rental and Taxi Operators accreditation from 2010 5.4.3. Proposals prepared for presentation to Congress in 2012 for planning controls, capacity limits, minimum daily charges and other internationally acceptable means of positioning the FSM as a premium international visitor destination 5.4.4. Tour guide certification standards and procedure established by 2006

To
ourisn
isr
sm Strategic Pl
tra
лtе
gic
7
lann
nn
ing
~ .
Matri.
7.

Outc	omes	Activities		Outputs		
6(i)	By 2010 hotels in FSM will buy 100% of their fish, 50% of fruit, 50% of vegetables, and 10% of meat from within the FSM	6.1. Each State's agricultural and fishing authorities to identify reliable local sources and suppliers of fish, meat, vegetables, and fruit in 2006.	6.1.1.	Demand assessment prepared by State VBs for consumption of local produce by tourism sector (accommodation, restaurants etc.) by 2007		
6(ii) 6(iii)	visitor to the FSM spends at least \$50 on locally produced artefacts, souvenirs, handicrafts etc. on each visit National craft advisor for artisans in place and operative by 2010	6.2. Tourism industry, state VBs and state governments to prepare tourist industry supply proposals and implement at producer level where necessary commencing 2007	6.2.1.	Tourism industry purchasing consortia and/or co- operatives created where necessary to "regularize" demand by 2007		
6(iv)		6.3. Develop a plan in each state for use of local construction techniques and materials in hotels, other tourism infrastructure and in cultural and other tourism related events by 2007	6.3.1.	An inventory of local building materials and construction skills to provide an information base for new local style tourism infrastructure, fixtures and fittings available by 2008		
	6.4. Develop and diversify range of local handicrafts and other products available for purchase by visitors	6.4.1.	Plans in place at key cultural attractions and within cultural groups for use of local raw materials etc. by 2008 A range of sustainable handicrafts and products available for sale to visitors in each state certified to FSM standards (SG 5) by 2010			
		6.5. Provide design and	6.5.1.	Where appropriate, State VBs to operate their own		

Outcomes	Activities	Outputs
	craft/production support services to local artisans and encourage the survival of traditional skills by teaching programs and presentations in schools	shop(s) and/or buy/sell co-operatives for local artisans by 2010
	6.6. Introduce new activities to craft industry eg candle making?, screen-printed Tee shirts?, basket ware?; Select annually individual local suppliers to the tourism industry worthy of receiving special recognition	6.6.1. Diversified and improved product range available to visitors

Tourism
ı Strategic
Planning
Matrix

Outc	omes	Activities		Outputs		
7(i)	Nationwide awareness of tourism's importance to the FSM's development by completing initial public	7.1.	FSM in coordination with all relevant agencies (and with assistance from international bodies, eg PATA) to develop	7.1.1.	Program developed for ongoing public awareness with supporting materials (information sheets, posters, media announcements/press releases, etc.) for adults by end 2006	
7(ii)	awareness campaigns in all four principal islands by 2008 Raise ability of residents to		tourism public awareness programs to inform FSM citizens of tourism's benefits,	7.1.2.	Annual public awareness campaigns by means of seminars, public meetings, radio, press ad, etc., on all four main islands to commence 2007.	
,	respond to the needs of tourists		opportunities and impact	7.1.3.	National tourism awareness program and supporting material for use in secondary schools designed by end-2007	
7(iii)	i) Gain the acceptance of citizens to tourism development plans			7.1.4.	Tourism awareness curriculum in all secondary schools introduced by 2008 so that at least one tourism awareness session per year is held in each school	
	7.2	7.2. Tourism industry stakeholders, FSM and state governments (with assistance from international bodies) to develop	7.2.1.	Educational material and programs designed by end- 2006 to inform citizens outside the tourism sector of tourists' interests, concerns, requirements and expectations		
			programs to educate citizens on tourists' requirements	7.2.2.	Information programs delivered to adults in principal settlements on all main islands, commencing in 2007, by means of public meetings, radio and press ads etc.	
				7.2.3.	Program of annual updates and refresher campaigns introduced in all states thereafter	
		7.3.	FSM, national and state governments to develop public	7.3.1.	All states to have presented tourism development plans and strategies to traditional, religious and other leaders	

Involve FSM residents in tourism sector development

Strategic Goal 7

Outcomes	Activities	Outpu	uts
	consultation mechanisms with traditional leaders, the church and other relevant		and gained broad approval as part of the formulation of state and national tourism development plans (SG 1) by 2007
	representatives on tourism development strategies	7.3.2.	An annual consultation meeting with traditional leaders etc held in each state on progress to date, amendments, specific project proposals etc. from 2008

Strat	Strategic Goal 8 Promote the FSM in appropriate markets and market segments to realize the sector's potential				
Outc	omes	Activities	Outpu	uts	
8(i) 8(ii)	Increase visitor expenditures 5% per annum from 2006 Increase visitor arrivals from key international and regional	8.1. FSM office, when established, to begin immediate implementation of National Tourism Marketing and Promotion Action Plan	8.1.1. 8.1.2.	Regional marketing representatives in key markets of Japan, USA and Europe appointed by end- 2005 For each regional agent: > documented business meetings with 15-25 travel	
8(iii) 8(iv)	markets at 5% per annum from 2006 Visitor surveys showing progressively rising visitor satisfaction levels of 5% per annum, commencing in 2007 and continuing until it culminates in an average satisfaction rate of 85% New business created based on a 5% increase in verifiable sales and/or ongoing new	As per the National Tourism Marketing Plan regional marketing agents will be selected to accomplish the following elements: arrange FSM representation at trade shows To meet the stated reporting and performance requirements of the FSM		trade representatives at each industry trade show attended documented contacts with travel consumers at each consumer travel show attended at least 25 new tour operators introduced to the FSM each annum three travel agent fam trips arranged to each FSM state pre annum three journalist fam trips arranged to each FSM state per annum editorial achieved in at least 6 appropriate	
8(v) 8(vi)	relationship contacts with the travel trade emanating from trade shows at which the FSM is represented. Demonstrate increased consumer awareness by a 10% higher web site hit rate per annum from 2006 Demonstrate a progressive 5% increase in positive	 deal with local media and arrange fam trips promote the FSM among local consumer groups deal directly with regional travel agents, tour operators and other travel industry interests help to arrange FSM multi-state packages 		 publications per quarter editorial content achieved in at least 6 appropriate publications per quarter 1-2 positive FSM oriented TV/film productions arranged each year 	

Outcomes	Activities	Outputs
editorial content in any publication based on measuring column inches,	 prepare region-specific collateral 	
print images and word count from 2006	8.2. The increasing use made of web information by the consumer and the industry to be exploited	8.2.1. New fully-interactive website launched by 2006 which is capable of providing downloadable brochures for consumers providing information for the travel trade providing an on-line reservation service providing holiday offers and competitions
	8.3. FSM to fully exploit the potential of electronic marketing	8.3.1. An active and ongoing electronic marketing campaign to targeted consumers (eg divers, eco tourists) and regular quarterly e-mail news bulletin service launched by 2006
	8.4. FSM to develop coordinated range of new collateral material	8.4.1. Set of co-ordinated collateral for press packs, trade shows etc completed by 2006
	8.5. Professional film company commissioned to prepare promotional video in 2007 and at regular 2-yearly intervals thereafter	8.5.1. Video promoting the FSM's tourism attractions for use at trade shows, travel industry events and specialist consumer meetings prepared by 2007
	8.6. FSM to commission photographer(s) to provide a range of quality digital and film photography of key tourist attractions in each state	8.6.1. Establishment of photographic library by 2007, under the control of the FSM, for use for collateral, on the website and by the travel trade, journalists, etc

Outcomes **Activities** Outputs Adoption by all existing 9.1. Existing businesses 9.1.1. FSM with appropriate specialist bodies to produce and tourism businesses of distribute an environmental practices guidance manual > State VBs and environmental environmental sustainability for the tourism sector by 2006 authorities work with existing and eco-friendly practices by National "Green" awards scheme introduced by 2007 tourism businesses and 9.1.2. 2008 (see SG 5) and each state VB to ensure that 30% of establishments facilities to encourage the 9(ii) Enforcement of adoption of environmentally are included on the register by 2007 environmental protection friendly practices 9.1.3. State level audit every 2 years to ensure existing tourism legislation within the tourism > FSM to set up enterprises working to environmentally sustainable industry environmental/sustainability standards instituted by 2007 9(iii) All new tourism conservation quality standards 9.1.4. Baseline environmental audit of existing businesses developments include for tourism businesses, in conducted by a respected environmental body (eg TNC) collaboration with international environmental impact to commence immediately assessment and conform to organizations (eg PATA) and national environmental issue "green" accreditation standards > FSM, state VBs, environmental Each state and the FSM to agencies and appropriate seek and if possible gain government agencies work internationally recognized together to set up award(s) for sustainable environmental monitoring tourism by 2006 systems for all tourism establishments Sense of local pride in the (accommodation, restaurants culture of the FSMs four ect) states (song, dance, music, traditions, local skills and State VBs to work with knowledge, history etc) landowners and traditional

actively to environmental conservation and cultural protection

Ensure that tourism is developed in an environmentally-sustainable manner and contributes

Strategic Goal 9

Outcomes	Activities	Outputs
	leaders to maintain and protect cultural, historical and natural sites	
	9.2. Awareness Each state arranges regular collection of trash, removal of old cars, beach clean-up activities etc and introduces other appropriate clean-up measures to enhance the environment by 2005 FSM works with national and state educational institutions and environmental organizations to further develop environmental sustainability and conservation modules on all school and COM tourism courses Consultations held with traditional leaders, church etc. on the way in which each state's traditional culture (dances, access to villages and footpaths, etc) can best be made accessible for the tourist without impinging on cultural values	 9.2.1. Beautification programs and anti-litter laws in place and actively followed 9.2.2. At least 6 annual cultural/environmental sessions given by each state VB director in secondary schools and colleges annually by 2005 9.2.3. State VBs produce lists of cultural events, places accessible to visitors and a guide to social and cultural sensitivities for the visitor by 2005, updated annually thereafter, co-ordinated and distributed internationally by the FSM
	FSM works with environmental and historical preservation	

Outcomes	Activities	Outputs
	agencies to protect and maintain historical sites and to make them accessible	
	9.3. New developments FSM to liaise with other government agencies and states to draw up set of national standards (including building regulations, location of development, appropriateness of development to its surroundings, use of appropriate materials etc.) to be included in all EIAs	9.3.1. National planning and building controls ensuring environmental sustainability for tourism developments agreed with each state and adopted as national Standards by 2007
		9.3.2. Environmental impact assessments which adhere to national standards, specifically designed for the tourism sector, carried out on all proposed tourism developments from 2008
		9.3.3. Collaborate with appropriate agencies to further develop existing monitoring programs to a National standard by 2008
	Appropriate environmental agencies to develop national monitoring system to ensure that no further damage is done to coral reefs by tourist boats, divers and snorkellers and to ensure protection of flora, fauna and natural resources from damage by the tourism sector	9.3.4. Environmental information guide for visitors produced by FSM and made available to all state VBs by 2006
	Training provided to boat operators, guides etc. on the importance of conservation, protection and sustainability to ensure preservation of the marine environment (see SG	

Outcomes	Activities	Outputs		
	11) FSM to liaise with state VBs and other relevant agencies to produce information guide for visitors in order to explain protection and conservation measures for natural, cultural and historical sites			

Strategic Goal 10 Put in place a reliable system of measuring tourism activity in the FSM to enable progress to be monitored accurately

Outco	omes	Activities	Outputs		
10(i)	New immigration systems established by 2006 which accurately measure arrivals from abroad by origin, length of stay purpose of visit, intra- FSM travel and tourism's	10.1.Immigration authorities in collaboration with the FSM design and implement an accurate paper-based visitor arrivals recording system by 2006	10.1.1. Redesigned immigration cards for foreign visitors introduced in all four states in 2006	10.1.1.	
10(ii)	impact on each state and nationally Establish accurate real time computer-based immigration system for visitors in each	10.2. Each state to issue monthly tourist arrivals reports immediately under current system and amended to comply with revised systems in 2006.	10.2.1. Periodic and regular reports issued on tourist expenditure, activities, nights spent, length of stay, origins, purpose of visit, satisfaction and other relevant issues commencing 2007	10.2.1.	
10(iii) 10(iv)	state by 2012 Annual visitor and accommodation surveys implemented by 2007 Detailed information (e.g	10.3.Based on reports from each State, FSM to compile reliable and accurate national tourist arrivals analysis on a monthly basis from 2006	 Monthly visitor arrivals analysis issued by FSM from 2006 (including on FSM website), based on reports fr each state, including hotel occupancy rates. 	10.3.1.	
	arrivals, length of stay, origin, purpose of visit etc.) collected and analyzed to inform tourism policy at state and national government level by 2006	10.4.Hotels supply State VBs with monthly occupancy rate returns, co-ordinated at national level by FSM statistical authorities	10.4.1.	10.4.1.	
10(v)	An accurate record of monthly hotel occupancy	10.5.Secure technical expertise to design, install and test real time	10.5.1. Computer network installed at all points of entry for retime monitoring of visitor arrivals and flows by 2012	10.5.1.	

rates available throughout the FSM by 2006	computer based immigration system for visitors in 2010 for implementation by 2012	
	10.6.Secure technical assistance to design and implement a regular and standardised tourist and tourism industry survey in all four states by 2007	10.6.1.
	10.7.Policy advice and adjustment Annual comparison of:	10.7.1. FSM presents in its annual report to President and Congress recommendations on future tourism policy
	actual versus planned visitor expenditure	based on ongoing monitoring of progress
	actual versus planned overnight stays	
	 monitoring market trends versus targets and 	
	 recommendations on policy adjustments and new measures 	

Outco	omes	Activities	Outputs		
11(i) 11(ii)	Key hotel staff in all four States to have completed core (basic level) training programs and hold appropriate certificates of competence by 2008 All other tourism service businesses to have completed core staff training programs by 2008	11.1.COM in collaboration with FSM state visitors bureaus and the FSM to define activities requiring specialized training in the tourism sector (e.g. hotel managers, front and back-office staff, food and beverage staff, visitors bureau staff, boat operators, tour guides, tourism retail employees) by 2006	 11.1.1. Tourism industry training operational plan and budgets prepared by 2006 covering three year period 2006-2008 11.1.2. Approval secured for Year 1 (2006) training budgets and outline budgets for Years 2 and 3 		
11(iii) 11(iv) 11(v) 11(vi)	Intermediate-level training completed for all selected recipients/groups by end-2009 Advanced level training completed for all selected recipients/groups by end-2010 Service quality accreditation schemes operative by 2008 for all tourism sector businesses All tourism-related transport	11.2.Carry out audit of training delivery agencies and capacities within FSM (College of Micronesia, individual specialists and other institutions) and identify resource gaps and prepare staffing plan to deliver required services to the tourism industry by 2006. Identify specific needs (ie customs and immigration staff, taxi drivers, vehicle rental staff and tourism retail employees) by 2006	 11.2.1. State visitor bureau staff training plan prepared by 2006 11.2.2. Program increased resources at COM state campuses for tourism certificate training programs agreed by 2006 11.2.3. Schedule of short duration vocational courses and onthe-job training for the tourism sector agreed by 2006 		
	services to hold FSM approval licenses by 2008	11.3.Identify specific needs and	11.3.1. Action program designed with responsible tourism		

Strategic Goal 11

Develop tourism services that are acceptable to the international tourism market through training programs

11(vii)	(See SG 5) 11(vii) Work place orientation course modules and procedures to be agreed and implemented for all new industry entrants by end-2008 11(viii) Certified training achievements to be formally incorporated into positioning of FSM as a premium tourism	courses (e.g. Japanese language training, boat/taxi/rental car maintenance) by 2006		authorities - possibly the FSM - to identify special industry training needs
11(viii)		11.4.Initiate three year training program covering 2006-2008 across all tourism sectors in all four states		Training schedules for main sub-sectors and designated individuals completed by State Visitor Bureaus and FSM by 2006 Agreement with all State governments on enrollment of participants for training programs and/or for on-site training modules
	destination by 2012	11.5.Design and implement annual employee certification within all key tourism sector activities and introduce basic qualification requirements as pre-condition of employment by end-2008 throughout the nation.	11.5.1.	First certificates of competence issued in 2006 for successful completion of agreed training modules and courses

Appendix B-05: Environment Strategic Planning Matrix

Mission Statement:

Recognizing the critical importance of the FSM's natural environment to the health and prosperity of this and future generations of Micronesians, the Environment Sector shall support the protection of the Nation's environment and achieve sustainable development of its natural resources. These efforts include the development, adoption and enforcement of policies, laws, and regulations in pursuit of the above-stated goals; the reduction and prevention of environmental degradation and all forms of pollution; adaptation to climate change; the protection of biological diversity, including assurance of adequate legal and international treaty safeguards relating to the protection of botanical and other agro-ecological property (including traditional knowledge and practices) belonging to the Federated States of Micronesia; the establishment and management of conservation areas; environmental infrastructure planning, design construction, and operation; interaction and cooperation with private sectors; and promotion of increased involvement of citizens and traditional leaders of the Federated States of Micronesia in the process of conserving their country's natural resources.

Strategic Goal 1 Mainstream environmental considerations, including climate change, into national policy and planning as well as in all economic development activities						
Out	Outcomes		Activities		Outputs	
1(i)	National environment functions centralized in an office/division	1.1.	Consolidate national environmental programs under	1.1.1.	All national environmental programs combined into an	

Outo	Outcomes		Activities		Outputs	
1(ii) 1(iii)	to better coordinate and assist the states in all aspects of the protection and sustainable management of the nation's ecosystems and natural environment by 2004 National Sustainable Develop Strategy completed by 2005 State BSAP/sustainable development plans developed	6 6 6 6	a central office/division with responsibilities including coordination of environment and natural resource conservation activities and assistance to states in addressing their environmental implementation needs (Pohnpei does not support – current situation is adequate)	1.1.2.	office/division by end 2004 (PRES, NCON) Decentralize/transfer appropriate services/functions from the National to the State level (PRES, NCON)	
1(iv)	and implementation begun in all States by 2005 Land-use and zoning master plans developed and	1	1.2. Strengthen the President's Council on Environmental Management and Sustainable Development (SD Council) through stronger state and NGO representation	1.2.1. 1.2.2.	Conduct quarterly meetings of the SD Council (NDEA) State representatives appointed by Governors and participating in all quarterly SD Council meetings (NDEA)	
1(1)	implemented for all four state population centers by 2006			1.2.3.	Core staff (at least one professional and one administrative) assigned full-time to SD Council activities and state support (NDEA)	
1(v)	financial assistance to municipalities for infrastructure and economic development promotes environmentally sustainable development			1.2.4. 1.2.5.	Sustainable indicators program developed and piloted by the FSM Environment Office/Division and the SD Council for the national level by 2005 (NDEA, NGO) Sustainable indicators program piloted in one state by	
1(vi)	practices by 2006 Environmental Impact	1.3. [Develop combined State	1.3.1.	2006 (NDEA, SGOV, SR&D, NGO) Establish Natural Resource Stewardship Councils in at	
. (۷1)	Assessments (EIA) carried out for 100% of all government and non-government	BSAP/ Sustainable Development Plans	1.0.1.	least one state, with community representatives designated by traditional leaders and communities. (NDEA, SGOV, SR&D, NGO)		
	development activities to minimize adverse impacts of development on the nation's			1.3.2.	Establish and sustain biodiversity clearinghouse nodes in all States by 2005 (NDEA, SGOV, SR&D, NGO)	
	acvelopment on the nations			1.3.3.	Support to communities for environmentally sustainable	

Outcomes	Activities	Outputs	
environment from 2005 onward 1(vii) 100% of environmental violations successfully		projects/ programs and assistance to individuals with projects that utilize land and marine areas for highest value use provided in all States (NDEA, SGOV, SR&D, NGO)	
prosecuted by 2010 1(viii) Climate change adaptation strategies that address	Improve land-use and sustainable development planning in urban centers	1.4.1. Land-use planning and zoning plans developed in all four urban centers (Lelu-Tofol, Kolonia, Weno, and Colonia) by 2007 (SGOV, SLEG, SR&D, MG)	
unacceptable risks to the natural environment and built assets, including those arising from natural hazards such as weather and climate extremes, variability and change		1.4.2. GIS (Geographic Information System) centers established and competently staffed in all four states with nodes in key government offices (Lands, Planning, EPA, Forestry, and Marine) by 2006 (SR&D, SEPA, SAFD, COM)	
developed and implemented (climate-proofing) in all states by 2010		1.4.3. Information compiled in a GIS system categorizes land and near shore waters according to their highest value (SR&D, SEPA, SAFD, COM)	
·		1.4.4. All key natural resource information (digital elevation model (DEM), soils, vegetation, rivers, wildlife populations, etc.) updated and digitized for each state by 2010 (SR&D, SEPA, SAFD, COM)	
	Promote and support sustainable land use and development planning in rural areas and outer islands.	1.5.1. Pilot long-term vision and sustainable development plans developed for at least 2 communities/ municipalities in each state by 2006 (SGOV, SR&D, MG, NGO)	
		1.5.2. Outreach and incentive scheme to encourage communities/municipalities to adopt environmentally friendly development alternatives developed and launched in at least one State by 2008 (SGOV, SLEG, SR&D, MG)	
		1.5.3. Establish and implement regular (quarterly) consultation	

Outcomes		vities	Outputs		
				process between state government and traditional leader councils in Yap, Pohnpei, and Chuuk (SGOV, SLEG)	
			1.5.4.	Identify and promote at least 2 traditional sustainable resource management practices in each state (SR&D, SMRD, SAFD)	
	1.6.	Strengthen State Environment Protection agencies to better	1.6.1.	All four State EPA Boards fully trained in environmental protection and sustainable development (NHHS, SEPA)	
		assess development projects, and enforce and prosecute offenders	1.6.2.	One lawyer/prosecutor recruited and hired to support each State EPA by 2006 (SGOV, SLEG, SEPA)	
	olleriders	1.6.3.	Double the EPA staff in each State designated as full- time enforcement officers by 2005(SEPA)		
			1.6.4.	EPA enforcement officers in all States trained in legal procedures, evidence handling, case development, etc. by 2006 (SAG, SEPA)	
			1.6.5.	EIA legislation improved and strengthened in all States by 2006 (SGOV, SLEG, SEPA)	
			1.6.6.	National standards for Environmental Impact Assessments & clearinghouse & standards for EIA expertise developed by 2006	
			1.6.7.	Roster of certified technical assistance for EIAs and other environmental planning by 2006	
			1.6.8.	Consortium of local and outside expertise to conduct EIAs by 2006	
			1.6.9.	Successful prosecutions for pollution, illegal earthmoving/landfill, and other infringements of environmental laws and regulations increased by 50 % by 2006 (SEPA, SAG)	

Outcomes	Activities	Outputs
		Laboratory facilities improved in all four states to handle basic environmental contamination testing of water and soil (NHHS, SEPA) by 2006
	1.7. Revamp existing State development review processes (including foreign investment) in all states to take into account environmental considerations and community input at all stages of project review	Development review processes with strong environmental criteria and involving community input adopted in two states by 2006 (SGOV, SLEG, SEPA, NGO)
	Draft necessary implementing legislation for international conventions to which the FSM is already a party	1.8.1. National legislation developed and passed to support FSM commitments under all major international environment conventions – Climate Change, Biodiversity, Desertification, Transport of Hazardous Wastes, etc. by 2008 (NDEA, NHHS, SGOV, SLEG, SR&D)
	1.9. Develop and implement integrated coastal environmental and resource management plans to enhance resilience of coastal and other ecosystems to extreme hazards exacerbated by climate variability and sea level rise.	1.9.1. Coastal management plans developed for four state centers by 2008 (SGOV, SRMD, MG, NGO)
	Integrate considerations of climate change and sea-level rise in strategic and	1.10.1. Existing facilities and infrastructure "climate-proofing" assessments and improvement plans developed for all States by 2010 (SGOV, SR&D, MG)

Outcomes	Activities	Outputs		
	operational (e.g. land use) planning for future development, including that related to structures, infrastructure, and critical assets supporting social and other services	1.10.2.	100 % of new government facilities and infrastructure designed and constructed to be "climate-proof" from 2005 onwards (PRES, NCON, SGOV, SLEG, MG)	

Strategic Goal 2 Improve and Enhance the Human Environment (Improve waste management (reduce, recycle, reuse) and pollution control

Outo	Outcomes		vities	Outputs		
2(i)	Ratification of Stockholm POPs Convention by the	2.1.	Limit and control importation and transport of polluting and	2.1.1.	Stockholm POPs Convention ratified by FSM Congress by 2004	
2(ii)	National Congress by 2004 Importation of POPs into the FSM reduced by 70 % by 2010		hazardous substances into and within the FSM	2.1.2.	National laws and regulations controlling trans-boundary pollution and transport of hazardous substances adopted by 2005 (PRES, NCON, NHHS)	
2(iii)	Solid wastes reduced by at least 10 % in all states, through reduced imports, recycling, and other methods			2.1.3.	All imports of ozone-depleting substances (such as CFCs and including other substances not yet determined) prohibited from 2005 onwards (PRES, NCON, NHHS)	
2(iv)	by 2010 Safe solid waste disposal sites designated, established and managed in 100% of State centers and 50% of rural				2.1.4.	National and State legislation to ban the import of POPs (persistent organic pollutants including polychlorinated biphenyls (PCBs)) and other hazardous chemicals adopted and enforced by 2006 ((PRES, NCON, NHHS, SGOV, SLEG, SEPA)
2(v)	municipalities by 2010 At least 50% of households in			2.1.5.	At least one state bans import of Styrofoam products and/or plastic bags by 2006 (SGOV, SLEG, SEPA)	
	urban areas served by effective public sewage treatment plants by 2010			2.1.6.	At least one local handicraft/industry within FSM designing and developing shopping bags (which could also be sold for tourists as souvenirs from FSM) by 2006	
2(vi)	and 50% of rural households				(SEPA, SR&D)	
			2.2.1.	National Implementation Plan for POPs completed by 2005 (NHHS, SEPA)		
2(vii)	Coastal marine water quality		pollution and hazardous wastes, including POPS	2.2.2.	Central temporary storage site for hazardous wastes designated and all hazardous wastes stored until they	

Outo	Outcomes		vities	Outpu	its
	(measured by ppm fecal				can be properly disposed of in all States (SEPA)
	coliform) around urban centers improved by 100% by 2008			2.2.3.	All existing POPs in the FSM identified and safely disposed of (through AusAID assistance program) by
2(viii)	100% of FSM communities will have ample access to safe				2006 (NHHS, SEPA)
	drinking water supplies by 2020			2.2.4.	Minimum pollution standards for imported vehicles adopted and enforced by 2006 (NHHS, SEPA)
2(ix)				2.2.5.	Import of all motor vehicles manufactured before 1996 prohibited (due to global ban on CFCs) (PRES, NCON, NDEA, SGOV, SLEG)
2(x)	in all States by 50% by 2010	2.4. Pro effe redu was recy alur	heavy metals, PCBs) lands in all States and undertake clean up operations	2.3.1.	Inventory and assessment of contaminated lands in all States completed by 2005 (NHHS, SEPA)
,				2.3.2.	Clean up plans developed and implementation begun by 2006 (NHHS, SEPA, MG)
				2.4.1.	Develop Integrated Waste Management Plan focusing on source reduction, reuse, recycling, composting, land filling, incineration, and disposal of hazardous wastes all States by 2010 (SEPA, MG)
				2.4.2.	Waste management and reduction campaigns conducted in all States by 2006 (SEPA, MG, NGO)
				2.4.3.	Hazardous waste (waste oil, batteries, etc.) collection services established in one State by 2006
				2.4.4.	Solid waste collection services serving 75 % of the population in all State urban centers by 2006 (SEPA, MG)
				2.4.5.	50% of solid waste collection services privately- managed by 2008 (SEPA)
				2.4.6.	Aluminum recycling centers established and operating in

Outcomes	Activities	Outputs
		at least two states by 2006 (SEPA, MG)
		2.4.7. Glass recycling centers established and operating in at least two states by 2006 (SEPA, MG)
		2.4.8. 100% of government office aluminum, glass, and paper wastes are recycled by 2008 (PRES, NCON, NHHS, SGOV, SLEG, SEPA, MG)
		2.4.9. 80 % of imported aluminum cans recycled nation-wide by 2006 (NHHS, SEPA)
	2.5. Designate, establish and/or upgrade, and manage easily accessible safe waste disposal sites on all populated islands, and encourage their effective	2.5.1. All four state urban centers will improve or establish and properly manage a designated waste disposal site (separating hazardous wastes, plastic or other impervious liner, composting, covering with soil, etc) by 2010 (SLEG, SEPA, MG)
	use	2.5.2. 50% of the nation's outlying municipalities will improve or establish and properly manage a designated waste disposal site (separating hazardous wastes, plastic or other impervious liner, composting, covering with soil, etc) by 2020 (SLEG, SEPA, MG)
		2.5.3. Private companies will manage 50% of waste disposal sites (SGOV, SLEG, SEPA, MG
	2.6. Remove and/or recycle abandoned cars and other bulky solid wastes (computers,	2.6.1. At least two States launch a fund financed by a tax on vehicle importers to finance the cost of removing abandoned vehicles by 2006 (SGOV, SLEG, SEPA)
	air conditioners, stereos, microwaves, washing machines, and other items	2.6.2. All abandoned vehicles will be removed from public areas and safely disposed of (including use as artificial reefs) in all States by 2008 (SEPA, MG)
	with electronic components that require special disposal) on all islands	2.6.3. Tax incentive created to encourage local or foreign entrepreneur to crush vehicles and export them to Asia

Outcomes	Activities	Outputs
		for the scrap metal market (NCON, NDEA, SGOV, SLEG, SEPA)
	2.7. Improve sewage treatment facilities in main population centers and resite sewage	2.7.1. Increase the number of homes with connection to sewage system in urban centers to 50% by 2006 (SPUC)
	discharge locations outside the barrier reefs to limit negative impacts on the marine environment in all state centers	2.7.2. Reduce to 0% the amount of untreated sewage discharge into lagoons in all States by 2008 (SPUC, SEPA)
	2.8. Develop and implement urban storm water management plans in urban centers	2.8.1. Storm water devices in urban centers (eg litter traps, sediment traps, oil/water separators) installed and/or improved in all State centers by 2008
	2.9. Provide and encourage the use of sanitary sewage disposal in all rural areas (septic tanks, water seal toilets, composting toilets, etc.)	2.9.1. 100 % of households in all States will have access to some form of sanitary latrines (temporary or permanent) by 2010 (NHHS, SEPA)
	2.10. Improve management of surface catchments and aquifers to meet projected	2.10.1. Limited-access Watershed Forest Reserves established above 50 % of village water systems catchments on high islands by 2010 (SGOV, SLEG, SEPA, SAFD, MG)
	water supply demands, including educational programs for landowners and	2.10.2. Increase to 50 % the number of households connected to a safe water supply system in all States by 2006 (SEPA, MG)
	other key stakeholders	2.10.3. Decrease by 50 % levels of contamination of groundwater aquifers and surface waters by 2010 (SEPA, MG)

Outcomes	Activities	Outputs		
		2.10.4. Watershed management fund from public water system revenues established in at least one state by 2006 (SGOV, SAFD, SPUC, NGO)		
		 In partnership with USGS and WERI, reestablish and monitor a system of stream gauges in all four States by 2006 (NDEA, SR&D, SEPA, SPUC) 		
	2.11. Continue to improve and extend centralized water	2.11.1. Public water systems extended to 250 additional households in each main island by 2006 (SPUC)		
	systems in urban centers, and improve community water	2.11.2. Water subsidies eliminated in all States.by 2010 (SGOV, SLEG, SPUC)		
	systems in rural areas to assure access to safe drinking water supplies.	2.11.3. 80 % of FSM rural households have access to safe drinking water (including roof catchment, sand filtering, and other low-cost, low tech methods) by 2010 (SEPA)		
		2.11.4. Low tech solar desalination plants are established on at least 4 populated outer islands in each FSM State by 2008 (SLEG, SEPA)		
	Increase preparedness and skills/capacity of relevant government and private sector	2.12.1. At least two states will establish and train an interagency pollution emergency rapid response team by 2006 (NHHS, SEPA)		
	agencies to rapidly respond to pollution emergencies (e.g., oil spills, ship groundings, natural disasters, etc)	Develop and implement legislation for the prevention, control and removal of oil spills in all States by 2008 (NHHS, SEPA)		
		2.12.3. Oil spill contingency plans developed and implemented in all States by 2006 (NHHS, SEPA)		
		2.12.4. National response plan to large oil spill events developed by 2006 (NHHS, SEPA)		
		2.12.5. Develop methods of waste/spilled oil collection and		

Outcomes	Activities	Outputs disposal in all States by 2009 (NILLIS SERA)		
		disposal in all States by 2008 (NHHS, SEPA)		

Strategic Goal 3 Reduce energy use and convert to renewable energy sources / Minimize emission of greenhouse gases

Outo	Outcomes		vities	Outputs		
3(i)	Decrease the import and use of imported petroleum fuels by 50% by 2020	3.1.	Decrease the use of imported petroleum fuels through improved energy efficiency,	3.1.1.	100% of all housing development funded by the US or FSM and State Governments shall meet minimum US standards for energy efficiency from 2006 onwards	
3(ii)	?? % of electricity in urban centers and ?? % in rural areas will be generated using		energy conservation, elimination of energy subsidies, and public education.	3.1.2.	(NDEA, SHA, USDARD) All electricity subsidies in the FSM eliminated by 2010 (SGOV, SLEG, SPUC)	
0(:::)	renewable energy sources by 2020			3.1.3.	All states fully enforce new pollution standards through existing vehicle inspection and maintenance programs	
3(iii)	100% of new public and 50% of private buildings in the FSM will meet US standards for energy-efficiency by 2006				3.1.4.	from 2006 onwards (SEPA, SPSD) 100% public and private motor vehicles in the FSM will meet minimum efficiency and pollution standards by 2006 (NDEA, NHHS, SPSD, SEPA)
3(iv)	Private motor vehicle ownership/number of vehicles will decrease by ?? % by 2010			3.1.5.	100% of energy generation in the FSM will meet USEPA and other relevant standards by 2008 (SDEA, SPUC)	
3(v)	The FSM will have a net gain of area covered by forests between now and 2020	3.2.	State population centers and system discourage private vehicle use, by a	At least one state will establish a public transportation system on the main island which will be regularly used by at least 30% of the island's population by 2010		
3(vi)	The FSM will have a net gain of area and health status of coral reefs between now and		including through educational programs	3.2.2.	(SGOV, SLEG) Vehicle ownership per capita will decrease by 50 % by 2010 (NCON, NDEA, SGOV, SLEG)	
3(vii)	2020 The FSM will remain a net			3.2.3.	Cycling paths will be established in one urban center by 2008 (SLEG, MG)	
((1)	importer of greenhouse gases	3.3.	Increase the use of solar	3.3.1.	Solar and/or wind power systems will be established and	

Outcomes	Activities	Outputs
through 2020	power, wind, and/or solar/wind hybrids for alternative power generation schemes, especially in rural and remote communities, through incentives and public education	operating on at least two outer islands in each state by 2008 (EU-funded energy project) (NDEA, SGOV, SPUC)
	3.4. Provide incentives for the use of alternative and renewable	3.4.1. 100% of new public buildings will be energy efficient from 2005 onwards (PRES, NCON, SGOV, SLEG, MG)
	energy sources and energy efficiency mechanisms in government and private sector buildings and development	3.4.2. New public buildings will integrate at least one alternative energy source (solar, wind, hydro-electric) to generate at least 50 % of energy needs (PRES, NCON, SGOV, SLEG, MG)
	projects	3.4.3. 25 % of existing public buildings will be refurbished with energy efficiency mechanisms by 2010 (PRES, NCON, SGOV, SLEG, MG)
	3.5. Undertake planning, regulatory, educational and other initiatives that will ensure	3.5.1. National government, in concurrence with all States, adopts policy of no net loss of forests and mangroves by 2006 (PRES, NDEA, NCON, SGOV, SAFD)
	the preservation of remaining native forests and agroforests and ensure reforestation for watershed protection and as a	3.5.2. Limited-access Watershed Forest Reserves established above 50 % of village water system catchments on high islands by 2010 (SGOV, SLEG, SEPA, SAFD, MG, NGO)
	carbon sink	3.5.3. Reforestation will be undertaken successfully in at least 50% of the nation's degraded watershed areas by 2020 (SGOV, SLEG, SAFD, MG, USDAFS)
		3.5.4. Ban or gradual ban of use of mangroves for fuel wood in all States adopted and enforced by 2006 (SGOV, SLEG, SAFD, MG, USDAFS)

Environment Strategic Pi	
Strategic	
Planning	
Matrix	

Outcomes	Activities	Outputs	
	3.6. Undertake educational and other initiatives that will prevent the degradation and destruction of coral reefs	3.6.1. National government, in concurrence with all States, adopts policy of no net loss of coral reefs by 2006 (PRES, NCON, NDEA, SGOV, USDOI)	
	Upgrade local capacity to carry out operation and maintenance of all renewable energy hardware	3.7.1. 3.7.1 Local utilities and private sector staff in all States able to operate and maintain renewable energy hardware by 2008 (SDEA, SPUC)	

Strategic Goal 4 Enhance the benefits of sustainable use of the FSM's genetic resources and ensure benefits derived are fairly shared amongst stakeholders Outcomes **Activities** Outputs Access to genetic resources in Draft and adopt mechanisms National legislation adopted protecting the FSM's 4.1.1. the FSM enhanced to support and legal framework regulating biodiversity and intellectual property and ensuring economic development and access to traditional equitable sharing of benefits from any utilization, improved quality of life knowledge, other forms of including enforcement protocol and penalties, by 2006 (NCON, NAG, NDEA, SGOV, SLEG) intellectual property, and Fully document traditional genetic resources in the FSM knowledge and practices National bio-prospecting coordinating expert panel so that the value of these pertaining to the FSM's established by 2005 (NAG, NDEA, COM, SGOV, SAG, resources is preserved for genetic resources by 2020 SR&D, MG, NGO) FSM citizens All research on the FSM's Process for the collection of biological specimens 4.1.3. needed for scientific studies which complies with traditional knowledge and genetic resources is permitted international regulations on the transport of biological and monitored to ensure that specimens established by 2005 (NCON, NAG, NDEA, COM, SGOV, SLEG) benefits are equitably shared by 2006 Model genetic access agreement negotiated and completed between the National and at least one State government and one private sector firm by 2008 (NAG,

NDEA, SGOV, SAG, SR&D, MG, NGO)

Outcomes	Acti	vities	Outpu	its
	in co tra	Encourage and assist individuals, families and communities to secure their traditional knowledge and enhance it where appropriate	4.2.1.	All State Foresters, and State Marine Resources and Agriculture Chiefs trained in ethnobotany and genetic access and benefit sharing by 2006 (NDEA, COM, SAFS)
			4.2.2.	Capacity of local staff in archaeology, museum/ curator, and other indigenous knowledge-based disciplines improved in all States by 2008 (NDEA, COM, SAFS, SHPO)
			4.2.3.	Traditional knowledge databases established and maintained in all states using World Intellectual Property Organization's (WIPO) recommended protocol by 2006 (NDEA, SAFD, SHPO)
			4.2.4.	Classes/training in ethnobotany and related subjects offered at College of Micronesia campuses in 2 States by 2006 (NDEA, COM, SAFD)
	research permitting proces assure that intellectual	enforce the current national research permitting process to	4.3.1.	100% of research on the FSM's traditional knowledge and genetic resources is approved and monitored by the FSM National Government and respects the nation's policies in this regard by 2008 (NDEA, SR&D, SHPO)
		property rights and genetic resources are protected	4.3.2.	Develop and implement a scientific code of conduct for all biodiversity and bioprospecting research in the FSM (NDEA, SR&D, SHPO, SEPA, NGO)
			4.3.3.	Research permit process that includes provisions for hiring local associates in order to assure the local capacity is developed and supported in conjunction with research on genetic resources and traditional knowledge (NBSAP) for permitting adopted by 2008 (NDEA, SR&D, SHPO, SEPA, NGO)

Strategic Goal 5 Manage and Protect the Nation's Natural Environment/Protect, conserve, and sustainably manage a full and functional representation of the FSM's marine, freshwater, and terrestrial ecosystems

Outcomes		Acti	vities	Outpu	nts
5(i)	A nation-wide system of community-led marine, freshwater, and terrestrial conservation areas where	5.1.	Assist states, municipalities and communities to identify high priority "areas of biological significance", and	5.1.1.	National guidelines for the selection, establishment, and management of protected areas are developed and approved by three out of four states by 2007 (NDEA, SR&D, SAFD, SMRD, NGO)
to conser is develor	special measures are enforced to conserve biological diversity is developed and implemented by 2010		support the development and implementation of conservation management plans for these areas	5.1.2.	Genetic resources, natural communities & ecosystems inventoried and support provided for state biodiversity nodes by 2006 (NDEA, SR&D, SAFD, SMRD, NGO)
5(ii)	Conservation areas contribute at least ?? % of the total national economy through		plans for these areas	5.1.3.	50% of government and NGO conservation area managers are trained in, adopt, and apply conservation area planning methods for their specific sites by 2008 (NDEA, SR&D, SAFD, SMRD, NGO, MCT)
	successful compatible enterprises including ecotourism, non-timber forest products, and mariculture.			5.1.4.	50% of the FSM municipalities legally designate at least one marine or terrestrial site (using the ABS sites identified in ecoregional plan developed under the NBSAP) as a conservation area by 2010 (NDEA, SR&D,
5(iii)	At least 20% of the nation's coral reefs are protected as				SAFD, SMRD, MG, NGO, MCT)
	"no-take" reserves by 2020			5.1.5.	Limited-access Watershed Forest Reserves established above 50 % of village water system catchments on high
5(iv)	Deforestation/Agricultural conversion rates are decreased to 0% by 2010				islands by 2010 (SGOV, SLEG, SEPA, SAFD, MG, NGO)
5(v)	No plant or animal species endemic to the FSM will go extinct, and endangered and			5.1.6.	Deforestation/Agricultural land conversion rates will decrease by at least 50% on all high islands in the FSM by 2006 (NDEA, SR&D, SAFD, NGO)
	threatened species status will	5.2.	Establish and enforce	5.2.1.	Rapid marine resource assessments carried out in 100%

Outcomes		Activities	Outp	Outputs	
	improve between now and 2020	protected area networks in all four states with the goal of protecting at least 20% of the FSM's reefs in no-take		of the high island reefs and 25% of the outer island reefs by 2010 (NDEA, SMRD, COM, MG, NGO)	
5(vi)	Comprehensive nation-wide biodiversity health and threat abatement monitoring program established and implemented by 2008		5.2.2.	Biological reef connectivity studies undertaken and completed in at least two states by 2010 (NDEA, SMRD, COM, MG, NGO)	
			5.2.3.	Reef resilience to climate change-caused coral bleaching will be integrated into the MPA network design process in at least one state 2010 (NDEA, SMRD, COM, MG, NGO)	
			5.2.4.	At least two Municipal governments in each state will successfully manage and enforce a conservation area in their locale, in partnership with traditional leaders and State government by 2008 (NDEA, SAG, SMRD, COM, MG, NGO, MCT)	
			5.2.5.	Successful prosecutions for infringement of laws designating and managing of conservation areas will be increased by 100 % by 2006 (NDEA, SAG, SMRD, COM, MG, NGO)	
		5.3. Develop and implement programs/policies that recognize, promote, and support community ownership and stewardship of natural resources and support for natural areas in all states, including environmentally compatible economic development enterprises.	5.3.1.	With National government assistance, State BSAPS completed for all four states and implementation begun (NDEA, SR&D, SMRD, MG, SAFD, NGO)	
			p 5.3.2.	Sustainable timber harvest determined for all FSM forests types and unsustainable logging and logging which deprives the culture of the natural resources it needs for its materials culture (traditional houses, canoes, etc.) controlled in all States by 2008 (NDEA, SR&D, SMRD, MG, SAFD, NGO)	
			5.3.3.	Policies encouraging & supporting in-situ conservation of traditional agrobiodiversity in support of landuse	

Outcomes	Activities	Outputs
		sustainability and nutritional health adopted in all States by 2008 (NDEA, SAG, SMRD, MG, NGO)
		5.3.4. Analyses of nutrient content of traditional crops compiled and disseminated in all States by 2006 (NDEA, NHHS, SAG, NGO)
		5.3.5. A law recognizing and supporting community-led conservation area designation and management is adopted by at least one State by 2006 (NDEA, SAG, SMRD, MG, NGO)
		5.3.6. 100 % conservation area management plans will integrate at least one traditional resource management practice (NDEA, SMRD, COM, MG, NGO)
		5.3.7. At least one successful ecotourism enterprise is established for 50 % of all conservation areas in the FSM by 2010 (NDEA, SMRD, COM, MG, NGO, MCT)
		5.3.8. Appropriate mariculture enterprises (sponges, giant clams, pearls, etc.) are successfully established at 50 % of the marine protected areas (MPAs) by 2010 (NDEA, SR&D, SMRD, COM, MG, NGO, MCT)
	5.4. Limit the use of destructive fishing technology, e.g., monofiliment gill net,	5.4.1. All States prohibit the export of monofilament gill nets with gaps less than three inches in width by 2006 (NDEA, SAG, SMRD, MG, NGO)
	underwater flashlights, SCUBA, fish poisons, etc.	5.4.2. All States prohibit fishing with SCUBA by 2006 (NDEA, SAG, SMRD, MG, NGO)
		5.4.3. At least two states prohibit night fishing with flashlights by 2008 (NDEA, SAG, SMRD, MG, NGO)
		5.4.4. Harvest and transport of threatened and endangered species by non-traditional means prohibited in all States

Outcomes	Activities		outs
			by 2010 (NDEA, SAG, SMRD, MG, NGO)
	5.5. Identify key ecological indicators to monitor and conditions of materrestrial biota, and	trends rine and regularly	 Standard fish and coral monitoring protocols established by the National and State governments and monitoring teams trained in all States by 2006 (NDEA, SMRD, COM, MG, NGO)
	assess their status, and set up community-based resource monitoring systems and, through education and training, assist communities to use this information for decision-making.	source 3.5.2 and, ad	 State fisheries agencies, in partnership with NGOs and Municipal governments implement standard state-wide fish and coral monitoring program by 2007 (NDEA, SMRD, COM, MG, NGO)
			. With support from the national government, each state update vegetation maps by 2008 using aerial or satellite photography and repeat no less than once very five years afterwards (NDEA, SMRD, COM, MG, NGO)
		5.5.4	. With support of the National government, each State will undertake new forest bird and fruit bat surveys by 2008, and repeat no less than once every five years afterwards (NDEA, SAFD, COM, NGO)
		5.5.5	. Establish and manage a community-based monitoring network in at least one State by 2006 NDEA, SMRD, COM, MG, NGO)
	5.6. Identify endangered threatened species in	n the	. FSM Endangered species law is updated and adopted by 2007 (PRES, NCON, NAG, NDEA, SGOV, SR&D)
	FSM, promote resea their biology, and est species recovery pla	ablish 3.0.2	 Keystone species, natural communities and ecosystem processes identified, linkages documented, and their condition and trends monitored in all States by 2008 (NDEA, SMRD, COM, MG, NGO)
		5.6.3	. Develop and implement species recovery plans for at least one threatened or endangered species in each

Outcomes	Activities	Outputs
		state by 2006 (in partnership with US Fish and Wildlife Service) (NDEA, SR&D, SMRD, SAFD, NGO, MCT)

Outo	Outcomes		Activities		ts
6(i) 6(ii)	Resource management and environmental studies are integrated into all levels of the nation's education curricula by 2010 Community environmental awareness improved and citizen involvement in	6.1.	Bring together educators, representatives of State and National Departments of Education and local and outside environmental experts to develop an appropriate environmental curriculum for the nation's schools	6.1.1.	A nation-wide environmental curriculum featuring the FSM's unique environment and biodiversity will be developed and implemented in schools throughout the FSM by 2010 (NDEA, NHHS, NDOE, SDOE, SR&D, SMRD, SAFD, NGO)
	conservation and environmental activities increased to 80% by 2010 (measured by public awareness surveys) (iii) Public awareness and understanding of the consequences of climate change increased to 80% by 2010 (measured by public awareness surveys)	6.2. Implement public educational programs that support good practices in environmental	6.2.1.	Carry out at least one conservation public awareness campaign in each state each year (NDEA, NHHS, SR&D, SMRD, SAFD, NGO)	
6(iii)			health, sustainable resource management, waste management and disposal,	6.2.2.	Carry out at least one climate change public awareness campaign in each state each year (NDEA, SR&D, SMRD, SAFD, NGO)
		equences of climate ge increased to 80% by (measured by public of the consequence hazards including related to extreme	awareness and understanding of the consequences of natural hazards including those related to extreme weather events, climate variability and	6.2.3.	Establish and implement regular (quarterly) consultation process between state government resource managers and traditional leader councils in Yap, Pohnpei, and Chuuk State by 2006 (SGOV, SR&D, NGO)
6(iv)	Sharing and transfer of environmental information between government, private sector, communities and NGOs improved 100% by 2008	change and sea-level rise		6.2.4.	National government, in partnership with the State governments, produce annual "state of the environment" report and present to traditional leaders councils from 2008 onwards (PRES, NSDC, NDEA, SGOV, SR&D)
		6.3.	Improve the dissemination and sharing of information on	6.3.1.	Clearinghouse mechanism (state computer nodes, web page, etc.) with easily-accessible state nodes

Strategic Goal 6

Improve environmental awareness and education and increase involvement of citizenry of the FSM in conserving their country's natural resources

Outcomes	Activities	Outputs		
	biodiversity, climate change, and other environmental information and activities		successfully implemented, regularly updated, and used regularly by the public by 2006 (NDEA, NHHS, SR&D, COM, NGO)	
	between different levels of government and with the general public.	6.3.2.	Environmental reference collection established and/or improved in major State and National environmental agencies (eg EPA, MRMD) by 2006 (NDEA, NHHS, SR&D, COM, NGO)	
		6.3.3.	College of Micronesia campus library environmental literature collections are improved and updated (measured by a doubling of library resources) by 2010 (NDEA, NHHS, SR&D, COM, NGO)	
		6.3.4.	At least one information dissemination specialist in each state will be trained and supported by 2008 (in partnership with SPREP) (NDEA, NHHS, SR&D, COM, NGO)	

Outcomes		Activities	Outpu	Outputs		
7(i)	Introduction of new alien invasive species into the FSM, transfer or existing alien	7.1. Develop and implement national and state laws and screening processes and	7.1.1.	National alien species screening process in place in all FSM ports of entry by 2006 (NDEA, SGOV, SR&D, , SMRD, SAFD, USDAFS)		
	species across state borders, and between islands within States will be totally prevented by 2010 improve screening at all ports for alien species introduction and genetically modified organisms (GMOs) to minimize their impact on the	7.1.2.	National GMO policy adopted and enforced by 2008 (NDEA, SGOV, SR&D, SAFD)			
-		,	7.1.3.	Increase quarantine staff at all ports of entry by 50% by 2008 (NDEA, SGOV, SR&D, SAFD)		
7(ii)	Control, and if feasible, eradication programs for top ten invasive species instituted in all states by 2008		7.1.4.	Deputization program for State resource management personnel to augment existing quarantine officers instituted in all States by 2006 (NDEA, SGOV, SR&D, SAFD)		
			7.1.5.	Legislation to require ships to empty ballast water at sea before entering FSM waters or to take other appropriate precautions to prevent the introduction of invasive and potentially harmful marine organisms instituted nationally by 2005 (PRES, NCON, NDEA, SGOV, SLEG, SR&D, SMRD)		

Strategic Goal 7

Establish effective biosecurity (border control, quarantine and eradication) programs to effectively protect the FSM's biodiversity from impacts of alien invasive species

Outcomes	Activities	Outputs
	7.2. Through training and education, further develop national enforcement capacity	7.2.1. Penalties on National quarantine laws increased by 100 % to further discourage violations (PRES, NCOM, NAG, NDEA)
	of all laws and regulations relating to alien species introductions	7.2.2. Increase prosecutions for violation of quarantine laws by 100% by 2008 (NAG, NDEA)
	7.3. Improve general awareness amongst the population to reduce the chance that invasive species are accidentally or deliberately spread around FSM.	7.3.1. Carry out a public awareness campaign to women's' groups in all States on the threat of invasive species/diseases through the deliberate introduction of ornamental plants by 2006 (NDEA, SMRD, SAFD, NGO)
	7.4. Increase local capacity to address biosecurity, particularly the ability at the State level to identify, control and eradicate alien invasive species.	7.4.1. At least 2 permanent positions focusing on invasive species control established and hired in each state by 2006 (NDEA, SMRD, SAFD)
	7.5. Develop and implement effective quarantine and inspection protocols and, where possible, physical	7.5.1. Develop and train an interagency Brown Tree Snake Rapid Response Force on all islands with ports of entry by 2006 (in partnership with the USGS) (NDEA, SGOV, SR&D, SAFD, NGO)
	barriers to alien species introduction (lighting, fencing, traps, dogs, etc.) at all ports and airports in the nation	7.5.2. Institute a policy that all arriving containers, vehicles and other cargo from Guam or the CNMI must be quarantined for three days by 2006 (NAG, NDEA, SGOV)
		7.5.3. With USGS and USFWS assistance, improve one State port/airport to be Brown Tree Snake-proof by 2008

Outcomes	Activities		Outpu	ts
				(NDEA, SGOV, SAFD)
	forces in each coordination b working on inv	sive species task state to improve between groups vasive species to	7.6.1.	All four states establish and fund inter-agency Invasive Species Task Forces to deal with priority invasive species by 2006 (NDEA, SGOV, SR&D, SAFD, COM, MG, NGO)
	present in the develop contro	identify and evaluate species present in the FSM and develop control/eradication plans for priority species, including rapid response plans for each state	7.6.2.	Develop rapid response plans for the five most serious invasive species threats after the Brown Tree Snake by 2008 (NDEA, SGOV, SR&D, SAFD, COM, MG, NGO)
	including rapid		7.6.3.	Invasive plant and animal database updated and widely disseminated to all State resource management agencies and private sector by 2007 (NDEA)
			7.6.4.	Develop control eradication plans for the top ten invasive species in each State by 2008 ((NDEA, SGOV, SR&D, SAFD, COM, MG, NGO)
	7.7. Control and eradicate (where feasible) priority invasive species, especially those that have been introduced but have not yet become widely established	7.7.1.	State Governments prioritize invasive species control and eradication in annual budgets from 2005 onwards (SGOV, SLEG, SR&D, SAFD)	
		7.7.2.	State Governments develop control and eradication protocols involving local communities, traditional leaders, and resource owners (SGOV, SR&D, SAFD, COM, MG, NGO)	
			7.7.3.	Complete review and recommendations for biological control in the FSM (what has been introduced, successes and failures, and future options) and widely disseminate by 2008 (NDEA, SR&D, SAFD, COM)

Strategic Goal 8 Create sustainable financing mechanisms for environmental and sustainable resource initiatives (FSMES, NBSAP)

Outo	Outcomes		Activities		Outputs	
8(i)	Micronesia Conservation Trust (MCT) capitalized with \$20 million, and providing \$1	8.1.	Fund directly and assist in securing foreign assistance for the Micronesia Conservation	8.1.1.	The Micronesia Conservation Trust will be established and endowed with at least US\$10 million by 2010 (PRES, NCON, NDEA, SGOV, SLEG, MCT)	
	million/year in grants to organizations and communities throughout the	illion/year in grants to ganizations and empower resource owners and local communities to manage their resources sustainably, as well as to improve the long-term viability of local and national environmental and sustainable programs	8.1.2.	All States will establish sub-accounts within the MCT to help support state environmental priorities by 2010 (SGOV, SLEG, MCT)		
8(ii)	Access to outside funding and technical assistance by the		well as to improve the long- term viability of local and	8.1.3.	GEF Small Grants Program provides \$250,000/year grant money through the MCT from FY05 onwards (PRES, NDEA, MCT)	
	government conservation agencies increased 100% by 2010		8.1.4.	MCT will access assistance from at least one other GEF grant window (PDF A, PDF B, medium-sized, or large grants) and other multi- and bilateral donors by 2006 (PRES, NDEA, MCT)		
8(iii)	Sustainable conservation funding mechanisms to support conservation activities in all states implemented and covering at least 25% of the	ext (bil	Facilitate effective access to external sources of funding (bilateral, multilateral, international) for	8.2.1.	Through clearinghouse mechanism, regularly provide information on environmental grant opportunities to State governments and NGOs from 2005 onwards (NDEA, NHHS, SR&D)	
	States' environmental project costs by 2010	environmental and sustainable initiatives		8.2.2.	Increase external environmental funding (excluding US government) by 100% by 2010 (NDEA, SR&D, NGO)	
`				8.2.3.	Hold fund-raising, proposal-writing, and project management workshops for government and non-government environment personnel in all States beginning in 2006 and biannually thereafter (NDEA, SR&D, NGO)	

Outcomes	Activities	Outputs	
		8.2.4. Maintain and expand existing SD Council database to include project information from all States by 2005 (NDEA, NSDC, SR&D)	
		8.2.5. Secure at least one GEF medium-sized grant every year and one GEF large grant every three years from 2005 onwards (NDEA, NSDC, SR&D)	
	8.3. Provide legal and financial incentives to encourage NGO fund-raising and development	8.3.1. Adopt national tax-exempt status for non-profit organizations to increase private sector support and donations from individuals and businesses by 2006 (PRES, NCON, NAG, NDEA, NGO)	
		8.3.2. At least one strong and effective state-wide NGO will be established in each state to engage local communities, the government and private sector in innovative and highly successful conservation partnerships by 2006 (NDEA, NGO)	
	8.4. Develop in-country sources of funding and investment for environmental and sustainable initiatives, including resource rentals and/or royalties, user fees for tourism activities, environmental bonds for development projects, and special taxes for visitors and tourists.	8.4.1. At least one local conservation revenue source will be established in each state that will effectively leverage additional resources (bilateral, private foundation, and other) to assure conservation success by 2010 (SGOV, SLEG, SR&D, MG, NGO)	

Stra	Strategic Goal 9 Enhance and Employ In-Country Technical Capacity to Support Environmental Programs					
Outo	comes	Acti	ivities	Outpu	ts	
9(i) 9(ii)	Staff of State government and non-government environmental organizations will be technically competent and highly capable to deal with all environmental challenges facing the nation by 2010 The College of Micronesia will emerge as the regional training "center of excellence" in environmental protection	9.1.	Assess technical training needs in the areas of waste management, drinking water quality, environmental monitoring, chemical safety, resource management, and emergency preparedness, and identify/develop training programs	9.1.1. 9.1.2. 9.1.3.	Training needs assessment completed by 2006 (NDEA, SGOV, SR&D, NGO) Comprehensive training program developed and implemented by National government by 2007 (in partnership with US Government agencies and SPREP) (NDEA, SGOV, SR&D, NGO) Through the clearinghouse mechanism, regularly provide information on environmental training and scholarship opportunities to State governments and NGOs from 2005 onwards (NDEA, NDOE, SGOV, SR&D, NGO)	
9(iii)	and natural resource management by 2010 Government and non-government organizations throughout the country will be linked together in strong networks and actively sharing best practices/successes, lessons learned, and			9.1.4.	National regulations requiring approval of visiting researcher's proposals, presentation of research finding to the public, and provision of copies of all reports/products; and contribution to the development of local capacity by hiring a local guide & assistant, affiliating with a local agency, NGO or institution, and/or contributing to a scholarship fund for local students studying environmental subjects established by 2005 (NCON, NDEA, SR&D)	

Outo	Outcomes		Activities		Outputs	
9(iv)	opportunities for assistance by 2010 At least 10 new FSM	networks to provide cost-	9.2.1.	Environment service providers network established and actively providing in-country training and technical assistance by 2008 (NDEA, COM, NGO)		
3(,	conservation/environment leaders are nurtured and developed by 2010		people to help build local technical capacity	9.2.2.	Cadre of EIA specialists trained and national network/ consortium of certified expertise developed by 2006 (NDEA, SR&D, COM, NGO)	
		9.3.	Develop formal (up to B.Sc. degree level) and informal conservation, resource	9.3.1.	Two environmental training programs/year developed and delivered by College of Micronesia to government and non-government agency staff (NDEA, NHHS, COM)	
			management and environmental protection training programs at the College of Micronesia	9.3.2.	Two year A.S. degree program in resource management and/or environmental science/health offered at all four state campuses by 2008 (NDEA, NHHS, COM)	
				9.3.3.	Four year B.Sc. degree program in resource management and/or environmental science/health developed and delivered at COM-FSM Palikir campus by 2010 (NDEA, NHHS, COM)	
		9.4.	Promote nation-wide and regional learning networks of local conservation and environmental leaders to promote peer learning	9.4.1.	The Micronesians in Island Conservation (MLIC) peer learning network will be expanded to include at least 16 conservation leaders (currently 10) from the FSM by 2008 (in partnership with The Nature Conservancy, NOAA, and other agencies) (NDEA, SR&D, SMRD, SAFD, COM, NGO)	
		9.5.	Establish and fund graduate (M.Sc. and Ph.D.) and undergraduate scholarships in environmental studies, with requirement that students	9.5.1.	Provide at least two graduate degree scholarships/year (M.Sc. or higher) in resource management/environment to deserving FSM students from 2005 onwards (PRES, NCON, NDEA, NDOE, NSDC, SGOV, SLEG, SDOE, COM)	

Outcomes	Activities	Outputs	
	return to the FSM upon completion of their studies for a fixed period (e.g., 2-5 years of service for every year of scholarship – to be determined by individual States)		
	9.6. Develop nationwide (government and NGO) environmental intern program to provide training and career opportunities	9.6.1. Offer ten in-country resource management/environment internships/year to FSM students at the College of Micronesia or studying abroad from 2005 onwards (NDEA, NHHS, NSDC, SGOV, SLEG, SDOE, COM, NGO)	

Appendix B-06: Health Strategic Planning Matrix

Draft Mission Statement:

The mission of the health sector of FSM is to promote and maintain a holistic system of health care that will provide an optimum quality of life for its citizenry.

	Strat	Strategic Goal 1 Improve primary health care services					
	Outo	omes	Activities		Outputs		
115	1(i)	Utilization of basic PHC services provided at the	Supervise, monitor, evaluate and train health assistants (HAs) in key public health and PHC services using continuous	1.1.1.	At least three (combined) supervisory, monitoring and training visits per year to each health centers.		
		dispensary level increased by 20%		1.1.2.	HA present at dispensary/health centers on official business 90% of time		
	1(ii)	Utilization of basic PHC services provided at hospital	quality improvement (CQI) principles	1.1.3.	HA provide assistance to PH field team 95% of time and considered useful by PH team		
		outpatient clinics is decreased by 50%		1.1.4.	Sufficient personnel at state health department level to supervise, train HAs		
	1(iii)	Improved performance of health workers in delivery PHC/PH services as		1.1.5.	CQI techniques incorporated into PHC and PH management practices		
		demonstrated by:		1.1.6.	Curriculum established for Health Assistants		
	>	immunization rate of all 2- year old children is increased to 85%		1.1.7.	95% of HAs trained in: public health		
	>	contraceptive prevalence		>	environmental health family planning (including condoms, birth control pills		

Outcomes	Activities	Outputs
increases to 50%, at least 3 MHC visits reported for all pregnancies		(BCP) and FP promotion and education (by end of year 2) SAMH including dispensing of some SAMH medicines
1(iv) hypertension screening and monitoring undertaken at 50% of PH/PHC encounters > 50% of overweight/obese		 PHC including using PHC drug formulary and/or update STD-HIV/AIDS treatment and preventiv measures. 1.1.8. Establish community health profiles.
patients receive diabetes screening, nutrition counseling > PHC monitoring/supervision dispensary visits according to schedule 90% of time	Inprove quality and frequency of delivery of public health/prevention services by PH field team	1.2.1. PH teams fully staffed 1.2.2. PH teams capable of delivering wide range public health services through multi-purpose public health training of personnel 1.2.3. 3 field trips/year/community budgeted and authorized.
 100% increase in PH promotion visits from baseline on monthly dispensary report form quality practices and 	Supply essential drugs, medical supplies and equipment to dispensaries and for field trips	Sufficient essential antibiotics, analgesics, FP supplies etc available at all dispensaries >11 months per year Sufficient drugs and supplies available for 95% field visits Sufficient and functioning bio-medical equipment
techniques and a full range of services are in place for 75% PHC unit and PH teams in all States	Maintain PHC facilities in good working condition	1.4.1. 90% of dispensaries in good operating condition 1.4.2. Community contributes to maintenance and repair of 95% of all dispensaries
1(v) 80% of dispensaries report no major drug/medical supply shortages in last year	Establish partnership between communities, Health A,ssistants, Public Health	Council meets 2 + times per year with participation of health department (or functioning Health Advisory Boards)
1(vi) At least 75% of all bio-medical equipment is functional at all times 1(vii) Dispensaries in good	teams, youth groups and state health department for delivery of Primary Health Care services.	1.5.2. Community financial and in-kind support for repair and maintenance of dispensary1.5.3. Build in tax incentives for private sector to promote in-kind support and business environment.

Health
Health Strategic Plan
Planning 1
Matrix

Outo	comes	Activities	Outputs
	operating condition		
1(viii)	Community involvement in management and support of dispensary.		
1(ix)	Increase the percentage of mothers that breastfeed from 66% to 75%.		

Strat	Strategic Goal 2 Improve Secondary Health Care Services						
Outo	comes	Activities		uts			
2(i) 2(ii)	QA practices and techniques in place in all states Average length of hospital stay is decreased	Establish quality assurance (QA) for all hospital departments and activities and all health department personnel.		QA established in all state hospitals QA training for management, planning and reporting for all senior personnel and supervisors provided in all state hospitals			
2(iii)	Hospital acquired infection rate is decreased (insert baseline data, if any).		2.1.3.	Practice standards established for security, food services, maintenance, renovation/repairs, management, housekeeping /custodial, laundry, ambulance, embalming, prosthesis			
2(iv)	Appropriate number of trained key health personnel (e.g. doctors, pharmacists, dieticians, physical therapists,			Practice standards established for staff of laboratory, x-ray, mental health, pharmaceutical, paramedical, medical supplies, inventory, and management staff.			
2(v)	nutritionists, health practitioners, nurses, HAs, administrators) v) Pharmacy and medical supply		2.1.5.	Practice standards established for professional staff (nurses, dentists, doctors, physiotherapists, hospital administrators, health information staff) and ratios of health workers to patients and population.			
	personnel trained in procurement policies and		2.1.6.	Conduct periodic qualitative surveys.			
2(vi) 2(vii)	procedures Rational pharmaceutical and supply management principles and practices are adapted by all states Availability of essential drugs	Provide regular continuing education for health professional staff	2.2.1. 2.2.2. 2.2.3.	Distance education established at all state hospitals			
	and medical supplies is increased.		2.2.4.	Pharmacy and medical supply personnel trained in procurement policies and procedures, including financial			

Health
Strategic
Planning
Matrix

Outo	comes	Activities	Outputs	
	Functionality increased (down- time decreased) of biomedical equipment.		2.2.5.	management, records Schedule of onsite training and workshops established for all health workers in each state
2(ix) 2(x) 2(xi) 2(xii) 2(xiii)	Referral processes based on equity and strict application and cost of out-of country referrals held to 5% of health budget All newly constructed facilities in compliance with approved standards All facilities have maintenance cost set aside for each facility Access to hospital services is increased Improve local health services to minimize off-island medical	Ensure adequate medical and pharmaceutical supplies are available for hospital, PH team, and PHC program and maintain equipment in good working condition	2.3.2. 2.3.3. 2.3.4. 2.3.5. 2.3.6.	hospital needs without rationing. Inventory management program established for all health department equipment (e.g. lab, x-ray,
	referrals.	Develop infrastructure plan to ensure adequate facilities and maintenance and ensure access to hospital services. Construction of a new hospital for Kosrae and other infrastructure development for the other States.	2.4.1. 2.4.2. 2.4.3. 2.4.4.	

Strategic Goal 3 Prioritize health promotion and services for major health problems						
Outc	omes	Activities		Outputs		
3(i)	Consensus agreement on nation-wide health outcome priorities and a minimum		D Prevention and ams in all states healthy lifestyles,		Review health services, decide on outcome priorities and agree on a "minimum package of essential services"	
5.4W	package of essential services		ealthy choices	3.1.2.	Each state has health education program and a qualified health educator oriented predominantly toward prevention	
3(ii)	95% of all 2-year olds will be fully immunized.			0.4.0	of NCDs	
3(iii)	Contraceptive utilization				School health programs established in all schools	
O(III)	prevalence rate increases to 70% from 55% of all childbearing age women.			3.1.4.	Good Health promoted in settings where people live, work and learn to modify risks of unhealthy lifestyles/environment	
3(iv)	At least 3 MHC visits reported for all pregnancies		3.1.5.	Exercise program promoted and infrastructure (sports and recreational facilities: gym, tracks, courts with lighting for night use)		
3(v)	Hypertension screening and monitoring undertaken at 50% of PH/PHC encounters			3.1.6.	Health workers and teachers complete physical examinations annually.	
3(vi)	50% of overweight/obese patients receive diabetes screening, nutrition counseling	3.2. Establish Prevention and Control programs for communicable diseases(TB,	3.2.1.	Each state has health education program and qualified health educator oriented toward prevention of communicable diseases		
3(vii)	Most people know common preventable causes of	Hepatitis, STDs, Hansen's disease and HIV) in all states		3.2.2.	Pilot study completed to establish prevalence of STDs	
	diabetes, hypertension and other NCDs.	3.3. Make MCH/FP/immunization a priority in all states.		3.3.1.	Comprehensive women's health program (women of child bearing age receive PAP smears and have access to FP	
3(viii)	Substance abuse decreased				techniques)	
3(ix)	Prevalence of STDs			3.3.2.	Immunization reaches 95% of targeted populations	
	decreased			3.3.3.	Enforce statutes requiring immunization for all school age	

Outo	Outcomes		Activities		Outputs		
3(x)	Number of children <5 years with VAD is decreased				children.		
3(xi)	Number of women and children with iron deficiency anemia is decreased	3.4.	Establish a nutrition program in all states focusing on both NCDs, benefits of breastfeeding	3.4.1. 3.4.2.	Nutrition programs established at all levels including national and/state and PHC levels PH team promote good nutrition on half of their field trips		
3(xii)	Increase public awareness about the health risks of being overweight.		and on child nutrition	3.4.3. 3.4.4. 3.4.5.	IDA identified and treated VAD programs delivered in all communities Conduct periodic nutritional surveys.		
3(xiv)	Increase appropriate services for mental illness. Fundamentals of PH achieved: clean water, , sanitation and garbage disposal available to 100% of FSM people by 2020. Prevalence of diarrhoeal	3.5.	3.5. Establish substance abuse and mental health prevention services in all states	3.5.2. 3.5.3.	95% of schools to receive SAMH programs services SAMH medicine/supplies available in 95% dispensaries 80% of villages receive SAMH health promotion/training Legal interventions established to prevent spread of tobacco, betel use, and other substance abuse		
3(xvi)	Prevalence of diarrhoeal diseases is decreased Incidence of dental caries is decreased by 10% among school-aged Conduct epidemiological surveillance as an early warning system to prevent outbreaks of communicable disease and other diseases requiring public health action.	3.6.	Strengthen surveillance and monitoring functions of the environmental health program (water, hygiene, sanitation, and food safety) Strenthen enforcement of sanitation regulations.	3.6.2. 3.6.3.	health program (including visits to communities/public awareness)		
		3.7.	Conduct a comprehensive dental health and preventative program	3.7.1. 3.7.2. 3.7.3.			

Outcomes	Activities	Outputs
		functional

Outo	comes	Activities	Outputs		
4(i)	States and National Government agree to basic elements for universal health insurance	4.1. Develop appropriate and acceptable health insurance and health maintenance schemes for FSM with aim of	4.1.1.	change the current management and operation of the plan to be responsive to the need of the state hospitals/health departments (i.e., remunerate on time), and collect data on causes of leading medical referral	
4(ii)	Universal health insurance prototype established, with aim	including all FSM citizens	412	cases. NIP policies transparent and easily understandable	
	of gradually including all FSM citizens		4.1.3.		
4(iii)	Number of individuals enrolled in NIP increased.		4.1.4.	Consider health maintenance programs other than regular health insurance programs, in order to provide	
4(iv)	Feasibility for health reform			universal coverage.	
	assessed in all states, including safety net for the uninsured citizens.	4.2. Increase enrollment (after necessary statutory	4.2.1.	Number of government employees with NIP has increased	
4(v)	Equitable access to health services to all FSM citizens (regardless of location or economic status)	amendments): Phase I: Mandatory for national/state government employees (2-3 years)	4.2.2.	Number of private sector employees with NIP has increased	
4(vi)	Cost efficient and appropriate co-payment/user fee system in	Phase II: Mandatory for private sector (2-4 years)			
46.35	place in all states	4.3. Standardize and update a fee	4.3.1.	Law changed in all states and national government	
4(vii)	Health insurance/financing reform assessed in all States.	schedule for all of the FSM, with State health departments to	4.3.2.	Fee schedule and exemption study completed (1-2 yrs.)	
	including safety nets for uninsured citizens.	keep Program Income	4.3.3.	Increase in amount of fees for services (if appropriate) at the hospitals	

Develop a sustainable health care finance mechanism

Strategic Goal 4

Outo	comes	Activities	Outputs	
	Off-island medical referral decreased to 5%. of current expenditures.		4.3.4. 4.3.5.	F
4(ix)	Community assumes responsibility for maintenance and repair	4.4. Consider other sources of funding	4.4.1.	promotion activities, including sports, recreational, health
4(x)	Amend the National Customs Act to create sin taxes for the purpose of funding uninsured referral patients.		4.4.2.	counseling centers. Establish tax incentives for private sector to promote inkind support and business environment.

Strategic Goal 5 Improve capacity and accountability systems					
Outo	comes]	Activities Output		uts	
5(i) 5(ii)	Performance based planning and budgeting established in all state DHS 95% of DHS managers trained in data based decision making	5.1. Improve management skills of health service administrators	5.1.2.	Health service managers trained in fiscal planning and management Health service administrators trained in use of management information systems. Health service administrators trained in performance	
5(iii)	using locally generated data Cost efficient procurement policies and procedures for pharmaceuticals and medical	5.2. Establish appropriate Management information	5.2.1.	- P	
	supplies established in states and DHESA	systems (MIS), including health data reporting in all state health departments	5.2.2.	MIS used as basis for QA program all states State and national statistics officers trained in use of systems and reporting	
5(iv)	Financial management and planning training developed for key permanent management	Develop core data set indicators. Strenthen Public Health surveillance system in the FSM.	5.2.4. 5.2.5.	State and national statistics systems and equipment working effectively, backed up and standardized Disease reporting to international agencies to meet	
5(v)	personnel in state DHS Appropriate positive incentives in place to encourage the desired behaviors of			international health treaty obligations. A reference library containing all health related reports at National and State levels	
	organizations and individual managers		5.2.7.	Establish mechanism and procedures for prioritizing disease and health indicators for surveillance.	
5(vi) 5(vii)	Health Statistics units at National and State levels competently staffed Establishment of National and	5.3. Ensure technical assistance/consultancy available for above areas in all states	5.3.1. 5.3.2.	TA in fiscal planning, management and reporting, health statistics and use of information in year one TA assistance in other areas as needed.	

Outo	omes]	Activities	Outputs
	State health information system (HIS) working group	5.4. Develop curriculm and seek funding for Nursing school.	5.4.1. Open the school in 2006.
5(viii)	Analysis and monitoring of health needs from statistical data		
5(ix)	Improved reporting of vital, health and management statistics (Decrease in DMF rate (Decay, Missing and Filled))		
5(x)	80% of vital events occurring in rural areas reported on time		
5(xi)	Establish a nursing school at COM-FSM.		

Mission Statement:

The Federated States of Micronesia educational system recognizes its shared participation with parents, extended family, and broader social structures in the intellectual, emotional, physical and social development of children. It will deliver a quality, sustainable basic education system which provides all students with basic skills, thinking skills, and personal qualities; provides for the manpower needs of the Nation; develops a literate population based on the revitalization of local languages and cultures while ensuring high competence in English and other international languages; and collaborates with all sectors of the government and community to fully utilize available human and financial resources in developing the educational foundation required for sustainable economic growth and social development.

Strategic Goal/Outcome Measures	Activities	Objectives	Outputs
Strategic goal: To improve the quality of instructional services for early childhood, elementary and secondary education.		1. By 2006 Head start programs will be fully integrated under the education sector. 2. P By 2007 training and technical assistance on bilingual reading will be delivered to teachers of early childhood program to high school level 3 P By December 200 a well organized early childhood, elementary and secondary language arts	Output 1: hrs. x days x early childhood students = instructional hours provided by teachers, principals and administrators Output 2: \$ per student x early childhood students for instructional materials and textbooks Output 3: \$ per student x

Strategic Goal/Outcome Measures	Activities	Objectives	Outputs
		(Reading) and mathematics program which is monitor able, measurable, reportable	early childhood students for administrative support
		4. C- By 2007 early childhood students will receive sufficient, relevant, and quality instructional materials and visual aides	
		5. C By year 2007 900 students will receive 18,000 instructional hours in learning moral values, cultures, as well as basic learning skills in language, math and science	
		6. Y By 2007 early childhood education (ECE) will increase to 8 of all children ages 3- enroll in ECE by constructing new centers and classrooms	
		7.Y- Increase instructional materials and supplies by 20 percent in all ECE classrooms through purchase of new books and develop local materials	
		8. K Improve the quality of instructional services for Early Childhood, Elementary and Secondary Education	
		Merge Head Start and preschool programs	
		Provide centers in all schools	

Strategic Goal/Outcome Measures	Activities	Objectives	Outputs
		Provide training for Head Start and Preschool staff Provide reading, science, agriculture & math instructions To develop textbooks with emphasis on reading in the content area	
BY 2007		C- By 2007 1000 students will graduate from elementary school Y- o provide comprehensive services such as teaching and administrative staff, instructional supplies and materials, especially language Arts in English and the indigenous languages, transportation and mainstream children with special needs 3 K Improve library services and upgrade internet accessibility in all the schools	Output 1:hrs. xdays x elementary students = instructional hours provided by teachers, principals and administrators (Elementary 1-8 grades) Output 2: \$ per student x elementary students for instructional materials and textbooks Output 3: \$ per student x elementary students for administrative support

Strategic Goal/Outcome Measures	Activities	Objectives	Outputs
		C- By year 2007 800 students will graduate from high school by implementing the retention strategies	Output 1: hrs. x days x students = instructional hours provided by teachers, principals and administrators (secondary 9 – 12)
			Output 2: \$ per student x secondary students for instructional materials and textbooks
			Output 3: \$ per student x secondary students for administrative support
		1.C- By year 2007, instructional programs will be made accessible to children with disabilities	Output 1: hrs. x days x disabled students = instructional hours provided by
		Y- To increase the services provided to identified children with special needs by 2007 and thereafter by increasing the number of training to	teachers, principals and Output 2: \$ per student x elementary students for instructional materials and textbooks
		the parents and regular teachers as well as the home services to children with severe disabilities.	Output 3: \$ per student x elementary students for administrative support
		Y- To provide comprehensive services such as instructional supplies and materials, teaching and administrative staff and transportation	

Strategic Goal/Outcome Measures	Activities	Objectives	Outputs
		Objective 1: By 2006 develop facilities standards for new construction and maintenance as part of the Accreditation of Schools System	Output 1: classrooms brought up to accreditations standards Output 2: 200 classrooms
		Objective 2: By 2007 have a functional construction and maintenance program in all states	maintained Output 2a. 40 classrooms constructed
		C- By 2007 hot lunches will be served to all secondary students and daily meals for all boarding students	Output 1: lunches per day x secondary students x day = lunches
		2.C- By 2007, communication and transportation system will be in place to ensure safety and provision of instructional programs in a 24 hours service.	Output 2: \$ per secondary boarding students x days secondary students x days
		Y- To provide transportation, feeding and boarding for outer island students	
		4. Y- To provide breakfast and lunches to ECE students by 2007.	

Strategic Goal 2/Outcome Measures	Activities	Objectives	Outputs
Strategic goal: Improve the quality of education services and programs	To implement revised teacher certification system.	Objective 1: By 2006 install a revised FSM teacher certification system in place with data systems, content training, and technical assistance programs to provide qualified teachers in FSM classrooms Objective 2: Develop a draft curriculum standard for early childhood student by 2006.	Output 1: 2005 1 data system for teacher certification Output 2: 2005/6 50 content training course provided to teachers Output 3: 2006 1 public register of qualified teachers in the FSM
% of elementary teachers certified as qualified teachers, by 200?% of secondary teachers certified as qualified teachers, by 200?% of early childhood teachers certified as qualified teachers, by 200? 2006 The number of elementary teacher days lost due to absenteeism during the academic year were 2006 The number of secondary teacher days lost due to absenteeism during the academic year were	To provide training and technical assistance.	Objective 1: By 2007 to increase by 20 per cent the amount of technical assistance being provided to teachers and education staff Objective 2: By 2006 ensure that per cent of FSM teachers will be able to pass the NSTT content exams in language arts, mathematics, science and FSM local languages Objective 3: By 2006 the National Language and Cultural Institute (NLCI) will be established and in full operation to provide technical assistance, training, research and other necessary components for improving language competence of FSM students. Objective 4: Judicial Education and Training will be provided under the	Output 1: specialist x 2080 hours x 25 per cent = hours of technical assistance Output 2: hours of teacher training Output 2a: 2005 4 content teacher training modules in major FSM local languages Output 2b 2005 content training courses x teachers per class = hours of teacher content training

Strategic Goal 2/Outcome Measures	Activities	Objectives	Outputs
		amended Compact through a special grant.	
		Objective 5: By 200_ a collaborative plan will be established for teacher training between the States for certification.	
		Objective 6: By 2007 increase student and teacher attendance rates to 90 per cent through incentive programs, public education and community involvement	Output 3: 2005 1 plan and incentive program for increasing student and teacher attendance
	To provide for development and upgrading of content standards, curriculum frameworks and	Objective 1: By 2007 review, revise, and align standards, curriculum instructional programs with NST and local assessment instruments.	Output 1: 2005 1 report on analysis of instructional program against curriculum and standards with impact on NST
	instructional materials	Objective 2: By 2006 increase the amount of local and instructional materials by 10 per cent though	Output 1a: 2007 1 set of revised NST exams for mathematics and language arts
		delivery of local language training modules to teachers	Output 2: 2006 200 local languages readers
		Objective 3: By 2005 survey and promote alternate sources of instructional materials and training programs from Non Governmental Organizations for inclusion in education instructional programs and develop a formal process for inclusion of outside The survey should include	Output 3: instructional materials developed in coordination with NGOs

Strategic Goal 2/Outcome Measures	Activities	Objectives	Outputs
		all nine sectors included in the 3rd Economic Summit. Objective 4: By 2006 increase the amount of local and non-local instructional materials by 10 percent.	
	To provide for upgrading, development, administration and reporting of evaluation instruments	Objective 1: By 2006 incorporate 6, 8 & 10 grades science test components into the NST Objective 2: By 2007 incorporate FSM local languages exam components in the NST Objective 3: By 2007 incorporate FSM local languages exam components in State High School Entrance Tests	Output 1: 3 NST science components for 6, 8 and 10th grades Output 2: 4 NST local languages components in the NST Output 3: 4 local language components in high school entrance tests
% of schools meet the requirements of the revised school accreditation system (FY2006)	To implement an FSM Accreditation of Schools System	Objective 1: By 2007 have a functional FSM Accreditation of Schools system in place for private and public elementary and secondary schools 2. P To implement an FSM accreditation system by 2006	Output 1: 2005 10 elementary schools complete self study on accreditation pre conditions Output 2: 2007 4 secondary schools complete self study on accreditation pre conditions.
% of schools with parent and teacher associations% of all new principal appointments that incorporate	To provide for increased community-based education programs and involvement of community in educational	Objective 1: By 2006 all states will update/revise and implement community involvement programs K Ensure parental participation in	Output 1: 1 set of individual state plans for improving community involvement in education

Strategic Goal 2/Outcome Measures	Activities	Objectives	Outputs
community input into selection process (FY2007)	decision making	education	
	To improve accountability for performance in the education system	Objective 1: By 2006 have a fully developed accountability and reporting system to support the Supplemental Education Grant (SEG) and education sector grant though a series of nationwide development sessions Objective 2: By 2005 have a system of SEG program regulations/guidelines in place through a series of nationwide development sessions Objective 3: By 2006 design and establish a national and state public information and dissemination system for the education sector where key information is also disseminated in FSM local languages K Develop and implement a uniform discipline evaluation of students and teacher performance standards	Output 1: 1 accountability (monitoring, coordination, technical assistance, reporting and research) system for SEG Output 2: 3 sets of SEG program regulations/guidelines for early childhood education, education improvement programs and workforce development (including adult education) and skill training programs Output 3: 2005 design of public information system Output 4: 2006 public information in fully implemented
	To review and consolidate existing state, and national efforts for the establishment of education management information and reporting	Objective 1: By 2006 have the core elements and trained staff to support a FSM wide educational data (including student and teacher attendance), reporting, analysis and research	Output 1: 1 FSM education data and analysis system

136

Strategic Goal 2/Outcome Measures	Activities	Objectives	Outputs
	systems.	system. Objective 2: By 2006 consolidate all data into one system.	

Education Strategic	
5	
Ē.	
2	
Str	
3	
100	
2.	
ַ	
Planning	
<u> </u>	
S	
at.	
Matrix	

Strategic Goal 3/Outcome Measures	Activities	Objectives	Outputs
Strategic goal: To meet the manpower needs of the nation and improve life-long learning activities% of at risk and drop out youth at secondary level will be trained and certified% of unemployed graduates and vocational illiterate adults will be certified% of out of school youth will be access under the CASAS and T3 evaluation% school drop out and at risk youth at secondary level will enroll in an apprenticeship program% high school vocational educational graduates would be trained and certified at COM-FSM. 6% graduates in T3, WIA, COM-FSM are trained and employed in a local job market,	To provide comprehensive vocational, technical and basic skills training and certification to at-risk in and out of school youths, incumbent and dislocated workers and adult learners	Objective 1: By 2006 WIA programs will be fully integrated under the education sector. Objective 2: By 2005 develop an education sector manpower development and training plan Objective 3: Delivery manpower and skill training programs through WIA, T3, COM-FSM and other education sector programs	Output 1: 1 education sector manpower and training survey Output 2: 1 education sector manpower and training plan Output 3: 1 manpower development council Output 4: 1 curriculum alignment for vocational training programs at grades 9 – 12 Output 5: graduates of T3 training programs Output 6: graduates of WIA programs Output 7: graduates of COM-FSM training programs
(affirmative action for hiring).			

Strategic Goal 4/Outcome Measures	Activities	Objectives	Outputs
Strategic goal: To allow FSM students to complete postsecondary education to assist in the economic and social development of the FSM % of students receiving scholarship will complete one semester of course work.	To provide scholarships for eligible postsecondary students	Objective 1: By 2006 develop a tracking system for FSM post secondary students including scholarships, graduation rates, drop out rates, majors and minors, rate of returning graduates and non graduates to FSM and other data. Objective 2: By 2005 develop a policy review and recommendation paper on scholarships programs in the FSM including recommendations on funding, tracking systems, scholarship award criteria, mechanisms to improve national government handling and public information on availability of foreign scholarships etc. for presentation to policy makers in the FSM.	Output 1: of scholarships awarded. Output 2: of students graduated. Output 3: of foreign scholarships awarded. Output 4: 1 data tracking system for scholarships and FSM students in post secondary institutions Output 5: 1 policy review paper on scholarships and scholarship systems in the FSM
Post secondary (COM-FSM) 1. 6,190 students provided with higher education in academic, vocational and technical programs at the College of Micronesia - FSM.	1.1 The College will provide educational opportunity to all qualified students within the FSM.		

Education
Strategic
Planning
Matrix

Strategic Goal 4/Outcome Measures	Activities	Objectives	Outputs
1.2. 30% of 900 or 270 high school students who passed the COM-FSM Entrance Exam admitted at COM-FSM.			
2.1. 55% of 591 or 325 first year students continued in the second year (first year retention rate). 2.2. 80% of 2,669 or 2,135 students completed courses they enrolled in (average completion rate). 2.3. 25% of 591 or 147 students who persist in any program after 4 years (persistence rate). 2.4. 27% of 2,669 or 720 students will graduate from their majors.	2.1 Students will be academically successful as measured by retention rates, completion rates, persistence rates, and graduation rates by major College system-wide		
3.1. 25% of 246 or 60 graduates will transfer to 4-year institutions.	Students will demonstrate their readiness for further studies as measured by transfer rates to other educational institutions of higher learning.		
4.1. 25% of 246 or 60 graduates will gain employment after one year	4.1. 25% of 246 or 60 graduates will gain employment after one year from graduation.		

140

Strategic Goal Activities 4/Outcome Measures		Objectives	Outputs	
from graduation.				
5.1. COM-FSM is duly accredited by Western Association of Schools and Colleges (WASC).	5.1. COM-FSM is duly accredited by Western Association of Schools and Colleges (WASC).			

Appendix B-08: Gender Strategic Planning Matrix

Draft Mission Statement:

Empower Women, Youth, Senior Citizens and Disabled Persons to Be Self-Reliant Individuals and Productive Members of FSM Society

Strategic Goal 1 Enhance and Promote the Cultural, Economic, Legal, Political and Social Status of Women Policies required:

- > Establishment of effective mechanisms for engaging women in the democratic and development processes
- > Adoption of official gender policy, strategic development agenda and action plan to guide FSM commitments for and compliance with national, regional and global gender development platforms for action on women

-	Outcomes	Activities	Outputs				
	1(i) Adopt nationwide policy on Gender by 2007. 1(ii) Establish Commission on the	Formulate and draft Gender Policy with assistance of technical experts	1.1.1. Official FSM Gender Policy legislated (5)				
	Status of Women by 2010.	Negotiate the establishment of a national multi-sector Commission on the Status of Women.	1.2.1. Commission on the Status of Women established 1.2.2. Development Agenda, Action Plan and Work Programs adopted & operational				
		Organize & convene biennial women's leadership caucus, conference and periodic gender policy forum (both national and state)	6th FSM Women's Conference (1), States' Gender Caucus (4) and Commission of the Status of Women (1) convened Purchase IMS Equipment, Soft Ware Facilities & Furniture				

Outcomes	Activities	Outputs		
	1.4. Commission studies, surveys and research on the cultural,	1.4.1. Status of Women's Report produced and disseminated to stakeholders (5)		
	economic, legal, political, and social status of FSM women,	1.4.2. Status of Children's Report produced and disseminated to stakeholders (5)		
	children, youth and people with disabilities and special needs	Status of People with Disabilities and Special Needs produced and disseminated to stakeholders		
		Status of Senior Citizens' Report produced and disseminated to stakeholders.		

Strategic Goal 2 Policies required:

Enhance the Leadership Capacity and Roles for Women.

- Establish mechanisms for engaging women in leadership and political processes at all levels
- > Provisions for leadership training for women, youth and people with disabilities and special needs

Outo	Outcomes		Activities		Outputs		
2(i)	Increase number of women in leadership, management and elected positions.	2.1.	Conduct comprehensive gender analysis and/or gender studies.	2.1.1.	Gender participation indicators (GPIs) and baseline gender disaggregated data produced and readily available by 2007		
2(ii)	Attitudes, Behaviors and	2.2.	Conduct Leadership and Management Training for	2.2.1.	Women and Youth Leadership Profiles' produced by 2007		
	Practices are decreasing.		Women and Youth	2.2.2.	National/State Specialized Trainings provided (10)		
				2.2.3.	Citizens and good governance curriculum offered at High School and college level (5)		
		2.3.	Seek funding from domestic and specialized regional and international development agencies to conduct Activities 1.1 – 1.2 above.	2.3.1.	Training Fund and Scholarship Incentive Program established (1)		
		2.4.	Conduct Gender Awareness and Analysis Training.	2.4.1.	Gender sensitization and gender analysis training ongoing (10)		
				2.4.2.	By 2010, at least 5 Percent of Congress, Legislature, Boards, Cabinets, Ambassadorial posts and offices will be filled by women		
				2.4.3.	By 2010, at least the post of Assistant Secretary for Gender and Social Affairs will be a woman.		

Strategic Goal 3 Mainstream Gender Issues into Decision-Making, Policies and Strategic Development Plans. Policies required:

- Ensure that official FSM gender policy and strategic development agenda are established through legislation at all levels
- > Ensure that Opportunities for Women's Leadership Development are prioritized in HRD and Capacity Building Initiatives and Programs

Outo	Outcomes		Activities		Outputs		
3(i)	FSM gender policy advocacy and mainstreaming capacity enhanced.	3.1.	Formulate gender advocacy and mainstreaming strategy and action plan	3.1.1.	Policy Advocacy and Action Plan adopted (5)		
3(ii) 3(iii)	by decision makers (ongoing).	3.2.	Commission gender studies and identified gender training gaps and needs	3.2.1.	Gender Advocacy Training gaps and needs Identified (5)		
		3.3.	Organize and convene gender management training	3.3.1.	Training Funds secure to enable women Leaders and managers to participate in HRD & capacity building programs (1)		
				3.3.2.	Technical assistance secured (4)		
		3.4.	3.4. Conduct gender awareness and sensitization, gender analysis, gender strategic planning, team building, and good governance training	3.4.1.	Participation in NGO Leadership & Management Diploma Program (20)		
				3.4.2.	Participation in MLIC, SPC/PWB, ForSec, RRRT and other global and regional gender training programs.		
		3.5.	Lobby and negotiate for the inclusion of gender studies in	3.5.1.	National/State Gender Awareness and Sensitization Training provided (5)		
			FSM education system.	3.5.2.	National/State Gender Analysis provided (5)		
				3.5.3.	National/State Gender Budgeting & Strategic Planning provided (5)		
				3.5.4.	National/State Lobbying & Negotiating Skills (5)		

Outcomes	Activities	Outputs
		3.5.5. National/State Fundraising and Grants Writing (5) 3.5.6. National/State Governance Training (5)
	3.6. Proactively advocate and lobby for women's participation in national, regional and international gender development and mainstreaming policy and decision-making processes.	3.6.1. By 2010, FSM Gender Delegations be headed by expert and high-level Women Officials
	3.7. Commission on the Status of Women (CSW) is regularly convened to address policy and decision-making on gender.	Inaugural 1st CSW held 2010 S.7.2. 1st CSW Report produced and disseminated to decision-makers and strategic development partners
	3.8. Conduct reviews to determine	3.8.1. SPM Performance Indicators produced (5)
	changes in policy and decision-making processes	3.8.2. Number of gender-sensitive, gender inclusive and gender responsive decisions, policies and programs increased from 1999 level.
	3.9. Evaluate and monitor FSM	3.9.1. SPM Compliance Report produced (1)
	compliance with implementation of the gender SPM and other global and regional platforms for action on women (GPA, PPA) youth (CRC), disabled people and other strategic development process (MDGs, WSSD, Cairo+10, etc)	3.9.2. GPA, PPA, CRC, MDG Reports updated and published (4)

Strategic Goal 4

Maximize Women's Contribution to and Participation in Democratic and Development Processes by Creating Opportunities for Women's Active Involvement.

Policies required:

- Facilitate women's equal access to resources, employment, markets and trade
- > Harmonize national laws, policies and programs to encourage economic and political empowerment of women
- > Eliminate all forms of abuse, discrimination, harassment and violence against women and girls in the work force and in the private and public spheres
- > Address unequal treatments and discrepancies in compensation/benefits for women in the public and private service sectors
- > Ensure macroeconomic policies and trade policies are gender inclusive and gender-sensitive.

Outo	Outcomes		Activities		Outputs	
4(i)	A safer environment at home, work, school and other public places.	4.1.	Facilitate enactment and enforcement of legislation to protect women and girl-	4.1.1.	Anti-domestic violence bill and/or Anti-abuse of women & girl-children in intimate relationships (anti-AWGIR) policy in place, legislation considered.	
4(ii)	Women's Economic Capacity and Commercial Networks are Strengthened	children from domestic violence, date/marital rape and other gender-based abuse, discrimination and violence.	4.1.2.	Age of Consent and Age of Marriage increased to 18 years (5)		
4(iii) 4(iv)	Harmonize work and family responsibilities for men and women. Representation on all law and policy making bodies by at	4.2.	Conduct training/awareness on domestic violence & "No Drop" Policy for police and judicial officials		"No Drop" Policy Adopted (5) DVAW Training Report Produced (5) DVAW Training Materials available (05)	
	least 2012	4.3.	Conduct baseline assessment of domestic violence.	4.3.1.	DVAW Assessment Report produced (5)	
		4.4.	Conduct assessment and training on labor laws, policies and regulations	4.4.1. 4.4.2.	produced (5)	

Outcomes	Activities	Outputs
	4.5. Conduct reviews of national/state compensation laws, policies and regulations to ensure there is "equal pay" for equal work of equal value in private and public services' regulations	4.5.1. Compensation Report Produced (5) 4.5.2.
	4.6. Create opportunities for Women's self-employment and the development of small micro-enterprises and entrepreneurship programs	4.6.1. Women's Self-Employment Report produced (5) 4.6.2. Entrepreneurship and Small Micro-Enterprises (SME) Report produced (5) 4.6.3. SME Fund established (05) 4.6.4. Flexible micro-finance training provided (05)
	4.7. Consideration of legislation for baby-friendly services in working environment.	 4.7.1. Baby-friendly legislation considered (05) 4.7.2. Nursing Rooms provided at work (05). 4.7.3. Tax incentive legislation for day care centers considered (05)
	4.8. Increase representation of women in law and policymaking bodies.	4.8.1. Facilitate increases in the numbers of women acting as elected representatives at national and state levels (04)
	4.9. Ensure the participation of women in the executive branch of government at both national and state levels	4.9.1. First CSW Commissioner be a Woman

Strategic Goal 5 Strengthen the Institutional Capacity of Women's Programs in FSM. Policies required:

- > Gender policy advocacy and mainstreaming capacity are prioritized in HRD Education & Training Programs
- > Effective mechanisms to build, strengthen and localize gender technical and advisory capacity
- > Information dissemination, public relations and information and communication technology gaps be addressed and resolved

Outo	Outcomes		Activities		Outputs		
5(i)	Establish Division of Gender and Social Affairs (GENSA) by 2007	5.1.	Prepare and formulate annual gender budgets & submit to budget planning and appropriation agencies	5.1.1.	Core gender budgets are annually appropriated in regular budget process		
5(ii)	Determine needs and requirements for appropriate skilled staff, technical equipment and office furniture	5.2.	Seek outside sources of funding & formulate resource mobilization strategy to access	5.2.1. 5.2.2.	(5)		
5(iii)	ii) Improve capacity and access to ICT (Information, Communication and Technology)		external aid and technical assistance (non-US)	0.2.2.	relevant donor and development agencies (3)		
		5.3.	Hire Additional professional staff	5.3.1.	Additional staff hired (3)		
5(iv)	Strengthen networks and alliances through increased advocacy.	5.4.	Purchase needed office equipment and furniture	5.4.1.	Office Equipment and furniture purchased and installed.		
		5.5.	Establish institutional memory (ICT strategy study, MIS design, development and training and purchase of required ICT equipment and software)	5.5.1. 5.5.2. 5.5.3. 5.5.4. 5.5.5. 5.5.6.	Gender website established (1) Gender Affairs Newsletter and publications available (5) Media, email, internet and ICT training provided (2) Gender Reports, Research Papers and Publications available (various)		

Outcomes	Activities	Outputs
	5.6. Draft official transmission to introduce operation and staff to donors, development agencies, UN, diplomatic community and relevant multistakeholders	5.6.1. Number of Official Introduction Letter sent and number acknowledged
	5.7. Participate in global, national, regional and state women's	5.7.1. 9th SPC Triennial Women's Conference, September 2004
	conferences, forum, meetings	5.7.2. Conference Trip Report (01)
	seminars, etc.	5.7.3. National/State Briefing on Conference Outcome (05)
	5.8. Organize and convene	5.8.1. CSW Organizational Meeting (2007) and 1st CSW (2010)
	Organizational meeting of	5.8.2. CSW Organizational Meeting and 1st CSW Reports (02)
FSM CSW (Commission on the Status of Women) officials Staff, and HESA) and Plan for 1st CSW Conference		
	5.9. Organize and Convene 6th	5.9.1. 6th FSM Women's Conference (2005)
	FSM Women's Conference	5.9.2. 6th FSM Women's Conference Report (01)
		5.9.3. Gender Strategic Development Plan 2005-2010 Adopted (01

Strategic Goal 6

Strengthen the Institutional Capacity, Effectiveness and Impact of Youth Organizations in the Planning, Delivery, Promotion, Monitoring and Evaluation of Youth Programs and the National Youth Policy.

Policies required:

- Adoption of National Youth Policy and Action Plan
- > Reform Youth Consultation and Dialogue Processes.
- > Adequate Allocation of Core Resources for Operation and Programs

Outo	Outcomes		Activities		Outputs	
6(i)	Adopt national youth policy in	6.1. Finalize youth policy and action plan and submit to decision-makers for adoption	action plan and submit to	6.1.1.	National Youth Policy adopted by 2005 (01)	
6(ii)	Year 2005. Strengthen Youths' Councils,			6.1.2.	Dissemination of Youth Policy to all States and Foreign entities. (100)	
	Organizations and Programs by year 2007.		6.1.3.	National Youth Action Plan adopted by 2005 (01)		
6(iii)	* *	6.2.	Audit current Youth programs and services to eliminate duplication & to consolidate remaining functions under appropriate agencies and/or institutions (HESA)	6.2.1.	Audit Report produced and disseminated to Managers and stakeholders (05)	
		6.3.	Re-organize Youth Councils, Organizations and Programs per findings of 2.2.1 above	6.3.1.	At least one annual youth council or forum held , on rotating basis (01)	
		6.4. Formulate Core Operation Programs and Budgets		6.4.1.	Restructuring Plan adopted (05)	
			Programs and Budgets	6.4.2.	Operation Programs (05) & Budget formulated (05)	
		6.5.	Create national youth volunteers and exchange programs by year 2010.	6.5.1.	National Youth Volunteer Service and Exchange Programs established by 2010	

Gend
er
Strat
tegic
Pl
'anning
Matri
riχ

Outcomes	Activities	Outputs	
	6.6. Develop Youth Training Programs to foster self-employment and incomegeneration	 6.6.1. Self-Employment and Income Generation Training Programs conducted (Ongoing) in all States. 6.6.2. Youth Trainers and Mentors identified, trained and certified (50). 6.6.3. Annual Youth Exchange (FSM and Abroad) 	

Strategic Goal 7 Strengthen Youth Development through Social, Economic and Political Participation Policies required:

- Provision for leadership and political empowerment, education and training for youth leaders.
- > Recognition of formal processes and structures for dialogue and engagement with youth

Outo	Outcomes		Activities		Outputs	
7(i)	7(i) Increase participation of youth leaders in economic, political and social activities, dialogues and programs 7(ii) Improve networking, partnership and collaboration with strategic stakeholders (ongoing) 7(iii) Improve MIS, information and communication capacity.	7.1.	Conduct FSM-wide Situational Analysis on the Status of FSM Youth	7.1.1.	Youth Status Report produced and disseminated to strategic stakeholders (05) by 2006	
7(ii)		7.2.	Conduct a FSM-wide Youth Leadership Study and compile a FSM Youth Leaders' Profile	7.2.1.	FSM Youth Leaders' Profile produced and disseminate widely by 2006	
7(iii)		7.3.	Conduct ongoing leadership and management training for youth leaders in all FSM States	7.3.1.	An average of 10 FSM youth leaders enrolled in formal and informal leadership and management training programs by 2010	
		7.4.	Educate youth in small business development, including income generation and fiscal management	7.4.1.	Youth Enterprise Development Plan adopted (2005) and implemented by 2006	
		7.5.	Conduct train-the-trainers courses for office bearers of youth organizations	7.5.1.	Governance Course for at least 25 Youth Boards and Executive Officers scheduled for 2006	
		7.6.	Establish partnership with key stakeholders at all levels	7.6.1.	Partnership Agreements signed with FSM Government, respective State Government and strategic development partners by 2010	
		7.7.	Purchase required office equipment, software and	7.7.1.	Computers and office furniture purchased (10)	

Gender
Strategic
Planning
Matrix

Gender
Gender Strategic I
Planning
Matr

Outcomes

Activities

furniture

7.8. Apply for ICT technical Assistance

Outputs

7.7.2. Office facilities met standard working conditions (5)

7.8.1. Technical Assistance proposal submitted to donor agencies (04)

Strategic Goal 8 Establish Social Protection and Social Welfare Services for the Elderly Policies required:

- > Create an office for the elderly in the National Government.
- Create a National Senior Citizens Policy.

Outo	Outcomes		Activities		Outputs	
8(i) 8(ii)	By FY 2006, create a national senior citizens' Office Improve senior citizens' benefits and protection	8.1.	Establish the FSM Senior Citizens' Office under proposed Division of Gender and Social Affairs (HESA)	8.1.1.	Senior Citizens' Function and Office approved and established by 2006	
8(iii)	Adopt National Senior Citizens Policy by 2010	8.2.	Hire or designate a Senior Citizen's staff in HESA	8.2.1.	Staff designated or hired (01)	
8(iv)	8(iv) Establish Senior Citizens Development Programs by 2006	8.3.	Established dialogue with FSM Social Security Administration to discuss social welfare needs of senior citizens	8.3.1. 8.3.2.	Discussions on FSM Social Security Benefits initiated by 2005. Prior Service Benefits (TTPI) benefits (500)	
		8.4.	Formulate FSM Senior Citizens Policy and lobby for adoption through legislation		Senior Citizens Policy adopted by 1010 States' Senior Citizen Council Created by 2010 (1) Annual leadership conference and meetings initiated by 2006 (2).	
		8.5.	Create a national senior citizens council.	8.5.1.		
		8.6.	Establish regular leadership conferences and meetings	8.6.1.		
		8.7.	Lobby for a Proclamation of Senior Citizens week.	8.7.1.	Observation Week for Senior Citizens designated (5)	

Gender S
Strategic i
Planning
Matrix

Oction	(jone
	0r \t
ucs.	Strateon
	משות
Summin	nnino
5	>

Outcomes

Activities

projects.

8.8. Establish Income generation

8.9. Negotiate for Alternative Geriatric Care.

Outputs

8.8.1. Home Gardening Program (5).

8.8.2. Home-based Child Care Services 8.8.3. Arts, Crafts & Cultural Shops

8.9.1. Medical Insurance & Fees Programs

8.8.4. Micro-Loan Revolving Fund established by 1010 (01)

8.9.2. Tax Break for Private Home-Care for the Elderly established (05)

Strategic Goal 9 Address the Special Economic, Legal, political and Social Needs of Disabled Persons and Persons with Special Needs

Policies required:

- > Establish effective mechanisms for engaging Disabled Persons and Persons with Special Needs in the democratic and development processes
- Adopt official policy, strategic development agenda and action plan on Disabled Persons and Persons with Special Needs to guide FSM development agenda on people with disabilities and special needs.
- Ensure building, roads, construction and transportation plans, decisions, policies and legislations are disability-friendly

Outo	Outcomes		Activities		Outputs	
9(i)	Adopt FSM-wide Policy on Disabled Persons and Persons	9.1.	Formulate FSM Disabled Persons Policy	9.1.1.	FSM Disabled Persons' Policy adopted through legislation by 2010 (05)	
9(ii) 9(iii)	and Persons with Special Needs into ongoing and regular public and private activities, programs and services	9.2.	Consider facility access legislation and policies for persons with disabilities and persons with special needs	9.2.1. 9.2.2. 9.2.3.	transportation, communication), development plans and building codes and construction standards complied with Facility Access Legislation by 2010 (at least by all 05 FSM governments) Tax incentives for private sector compliance legislated (5)	
	contribution of Disabled Persons and Persons with Special Needs	9.3.	Review existing Programs and Services with the aim to consolidate cross-cutting functions into a centralized mandate under proposed Division of Gender and Social Affairs (GENSA)	9.2.4. 9.3.1. 9.3.2.	Disabled Persons and Persons with Special Needs (DPPSN) function consolidated under GENSA by 2007 (01) DPPSN staff assigned to assume function (01)	
		9.4.	Establish baseline data and information on DPPSN through research and create	9.4.1.	DPPSN Status Report produced and disseminated to decision-makers by 2006 (05)	

Gender S
Strategic i
Planning
Matrix

	Gender
(r Strategic Planning
	Planning
	Matri

Outcomes

Activities

9.5.

systems

Program

disaggregated databases and information management

Conduct a FSM-wide DPPSN

Meritorious Award of the Year

Productivity Survey 9.6. Establish the DPPSN Outputs

9.4.2. DPPSN Service Report produced and disseminated to policy-makers, planners and development partners by 2006 (01)

9.5.1. DPPSN Productivity Report produced (1) and disseminated to all stakeholders by 2007 (100)

9.6.1. DPPSN Meritorious Award initiated in 2008 (1)

Table 1a FSM Gross Domestic Product (Current and Constant Price Estimates, \$US Millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04 Est	
Productive Enterprises	29.4	34.4	37.9	44.3	51.5	58.1	65.1	70.7	74.3	68.1	64.0	72.1	66.6	79.8	79.7	79.1	82.6	79.1	85.1
Private Sector	26.1	31.0	34.0	39.5	46.8	53.3	59.2	56.8	58.8	56.3	51.9	53.2	55.1	63.8	63.9	61.9	64.2	64.5	68.7
Compensation	10.5	12.6	13.4	16.3	17.7	21.9	24.4	24.4	23.7	23.4	22.4	23.2	25.3	27.9	29.1	29.3	30.2	32.0	~
Operating Surplus	15.6	18.4	20.6	23.1	29.0	31.3	34.9	32.3	35.1	32.9	29.5	30.0	29.8	35.9	34.8	32.6	34.0	32.5	~
Public Enterprises	3.3	3.4	3.9	4.8	4.7	4.8	5.9	13.9	15.5	11.8	12.1	18.9	11.5	16.0	15.7	17.2	18.4	14.7	16.4
Compensation	1.7	1.9	2.3	2.7	3.0	4.0	5.6	7.9	10.4	11.7	11.3	13.5	13.2	13.3	12.7	11.4	11.8	11.4	~
Operating Surplus	1.9	2.1	2.5	3.0	3.4	4.6	3.1	10.3	9.4	5.9	5.2	10.0	3.0	8.4	8.9	10.5	11.2	8.0	~
less Subsidies	-0.3	-0.6	-0.9	-0.9	-1.7	-3.7	-2.8	-4.2	-4.3	-5.8	-4.4	-4.6	-4.7	-5.7	-5.8	-4.7	-4.6	-4.8	
Financial Enterprises	2.6	2.9	3.0	3.3	3.7	4.0	4.5	5.8	5.8	5.6	5.3	5.7	5.9	7.4	7.1	6.6	4.2	3.5	
Government	44.4	47.0	47.9	50.8	54.3	55.7	61.9	62.3	66.8	67.1	62.2	53.5	53.7	56.5	58.8	61.5	63.0	60.9	
National	7.1	6.6	7.6	7.9	8.4	8.8	9.9	10.4	11.0	11.5	13.5	12.5	11.8	11.4	11.6	12.7	12.9	12.5	12.5
State	35.7	38.6	38.3	41.0	43.8	44.5	49.3	49.1	53.0	52.7	45.8	38.2	38.9	41.7	43.4	44.9	46.3	44.4	44.4
Other	1.6	1.9	2.0	1.9	2.1	2.4	2.6	2.8	2.9	2.9	2.9	2.7	2.9	3.4	3.8	3.8	3.8	4.0	
Non Profit Organizations	3.6	3.8	3.5	3.4	4.0	4.8	4.9	5.1	5.7	6.3	6.9	7.7	8.1	8.8	9.5	11.1	11.7	12.4	13.6
Households	30.3	32.5	35.1	37.6	40.2	42.2	44.3	46.3	47.8	49.2	50.7	51.6	52.7	54.0	54.9	54.9	54.9	55.7	56.6
Subsistence	18.4	19.8	21.3	22.8	24.4	25.7	27.0	28.2	29.1	29.9	30.8	31.4	32.0	32.7	33.2	33.3	33.3	33.9	34.5
Home Ownership	11.9	12.7	13.8	14.7	15.8	16.5	17.3	18.1	18.7	19.3	19.8	20.2	20.7	21.3	21.6	21.6	21.5	21.8	22.1
Indirect Taxes	6.9	8.6	9.0	9.7	12.1	13.0	15.2	15.4	14.9	14.6	14.3	16.2	17.4	21.0	20.1	17.9	18.3	17.8	18.5
less bank service charge	-3.5	-3.8	-4.0	-4.4	-4.9	-5.3	-5.9	-7.2	-7.1	-7.1	-6.4	-7.1	-7.5	-8.9	-8.4	-8.0	-5.1	-4.3	-4.6
Nominal GDP																			
(US\$ millions)	113.8	125.4	132.5	144.7	161.0	172.5	190.0	198.5	208.2	203.8	196.9	199.7	196.8	218.5	221.7	223.0	229.5	225.1	233.6
Nominal GDP per capita	\$1,261	\$1,350	\$1,384	\$1,482	\$1,617	\$1,700	\$1,836	\$1,882	\$1,969	\$1,922	\$1,854	\$1,875	\$1,844	\$2,042	\$2,067	\$2,074	\$2,130	\$2,084	\$2,157
Inflation Index	69.2	72.1	75.5	79.3	83.3	85.8	88.4	90.7	93.2	95.8	98.4	100.0	101.9	104.0	105.3	105.2	104.9	106.5	107.9
Inflation Rate	2.9%	4.1%	4.8%	5.0%	5.0%	3.0%	3.0%	2.6%	2.8%	2.8%	2.7%	1.6%	1.9%	2.0%	1.3%	-0.1%	-0.2%	1.4%	1.4%
Population	90.2	92.9	95.7	97.6	99.5	101.5	103.5	105.5	105.8	106.0	106.3	106.5	106.8	107.0	107.3	107.5	107.8	108.0	108.3
Population Growth Rate	3.0%	3.0%	3.0%	2.0%	2.0%	2.0%	2.0%	2.0%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Real GDP																			
(FY98 US\$ millions) Real GDP Growth Rate	164.4 2.0%	174.1 5.9%	175.5 0.8%	182.6 4.0%	193.4 5.9%	201.1 4.0%	215.0 6.9%	218.9 1.8%	223.3 2.0%	212.6 -4.8%	200.2 -5.9%	199.7 -0.2%	193.1 -3.3%	210.2 8.8%	210.4 0.1%	212.0 0.8%	218.7 3.2%	211.5 -3.3%	

Sources FSM Department of Finance and Administration, FSM Social Security Administration, FSM Department of Economic Affairs, US Bureau of Labor Statistics (CPI)

Inflation Index: 1987-2000 US CPI; 2000-2005 FSM CPI

Note

Table 1b Chuuk Gross Domestic Product (Current and Constant Price Estimates, \$US Millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03
Productive Enterprises	9.15	10.97	11.82	12.38	15.01	16.78	16.14	16.00	17.23	12.23	13.32	14.14	13.43	20.04	18.32	16.84	18.70
Private Sector	8.28	10.14	11.14	11.30	14.04	14.90	15.39	14.77	15.50	12.64	11.75	12.47	12.37	18.08	16.59	15.03	16.84
Compensation	3.10	3.17	3.59	3.70	4.06	4.58	5.14	5.33	5.39	4.69	4.18	4.13	4.51	5.53	5.33	5.55	6.06
Operating Surplus	5.18	6.97	7.56	7.60	9.98	10.32	10.25	9.44	10.11	7.95	7.57	8.34	7.86	12.55	11.26	9.47	10.78
Public Enterprises	0.86	0.84	0.67	1.08	0.96	1.88	0.75	1.23	1.72	-0.41	1.56	1.67	1.06	1.96	1.73	1.81	1.86
Compensation	0.23	0.22	0.27	0.35	0.40	0.55	0.49	0.61	0.84	1.14	1.49	1.57	1.77	1.99	1.99	1.89	1.89
Operating Surplus	0.64	0.62	0.77	1.00	1.12	1.54	0.69	1.68	1.38	1.26	1.93	1.56	1.00	1.96	1.69	1.88	1.94
less Subsidies	0.00	0.00	-0.38	-0.27	-0.55	-0.21	-0.43	-1.06	-0.49	-2.81	-1.86	-1.46	-1.70	-1.99	-1.95	-1.96	-1.96
Financial Enterprises	0.76	0.88	0.88	0.95	1.08	1.16	1.21	1.62	1.35	1.19	0.88	0.88	1.02	1.48	1.73	1.63	1.54
Government	15.26	17.34	16.48	18.24	19.67	20.32	22.48	21.51	23.30	21.96	18.01	13.69	15.06	17.73	19.22	19.17	20.13
National	0.27	0.25	0.29	0.30	0.32	0.33	0.37	0.39	0.41	0.43	0.51	0.47	0.45	0.43	0.44	0.48	0.48
State	14.44	16.47	15.54	17.29	18.66	19.31	21.30	20.31	22.05	20.96	16.99	12.92	14.27	17.02	18.61	18.52	19.50
Other	0.55	0.62	0.66	0.65	0.69	0.68	0.81	0.81	0.83	0.57	0.50	0.30	0.34	0.28	0.17	0.17	0.15
Non Profit Organizations	1.07	1.00	1.02	0.91	1.21	1.50	1.48	1.47	1.63	1.86	2.00	2.23	2.29	2.38	2.52	2.99	3.08
Households	11.42	12.21	13.15	14.10	15.14	15.94	16.78	17.59	18.10	18.62	19.14	19.47	19.86	20.16	20.38	20.59	20.65
Subsistence	8.97	9.59	10.33	11.08	11.89	12.51	13.17	13.82	14.22	14.63	15.03	15.29	15.59	15.83	16.00	16.17	16.22
Home Ownership	2.45	2.62	2.82	3.03	3.25	3.42	3.60	3.78	3.89	4.00	4.11	4.18	4.26	4.33	4.38	4.42	4.43
Indirect Taxes	2.50	3.55	3.53	3.37	4.73	4.39	4.88	4.76	4.63	3.59	3.84	4.59	4.90	7.08	6.68	5.41	6.08
less bank service charge Nominal GDP	-1.03	-1.19	-1.19	-1.28	-1.46	-1.57	-1.62	-2.02	-1.70	-1.59	-1.22	-1.19	-1.36	-1.82	-2.11	-2.01	-1.90
(US\$ millions)	39.13	44.76	45.69	48.67	55.39	58.53	61.34	60.92	64.54	57.87	55.97	53.79	55.20	67.04	66.74	64.63	68.28
Nominal GDP per capita	\$ 863	\$ 961	\$ 954	\$ 995	\$ 1,108	\$ 1,146	\$ 1,175	\$ 1,143	\$ 1,209	\$ 1,084	\$ 1,047	\$ 1,005	\$ 1,031	\$ 1,251	\$ 1,244	\$ 1,204	\$ 1,271
Inflation Index	69.21	72.06	75.49	79.26	83.25	85.76	88.37	90.69	93.23	95.84	98.39	100.00	101.92	103.38	104.42	105.43	105.63
Inflation Rate	2.9%	4.1%	4.8%	5.0%	5.0%	3.0%	3.0%	2.6%	2.8%	2.8%	2.7%	1.6%	1.9%	1.4%	1.0%	1.0%	0.2%
Population	45,340	46,588	47,871	48,914	49,980	51,069	52,182	53,319	53,365	53,411	53,457	53,503	53,549	53,595	53,641	53,687	53,734
Population Growth Rate	2.8%	2.8%	2.8%	2.2%	2.2%	2.2%	2.2%	2.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Real GDP																	
(FY98 US\$ millions) Real GDP Growth Rate	56.55 -2.4%	62.12 9.9%	60.53 -2.6%	61.41 1.5%	66.53 8.3%	68.25 2.6%	69.42 1.7%	67.18 -3.2%	69.22 3.0%	60.38 -12.8%	56.88 -5.8%	53.79 -5.4%	54.16 0.7%	64.85 19.7%	63.91 -1.4%	61.30 -4.1%	64.64 5.5%

Sources FSM Department of Finance and Administration, FSM Social Security Administration, FSM Department of Economic Affairs, US Bureau of Labor Statistics (CPI)

Note Inflation Index: 1987-2000 US CPI; 2000-2005 FSM CPI

Appendix C Statistical Tables

Real GDP (FY98 US\$ millions) Real GDP Growth Rate	15.90 2.3%	14.51 -8.7%	14.20 -2.1%	14.50 2.1%	15.18 4.7%	14.66 -3.4%	15.79 7.7%	18.76 18.8%	17.80 -5.1%		16.84 -8.3%	15.85 -5.9%	16.17 2.0%	17.61 8.9%	19.72 12.0%	19.53 -0.9%	18.44 -5.6%
•	2.5%	2.5%	2.5%	1.4%	1.4%	1.4%	1.4%	1.4%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
Population Growth Rate	2.5%	2.5%	2.5%	1.4%	1.4%	1.4%	, -	1.4%	0.8%	,	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
Inflation Rate Population	2.9% 6,510	4.1% 6.671	4.8% 6.835	5.0% 6.929	5.0% 7.024	3.0% 7.120	3.0% 7.218	2.6% 7,317	2.8% 7,377	2.8% 7.438	2.7% 7.499	1.6% 7,561	1.9% 7.623	1.2% 7,686	0.4% 7.749	-3.0% 7.813	-1.8% 7,877
Inflation Index	69.21	72.06	75.49	79.26	83.25	85.76	88.37	90.69	93.23	95.84	98.39	100.00	101.92	103.15	103.58	100.49	98.63
Nominal GDP per capita	\$ 1,690	\$ 1,567	\$ 1,569	\$ 1,658	\$ 1,799	\$ 1,766	\$ 1,933	\$ 2,325	\$ 2,249	\$ 2,366	\$ 2,210	\$ 2,096	\$ 2,161	\$ 2,363	\$ 2,635		\$ 2,309
Nominal GDP (US\$ millions)	11.00	10.45	10.72	11.49	12.64	12.57	13.95	17.01	16.59	17.60	16.57	15.85	16.48	18.16	20.42	19.63	18.19
less bank service charge	-0.37	-0.34	-0.35	-0.37	-0.41	-0.40	-0.46	-0.58	-0.50	-0.54	-0.59	-0.59	-0.54	-0.89	-0.80	-0.91	-0.47
Indirect Taxes	0.77	0.67	0.63	0.72	0.87	0.83	0.92	1.12	1.15		1.15	1.30	1.40	1.65	1.81	1.37	1.29
Home Ownership	1.31	1.40	1.50	1.59	1.70	1.77	1.85	1.93	2.00		2.14	2.20	2.26	2.30	2.33	2.28	2.26
Subsistence	1.00	1.07	1.15		1.30	1.36	1.42	1.48	1.53		1.64	1.68	1.73	1.76	1.78	1.75	1.73
Non Profit Organizations Households	2.31	2.46	2.64	2.82	3.00	3.13	3.27	3.40	3.53		3.78	3.88	3.98	4.06	4.11	4.02	3.98
Other	0.13 0.12	0.12 0.13	0.11 0.12	0.10 0.12	0.11 0.13	0.14 0.15	0.16 0.13	0.16 0.14	0.15 0.22	0.17 0.18	0.16 0.19	0.15 0.23	0.15 0.25	0.16 0.29	0.16 0.32	0.15 0.37	0.16 0.41
State	4.59	4.64	4.74	4.89	5.09	5.32	5.55	5.49	5.87	6.28	6.20	4.99	4.87	5.31	5.34	6.07	5.79
National	0.16	0.15	0.17	0.18	0.19	0.20	0.23	0.24	0.25	0.26	0.31	0.29	0.27	0.26	0.27	0.29	0.30
Government	4.88	4.91	5.02	5.17	5.39	5.66	5.93	5.89	6.27	6.72	6.67	5.43	5.29	5.73	5.77	6.51	6.25
Financial Enterprises	0.29	0.27	0.27	0.29	0.32	0.31	0.35	0.47	0.42		0.52	0.46	0.44	0.75	0.70	0.76	0.38
less Subsidies	0.00	0.00	0.00	0.00	0.00	0.00	-0.10	-1.04	-0.71	-0.62	-0.67	-0.69	-0.70	-0.75	-1.49	-0.86	-0.56
Operating Surplus	0.00	0.00	0.00	0.00	0.00	0.00	0.36	2.55	1.13	0.84	0.79	0.44	0.54	0.59	2.26	1.52	0.56
Compensation	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.88	1.29	1.07	1.01	1.36	1.42	1.33	1.10	1.06	0.98
Public Enterprises	0.00	0.00	0.00	0.00	0.00	0.00	0.46	2.39	1.71	1.29	1.13	1.11	1.27	1.16	1.88	1.71	0.99
Operating Surplus	2.15	1.60	1.72	1.87	2.39	1.83	2.24	2.94	2.59		2.38	2.62	2.87	3.19	3.86	3.00	2.56
Compensation	0.86	0.76	0.67	0.88	0.95	1.06	1.10	1.22	1.20	1.39	1.35	1.41	1.50	2.22	2.78	2.79	2.78
Private Sector	3.00	2.36	2.39	2.75	3.34	2.90	3.34	4.17	3.80	4.61	3.73	4.03	4.37	5.41	6.63	5.79	5.34

Table 1c Kosrae Gross Domestic Product (Current and Constant Price Estimates, \$US Millions)

FY92

2.90

FY93

3.80

FY94

6.56

5.51

FY96

5.90

FY97

4.86

FY98

5.14

FY99

5.64

FY00

6.57

FY01

8.51

FY02

7.50

FY03

6.33

FY91

3.34

Sources

Productive Enterprises

FSM Department of Finance and Administration, FSM Social Security Administration, FSM Department of Economic Affairs, US Bureau of Labor Statistics (CPI)

Note

Inflation Index: 1987-2000 US CPI; 2000-2005 FSM CPI

FY88

2.36

3.00

FY89

2.39

FY90

2.75

Table 1d Pohnpei Gross Domestic Product (Current and Constant Price Estimates, \$US Millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03
Productive Enterprises	13.41	16.64	19.14	22.08	25.25	26.55	33.76	36.74	40.92	38.14	33.05	34.99	31.76	37.94	35.85	40.20	40.49
Private Sector	11.47	14.62	16.34	18.98	21.63	24.67	30.32	27.69	30.58	29.05	26.15	25.07	25.21	27.82	27.26	28.61	28.56
Compensation	5.00	6.74	7.04	8.66	9.34	11.49	13.98	13.12	12.92	12.69	11.85	11.45	12.42	12.83	13.23	13.10	13.39
Operating Surplus	6.47	7.89	9.30	10.32	12.29	13.17	16.34	14.58	17.66	16.36	14.29	13.61	12.78	14.99	14.03	15.51	15.17
Public Enterprises	1.95	2.01	2.79	3.10	3.62	1.89	3.44	9.04	10.34	9.09	6.90	9.92	6.55	10.12	8.59	11.58	11.93
Compensation	1.07	1.25	1.70	1.92	2.19	2.86	4.11	5.52	7.22	8.15	7.19	7.83	7.79	7.67	6.94	6.39	6.72
Operating Surplus	0.88	1.02	1.39	1.57	1.79	2.33	1.37	5.35	5.92	2.94	1.19	4.16	0.59	5.14	3.45	6.61	6.76
less Subsidies	0.00	-0.26	-0.29	-0.38	-0.36	-3.31	-2.05	-1.83	-2.80	-2.00	-1.48	-2.07	-1.82	-2.69	-1.80	-1.41	-1.55
Financial Enterprises	1.29	1.44	1.59	1.73	1.93	2.01	2.42	3.16	3.47	3.51	3.39	3.82	3.77	4.25	3.82	3.29	1.87
Government	18.07	18.63	20.16	21.02	22.72	23.03	26.43	27.27	29.26	30.20	29.86	27.23	26.71	26.50	26.52	28.17	28.95
National	6.55	6.11	7.02	7.28	7.77	8.16	9.16	9.55	10.10	10.56	12.44	11.56	10.91	10.50	10.75	11.76	11.89
State	10.96	11.68	12.17	12.76	13.81	13.67	15.99	16.33	17.78	18.05	15.82	14.13	14.13	14.07	13.74	14.28	14.90
Other	0.56	0.84	0.97	0.98	1.14	1.20	1.28	1.38	1.38	1.58	1.59	1.54	1.67	1.93	2.03	2.13	2.16
Non Profit Organizations	2.24	2.49	2.22	2.23	2.53	2.94	3.08	3.31	3.62	3.93	4.37	4.89	5.22	5.73	6.20	7.05	7.42
Households	11.13	12.02	13.06	13.97	14.95	15.69	16.48	17.23	17.78	18.35	18.91	19.30	19.75	20.56	20.91	20.79	20.83
Subsistence	5.29	5.72	6.21	6.65	7.11	7.47	7.84	8.20	8.46	8.73	9.00	9.18	9.39	9.78	9.95	9.89	9.91
Home Ownership	5.83	6.30	6.84	7.32	7.84	8.23	8.64	9.03	9.32	9.62	9.92	10.12	10.35	10.78	10.96	10.90	10.92
Indirect Taxes	2.42	2.93	3.47	3.52	4.23	4.83	5.92	5.94	6.32	6.33	6.14	6.63	7.39	8.57	7.66	7.88	7.59
less bank service charge Nominal GDP	-1.70	-1.90	-2.09	-2.28	-2.54	-2.64	-3.19	-3.90	-4.24	-4.39	-3.98	-4.64	-4.82	-5.10	-4.51	-4.02	-2.29
(US\$ millions)	46.86	52.25	57.54	62.27	69.07	72.41	84.90	89.75	97.13	96.08	91.75	92.22	89.77	98.45	96.46	103.36	104.87
Nominal GDP per capita	\$ 1,644	\$ 1,767	\$ 1,876	\$ 1,993	\$ 2,169	\$ 2,232	\$ 2,568	\$ 2,664	\$ 2,872	\$ 2,830	\$ 2,692	\$ 2,695	\$ 2,613	\$ 2,855	\$ 2,786	\$ 2,974	\$ 3,006
Inflation Index	69.21	72.06	75.49	79.26	83.25	85.76	88.37	90.69	93.23	95.84	98.39	100.00	101.92	105.70	107.12	106.08	105.85
Inflation Rate	2.9%	4.1%	4.8%	5.0%	5.0%	3.0%	3.0%	2.6%	2.8%	2.8%	2.7%	1.6%	1.9%	3.7%	1.3%	-1.0%	-0.2%
Population	28,509	29,570	30,669	31,251	31,844	32,449	33,064	33,692	33,823	33,955	34,087	34,219	34,352	34,486	34,620	34,755	34,890
Population Growth Rate	3.7%	3.7%	3.7%	1.9%	1.9%	1.9%	1.9%	1.9%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
Real GDP																	
(FY98 US\$ millions) Real GDP Growth Rate	67.71 7.1%	72.50 7.1%	76.22 5.1%	78.57 3.1%	82.97 5.6%	84.43 1.8%	96.07 13.8%	98.97 3.0%	104.18 5.3%	100.26 -3.8%	93.25 -7.0%	92.22 -1.1%	88.08 -4.5%	93.14 5.7%	90.05 -3.3%	97.43 8.2%	99.07 1.7%

Sources FSM Department of Finance and Administration, FSM Social Security Administration, FSM Department of Economic Affairs, US Bureau of Labor Statistics (CPI)

Note Inflation Index: 1987-2000 US CPI; 2000-2005 FSM CPI

Yap Gross Domestic Product (Current and Constant Price Estimates, \$US Millions) Table 1e

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03
Productive Enterprises	3.82	4.46	4.57	7.10	7.91	11.87	11.40	11.41	10.68	11.85	12.76	17.88	15.78	15.23	16.99	14.59	17.05
Private Sector	3.37	3.89	4.10	6.44	7.76	10.80	10.17	10.14	8.97	10.01	10.26	11.67	13.20	12.47	13.44	12.47	13.43
Compensation	1.59	1.94	2.10	3.08	3.38	4.79	4.15	4.76	4.21	4.65	4.97	6.23	6.86	7.31	7.74	7.82	7.98
Operating Surplus	1.79	1.95	2.01	3.35	4.37	6.01	6.02	5.38	4.76	5.36	5.29	5.43	6.34	5.16	5.70	4.66	5.45
Public Enterprises	0.45	0.57	0.46	0.67	0.15	1.06	1.23	1.28	1.71	1.84	2.50	6.21	2.58	2.76	3.55	2.11	3.62
Compensation	0.37	0.42	0.34	0.42	0.46	0.59	0.79	0.86	1.04	1.29	1.63	2.78	2.20	2.35	2.66	2.12	2.22
Operating Surplus	0.42	0.49	0.39	0.48	0.53	0.68	0.70	0.70	1.01	0.90	1.23	3.86	0.91	0.71	1.47	0.48	1.90
less Subsidies	-0.35	-0.34	-0.27	-0.24	-0.84	-0.21	-0.25	-0.28	-0.35	-0.34	-0.37	-0.42	-0.52	-0.29	-0.58	-0.48	-0.49
Financial Enterprises	0.27	0.29	0.30	0.37	0.40	0.52	0.52	0.54	0.55	0.47	0.52	0.58	0.66	0.90	0.82	0.89	0.35
Government	6.17	6.17	6.24	6.40	6.53	6.69	7.03	7.61	7.97	8.19	7.68	7.11	6.64	6.52	7.31	7.62	7.66
National	0.12	0.11	0.13	0.13	0.14	0.15	0.17	0.17	0.18	0.19	0.23	0.21	0.20	0.19	0.20	0.22	0.22
State	5.72	5.78	5.89	6.05	6.19	6.19	6.48	6.97	7.25	7.44	6.77	6.19	5.68	5.34	5.70	6.03	6.10
Other	0.33	0.28	0.22	0.21	0.20	0.35	0.38	0.47	0.54	0.56	0.68	0.71	0.76	0.99	1.42	1.38	1.35
Non Profit Organizations	0.20	0.19	0.14	0.14	0.16	0.19	0.22	0.23	0.26	0.30	0.31	0.30	0.30	0.36	0.50	0.64	0.77
Households	5.43	5.81	6.26	6.67	7.11	7.44	7.78	8.10	8.34	8.58	8.82	8.97	9.15	9.22	9.45	9.46	9.39
Subsistence	3.16	3.38	3.64	3.88	4.14	4.33	4.53	4.72	4.86	5.00	5.14	5.22	5.33	5.37	5.50	5.51	5.47
Home Ownership	2.27	2.43	2.61	2.78	2.97	3.11	3.25	3.38	3.48	3.58	3.68	3.75	3.82	3.85	3.95	3.95	3.92
Indirect Taxes	1.21	1.41	1.40	2.05	2.30	2.95	3.48	3.61	2.83	3.39	3.15	3.72	3.66	3.73	3.91	3.28	3.38
less bank service charge Nominal GDP	-0.35	-0.38	-0.38	-0.48	-0.52	-0.67	-0.67	-0.65	-0.67	-0.58	-0.58	-0.69	-0.83	-1.05	-0.95	-1.08	-0.42
(US\$ millions)	16.75	17.96	18.52	22.26	23.89	28.99	29.77	30.85	29.96	32.21	32.66	37.86	35.37	34.90	38.04	35.40	38.19
Nominal GDP per capita	\$ 1,707	\$ 1,781	\$ 1,787	\$ 2,115	\$ 2,236	\$ 2,673	\$ 2,703	\$ 2,760	\$ 2,678	\$ 2,876	\$ 2,913	\$ 3,375	\$ 3,150	\$ 3,105	\$ 3,381	\$ 3,143	\$ 3,388
Inflation Index	69.21	72.06	75.49	79.26	83.25	85.76	88.37	90.69	93.23	95.84	98.39	100.00	101.92	102.62	105.05	105.06	104.21
Inflation Rate	2.9%	4.1%	4.8%	5.0%	5.0%	3.0%	3.0%	2.6%	2.8%	2.8%	2.7%	1.6%	1.9%	0.7%	2.4%	0.0%	-0.8%
Population	9,812	10,085	10,365	10,523	10,683	10,845	11,010	11,178	11,188	11,199	11,209	11,220	11,230	11,241	11,252	11,262	11,273
Population Growth Rate	2.8%	2.8%	2.8%	1.5%	1.5%	1.5%	1.5%	1.5%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Real GDP																	
(FY98 US\$ millions) Real GDP Growth Rate	24.20 -1.0%	24.93 3.0%	24.54 -1.6%	28.09 14.5%	28.70 2.2%	33.80 17.8%	33.69 -0.3%	34.02 1.0%	32.14 -5.5%	33.61 4.6%	33.19 -1.3%	37.86 14.1%	34.71 -8.3%	34.01 -2.0%	36.21 6.5%	33.70 -7.0%	36.64 8.7%

Sources FSM Department of Finance and Administration, FSM Social Security Administration, FSM Department of Economic Affairs, US Bureau of Labor Statistics (CPI)

Inflation Index: 1987-2000 US CPI; 2000-2005 FSM CPI Note

Table 2a FSM Tourist and Visitor Arrivals by year and Nationality (FY1996-FY2004)

	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003 F	Y2004 Est ¹
Asia	2,029	2,301	1,830	2,064	2,890	2,255	1,737	1,842	1,699
Australia	561	452	438	563	791	540	566	639	687
Canada	187	224	169	177	188	192	223	214	199
Europe	1,007	995	1,048	1,302	1,427	1,235	1,343	1,668	1,172
Japan	5,519	4,223	3,429	3,399	4,661	3,194	4,061	3,984	3,162
New Zealand	113	119	128	140	111	87	161	143	129
Other	52	52	90	74	116	63	91	85	108
Pacific Islands	1,608	1,580	1,231	843	1,249	962	1,423	1,150	1,345
Philippines	-	-	-	-	-	-	943	1,035	959
USA	7,083	7,137	5,912	6,950	8,605	6,966	8,152	7,736	6,632
Total	18,159	17,083	14,275	15,512	20,038	15,494	18,700	18,496	16,092

Table 2b Chuuk Tourist and Visitor Arrivals by year and Nationality (FY1996-FY2004)

	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003 F	Y2004 Est ¹
Asia	417	1,004	647	827	1,052	548	370	381	479
Australia	163	122	67	153	283	109	189	226	317
Canada	45	72	50	55	62	62	103	85	66
Europe	291	402	349	534	510	313	473	423	552
Japan	731	1,181	901	1,023	2,045	1,277	1,690	1,057	1,715
New Zealand	28	13	19	39	31	10	32	48	55
Other	5	22	35	30	39	20	19	16	19
Pacific Islands	63	160	128	112	130	107	162	178	177
Philippines	-	-	-	-	-	-	293	374	468
USA	1,789	2,602	1,898	2,339	2,705	1,810	2,735	2,810	2,554
Total	3,532	5,578	4,094	5,112	6,857	4,256	6,066	5,598	6,404

Table 2c Kosrae Tourist and Visitor Arrivals by year and Nationality (FY1996-FY2002Est)

	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003 F	/2004 Est ¹
Asia	271	217	193	281	288	278	97	96	100
Australia	63	64	63	86	71	95	110	61	88
Canada	36	18	24	22	34	28	26	25	28
Europe	155	84	76	100	127	118	121	105	110
Japan	297	220	263	339	244	163	235	213	307
New Zealand	9	14	21	21	20	16	19	23	21
Other	11	8	4	5	24	11	10	8	16
Pacific Islands	377	622	559	249	616	298	375	272	557
Philippines	-	-	-	-	-	-	118	156	147
USA	1,293	998	841	1,039	2,273	1,170	1,133	1,034	941
Total	2,512	2,245	2,044	2,142	3,697	2,177	2,244	1,993	2,315

Table 2d Pohnpei Tourist and Visitor Arrivals by year and Nationality (FY1996-FY2003)

	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003 F	Y2004 Est ¹
Asia	1,181	663	1,008	988	1,289	1,276	1,022	1,161	1,271
Australia	497	302	374	366	506	359	361	335	389
Canada	96	47	51	60	71	67	65	85	88
Europe	417	293	334	280	317	331	269	544	354
Japan	3,701	2,428	1,853	1,565	1,496	1,727	1,802	2,375	1,452
New Zealand	83	73	105	68	58	55	105	87	116
Other	12	21	52	16	37	36	47	51	62
Pacific Islands	880	489	481	363	453	375	877	622	691
Philippines	-	-	-	-	-	-	486	598	778
USA	3,171	2,218	2,184	2,263	2,440	2,812	3,484	3,279	3,026
Total	10,039	6,534	6,442	5,969	6,667	7,038	8,518	9,137	8,226

Yap Tourist and Visitor Arrivals by year and Nationality (FY1996-FY2003) Table 2e

	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003 F	Y2004 Est ¹
Asia	660	614	463	442	745	647	411	540	413
Australia	77	97	57	72	71	69	88	143	110
Canada	89	99	68	82	70	67	65	81	86
Europe	423	412	428	533	665	624	589	810	561
Japan	1,208	997	745	837	867	699	707	741	446
New Zealand	29	25	26	40	22	18	37	27	15
Other	33	24	9	26	42	21	33	19	33
Pacific Islands	299	448	225	235	190	195	159	175	176
Philippines	-	-	-	-	-	-	143	203	192
USA	2,111	2,373	1,982	2,138	2,341	2,382	2,096	2,122	2,118
Total	4,929	5,089	4,003	4,405	5,013	4,722	4,328	4,861	4,150

FSM Department of Justice, Immigration Division First 10 months data Source: Notes 1

Table 3a FSM Employment by Industry (FY1987-FY2004 Est)

FSM	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04E
Agriculture, Hunting and Forestry	11	10	10	12	16	27	49	44	41	33	38	38	33	30	25	27	26	30
Fishing	57	75	85	93	109	127	253	470	632	493	420	356	304	225	222	176	187	181
Mining and Quarrying	53	44	60	60	61	54	51	48	39	17	11	12	7	15	14	11	12	12
Manufacturing	117	181	365	476	486	636	671	612	610	621	572	555	581	700	812	794	684	625
Electricity, Gas and Water Supply	2	11	10	10	13	34	126	203	229	293	403	415	429	429	412	411	417	423
Construction	819	945	929	1,141	1,055	1,181	1,256	1,086	994	877	796	879	881	935	917	788	812	776
Wholesale and Retail Trade; Repair Of Moto		1,685	1,870	1,946	2,095	2,236	2,361	2,471	2,410	2,309	2,320	2,291	2,454	2,585	2,452	2,591	2,733	2,784
Hotels and Restaurants	277	320	369	401	434	497	545	584	642	708	677	731	755	827	744	709	720	707
Transport, Storage and Communications	469	540	611	690	680	788	826	859	955	857	840	798	825	870	804	761	793	810
Financial Intermediation	137	180	201	219	235	248	261	251	240	232	226	232	229	206	206	202	178	174
Real Estate, Renting and Businesss Activitie	225	231	230	258	257	293	311	285	303	288	291	278	301	362	410	454	423	392
Public Administration and Defence; Compuls	7,445	7,787	7,900	7,645	7,972	7,670	7,986	8,005	7,845	7,619	7,145	6,410	6,299	6,353	6,706	6,894	6,635	6,475
Education	362	433	320	339	369	399	386	387	439	471	513	557	580	587	605	686	729	799
Health and Social Work	1	1	1	2	6	9	9	11	15	15	12	11	14	22	31	45	53	64
Other Community, Social and Personal Serv	619	595	473	462	536	527	526	456	460	482	590	711	745	545	573	611	676	722
Private Households With Employed Persons	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Extra-Territorial Organizations and Bodies	69	68	71	49	55	90	112	133	148	141	137	148	152	152	169	183	177	180
Unclassified	1	0	0	0	0	7	1	0	0	0	0	0	0	1	1	1	1	1
Total	12,208	13,105	13,504	13,802	14,380	14,822	15,729	15,905	16,003	15,456	14,989	14,421	14,588	14,842	15,103	15,345	15,257	15,156

Source: Social Security Administration

Table 3a Chuuk Employment by Industry (FY1987-FY2004 Est)

Chuuk	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04E
Agriculture, Hunting and Forestry	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0
Fishing	18	23	27	20	27	18	76	100	67	27	14	13	32	20	0	0	1	3
Mining and Quarrying	45	35	54	55	56	50	50	46	37	14	8	9	5	13	13	10	10	10
Manufacturing	67	88	101	141	130	144	149	139	111	94	83	60	61	55	55	49	41	30
Electricity, Gas and Water Supply	0	0	0	0	0	0	0	0	0	44	88	85	95	99	102	105	104	104
Construction	134	91	120	84	57	94	88	70	70	56	44	63	63	125	74	58	64	69
Wholesale and Retail Trade; Repair Of Moto	668	673	726	710	753	797	816	874	791	680	625	597	631	704	750	825	902	946
Hotels and Restaurants	94	121	159	154	168	187	217	199	252	293	262	255	271	335	269	248	254	258
Transport, Storage and Communications	226	248	223	227	230	269	302	288	341	278	300	279	298	291	239	210	208	206
Financial Intermediation	37	38	43	44	42	44	42	36	30	23	20	20	21	22	21	22	24	26
Real Estate, Renting and Businesss Activitie	38	36	37	49	39	32	26	28	30	28	30	31	26	32	36	32	34	35
Public Administration and Defence; Compuls	3,118	3,336	3,303	3,019	3,339	2,943	3,276	3,308	3,366	3,155	2,875	2,505	2,359	2,403	2,623	2,733	2,415	2,332
Education	95	93	102	115	124	142	132	127	149	151	143	150	143	143	140	144	140	142
Health and Social Work	0	0	0	0	0	0	0	2	2	3	3	3	4	5	8	13	14	20
Other Community, Social and Personal Serv	175	161	162	165	181	185	201	191	209	192	223	282	339	225	221	241	250	264
Private Households With Employed Persons																		0
Extra-Territorial Organizations and Bodies	4	5	6	6	6	5	5	6	6	6	4	6	5	6	7	8	11	14
Unclassified	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
Total	4,717	4,948	5,061	4,787	5,153	4,910	5,379	5,415	5,464	5,044	4,723	4,359	4,353	4,477	4,558	4,698	4,473	4,460

Source: Social Security Administration

Appendix C Statistical Tables

Table 3a Kosrae Employment by Industry (FY1987-FY2004 Est)

Kosrae	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04E
Agriculture, Hunting and Forestry	1	1	1	3	4	1	1	1	1	1	1	1	1	1	1	1	1	1
Fishing	5	8	9	9	10	7	2	37	87	87	62	68	62	27	30	0	0	0
Mining and Quarrying	0	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Manufacturing	7	14	12	17	24	38	38	30	23	25	32	30	28	29	24	33	31	29
Electricity, Gas and Water Supply	0	0	0	0	0	0	0	7	27	29	33	33	32	35	30	32	33	34
Construction	98	49	32	64	67	33	39	38	34	39	56	80	99	122	87	78	111	90
Wholesale and Retail Trade; Repair Of Moto	112	130	146	161	172	191	189	185	182	190	187	200	215	228	236	240	295	274
Hotels and Restaurants	4	12	17	20	23	39	41	34	46	55	61	52	55	44	42	47	47	48
Transport, Storage and Communications	50	60	46	38	38	43	49	56	30	34	33	30	34	62	51	42	41	48
Financial Intermediation	4	4	4	3	3	2	3	2	1	0	0	0	0	0	0	0	1	3
Real Estate, Renting and Businesss Activitie	20	18	15	18	15	17	23	24	44	53	49	49	48	53	43	42	40	43
Public Administration and Defence; Compuls	915	906	877	888	888	904	881	881	799	824	804	701	672	680	670	695	704	697
Education	0	0	0	0	0	0	0	8	14	0	0	0	0	0	0	0	0	0
Health and Social Work																		0
Other Community, Social and Personal Serv	19	19	18	15	19	14	26	27	36	27	18	20	18	23	44	49	55	55
Private Households With Employed Persons																		0
Extra-Territorial Organizations and Bodies	1	1	1	1	1	1	1	1	1	1	2	3	3	3	3	3	3	2
Unclassified	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1,236	1,222	1,179	1,236	1,265	1,289	1,292	1,331	1,325	1,364	1,339	1,267	1,268	1,308	1,261	1,263	1,361	1,324

Source: Social Security Administration

Table 3a Pohnpei Employment by Industry (FY1987-FY2004 Est)

Pohnpei	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04E
Agriculture, Hunting and Forestry	10	9	9	9	11	25	39	32	28	25	30	30	26	25	20	21	21	26
Fishing	0	0	3	4	7	18	60	175	328	257	223	212	174	124	140	140	145	139
Mining and Quarrying	7	8	5	4	4	4	2	2	2	3	3	3	2	1	1	1	2	2
Manufacturing	38	66	54	60	63	77	76	76	77	78	71	63	52	51	44	64	45	39
Electricity, Gas and Water Supply	2	9	8	8	11	32	124	194	200	199	199	207	205	194	186	180	181	183
Construction	430	618	602	684	622	704	868	799	713	559	488	494	524	488	555	422	366	381
Wholesale and Retail Trade; Repair Of Moto	549	644	755	840	901	964	1,053	1,061	1,075	1,066	1,066	1,069	1,134	1,173	1,068	1,137	1,152	1,178
Hotels and Restaurants	137	144	147	175	199	216	224	237	228	230	218	233	206	203	221	227	230	215
Transport, Storage and Communications	166	198	318	401	390	455	450	480	549	513	472	455	461	475	465	467	495	501
Financial Intermediation	83	126	141	161	177	188	203	200	198	197	195	200	196	181	185	180	153	145
Real Estate, Renting and Businesss Activitie	150	158	157	162	173	206	217	194	193	171	173	154	143	160	193	238	226	228
Public Administration and Defence; Compuls	2,369	2,452	2,637	2,659	2,693	2,751	2,656	2,562	2,545	2,515	2,430	2,226	2,372	2,363	2,433	2,486	2,508	2,445
Education	267	337	213	216	238	245	241	236	262	306	356	401	435	442	463	539	586	654
Health and Social Work	1	1	1	2	6	9	9	10	13	12	9	8	10	15	20	30	37	42
Other Community, Social and Personal Serv	390	379	254	252	304	297	261	200	160	193	242	292	272	209	209	234	238	255
Private Households With Employed Persons																		0
Extra-Territorial Organizations and Bodies	63	59	63	40	47	82	106	126	141	134	131	139	143	142	160	172	164	164
Unclassified	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0
Total	4,662	5,208	5,366	5,675	5,847	6,279	6,589	6,583	6,713	6,459	6,304	6,187	6,355	6,248	6,362	6,540	6,548	6,597

Source: Social Security Administration

Table 3a Yap Employment by Industry (FY1987-FY2004 Est)

Yap	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04E
Agriculture, Hunting and Forestry	0	0	0	0	1	2	8	9	9	7	7	7	6	4	4	5	4	3
Fishing	34	44	46	60	64	83	114	158	151	123	122	62	36	54	52	35	41	39
Mining and Quarrying																		0
Manufacturing	5	13	198	259	269	378	408	367	398	424	386	402	440	565	689	648	567	527
Electricity, Gas and Water Supply	0	2	2	2	2	2	2	2	2	21	83	90	97	101	95	94	98	102
Construction	157	186	175	309	309	349	262	178	177	224	208	242	195	201	201	230	272	236
Wholesale and Retail Trade; Repair Of Moto	215	238	243	235	269	283	304	351	362	374	441	424	474	481	398	389	385	386
Hotels and Restaurants	43	44	46	52	44	54	63	113	116	129	135	191	223	244	212	186	189	186
Transport, Storage and Communications	27	33	24	25	21	22	26	34	34	32	34	33	33	41	49	42	49	56
Financial Intermediation	12	12	12	12	13	14	14	13	11	11	11	12	12	3	0	0	0	0
Real Estate, Renting and Businesss Activitie	17	20	22	29	30	38	45	40	37	36	39	44	84	118	138	141	123	86
Public Administration and Defence; Compuls	1,044	1,092	1,082	1,079	1,053	1,073	1,173	1,255	1,134	1,125	1,036	978	895	906	981	980	1,007	1,000
Education	0	3	6	8	7	12	14	16	14	14	14	7	2	2	2	3	3	3
Health and Social Work	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2
Other Community, Social and Personal Serv	36	36	39	30	31	31	38	39	55	70	107	116	116	88	98	88	134	147
Private Households With Employed Persons	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Extra-Territorial Organizations and Bodies	2	3	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
Unclassified	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Total	1,593	1,726	1,898	2,103	2,115	2,343	2,469	2,575	2,501	2,590	2,623	2,608	2,612	2,810	2,921	2,844	2,875	2,775

Source: Social Security Administration

Table 3b Employment by Institution; FSM, Chuuk and Kosrae (FY1987-FY2004 Est)

FSM		FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04E
1.1	Private Sector	3,492	3,916	4,378	4,909	5,046	5,655	6,148	6,149	6,141	5,770	5,567	5,551	5,832	6,366	6,281	6,250	6,379	6,388
1.2	Public Enterprise	202	250	280	291	306	351	484	719	949	976	1,038	1,021	965	892	867	849	847	825
2	Financial Institutions	137	161	177	198	215	230	245	236	227	220	217	224	222	200	200	195	170	162
3.1	National Governmen	515	556	591	634	651	681	722	730	712	684	694	683	835	801	845	837	861	788
3.2	State Government	6,050	6,307	6,362	6,173	6,433	6,033	6,291	6,244	6,094	5,918	5,497	4,935	4,659	4,695	4,918	5,075	4,777	4,697
3.3	Municipalities	775	797	823	751	778	819	851	877	878	824	763	619	634	678	741	787	768	766
4	Non-Profits	1,038	1,118	894	847	951	1,052	988	949	1,002	1,064	1,214	1,388	1,441	1,210	1,251	1,351	1,455	1,530
	Total	12,208	13,105	13,504	13,802	14,380	14,822	15,729	15,905	16,003	15,456	14,989	14,421	14,588	14,842	15,103	15,345	15,257	15,156
Chuu	k																		
1.1	Private Sector	1,304	1,325	1,460	1,457	1,491	1,612	1,750	1,786	1,756	1,520	1,403	1,355	1,438	1,666	1,554	1,557	1,644	1,722
1.2	Public Enterprise	10	10	13	14	14	16	15	15	14	56	101	88	95	98	98	99	96	90
2	Financial Institutions	37	38	43	44	42	44	42	36	30	23	20	20	21	22	21	22	22	22
3.1	National Governmen	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
3.2	State Government	2,663	2,866	2,755	2,569	2,825	2,416	2,735	2,747	2,830	2,676	2,473	2,251	2,120	2,142	2,374	2,464	2,136	2,062
3.3	Municipalities	365	373	457	397	443	421	453	457	433	340	268	134	117	115	86	99	100	88
4	Non-Profits	339	337	333	306	337	400	383	374	402	429	458	511	563	434	425	458	476	476
	Total	4,717	4,948	5,061	4,787	5,153	4,910	5,379	5,415	5,464	5,044	4,723	4,359	4,353	4,477	4,558	4,698	4,473	4,460
Kosra	ie																		
1.1	Private Sector	309	302	286	334	357	366	394	389	392	424	424	419	453	521	517	494	578	544
1.2	Public Enterprise	0	0	0	0	0	0	0	41	101	107	105	137	130	94	67	70	73	71
2	Financial Institutions	4	4	4	3	3	2	3	2	1	0	0	0	0	0	0	0	1	3
3.1	National Governmen	2	3	3	4	5	4	4	4	4	5	5	5	5	6	6	6	6	6
3.2	State Government	861	861	826	848	851	863	838	836	756	783	763	659	633	639	629	651	661	654
3.3	Municipalities	52	42	48	36	32	36	39	40	39	37	36	36	34	36	35	37	37	42
4	Non-Profits	9	10	12	12	17	18	14	19	32	9	6	10	13	13	8	5	5	5
	Total	1,236	1,222	1,179	1,236	1,265	1,289	1,292	1,331	1,325	1,364	1,339	1,267	1,268	1,308	1,261	1,263	1,361	1,324

Source: Social Security Administration

Appendix C Statistical Tables

Pohn	pei	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04E
1.1	Private Sector	1,436	1,768	1,929	2,212	2,258	2,562	2,879	2,835	2,844	2,591	2,442	2,423	2,496	2,528	2,518	2,545	2,543	2,613
1.2	Public Enterprise	141	179	206	206	220	244	368	553	691	661	655	641	586	520	534	538	537	518
2	Financial Institutions	83	107	118	139	157	170	186	185	185	186	185	192	189	176	179	174	147	137
3.1	National Governmen	513	553	588	630	646	677	718	726	708	679	689	678	830	796	839	831	855	782
3.2	State Government	1,559	1,557	1,736	1,718	1,739	1,763	1,639	1,516	1,510	1,455	1,346	1,176	1,140	1,169	1,179	1,215	1,207	1,215
3.3	Municipalities	282	313	280	278	268	279	265	269	270	327	338	319	353	367	385	424	405	410
4	Non-Profits	648	732	508	493	559	584	535	498	506	560	649	757	761	693	728	813	855	922
	Total	4,662	5,208	5,366	5,675	5,847	6,279	6,589	6,583	6,713	6,459	6,304	6,187	6,355	6,248	6,362	6,540	6,548	6,597
Yap																			
1.1	Private Sector	443	521	703	906	940	1,115	1,125	1,138	1,150	1,236	1,298	1,353	1,446	1,651	1,692	1,654	1,614	1,509
1.2	Public Enterprise	51	62	60	70	71	91	102	112	143	151	177	155	155	179	167	141	142	146
2	Financial Institutions	12	12	12	12	13	14	14	13	11	11	11	12	12	3	0	0	0	0
3.2	State Government	967	1,023	1,045	1,038	1,018	991	1,079	1,144	999	1,004	915	849	766	746	737	745	773	767
3.3	Municipalities	77	69	37	41	35	82	94	111	136	121	120	129	130	160	234	227	226	226
4	Non-Profits	42	39	41	36	38	50	57	57	62	66	101	110	104	70	91	76	120	127
	Total	1,593	1,726	1,898	2,103	2,115	2,343	2,469	2,575	2,501	2,590	2,623	2,608	2,612	2,810	2,921	2,844	2,875	2,775

Employment by Institution; Pohnpei and Yap (FY1987-FY2004 Est)

Source: Social Security Administration

Table 3b

Table 3c Nominal Wages by Institution; FSM, Chuuk and Kosrae (FY1987-FY2004 Est)

FSM		FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04E
1.1	Private Sector	2,991	3,190	3,037	3,306	3,490	3,843	3,914	3,918	3,808	3,983	3,941	3,990	4,054	4,091	4,287	4,315	4,408	4,414
1.2	Public Enterprise	5,593	5,222	5,865	6,470	6,989	7,941	8,099	7,935	7,663	8,163	8,532	8,997	9,764	10,491	11,014	10,815	10,960	10,815
2	Financial Institutions	7,846	8,793	8,879	9,693	10,129	10,858	11,437	12,518	12,364	12,829	13,091	13,385	14,407	16,043	16,040	15,481	16,630	14,493
3.1	National Government	11,376	11,461	10,519	11,348	11,667	12,553	13,092	13,810	14,682	14,711	14,651	13,768	12,896	11,785	11,892	12,304	12,100	12,787
3.2	State Government	5,619	5,668	5,646	6,108	6,547	6,848	7,448	7,480	8,095	8,182	7,613	7,661	7,620	7,850	7,954	8,151	8,482	8,365
3.3	Municipalities	2,004	2,266	2,330	2,567	2,727	2,863	3,056	3,187	3,265	3,459	3,821	4,356	4,584	4,926	5,074	4,843	4,940	5,200
4	Non-Profits	3,440	3,408	3,920	4,014	4,232	4,532	4,962	5,393	5,676	5,786	5,573	5,433	5,521	7,148	7,534	8,088	7,939	8,003
	Total	4,720	4,804	4,744	5,090	5,409	5,667	6,014	6,128	6,361	6,552	6,360	6,365	6,402	6,528	6,756	6,881	6,981	6,932
Chuu	k																		
1.1	Private Sector	2,365	2,377	2,445	2,524	2,709	2,826	2,921	2,973	3,059	3,053	2,961	3,029	3,107	3,282	3,391	3,523	3,649	3,526
1.2	Public Enterprise	3,671	3,717	3,301	3,947	4,445	5,518	5,263	5,458	5,503	6,615	7,175	8,435	10,284	10,919	10,774	10,153	10,397	9,408
2	Financial Institutions	5,986	6,828	8,104	11,033	9,965	12,220	11,371	12,274	12,333	14,938	13,589	13,235	14,590	16,054	16,159	13,462	12,110	12,466
3.1	National Government	-	-	-	-	-	1,920	1,920	-	-	-	-	-	-	-	-	-	-	-
3.2	State Government	5,304	4,870	5,304	5,686	6,244	6,435	6,613	6,399	7,173	7,093	6,106	6,054	5,970	6,599	7,007	6,974	7,469	7,223
3.3	Municipalities	1,470	1,508	1,347	1,590	1,507	1,543	1,729	1,714	1,848	1,611	1,818	2,146	2,836	2,393	1,890	1,710	1,466	1,746
4	Non-Profits	2,551	2,227	2,403	2,219	2,876	3,080	3,145	3,165	3,221	3,358	3,308	3,241	2,972	3,780	3,967	4,384	4,214	4,497
	Total	4,000	3,782	3,950	4,206	4,619	4,604	4,786	4,686	5,162	5,219	4,712	4,745	4,688	5,123	5,518	5,564	5,669	5,467
Kosra	ае																		
1.1	Private Sector	2,753	2,475	2,282	2,615	2,622	2,815	2,735	3,088	3,007	3,216	3,128	3,279	3,223	3,169	3,466	3,552	3,596	3,602
1.2	Public Enterprise	-	-	-	-	-	-	-	4,831	6,159	5,600	7,880	7,936	8,936	10,926	11,700	10,881	9,542	9,464
2	Financial Institutions	6,259	6,247	6,348	6,404	5,271	5,550	6,590	5,855	4,259	-	-	-	-	-	-	-	1,651	2,086
3.1	National Government	4,660	4,128	3,914	3,438	3,162	3,416	3,285	3,167	3,061	2,964	2,876	2,795	2,720	2,652	2,588	2,529	2,508	2,508
3.2	State Government	4,326	4,919	5,330	5,249	5,569	5,873	6,511	6,446	7,236	7,317	7,431	6,715	7,248	7,474	7,669	9,004	8,456	8,369
3.3	Municipalities	2,473	2,944	2,231	2,830	3,464	3,823	4,100	3,977	3,876	4,587	4,322	4,254	4,476	4,538	4,662	4,039	4,270	4,040
4	Non-Profits	5,088	4,175	3,669	3,331	2,619	2,946	2,592	2,252	3,244	3,200	2,095	2,097	1,894	1,807	2,629	3,475	4,334	5,093
	Total	3,868	4,244	4,446	4,446	4,634	4,899	5,235	5,270	5,693	5,792	5,981	5,588	5,834	5,849	6,021	6,779	6,292	6,280

Source: Social Security Administration

Appendix C Statistical Tables

Pohn	pei	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04E
1.1	Private Sector	3,432	3,770	3,620	3,891	4,106	4,437	4,771	4,536	4,454	4,782	4,723	4,606	4,836	4,925	5,142	5,019	5,102	5,111
1.2	Public Enterprise	6,301	5,791	6,822	7,721	8,256	9,711	9,255	9,005	8,548	9,460	9,679	10,099	10,785	11,995	12,574	11,866	12,122	11,947
2	Financial Institutions	9,107	9,700	9,323	9,439	10,354	10,724	11,669	12,828	12,509	12,686	13,145	13,527	14,551	16,098	16,026	15,735	17,372	15,090
3.1	National Government	11,401	11,500	10,555	11,402	11,728	12,616	13,159	13,872	14,755	14,792	14,734	13,850	12,961	11,849	11,956	12,374	12,168	12,867
3.2	State Government	7,048	7,452	6,388	7,411	7,826	8,265	10,258	11,099	11,151	11,526	10,902	11,767	11,270	11,081	10,888	10,974	11,540	11,463
3.3	Municipalities	1,985	2,686	3,477	3,542	4,263	4,305	4,811	5,144	5,093	4,835	4,710	4,823	4,712	5,242	5,262	5,027	5,329	5,522
4	Non-Profits	3,884	3,947	5,062	5,269	5,216	5,756	6,566	7,502	8,147	8,047	7,790	7,549	8,057	9,861	10,232	10,501	10,580	10,360
	Total	5,681	5,843	5,653	6,167	6,492	6,885	7,642	7,935	7,994	8,346	8,215	8,198	8,268	8,427	8,624	8,590	8,791	8,703
Yap																			
1.1	Private Sector	3,569	3,708	2,972	3,392	3,582	4,284	3,678	4,148	3,623	3,718	3,795	4,071	3,906	3,921	4,087	4,206	4,378	4,513
1.2	Public Enterprise	4,018	3,808	3,157	3,333	3,595	3,628	4,338	4,091	4,647	4,881	5,452	5,705	6,276	5,659	5,904	7,240	7,666	8,319
2	Financial Institutions	5,439	7,733	8,103	8,527	9,024	9,051	9,528	9,913	10,458	10,875	11,298	11,296	11,713	12,445	-	-	-	-
3.2	State Government	5,335	5,817	5,565	5,701	6,018	6,188	6,024	6,038	6,740	6,912	6,998	6,971	7,060	6,702	6,554	6,696	6,528	6,525
3.3	Municipalities	4,288	4,054	5,908	5,196	5,766	4,305	4,086	4,237	3,972	4,598	5,634	5,522	5,848	6,106	5,993	5,996	5,899	6,177
4	Non-Profits	3,421	3,311	2,138	2,250	2,526	2,425	2,693	2,660	2,699	2,728	1,769	1,342	1,228	2,218	3,020	4,888	4,010	4,148
	Total	4,701	4,995	4,478	4,575	4,805	5,053	4,756	4,986	4,954	5,071	5,064	5,101	4,995	4,861	4,933	5,170	5,222	5,388

Nominal Wages by Institution; Pohnpei and Yap (FY1987-FY2004 Est)

Source: Social Security Administration

Table 3c

Table 3d Real Wages by Institution, FSM and States (FY1987-FY2004 Est)

FSM		FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04E
1.1	Private Sector	4,322	4,427	4,023	4,172	4,193	4,481	4,429	4,321	4,084	4,156	4,005	3,990	3,978	3,890	3,949	3,915	3,882	3,823
1.2	Public Enterprise	8,081	7,246	7,770	8,163	8,395	9,259	9,165	8,750	8,219	8,518	8,672	8,997	9,580	9,976	10,147	9,811	9,654	9,367
2	Financial Institutions	11,337	12,202	11,762	12,230	12,166	12,661	12,942	13,804	13,262	13,387	13,305	13,385	14,136	15,256	14,777	14,044	14,647	12,554
3.1	National Government	16,437	15,904	13,934	14,318	14,014	14,637	14,815	15,229	15,748	15,350	14,890	13,768	12,653	11,207	10,956	11,162	10,657	11,076
3.2	State Government	8,119	7,865	7,479	7,707	7,863	7,985	8,429	8,249	8,683	8,538	7,737	7,661	7,477	7,465	7,328	7,395	7,470	7,246
3.3	Municipalities	2,895	3,144	3,087	3,239	3,275	3,338	3,459	3,515	3,502	3,609	3,883	4,356	4,498	4,684	4,674	4,394	4,351	4,504
4	Non-Profits	4,971	4,730	5,193	5,064	5,083	5,284	5,615	5,947	6,088	6,037	5,663	5,433	5,417	6,798	6,941	7,337	6,992	6,932
	Total	6,820	6,666	6,285	6,422	6,497	6,608	6,806	6,758	6,823	6,836	6,464	6,365	6,282	6,208	6,224	6,242	6,148	6,004
Chuu	k																		
1.1	Private Sector	3,417	3,298	3,239	3,184	3,254	3,296	3,306	3,278	3,281	3,185	3,009	3,029	3,049	3,121	3,124	3,196	3,214	3,054
1.2	Public Enterprise	5,305	5,158	4,373	4,980	5,339	6,434	5,956	6,019	5,903	6,902	7,292	8,435	10,091	10,383	9,926	9,211	9,158	8,149
2	Financial Institutions	8,650	9,475	10,736	13,921	11,970	14,248	12,868	13,535	13,228	15,587	13,811	13,235	14,316	15,266	14,887	12,213	10,666	10,798
3.1	National Government	-	-	-	-	-	2,239	2,173	-	-	-	-	-	-	-	-	-	-	-
3.2	State Government	7,664	6,759	7,026	7,174	7,500	7,503	7,483	7,056	7,694	7,401	6,206	6,054	5,858	6,275	6,455	6,326	6,578	6,257
3.3	Municipalities	2,124	2,092	1,784	2,006	1,810	1,799	1,957	1,890	1,983	1,681	1,848	2,146	2,783	2,276	1,741	1,552	1,291	1,513
4	Non-Profits	3,686	3,090	3,183	2,800	3,455	3,591	3,559	3,490	3,455	3,503	3,362	3,241	2,916	3,594	3,654	3,977	3,712	3,896
	Total	5,779	5,248	5,233	5,307	5,548	5,369	5,416	5,167	5,537	5,446	4,789	4,745	4,600	4,872	5,084	5,048	4,993	4,735
Kosra	ae																		
1.1	Private Sector	3,977	3,434	3,023	3,299	3,150	3,282	3,095	3,406	3,225	3,356	3,179	3,279	3,162	3,013	3,193	3,223	3,167	3,120
1.2	Public Enterprise	-	-	-	-	-	-	-	5,327	6,606	5,843	8,009	7,936	8,768	10,390	10,779	9,871	8,404	8,198
2	Financial Institutions	9,043	8,669	8,408	8,080	6,331	6,471	7,458	6,456	4,568	-	-	-	-	-	-	-	1,454	1,806
3.1	National Government	6,734	5,729	5,185	4,337	3,797	3,983	3,717	3,492	3,283	3,093	2,923	2,795	2,669	2,522	2,384	2,294	2,209	2,173
3.2	State Government	6,250	6,826	7,061	6,623	6,689	6,848	7,369	7,108	7,761	7,635	7,553	6,715	7,112	7,107	7,065	8,168	7,448	7,249
3.3	Municipalities	3,573	4,085	2,955	3,570	4,161	4,457	4,640	4,386	4,158	4,786	4,393	4,254	4,391	4,315	4,295	3,664	3,760	3,500
4	Non-Profits	7,352	5,794	4,860	4,202	3,146	3,435	2,933	2,483	3,479	3,339	2,129	2,097	1,859	1,719	2,422	3,153	3,818	4,411
	Total	5,588	5,889	5,889	5,609	5,567	5,712	5,924	5,811	6,106	6,044	6,078	5,588	5,724	5,562	5,547	6,150	5,542	5,439

Source: Social Security Administration

Appendix C Statistical Tables

Pohn	pei	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04E
1.1	Private Sector	4,959	5,231	4,796	4,909	4,932	5,174	5,399	5,002	4,778	4,989	4,800	4,606	4,745	4,683	4,737	4,553	4,494	4,427
1.2	Public Enterprise	9,104	8,037	9,036	9,742	9,916	11,323	10,474	9,930	9,169	9,871	9,837	10,099	10,582	11,406	11,584	10,765	10,677	10,348
2	Financial Institutions	13,159	13,461	12,351	11,909	12,436	12,504	13,206	14,146	13,417	13,237	13,360	13,527	14,277	15,309	14,764	14,275	15,301	13,071
3.1	National Government	16,474	15,959	13,981	14,386	14,087	14,711	14,891	15,297	15,826	15,435	14,975	13,850	12,717	11,268	11,015	11,226	10,717	11,145
3.2	State Government	10,184	10,341	8,462	9,351	9,400	9,636	11,609	12,239	11,961	12,027	11,080	11,767	11,058	10,538	10,031	9,956	10,164	9,929
3.3	Municipalities	2,868	3,727	4,606	4,470	5,120	5,019	5,444	5,673	5,463	5,045	4,787	4,823	4,623	4,985	4,848	4,560	4,694	4,783
4	Non-Profits	5,612	5,478	6,706	6,648	6,265	6,711	7,431	8,272	8,738	8,396	7,917	7,549	7,905	9,378	9,426	9,526	9,319	8,973
	Total	8,208	8,108	7,489	7,782	7,797	8,028	8,648	8,750	8,574	8,709	8,349	8,198	8,113	8,014	7,946	7,793	7,743	7,539
Yap																			
1.1	Private Sector	5,158	5,145	3,936	4,280	4,302	4,995	4,162	4,574	3,887	3,879	3,857	4,071	3,832	3,729	3,765	3,816	3,856	3,909
1.2	Public Enterprise	5,806	5,285	4,182	4,205	4,317	4,230	4,909	4,511	4,984	5,093	5,541	5,705	6,158	5,382	5,439	6,568	6,752	7,206
2	Financial Institutions	7,859	10,731	10,734	10,759	10,839	10,553	10,782	10,931	11,218	11,347	11,482	11,296	11,493	11,834	-	-	-	-
3.2	State Government	7,708	8,072	7,372	7,193	7,229	7,216	6,818	6,658	7,230	7,212	7,113	6,971	6,927	6,374	6,038	6,074	5,750	5,652
3.3	Municipalities	6,196	5,625	7,826	6,555	6,926	5,019	4,624	4,672	4,261	4,798	5,726	5,522	5,738	5,807	5,522	5,440	5,196	5,350
4	Non-Profits	4,942	4,595	2,832	2,839	3,034	2,828	3,048	2,934	2,895	2,847	1,798	1,342	1,205	2,109	2,782	4,435	3,532	3,592
	Total	6,792	6,931	5,931	5,772	5,772	5,891	5,382	5,498	5,313	5,291	5,146	5,101	4,901	4,623	4,545	4,691	4,600	4,667

Real Wages by Institution, FSM and States (FY1987-FY2004 Est)

Source: Social Security Administration

Table 3d

Table 4 FSM Commercial Banking Survey (Sept 1995 – March 2004, end of period, US\$ Millions)

			•					•						
	1995	1996	1997	1998	1999	2000	2001	2002	2002	2003	2003	2003	2003	2004
	Sept. 30	Dec. 31	March 31	June 30	Sept. 30	Dec. 31	March 31							
TOTAL ASSETS	128.7	127.8	123.8	135.8	134.2	137.0	138.6	128.3	139.3	144.9	138.8	137.1	132.8	138.1
Total Liquid Assets	75.8	75.8	78.4	83.8	80.6	81.2	82.2	83.5	98.8	108.8	106.7	107.7	105.5	112.1
Cash & Due from Local banks	5.4	4.1	4.2	5.5	4.6	4.2	4.4	5.2	3.2	4.0	2.4	3.1	3.1	3.5
Foreign Assets - Due from Banks Abroad	70.4	71.7	74.2	78.3	75.9	77.0	77.8	78.3	95.6	104.8	104.3	104.6	102.4	108.6
Total Loans	51.3	49.3	42.9	48.1	50.0	52.4	52.0	39.1	34.7	30.9	26.5	24.0	21.7	20.5
Commercial Loans	18.7	18.8	17.8	22.0	21.7	21.3	18.3	21.0	13.5	12.9	12.2	10.1	7.1	9.7
Consumer Loans	32.6	30.5	25.1	26.0	28.3	31.1	33.8	18.1	21.2	18.0	14.4	13.9	14.7	10.8
Other Assets	1.5	2.7	2.5	3.9	3.6	3.4	4.4	5.7	5.8	5.2	5.5	5.4	5.6	5.5
TOTAL LIABILITIES & CAPITAL	128.7	127.8	123.8	135.8	134.2	137.0	138.6	128.3	139.3	144.9	138.8	137.1	132.8	138.1
Total Deposits:	116.3	112.3	109.3	120.0	119.1	120.8	121.7	112.0	118.5	125.0	119.2	119.8	117.2	122.2
Demand	23.7	22.1	21.6	25.9	23.3	24.2	24.2	25.5	26.5	27.0	25.5	28.1	28.4	30.9
Savings	36.0	30.5	31.6	37.9	41.0	36.1	42.8	44.7	52.2	63.1	60.8	60.2	57.3	58.9
Time	56.6	59.7	56.1	56.3	54.7	60.5	54.5	41.7	39.8	34.8	32.9	31.4	31.5	32.3
Other					0.1	0.1	0.2	0.1	0.0	0.1	0.0	0.1	0.0	0.0
Other Liabilities & Capital	12.3	15.5	14.5	15.8	15.1	16.1	17.0	16.3	20.8	19.9	19.6	17.3	15.6	16.0
Memorandum Items:														
Loan/Deposit Ratio	44	44	39	40	42	43	43	35	29	25	22	20	19	17
Commercial Loan Share of Total Loans (%)	36	38	42	46	43	41	35	54	39	42	46	42	33	48
Consumer Loan Share of Total Loans (%)	64	62	58	54	57	59	65	46	61	58	54	58	67	52
Deposits Annual Rate of Change (%)	3.3	-3.5	-2.7	9.8	-0.8	1.5	0.7	-7.9	-5.6	2.3	3.9	6.9	-1.1	-2.3
Loans Annual Rate of Change (%)	-14.9	-2.3	-12.9	12.0	4.0	4.8	-0.7	-24.9	-34.7	-37.4	-40.9	-38.7	-37.4	-33.5
Commercial Loans Annual Rate of Change (%)	-12.8	0.5	-5.0	23.6	-1.5	-2.0	-14.1	15.0	-29.8	-29.5	-28.0	-52.0	-47.7	-24.1
Consumer Loans Annual Rate of Change (%)	-16.1	-6.5	-17.7	3.7	8.6	10.0	8.5	-46.5	-37.5	-42.0	-48.6	-23.3	-30.9	-40.2

Source: Social Security Administration

Table 5a FSM CPI Index (1999=100)

Table Sa	F3IVI C		X (1999=	100)				
·	Total	Food	Tob, Alch,	Clothing,	Housing	Fuel,	Services M	liscellan-
				Footware		Light &		eous
			Sakau			Water		
Weight	100.0	45.5	8.5	2.9	2.7	5.6	16.5	18.4
00-Q1	100.8	100.7	100.0	101.3	102.0	100.6	100.2	101.7
00-Q2	102.0	100.7	101.7	100.5	101.9	116.8	101.9	101.1
00-Q3	102.5	100.9	103.1	97.0	99.7	117.0	107.3	99.0
00-Q4	103.3	101.2	103.8	98.0	100.4	118.0	109.0	100.1
01-Q1	102.8	100.6	103.4	96.8	99.6	112.6	110.5	99.7
01-Q2	102.6	100.3	103.7	96.6	100.1	111.2	110.5	99.5
01-Q3	102.5	100.4	105.4	96.6	98.7	113.2	111.8	95.9
01-Q4	102.7	100.9	101.8	96.2	98.5	119.2	112.5	95.4
02-Q1	102.8	101.7	97.2	97.0	99.8	123.2	111.8	95.4
02-Q2	102.7	101.2	99.7	96.5	99.1	120.5	112.4	95.4
02-Q3	102.4	100.7	99.7	95.7	98.6	120.5	112.1	95.3
02-Q4	102.3	99.8	100.9	95.4	99.3	123.6	112.1	95.4
03-Q1	102.0	99.3	98.9	95.9	97.1	125.0	112.5	95.5
03-Q1 03-Q2	102.6	100.5	97.9	95.9	97.0	124.9	113.3	95.7
03-Q2 03-Q3	102.7	100.4	98.3	97.0	96.6	126.7	113.1	95.8
03-Q3 03-Q4	103.5	100.4	97.4	97.0	96.7	134.4	113.1	96.1
03-Q4 04-Q1	103.5	102.9	95.1	96.5	97.0	134.2	115.4	92.9
					97.0	134.2		
FY99	99.5	99.7	99.7	100.2	100.0	98.0	99.2	99.4
FY00	101.5	100.7	101.1	99.7	100.9	108.7	102.3	100.9
FY01	102.8	100.6	104.1	97.0	99.7	113.8	110.4	98.8
FY02	102.7	101.1	99.6	96.3	99.0	120.9	112.2	95.4
FY03	102.4	100.0	99.0	96.1	97.5	125.1	112.8	95.6
Voor on voor		#b						
Year on year 00-Q1	percent grow 1.5	1.5	1.1	0.9	2.3	-0.1	0.1	3.4
00-Q1 00-Q2	2.2	0.7	1.1		1.9	16.1	1.9	
	2.2	0.7	2.2	0.5 -2.6	-0.4	19.2	7.4	3.0
00-Q3	2.2	0.7	4.3	-2.0 -2.1	-0.4 0.2			-2.6
00-Q4 01-Q1	2.7	-0.1	_	-2.1 -4.5	-2.3	17.3 11.9	9.0 10.3	-1.6 -2.0
	2.0 0.6	-0.1	3.5	-4.5 -3.8	-2.3 -1.8	-4.8	8.4	-2.0 -1.6
01-Q2	-0.1		2.0		-1.6 -1.0		6.4 4.2	-1.6 -3.1
01-Q3		-0.5	2.2	-0.3		-3.2		-3.1 -4.7
01-Q4	-0.6	-0.3	-2.0	-1.8	-1.9	1.0	3.2	
02-Q1	0.0	1.0	-6.0	0.3	0.1	9.5	1.2	-4.4
02-Q2	0.1	0.9	-3.9	-0.2	-1.0	8.4	1.7	-4.1
02-Q3	-0.1	0.2	-5.3	-1.0	-0.1	6.5	0.2	-0.6
02-Q4	-0.4	-1.1	-0.8	-0.8	0.9	3.7	-0.3	0.0
03-Q1	-0.8	-2.3	1.8	-1.1	-2.6	1.5	0.6	0.1
03-Q2	-0.1	-0.7	-1.9	-0.6	-2.1	3.6	0.8	0.3
03-Q3	0.3	-0.3	-1.4	1.4	-2.1	5.1	0.9	0.5
03-Q4	1.1	1.1	-3.5	1.6	-2.7	8.7	1.2	8.0
04-Q1	1.8	3.6	-3.9	0.6	-0.1	7.4	2.6	-2.7
FY00	2.0	1.1	1.4	-0.5	1.0	10.9	3.2	1.5
FY01	1.3	-0.1	3.0	-2.7	-1.2	4.6	7.9	-2.1
FY02	-0.1	0.5	-4.3	-0.7	-0.7	6.3	1.6	-3.5
FY03	-0.2	-1.1	-0.6	-0.3	-1.5	3.5	0.5	0.2

Table 5a FSM CPI Index Domestic Items (1999=100)

i able 5a	FSIVI C	Pi inae	x Domes	tic items	(1999=1	00)		
	Total	Food	Tob, Alch,	Clothing,	Housing	Fuel,	Services N	/liscellan-
			Betelnut,	Footware	· ·	Light &		eous
			Sakau			Water		
Weight	25.4	9.6	0.8	0.1	1.5	3.9	9.5	
00-Q1	99.8	99.2	94.5	100.0	100.3	100.7	100.4	
00-Q2	105.6	105.6	92.5	100.0	100.2	119.0	102.2	
00-Q3	109.6	105.1	98.1	100.0	100.2	119.0	113.0	
00-Q4	110.4	105.8	97.9	101.2	101.0	119.7	113.9	
01-Q1	109.2	104.5	102.6	101.2	101.0	111.1	115.1	
01-Q2	109.2	104.9	111.1	101.2	101.0	108.8	115.0	
01-Q3	108.9	105.2	109.6	101.2	101.0	108.8	114.0	
01-Q4	109.7	105.3	95.6	101.2	100.9	117.0	113.8	
02-Q1	110.1	104.6	93.6	101.2	101.7	121.5	113.8	
02-Q2	110.2	105.3	93.6	101.2	100.1	118.7	114.6	
02-Q3	110.0	105.4	86.4	101.9	100.1	119.7	114.3	
02-Q4	110.3	103.1	98.5	101.9	101.5	124.1	114.3	
03-Q1	109.7	102.1	98.5	101.9	96.7	124.6	114.3	
03-Q2	110.2	104.1	100.8	101.9	96.7	122.7	114.3	
03-Q3	110.2	102.8	102.6	101.9	95.9	125.3	114.5	
03-Q4	111.6	102.5	97.8	101.9	96.7	135.8	114.6	
04-Q1	113.2	103.4	94.7	101.2	96.7	135.8	118.1	
FY99	98.9	99.4	100.9	99.9	99.9	97.8	98.6	
FY00	103.8	102.4	95.7	100.0	100.2	109.8	104.0	
FY01	109.4	105.1	105.3	101.2	101.0	112.1	114.5	
FY02	110.0	105.2	92.3	101.4	100.7	119.2	114.1	
FY03	110.1	103.0	100.1	101.9	97.7	124.2	114.3	
Year on year	percent grow	<i>r</i> th						
00-Q1	0.0	-0.5	-6.5	0.0	0.9	0.0	1.0	
00-Q2	5.4	5.3	-8.1	0.0	0.0	18.2	2.1	
00-Q3	9.7	4.8	-2.6	0.0	0.0	21.3	12.7	
00-Q4	10.4	6.1	0.4	1.2	0.8	18.9	13.7	
01-Q1	9.4	5.3	8.6	1.2	0.7	10.4	14.6	
01-Q2	3.4	-0.6	20.1	1.2	0.8	-8.5	12.5	
01-Q3	-0.7	0.1	11.7	1.2	0.8	-8.5	0.9	
01-Q4	-0.7	-0.5	-2.4	0.0	0.0	-2.3	-0.1	
02-Q1	0.8	0.1	-8.8	0.0	0.7	9.4	-1.1	
02-Q2	0.9	0.4	-15.8	0.0	-0.8	9.1	-0.3	
02-Q3	1.0	0.2	-21.2	0.7	-0.8	10.0	0.3	
02-Q4	0.5	-2.1	3.1	0.7	0.6	6.1	0.4	
03-Q1	-0.4	-2.4	5.3	0.7	-4.9	2.6	0.5	
03-Q2	0.0	-1.2	7.7	0.7	-3.4	3.3	-0.3	
03-Q3	0.2	-2.5	18.8	0.0	-4.2	4.7	0.1	
03-Q4	1.2	-0.6	-0.8	0.0	-4.7	9.4	0.2	
04-Q1	3.2	1.4	-3.8	-0.7	0.0	9.0	3.3	
FY00	4.9	3.0	-5.2	0.1	0.4	12.3	5.5	
FY01	5.5	2.6	10.1	1.2	0.8	2.1	10.1	
FY02	0.5	0.0	-12.4	0.2	-0.2	6.3	-0.3	
FY03	0.1	-2.0	8.5	0.5	-3.0	4.2	0.2	

Table 5a FSM CPI Index Imported Items (1999=100)

Table 5a			•		(1999=10			
	Total	Food	Tob, Alch,	Clothing,	Housing	Fuel,	Services M	
				Footware		Light &		eous
			Sakau			Water		
Weight	74.6	35.9	7.7	2.8	1.1	1.7	7.0	18.4
00-Q1	101.1	101.1	100.5	101.3	104.4	100.5	99.8	101.7
00-Q2	100.7	99.4	102.7	100.5	104.2	111.7	101.6	101.1
00-Q3	100.1	99.8	103.6	96.8	99.0	112.4	99.7	99.0
00-Q4	100.9	100.0	104.4	97.9	99.5	114.2	102.3	100.1
01-Q1	100.7	99.6	103.5	96.6	97.8	116.0	104.2	99.7
01-Q2	100.3	99.0	103.0	96.4	98.8	116.7	104.5	99.5
01-Q3	100.3	99.2	104.9	96.5	95.6	123.3	108.9	95.9
01-Q4	100.3	99.8	102.4	96.0	95.2	124.5	110.7	95.4
02-Q1	100.4	100.9	97.5	96.8	97.1	127.2	109.1	95.4
02-Q2	100.2	100.1	100.4	96.3	97.6	124.6	109.4	95.4
02-Q3	99.8	99.4	101.1	95.5	96.6	122.5	109.0	95.3
02-Q4	99.6	99.0	101.2	95.2	96.4	122.5	109.1	95.4
03-Q1	99.4	98.6	98.9	95.7	97.6	126.1	110.0	95.5
03-Q2	100.1	99.5	97.6	95.7	97.4	129.9	112.1	95.7
03-Q3	100.2	99.7	97.9	96.8	97.4	129.8	111.2	95.8
03-Q4	100.7	100.6	97.4	96.8	96.7	131.0	111.8	96.1
04-Q1	100.7	102.8	95.1	96.3	97.4	130.5	111.8	92.9
FY99	99.7	99.7	99.6	100.2	100.1	98.5	100.0	99.4
FY00	100.7	100.3	101.6	99.7	101.9	106.2	100.2	100.9
FY01	100.6	99.4	104.0	96.8	97.9	117.5	105.0	98.8
FY02	100.2	100.0	100.3	96.2	96.6	124.7	109.5	95.4
FY03	99.8	99.2	98.9	95.8	97.2	127.1	110.6	95.6
-								
Year on year			4.0	4.0	4.0			
00-Q1	2.0	2.1	1.9	1.0	4.3	-0.4	-1.1	3.4
00-Q2	1.2	-0.5	2.0	0.5	4.4	11.2	1.6	3.0
00-Q3	-0.3	-0.4	2.7	-2.7	-1.0	14.5	0.1	-2.6
00-Q4	0.1	-1.0	4.7	-2.3	-0.5	13.7	2.7	-1.6
01-Q1	-0.4	-1.5	3.0	-4.7	-6.3	15.5	4.4	-2.0
01-Q2	-0.4	-0.3	0.3	-4.0	-5.2	4.4	2.9	-1.6
01-Q3	0.1	-0.6	1.3	-0.4	-3.5	9.7	9.3	-3.1
01-Q4	-0.6	-0.2	-2.0	-1.9	-4.4	9.0	8.2	-4.7
02-Q1	-0.3	1.3	-5.7	0.3	-0.8	9.6	4.7	-4.4
02-Q2	-0.1	1.1	-2.5	-0.2	-1.2	6.8	4.7	-4.1
02-Q3	-0.5	0.3	-3.6	-1.0	1.1	-0.7	0.1	-0.6
02-Q4	-0.7	-0.8	-1.2	-0.9	1.3	-1.6	-1.4	0.0
03-Q1	-0.9	-2.3	1.4	-1.2	0.6	-0.9	0.8	0.1
03-Q2	-0.1	-0.6	-2.8	-0.6	-0.2	4.2	2.5	0.3
03-Q3	0.4	0.3	-3.2	1.4	0.8	6.0	2.0	0.5
03-Q4	1.1	1.6	-3.7	1.7	0.2	6.9	2.5	0.8
04-Q1	1.3	4.2	-3.9	0.7	-0.2	3.5	1.7	-2.7
FY00	1.1	0.6	2.1	-0.5	1.8	7.8	0.1	1.5
FY01	-0.2	-0.9	2.3	-2.9	-3.9	10.6	4.8	-2.1
FY02	-0.4	0.6	-3.5	-0.7	-1.3	6.1	4.4	-3.5
FY03	-0.3	-0.8	-1.5	-0.3	0.6	1.9	1.0	0.2

Table 5b Chuuk State CPI Index (1999=100)

lable 5b	Chuuk	State C	Pi index	•	00)			
	Total	Food	Tob, Alch,	Clothing,	Housing	Fuel,	Services I	Miscellan-
			Betelnut,	Footware		Light &		eous
			Sakau			Water		
Weight	41.6	22.0	2.8	1.1	0.9	1.9	6.7	6.1
00-Q1	100.4	100.4	100.4	101.2	101.4	102.0	100.1	100.0
00-Q2	101.5	98.0	106.5	100.4	101.4	139.6	101.9	99.8
00-Q3	101.4	98.6	109.3	96.3	99.6	139.6	100.6	98.2
00-Q4	103.1	99.2	111.1	98.4	101.5	142.8	104.6	100.9
01-Q1	101.7	99.0	109.4	96.6	100.8	116.3	105.2	100.7
01-Q2	100.9	98.0	107.7	96.4	101.2	116.3	105.3	99.5
01-Q3	102.3	99.5	113.6	95.9	100.0	121.8	106.4	98.2
01-Q4	102.9	98.9	111.4	96.1	99.8	149.2	106.1	97.2
02-Q1	102.6	99.8	100.7	97.1	101.7	150.6	105.1	97.6
02-Q2	103.4	100.4	108.6	96.2	99.7	150.6	105.2	97.3
02-Q3	103.0	99.9	108.6	96.2	99.6	147.8	105.1	97.6
02-Q4	103.3	99.6	109.4	96.4	101.8	153.3	105.1	97.7
03-Q1	102.7	98.7	105.9	96.0	94.3	156.5	105.9	97.9
03-Q2	103.3	99.5	101.8	96.0	94.0	159.3	107.6	98.4
03-Q3	103.5	99.2	103.5	96.2	92.5	164.8	107.4	98.8
03-Q4	105.6	100.7	103.5	96.4	93.5	187.6	107.7	100.3
04-Q1	106.3	101.1	95.2	95.3	93.9	188.6	113.7	100.6
FY99	99.6	99.7	99.3	100.3	99.9	95.2	99.7	99.9
FY00	101.0	99.5	103.7	99.5	100.6	120.8	100.6	99.6
FY01	102.0	98.9	110.5	96.8	100.9	124.3	105.4	99.8
FY02	103.0	99.7	107.3	96.4	100.2	149.5	105.4	97.4
FY03	103.2	99.3	105.2	96.1	95.7	158.5	106.5	98.2
Year on year	percent grow	v th						
00-Q1	0.5	0.8	0.4	0.8	1.4	0.3	-0.1	-0.1
00-Q2	1.6	-1.5	6.5	0.4	1.4	37.2	2.0	-0.3
00-Q3	1.8	-1.1	7.8	-3.3	-0.4	47.9	0.6	-1.3
00-Q4	2.5	-2.0	12.7	-1.7	1.4	40.0	4.9	0.6
01-Q1	1.2	-1.5	8.9	-4.6	-0.6	14.0	5.1	0.7
01-Q2	-0.5	0.0	1.1	-3.9	-0.2	-16.7	3.3	-0.3
01-Q3	0.9	0.9	4.0	-0.4	0.4	-12.8	5.7	0.0
01-Q4	-0.3	-0.3	0.2	-2.3	-1.6	4.5	1.4	-3.7
02-Q1	0.9	0.8	-7.9	0.6	0.9	29.4	-0.1	-3.1
02-Q2	2.5	2.5	0.9	-0.2	-1.5	29.4	-0.1	-2.2
02-Q3	0.7	0.4	-4.4	0.3	-0.4	21.4	-1.2	-0.6
02-Q4	0.4	0.7	-1.8	0.2	2.0	2.8	-0.9	0.6
03-Q1	0.0	-1.1	5.1	-1.1	-7.3	4.0	0.7	0.3
03-Q2	-0.1	-0.9	-6.2	-0.3	-5.6	5.8	2.3	1.1
03-Q3	0.5	-0.7	-4.7	-0.1	-7.1	11.5	2.2	1.3
03-Q4	2.3	1.1	-5.4	0.1	-8.2	22.4	2.5	2.6
04-Q1	3.5	2.4	-10.1	-0.8	-0.4	20.5	7.4	2.8
FY00	1.4	-0.2	4.4	-0.8	0.7	27.0	0.9	-0.3
FY01	1.0	-0.6	6.5	-2.7	0.3	2.9	4.7	0.2
FY02	1.0	8.0	-2.8	-0.4	-0.6	20.3	0.0	-2.4
FY03	0.2	-0.5	-2.0	-0.3	-4.5	6.0	1.1	8.0

Table 5c Kosrae State CPI Index (1999=100)

Table 30	Nosiac	State	ori ilide	x (1333–	100)			
	Total	Food	Tob, Alch,	Clothing,	Housing	Fuel,	Services N	/liscellan-
				Footware	· ·	Light &		eous
			Sakau			Water		
Weight	6.0	2.5	0.2	0.4	0.1	0.2	1.3	1.4
00-Q1	101.1	101.0	102.7	105.1	103.9	100.2	100.2	100.8
00-Q1 00-Q2	101.1	101.2	101.5	105.1	103.8	99.5	100.2	101.3
00-Q2 00-Q3	101.2	101.2	101.3	105.1	103.7	99.5	99.4	101.6
				105.0				
00-Q4	101.9	102.5	104.2		104.0	99.5	99.2	101.8
01-Q1	101.8	99.9	102.0	102.0	102.3	99.5	103.6	103.6
01-Q2	101.3	99.6	102.0	102.2	102.8	99.5	104.0	101.9
01-Q3	100.7	98.8	104.5	101.8	95.3	99.2	103.6	101.0
01-Q4	100.4	99.4	95.4	102.8	97.5	99.2	103.6	100.0
02-Q1	99.1	98.1	95.0	100.0	94.6	99.4	101.5	99.2
02-Q2	97.3	93.2	90.4	99.9	92.7	99.5	101.9	100.5
02-Q3	96.8	92.9	90.4	99.9	93.5	99.5	101.9	98.9
02-Q4	96.6	92.5	90.4	99.9	93.5	99.5	101.9	99.0
03-Q1	96.5	92.2	90.4	100.2	93.5	99.5	101.9	98.9
03-Q2	96.4	92.3	90.4	100.1	93.6	99.5	101.9	98.4
03-Q3	96.7	93.0	92.8	100.2	93.6	99.5	101.9	98.1
03-Q4	96.7	92.8	92.8	99.9	93.6	99.5	101.8	98.3
04-Q1	97.1	95.8	93.9	98.7	92.8	99.5	94.9	101.3
FY99	99.8	99.5	99.8	99.4	99.3	100.1	100.1	100.1
FY00	101.0	101.2	102.0	103.8	103.1	99.8	100.0	100.8
FY01	101.4	100.2	103.2	103.2	101.1	99.4	102.6	102.1
FY02	98.4	95.9	92.8	100.6	94.6	99.4	102.2	99.6
FY03 _	96.6	92.5	91.0	100.1	93.5	99.5	101.9	98.6
Year on year p	percent grov	vth						
00-Q1	0.9	1.6	1.6	5.0	4.9	0.2	0.2	-1.0
00-Q2	1.7	1.8	1.9	5.2	4.8	-0.5	0.3	1.8
00-Q3	1.4	1.3	4.6	5.0	2.7	-0.5	-0.6	2.2
00-Q4	1.7	1.6	4.6	6.9	3.1	-0.5	-0.8	2.4
01-Q1	0.7	-1.1	-0.7	-2.9	-1.5	-0.6	3.4	2.9
01-Q2	0.1	-1.6	0.5	-2.8	-1.0	0.0	3.7	0.6
01-Q3	-0.7	-2.9	0.3	-3.1	-8.0	-0.3	4.3	-0.6
01-Q3 01-Q4	-1.4	-3.0	-8.5	-3.9	-6.3	-0.3	4.5	-1.8
01-Q4 02-Q1	-1. 4 -2.7	-1.8	-6.8	-2.0	-0.5 -7.5	-0.3	-2.1	-4.3
	-2.7 -4.0	-6.4					-2.1 -2.0	
02-Q2			-11.3	-2.2	-9.8	0.0		-1.4
02-Q3	-3.9	-6.0	-13.5	-1.9	-2.0	0.3	-1.6	-2.1
02-Q4	-3.8	-7.0	-5.2	-2.8	-4.2	0.3	-1.6	-1.0
03-Q1	-2.6	-6.1	-4.8	0.1	-1.2	0.2	0.4	-0.2
03-Q2	-0.9	-1.0	0.0	0.3	0.9	0.0	0.0	-2.0
03-Q3	0.0	0.2	2.6	0.3	0.2	0.0	0.0	-0.8
03-Q4	0.0	0.4	2.6	0.0	0.2	0.0	-0.1	-0.7
04-Q1	0.6	3.9	3.9	-1.5	-0.7	0.0	-6.9	2.4
FY00	1.2	1.7	2.2	4.4	3.8	-0.3	-0.1	0.7
FY01	0.4	-1.0	1.1	-0.6	-1.9	-0.4	2.6	1.3
FY02	-3.0	-4.3	-10.1	-2.5	-6.5	0.0	-0.4	-2.4
FY03	-1.8	-3.6	-1.9	-0.5	-1.1	0.1	-0.3	-1.0

Table 5d Pohnpei State CPI Index (1999=100)

lable 5d	Ponnpe	ei State	CPI Inde	ex (1999:	=100)			
	Total	Food	Tob, Alch,	Clothing,	Housing	Fuel,	Services N	/liscellan-
			Betelnut,	Footware	· ·	Light &		eous
			Sakau			Water		
Weight	37.5	16.2	3.5	1.1	1.2	2.7	5.5	7.3
01-Q1	104.4	103.0	98.2	95.9	98.6	113.2	118.7	99.0
01-Q2	104.4	103.0	98.1	95.9	98.8	110.4	118.6	99.9
01-Q3	102.5	101.6	96.6	96.9	98.6	110.8	120.4	92.3
01-Q4	102.8	103.6	92.4	95.4	98.4	105.1	122.2	92.3
02-Q1	103.7	105.0	90.1	97.4	100.0	112.4	121.6	92.0
02-Q2	102.6	103.2	89.8	96.9	100.2	106.1	123.2	92.0
02-Q3	102.6	103.1	90.9	95.0	99.4	108.1	122.1	92.1
02-Q4	102.0	101.0	92.7	94.1	99.4	110.7	122.1	92.2
03-Q1	102.2	101.0	92.7	95.7	100.1	111.3	122.2	92.4
03-Q2	103.4	103.4	92.7	96.0	100.2	111.7	122.3	92.7
03-Q3	103.1	103.1	92.4	98.5	100.2	111.7	122.0	92.2
03-Q4	102.8	102.8	91.8	98.3	100.2	111.7	122.1	91.5
04-Q1	103.2	107.5	93.2	98.8	100.2	110.7	122.5	82.7
04-Q2	104.2	108.2	93.2	98.8	100.1	117.4	123.4	82.8
FY97	101.6	109.1	88.3	110.3	96.0	99.7	99.1	93.4
FY98	98.9	101.6	91.7	106.2	98.4	100.1	100.3	94.1
FY99	98.9	98.9	97.1	99.9	99.8	100.0	100.4	97.8
FY00	102.5	102.2	99.3	99.6	101.3	103.3	104.8	103.3
FY01	103.9	102.8	97.8	96.1	98.8	110.3	119.1	97.6
FY02	102.9	103.7	90.8	96.2	99.5	107.9	122.3	92.1
FY03	102.7	102.1	92.7	96.1	100.0	111.3	122.2	92.4
Year on year p	ercent arov	vth						
00-Q1	3.2	2.8	2.5	0.7	3.4	-0.1	-0.7	9.4
00-Q2	3.8	3.5	-2.5	1.2	2.8	6.7	1.3	9.2
00-Q3	3.1	2.7	-2.5	-3.6	-0.8	6.7	18.7	-4.3
00-Q4	3.3	3.4	-1.7	-5.0	-0.8	6.9	18.9	-5.2
01-Q1	3.0	2.0	-1.8	-5.0	-4.3	13.3	18.8	-5.3
01-Q2	1.2	-1.1	-0.4	-4.9	-4.1	3.4	17.3	-4.0
01-Q3	-1.9	-1.9	-2.0	1.1	-0.6	3.8	1.6	-7.8
01-Q4	-1.5	0.0	-6.2	-0.4	-0.9	-1.5	3.1	-6.8
02-Q1	-0.8	2.0	-8.2	1.6	1.4	-0.7	2.5	-7.1
02-Q2	-1.7	0.2	-8.5	1.0	1.5	-3.9	3.8	-7.9
02-Q3	0.1	1.4	-5.8	-1.9	0.8	-2.5	1.5	-0.1
02-Q4	-0.7	-2.5	0.4	-1.4	1.0	5.3	-0.1	-0.1
03-Q1	-1.4	-3.9	3.0	-1.7	0.0	-1.0	0.5	0.4
03-Q2	0.7	0.2	3.3	-0.9	0.0	5.3	-0.7	0.8
03-Q3	0.5	0.1	1.6	3.7	0.8	3.4	-0.1	0.1
03-Q4	0.8	1.8	-1.1	4.4	0.8	0.9	0.0	-0.7
04-Q1	1.0	6.5	0.5	3.2	0.1	-0.6	0.2	-10.5
04-Q2	8.0	4.6	0.5	2.9	-0.1	5.1	8.0	-10.7
FY98	-2.6	-6.9	3.8	-3.8	2.5	0.3	1.2	0.8
FY99	-0.1	-2.7	5.9	-5.9	1.4	-0.1	0.1	3.9
FY00	3.7	3.4	2.3	-0.4	1.6	3.3	4.4	5.6
FY01	1.3	0.6	-1.5	-3.5	-2.5	6.7	13.6	-5.6
FY02	-1.0	0.9	-7.2	0.1	0.7	-2.2	2.7	-5.6
FY03	-0.2	-1.5	2.0	-0.1	0.5	3.2	-0.1	0.3

Table 5e Yap State CPI Index (1999=100)

lable 5e	Yap Sta	ate CPI	index (1	999=100))			
	Total	Food	Tob, Alch,	Clothing,	Housing	Fuel,	Services N	/liscellan-
			Betelnut,	Footware	· ·	Light &		eous
			Sakau			Water		
Weight	14.9	4.8	1.9	0.3	0.5	0.8	3.0	3.5
00-Q1	100.1	101.2	99.0	98.3	100.4	99.6	100.6	99.1
00-Q2	100.6	101.2	100.6	94.1	100.3	101.9	104.1	97.1
00-Q3	101.4	101.9	102.2	94.2	100.2	103.2	105.6	97.1
00-Q4	102.1	101.4	102.9	94.2	100.3	103.3	105.7	100.3
01-Q1	102.5	100.7	104.5	94.4	99.2	105.5	110.1	98.0
01-Q2	103.4	101.9	108.4	93.3	100.5	105.5	110.4	97.5
01-Q3	103.6	101.5	109.4	92.5	97.1	105.2	112.1	97.6
01-Q4	103.0	101.9	105.6	91.8	96.5	102.4	112.8	96.9
02-Q1	102.7	101.0	105.1	91.6	96.3	102.6	113.1	97.0
02-Q2	103.4	101.8	105.9	91.8	96.5	104.8	113.6	97.1
02-Q3	102.5	100.2	104.0	91.5	96.0	104.9	113.6	96.6
02-Q4	102.7	100.7	104.7	91.4	95.7	104.9	113.9	96.4
03-Q1	102.1	100.2	100.9	91.1	96.2	104.9	114.1	96.2
03-Q2	101.5	99.0	102.3	90.6	95.9	96.1	114.9	96.3
03-Q3	102.0	100.1	102.3	91.1	96.2	96.0	114.2	97.2
03-Q4	101.9	99.9	99.5	91.0	95.1	96.2	115.4	97.5
04-Q1	101.5	99.5	98.3	90.5	96.2	96.5	115.2	97.4
FY99	99.8	100.0	99.8	101.1	99.9	99.8	99.1	100.2
FY00	100.5	101.0	100.4	96.2	100.3	101.1	102.8	98.3
FY01	102.9	101.4	106.3	93.6	99.3	104.9	109.6	98.3
FY02	102.9	101.2	105.1	91.7	96.3	103.7	113.3	96.9
FY03	102.1	100.0	102.6	91.0	96.0	100.5	114.3	96.5
_								
Year on year p	U							
00-Q1	0.3	0.8	-0.4	-2.7	1.1	-1.1	1.9	-0.8
00-Q2	0.3	1.2	-0.3	-7.1	0.0	1.9	3.7	-3.2
00-Q3	1.5	2.1	2.3	-5.2	0.1	3.6	5.5	-2.9
00-Q4	2.2	1.7	3.1	-4.2	0.1	3.7	4.8	0.6
01-Q1	2.4	-0.5	5.5	-4.0	-1.2	5.9	9.5	-1.1
01-Q2	2.7 2.2	0.7 -0.4	7.7 7.1	-0.8 -1.8	0.2 -3.1	3.5	6.0	0.4
01-Q3						1.9	6.2	0.5
01-Q4 02-Q1	0.9 0.2	0.5 0.2	2.6 0.7	-2.6 -3.0	-3.8 -2.9	-0.8 -2.7	6.8 2.8	-3.3 -1.0
	0.2	0.2	-2.3	-3.0 -1.6	-2.9 -4.0	-2.7 -0.7	2.6 2.9	
02-Q2 02-Q3	-1.1	-1.2	-2.3 -5.0	-1.0 -1.2	-4.0 -1.1	-0.7 -0.3	2.9 1.4	-0.4 -1.1
	-0.3	-1.2	-0.8	-0.4	-0.9	-0.3 2.4	1.4	-0.5
02-Q4 03-Q1	-0.3 -0.7	-0.8	-0.8 -4.0	-0.4 -0.6	-0.9	2.4	0.9	-0.5 -0.8
03-Q1 03-Q2	-0.7 -1.8	-0.8	-3.4	-0.6	-0.2	-8.3	1.1	-0.8
03-Q2 03-Q3	-1.6 -0.5	-2.6 -0.1	-3.4	-1.3 -0.4	0.2	-6.5 -8.5	0.5	0.6
03-Q3 03-Q4	-0.5 -0.9			-0.4 -0.5	-0.6		1.3	
03-Q4 04-Q1	-0.9 -0.5	-0.8 -0.7	-5.0	-0.5 -0.7	-0.6 0.1	-8.3 -8.0	1.0	1.1 1.2
			-2.6					
FY00	0.7	1.1	0.7	-4.9	0.4	1.3	3.7	-1.9
FY01	2.4	0.4	5.9	-2.7	-1.0	3.7	6.6	0.1
FY02	0.0	-0.1	-1.1	-2.1	-3.0	-1.1	3.4	-1.5
FY03	-0.8	-1.2	-2.5	-0.7	-0.4	-3.1	0.9	-0.4

Table 6a FSM Balance of Payments; Current Account (Millions of U.S. dollars)

	•		,			,					
	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04
				(In million	s of U.S. dol	lars)					
Trade balance	-85.1	-67.0	-79.7	<i>-78.7</i>	-76.9	-76.6	-82.7	-88.1	-76.8	-100.7	-113.8
ExportS, f.o.b.	12.1	22.0	19.6	15.8	18.0	15.5	19.0	22.4	23.8	21.6	19.6
Imports, f.o.b. 1/	-97.2	-89.0	-99.3	-94.5	-94.9	-92.1	-101.7	-110.5	-100.6	-122.3	-133.4
Petroleum products	-12.2	-11.6	-13.4	-11.3	-10.9	-11.1	-13.7	-15.9	-12.5	-11.0	-17.3
Services account	-27.2	-18.5	-23.3	-31.8	-35.2	-30.4	-28.8	-29.1	-28.0	-30.5	-30.9
Receipts	14.8	17.9	19.9	1 <i>7.7</i>	14.4	15.4	18.6	16.8	19.0	18.8	19.9
Travel	13.7	15.7	16.6	15.8	13.2	13.9	17.0	14.7	16.9	16.8	17.9
Communications (net)	0.7	0.8	1.0	0.8	1.1	1.1	1.1	1.8	2.1	1.9	1.9
Other	0.4	1.4	2.3	1.1	0.1	0.3	0.5	0.3	0.1	0.1	0.1
Payments	-42.1	-36.4	-43.2	-49.5	-49.6	-45.7	-47.4	-45.9	-47.0	-49.3	-50.8
Freight and insurance	-17.1	-15.7	-17.5	-16.7	-16.7	-16.2	-18.0	-19.5	-17.7	-21.6	-23.5
Transportation	-8.2	-9.6	-9.6	-12.8	-9.9	-9.8	-10.8	-11.0	-11.1	-11.6	-11.3
Travel	-4.6	-4.9	-4.7	-4.9	-4.9	-4.9	-5.4	-5.5	-5.5	-5.7	-5.5
Other	-12.1	-6.3	-11.3	-15.1	-18.0	-14.8	-13.3	-10.0	-12.7	-10.4	-10.3
Income, net	20.7	23.5	23.2	19.6	18.0	21.3	18.8	8.6	10.4	12.9	14.0
Receipts	21.3	35.0	34.6	29.3	28.6	29.6	26.6	15.0	16.1	16.1	17.1
Fishing rights fees	21.3	21.5	20.5	14.4	13.5	15.9	14.1	12.0	11.2	13.5	11.8
Interest dividend income	11.8	14.1	14.1	15.2	15.0	14.1	12.4	2.8	4.9	6.1	8.8
Payments	-12.4	-12.1	-11.4	-9.9	-10.5	-8.7	-7.7	-6.2	-5.7	-6.8	-6.6
Interest payments	-1.6	-2.0	-2.0	-1.7	-3.4	-2.5	-2.7	-2.8	-2.6	-3.7	-3.6
Dividends	-9.5	-8.7	-7.7	-6.7	-5.5	-4.6	-3.7	-2.0	-1.7	-1.6	-1.6
Unrequited transfers	98.0	97.4	98.7	85.1	89.1	90.3	93.4	96.7	110.6	122.3	106.8
Private	1.1	1.2	1.4	1.7	1.9	2.2	2.2	2.3	2.3	2.3	2.4
Inflows	3.4	3.5	3.7	4.0	4.2	4.4	4.6	4.7	4.8	4.9	5.0
Outflows	-2.2	-2.3	-2.3	-2.2	-2.2	-2.2	-2.5	-2.5	-2.5	-2.6	-2.6
Official	96.9	96.2	97.3	83.4	87.1	88.1	91.2	94.4	108.2	120.0	104.3
Compact funds	61.4	62.1	62.8	53.6	54.4	54.4	54.7	55.3	65.9	66.6	58.9
Other	35.5	34.1	34.5	29.8	32.7	33.7	36.5	39.1	42.3	53.4	45.4
Current Account Balance	6.5	35.4	18.9	-5.7	-5.1	4.7	0.7	-11.9	16.2	3.9	-23.9

Table 6a continued FSM Balance of Payments; Capital Account (Millions of U.S. dollars)

	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04
Capital and financial account	30.0	17.6	13.4	35.2	23.6	18.3	13.0	20.0	36.6	21.4	5.2
Capital Transfers	28.8	29.4	29.8	30.2	24.0	24.5	24.5	24.6	31.8	32.2	0.0
Capital Transfers, Official	28.8	29.4	29.8	30.2	24.0	24.5	24.5	24.6	31.8	32.2	0.0
Capital Transfers, in-kind	8.8	5.1	5.4	6.3	4.3	4.5	5.5	6.4	5.6	5.2	5.2
Short term, net	1.9	-7.4	-6.2	2.9	-1.3	0.2	0.1	-2.1	-0.8	-16.0	0.0
Medium term, net	-9.5	-9.5	-15.6	-4.2	-3.4	-10.9	-17.0	-8.9	0.0	0.0	0.0
Inflows	2.2	0.3	0.8	11.7	11.8	3.8	2.2	0.0	0.0	0.0	0.0
Medium-term notes (MTN)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other borrowing	2.2	0.3	0.8	11.7	11.8	3.8	2.2	0.0	0.0	0.0	0.0
Outflows	-11.7	-9.8	-16.4	-15.9	-15.2	-14.7	-19.2	-8.9	0.0	0.0	0.0
MTN amortization	-8.6	-9.2	-15.8	-8.3	-11.3	-11.0	-18.5	-8.2	0.0	0.0	0.0
Other amortization	-3.1	-0.6	-0.6	-7.6	-3.9	-3.7	-0.7	-0.7	0.0	0.0	0.0
Overall balance 2/	36.4	53.0	32.3	29.5	18.5	23.0	13.7	8.1	52.8	25.3	-18.7

Source Notes

Department of Economic Affairs
1/ Based on import tax collections FY94-FY99, thereafter-actual imports
2/ Includes changes in FSM reserves, valuation changes, errors and omissions

Table 6b FSM External Debt (Millions of U.S. dollars)

	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04
External Debt Total (US\$ millions)															
New	19.9	91.9	19.3	28.6	2.2	0.3	0.8	11.7	11.8	3.8	2.2	-	-	2.0	1.1
Outstanding	19.9	111.7	128.7	145.6	138.8	127.4	118.4	113.7	109.6	98.2	85.7	66.6	57.8	59.2	59.6
Amortization	-	2.3	11.7	9.0	11.7	9.8	16.4	15.9	15.2	14.7	19.1	8.8	0.6	0.6	0.7
Interest	-	2.2	7.7	9.1	9.4	8.7	7.7	6.7	5.6	4.7	3.8	2.1	1.7	1.7	1.7
Principal balance	19.9	109.4	117.0	136.6	127.1	117.6	102.0	97.8	94.4	83.5	66.6	57.8	57.2	58.5	58.9
External debt as % of GDP	14%	68%	68%	72%	64%	56%	50%	50%	47%	42%	30%	26%	26%	25%	26%
Debt service as % of exports*	n.a.	n.a.	n.a.	n.a.	79%	46%	61%	67%	64%	63%	61%	28%	5.5%	8.2%	6.5%
External Debt Adjusted for Offsetting Assets**															
New	19.9	20.9	19.3	28.6	2.2	0.3	0.8	1.7	3.8	3.8	2.2	-	-	-	-
Outstanding	19.9	40.7	57.7	81.4	80.5	75.7	73.9	66.9	60.9	57.5	51.0	45.4	39.8	39.2	38.5
Amortization	-	2.3	4.9	3.1	5.1	2.6	8.7	9.8	7.2	8.7	5.6	5.6	0.6	0.6	0.7
Interest	-	1.9	2.9	3.7	4.4	4.3	3.9	3.5	2.8	2.6	2.2	1.8	1.6	1.5	1.5
Principal balance	19.9	38.4	52.8	78.3	75.4	73.1	65.2	57.1	53.7	48.8	45.4	39.8	39.2	38.5	37.9
External debt (adjusted) as % of GDP	14%	24%	31%	41%	38%	35%	32%	29%	27%	25%	21%	18%	18%	17%	17%
Debt service (adjusted) as % of exports*	n.a.	n.a.	n.a.	n.a.	35%	17%	32%	40%	31%	36%	21%	19%	5.1%	7.5%	5.9%
Memorandum items:															
Debt to ADB (all concessional)	-	-	-	-	-	0.3	1.1	12.8	24.6	28.4	30.6	30.6	30.6	32.6	33.7
GDP (US\$ millions)	144.7	161.0	172.5	190.0	198.5	208.2	203.8	196.9	199.7	196.8	218.5	221.7	223.0	229.5	225.1
Export of Goods and Services (US\$ millions)	n.a.	n.a.	n.a.	n.a.	26.9	39.9	39.5	33.6	32.4	30.9	37.6	39.3	42.8	28.9	37.0

Department of Finance and Administration and Department of Economic Affairs estimates. Source:

Exports of Goods and Services
Adjustment for fact that both Yap MTN (Monetization Scheme) and PSRP Program Loan hold assets in offshore investments equal/greater than debt

Appendix C Statistical Tables

Table 7a FSM Consolidated General Government Finances (GFS Format)—Revenues (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02 est.	FY03 est.	FY04 proj.	FY05 proj
A.I. Total revenue and grants	142.3	164.5	159.8	160.1	168.8	148.1	157.0	162.4	170.3	162.9	138.7	151.2	149.4	148.8	141.1	160.2	161.9	117.9	139.6
A.II. Total revenue	23.9	28.2	46.0	42.0	49.6	48.4	55.7	56.0	58.7	54.2	48.7	55.6	53.4	52.6	45.4	46.3	45.7	43.1	44.0
A.IV. Tax revenue	9.7	12.3	13.3	13.6	17.0	17.7	21.5	21.2	21.1	21.1	20.6	26.1	25.3	27.7	26.5	27.2	25.9	25.3	26.1
Wages and salary tax	3.3	4.0	3.9	3.8	4.5	4.6	5.4	5.7	6.2	5.6	5.4	7.9	5.6	6.4	6.1	8.0	7.3	7.0	7.2
Gross revenue tax	2.6	3.2	3.7	4.2	5.2	5.7	6.2	6.0	6.1	6.0	5.5	5.6	5.8	6.9	6.9	6.3	6.1	5.8	6.0
Import tax:Fuel	0.4	0.4	0.5	0.5	0.6	0.6	0.5	0.9	0.7	0.9	0.7	0.5	0.8	0.7	0.9	0.9	0.7	0.7	0.7
Import tax:All others	1.4	2.0	2.1	2.0	2.3	2.6	4.6	4.3	3.8	3.7	4.1	6.4	6.3	7.2	7.0	6.1	6.3	6.3	6.5
All other tax (National)	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.3	0.3	0.5	0.2	0.7	0.0	0.2	0.9	0.4	0.5	0.6
State tax revenue	2.0	2.8	3.1	3.1	4.3	4.2	4.2	4.4	4.0	4.6	4.3	5.4	6.0	6.4	5.5	5.1	5.1	5.0	5.1
Nontax revenue	14.2	15.9	32.6	28.4	32.7	30.7	34.2	34.7	37.6	33.1	28.1	29.5	28.2	24.9	19.0	19.1	19.8	17.8	17.9
Fishing access revenue	3.8	7.7	10.8	12.7	12.9	12.5	18.3	21.3	21.5	20.5	14.4	13.5	16.0	14.1	11.3	10.6	13.5	11.8	12.0
Dividend and interest income	4.7	3.5	13.2	7.7	11.1	10.2	7.4	6.6	8.2	8.1	8.7	8.9	7.4	5.2	2.1	2.0	1.1	1.3	1.3
Other nontax revenues	5.6	4.7	8.7	8.0	8.7	8.0	8.5	6.8	7.9	4.5	5.1	7.2	4.7	5.6	5.5	6.5	5.2	4.6	4.6
A.VII. Grants	118.4	136.3	113.8	118.1	119.2	99.7	101.3	106.4	111.6	108.7	90.0	95.6	96.0	96.2	95.6	113.9	116.2	74.8	95.6
Grants from abroad	118.4	136.3	113.8	118.1	119.2	99.7	101.3	106.4	111.6	108.7	90.0	95.6	96.0	96.2	95.6	113.9	116.2	74.8	95.6
Current grants	78.0	95.1	77.2	83.3	78.7	69.6	65.3	70.5	77.2	77.2	66.0	71.0	70.9	70.4	70.5	82.1	83.0	74.8	81.6
Compact General	43.9	44.6	45.7	46.8	44.5	42.2	38.9	39.7	44.7	45.3	38.0	37.9	37.5	36.9	37.4	47.7	48.3	0.0	0.0
Compact Special	19.5	28.9	15.9	23.8	19.3	17.8	17.9	17.9	18.3	18.0	18.0	18.2	18.2	17.7	17.8	18.2	18.3	58.9	71.4
Other:Current	14.5	21.6	15.6	12.7	15.0	9.6	8.5	12.8	14.3	13.9	9.9	14.9	15.2	15.8	15.2	16.1	16.4	15.9	10.2
Capital grants	40.4	41.2	36.6	34.8	40.4	30.1	35.9	35.9	34.3	31.6	24.0	24.6	25.1	25.8	25.1	31.8	33.2	0.0	14.0
Compact CIP	29.3	29.8	30.5	31.2	35.9	28.2	33.1	33.7	29.8	30.2	22.0	23.3	23.7	24.6	25.0	31.8	32.2	0.0	14.0
Other:Capital	11.2	11.4	6.2	3.6	4.5	2.0	2.9	2.2	4.6	1.4	2.0	1.3	1.4	1.1	0.2	0.0	1.0	0.0	0.0
																		conti	nued

Table 7a FSM Consolidated General Government Finances (GFS Format)— Expenditures and Balances (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01 est.	FY02 est.	FY03 proj.	FY04 proj.	FY05 proj.
C.II. Total expenditure	-104.3	-125.5	-143.0	-143.0	-169.9	-158.4	-161.2	-163.0	-173.4	-162.4	-137.9	-165.3	-165.3		-160.6	-147.1	-150.5	-133.0	-144.8
C.III. Current expenditure	-84.0	-100.4	-95.8	-100.1	-117.7	-119.6	-123.6	-128.3	-142.2	-132.8	-124.4	-124.9	-126.6	-131.9	-129.7	-124.9	-126.4	-120.4	-119.7
Expenditure on goods and services	-82.5	-94.2	-92.6	-95.8	-112.4	-107.0	-109.8	-114.7	-130.0	-119.7	-113.6	-109.1	-114.3	-119.7	-122.1	-116.1	-117.8	-114.8	-114.4
Wages and salaries	-42.0	-44.2	-44.8	-47.7	-50.7	-51.9	-57.9	-58.4	-62.9	-63.2	-58.5	-50.1	-50.2	-52.2	-54.3	-56.9	-58.4	-56.6	-56.3
Travel	-5.1	-4.2	-5.1	-5.7	-6.0	-6.2	-5.7	-5.8	-6.2	-5.1	-6.9	-6.8	-7.7	-8.4	-8.9	-8.5	-8.6	-8.5	-8.4
Other	-35.4	-45.8	-42.7	-42.4	-55.8	-48.9	-46.3	-50.5	-60.9	-51.4	-48.2	-52.2	-56.4	-59.1	-58.9	-50.6	-50.8	-49.8	-49.7
Interest payments	0.0	0.0	0.0	0.0	-1.6	-6.8	-7.3	-7.4	-6.8	-5.7	-4.8	-3.6	-2.9	-1.9	-0.6	0.0	0.0	0.0	0.0
Subsidies	-1.1	-6.2	-3.2	-4.3	-3.7	-5.1	-5.0	-4.9	-4.9	-6.3	-3.9	-3.4	-4.3	-5.9	-3.6	-4.2	-4.3	-1.3	-1.1
Transfers	-0.4	0.0	0.0	-0.1	0.0	-0.7	-1.4	-1.3	-0.6	-1.1	-1.9	-8.8	-5.2	-4.5	-3.4	-4.7	-4.3	-4.2	-4.2
C.IV. Capital expenditure	-20.3	-25.1	-47.2	-42.9	-52.1	-38.8	-37.6	-34.7	-31.1	-29.6	-13.5	-40.4	-38.8	-31.3	-30.9	-22.2	-24.1	-12.6	-25.1
Acquisition of fixed capital	-2.8	-3.3	-4.4	-10.2	-14.4	-13.4	-7.7	-7.4	-8.2	-4.4	-3.3	-21.3	-14.8	-9.4	-12.1	-6.4	-6.8	-5.5	-9.1
Multi-purpose development projects	-17.3	-18.9	-27.9	-19.9	-24.3	-21.8	-25.1	-19.1	-18.9	-22.2	-10.2	-16.9	-23.0	-21.5	-18.5	-15.9	-17.1	-7.1	-16.0
Capital Transfers	-0.2	-3.0	-14.9	-12.8	-13.5	-3.6	-4.8	-8.2	-4.1	-3.0	0.0	-2.2	-1.0	-0.5	-0.3	0.0	-0.3	0.0	0.0
C.V. Net lending (domestic)	0.0	0.0	0.0	0.0	0.0	0.0	-4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
						400			-3.1		0.8	-14.1	450	444	40.0			-15.1	
Overall Balance	38.0	39.0	16.8	17.1	-1.1	-10.2	-8.7	-0.6	-3.1	0.4	0.0	-14.1	-15.9	-14.4	-19.6	13.1	11.4	-15.1	-5.2
Overall Balance Current Balance	38.0 17.9	39.0 23.0	16.8 27.4	17.1 25.2	-1.1 10.7	-10.2 -1.6	-8.7 -7.0	- 0.6 -1.8	- 6. 3	-1.5	-9.7	1.7	-1 5.9 -2.3	-14.4 -8.8	-19.6 -13.8	1 3.1 3.5	2.3	-1 3. 1 -2.5	-5.2 5.9
Current Balance	17.9	23.0	27.4	25.2	10.7	-1.6	-7.0	-1.8	-6.3	-1.5	-9.7	1.7	-2.3	-8.8	-13.8	3.5	2.3	-2.5	5.9
Current Balance Capital Balance	17.9	23.0	27.4	25.2	10.7	-1.6	-7.0	-1.8	-6.3	-1.5	-9.7	1.7	-2.3	-8.8	-13.8	3.5	2.3	-2.5	5.9
Current Balance Capital Balance Memo items:	17.9 20.2	23.0 16.0	27.4 -10.5	25.2 -8.1	10.7 -11.7	-1.6 -8.7	-7.0 -1.7	-1.8 1.2	-6.3 3.2	-1.5 1.9	-9.7 10.5	1.7 -15.8	-2.3 -13.6	-8.8 -5.6	-13.8 -5.8	3.5 9.6	2.3 9.1	-2.5 -12.6	5.9 -11.1
Current Balance Capital Balance Memo items: Nominal GDP	17.9 20.2	23.0 16.0	27.4 -10.5	25.2 -8.1	10.7 -11.7	-1.6 -8.7	-7.0 -1.7	-1.8 1.2	-6.3 3.2 208.1	-1.5 1.9 203.0	-9.7 10.5	1.7 -15.8 197.3	-2.3 -13.6	-8.8 -5.6	-13.8 -5.8	3.5 9.6 222.4	2.3 9.1 221.7	-2.5 -12.6 225.1	5.9 -11.1 233.6
Current Balance Capital Balance Memo items: Nominal GDP Total Revenue & Grants as % of GDP	17.9 20.2 114.1 125%	23.0 16.0 126.0 130%	27.4 -10.5 132.9 120%	25.2 -8.1 145.3 110%	10.7 -11.7 162.2 104%	-1.6 -8.7 173.2 86%	-7.0 -1.7 190.4 82%	-1.8 1.2 199.2 81%	-6.3 3.2 208.1 82%	-1.5 1.9 203.0 80%	-9.7 10.5 195.6 71%	1.7 -15.8 197.3 77%	-2.3 -13.6 194.1 77%	-8.8 -5.6 216.5 69%	-13.8 -5.8 220.8 64%	3.5 9.6 222.4 72%	2.3 9.1 221.7 73%	-2.5 -12.6 225.1 52%	5.9 -11.1 233.6 60%
Current Balance Capital Balance Memo items: Nominal GDP Total Revenue & Grants as % of GDP Grants as % of GDP	17.9 20.2 114.1 125% 104%	23.0 16.0 126.0 130% 108%	27.4 -10.5 132.9 120% 86%	25.2 -8.1 145.3 110% 81%	10.7 -11.7 162.2 104% 73%	-1.6 -8.7 173.2 86% 58%	-7.0 -1.7 190.4 82% 53%	-1.8 1.2 199.2 81% 53%	-6.3 3.2 208.1 82% 54%	-1.5 1.9 203.0 80% 54%	-9.7 10.5 195.6 71% 46%	1.7 -15.8 197.3 77% 48%	-2.3 -13.6 194.1 77% 49%	-8.8 -5.6 216.5 69% 44%	-13.8 -5.8 220.8 64% 43%	3.5 9.6 222.4 72% 51%	2.3 9.1 221.7 73% 52%	-2.5 -12.6 225.1 52% 33%	5.9 -11.1 233.6 60% 41%
Current Balance Capital Balance Memo items: Nominal GDP Total Revenue & Grants as % of GDP Grants as % of GDP Grants as % of Total Revenue	17.9 20.2 114.1 125% 104% 83% 8.5%	23.0 16.0 126.0 130% 108% 83%	27.4 -10.5 132.9 120% 86% 71%	25.2 -8.1 145.3 110% 81% 74%	10.7 -11.7 162.2 104% 73% 71%	-1.6 -8.7 173.2 86% 58% 67%	-7.0 -1.7 190.4 82% 53% 65%	-1.8 1.2 199.2 81% 53% 66%	-6.3 3.2 208.1 82% 54% 66%	-1.5 1.9 203.0 80% 54% 67%	-9.7 10.5 195.6 71% 46% 65%	1.7 -15.8 197.3 77% 48% 63%	-2.3 -13.6 194.1 77% 49% 64%	-8.8 -5.6 216.5 69% 44% 65%	-13.8 -5.8 220.8 64% 43% 68%	3.5 9.6 222.4 72% 51% 71%	2.3 9.1 221.7 73% 52% 72%	-2.5 -12.6 225.1 52% 33% 63%	5.9 -11.1 233.6 60% 41% 68%
Current Balance Capital Balance Memo items: Nominal GDP Total Revenue & Grants as % of GDP Grants as % of GDP Grants as % of Total Revenue Tax Revenue as % of GDP	17.9 20.2 114.1 125% 104% 83% 8.5%	23.0 16.0 126.0 130% 108% 83% 10%	27.4 -10.5 132.9 120% 86% 71% 10%	25.2 -8.1 145.3 110% 81% 74% 9%	10.7 -11.7 162.2 104% 73% 71% 10%	-1.6 -8.7 173.2 86% 58% 67% 10%	-7.0 -1.7 190.4 82% 53% 65% 11%	-1.8 1.2 199.2 81% 53% 66% 11%	-6.3 3.2 208.1 82% 54% 66% 10%	-1.5 1.9 203.0 80% 54% 67% 10%	-9.7 10.5 195.6 71% 46% 65% 11%	1.7 -15.8 197.3 77% 48% 63% 13%	-2.3 -13.6 194.1 77% 49% 64% 13%	-8.8 -5.6 216.5 69% 44% 65% 13%	-13.8 -5.8 220.8 64% 43% 68% 12%	3.5 9.6 222.4 72% 51% 71% 12%	2.3 9.1 221.7 73% 52% 72% 12%	-2.5 -12.6 225.1 52% 33% 63% 11%	5.9 -11.1 233.6 60% 41% 68% 11%
Current Balance Capital Balance Memo items: Nominal GDP Total Revenue & Grants as % of GDP Grants as % of GDP Grants as % of Total Revenue Tax Revenue as % of GDP Total Expenditure and Net Lending as % of GDP	17.9 20.2 114.1 125% 104% 83% 8.5% -91%	23.0 16.0 126.0 130% 108% 83% 10% -100%	27.4 -10.5 132.9 120% 86% 71% 10% -108%	25.2 -8.1 145.3 110% 81% 74% 9% -98%	10.7 -11.7 162.2 104% 73% 71% 10% -105%	-1.6 -8.7 173.2 86% 58% 67% 10% -91%	-7.0 -1.7 190.4 82% 53% 65% 11% -85%	-1.8 1.2 199.2 81% 53% 66% 11% -82%	-6.3 3.2 208.1 82% 54% 66% 10% -83%	-1.5 1.9 203.0 80% 54% 67% 10% -80%	-9.7 10.5 195.6 71% 46% 65% 11% -71%	1.7 -15.8 197.3 77% 48% 63% 13% -84%	-2.3 -13.6 194.1 77% 49% 64% 13% -85%	-8.8 -5.6 216.5 69% 44% 65% 13% -75%	-13.8 -5.8 220.8 64% 43% 68% 12% -73%	3.5 9.6 222.4 72% 51% 71% 12% -66%	2.3 9.1 221.7 73% 52% 72% 12% -68%	-2.5 -12.6 225.1 52% 33% 63% 11% -59%	5.9 -11.1 233.6 60% 41% 68% 11% -62%
Current Balance Capital Balance Memo items: Nominal GDP Total Revenue & Grants as % of GDP Grants as % of GDP Grants as % of Total Revenue Tax Revenue as % of GDP Total Expenditure and Net Lending as % of GDP Current Expenditure as % of GDP	17.9 20.2 114.1 125% 104% 83% 8.5% -91% -74%	126.0 130% 108% 83% 10% -100% -80%	27.4 -10.5 132.9 120% 86% 71% 10% -108% -72%	25.2 -8.1 145.3 110% 81% 74% 9% -98% -69%	10.7 -11.7 162.2 104% 73% 71% 10% -105% -73%	-1.6 -8.7 173.2 86% 58% 67% 10% -91% -69%	-7.0 -1.7 190.4 82% 53% 65% 11% -85% -65%	-1.8 1.2 199.2 81% 53% 66% 11% -82% -64%	-6.3 3.2 208.1 82% 54% 66% 10% -83% -68%	-1.5 1.9 203.0 80% 54% 67% 10% -80% -65%	-9.7 10.5 195.6 71% 46% 65% 11% -71% -64%	1.7 -15.8 197.3 77% 48% 63% 13% -84% -63%	-2.3 -13.6 194.1 77% 49% 64% 13% -85% -65%	-8.8 -5.6 216.5 69% 44% 65% 13% -75% -61%	-13.8 -5.8 220.8 64% 43% 68% 12% -73% -59%	3.5 9.6 222.4 72% 51% 71% 12% -66% -56%	2.3 9.1 221.7 73% 52% 72% 12% -68% -57%	-2.5 -12.6 225.1 52% 33% 63% 11% -59% -53%	5.9 -11.1 233.6 60% 41% 68% 11% -62% -51%

Appendix C Statistical Tables

Table 7b National Government Finances (GFS Format)—Revenues (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02 est.	FY03 est.	FY04 proj.	FY05 proj.
A.I. Total revenue and grants	38.3	48.2	38.1	47.6	40.3	37.0	48.0	50.5	54.3	52.3	42.0	47.0	43.0	39.7	37.8	41.5	42.9	40.0	37.2
A.II. Total revenue	10.0	15.5	19.1	23.7	24.3	22.3	31.7	32.8	33.8	32.2	26.3	30.1	25.2	20.9	19.6	20.3	21.5	23.7	24.2
A.IV. Tax revenue	3.8	4.6	5.0	5.1	6.1	6.6	8.7	8.0	8.4	8.2	8.2	10.4	6.4	5.5	5.7	7.6	6.4	10.2	10.6
Wages and salary tax	1.7	2.0	1.9	1.9	2.3	2.3	2.7	2.7	2.8	2.7	2.6	3.9	1.5	1.4	1.5	2.9	2.2	3.5	3.6
Gross revenue tax	1.3	1.6	1.9	2.1	2.6	2.9	3.0	3.0	3.1	3.1	2.9	2.8	1.8	1.9	1.8	1.9	1.8	2.9	3.0
Import tax:Fuel	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1
Import tax:All others	0.7	1.0	1.1	1.0	1.2	1.3	2.3	2.1	2.0	2.0	2.1	3.2	2.0	2.1	2.1	1.8	1.9	3.1	3.2
All other tax (National)	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.3	0.3	0.5	0.2	0.7	0.0	0.2	0.9	0.4	0.5	0.6
Nontax revenue	6.2	10.9	14.1	18.6	18.1	15.8	23.0	24.7	25.5	24.0	18.2	19.6	18.9	15.4	13.9	12.7	15.0	13.6	13.6
Fishing access revenue	3.8	7.7	10.8	12.7	12.9	12.5	18.3	21.3	21.5	20.5	14.4	13.5	16.0	14.1	11.3	10.6	13.5	11.8	12.0
Dividend and interest income	1.4	1.7	2.2	2.7	3.5	1.9	2.0	2.1	2.4	2.1	1.9	2.2	1.6	0.1	0.7	0.5	0.2	0.2	0.2
Other nontax revenues	0.9	1.5	1.1	3.2	1.7	1.3	2.6	1.3	1.5	1.4	1.9	4.0	1.2	1.2	1.8	1.6	1.4	1.6	1.5
A.VII. Grants	28.2	32.7	19.0	23.9	16.1	14.7	16.3	17.7	20.5	20.1	15.6	16.9	17.7	18.8	18.2	21.2	21.5	16.2	12.9
Grants from abroad	28.2	32.7	19.0	23.9	16.1	14.7	16.3	17.7	20.5	20.1	15.6	16.9	17.7	18.8	18.2	21.2	21.5	16.2	12.9
Current grants	20.4	24.2	12.9	21.0	9.0	12.0	6.2	8.9	14.4	17.2	13.3	14.6	15.5	16.5	15.9	18.2	18.4	16.2	12.5
Compact General	6.4	6.5	6.7	6.8	3.3	6.2	0.0	2.1	6.5	6.6	5.2	5.4	5.4	5.4	5.5	7.0	7.0	0.0	0.0
Compact Special	11.6	15.8	3.9	11.9	3.9	4.0	4.0	4.0	4.0	4.0	4.0	4.1	4.1	4.1	4.1	4.8	4.8	9.8	7.6
Other:Current	2.4	1.8	2.4	2.3	1.8	1.9	2.3	2.8	3.9	6.6	4.0	5.2	6.0	7.1	6.3	6.5	6.6	6.5	4.9
Capital grants	7.8	8.5	6.1	2.9	7.0	2.7	10.0	8.7	6.1	2.8	2.3	2.3	2.3	2.3	2.3	3.0	3.0	0.0	0.5
Compact CIP	2.7	2.8	2.9	2.9	6.8	2.6	9.0	7.1	2.8	2.8	2.3	2.3	2.3	2.3	2.3	3.0	3.0	0.0	0.5
Other:Capital	5.1	5.7	3.2	0.0	0.2	0.0	1.0	1.7	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
																		contir	nued

Table 7b National Government Finances (GFS Format)— Expenditures and Balances (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01 est.	FY02 est.	FY03 proj.	FY04 proj.	FY05 proj.
C.I. Total expenditure and net lending	25.1	34.7	44.0	32.3	42.0	35.7	40.1	45.4	52.0	51.0	51.3	55.8	52.5	51.3	50.3	43.3	43.4	41.7	41.7
C.II. Total expenditure	25.1	34.7	44.0	32.3	42.0	35.7	40.1	45.4	52.0	51.0	51.3	55.8	52.5	51.3	50.3	43.3	43.4	41.7	41.7
C.III. Current expenditure	19.7	25.5	25.1	26.7	29.7	32.4	34.9	38.0	43.4	43.7	50.4	48.1	47.0	47.9	47.0	40.6	40.7	39.2	39.0
Expenditure on goods and services	18.6	20.0	22.8	23.3	27.7	30.8	30.1	34.7	41.2	41.4	47.9	44.9	42.4	41.8	42.0	35.2	35.6	34.7	34.7
Wages and salaries	7.1	6.5	7.5	7.7	8.3	8.7	9.9	10.3	10.9	11.4	13.5	12.5	11.8	11.4	11.6	12.7	12.9	12.5	12.5
Travel	2.0	1.6	2.1	1.9	2.1	2.4	2.6	2.5	2.9	2.6	4.3	4.2	4.7	4.9	5.2	4.4	4.5	4.4	4.4
Other	9.5	11.8	13.2	13.7	17.2	19.6	17.7	22.0	27.5	27.3	30.2	28.2	26.0	25.6	25.2	18.0	18.2	17.8	17.8
Interest payments	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subsidies	8.0	5.6	2.3	3.4	2.0	1.4	3.7	2.1	1.7	1.5	1.0	1.3	1.5	2.2	1.6	1.9	1.6	1.0	8.0
Transfers	0.4	0.0	0.0	0.0	0.0	0.0	1.1	1.2	0.5	8.0	1.4	1.8	3.0	3.8	3.4	3.6	3.6	3.6	3.6
[Memo: incl. transfers to state governments]	1.7	0.7	0.7	1.7	0.9	2.6	2.2	1.9	2.1	4.7	4.7	6.5	4.5	6.2	6.4	3.0	2.6	0.0	0.0
C.IV. Capital expenditure	5.4	9.1	19.0	5.5	12.3	3.4	5.2	7.4	8.6	7.3	0.9	7.7	5.5	3.5	3.3	2.7	2.7	2.5	2.7
Acquisition of fixed capital	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	3.3	3.7	2.7	1.6	1.4	1.4	1.3	1.3
Multi-purpose development projects	5.2	6.1	5.5	2.0	1.2	0.9	3.2	2.7	4.7	4.3	0.9	2.9	8.0	0.7	1.7	1.3	1.3	1.1	1.3
Capital Transfers	0.2	3.0	13.5	3.5	11.0	2.5	2.0	4.7	3.4	3.0	0.0	1.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Overall Balance	13.1	13.6	-5.9	15.3	-1.7	1.3	7.8	5.0	2.3	1.3	-9.3	-8.8	-9.5	-11.7	-12.6	-1.8	-0.5	-1.7	-4.5
Current Balance	10.7	14.2	6.9	17.9	3.6	2.0	3.0	3.7	4.8	5.8	-10.7	-3.4	-6.3	-10.5	-11.6	-2.1	-0.8	0.7	-2.3
Capital Balance	2.4	-0.6	-12.9	-2.6	-5.3	-0.7	4.8	1.3	-2.5	-4.5	1.4	-5.4	-3.2	-1.2	-1.0	0.3	0.3	-2.5	-2.2
Memo items:																			
Nominal GDP	114.1	126.0	132.9	145.3	162.2	173.2	190.4	199.2	208.1	203.0	195.6	197.3	194.1	216.5	220.8	222.4	221.7	225.1	233.6
Total Revenue & Grants as % of GDP	34%	38%	29%	33%	25%	21%	25%	25%	26%	26%	21%	24%	22%	18%	17%	19%	19%	18%	16%
Grants as % of GDP	25%	26%	14%	16%	10%	8%	9%	9%	10%	10%	8%	9%	9%	9%	8%	10%	10%	7%	6%
Grants as % of Total Revenue	74%	68%	50%	50%	40%	40%	34%	35%	38%	38%	37%	36%	41%	47%	48%	51%	50%	41%	35%
Tax Revenue as % of GDP	7%	8%	8%	7%	8%	8%	9%	8%	8%	8%	8%	11%	10%	9%	9%	11%	9%	15%	15%
Total Expenditure and Net Lending as % of GDP	22%	28%	33%	22%	26%	21%	21%	23%	25%	25%	26%	28%	27%	24%	23%	19%	20%	19%	18%
Current Expenditure as % of GDP	17%	20%	19%	18%	18%	19%	18%	19%	21%	22%	26%	24%	24%	22%	21%	18%	18%	17%	17%
Capital Expenditure as % of GDP	5%	7%	14%	4%	8%	2%	3%	4%	4%	4%	0%	4%	3%	2%	2%	1%	1%	1%	1%
Overall Balance as % of GDP	11%	11%	-4%	11%	-1%	1%	4%	3%	1%	1%	-5%	-4%	-5%	-5%	-6%	-1%	0%	-1%	-2%
Current Balance as % of GDP	9%	11%	5%	12%	2%	1%	2%	2%	2%	3%	-5%	-2%	-3%	-5%	-5%	-1%	0%	0%	-1%

Appendix C Statistical Tables

Table 7c Chuuk State Government Finances (GFS Format)—Revenues (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02 est.	FY03 est.	FY04 proj.	FY05 proj.
A.I. Total revenue and grants	41.4	48.8	51.1	45.4	55.0	42.6	41.5	41.8	42.8	40.0	34.2	37.5	39.3	42.2	38.7	44.2	45.2	25.5	39.4
A.II. Total revenue	3.5	4.1	11.3	6.3	10.1	7.2	6.8	6.7	7.0	5.3	6.0	8.0	8.6	10.1	8.3	6.7	8.5	6.5	6.6
A.IV. Tax revenue	1.7	2.8	3.1	2.8	4.1	3.7	4.1	3.9	3.6	2.8	3.2	5.0	5.3	7.4	6.3	5.2	6.5	4.6	4.7
Wages and salary tax	0.5	0.7	0.7	0.5	0.7	0.7	8.0	0.7	0.9	0.7	0.5	1.7	1.1	1.4	1.4	1.2	1.5	0.9	1.0
Gross revenue tax	0.4	0.6	0.6	0.6	0.8	0.9	0.9	0.8	0.7	0.5	0.6	0.7	0.9	1.7	1.3	1.1	1.3	0.8	0.8
Import tax:Fuel	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.3	0.3	0.1	0.1	0.2	0.1	0.3	0.3	0.2	0.2	0.2	0.2
Import tax:All others	0.2	0.4	0.4	0.4	0.5	0.4	0.8	0.7	0.5	0.3	0.5	8.0	1.2	1.6	1.4	1.1	1.5	0.9	1.0
State tax revenue	0.5	0.9	1.3	1.2	1.8	1.6	1.5	1.4	1.3	1.1	1.5	1.6	1.9	2.4	2.0	1.6	2.1	1.8	1.8
Nontax revenue	1.8	1.3	8.2	3.5	6.0	3.5	2.7	2.8	3.3	2.5	2.8	3.0	3.3	2.7	2.0	1.5	2.0	1.9	1.8
Dividend and interest income	0.8	8.0	4.1	1.9	3.0	1.8	1.3	0.9	1.2	1.4	1.9	2.2	2.2	1.6	0.3	0.1	0.2	0.3	0.3
Other nontax revenues	1.0	0.6	4.1	1.6	3.1	1.7	1.4	1.9	2.1	1.1	0.9	8.0	1.1	1.1	1.7	1.4	1.7	1.5	1.6
A.VII. Grants	37.9	44.7	39.8	39.0	44.9	35.4	34.7	35.2	35.8	34.7	28.2	29.5	30.7	32.1	30.5	37.5	36.7	19.0	32.8
Grants from abroad	37.9	44.7	39.8	39.0	44.9	35.4	34.7	35.2	35.8	34.7	28.2	29.2	30.5	29.0	29.5	36.3	36.7	19.0	32.8
Current grants	24.8	33.0	27.5	26.3	31.7	23.8	25.0	23.8	24.3	23.0	19.0	19.8	21.1	19.6	19.9	24.1	24.4	19.0	25.1
Compact General	16.1	16.4	16.8	17.2	17.7	15.5	17.8	16.2	16.4	16.6	13.2	13.5	13.5	13.6	13.8	17.5	17.7	0.0	0.0
Compact Special	3.2	5.0	4.7	4.7	6.0	5.3	5.3	5.4	5.3	5.0	5.0	5.0	5.0	5.0	5.1	5.0	5.0	17.4	24.1
Other:Current	5.5	11.5	6.0	4.4	8.0	3.0	1.8	2.2	2.6	1.3	0.8	1.3	2.6	1.0	1.1	1.6	1.6	1.6	1.0
Capital grants	13.1	11.8	12.4	12.8	13.2	11.6	9.7	11.4	11.5	11.7	9.2	9.4	9.4	9.5	9.6	12.2	12.4	0.0	7.8
Compact CIP	11.2	11.4	11.7	12.0	12.3	10.8	9.0	11.3	11.4	11.6	9.2	9.4	9.4	9.5	9.6	12.2	12.4	0.0	7.8
Other:Capital	1.8	0.4	0.7	0.8	0.9	0.8	0.7	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grants from national government	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	3.1	1.0	1.2	0.0	0.0	0.0
Current	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	3.1	1.0	1.2	0.0	0.0	0.0
																		contir	nued

Table 7c Chuuk State Government Finances (GFS Format)— Expenditures and Balances (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01 est.	FY02 est.	FY03 proj.	FY04 proj.	FY05
C.I. Total expenditure and net lending	31.7	39.0	40.2	39.7	54.2	45.3	48.9	47.5	42.4	39.3	25.8	37.2	50.2	48.5	45.2	40.3	42.2	36.1	42.1
C.II. Total expenditure	31.7	39.0	40.2	39.7	54.2	45.3	48.9	47.5	42.4	39.3	25.8	37.2	50.2	48.5	45.2	40.3	42.2	36.1	42.1
C.III. Current expenditure	27.7	34.8	29.7	31.6	42.1	34.6	36.0	34.2	33.6	32.3	23.6	26.7	31.1	35.6	35.1	33.9	34.4	31.2	30.6
Expenditure on goods and services	27.7	34.8	29.3	31.4	41.6	33.9	35.6	33.3	32.0	29.1	21.4	22.5	28.2	34.0	34.1	32.7	33.2	31.2	30.6
Wages and salaries	14.4	16.2	15.2	17.0	18.2	19.1	21.0	20.1	21.9	20.9	16.9	12.8	14.0	16.8	18.4	18.4	19.3	18.1	17.8
Travel	1.1	0.9	1.0	1.8	2.1	2.0	1.5	1.3	0.8	0.7	0.8	0.7	1.1	1.3	1.3	1.2	1.1	1.1	1.0
Other	12.2	17.7	13.0	12.6	21.2	12.9	13.1	11.9	9.3	7.5	3.7	9.0	13.1	15.8	14.4	13.2	12.8	12.0	11.8
Interest payments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.7	0.7	0.7	0.4	0.5	0.3	-0.1	0.0	0.0	0.0	0.0
Subsidies	0.0	0.0	0.4	0.3	0.6	0.2	0.2	0.3	0.9	2.5	1.5	1.2	1.5	1.2	1.2	1.2	1.2	0.0	0.0
Transfers	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.1	0.1	0.0	0.0	2.6	0.9	0.1	0.0	0.0	0.0	0.0	0.0
C.IV. Capital expenditure	4.1	4.2	10.6	8.1	12.1	10.8	12.9	13.3	8.7	7.0	2.2	10.5	19.0	12.9	10.0	6.4	7.8	4.9	11.6
Acquisition of fixed capital	0.0	1.2	1.6	2.3	3.4	3.4	3.6	3.2	2.2	1.7	0.2	3.7	4.2	3.3	3.3	2.2	2.6	1.7	3.6
Multi-purpose development projects	4.1	3.0	8.9	5.8	8.7	7.4	9.3	10.1	6.6	5.3	2.0	6.8	14.8	9.6	6.8	4.2	5.2	3.1	8.0
Overall Balance	9.6	9.8	10.9	5.6	0.9	-2.8	-7.5	-5.7	0.4	0.7	8.4	0.3	-10.9	-6.3	-6.4	3.9	3.0	-10.6	-2.8
Current Balance	0.6	2.2	9.1	0.9	-0.3	-3.7	-4.2	-3.8	-2.3	-4.0	1.5	1.5	-1.2	-2.8	-6.0	-1.9	-1.6	-5.7	1.1
Capital Balance	9.0	7.6	1.8	4.7	1.2	0.9	-3.2	-1.9	2.8	4.7	7.0	-1.1	-9.6	-3.5	-0.4	5.8	4.6	-4.9	-3.8
Memo items:																			
Nominal GDP	39.4	44.9	45.8	48.8	55.6	58.7	61.5	61.1	64.8	58.0	56.0	53.8	55.3	66.8	66.8	65.4	66.5	65.5	68.1
Total Revenue & Grants as % of GDP	105%	109%	112%	93%	99%	73%	67%	68%	66%	69%	61%	70%	71%	63%	58%	68%	68%	39%	58%
Grants as % of GDP	96%	100%	87%	80%	81%	60%	56%	58%	55%	60%	50%	55%	56%	48%	46%	57%	55%	29%	48%
Grants as % of Total Revenue	92%	92%	78%	86%	82%	83%	84%	84%	84%	87%	82%	79%	78%	76%	79%	85%	81%	75%	83%
Tax Revenue as % of GDP	7%	10%	11%	9%	11%	10%	11%	10%	9%	8%	9%	15%	12%	14%	12%	10%	13%	9%	9%
Total Expenditure and Net Lending as % of GDP	81%	87%	88%	81%	97%	77%	80%	78%	65%	68%	46%	69%	91%	73%	68%	62%	64%	55%	62%
Current Expenditure as % of GDP	70%	78%	65%	65%	76%	59%	59%	56%	52%	56%	42%	50%	56%	53%	53%	52%	52%	48%	45%
Capital Expenditure as % of GDP	10%	9%	23%	17%	22%	18%	21%	22%	14%	12%	4%	20%	34%	19%	15%	10%	12%	7%	17%
Overall Balance as % of GDP	24%	22%	24%	12%	2%	-5%	-12%	-9%	1%	1%	15%	1%	-20%	-9%	-10%	6%	5%	-16%	-4%
Current Balance as % of GDP	1%	5%	20%	2%	-1%	-6%	-7%	-6%	-4%	-7%	3%	3%	-2%	-4%	-9%	-3%	-2%	-9%	2%

Appendix C Statistical Tables

Table 7d Kosrae State Government Finances (GFS Format)—Revenues (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02 est.	FY03 est.	FY04 proj.	FY05 proj.
A.I. Total revenue and grants	15.2	15.4	14.2	14.2	13.9	12.3	12.7	15.0	15.2	15.2	13.3	12.0	12.4	14.3	13.8	14.8	15.0	8.9	12.4
A.II. Total revenue	2.1	0.9	2.3	1.4	1.6	1.9	1.4	2.0	2.4	1.8	1.5	1.5	1.8	3.2	1.4	2.1	1.8	1.4	1.5
A.IV. Tax revenue	0.5	0.6	0.6	0.6	8.0	0.7	0.8	0.9	0.9	1.0	1.0	1.0	1.4	1.6	1.9	1.5	1.5	1.1	1.1
Wages and salary tax	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.3	0.3
Gross revenue tax	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.4	0.4	0.5	0.4	0.3	0.2	0.2
Import tax:Fuel	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Import tax:All others	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.5	0.4	0.4	0.3	0.3
State tax revenue	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nontax revenue	1.6	0.4	1.8	0.8	0.8	1.2	0.7	1.1	1.5	0.8	0.6	0.5	0.4	1.6	-0.4	0.6	0.4	0.3	0.4
Dividend and interest income	1.3	0.1	1.3	0.5	0.4	0.3	0.2	0.5	0.4	0.3	0.3	0.3	0.3	0.8	-0.8	0.2	0.1	0.0	0.1
Other nontax revenues	0.3	0.3	0.4	0.3	0.4	0.8	0.5	0.6	1.1	0.5	0.3	0.2	0.1	0.8	0.3	0.4	0.3	0.3	0.3
A.VII. Grants	13.2	14.5	11.8	12.8	12.3	10.4	11.3	13.0	12.8	13.4	11.8	10.4	10.6	11.1	12.4	12.8	13.2	7.5	10.9
Grants from abroad	12.8	14.2	11.8	12.7	12.3	10.4	10.8	12.1	11.9	12.1	10.1	10.4	10.0	10.5	10.6	12.5	12.7	7.5	10.9
Current grants	6.7	7.9	7.3	8.3	7.9	6.7	7.1	8.3	7.9	8.2	6.7	6.9	7.0	7.6	7.7	8.7	8.6	7.5	8.9
Compact General	4.0	4.1	4.2	4.3	4.4	3.9	3.9	4.0	4.1	4.1	3.3	3.4	3.4	3.4	3.4	4.4	4.4	0.0	0.0
Compact Special	1.0	1.8	1.6	1.6	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	5.3	7.6
Other:Current	1.7	2.0	1.5	2.4	1.5	0.9	1.2	2.3	1.8	2.1	1.3	1.5	1.6	2.1	2.2	2.3	2.2	2.2	1.3
Capital grants	6.2	6.4	4.5	4.4	4.4	3.8	3.7	3.8	4.0	3.9	3.4	3.6	2.9	3.0	3.0	3.8	4.1	0.0	2.0
Compact CIP	3.5	3.6	3.7	3.7	3.9	3.4	3.4	3.5	3.6	3.6	2.9	2.9	2.9	3.0	3.0	3.8	3.9	0.0	2.0
Other:Capital	2.7	2.8	0.8	0.7	0.6	0.4	0.3	0.3	0.5	0.2	0.5	0.6	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Grants from national government	0.3	0.2	0.0	0.1	0.0	0.0	0.5	0.9	0.9	1.3	1.7	0.0	0.6	0.6	1.7	0.2	0.5	0.0	0.0
Current	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Capital	0.3	0.2	0.0	0.1	0.0	0.0	0.5	0.6	0.7	1.2	1.6	0.0	0.5	0.5	1.6	0.1	0.3	0.0	0.0
																		contir	nued

Table 7d Kosrae State Government Finances (GFS Format)— Expenditures and Balances (\$ millions)

				•		,		•					•		,				
	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01 est.	FY02 est.	FY03 proj.	FY04 proj.	FY05 proj.
C.I. Total expenditure and net lending	12.7	12.5	11.7	13.8	14.8	15.2	13.6	13.4	13.6	15.3	13.3	11.3	11.8	13.4	14.6	14.5	14.0	10.5	11.7
C.II. Total expenditure	12.7	12.5	11.7	13.8	14.8	15.2	13.6	13.4	13.6	15.3	13.3	11.3	11.8	13.4	14.6	14.5	14.0	10.5	11.7
C.III. Current expenditure	7.6	7.8	8.0	8.2	8.1	7.9	9.1	9.6	10.5	10.0	9.4	8.4	8.1	8.4	9.5	10.9	10.2	9.7	9.5
Expenditure on goods and services	7.6	7.8	8.0	8.2	8.1	7.6	8.8	8.7	9.9	9.5	8.4	7.0	7.5	8.4	9.0	10.1	9.9	9.7	9.5
Wages and salaries	4.2	4.3	4.4	4.5	4.6	4.9	5.1	5.1	5.5	5.8	5.7	4.6	4.6	4.9	5.0	5.7	5.5	5.4	5.2
Travel	0.8	0.4	0.5	0.6	0.4	0.3	0.3	0.5	0.6	0.4	0.4	0.5	0.4	0.7	0.7	0.8	8.0	8.0	0.7
Other	2.5	3.1	3.2	3.1	3.1	2.4	3.4	3.1	3.8	3.3	2.3	1.9	2.4	2.8	3.3	3.6	3.6	3.5	3.5
Interest payments	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subsidies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4	0.5	1.1	0.5	0.5	0.0	0.5	0.5	0.3	0.0	0.0
Transfers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.1	0.0	0.0	0.4	0.0	0.0	0.0
C.IV. Capital expenditure	5.1	4.7	3.7	5.6	6.6	7.3	4.5	3.8	3.1	5.3	3.8	2.8	3.6	5.0	5.1	3.5	3.8	8.0	2.2
Acquisition of fixed capital	0.4	0.3	0.5	1.8	3.8	5.4	0.5	0.5	0.4	0.3	0.3	0.5	0.4	0.5	0.3	0.3	0.3	0.2	0.3
Multi-purpose development projects	-4.7	-4.5	-3.1	-3.8	-2.8	-1.8	-4.0	-3.1	-2.7	-4.9	-3.6	-2.4	-3.2	-3.9	-4.6	-3.2	-3.2	-0.6	-2.0
Capital Transfers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	0.0	0.0	0.0	0.0	0.0	-0.5	-0.3	0.0	-0.3	0.0	0.0
C.V. Net lending (domestic)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overall Balance	2.6	2.9	2.5	0.4	-0.8	-2.9	-0.9	1.6	1.5	-0.1	0.0	0.7	0.7	1.0	-0.8	0.3	1.0	-1.6	0.7
Current Balance	1.1	1.0	1.7	1.5	1.3	0.7	-0.6	0.9	-0.1	0.1	-1.1	0.0	8.0	2.5	-0.3	0.0	0.4	-0.7	1.0
Capital Balance	1.4	1.9	0.8	-1.1	-2.2	-3.5	-0.4	0.7	1.6	-0.2	1.2	0.7	-0.2	-1.5	-0.6	0.4	0.6	-0.8	-0.2
Memo items:																			
Nominal GDP	11.5	11.1	11.3	12.2	13.4	13.4	14.8	18.2	17.5	18.4	17.0	16.4	17.1	18.5	20.7	20.0	19.0	17.8	18.5
Total Revenue & Grants as % of GDP	132%	139%	125%	117%	104%	92%	86%	82%	86%	83%	79%	73%	73%	78%	67%	74%	79%	50%	67%
Grants as % of GDP	115%	131%	104%	105%	92%	78%	76%	71%	73%	73%	70%	64%	62%	60%	60%	64%	69%	42%	59%
Grants as % of Total Revenue	87%	94%	83%	90%	88%	85%	89%	87%	84%	88%	89%	87%	85%	78%	90%	86%	88%	84%	88%
Tax Revenue as % of GDP	8%	9%	9%	9%	10%	9%	9%	9%	9%	10%	10%	11%	11%	12%	12%	10%	11%	8%	8%
Total Expenditure and Net Lending as % of GDP	110%	113%	103%	113%	110%	113%	92%	74%	78%	83%	78%	69%	69%	72%	71%	72%	74%	59%	63%
Current Expenditure as % of GDP	66%	70%	71%	67%	60%	59%	62%	53%	60%	55%	56%	51%	48%	45%	46%	55%	54%	54%	51%
Capital Expenditure as % of GDP	44%	43%	32%	46%	49%	54%	31%	21%	18%	29%	23%	17%	21%	27%	25%	18%	20%	5%	12%
Overall Balance as % of GDP	22%	26%	22%	4%	-6%	-21%	-6%	9%	9%	-1%	0%	4%	4%	5%	-4%	2%	5%	-9%	4%
Current Balance as % of GDP	10%	9%	15%	13%	10%	5%	-4%	5%	0%	1%	-7%	0%	5%	14%	-1%	0%	2%	-4%	5%

Appendix C Statistical Tables

Table 7e Pohnpei State Government Finances (GFS Format)—Revenues (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02 est.	FY03 est.	FY04 proj.	FY05 proj.
A.I. Total revenue and grants	29.7	32.3	34.3	31.3	35.2	31.5	31.9	33.2	34.7	33.7	29.1	31.4	32.3	32.7	33.2	38.1	36.5	27.0	31.5
A.II. Total revenue	5.9	5.3	8.0	6.2	7.3	7.4	7.6	6.9	7.4	6.4	7.1	8.1	10.3	10.4	9.9	10.8	9.2	7.5	7.8
A.IV. Tax revenue	2.4	2.9	3.1	3.1	3.7	4.2	5.2	5.1	5.7	5.7	5.5	6.5	8.6	8.5	8.8	9.8	8.0	6.8	7.0
Wages and salary tax	0.8	0.8	0.9	0.9	1.0	1.1	1.4	1.4	1.8	1.5	1.6	1.5	2.2	2.3	2.4	2.7	2.3	1.7	1.8
Gross revenue tax	0.6	0.7	8.0	0.9	1.1	1.2	1.5	1.3	1.6	1.5	1.3	1.3	1.7	1.7	1.8	2.2	1.9	1.4	1.4
Import tax:Fuel	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.4	0.3	0.1	0.3	0.2	0.3	0.3	0.2	0.2	0.3
Import tax:All others	0.3	0.3	0.4	0.4	0.4	0.5	0.9	0.9	8.0	8.0	0.9	1.4	1.9	2.0	1.9	2.0	1.6	1.3	1.3
State tax revenue	0.6	0.9	8.0	0.7	1.0	1.2	1.4	1.3	1.3	1.5	1.4	2.3	2.4	2.4	2.4	2.4	2.0	2.2	2.2
Nontax revenue	3.5	2.4	4.9	3.1	3.6	3.2	2.4	1.8	1.8	0.7	1.6	1.5	1.7	1.9	1.1	1.1	1.2	0.7	0.8
Dividend and interest income	0.5	0.6	2.7	1.1	1.6	0.9	0.5	0.6	8.0	0.5	0.7	0.4	8.0	1.2	0.1	0.3	0.2	0.3	0.3
Other nontax revenues	3.0	1.8	2.2	2.0	2.0	2.3	1.9	1.2	0.9	0.2	0.9	1.2	1.0	8.0	1.0	0.7	1.0	0.4	0.5
A.VII. Grants	23.7	27.0	26.3	25.1	27.8	24.1	24.3	26.3	27.2	27.2	22.0	23.3	22.0	22.2	23.4	27.3	27.4	19.4	23.8
Grants from abroad	23.7	27.0	26.3	24.8	27.8	24.1	24.3	26.3	27.2	25.4	20.8	22.9	21.7	21.9	22.1	26.5	26.5	19.4	23.8
Current grants	16.0	18.1	18.4	16.8	19.1	16.8	16.5	18.8	19.1	17.2	16.5	17.2	16.1	15.6	15.8	18.4	18.3	19.4	21.3
Compact General	10.3	10.5	10.8	11.0	11.4	9.9	10.2	10.4	10.5	10.7	10.5	9.8	9.4	8.7	8.8	11.2	11.4	0.0	0.0
Compact Special	2.2	3.5	3.3	3.3	4.6	3.9	3.7	3.7	4.0	4.0	4.0	4.1	4.1	3.8	3.8	3.7	3.7	16.2	19.7
Other:Current	3.4	4.1	4.4	2.5	3.1	3.0	2.7	4.7	4.6	2.5	2.0	3.3	2.6	3.1	3.1	3.4	3.2	3.2	1.6
Capital grants	7.7	8.9	7.9	8.0	8.8	7.2	7.8	7.5	8.1	8.2	4.3	5.7	5.7	6.3	6.4	8.1	8.2	0.0	2.5
Compact CIP	7.5	7.6	7.8	7.9	8.2	7.2	7.3	7.5	7.6	7.7	4.1	5.0	5.4	6.3	6.4	8.1	8.2	0.0	2.5
Other:Capital	0.3	1.3	0.1	0.1	0.6	0.1	0.5	0.1	0.5	0.5	0.3	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Grants from national government	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.8	1.1	0.5	0.3	0.4	1.2	0.8	8.0	0.0	0.0
Current	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	1.8	1.1	0.5	0.3	0.4	1.2	8.0	8.0	0.0	0.0
																		contir	nued

Table 7e Pohnpei State Government Finances (GFS Format)— Expenditures and Balances (\$ millions)

•				`			,	•					٠.		,				
	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01 est.	FY02 est.	FY03 proj.	FY04 proj.	FY05 proj.
C.I. Total expenditure and net lending	19.6	24.4	31.2	35.2	38.2	38.3	36.6	33.9	39.8	30.2	27.7	29.6	27.6	29.1	30.4	32.2	33.7	27.6	29.9
C.II. Total expenditure	19.6	24.4	31.2	35.2	38.2	38.3	36.6	33.9	39.8	30.2	27.7	29.6	27.6	29.1	30.4	32.2	33.7	27.6	29.9
C.III. Current expenditure	17.9	19.9	21.5	21.3	24.5	26.0	25.9	27.7	34.9	27.6	24.3	24.6	23.5	24.7	23.9	24.4	25.8	24.9	25.2
Expenditure on goods and services	17.9	19.7	21.2	20.9	22.9	21.1	23.3	24.3	31.6	25.8	22.6	22.1	22.8	22.2	23.7	24.1	24.9	24.9	25.2
Wages and salaries	10.8	11.5	12.0	12.7	13.5	13.3	15.6	16.2	17.7	17.9	15.7	14.1	14.1	13.8	13.6	14.1	14.7	14.6	14.8
Travel	0.4	0.6	0.9	0.8	0.8	0.7	0.7	0.9	1.0	0.5	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.8	0.8
Other	6.6	7.6	8.3	7.4	8.7	7.1	7.1	7.2	13.0	7.4	6.3	7.4	8.1	7.8	9.3	9.2	9.4	9.5	9.6
Interest payments	0.0	0.0	0.0	0.0	1.3	1.6	1.5	1.7	1.6	1.2	1.0	0.6	0.4	0.2	0.1	0.0	0.0	0.0	0.0
Subsidies	0.0	0.3	0.3	0.4	0.4	3.3	1.1	1.8	1.7	0.6	0.1	0.2	0.3	2.3	0.1	0.3	0.9	0.0	0.0
Transfers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C.IV. Capital expenditure	1.7	4.5	9.7	13.9	13.6	12.3	10.7	6.2	4.9	2.7	3.5	5.0	4.1	4.4	6.5	7.8	7.9	2.7	4.7
Acquisition of fixed capital	0.6	1.1	1.1	1.3	1.1	0.6	0.6	1.1	0.6	0.5	0.6	1.2	0.7	0.9	1.6	1.0	1.0	0.7	0.8
Multi-purpose development projects	1.1	3.5	7.3	7.0	10.2	10.7	7.2	1.8	3.6	2.2	2.9	3.8	3.4	3.5	4.9	6.8	7.0	2.0	3.9
Capital Transfers	0.0	0.0	-1.4	-5.6	-2.2	-1.1	-2.8	-3.3	-0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overall Balance	10.1	7.8	3.1	-3.9	-3.0	-6.8	-4.7	-0.7	-5.1	3.4	1.3	1.8	4.7	3.6	2.8	5.9	2.8	-0.6	1.7
Current Balance	4.1	3.5	5.0	2.0	1.9	-1.7	-1.8	-2.0	-8.3	-2.1	0.5	1.1	3.2	1.7	3.0	5.6	2.6	2.1	3.9
Capital Balance	6.0	4.4	-1.8	-5.9	-4.8	-5.1	-2.9	1.3	3.2	5.5	0.9	0.7	1.6	1.8	-0.2	0.3	0.3	-2.7	-2.2
Memo items:																			
Nominal GDP	46.5	52.0	57.1	61.9	69.0	71.9	84.1	88.8	95.5	94.1	89.7	89.7	87.4	96.4	95.9	102.5	99.2	105.6	109.6
Total Revenue & Grants as % of GDP	64%	62%	60%	51%	51%	44%	38%	37%	36%	36%	32%	35%	37%	34%	35%	37%	37%	26%	29%
Grants as % of GDP	51%	52%	46%	41%	40%	33%	29%	30%	29%	29%	24%	26%	25%	23%	24%	27%	28%	18%	22%
Grants as % of Total Revenue	80%	84%	77%	80%	79%	76%	76%	79%	79%	81%	76%	74%	68%	68%	70%	72%	75%	72%	75%
Tax Revenue as % of GDP	9%	9%	9%	9%	9%	10%	11%	10%	10%	10%	10%	12%	13%	12%	12%	13%	11%	8%	8%
Total Expenditure and Net Lending as % of GDP	42%	47%	55%	57%	55%	53%	44%	38%	42%	32%	31%	33%	32%	30%	32%	31%	34%	26%	27%
Current Expenditure as % of GDP	38%	38%	38%	34%	36%	36%	31%	31%	37%	29%	27%	27%	27%	26%	25%	24%	26%	24%	23%
Capital Expenditure as % of GDP	4%	9%	17%	22%	20%	17%	13%	7%	5%	3%	4%	6%	5%	5%	7%	8%	8%	3%	4%
Overall Balance as % of GDP	22%	15%	5%	-6%	-4%	-9%	-6%	-1%	-5%	4%	2%	2%	5%	4%	3%	6%	3%	-1%	2%
Current Balance as % of GDP	9%	7%	9%	3%	3%	-2%	-2%	-2%	-9%	-2%	1%	1%	4%	2%	3%	5%	3%	2%	4%

Appendix C Statistical Tables

Table 7f Yap State Government Finances (GFS Format)—Revenues (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02 est.	FY03 est.	FY04 proj.	FY05 proj.
A.I. Total revenue and grants	19.5	20.4	22.8	23.3	25.3	27.4	25.1	23.8	25.4	26.5	24.7	29.8	26.9	26.2	24.0	24.6	24.9	16.5	19.1
A.II. Total revenue	2.4	2.4	5.2	4.4	6.4	9.6	8.2	7.6	8.1	8.4	7.7	7.9	7.5	8.0	6.3	6.4	4.7	3.9	4.0
A.IV. Tax revenue	1.3	1.5	1.5	2.0	2.3	2.5	2.7	3.3	2.5	3.3	2.8	3.1	3.6	4.7	3.8	3.2	3.5	2.6	2.7
Wages and salary tax	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.6	0.4	0.4	0.4	0.4	0.4	0.9	0.3	0.7	0.9	0.5	0.6
Gross revenue tax	0.2	0.2	0.2	0.4	0.5	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.9	1.2	1.5	0.7	0.8	0.5	0.5
Import tax:Fuel	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Import tax:All others	0.1	0.1	0.1	0.2	0.1	0.2	0.4	0.5	0.3	0.5	0.4	0.7	0.7	1.2	1.1	0.9	0.9	0.6	0.7
State tax revenue	0.8	0.8	0.9	1.1	1.3	1.3	1.3	1.6	1.3	1.8	1.2	1.4	1.5	1.4	0.9	0.8	0.9	0.8	0.9
Nontax revenue	1.1	0.9	3.7	2.4	4.1	7.1	5.5	4.3	5.6	5.1	4.9	4.8	3.9	3.3	2.5	3.3	1.2	1.3	1.3
Dividend and interest income	0.6	0.3	2.9	1.4	2.7	5.3	3.5	2.5	3.4	3.7	3.9	3.8	2.6	1.6	1.8	0.9	0.4	0.5	0.5
Other nontax revenues	0.5	0.5	8.0	1.0	1.4	1.8	2.0	1.8	2.2	1.3	1.0	1.0	1.3	1.6	0.7	2.4	8.0	8.0	0.8
A.VII. Grants	17.1	18.0	17.6	19.0	18.9	17.8	16.9	16.2	17.3	18.1	17.1	21.9	19.4	18.2	17.7	18.1	20.1	12.6	15.1
Grants from abroad	15.7	17.6	16.9	17.7	18.0	15.2	15.2	15.1	16.1	16.6	15.2	16.1	16.0	16.0	15.2	17.4	18.8	12.6	15.1
Current grants	10.1	12.0	11.1	11.0	11.0	10.4	10.4	10.7	11.5	11.6	10.5	12.5	11.2	11.2	11.3	12.7	13.3	12.6	13.8
Compact General	7.0	7.1	7.3	7.5	7.7	6.8	6.9	7.1	7.2	7.3	5.8	5.9	5.9	5.9	6.0	7.6	7.7	0.0	0.0
Compact Special	1.6	2.7	2.4	2.3	2.8	2.6	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.8	2.8	2.8	2.7	10.2	12.4
Other:Current	1.5	2.1	1.3	1.2	0.5	1.0	0.5	0.8	1.5	1.4	1.8	3.7	2.4	2.5	2.5	2.3	2.8	2.5	1.5
Capital grants	5.6	5.6	5.8	6.7	7.0	4.8	4.7	4.4	4.6	5.0	4.7	3.6	4.8	4.8	3.9	4.7	5.5	0.0	1.3
Compact CIP	4.3	4.4	4.5	4.6	4.8	4.2	4.3	4.3	4.4	4.5	3.5	3.6	3.6	3.6	3.7	4.7	4.8	0.0	1.3
Other:Capital	1.3	1.2	1.3	2.1	2.2	0.7	0.5	0.1	0.2	0.5	1.2	0.0	1.2	1.1	0.2	0.0	0.8	0.0	0.0
Grants from national government	1.4	0.4	0.7	1.3	0.9	2.6	1.7	1.1	1.2	1.5	1.8	5.8	3.4	2.2	2.5	0.7	1.3	0.0	0.0
Current	1.3	0.4	0.6	0.5	0.5	0.4	0.3	0.9	1.1	1.0	1.3	1.3	1.4	1.3	2.4	0.7	1.3	0.0	0.0
Capital	0.1	0.0	0.1	8.0	0.4	2.2	1.5	0.1	0.1	0.5	0.5	4.5	2.0	0.9	0.1	0.0	0.0	0.0	0.0
																		contii	nued

Table 7f Yap State Government Finances (GFS Format)— Expenditures and Balances (\$ millions)

•			•			,	•							,					
	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01 est.	FY02 est.	FY03 proj.	FY04 proj.	FY05 proj.
C.I. Total expenditure and net lending	15.2	14.8	15.8	22.0	20.8	23.8	26.3	22.8	25.5	26.6	19.8	31.4	23.3	20.9	20.1	16.9	17.1	17.1	19.4
C.II. Total expenditure	15.2	14.8	15.8	22.0	20.8	23.8	21.8	22.8	25.5	26.6	19.8	31.4	23.3	20.9	20.1	16.9	17.1	17.1	19.4
C.III. Current expenditure	11.2	12.3	11.6	12.3	13.2	18.8	17.5	18.7	19.8	19.3	16.7	17.2	16.8	15.3	14.2	15.0	15.3	15.4	15.5
Expenditure on goods and services	10.8	11.9	11.3	11.9	12.1	13.5	12.0	13.7	15.3	14.0	13.4	12.7	13.3	13.3	13.4	14.0	14.3	14.4	14.5
Wages and salaries	5.6	5.6	5.7	5.8	6.0	6.0	6.3	6.7	7.0	7.3	6.7	6.1	5.6	5.3	5.6	6.0	6.1	6.0	6.0
Travel	0.7	0.6	0.6	0.7	0.6	8.0	0.6	0.7	1.0	0.9	0.9	0.9	0.9	0.9	1.1	1.4	1.4	1.5	1.5
Other	4.6	5.7	5.0	5.5	5.5	6.8	5.1	6.3	7.3	5.8	5.7	5.7	6.8	7.1	6.7	6.6	6.8	6.9	7.0
Interest payments	0.0	0.0	0.0	0.0	0.3	4.8	5.4	5.0	4.4	3.8	3.2	2.6	2.0	1.3	0.6	0.0	0.0	0.0	0.0
Subsidies	0.3	0.3	0.3	0.2	0.8	0.2	0.1	0.1	0.2	1.2	0.1	0.2	0.5	0.2	0.2	0.3	0.3	0.3	0.3
Transfers	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.3	0.0	1.7	1.1	0.6	0.0	0.7	0.7	0.7	0.7
C.IV. Capital expenditure	4.0	2.6	4.3	9.8	7.6	5.0	4.3	4.1	5.7	7.4	3.1	14.3	6.5	5.5	5.9	1.8	1.9	1.7	3.9
Acquisition of fixed capital	1.8	0.7	1.1	4.9	6.1	4.0	3.0	2.6	4.4	1.9	2.2	12.5	5.7	1.9	5.4	1.5	1.6	1.5	3.0
Multi-purpose development projects	2.2	1.8	3.1	1.2	1.3	1.1	1.3	1.4	1.3	5.5	0.9	1.0	0.7	3.7	0.5	0.3	0.3	0.3	0.9
Capital Transfers	0.0	0.0	0.0	3.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C.V. Net lending (domestic)	0.0	0.0	0.0	0.0	0.0	0.0	-4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overall Balance	4.3	5.5	6.9	1.3	4.5	3.6	-1.2	1.0	-0.1	-0.2	5.0	-1.6	3.6	5.3	3.9	7.7	7.7	-0.6	-0.3
Current Balance	2.6	2.5	5.4	3.6	4.6	1.6	-3.1	0.5	0.8	1.7	2.8	4.6	3.3	5.2	5.8	4.8	4.1	1.1	2.3
Capital Balance	1.7	3.1	1.6	-2.3	-0.2	2.0	1.9	0.5	-1.0	-1.8	2.2	-6.2	0.3	0.1	-1.9	2.9	3.7	-1.7	-2.7
Memo items:																			
Nominal GDP	16.7	18.0	18.7	22.5	24.2	29.2	30.0	31.2	30.3	32.5	32.9	37.4	34.4	34.8	37.4	34.6	37.0	36.2	37.4
Total Revenue & Grants as % of GDP	117%	113%	122%	104%	105%	94%	84%	76%	84%	82%	75%	80%	78%	75%	64%	71%	67%	46%	51%
Grants as % of GDP	102%	100%	94%	84%	78%	61%	56%	52%	57%	56%	52%	59%	56%	52%	47%	52%	54%	35%	40%
Grants as % of Total Revenue	88%	88%	77%	81%	75%	65%	67%	68%	68%	68%	69%	73%	72%	69%	74%	74%	81%	77%	79%
Tax Revenue as % of GDP	11%	12%	11%	12%	13%	12%	14%	16%	12%	15%	13%	13%	13%	18%	13%	12%	12%	9%	9%
Total Expenditure and Net Lending as % of GDP	91%	83%	85%	98%	86%	82%	88%	73%	84%	82%	60%	84%	68%	60%	54%	49%	46%	47%	52%
Current Expenditure as % of GDP	67%	68%	62%	55%	55%	64%	58%	60%	66%	59%	51%	46%	49%	44%	38%	44%	41%	42%	41%
Capital Expenditure as % of GDP	24%	14%	23%	43%	31%	17%	14%	13%	19%	23%	9%	38%	19%	16%	16%	5%	5%	5%	11%
Overall Balance as % of GDP	26%	31%	37%	6%	18%	12%	-4%	3%	0%	0%	15%	-4%	10%	15%	10%	22%	21%	-2%	-1%
Current Balance as % of GDP	16%	14%	29%	16%	19%	5%	-10%	2%	3%	5%	8%	12%	9%	15%	16%	14%	11%	3%	6%

Table 8a National Government Finances (Audit Format)—Revenues and Expenditures (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02 est.	FY03 est.	FY04 proj.	FY05 proj.
Total Revenues	38.4	47.5	38.7	47.8	44.4	38.9	49.3	51.1	55.7	53.3	64.5	48.0	61.6	49.3	35.3	38.4	43.8	40.8	38.0
Total Domestic Revenue Tax Revenue	10.2	14.8 4.6	19.7 5.0	23.8 5.1	28.3 6.1	24.3 6.6	33.1 8.7	33.5	35.2 8.4	33.2 8.2	48.9 8.2	31.1	43.8 6.4	30.6 5.5	17.1 5.7	17.2 7.6	22.3 6.4	24.6 10.2	25.1 10.6
National Tax (Rev. Share)	3.8 3.8	4.6 4.6	5.0	5.1 5.1	6.1	6.6	8.7 8.7	8.0 8.0	8.4 8.4	8.2	8.2	10.4 10.4	6.4 6.4	5.5 5.5	5.7	7.6 7.6	6.4	10.2	10.6
National Tax (Rev. Share)	3.8	4.6	5.0	5.1	6.1	6.6	8.7	8.0	8.4	8.2	8.2	10.4	6.4	5.5	5.7	7.6	6.4	10.2	10.6
Non-Tax Revenue	6.4	10.2	14.7	18.7	22.2	17.7	24.3	25.4	26.8	25.0	40.8	20.6	37.5	25.1	11.5	9.6	15.9	14.4	14.5
Investment	1.6	0.9	2.8	2.9	3.8	3.9	3.4	2.7	3.8	3.1	14.0	1.4	10.3	6.2	-4.4	-2.6	1.0	1.0	1.0
Fishing/EEZ Access Fees	3.8	7.7	10.8	12.7	12.9	12.5	18.3	21.3	21.5	20.5	14.4	13.5	16.0	14.1	11.3	10.6	13.5	11.8	12.0
Service Charges/Fees	0.9	1.5	1.1	3.2	1.7	1.3	1.1	1.3	1.5	1.4	1.6	4.0	1.2	0.7	1.8	1.6	1.4	1.6	1.5
Loan Proceeds	~	~	~	~	3.8	~	. ~	~	~	~	10.5	1.8	9.9	3.5	2.7	~	~	~	~
Transfers In/Adjustments/Other	~	~	~	~	~	~	1.5	~	~	~	0.3	~	~	0.5	~	~	~	~	~
Total External Revenue	28.2	32.7	19.0	23.9	16.1	14.7	16.3	17.7	20.5	20.1	15.6	16.9	17.7	18.8	18.2	21.2	21.5	16.2	12.9
Compact Current	6.4	6.5	6.7	6.8	3.3	6.2	~	2.1	6.5	6.6	5.2	5.4	5.4	5.4	5.5	7.0	7.0	~	~
Compact Special Programs	11.6	15.8	3.9	11.9	3.9	4.0	4.0	4.0	4.0	4.0	4.0	4.1	4.1	4.1	4.1	4.8	4.8	9.8	7.6
Compact Capital (CIP)	2.7	2.8	2.9	2.9	6.8	2.6	9.0	7.1	2.8	2.8	2.3	2.3	2.3	2.3	2.3	3.0	3.0	~	0.5
Other: Current	2.4	1.8	2.4	2.3	1.8	1.9	2.3	2.8	3.9	6.6	4.0	5.2	6.0	7.1	6.3	6.5	6.6	6.5	4.9
Other: Capital	5.1	5.7	3.2	~	0.2	0.0	1.0	1.7	3.3	~	0.0	~	~	~	~	~	~	~	~
General Fund Revenue	16.4	20.5	26.1	28.6	27.1	30.0	32.3	35.1	41.1	39.2	42.8	34.1	38.5	32.2	19.2	23.7	29.1	24.3	24.7
Special Fund Revenue	14.2 7.8	18.5	6.3	15.2	6.5	6.3	6.7	7.2 8.7	8.4	9.3	19.2	11.3	20.4	15.2	13.5	11.5	11.6 3.1	16.5	12.7 0.5
Capital Fund Revenue	7.8	8.5	6.4	4.0	10.8	2.7	10.3	8.7	6.1	4.7	2.6	2.6	2.7	2.0	2.6	3.2	3.1	0.1	0.5
Total Expenditures	-25.1	-34.7	-44.0	-32.3	-43.3	-37.1	-41.2	-45.4	-52.0	-51.4	-51.3	-57.0	-52.5	-51.3	-50.3	-43.3	-43.4	-41.7	-41.7
Personnel	-7.1	-6.6	-7.6	-7.9	-8.4	-8.8	-9.9	-10.4	-11.0	-11.5	-13.5	-12.5	-11.8	-11.4	-11.6	-12.7	-12.9	-12.5	-12.5
ERP Payments to Retirees	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Travel	-2.0	-1.7	-2.1	-2.0	-2.2	-2.4	-2.6	-2.5	-2.9	-2.7	-4.3	-4.3	-4.7	-5.0	-5.2	-4.5	-4.5	-4.4	-4.4
Other	-14.6	-17.8	-18.3	-15.5	-18.4	-20.4	-20.8	-24.5	-32.6	-31.5	-31.0	-34.3	-30.4	-29.0	-28.4	-20.6	-20.8	-20.3	-20.4
Subsidies	-0.8	-5.6	-2.3	-3.4	-2.0	-1.4	-3.7	-2.1	-1.7	-1.5	-1.0	-1.3	-1.5	-2.2	-1.6	-1.9	-1.6	-1.0	-0.8
Transfers Out/Adjustments/Other	-0.6	-3.0	-13.8	-3.5	-11.0	-2.5	-3.1	-5.9	-3.9	-4.3	-1.4	-4.6	-4.0	-3.8	-3.4	-3.6	-3.6	-3.6	-3.6
Principal Repayment	~	~	~	~	-1.3	-1.4 -0.2	-1.1 -0.0	~	~	~	~	~	~	~	~	~	~	~	~
Interest	~	~	~	~	~				~	~	~	~	~	~	~	~	~	~	~
General Fund Expenditure	-15.8	-15.2	-18.3	-21.5	-21.3	-24.5	-26.3	-29.0	-35.0	-34.0	-41.0	-39.1	-38.9	-37.9	-37.3	-31.2	-31.2	-24.4	-24.2
Special Fund Expenditure	-4.0	-10.3	-19.0	-7.7	-17.3	-7.7	-7.4	-8.7	-8.9	-9.6	-9.4	-12.0	-11.7	-12.5	-11.4	-10.8	-10.9	-16.1	-16.1
Capital Fund Expenditure	-5.4	-9.1	-6.7	-3.0	-4.7	-4.9	-7.5	-7.7	-8.1	-7.8	-0.9	-6.0	-1.8	-1.0	-1.7	-1.4	-1.4	-1.2	-1.4
														contin	ued				

Table 8a National Government Finances (Audit Format)—Fund Balances (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01 est.	FY02 est.	FY03 est.	FY04 proj.	FY05 proj.
Overall Balance	13.3	12.8	-5.3	15.5	1.1	1.9	8.1	5.7	3.7	1.9	13.3	-9.0	9.1	-2.0	-15.0	-4.9	0.4	-0.9	-3.7
General Fund Surplus/(Deficit)	0.6	5.3	7.7	7.1	5.9	5.5	6.0	6.1	6.2	5.2	1.7	-5.0	-0.4	-5.7	-18.1	-7.5	-2.1	-0.2	0.5
Interfund Transfers In	0.0	0.0	~	0.0	0.0	~	~	0.1	0.1	0.0	~	0.1	0.2	0.2	0.3	0.3	~	~	~
Interfund Transfers Out	-0.5	-0.4	-0.5	-0.5	-1.1	-1.0	-1.7	-0.5	-0.4	-0.5	-0.4	-0.6	-1.0	-1.0	-0.8	~	~	~	~
Year-end Fund Balance	7.9	12.8	20.0	26.6	31.4	35.9	40.2	45.9	51.7	56.5	57.8	52.4	51.2	44.8	26.2	19.0	16.9	16.8	17.3
Unreserved:	2.8	8.0	11.6	7.9	17.3	19.2	16.1	13.8	16.5	12.3	17.2	13.2	10.4	9.5	0.6	-3.3	-3.1	-1.4	0.5
Special Fund Surplus/(Deficit)	10.2	8.2	-12.7	7.5	-10.8	-1.5	-0.7	-1.5	-0.5	-0.3	9.8	-0.7	8.7	2.7	2.2	0.7	0.8	0.5	-3.3
Interfund Transfers In	0.5	0.4	0.5	0.5	1.1	1.0	1.7	0.5	0.4	0.5	0.4	0.6	1.0	1.0	0.8	~	~	~	~
Interfund Transfers Out	-0.0	-0.0	~	-0.0	-0.0	~	~	-0.1	-0.1	-0.0	~	-0.1	-0.2	-0.2	-0.3	-0.3	~	~	~
Year-end Fund Balance	10.8	19.4	7.1	15.0	5.3	4.9	5.9	4.8	4.6	4.8	15.0	14.7	24.2	27.7	30.4	30.8	31.6	32.0	28.7
Unreserved:	-3.1	9.7	1.0	10.1	2.3	1.3	0.7	-0.1	-0.5	-0.1	9.6	-0.6	1.8	1.8	1.4	1.8	2.9	3.6	0.5
Capital FundSurplus/(Deficit)	2.4	-0.6	-0.3	1.0	6.0	-2.2	2.8	1.1	-2.0	-3.0	1.7	-3.4	0.9	1.0	0.9	1.8	1.7	-1.2	-0.9
Interfund Transfers In	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Interfund Transfers Out	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Year-end Fund Balance	2.8	2.1	1.8	2.8	8.8	6.6	9.5	10.5	8.6	5.5	7.2	3.8	4.7	5.6	6.6	8.4	10.1	8.9	8.0
Unreserved:	-5.2	-1.8	-1.1	-0.1	2.5	0.4	-5.6	-5.2	-5.2	-2.9	-3.9	-3.5	-3.3	-0.9	-0.0	1.6	3.7	2.9	2.7
Total Year-end Fund Balance Unreserved:	21.4 -5.4	34.3 15.9	29.0 11.4	44.5 17.9	45.6 22.0	47.4 20.9	55.5 11.1	61.2 8.5	64.9 10.8	66.8 9.3	80.0 22.9	71.0 9.1	80.1 8.9	78.1 10.4	63.1 1.9	58.2 0.0	58.6 3.5	57.7 5.0	54.0 3.7

Appendix C Statistical Tables

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01 est.	FY02 est.	FY03 est.	FY04 proj.	FY05 proj.
Total Revenues	41.4	48.8	51.1	45.4	56.9	43.6	52.6	42.0	43.0	40.6	36.5	48.0	46.5	44.2	35.3	43.8	45.8	26.3	40.0
Total Domestic Revenue	3.5	4.1	11.3	6.3	12.0	8.2	17.9	6.8	7.2	6.0	8.3	18.7	16.1	15.1	5.9	7.5	9.1	7.3	7.2
Tax Revenue	1.7	2.8	3.1	2.8	4.1	3.7	4.1	3.9	3.6	2.8	3.2	5.0	5.3	7.4	6.3	5.2	6.5	4.6	4.7
National Tax (Rev. Share)	1.2	1.8	1.8	1.6	2.2	2.1	2.6	2.5	2.4	1.7	1.7	3.4	3.4	5.0	4.3	3.6	4.5	2.8	2.9
State Tax	0.5	0.9	1.3	1.2	1.8	1.6	1.5	1.4	1.3	1.1	1.5	1.6	1.9	2.4	2.0	1.6	2.1	1.8	1.8
Non-Tax Revenue	1.8	1.3	8.2	3.5	7.9	4.5	13.8	2.9	3.6	3.2	5.1	13.7	10.8	7.8	-0.4	2.3	2.6	2.7	2.5
Investment	0.8	0.8	4.1	1.9	3.0	2.8	2.1	1.1	1.4	2.1	4.2	6.0	7.3	3.6	-3.1	-0.3	0.8	1.2	0.9
Service Charges/Fees	1.0	0.5	1.0	0.8	1.0	1.7	1.4	1.7	1.6	1.1	0.9	0.8	1.1	1.1	1.7	1.4	1.7	1.5	1.6
Loan Proceeds	~	~	~	~	1.9	~	10.3	~	~	~	~	6.7	2.1	~	~	~	~	~	~
Transfers In/Adjustments/Other	~	0.0	3.1	0.7	2.0	~	0.0	0.1	0.5	0.0	~	0.0	0.0	~	~	~	~	~	~
CFSM Grants	~	~	~	~	~	~	~	~	~	~	~	0.3	0.2	3.1	1.0	1.2	~	~	~
Total External Revenue	37.9	44.7	39.8	39.0	44.9	35.4	34.7	35.2	35.8	34.7	28.2	29.2	30.5	29.0	29.5	36.3	36.7	19.0	32.8
Compact Current	16.1	16.4	16.8	17.2	17.7	15.5	17.8	16.2	16.4	16.6	13.2	13.5	13.5	13.6	13.8	17.5	17.7	~	~
Compact Special Programs	3.2	5.0	4.7	4.7	6.0	5.3	5.3	5.4	5.3	5.0	5.0	5.0	5.0	5.0	5.1	5.0	5.0	17.4	24.1
Compact Capital (CIP)	11.2	11.4	11.7	12.0	12.3	10.8	9.0	11.3	11.4	11.6	9.2	9.4	9.4	9.5	9.6	12.2	12.4	~	7.8
Other: Current	5.5	11.5	6.0	4.4	8.0	3.0	1.8	2.2	2.6	1.3	0.8	1.3	2.6	1.0	1.1	1.6	1.6	1.6	1.0
Other: Capital	1.8	0.4	0.7	0.8	0.9	0.8	0.7	0.1	0.1	0.1	0.0	~	~	~	~	~	~	~	~
General Fund Revenue	19.4	20.4	27.7	23.3	27.5	23.4	25.2	22.8	23.3	22.6	21.3	31.7	29.1	25.6	18.6	23.8	26.9	7.3	7.2
Special Fund Revenue	8.7	16.7	10.7	9.3	16.2	8.6	7.4	7.8	8.1	6.3	6.0	6.9	8.0	9.1	7.1	7.8	6.6	19.0	25.1
Capital Fund Revenue	13.3	11.8	12.7	12.8	13.2	11.6	20.0	11.4	11.6	11.7	9.2	9.4	9.4	9.5	9.6	12.2	12.4	~	7.8
Total Expenditures	-31.7	-39.0	-40.2	-39.7	E4 6	46.0	40.6	-47.5	-42.5	-39.7	-25.8	-38.5	-54.9	-63.0	-48.9	-40.3	-42.2	-36.1	-42.1
Personnel	-14.4	-16.5	-15.5	-17.3	-18.7	-19.3	-21.3	-20.3	-22.1	-21.0	-17.0	-12.9	-14.3	-17.0	-18.6	-18.5	-19.5	-18.3	-17.9
ERP Payments to Retirees	~14.4	-10.5	-13.3	-17.5	-10.7	~19.5	~21.5	-20.5	~22.1	~21.0	-17.0	-2.6	-0.9	~ 17.0	-10.0	-10.5	-19.5	-10.5	-17.5
Travel	-1.1	-0.9	-1.1	-1.9	-2.2	-2.2	-1.7	-1.6	-1.0	-1.0	-0.9	-0.8	-1.3	-1.4	-1.3	-1.2	-1.2	-1.1	-1.1
Other	-15.1	-20.3	-23.3	-20.3	-32.8	-23.2	-25.5	-24.6	-17.7	-14.2	-5.7	-19.3	-31.7	-28.5	-24.2	-19.4	-20.4	-16.7	-23.1
Subsidies	~	~	-0.4	-0.3	-0.6	-0.2	-0.2	-0.3	-0.9	-2.5	-1.5	-1.2	-1.5	-1.2	-1.2	-1.2	-1.2	~	~20.1
Transfers Out/Adjustments/Other	-1.1	-1.3	~	~	~	-0.4	-0.2	-0.5	-0.5	-0.4	-0.0	~	~	-9.9	-0.4	-0.0	-0.0	~	~
Principal Repayment	~	~	~	~	-0.5	-0.7	-0.7	~	-0.1	~	~	-1.3	-4.7	-4.7	-3.3	~	~	~	~
Interest	~	~	~	~	~	~	-0.0	-0.6	-0.7	-0.7	-0.7	-0.4	-0.5	-0.3	0.1	~	~	~	~
General Fund Expenditure	-19.5	-19.6	-19.3	-22.7	-26.4	-25.1	-29.4	-26.7	-25.6	-24.6	-17.9	-20.3	-23.9	-28.2	-26.9	-25.7	-26.4	-9.8	-9.6
Special Fund Expenditure	-8.2	-16.3	-11.2	-9.7	-16.2	-10.2	-7.3	-7.6	-7.9	-5.9	-5.1	-6.3	-8.4	-9.2	-9.3	-8.8	-8.7	-21.9	-21.5

203

Table 8b Chuuk State Government Finances (Audit Format)—Fund Balances (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01 est.	FY02 est.	FY03 est.	FY04 proj.	FY05 proj.
Overall Balance	9.6	9.8	10.9	5.6	2.3	-2.4	3.0	-5.5	0.5	1.0	10.7	9.5	-8.3	-18.8	-13.5	3.5	3.6	-9.7	-2.1
General Fund Surplus/(Deficit)	-0.1	0.8	8.4	0.6	1.1	-1.7	-4.2	-3.9	-2.3	-2.0	3.4	11.3	5.2	-2.6	-8.3	-1.9	0.5	-2.5	-2.4
Interfund Transfers In	0.7	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Interfund Transfers Out	-0.5	-0.5	~	-0.1	-0.1	-0.2	-0.2	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	~	~	~	~	~	~
Year-end Fund Balance	-10.8	-10.5	-2.2	-1.7	-0.7	-2.6	-6.9	-11.0	-13.5	-15.6	-12.4	-1.2	3.8	1.2	-7.1	-9.0	-8.5	-11.0	-13.5
Unreserved:	-11.7	-10.8	-3.6	-3.1	-1.5	-3.8	-8.2	-12.6	-15.6	-17.1	-14.0	-4.1	0.2	-4.0	-14.6	-15.3	-14.6	-17.0	-19.3
Special Fund Surplus/(Deficit)	0.5	0.4	-0.4	-0.3	0.1	-1.7	0.1	0.2	0.2	0.4	0.8	0.6	-0.4	-0.1	-2.2	-1.0	-2.1	-2.9	3.5
Interfund Transfers In	0.5	0.5	~	0.3	0.1	0.6	0.3	0.1	0.2	0.1	0.1	0.2	0.1	0.1	~	~	~	~	~
Interfund Transfers Out	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Year-end Fund Balance	0.9	1.8	1.3	1.4	1.5	0.4	0.9	1.3	1.6	2.2	3.2	4.0	3.7	3.7	1.5	0.5	-1.5	-4.5	-0.9
Unreserved:	-0.8	-0.6	-1.1	0.4	0.9	-0.5	-0.2	-0.1	-0.1	8.0	2.4	2.8	3.0	3.4	1.2	0.3	-1.7	-4.6	-1.0
Capital Fund Surplus/(Deficit)	9.2	8.7	3.0	5.4	1.1	1.0	7.1	-1.8	2.7	2.6	6.4	-2.5	-13.1	-16.1	-3.0	6.4	5.2	-4.3	-3.2
Interfund Transfers In	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Interfund Transfers Out	-0.7	~	~	-0.2	~	-0.4	-0.2	-0.0	-0.0	~	~	~	~	~	~	~	~	~	~
Year-end Fund Balance	8.5	17.2	20.2	25.4	26.5	27.1	34.0	32.2	34.8	37.4	43.8	41.3	28.3	12.2	9.2	15.6	20.8	16.5	13.3
Unreserved:	0.5	1.6	3.5	4.5	5.0	15.0	3.4	-9.6	-0.7	0.7	11.8	12.6	9.5	~	0.9	8.4	14.4	10.8	8.0
Total Year-end Fund Balance Unreserved:	-1.4 -12.0	8.5 -9.8	19.4 -1.2	25.1 1.8	27.4 4.4	25.0 10.7	28.0 -5.0	22.5 -22.3	23.0 -16.4	24.0 -15.6	34.6 0.2	44.1 11.4	35.8 12.7	17.1 -0.6	3.6 -12.4	7.1 -6.6	10.7 -1.9	1.0 -10.8	-1.1 -12.3

Table 8c Kosrae State Government Finances (Audit Format)—Revenues and Expenditures (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01 est.	FY02 est.	FY03 est.	FY04 proj.	FY05 proj.
Total Revenues	15.2	15.4	14.2	14.2	18.9	12.4	13.3	14.7	15.3	15.1	13.3	13.3	13.8	14.4	13.4	14.2	15.0	9.0	12.6
Total Domestic Revenue	2.4	1.2	2.3	1.5	6.6	2.0	2.5	2.6	3.4	3.0	3.3	2.9	3.9	3.9	2.8	1.6	2.3	1.6	1.7
Tax Revenue	0.5	0.6	0.6	0.6	0.8	0.7	0.8	0.9	0.9	1.0	1.0	1.0	1.4	1.6	1.9	1.5	1.5	1.1	1.1
National Tax (Rev. Share)	0.4	0.4	0.4	0.5	0.6	0.5	0.6	8.0	8.0	0.8	8.0	0.9	1.3	1.4	1.6	1.3	1.3	0.9	0.9
State Tax	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Non-Tax Revenue	1.9	0.6	1.8	0.9	5.8	1.3	1.7	1.7	2.4	2.0	2.3	1.8	2.4	2.3	0.9	0.1	0.8	0.5	0.5
Investment	1.3	0.1	1.3	0.5	0.4	0.4	8.0	0.5	0.4	0.4	0.4	0.6	0.7	1.0	-0.8	-0.3	0.2	0.2	0.2
Service Charges/Fees	0.3	0.3	0.4	0.3	0.4	8.0	0.5	0.6	1.1	0.5	0.3	0.2	0.1	8.0	0.1	0.3	0.3	0.3	0.3
Loan Proceeds	~	~	~	~	5.0	~	~	~	~	~	~	1.0	1.1	~	~	~	~	~	~
Transfers In/Adjustments/Other	~	~	~	~	~	~	~	~	0.2	~	~	~	~	~	~	~	~	~	~
CFSM Grants	0.3	0.2	~	0.1	~	~	0.5	0.6	0.7	1.2	1.6	~	0.5	0.5	1.6	0.1	0.3	~	~
Total External Revenue	12.8	14.2	11.8	12.7	12.3	10.4	10.8	12.1	11.9	12.1	10.1	10.4	10.0	10.5	10.6	12.5	12.7	7.5	10.9
Compact Current	4.0	4.1	4.2	4.3	4.4	3.9	3.9	4.0	4.1	4.1	3.3	3.4	3.4	3.4	3.4	4.4	4.4	~	~
Compact Special Programs	1.0	1.8	1.6	1.6	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	5.3	7.6
Compact Capital (CIP)	3.5	3.6	3.7	3.7	3.9	3.4	3.4	3.5	3.6	3.6	2.9	2.9	2.9	3.0	3.0	3.8	3.9	~	2.0
Other: Current	1.7	2.0	1.5	2.4	1.5	0.9	1.2	2.3	1.8	2.1	1.3	1.5	1.6	2.1	2.2	2.3	2.2	2.2	1.3
Other: Capital	2.7	2.8	8.0	0.7	0.6	0.4	0.3	0.3	0.5	0.2	0.5	0.6	~	~	~	~	0.2	~	~
General Fund Revenue	5.0	5.0	6.5	5.7	6.0	5.8	6.0	6.0	6.5	5.9	5.0	5.2	5.5	6.6	4.6	5.9	6.4	1.6	1.7
Special Fund Revenue	2.7	3.8	3.2	4.0	3.5	2.8	3.2	4.5	3.9	4.2	3.5	4.5	5.0	4.3	4.4	4.5	4.3	7.5	8.9
Capital Fund Revenue	7.5	6.6	4.5	4.5	9.5	3.8	4.2	4.4	5.0	5.0	5.0	3.6	3.4	3.7	4.6	3.9	4.4	~	2.0
Total Expenditures	-12.7	-12.5	-11.7	-13.8	-14.8	-16.2	-14.6	-14.4	-14.8	-16.6	-13.5	-11.5	-12.0	-13.4	-14.7	-15.4	-14.0	-10.5	-11.7
Personnel	-4.6	-4.6	-4.7	-4.9	-5.1	-5.3	-5.5	-5.5	-5.9	-6.3	-6.2	-5.0	-4.9	-5.3	-5.3	-6.1	-5.8	-5.4	-5.4
ERP Payments to Retirees	~	~	~	~	~	~	~	~	~	~	~	-0.9	-0.1	~	~	~	~	~	~
Lump-sum Annual Leave Payment	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	-0.4	~	~	~
Travel	-0.8	-0.4	-0.6	-0.6	-0.5	-0.4	-0.5	-0.6	-0.8	-0.5	-0.5	-0.6	-0.5	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8
Other	-7.2	-7.4	-6.4	-8.3	-9.2	-9.2	-7.4	-6.2	-6.5	-8.0	-5.6	-4.2	-5.7	-6.8	-7.8	-7.1	-6.8	-4.3	-5.5
Subsidies	~	~	~	~	~	~	~	-0.7	-0.4	-0.5	-1.1	-0.5	-0.5	~	-0.5	-0.5	-0.3	~	~
Transfers Out/Adjustments/Other	~	~	~	~	-0.0	-0.0	~	-0.3	-0.2	-0.3	-0.2	-0.0	-0.0	-0.5	-0.4	-0.5	-0.3	~	~
Principal Repayment	~	~	~	~	~	-1.0	-1.0	-1.0	-1.0	-1.0	~	-0.2	-0.2	~	~	~	~	~	~
Interest	~	~	~	~	~	-0.2	-0.3	-0.2	-0.1	-0.0	~	~	~	~	~	~	~	~	~
General Fund Expenditure	-5.0	-4.6	-5.0	-5.6	-6.0	-6.1	-5.9	-5.5	-6.7	-5.3	-5.4	-5.3	-4.6	-5.1	-5.2	-6.5	-5.9	-2.0	-2.0
Special Fund Expenditure	-2.9	-3.5	-3.5	-4.2	-3.6	-2.6	-3.2	-4.1	-4.0	-4.8	-3.6	-3.7	-4.0	-4.3	-4.6	-4.7	-4.7	-7.8	-7.7
Capital Fund Expenditure	-4.8	-4.5	-3.2	-4.0	-5.2	-7.6	-5.5	-4.7	-4.2	-6.5	-4.6	-2.6	-3.4	-4.0	-4.9	-3.8	-3.4	-0.6	-2.0
														contin	ued				

Table 8c Kosrae State Government Finances (Audit Format)—Fund Balances (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01 est.	FY02 est.	FY03 est.	FY04 proj.	FY05 proj.
Overall Balance	2.6	2.9	2.5	0.4	4.1	-3.8	-1.3	0.4	0.5	-1.5	-0.2	1.8	1.8	1.1	-1.3	-1.2	1.0	-1.4	0.9
General Fund Surplus/(Deficit)	0.0	0.5	1.6	0.1	-0.0	-0.2	0.1	0.5	-0.2	0.6	-0.4	-0.1	0.9	1.5	-0.6	-0.6	0.5	-0.5	-0.3
Interfund Transfers In	~	~	~	~	~	~	~	~	~	~	~	~	~	~	0.3	~	~	~	~
Interfund Transfers Out	-0.1	~	~	~	~	~	~	-0.0	~	~	~	~	~	~	~	~	~	~	~
Year-end Fund Balance	-0.1	0.4	1.9	2.0	2.0	1.7	1.8	2.3	2.1	2.8	2.4	2.3	3.2	4.7	4.4	3.8	4.2	3.8	3.4
Unreserved:	-0.4	0.0	1.5	1.3	0.9	0.4	0.6	1.3	1.0	-1.7	-2.7	-2.4	-0.4	0.9	0.1	-1.3	-0.7	-1.0	-1.2
Special Fund Surplus/(Deficit)	-0.3	0.3	-0.3	-0.2	-0.1	0.2	-0.0	0.4	-0.1	-0.6	-0.1	0.8	1.0	0.1	-0.2	-0.2	-0.3	-0.4	1.2
Interfund Transfers In	0.1	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Interfund Transfers Out	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Accounting Adjustment	~	~	~	~	~	~	~	~	~	~	~	-0.1	-0.9	~	~	~	~	~	~
Year-end Fund Balance	-0.3	0.1	-0.3	-0.5	-0.6	-0.3	-0.4	-0.0	-0.1	-0.7	-0.7	0.0	0.1	0.2	-0.0	-0.2	-0.5	-0.9	0.3
Unreserved:	-0.8	-0.7	-1.3	-4.4	-2.8	-0.8	-1.0	-0.6	-1.3	-1.4	-1.7	-1.3	-1.1	-0.7	-0.9	-0.8	-1.1	-1.4	-0.1
Capital FundSurplus/(Deficit)	2.8	2.1	1.2	0.6	4.3	-3.8	-1.4	-0.3	0.8	-1.4	0.4	1.0	0.1	-0.3	-0.3	0.1	1.0	-0.6	
Interfund Transfers In	~	~	~	~	~	~	~	0.0	~	~	~	~	~	~	~	~	~	~	
Interfund Transfers Out	~	~	~	~	~	~	~	~	~	~	~	~	~	~	-0.3	~	~	~	
Year-end Fund Balance	2.7	4.8	6.1	6.6	10.9	7.1	5.7	5.4	6.3	4.9	5.2	6.3	6.3	6.0	5.3	5.4	6.4	5.8	5.8
Unreserved:	-2.8	-7.4	-6.5	1.3	2.7	-0.2	0.4	-2.1	-2.9	-1.2	-1.5	-2.0	0.0	0.8	0.1	0.1	1.5	1.2	1.5
Total Year-end Fund Balance	2.3	5.2	7.7	8.2	12.3	8.5	7.1	7.7	8.3	6.9	6.9	8.6	9.7	10.9	9.7	9.0	10.1	8.6	9.6
Unreserved:	-4.0	-8.1	-6.2	-1.8	0.7	-0.5	0.1	-1.4	-3.1	-4.3	-6.0	-5.6	-1.5	1.1	-0.7	-2.1	-0.3	-1.2	0.2

Appendix C Statistical Tables

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01 est.	FY02 est.	FY03 est.	FY04 proj.	FY05 proj.
Total Revenues Total Domestic Revenue Tax Revenue National Tax (Rev. Share) State Tax	29.7 5.9 2.4 1.8 0.6	32.3 5.3 2.9 2.0 0.9	34.3 8.0 3.1 2.3 0.8	45.9 21.2 3.1 2.4 0.7	40.4 12.5 3.7 2.7 1.0	31.9 7.9 4.2 3.0 1.2	36.5 12.2 5.2 3.8 1.4	33.4 7.1 5.1 3.8 1.3	34.8 7.6 5.7 4.3 1.3	34.2 8.8 5.7 4.2 1.5	33.4 12.6 5.5 4.1 1.4	31.4 8.5 6.5 4.3 2.3	35.0 13.3 8.6 6.2 2.4	32.7 10.8 8.5 6.1 2.4	32.4 10.3 8.8 6.4 2.4	37.4 11.0 9.8 7.3 2.4	37.1 10.6 8.0 6.0 2.0	27.7 8.3 6.8 4.6 2.2	32.3 8.5 7.0 4.8 2.2
Non-Tax Revenue Investment Service Charges/Fees Loan Proceeds Transfers In/Adjustments/Other CFSM Grants	3.5 0.5 1.9 ~ 1.1	2.4 0.6 1.8 ~ 0.0	4.9 2.7 1.5 ~ 0.7	18.0 1.1 2.0 14.7 ~ 0.3	8.8 1.6 1.8 5.2 0.2	3.6 1.3 1.9 ~ 0.4	7.1 1.2 1.9 4.0 0.0	2.1 0.8 1.2 ~ ~	1.9 1.0 0.9 ~ 0.1	3.1 1.1 0.2 ~ 0.0 1.8	7.1 2.5 0.8 2.5 0.1 1.1	1.9 0.3 1.2 ~ ~ 0.5	4.7 1.9 0.0 1.6 0.9 0.3	2.3 1.2 0.4 ~ 0.4 0.4	1.5 -0.8 0.6 ~ 0.4 1.2	1.2 -0.3 0.5 ~ 0.2 0.8	2.6 0.8 0.4 ~ 0.6 0.8	1.5 1.0 0.4 ~ ~	1.5 1.0 0.5 ~ ~
Total External Revenue Compact Current Compact Special Programs Compact Capital (CIP) Other: Current Other: Capital General Fund Revenue Special Fund Revenue Capital Fund Revenue	23.7 10.3 2.2 7.5 3.4 0.3 15.4 6.0 8.3	27.0 10.5 3.5 7.6 4.1 1.3 15.3 8.1 8.9	26.3 10.8 3.3 7.8 4.4 0.1 17.7 8.8 7.9	24.8 11.0 3.3 7.9 2.5 0.1 16.7 6.5 22.7	27.8 11.4 4.6 8.2 3.1 0.6 18.2 8.0 14.2	24.1 9.9 3.9 7.2 3.0 0.1 16.2 8.1 7.6	24.3 10.2 3.7 7.3 2.7 0.5 17.2 7.5 11.8	26.3 10.4 3.7 7.5 4.7 0.1 16.9 8.8 7.7	27.2 10.5 4.0 7.6 4.6 0.5 17.2 9.1 8.5	25.4 10.7 4.0 7.7 2.5 0.5 17.5 8.4 8.3	20.8 10.5 4.0 4.1 2.0 0.3 18.6 10.3 4.5	22.9 9.8 4.1 5.0 3.3 0.6 17.3 8.3 5.7	21.7 9.4 4.1 5.4 2.6 0.2 18.0 9.2 7.8	21.9 8.7 3.8 6.3 3.1 ~ 16.7 7.9 8.1	22.1 8.8 3.8 6.4 3.1 ~ 15.2 9.1 8.1	26.5 11.2 3.7 8.1 3.4 ~ 18.7 8.6 10.2	26.5 11.4 3.7 8.2 3.2 ~ 18.6 8.5 9.9	19.4 ~ 16.2 ~ 3.2 ~ 7.9 19.8	23.8 ~ 19.7 2.5 1.6 ~ 8.2 21.7 2.5
Total Expenditures Personnel ERP Payments to Retirees Travel Other Subsidies Transfers Out/Adjustments/Other Principal Repayment Interest	-19.6 -11.0 -0.5 -8.2 -	-24.4 -11.7 -0.6 -11.9 -0.3 -0.0	-31.2 -12.2 -0.9 -16.4 -0.3 -1.4	-35.2 -12.8 -0.9 -15.5 -0.4 -5.6	-39.2 -13.8 ~ -0.8 -19.7 -0.4 -2.2 -1.0 -1.3	-40.9 -13.7 ~ -0.8 -17.8 -3.3 -1.2 -2.6 -1.6	-37.6 -16.0 -0.8 -14.3 -1.1 -2.8 -1.0 -1.5	-34.9 -16.3 ~ -1.1 -9.5 -1.8 -3.6 -1.0 -1.7	-40.8 -17.8 ~ -1.0 -17.1 -1.7 -0.7 -1.0 -1.6	-37.3 -18.1 -0.6 -9.8 -0.6 -7.1 -1.2	-29.9 -15.8 -0.4 -0.6 -9.6 -0.1 -0.1 -2.2 -1.0	-31.6 -14.1 -1.8 -0.6 -12.3 -0.2 -0.0 -2.0 -0.6	-29.6 -14.1 -2 -0.7 -10.8 -0.3 -1.3 -2.0 -0.4	-31.1 -14.1 -2.6 -11.9 -2.3 -2.0 -0.2	-32.4 -13.7 -0.8 -15.7 -0.1 -0.0 -2.0 -0.1	-32.2 -14.3 -0.9 -16.7 -0.3	-33.7 -14.9 -0.9 -17.0 -0.9	-27.6 -14.7 -0.8 -12.1	-29.9 -14.9 -0.9 -14.1
General Fund Expenditure Special Fund Expenditure Capital Fund Expenditure	-13.4 -4.8 -1.4	-13.3 -7.4 -3.8	-13.5 -8.9 -8.8	-14.7 -7.3 -13.2	-17.0 -6.9 -15.3	-16.8 -8.0 -16.1	-16.0 -8.9 -12.6	-18.0 -9.1 -7.9	-24.8 -9.1 -6.9	-19.1 -7.7 -10.6	-16.3 -7.4 -6.2	-15.2 -9.8 -6.6	-15.1 -8.7 -5.8	-15.9 -7.5 -7.7	-16.5 -10.1 -7.9	-17.1 -7.8 -7.2	-17.7 -8.1 -7.9	-6.1 -19.4 -2.1	-6.2 -19.6 -4.1

Pohnpei State Government Finances (Audit Format)—Revenues and Expenditures (\$ millions)

Table 8d

Table 8d Pohnpei State Government Finances (Audit Format)—Fund Balances (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01 est.	FY02 est.	FY03 est.	FY04 proj.	FY05 proj.
Overall Balance	10.1	7.8	3.1	10.7	1.2	-9.0	-1.1	-1.5	-6.0	-3.2	3.5	-0.2	5.4	1.6	-0.0	5.3	3.4	0.1	2.4
General Fund Surplus/(Deficit)	1.9	2.0	4.2	2.0	1.2	-0.6	1.2	-1.1	-7.7	-1.5	2.4	2.1	2.9	0.7	-1.3	1.5	1.0	1.8	1.9
Interfund Transfers In	0.3	~	~	~	~	~	~	~	~	0.3	~	~	~	~	~	~	~	~	~
Interfund Transfers Out	-0.2	~	~	~	~	~	~	~	~	~	~	-0.4	-0.8	-0.6	~	~	~	~	~
Year-end Fund Balance	-1.4	0.6	4.8	6.8	8.0	7.3	8.5	7.4	-0.3	-1.5	0.9	2.6	4.6	4.7	3.5	5.0	5.9	7.7	9.7
Unreserved:	-2.9	0.0	3.4	4.5	6.1	6.2	7.5	6.5	-1.2	-2.2	0.1	1.6	1.6	1.4	-0.0	-1.8	-0.8	1.1	3.1
Special Fund Surplus/(Deficit)	1.2	0.7	-0.1	-0.8	1.1	0.2	-1.4	-0.2	0.1	0.7	2.8	-1.4	0.6	0.5	-1.0	0.7	0.4	0.4	2.1
Interfund Transfers In	0.2	~	~	~	~	~	~	~	~	0.0	~	0.4	0.8	~	~	~	~	~	~
Interfund Transfers Out	-0.3	~	~	~	~	~	~	~	~	-0.3	~	~	~	~	~	~	~	~	~
Year-end Fund Balance	1.2	1.9	1.8	1.0	2.0	2.2	0.8	0.5	0.6	1.0	3.8	2.8	4.3	4.7	3.7	4.4	4.8	5.2	7.3
Unreserved:	-0.5	0.3	0.7	0.2	1.1	1.3	-1.3	-0.8	-1.4	-0.3	2.0	0.8	3.4	2.8	2.0	2.5	3.1	3.6	5.8
Capital FundSurplus/(Deficit)	7.0	5.1	-0.9	9.6	-1.1	-8.5	-0.8	-0.1	1.6	-2.3	-1.7	-0.9	1.9	0.3	0.2	3.0	2.0	-2.1	-1.6
Interfund Transfers In	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Interfund Transfers Out	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Year-end Fund Balance	7.0	12.1	11.2	20.8	19.7	11.2	10.4	10.2	11.8	9.5	7.8	6.8	8.8	9.1	9.3	12.3	14.4	12.3	10.6
Unreserved:	1.2	8.8	5.8	8.6	4.4	-0.6	-1.2	-5.5	2.6	-1.6	-1.2	-0.9	-1.6	-3.3	-4.1	-0.8	3.2	2.6	2.1
Total Year-end Fund Balance Unreserved:	6.8 -2.2	14.6 9.1	17.7 9.9	28.5 13.2	29.7 11.5	20.7 6.8	19.6 5.0	18.2 0.2	12.2 -0.0	9.0 -4.0	12.5 1.0	12.2 1.5	17.6 3.4	18.6 0.8	16.4 -2.1	21.7 -0.1	25.1 5.5	25.2 7.3	27.6 11.0

Table 8e Yap State Government Finances (Audit Format)—Revenues and Expenditures (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05
	1 107	1 100	1 109	1 130	1 131	1 192	1 193	1 134	1 193	1 130	1 137	1 130	1 133	1 100	est.	est.	est.	proj.	proj.
Total Revenues	19.5	20.4	22.8	23.3	96.3	29.4	25.3	25.9	25.7	29.9	33.0	30.7	33.8	31.5	15.9	21.6	26.8	19.0	21.6
Total Domestic Revenue	3.8	2.8	5.9	5.7	78.3	14.2	10.1	10.8	9.6	13.3	17.8	14.6	17.8	15.5	0.7	4.2	8.0	6.3	6.5
Tax Revenue	1.3	1.5	1.5	2.0	2.3	2.5	2.7	3.3	2.5	3.3	2.8	3.1	3.6	4.7	3.8	3.2	3.5	2.6	2.7
National Tax (Rev. Share)	0.6	0.7	0.7	0.9	1.0	1.2	1.5	1.7	1.3	1.6	1.5	1.7	2.1	3.3	2.9	2.4	2.6	1.7	1.8
State Tax	0.8	8.0	0.9	1.1	1.3	1.3	1.3	1.6	1.3	1.8	1.2	1.4	1.5	1.4	0.9	8.0	0.9	8.0	0.9
Non-Tax Revenue	2.5	1.3	4.4	3.7	76.0	11.8	7.4	7.5	7.1	10.0	15.0	11.5	14.2	10.7	-3.1	1.1	4.5	3.7	3.9
Investment	0.6	0.3	2.9	1.4	2.7	7.3	3.6	4.6	3.7	7.1	12.2	2.7	8.0	6.9	-6.3	-2.0	2.4	2.9	3.1
Service Charges/Fees	0.5	0.5	8.0	1.0	1.4	1.6	2.0	1.8	2.2	1.3	1.0	1.0	1.3	8.0	0.6	0.8	8.0	8.0	0.8
Loan Proceeds	~	~	~	~	71.0	~	~	~	~	~	~	2.0	1.5	~	~	~	~	~	~
Transfers In/Adjustments/Other	~	~	~	~	~	0.2	0.1	0.0	~	~	0.0	~	~	8.0	0.1	1.6	~	~	~
CFSM Grants	1.4	0.4	0.7	1.3	0.9	2.6	1.7	1.1	1.2	1.5	1.8	5.8	3.4	2.2	2.5	0.7	1.3	~	~
Total External Revenue	15.7	17.6	16.9	17.7	18.0	15.2	15.2	15.1	16.1	16.6	15.2	16.1	16.0	16.0	15.2	17.4	18.8	12.6	15.1
Compact Current	7.0	7.1	7.3	7.5	7.7	6.8	6.9	7.1	7.2	7.3	5.8	5.9	5.9	5.9	6.0	7.6	7.7	~	~
Compact Special Programs	1.6	2.7	2.4	2.3	2.8	2.6	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.8	2.8	2.8	2.7	10.2	12.4
Compact Capital (CIP)	4.3	4.4	4.5	4.6	4.8	4.2	4.3	4.3	4.4	4.5	3.5	3.6	3.6	3.6	3.7	4.7	4.8	~	1.3
Other: Current	1.5	2.1	1.3	1.2	0.5	1.0	0.5	8.0	1.5	1.4	1.8	3.7	2.4	2.5	2.5	2.3	2.8	2.5	1.5
Other: Capital	1.3	1.2	1.3	2.1	2.2	0.7	0.5	0.1	0.2	0.5	1.2	~	1.2	1.1	0.2	~	8.0	~	~
General Fund Revenue	9.5	9.5	12.5	11.9	84.9	18.1	15.2	16.6	15.4	18.8	21.6	14.5	20.1	18.8	4.1	11.1	14.4	6.3	6.5
Special Fund Revenue	4.1	5.2	4.4	4.0	3.9	4.3	3.9	4.7	5.6	5.6	6.2	7.8	6.9	7.1	7.8	5.9	6.9	12.6	13.8
Capital Fund Revenue	6.0	5.6	5.8	7.5	7.4	7.1	6.2	4.6	4.7	5.5	5.3	8.4	6.8	5.6	4.0	4.7	5.5	~	1.3
Total Expenditures	-15.2	-14.8	-15.8	-22.0	-20.8	-30.6	-32.2	-29.4	-32.7	-34.3	-35.6	-38.5	-33.8	-28.8	-29.0	-16.9	-17.1	-17.1	-19.4
Personnel	-5.7	-5.8	-5.9	-6.1	-6.2	-6.2	-6.5	-7.0	-7.2	-7.4	-6.8	-6.2	-5.7	-5.3	-5.7	-6.0	-6.1	-6.0	-6.1
ERP Payments to Retirees	~	~	~	~	~	~	~	~	~	~	~	-1.0	-0.5	-0.0	~	~	~	~	~
Travel	-0.7	-0.6	-0.6	-0.7	-0.7	-0.8	-0.6	-0.7	-1.0	-1.0	-0.9	-0.9	-0.9	-0.9	-1.1	-1.4	-1.4	-1.5	-1.5
Other	-8.4	-8.1	-9.1	-11.3	-12.6	-11.6	-9.2	-10.1	-12.7	-12.9	-8.8	-19.2	-13.2	-12.6	-12.5	-8.4	-8.6	-8.6	-10.8
Subsidies	-0.3	-0.3	-0.3	-0.2	-0.8	-0.2	-0.1	-0.1	-0.2	-1.2	-0.1	-0.2	-0.5	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3
Transfers Out/Adjustments/Other	~	~	~	-3.8	-0.2	-0.2	-4.5	-0.0	~	-0.3	-9.8	-1.7	-1.1	-0.6	-0.2	-0.7	-0.7	-0.7	-0.7
Principal Repayment	~	~	~	~	~	-6.8	-5.9	-6.6	-7.2	-7.7	-6.1	-6.7	-10.0	-7.9	-8.8	~	~	~	~
Interest	~	~	~	~	-0.3	-4.8	-5.4	-5.0	-4.4	-3.8	-3.2	-2.6	-2.0	-1.3	-0.6	~	~	~	~
General Fund Expenditure	-8.6	-7.7	-7.8	-8.4	-9.6	-21.4	-20.7	-22.2	-22.4	-23.0	-25.5	-18.1	-21.5	-17.0	-17.2	-10.2	-10.3	-6.7	-6.7
Special Fund Expenditure	-3.2	-5.2	-4.4	-4.3	-3.7	-4.5	-3.2	-3.8	-5.6	-4.7	-5.8	-10.0	-6.9	-7.1	-7.6	-5.4	-5.5	-9.3	-9.3
Capital Fund Expenditure	-3.3	-2.0	-3.7	-9.3	-7.5	-4.7	-8.3	-3.4	-4.7	-6.7	-4.3	-10.3	-5.4	-4.7	-4.3	-1.3	-1.3	-1.1	-3.3
														contin	ued				

Table 8e Yap State Government Finances (Audit Format)—Fund Balances (\$ millions)

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01 est.	FY02 est.	FY03 est.	FY04 proj.	FY05 proj.
Overall Balance	4.3	5.5	6.9	1.3	75.5	-1.2	-7.0	-3.5	-7.0	-4.5	-2.6	-7.8	0.0	2.7	-13.1	4.8	9.7	1.8	2.2
General Fund Surplus/(Deficit) Interfund Transfers In	0.8	1.8	4.7	3.5	75.4 ~	-3.3	-5.6 ~	-5.6 ~	-7.0 ~	-4.2 ~	-3.9	-3.6 ~	-1.4 ~	1.8	-13.1 ~	0.9	4.1	-0.4 ~	-0.2
Interfund Transfers Out	-0.4	-0.0	~	~	-0.7	~	-2.0	-4.1	-0.1	~	-0.1	-0.9	-2.1	-0.1	-2.6	~	~	~	-
Year-end Fund Balance Unreserved:	2.9 1.7	4.7 3.6	9.4 8.3	12.9 3.0	87.6 1.8	84.2 6.3	76.6 9.7	67.0 4.5	59.9 5.4	55.7 9.3	51.7 16.7	47.1 14.9	43.6 19.1	45.3 20.4	29.6 13.6	30.5 18.2	34.6 22.7	34.2 22.6	34.0 22.7
omeserved.	1.7	5.0	0.5	0.0	1.0	0.5	5.7	4.5	5.4	5.5	10.7	14.5	13.1	20.4	10.0	10.2	22.1	22.0	22.1
Special Fund Surplus/(Deficit)	0.8	0.1	0.1	-0.3	0.2	-0.2	0.7	0.9	0.0	0.9	0.3	-2.2	0.0	-0.1	0.2	0.5	1.3	3.4	4.5
Interfund Transfers In	0.1	~	~	~	~	~	0.0	~	~	~	0.1	0.2	0.1	0.4	0.1	~	~	~	
Interfund Transfers Out	~	~	~	~	~	~	~	~	~	~	~	~	~	-0.3	-0.3	~	~	~	^
Year-end Fund Balance	0.9	1.0	1.1	0.8	1.0	0.9	1.6	2.5	2.5	3.4	3.9	1.9	2.1	2.1	2.1	2.5	3.9	7.2	11.7
Unreserved:	0.3	-0.1	0.0	0.1	0.7	-0.1	0.7	1.3	1.4	2.8	1.6	1.3	1.0	0.1	0.1	1.8	3.3	6.7	11.3
Capital FundSurplus/(Deficit)	2.7	3.7	2.1	-1.8	-0.1	2.3	-2.1	1.2	0.0	-1.2	1.0	-2.0	1.3	1.0	-0.3	3.4	4.2	-1.1	-2.0
Interfund Transfers In	0.2	0.0	~	~	0.7	~	2.0	4.1	0.1	~	~	0.8	2.0	~	2.5	~	~	~	
Interfund Transfers Out	~	~	~	~	~	~	~	~	~	~	~	~	~	~	-0.5	~	~	~	-
Year-end Fund Balance	3.0	6.7	8.8	7.0	7.5	9.8	9.7	15.0	15.0	13.9	14.9	13.7	17.1	18.0	19.8	23.2	27.4	26.3	24.3
Unreserved:	-1.0	0.2	-5.0	-3.1	2.0	1.8	2.7	1.2	2.0	1.8	-1.1	2.7	4.4	8.3	10.0	15.2	19.7	18.7	16.8
Total Year-end Fund Balance Unreserved:	6.8 1.0	12.4 3.7	19.3 3.3	20.6 0.0	96.1 4.4	94.9 8.1	88.0 13.0	84.5 7.0	77.5 8.8	73.0 13.9	70.4 17.2	62.7 18.9	62.7 24.5	65.4 28.7	51.5 23.6	56.2 35.2	65.9 45.6	67.8 48.0	70.0 50.7

FEDERATED STATES OF MICRONESIA'S



The Next 20 Years:

ACHIEVING ECONOMIC
GROWTH & SELF-RELIANCE

Vol III: Infrastructure Development

Table of Contents

EX	ECUT	IVE SUMMARY	vi
1.		Introduction	1
2.		Preparation of Infrastructure Development Plan	3
	2.1	Historical Background	3
	2.2	Preparation of Draft Final Report	3
	2.3	Final IDP Report	4
	2.4	Formal Submission of the IDP	4
	2.5	Preparation of Final IDP Document	5
3.		Planning Context	6
	3.1	FSM Planning Framework	6
	3.2	Public Sector Investment Program	6
	3.3	Public and Private Sector Management of Infrastructure	7
	3.4	National Government Infrastructure Priorities	8
4.		Financing for Infrastructure Development	11
	4.1	Capital Funding Requirements	11
	4.2	Sources of Funds	11
	4.3	Proposed Allocation of Funding for IDP Projects	16
5.		Proposed Infrastructure Program and Funding	19
	5.1	Electric Power	19
	5.2	Water/Wastewater Systems	30
	5.3	Solid Waste Management	45
	5.4	Roads and Pedestrian Facilities	51
	5.5	Maritime Transportation	66
	5.6	Air Transportation	78
	5.7	Education	86
	5.8	Health	103
	5.9	Government Administrative Buildings	112
	5.10	Telecommunications Sector	117
6.		Plan Implementation	118
	6.1	Commitment and Conditions Precedent	118
	6.2	Infrastructure Plan Implementation Committees	119
	6.3	Infrastructure Plan Implementation Committees	120
	6.4	Public Sector Institutional Reform, Restructuring and	
		Strengthening	123

6.5	Databases and Planning Studies	127
6.6	IDP Implementation Schedule	130
Annex A	Infrastructure Sector Strategic Planning Matrix	135
Annex B	Proposed Projects to be Undertaken Under IDP by State (US\$ '000)	136
Annex C	Proposed Projects to be Funded Under Amended Compact Infrastructure Grant (FY2004-2008) by State	156

List of Tables

Table 4.1 Summary of Proposed IDP – by Sector (US\$ '000) Table 4.2 Summary of IDP – by Government (US\$ '000) Table 4.3 Summary of IDP Funding Sources – by Government (US\$ '000) Table 4.4 Summary of Funding Sources for IDP (US\$ millions) Table 4.5 IDP Investment by Sector Table 5.1 Existing Electric Power Generation Systems Table 5.2 Details of Existing Power Distribution Systems Table 5.3 Electrical Power – Proposed Project Implementation Schedule (US\$ '000) Table 5.4 Electric Power - Funded or Partially Funded Projects (US\$ '000) Table 5.5 Electric Power - Unfunded Projects (US\$ '000) Table 5.6 Existing Major Water Supply Systems Table 5.7 Existing Sewerage Systems Table 5.8 Water Supply/Wastewater – Proposed Project Implementation Schedule (US\$ '000) Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000) Table 5.10 Water/Wastewater – Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) Table 5.13 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.22 Air Transportation – Funde	Table 3.1	Priority Projects from National Government Perspective	9
Table 4.2 Summary of IDP – by Government (US\$ '000) Table 4.3 Summary of IDP Funding Sources – by Government (US\$ '000) Table 4.4 Summary of Funding Sources for IDP (US\$ millions) Table 4.5 IDP Investment by Sector Table 5.1 Existing Electric Power Generation Systems Table 5.2 Details of Existing Power Distribution Systems Table 5.3 Electrical Power – Proposed Project Implementation Schedule (US\$ '000) Table 5.4 Electric Power - Unfunded Projects (US\$ '000) Table 5.5 Electric Power - Unfunded Projects (US\$ '000) Table 5.6 Existing Major Water Supply Systems Table 5.7 Existing Sewerage Systems Table 5.8 Water Supply/Wastewater – Proposed Project Implementation Schedule (US\$ '000) Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000) Table 5.10 Water/Wastewater – Unfunded Projects (US\$ '000) Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.20 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$			12
Table 4.3 Summary of IDP Funding Sources – by Government (US\$ '0000) 13 Table 4.4 Summary of Funding Sources for IDP (US\$ millions) 16 Table 4.5 IDP Investment by Sector 17 Table 5.1 Existing Electric Power Generation Systems 19 Table 5.2 Details of Existing Power Distribution Systems 20 Table 5.3 Electrical Power – Proposed Project Implementation Schedule (US\$ '000) 25 Table 5.4 Electrical Power - Funded or Partially Funded Projects (US\$ '000) 30 Table 5.5 Electric Power - Unfunded Projects (US\$ '000) 30 Table 5.6 Existing Major Water Supply Systems 31 Table 5.7 Existing Sewerage Systems 33 Table 5.8 Water Supply/Wastewater – Proposed Project Implementation Schedule (US\$ '000) 42 Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000) 42 Table 5.10 Water/Wastewater – Unfunded Projects (US\$ '000) 42 Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) 52 Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) 53 Table 5.13 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) 54 Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) 61 Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) 63 Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) 75 Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) 77 Table 5.20 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) 78 Table 5.21 Air Transportation – Unfunded Projects (US\$ '000) 78 Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) 78 Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) 78 Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) 78	Table 4.2		12
Table 4.4 Summary of Funding Sources for IDP (US\$ millions) Table 4.5 IDP Investment by Sector Table 5.1 Existing Electric Power Generation Systems Table 5.2 Details of Existing Power Distribution Systems Table 5.3 Electrical Power – Proposed Project Implementation Schedule (US\$ '000) Table 5.4 Electrical Power - Funded or Partially Funded Projects (US\$ '000) Table 5.5 Electric Power - Unfunded Projects (US\$ '000) Table 5.6 Existing Major Water Supply Systems Table 5.7 Existing Sewerage Systems Table 5.8 Water Supply/Wastewater – Proposed Project Implementation Schedule (US\$ '000) Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000) Table 5.10 Water/Wastewater – Unfunded Projects (US\$ '000) Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management – Funded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation – Funded Projects (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000)	Table 4.3		
Table 4.5 IDP Investment by Sector Table 5.1 Existing Electric Power Generation Systems Table 5.2 Details of Existing Power Distribution Systems Table 5.3 Electrical Power – Proposed Project Implementation Schedule (US\$ '000) Table 5.4 Electrical Power - Funded or Partially Funded Projects (US\$ '000) Table 5.5 Electric Power - Unfunded Projects (US\$ '000) Table 5.6 Existing Major Water Supply Systems Table 5.7 Existing Sewerage Systems Table 5.8 Water Supply/Wastewater – Proposed Project Implementation Schedule (US\$ '000) Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000) Table 5.10 Water/Wastewater – Unfunded Projects (US\$ '000) Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.20 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000)		· · · · · · · · · · · · · · · · · · ·	13
Table 4.5 IDP Investment by Sector Table 5.1 Existing Electric Power Generation Systems Table 5.2 Details of Existing Power Distribution Systems Table 5.3 Electrical Power – Proposed Project Implementation Schedule (US\$ '000) Table 5.4 Electrical Power - Funded or Partially Funded Projects (US\$ '000) Table 5.5 Electric Power - Unfunded Projects (US\$ '000) Table 5.6 Existing Major Water Supply Systems Table 5.7 Existing Sewerage Systems Table 5.8 Water Supply/Wastewater – Proposed Project Implementation Schedule (US\$ '000) Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000) Table 5.10 Water/Wastewater – Unfunded Projects (US\$ '000) Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.20 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000)	Table 4.4	Summary of Funding Sources for IDP (US\$ millions)	16
Table 5.2 Details of Existing Power Distribution Systems Table 5.3 Electrical Power – Proposed Project Implementation Schedule (US\$ '000) Table 5.4 Electrical Power - Funded or Partially Funded Projects (US\$ '000) Table 5.5 Electric Power - Unfunded Projects (US\$ '000) Table 5.6 Existing Major Water Supply Systems Table 5.7 Existing Sewerage Systems Table 5.8 Water Supply/Wastewater – Proposed Project Implementation Schedule (US\$ '000) Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000) Table 5.10 Water/Wastewater – Unfunded Projects (US\$ '000) Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.20 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.21 Air Transportation – Unfunded Projects (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Air Transportation – Funded or Partially Funded Projects (US\$ '	Table 4.5		17
Table 5.3 Electrical Power – Proposed Project Implementation Schedule (US\$ '000) Table 5.4 Electrical Power - Funded or Partially Funded Projects (US\$ '000) Table 5.5 Electric Power - Unfunded Projects (US\$ '000) Table 5.6 Existing Major Water Supply Systems Table 5.7 Existing Sewerage Systems Table 5.8 Water Supply/Wastewater – Proposed Project Implementation Schedule (US\$ '000) Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000) Table 5.10 Water/Wastewater – Unfunded Projects (US\$ '000) Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.20 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000)	Table 5.1	Existing Electric Power Generation Systems	19
Schedule (US\$ '000) Table 5.4 Electrical Power - Funded or Partially Funded Projects (US\$ '000) Table 5.5 Electric Power - Unfunded Projects (US\$ '000) Table 5.6 Existing Major Water Supply Systems Table 5.7 Existing Sewerage Systems Table 5.8 Water Supply/Wastewater - Proposed Project Implementation Schedule (US\$ '000) Table 5.9 Water/Wastewater - Funded or Partially Funded Projects (US\$ '000) Table 5.10 Water/Wastewater - Unfunded Projects (US\$ '000) Table 5.11 Solid Waste Management - Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management - Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management - Unfunded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities - Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities - Funded or Partially Funded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities - Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation - Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation - Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation - Unfunded Projects (US\$ '000) Table 5.21 Air Transportation - Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation - Funded or Partially Funded Projects (US\$ '000) Table 5.22 Air Transportation - Funded or Partially Funded Projects (US\$ '000)	Table 5.2	Details of Existing Power Distribution Systems	20
Table 5.4 Electrical Power - Funded or Partially Funded Projects (US\$ '000) Table 5.5 Electric Power - Unfunded Projects (US\$ '000) Table 5.6 Existing Major Water Supply Systems Table 5.7 Existing Sewerage Systems Table 5.8 Water Supply/Wastewater - Proposed Project Implementation Schedule (US\$ '000) Table 5.9 Water/Wastewater - Funded or Partially Funded Projects (US\$ '000) Table 5.10 Water/Wastewater - Unfunded Projects (US\$ '000) Table 5.11 Solid Waste Management - Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management - Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management - Unfunded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities - Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities - Funded or Partially Funded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities - Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation - Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation - Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation - Unfunded Projects (US\$ '000) Table 5.21 Air Transportation - Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation - Funded or Partially Funded Projects (US\$ '000)	Table 5.3	Electrical Power – Proposed Project Implementation	
Table 5.5 Electric Power - Unfunded Projects (US\$ '000) Table 5.6 Existing Major Water Supply Systems Table 5.7 Existing Sewerage Systems Table 5.8 Water Supply/Wastewater – Proposed Project Implementation Schedule (US\$ '000) Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000) Table 5.10 Water/Wastewater – Unfunded Projects (US\$ '000) Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation – Funded Projects (US\$ '000) Table 5.21 Air Transportation – Unfunded Projects (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000)		Schedule (US\$ '000)	25
Table 5.5 Electric Power - Unfunded Projects (US\$ '000) Table 5.6 Existing Major Water Supply Systems Table 5.7 Existing Sewerage Systems Table 5.8 Water Supply/Wastewater – Proposed Project Implementation Schedule (US\$ '000) Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000) Table 5.10 Water/Wastewater – Unfunded Projects (US\$ '000) Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation – Funded Projects (US\$ '000) Table 5.21 Air Transportation – Unfunded Projects (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000)	Table 5.4		
Table 5.6 Existing Major Water Supply Systems Table 5.7 Existing Sewerage Systems Table 5.8 Water Supply/Wastewater – Proposed Project Implementation Schedule (US\$ '000) Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000) Table 5.10 Water/Wastewater – Unfunded Projects (US\$ '000) Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation – Funded Projects (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.23 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.24 Air Transportation – Funded or Partially Funded Projects (US\$ '000)		(000)	28
Table 5.7 Existing Sewerage Systems Table 5.8 Water Supply/Wastewater – Proposed Project Implementation Schedule (US\$ '000) Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000) Table 5.10 Water/Wastewater – Unfunded Projects (US\$ '000) Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.23 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.24 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.25 Air Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.26 Air Transportation – Funded or Partially Funded Projects (US\$ '000)			30
Table 5.8 Water Supply/Wastewater – Proposed Project Implementation Schedule (US\$ '000) Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000) Table 5.10 Water/Wastewater – Unfunded Projects (US\$ '000) Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) Table 5.21 Air Transportation – Unfunded Projects (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.23 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.24 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.25 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.24 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.25 Air Transportation – Funded or Partially Funded Projects (US\$ '000)			31
Implementation Schedule (US\$ '000) Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000) Table 5.10 Water/Wastewater – Unfunded Projects (US\$ '000) Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) Table 5.21 Air Transportation – Unfunded Projects (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.23 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.24 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.25 Air Transportation – Proposed Project Implementation Schedule (US\$ '000)			33
Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000) 42 Table 5.10 Water/Wastewater – Unfunded Projects (US\$ '000) 44 Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) 52 Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) 53 Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) 54 Table 5.14 Existing Road Network 54 Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) 61 Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) 63 Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) 65 Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) 75 Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) 77 Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) 78 Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) 83 Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 84	Table 5.8		
Table 5.10 Water/Wastewater – Unfunded Projects (US\$ '000) Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) Table 5.21 Air Transportation – Unfunded Projects (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.23 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.24 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.25 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.26 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.27 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.28 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.29 Air Transportation – Proposed Project Implementation Schedule (US\$ '000)			39
Table 5.10 Water/Wastewater – Unfunded Projects (US\$ '000) Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.23 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.24 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.25 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.26 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.27 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.29 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.29 Air Transportation – Funded or Partially Funded Projects (US\$ '000)	Table 5.9	Water/Wastewater – Funded or Partially Funded Projects	
Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000) 52 Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) 53 Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) 54 Table 5.14 Existing Road Network 54 Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) 61 Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) 63 Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) 65 Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) 75 Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) 77 Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) 78 Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) 83 Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 84			42
Implementation Schedule (US\$ '000) Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000)			44
Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000) 53 Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) 54 Table 5.14 Existing Road Network 54 Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) 61 Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) 63 Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) 65 Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) 75 Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) 77 Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) 78 Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) 83 Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 84	Table 5.11		
Projects (US\$ '000) 53 Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) 54 Table 5.14 Existing Road Network 54 Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) 61 Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) 63 Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) 65 Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) 75 Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) 77 Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) 78 Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) 83 Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 84			52
Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000) 54 Table 5.14 Existing Road Network 54 Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) 61 Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) 63 Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) 65 Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) 75 Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) 77 Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) 78 Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) 83 Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 84	Table 5.12	•	
Table 5.14 Existing Road Network Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 83 Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000)			
Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000) 61 Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) 63 Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) 65 Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) 75 Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) 77 Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) 78 Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) 83 Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 84			
Implementation Schedule (US\$ '000) Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 83 Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000)			54
Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000) 63 Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) 65 Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) 75 Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) 77 Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) 78 Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) 83 Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 84	Table 5.15		
Projects (US\$ '000) Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 83 Table 5.22 (US\$ '000) 84	T 11 7 16		61
Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000) Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 83	Table 5.16	•	60
Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000) 75 Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) 77 Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) 78 Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) 83 Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 84	T.1.1. 5 17		
Schedule (US\$ '000) Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 84			63
Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000) 77 Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) 78 Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) 83 Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 84	Table 5.18		75
Projects (US\$ '000) 77 Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) 78 Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) 83 Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 84	Table 5 10		13
Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000) Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 84	1 able 5.19		77
Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 84	Table 5 20	3	
Schedule (US\$ '000) Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 83			70
Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000) 84	1 able 3.21		02
(US\$ '000) 84	Table 5 22		0.3
	1 autc 3.22		Q /1
	Table 5 23	Air Transportation – Unfunded Projects (US\$ '000)	86

Table 5.24	Elementary and High Schools in Pohnpei	88
Table 5.25	Elementary and High Schools in Chuuk	89
Table 5.26	Elementary and High Schools in Kosrae	90
Table 5.27	Elementary and High Schools in Yap	90
Table 5.28	Education – Proposed Project Implementation Schedule	
	(US\$ '000)	96
Table 5.29	Education – Funded or Partially Funded Projects (US\$ '000)	100
Table 5.30	Education – Unfunded Projects (US\$ '000)	102
Table 5.31	Health – Proposed Project Implementation Schedule (US\$	
	(000)	109
Table 5.32	Health – Funded or Partially Funded Projects (US\$ '000)	110
Table 5.33	Government Administration Buildings – Proposed Project	
	Implementation Schedule (US\$ '000)	115
Table 6.1	Program Preparation and Management (US\$ '000)	133
Table B.1	Chuuk State	136
Table B.2	Kosrae State	143
Table B.3	Pohnpei State	146
Table B.4	Yap State	150
Table B.5	National Government	154
Table C.1	Chuuk State	156
Table C.2	Kosrae State	159
Table C.3	Pohnpei State	161
Table C.4	Yap State	162

Abbreviations

AC Asphaltic Concrete
ADB Asian Development Bank
ATSA Air Transport Safety Authority
CFA Compact of Free Association

COM College of Micronesia

CPUC Chuuk Public Utility Corporation
CSG Core Stake Holder Group
DOE Department of Education

DTC&I Department of Transportation, Communications and Infrastruc-

ture

EPIC Economic Policy Implementation Council
FAA US Federal Aviation Administration
FMI Fisheries and Maritime Institute
FPA Fiscal Procedures Agreement
FSM Federated States of Micronesia
IDP Infrastructure Development Plan

IPIC Infrastructure Planning Implementation Committees

KSC Kyowa Shipping Company

KT&SC Kosrae Terminal and Stevedoring Company

KUA Kosrae Utilities Authority
NDE National Division of Education
NGO Non-Government Organization
NSC National Steering Committee

OPS-PMU Office of Planning & Statistics – Program Management Unit

PICS Pohnpei Island Central School

PM&O Philippines, Micronesia Orient Navigation Company

PMU Program Management Unit PPA Pohnpei Ports Authority

PSIP Public Sector Infrastructure Program
PTA Parent Teachers Association

PTI Pacific Tuna Industries
PUC Pohnpei Utilities Corporation

PWMS Pohnpei Waste Management Services

SDP Strategic Development Plan

SEED State Enterprising Education Department
SEPA State Environmental Protection Agency
USAID US Agency for International Development

USDA US Department of Agriculture
US DOI US Department of Interior
WRF Waste Recycling Facility
YSPA Yap State Ports Authority

YSPSC Yap State Public Service Corporation

Executive Summary

Plan Preparation

This Infrastructure Development Plan (IDP) was prepared by the Department of Transportation, Communications and Infrastructure (DTC&I) in consultation with the States of Chuuk, Kosrae. Pohnpei and Yap and under the guidance of the FSM National IDP Steering Committee. The Plan assesses the current state of infrastructure in nine sectors: electrical power, water/wastewater, solid waste management, roads and pedestrian facilities, maritime transportation, air transportation, education, health and government buildings and develops a program and budget over the period FY2004-FY2023 to respond to the needs. Special consideration is given to the likely funding available from the Compact of Free Association and from other sources.

Based on an estimated average funding availability for infrastructure from all sources of \$35 million, a total investment of \$748 million has been envisaged over the 20-year IDP period in the nine infrastructure sectors. This is made up of the planned investments in Table E1.

The program takes into account each of the State Government five-year infrastructure proposals covering the period FY2004-FY2008. The cost for Program Management includes funding for the Program Management Unit (PMU), the planning studies required to conduct detailed project feasibility analysis, and support for some institutional strengthening requirements in the transportation, education and health sectors. The proposed source of funding for this investment is indicated in Table E2.

This represents an average allocation for infrastructure from Compact funds of \$18.6 million per annum and \$18.0 million from other sources. The charts on the next page illustrate the funding allocation by sector and by government.

Table E1 Planned Investments (\$'millions)

Sector	Amount (\$ millions)
Water Supply/Wastewater	141.9
Education	135.4
Roads/Pedestrian Facilities	120.9
Maritime Transportation	88.5
Electric Power	81.1
Air Transportation	68.4
Solid Waste Management	40.8
Health	32.5
Government Buildings	27.3
Program Management	10.7
Total:	747.5

Table E2 Proposed Source of Funding (\$'millions)

Funding Source	2004	2005	2006	2007	2008	2009- 13	2014- 18	2019- 23	Total
Compact Other Sources	16 13	24 17	30 20	26 23	23 25	77 109	98 70	84 83	372 359
States Total	1 30	1 42	1 46	1 50	1 49	3 189	4 172	4 170	16 748

Some of the priority projects identified taking into account national interest criteria such as impact on the economy, health and safety of the community, contribution towards development of the FSM workforce, potential for private sector development, viability, sustainability, potential social benefit and environmental impact and risk exposure of the project are:

- Weno Power Supply
- Pohnpei Airport Runway Rehabilitation
- Weno Sewerage
- Kosrae Water Supply Improvements
- Weno Water Supply Improvements
- Rehabilitation of Outer Island Airstrips in all States
- New Pohnpei High School
- New S. Namoneas High School
- Chuuk High School Improvements
- New Weno COM-FSM Campus
- Weno West Coast Road
- Kosrae Circumferential Road
- Dekehtik Port Dredging
- Chuuk Lagoon Ferry Terminals
- Elementary School Rehabilitation in all States
- Renovation of Dispensaries in all States

It is proposed that all of these projects would be commenced within the first five years of the IDP. Figures E1 through E3 provide a graphical illustration of Infrastructure at a glance.

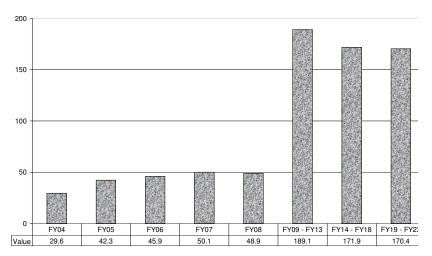


Figure E1 Investment by Fiscal Year (\$, millions)

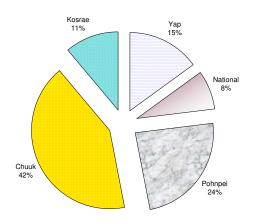


Figure E2 Allocation by Government

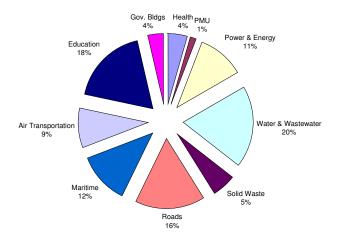


Figure E3 Investment by Sectors (\$, millions)

Plan Implementation

In order establish accountability for the IDP implementation, it will be necessary to establish Infrastructure Plan Implementation Committees (IPICS) at the national and state levels. In accordance with the thrust in FSM in recent years to reduce the public sector, it is proposed, where appropriate, that existing committees and secretariats take on the role of the IPIC. At the national level, the Economic Policy Implementation Committee (EPIC) could take on the responsibility for infrastructure implementation, with the Department of Transportation, Communications and Infrastructure (DTC&I) assuming the role of national secretariat.

The size of the IDP investment program is such that if it is to be executed successfully and according to schedule, substantial improvement of the implementation capacity currently available in FSM will be required. Further the new Compact Fiscal Procedures Agreement requires stringent documentation related to project approvals and review, budgeting and monitoring prior to draw down of funds. In order to meet these requirements and adhere to the time schedule, a high level of program management, technical skills, financial and reporting skills for detailed planning, technical analysis, resource mobilization,

skills for detailed planning, technical analysis, resource mobilization, financial management and reporting systems will be required by the implementing agencies.

It is proposed that in order to provide the program management skills required to successfully implement the IDP, that a Program Management Unit (PMU) be established at the national level within the DTC&I. The national PMU would be responsible for the development of program management systems, training of national and state personnel in these systems, review of project documentation to ensure compliance with funding agency requirements, preparation of annual consolidated FSM program reviews as well as program management implementation assistance to the states as required. The national PMU would be staffed by personnel from within the DTC&I, but will, at least during the first 3-5 years of the IDP, require assistance from program management and technical specialists hired to strengthen the PMU. The cost of these specialists would need to be drawn from the total infrastructure budget and estimated to be in the order of \$900,000 per annum. It is recommended that an amount of 1.2% of the total infrastructure costs funded by the Compact Infrastructure Sector grant be allocated to program management to cover the cost of the PMU. This represents about 5% of the annual infrastructure costs funded by the Compact during the five years of external assistance to the PMU.

The IDP implementation will commence in 2004. It is therefore urgent that the program management organizations are agreed upon and established as soon as possible and that the IDP is communicated to the key stakeholders in order to obtain general community support for the program. Early commencement of some of the key planning studies and database development programs is then required to provide the basis for the detailed planning and feasibility analysis of projects to meet the requirements of the funding agencies.

1 Introduction

- The Federated States of Micronesia (FSM) has negotiated new provisions for economic assistance under the Compact of Free Association (CFA) with the United States. As part of the new 'sector grant' approach, the US will provide support for infrastructure development under new and rigorous fiscal procedures. The amended Compact and Fiscal Procedures Agreement (FPA) that will be in effect requires that the FSM have a Strategic Development Plan (SDP) in place by December 2003, and a nationwide Infrastructure Development Plan (IDP) in place in advance of awards under the infrastructure development sector. This report comprises the Infrastructure Development Plan.
- The FSM Department of Transportation, Communications and Infrastructure (DTC&I) prepared an IDP during 2001/2002 to cover the period 2003-2017. This was prepared with the assistance of Nathan Associates Inc in association with Island State Development Consulting (ISDECO, LLC.) and Sustainable Engineering & Environmental Corporation (SEECO). The final IDP report was submitted in May 2002¹. This report covered eight infrastructure sectors: electric power, water and wastewater systems, solid waste management, roads and pedestrian facilities, maritime transportation, air transportation, education and health. The report discussed the condition of existing infrastructure, infrastructure development priorities, maintenance, institutional issues, cost recovery, support for tourism development, scheduling of projects, plan implementation and sources of investment funding. The Plan is considered to be comprehensive and systematic.
- The IDP included in this report is not an alternative version of the IDP prepared in May 2002. Rather, is a summary of that IDP and quotes liberally from the findings and conclusions of the May 2002 report. All projects included in the May 2002 report have been considered in the context of the funding believed likely to be available to the FSM for infrastructure during the period of the IDP which has now been amended to cover the period 2004-2023. In other words, the intention of this report is to produce a realistic IDP that reflects the FSM infrastructure priorities bound by the fiscal constraints of the nation. In this context the infrastructure investment costs for the period 2004-2023 are estimated to be \$750 million, compared with the May 2002 report estimate of \$1.9 billion. This results in many of the projects proposed in the May 2002 report being unable to be fully funded or even commenced.
- The project costings estimated in the May 2002 report have been used in this IDP, since there has been insufficient time to fully evaluate costs for all

Federated States of Micronesia, Infrastructure Development Plan FY2003-FY2007, Final Report, May 2002

2 FSM Infrastructure Development Plan

projects. However, it is considered that the May 2002 costings are high for several of the infrastructure sectors, in particular water supply, wastewater and solid waste management, and this may result in some additional projects being able to be included within the funding constraint than is indicated in this report.

2 Preparation of Infrastructure Development Plan

2.1 Historical Background

- Following the 1999 FSM Second National Economic Summit, it was widely recognized that improvement of the nation's infrastructure is critical to the expansion of productive sector activities and the development of the private sector. Accordingly, the provision of efficient and cost-effective infrastructure was endorsed by the summit as one of the five guiding principles that should shape the FSM's strategy to promote private sector development.
- In keeping with the guidelines for economic development and indications of procedural requirements from the US Department of Interior (DOI) for the new Compact, the OPS-PMU (Office of Planning & Statistics-Program Management Unit) initiated formulation of a long term IDP in early 2000 under the guidance of the FSM National Steering Committee (FSM NSC). The Committee was created and formed by the President and State Governors to oversee the overall coordination and completion of the IDP. Nathan and Associates, a US consulting firm, was contracted to complete the task within six months effective May 2001.

2.2 Preparation of Draft Final Report

- Following four months thorough field investigation and consultation at the national, state and local government levels, the draft final IDP was submitted to the NSC for review and comments in October 2001. The NSC distributed the draft final report to those concerned at the national and state levels with an expectation of receiving comments by November 2001. However, it was not possible to finalize the comments until February 2002. The draft final report was distributed widely at the state level at the Executive and Legislative Branches as well as to all concerned departments, agencies and NGOs.
- 8 The National Steering Committee met to discuss the draft final IDP report during November 2001, with the following summary outcomes:
- The NSC agreed with the basic features of the draft IDP with respect to resource allocation/investment and priority selection of projects for the respective states and for different sectors, but had some reservations about the study phase proposed for technical assistance.
- The NSC agreed in principle to strengthen the existing Infrastructure Departments at the national and state levels in order to enable them to function as IPIC secretariats that will ultimately be responsible to provide policy guidance and direction required by the project implementation agencies.

- The NSC agreed that a Program Management Unit is required and should be established at the national level to facilitate successful implementation and monitoring of the IDP, but the costs should be kept under control by utilizing existing resources where appropriate.
- The NSC agreed that proposed unforeseen pre-conditions, if required, be dealt with and accepted by the IPICs at state and national levels
- The NSC accepted the proposals in the draft final IDP report on institutional issues that would assist in bringing the necessary socio-economic changes to the country.
- 9 Detailed comments were received from Chuuk, Pohnpei and Yap States by January 15, 2002 and, where, appropriate, these were addressed in the final draft of the IDP.

2.3 Final IDP Report

Following the comments from the NSC and the states, the final IDP report was prepared in eight volumes, four of which were specific to each of the states. Volumes 1-IV were submitted by August 2002 and the state volumes by April 2003. The final plan proposed a \$1.9 billion investment at current rates on approximately750 individual projects during FY2003-FY2017, or 2.34 billion considering a presumed inflation rate of 3% per annum.

2.4 Formal Submission of the IDP

- The President formally transmitted the IDP to the State Governments on April 4, 2003 for review and preparation of the Annual Budget submission according to individual state plans and priorities to comply with the FPA under Compact II.
- The states were requested to modify and update as appropriate the projects identified in the IDP and ensure their linkage with the other sectoral projects under the FPA. Annual budget format proposals were requested for FY2004, Each of the states provided a list of priority projects for FY2004-FY2008, together with project scopes for FY2004 and these priority projects have been taken into account when developing this final version of the IDP. Details of the priority projects submitted by the states for the first five years of the IDP are indicated in Annex C
- Formal submission of the IDP to the US and other donors is still awaiting formal approval by the FSM five governments. Once it has been approved it will be considered as an official long-term Master Plan to link to the preparation of drafting a Medium Term Priority Plan, an Annual Development Plan and Budget Submission in the case of US. To accord with the Compact Grant, ADB loan or other donors, the necessary economic and financial strategies will be

developed to fulfill the requirements of that particular agreement or covenant which will vary from donor to donor.

2.5 Preparation of Final IDP Document

- As outlined in Section 1, this IDP document is essentially a summary of the May 2002 IDP Final Report, albeit adjusted to comply with the new Compact FPA and the likely available funding for the infrastructure sector during the period 2004-2023. As such it should be read in conjunction with the May 2002 IDP Final Report.
- The basis for producing the report was developed by the Economic Policy Implementation Council (EPIC) during their meeting in November 2003. It was resolved during this meeting that the IDP NSC expedites the preparation and review of the draft IDP by December 15, 2003, so that the draft can be considered by the 3rd FSM Economic Summit.

3 Planning Context

3.1 FSM Planning Framework

- The first National and State Economic Summits were held in 1995 and were a significant advance in providing the direction and resolve within the FSM to face changing economic circumstances. Specifically the results of the first Summits increased understanding of the declining fiscal position of the FSM and gave people the political will to embark on a course of public sector reforms and formulate general economic policy. A second Economic Summit was conducted in September 1999 and this resulted in an updated, extended and refined focus for economic development policies, and a renewal of the momentum from the first summit.
- Largely, the strategic planning framework consists of sector strategic policy frameworks that provide an analysis and forward vision of the National and State economies and sectors, a policy statement and an implementation framework for the Nation and State. The framework was outlined in a series of eleven separate sector policy matrices that were ultimately endorsed by consensus at the 2nd Economic Summit. These matrices were roughly divided into Economic Sector Policy Matrices (fisheries, tourism, agriculture) and Social Sector Matrices (health, education, gender). Infrastructure was included as a cross sector issue, as were public sector management, private sector/commerce and industries and environment. The sector policy matrices are intended to elaborate in detail the directions the FSM needs to follow, where the resources should be allocated, the urgency of making progress and a plan for implementation.
- Preparation is now in progress for the 3rd National Economic Summit, which is expected to be conducted in early 2004. The IDP and the infrastructure policy matrix included in this report will form an input to the future FSM National Strategic Plan that will be an outcome of the Summit.
- 19 The infrastructure sector strategic planning matrix, which forms the basis for the proposed IDP investments, is included as Annex A

3.2 Public Sector Investment Program

The Public Sector Investment Program (PSIP) was endorsed through a participatory process that started at the first of the economic summits in 1995 and 1996 and is, in effect, a preliminary list of the major capital development projects proposed. The intent of the PSIP was to describe the projects, estimate their costs, give priority for funding, indicate the steps required for planning and approval and prepare a schedule for implementation. This process was intended to identify major priorities for investment, link the projects of the state governments to the investment funds likely to be available and ensure consistency and compliance with FSM economic policies and strategies.

- The PSIP process has been part of the shift in FSM from 5 year planning to strategic planning to overcome the lack of integration between the 5-year state plans and the on going operational and development budget allocations of each government as well as to create a more flexible, participatory and action-orientated process from planning to actual development.
- The PSIP includes projects in four categories; public sector management, infrastructure, human resource development and priority economic sector development. The IDP is a logical extension of this process for the infrastructure sector.
- Progress of the PSIP since its implementation has been reasonable, although in all states it has not been possible to fully complete or implement all of the projects due to funding constraints and lack of technical support. Processes in coordination and monitoring of the projects also require additional strengthening.

3.3 Public and Private Sector Management of Infrastructure

- A major objective of the IDP is to move towards achieving technical, financial and commercial sustainability in each of the infrastructure sectors. This will require an acceleration of the growth and diversification in private sector economic activities in infrastructure. Investment, maintenance and operation will need to be done in the most cost-effective manner possible, entailing in many cases an expanded and diversified role for the private sector and a redefined and redeveloped role for government infrastructure agencies.
- There are several constraints to growth of the private sector in the FSM economy, including the infrastructure sector, that need to be overcome if conditions are to be such that commercial sustainability in the infrastructure sectors is to be achieved through intervention of the private sector. These include the hitherto large public sector employment and the higher relative wages, lack of skilled labor available to the private sector, dependence on government financing for development over commercial finance, land tenure issues and the difficulty in obtaining land for infrastructure projects, variable transparency and deficiency in the business and investment environment, protective attitudes towards foreign investment and, of course, the general poor state of the infrastructure itself that inhibits foreign investors even within the sector. Many of these constraints have, and continue to be addressed by the FSM in order to improve the environment for private sector involvement in the economy.
- In the infrastructure sector specifically, there has been some progress in attaining commercial sustainability, but much still remains to be done. In the power and water/wastewater sectors, public utility corporations have been created with the requirement that they make the power and water sectors fully self –

sustainable through the generation of sufficient revenue to cover all costs. For power, and to a lesser extent, water, charging for services is now widely accepted. Despite this, none of the utility corporations have yet achieved full cost recovery with the water and sewerage operations in all cases suffering severe losses due to insufficient tariffs for water and non-existent tariffs for sewerage services. Further, the spiraling fuel cost is putting great pressure on electricity tariffs and cost recovery. Another issue is that of provision of power and water facilities to remote areas such as the outer islands, which are a social, must, but not a financially viable operation.

- In the solid waste sector, there is considerable scope for the private sector in collection, recycling and disposal of garbage, although service charges for collection will need to be introduced. There is already some limited private sector involvement in most states in aluminum can disposal, and in Pohnpei with the operation of the dumpsite.
- Commercial sustainability of seaports and ferry system operations should be achievable through arrangements whereby the public sector port authorities enter long term arrangements with private sector investment/operators for operating port infrastructure and providing a variety of services, including ferry operations. However, it would probably be still necessary to provide subsidies for outer island services.
- With the exception of emergency air services, it should be possible for air transport to be commercially sustainable. Further, recovery of recurrent costs at airports should also be possible; provided that airport management entities are created that have a commercial orientation. Expansion of passenger terminals at the airports will involve additional concession areas that will generate income for the airport.
- In the education sector, the College of Micronesia currently covers more than 50% of its operating costs from revenue collected from student fees, and the proportion is likely to increase as the country realizes it potential for growth of the productive economic sectors. Where elementary and secondary school education is concerned, however, cost recovery objectives probably must be kept modest.
- In the health sector recurrent costs for maintenance of hospitals, staff salaries and benefits, hospital materials and medicine replenishments should increasingly be generated by payments for curative services received, although this will only occur when the hospital infrastructure and medical services are of a standard to reduce the current level of overseas medical referrals.

3.4 National Government Infrastructure Priorities

32 In Section 5 of this IDP, priority projects have been ranked according to sector for inclusion in the IDP Capital Investment Program. These projects

could also be ranked across sectors and states in accordance with the national government priorities. The infrastructure strategic matrix in Annex A provides the underlying infrastructure goals that reflect the national interest. Criteria by which to rank projects nationally across sector and state include:

- Impact of the project on the national economy;
- Cost benefit of project, taking into account economic and social benefits;
- Contribution of the project towards health and safety of the community;
- Contribution of the project towards development of the workforce in FSM to meet the social and economic challenges;
- Contribution of the project to institutional strengthening and restructuring of government infrastructure agencies;
- Contribution of the project to promoting private sector development; and
- Viability, sustainability, potential social benefits and environmental impact, and risk exposure of the infrastructure development project.
- Taking into account these criteria, the projects indicated in Table 3.1 are considered to be a priority from the perspective of the national government.

Table 3.1 Priority Projects from National Government Perspective

Project	Schedule	Total Cost (US\$ millions) ²	Justification
Weno Power Supply	2004-7	8.0	Economic development, Safety
Pohnpei Airport Runway Rehabilitation	2004	4.0	Safety
Weno Water Supply	2004-23	1.0	Health
Kosrae Water Supplies	2004-2007	9.8	Health
Weno Sewerage	2005-2008	3.3	Health
Rehabilitation of Outer Island Airstrips in all States	2007-2018	5.6	Safety, Economic development
New Pohnpei High School	2007-8	7.5	Development of work- force, economic
New S. Namoneas High School	2005-23	1.0	Development of work- force, economic
Chuuk High School Improvements	2005	1.3	Development of work- force, economic

² Covers only the Phase 1 investment during the period 2004-8

Table 3.1 Priority Projects from National Government Perspective, Cont'

Project	Schedule	Total Cost	Justification
		(US\$ millions) ³	1
New Weno COM-FSM Campus	2006-7	3.0	Development of work- force, economic
Weno West Coast Road	2004-8	7.3	Economic development
Kosrae Circumferential Road	2004-6	1.8	Economic Development
Dekehtik Port Dredging	2008-23	1.0	Safety, Economic development
Chuuk Lagoon Ferry Termi- nals	2008-23	3.7	Economic development
Maritime Safety Operations Fund	2007-23	0.2	Safety
National Air Transportation Safety Fund	2007-23	0.2	Safety
Elementary Schools Rehabilitation in all States	2004-23	10.7	Development of work- force
Renovation of Dispensaries in all States	2004-13	5.4	Health

³ Covers only the Phase 1 investment during the period 2004-8

4 Financing for Infrastructure Development

4.1 Capital Funding Requirements

The May 2002 Final IDP report proposed a \$1.91 billion investment on infrastructure in the FSM during the period 2003-17. This proposed level of capital expenditures far exceeds that allocated in recent years or likely to be available from all possible funding sources in the future. Section 5 of this report has reviewed the May 2002 IDP giving consideration to the most urgent national and state priorities related to the estimated available funding from the new Compact and other sources⁴. The summary of program costs is indicated in Table 4.1

4.2 Sources of Funds

4.2.1 FSM Government

The FSM Government shares 70% of the revenue raised from income tax, import tax and Gross Revenue tax with the four states. The FSM revenue collected from fishing rentals is not shared with the states. Twenty (20) percent of the FSM Government revenue share is required to be used for capital works in the health and education sectors, although when the new Compact is approved the state share of the national government revenue may decrease to 50% as the health and education infrastructure needs may be considered to be provided through the Compact funds. The revenue share was increased from 50% to 70% in 1999, before which time, the national government provided grants to state and local governments for local projects. These grants were reduced when the share was increased.

Increased FSM Government revenues resulting from policy reforms related to increasing existing taxes or the introduction of new taxes could in turn increase the revenue available to the states for infrastructure projects. This is considered to be an important initiative to be addressed in FSM, in order for the nation to become more self-reliant and enable adequate maintenance of infrastructure to prolong its effective lifetime. The FSM should give consideration to requesting donor agencies to provide technical assistance with tax reform processes.

For the sake of project prioritization, it has been assumed that an average of \$35 million will be available on an annual basis, assuming \$20 million from Compact funding and \$15 million from other sources.

Table 4.1 Summary of Proposed IDP – by Sector (US\$ '000)

Sector	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Electric Power	1,317	2,900	4,408	3,801	3,405	40,423	15,342	9,590	81,186
Water/Wastewater	3,483	8,340	9,175	8,325	7,260	27,085	40,132	38,063	141,863
Solid Waste Management	330	220		3,570	1,050	14,841	10,088	10,750	40,849
Roads and Pedestrian Facilities	9,355	8,460	8,348	5,232	9,858	22,358	29,325	27,982	120,918
Maritime Transportation	0	294	5,880	5,233	6,900	16,339	26,452	27,373	88,471
Air Transportation	6,060	9,485	1,400	10,203	6,525	11,090	11,907	11,724	68,394
Education	7,013	7,646	6,807	9,792	7,941	32,753	29,805	33,663	135,420
Health	660	1,025	1,410	1,800	5,190	12,404	4,000	6,000	32,489
Government Administrative Build-									
ings	879	275	4,846	110	110	11,550	4,550	5,000	27,320
Program Management/Inst									
Dev/Studies	550	2,900	3,650	2,100	700	250	250	250	10,650
TOTAL	29,647	41,545	45,924	50,166	48,939	189,093	171,851	170,395	747,560

Table 4.2 Summary of IDP – by Government (US\$ '000)

Government	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Pohnpei	12,167	12,799	10,630	13,323	15,261	42,905	34,423	35,520	177,028
Chuuk	10,285	13,138	16,767	17,996	18,924	83,439	82,691	73,550	316,790
Kosrae	4,599	5,650	5,991	5,522	5,700	15,137	16,050	23,535	82,184
Yap	1,681	6,493	6,387	8,500	7,130	30,112	27,812	26,914	115,029
National Government TOTAL	915 29,647	3,465 41,545	6,150 45,925	4,825 50,166	1,925 48,940	17,500 189,093	10,875 171,851	10,875 170,394	56,530 747,561

Table 4.3 Summary of IDP Funding Sources – by Government (US\$ '000)

Government	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Pohnpei									
Compact II	1,990	3,143	3,531	4,009	4,105	14,846	13,986	12,886	58,496
Other Sources	10,082	9,507	6,931	9,123	10,961	27,349	19,771	22,021	115,745
Chuuk									
Compact II	9,809	9,772	9,248	9,720	10,034	36,325	55,722	44,630	185,260
Other Sources	0	2,900	7,080	7,814	8,412	45,385	24,316	26,795	122,702
Kosrae									
Compact II	2,312	2,170	2,974	3,839	2,100	5,858	8,925	8,147	36,325
Other Sources	2,176	3,368	2,875	1,500	3,500	9,000	6,700	15,000	44,119
Yap									
Compact II	1,128	5,244	4,514	5,250	4,897	12,973	12,246	11,277	57,529
Other Sources	500	1,000	1,658	3,000	2,000	16,522	14,983	15,100	54,763
National									
Compact II	915	3,465	4,650	3,325	1,925	6,500	6,875	6,875	34,530
Other Sources	0	0	1,500	1,500	0	11,000	4,000	4,000	22,000
All Govs - IMF	735	976	964	1,086	1,007	3,335	4,328	3,663	16,094
Total:	29,647	41,545	45,925	50,166	48,941	189,093	171,852	170,394	747,563

4.2.2 State Governments

37 The level of revenue raising by the state governments comprising largely of State taxes and licenses is low and in the case of Kosrae, for example, contributes little more than 1% of all State revenue although it is higher in the other states. State governments should consider opportunities to raise revenues from a range of government services on the basis of user charges for the cost of services they consume as for example in the supply of water, collection of wastewater and solid waste, for medical services provided and for the use of transportation facilities by means of a road user fee, rentals for use of sea and airport infrastructure.

4.2.3 Compact of Free Association

- 38 The FSM Government's Compact of Free Association with the USA provides for financial assistance to the FSM. The initial funding period ran for 15 years from 1986 until 2001, and was extended for a further transition period until September 30, 2003.
- A new Compact of Free Association (Compact II) is now in the final stages of negotiation and funding is expected to become available by 2004. Under Compact II, the Government of the United States will provide financial assistance on an annual sector Grant basis for a period of 20 years on the basis of \$76 million for the first three years, then declining by \$800,000 each year over the following 17 years. These grants will be used for assistance in education, health care, public infrastructure, the environment, public sector capacity building and private sector development, or for other areas as mutually agreed, with priorities in the education and health care sectors.
- The proportion of Compact II funds to be allocated to public infrastructure or indeed the other sectors is not specified in the FPA, but it is expected that about 20% allocation will be achieved for infrastructure. Further, the FPA specifies that with respect to the public infrastructure sector grant, the highest priority shall be given to primary and secondary education capital projects and projects that directly affect health and safety, including water and wastewater projects, solid waste disposal projects, and health care facilities. Second priority shall be given to economic development-related projects, including airport and seaport improvements, sea walls, and energy development including renewable energy that cannot be funded through the tariff structure.
- It has been estimated that a total of approximately \$20 million per annum will be available from Compact II for public sector infrastructure.

4.2.4 Other Funding Sources

42 Other sources of external funds for public sector infrastructure are described below. It is estimated that, based on past experience, about \$15 million per annum will be available from these sources.

a Bilateral Aid from US Government Agencies

- Agencies such as USAID and USDA provide infrastructure grants and loans to the FSM under favorable terms. Projects currently in the pipeline with the USDA Rural Utilities Services include the Lelu Water Supply Project in Kosrae, a 75:25 grant loan with a total cost of \$3.25 million, a possible second water supply project in Kosrae in Malem and a loan for extensions to the water supply system on Pohnpei Island.
- The US Engineering Survey and Assistance Team have also recently confirmed to continue the US desire and readiness to utilize US military personnel and equipment to assist in possible humanitarian assistance projects in the four FSM states. While projects under this assistance program must be budgeted and the expenditure accounted for under the Compact II FPA, the labor cost of the military personnel will not be charged against the project budget. This opens the opportunity to use this assistance for project planning, scoping and technical studies required for the infrastructure projects to be funded under the Compact.

b Asian Development Bank

The Asian Development Bank has provided considerable technical assistance and concessional loan funds to FSM over the past decade. This includes the recently completed Water Supply Project that provided improved water supply facilities for the principal islands of Pohnpei, Chuuk and Yap. New loan projects in the pipeline include a \$7.1 million loan for a Basic Social Services Project and the \$8 million Omnibus Infrastructure Improvement Project. The Basic Social Services Project will cover the health and education sectors and will include a state-level institutional reform phase and an investment program for upgrading facilities and establishing systematic maintenance programs. The Omnibus Infrastructure Development Project will provide improvements to the power sector in Weno, water supply systems in Kosrae and Yap and sewerage and water supply on Pohnpei Island.

c Japanese Aid

Financial assistance from Japan to the FSM is significant and has averaged approximately \$10 million per annum since 1988. Japanese aid supports the purchase of products and services to implement social and economic development projects. It is generally given to FSM states and the national government on a rotational basis. The current project to be implemented during 2004-5 will be the circumferential road for Pohnpei. In 2005, support will be provided to the national government, possibly in the form of a National General Hospital for referrals to be located in Chuuk, although this concept is still under discussion. In 2006, it is proposed to support Chuuk in the Weno waterfront development. In 2007, support will be provided to Kosrae, either in hospital redevelopment or construction of coastal protection facilities. Given the difficulty that FSM has had in the past maintaining public facilities such as schools and hospitals, the

Japanese Government has some reservations about providing grants for these types of projects, despite the obvious social benefit of doing so.

d European Economic Commission

The EC has not been a major donor to FSM in the past, but is understood to be proposing to provide funding for one of the IDP priority projects – the provision of hybrid diesel/solar units for schools and hospitals on the outer islands.

e Other multilateral/bilateral donors

These include Australia, New Zealand, Germany, the United Kingdom and the UNDP who tend to provide primarily technical assistance rather than grants or loans for infrastructure.

4.3 Proposed Allocation of Funding for IDP Projects

The infrastructure projects proposed to be implemented during the period 2004-23 under the IDP are discussed in Section 5. Based on the assumed funding availability discussed above, the priorities for Compact II funding outlined in the FPA and the ongoing or planned projects from the other funding agencies, projects have been allocated to either funding from the Compact or other sources. This is indicated in the sector project tables in Section 5 and is summarized by sector in Table 4.2 the proposed projects and programs to be implemented during the period of the IDP from 2004 until 2023 for each State and the National Government are indicated in Annex B.

The total funding from Compact and other sources for the entire IDP period is indicated in Table 4.3. A summary of the funding sources is shown below in Table 4.4.

		-		-		•		•	
Funding Source	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Compact	16	24	30	26	23	77	98	88	372
Other Sources	13	168	20	23	25	109	70	83	359
States ⁵	1	1	1	1	1	3	4	4	16
Total	30	42	46	50	49	189	172	170	748

Table 4.4 Summary of Funding Sources for IDP (US\$ millions)

This results in a total investment of \$748 million during the 20 year IDP period or an average of \$37.4 million per year. An average allocation of

⁵ The States contribution comprises their share of the Infrastructure Maintenance Fund

\$18.6 million per annum will be required from the Compact funds and \$18 million from other funding sources. The higher than average investments during the period 2005-2008 for the Compact funds reflects the immediate infrastructure needs resulting from under investment in the past and the proposed 5 year plans of the states. The higher than average expenditure from other sources during the period 2008-2013 reflects the power station development in Pohnpei and Chuuk lagoon during that period which is expected to be sources from outside the Compact funding.

4.4 Sector Linkages

- As discussed above under 4.2.3, the FPA for Compact II specifies that for the infrastructure grant, first priority is given to education, health, water supply, wastewater and solid waste and second priority to economic development related projects such as roads, airport and seaport improvements and energy related projects.
- These priorities have been reflected in the funding allocations for the IDP. Water supply/wastewater and education projects have the largest allocation of IDP funds at 19% and 18% respectively. All proposed health projects have been allocated funding during the IDP period. The allocation of Compact Funds to each of the sectors is shown in Table 4.5.

Table 4.5 IDP Investment by Sector

Sector	IDP Investment (US\$ mill)	Share (%)	
	(ΟΟΦ 111111)	(70)	
Water Supply/Wastewater	141.9	19	
Education	135.4	18	
Roads/Pedestrian Facilities	120.9	16	
Maritime Transportation	88.5	12	
Electric Power	81.1	11	
Air Transportation	68.4	9	
Solid Waste Management	40.8	6	
Health	32.5	4	
Government Buildings	27.3	4	
Program Management/Institutional	10.7	1	
Total	747.6	100	

While maintenance and renovation projects for education and health facilities have been included for funding under the Compact, those in the power sector have largely been allocated to other loan funds on the assumption that these are income generating projects that will be able to service the loans. Similarly, large projects such as the new Dekehtik power station and the power stations on the Chuuk lagoon islands are considered to be of a scale that funding should be sought from the international funding agencies. On the other hand,

improved power supplies are essential for education and health facilities, to operate water supply and wastewater systems and for public safety and Compact funding has been allocated to extend distribution systems to areas where there is no current power supply or to improve the power supply in areas where it is currently inadequate.

- 55 Similarly, adequate road networks are essential for providing access to health and education facilities and market opportunities for the population living outside the main centers, especially the circumferential roads in Pohnpei, Weno and Kosrae and in the Chuuk lagoon islands, and Compact funds have also been allocated for this infrastructure.
- Seaport and airport infrastructure has largely been allocated to other funding except for airport runway improvements in Pohnpei and Chuuk and seaport dredging activities, all of which have safety implications for the users of these transportation facilities. Compact funding has also been provided to improve the Chuuk lagoon and outer island ferry infrastructure systems which are essential to provide the population of those island access to facilities, including those in health and education, that are available to residents of the main centers in FSM.

5 Proposed Infrastructure Program and Funding

5.1 Electric Power

5.1.1 Sector Objectives and Outcomes

57 The principal objective of developing infrastructure in the electric power sector is to ensure that all areas of the country are provided with electric power in an efficient and effective manner in accordance with demand such that:

- Households are provided with power for basic livelihood purposes
- Local manpower can realize production opportunities and potential,
- Power is available for basic services such as schools, hospitals, water and wastewater systems

5.1.2 Existing Electric Power Systems

There are electric power systems on each of the principal islands of the four FSM States and also four small systems on other islands. These power generation systems are summarized in Table 5.1

Table 5.1 Existing Electric Power Generation Systems

State	System	System Details	Current Effective Capacity (MW)	Max Peak De- mand (MW) (2001)	Owner/Operator
Chuuk	Weno Is- land Power System	Diesel Gen- erators	5.0	4.0	CPUC
	Tonoas Power System	Diesel Gen- erators	0.25	0.065 (few connections)	CPUC
Pohnpei	Pohnpei Island	Diesel Generators	14.9	6.69	PUC
	System ⁶	Hydropower	2.1		

Operation of the hydro plant is constrained by the supply of water from Nanpil River that is usually committed to the water supply system

Table 5.1 Existing Electric Power Generation Systems, continued

Table 5.1	LAISHING	Electric Fower	Generation	i Oysteins, conti	illueu
State	System	System Details	Current Effective Capacity (MW)	Max Peak De- mand (MW) (2001)	Owner/Operator
Kosrae	Kosrae Island Power System7	Diesel Generators	5.4	1.2	KUA
Yap	Yap Proper Power System	Diesel Gen- erators	7.6	3.0	YSPSC
Ulithi	Falalop Power System	Diesel Gen- erators	0.475	0.085	YSPSC
Ulithi	Mogmog Power System	Diesel Gen- erators	0.05	0.012	YSPSC
Woleai	Falalop Power System	Diesel Gen- erators	0.26	0.08	YSPSC

59 The status and extent of the power distribution system for each of the existing systems is outlined in Table 5.2

Table 5.2 Details of Existing Power Distribution Systems

System	Coverage	Condition	Needs
Weno Island Powe System	er Most of Weno Island	Generally in poor condition	Replacement of poles, secondary cables
Tonoas Power System	Potentially most households on Tonoas, but few currently con- nected.	Generally in good condition	Maintenance
Pohnpei Island System	Most of Pohnpei Is- land	Generally in good condition	Ongoing program of pole and line replacement as needed

There is a micro-hydropower project on Malem River with a rated capacity of 30kW, but it is not yet in service

Table 5.2 Details of Existing Power Distribution Systems

System	Coverage	Condition	Needs
Kosrae Island Power System ⁸	Essentially along circumferential road	Condition of old lines and poles very poor	Ongoing pole and line replacement by KUA
Yap Proper Power System	98% of Yap Proper	Wooden poles in poor condition	Replacement of wooden poles
Falalop Power Sys- tem (Ulithi) Mogmog Power System (Ulithi) Falalop Power Sys- tem (Woleai)	households Potentially most households	Generally in good condition Generally in good condition Generally in good condition	Maintenance of over- head lines

5.1.3 Short Term Needs of Existing Systems

A key strategic objective of this IDP is to ensure that existing infrastructure is rehabilitated as a first priority before implementation of new infrastructure. The immediate needs for rehabilitation of the existing power systems are described below.

a Weno Island Power System

As indicated in Table 5.1, of the eight existing power systems on FSM, only the Weno system is having difficulty meeting demand. Further, the power generation plant and the distribution system are in an extremely poor and dangerous condition. As a result, it is estimated that up to 1.0-1.5 MW capacity of standby generation has been installed by public and private sector companies to overcome the frequent power shortages and outages. Continuation of this situation constrains the economy of Chuuk and is a public health risk both from the condition of the facilities and the risk to water and wastewater supplies that rely on the power system. Rectification of this situation should be one of the highest priorities of the State and National Governments.

b Pohnpei Island Power System

Table 5.1 indicates that the capacity of the Nanpohmal power plant in Pohnpei has ample capacity for the current needs of the island. The need for further expansion of this plant is really a function of economic growth in Pohnpei. In fact demand has been stagnant for several years and future growth in demand can only be predicated on the development of improved infrastruc-

Walung Village is not covered by the distribution system since it is beyond the end of the circumferential road. KUA has provided the village with a solar power system not connected to the main distribution system.

ture leading to the expansion of the marine recreation service industry and acceleration in tourism growth, or additional industrial investments as for example, by the beverage industry.

The Pohnpei Utilities Corporation proposes to phase out the Nanpohmal plant, primarily to end the necessity of trucking fuel to the plant, and construct a new plant at a cost of \$10.5 million on Dekehtik Island. PUC is proposing this as a turnkey project and will arrange financing.

c Tonoas Power System

The current Tonoas plant is inadequate to meet the future needs of the island and is in poor condition with considerable environmental hazards. It needs to be rehabilitated or replaced, but in an integrated manner with the other Southern Namoneas Islands.

d Kosrae Power System

The ongoing replacement of old poles and lines needs to be continued.

e Yap Power Systems

The power system for Yap Proper is currently adequate, but will require some further investment for upgrading of the power plant and extension of the distribution system later in the IDP investment program. The power systems in Ulithi and Woleai are adequate for the foreseeable future.

f Short Term Development Needs

- Aside from rehabilitation of the existing power systems described in 5.1.3, the most urgent priorities are:
- Development of power systems in the Chuuk Lagoon
- Provision of diesel/solar units for schools and dispensaries in the outer islands of Pohnpei, Chuuk and Yap.
- The economy of the Chuuk lagoon is not an integrated one, and has stagnated for several years. The 2001 population of Southern Namoneas and the Faichuk is over 20,000 and development of the economy in these areas should therefore take some priority in the short term. To accelerate economic growth, and involve the entire population in the market economy, it is essential to provide electric power systems, roads and inter-island ferry services as well as public health facilities. When these are provided, all areas of the islands will be able to market their produce and realize their considerable tourist potential.
- Integrated power systems for the Southern Namoneas group and the Faichuk group may be considered with new centralized power generation plants on Tonoas and Tol respectively. However, these power plants represent considerable investment (an estimated \$9 million for each plant) and funding from

outside the Compact would need to be sought. Distribution systems in each of the islands may be funded incrementally through the Compact or as part of the same financing used for the power plants.

- In addition to the two large power systems to be developed in the Southern Namoneas and Faichuk, three smaller power systems are needed to serve the inner Faichuk Islands of Fanapanges, Udot, Eot and Romanum.
- Preparation of a Chuuk Electrification Master Plan⁹ is proposed prior to committing any funds to evaluate development options and investments. This Plan would need to be prepared towards the end of the first five years of the IDP.

5.1.4 Long Term Development Needs

- Long term needs in the power sector necessitated by a requirement for increased power generation capacity are dependent upon predictions of economic growth. Should implementation of the IDP be slow and private sector development in the country not accelerates as expected, it is likely that economic stagnation will continue. Under this scenario, the short term development needs outlined in 5.1.4 will probably be sufficient to met demand until the end of the IDP period.
- If however, economic growth accelerates through implementation of the IDP and needed private sector investments in tourism facilities and services, fisheries, transportation services, solid waste management and manufacturing, the growth of demand for electricity would also increase and the power generation capacity would need to be expanded. Under this optimistic scenario, the implications of the power industry development would include:
- For Pohnpei, rehabilitation of the Nanpohmal plant or expansion of the new Dekehtik plant capacity.
- Replacement of two Weno power pant generators with larger generators.
- Enhancement of Yap Proper generation capacity.
- However, these investments have not been included in the IDP at his stage.

5.1.5 Proposed IDP Investment Program

75 The IDP report proposed an investment of \$137 million for electric power sector investment over the period 2003-2017¹⁰. While this will meet the sector needs as outlined above, it is probably unaffordable given the availability

See Annex B, Volume III, Nathan report for TOR for this study

FSM Infrastructure Development Plan FY 2003-FY 2017, May 2002

of funding. A revised capital investment program shown in Table 5.3 has been prepared based on an assumed annual funding from the Compact and other sources for all infrastructure sectors of \$35 million per year. This program reflects the state government priorities for the period 2004 to 2008¹¹ In the case of Pohnpei, the State has not included investments in the power sector in the priority listings as these are considered to be the responsibility of the PUC. Nevertheless, these investments have been included in the IDP Program under funding outside the Compact.

Investments in new power generation for Pohnpei, Southern Namoneas and Faichuk are included in the program, but due to considerable cost, funding additional to that generally available to FSM would need to be sought on the basis of the economic return of these investments. Investment in the Weno Power Plant is also a large investment, but due to the critical nature of this project, it is proposed that it be funded through the Compact or other sources such as ADB.

77 The timing of the projects as shown in Table 5.3 reflects their priority as follows:

- Weno Power Plant and Distribution System
- Diesel/Solar Power for Outer Islands in Pohnpei, Chuuk and Yap
- Southern Namoneas Power Generation and Distribution
- Faichuk Power Generation and Distribution
- Faichuk Power Generation and Distribution
- Yap Power Plant Upgrade and Distribution Extension

This corresponds to a total sector investment of \$81.1 million for the period 2004-2023. Some projects proposed in the May 2002 IDP report either cannot be fully funded during this period of are unable to be commenced. This status of these projects is indicated in Tables 5.4 and 5.5. Unfunded projects include further long term expansion of the Pohnpei, Weno and Yap power plants, upgrading of the Pohnpei distribution systems, investment in office improvements, computer systems and metering for all state systems, diesel/solar systems for households on outer islands in Pohnpei, Chuuk and Yap. Many of these investments could be provided by the utility corporations as they demonstrate improved financial performance.

See Annex C for listing of state priorities for 2004-2008

Table 5.3 Electrical Power – Proposed Project Implementation Schedule (US\$ '000)

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Dekehtik Power Plant	Pohnpei						10,500			Other
Diesel/Solar Power for schools	Pohnpei/Outer Is- lands			700		300	253			Other
Diesel/Solar Power for dispensaries	Pohnpei/Outer Is- lands					100				Other
Weno Power Plant	Chuuk/Weno	500	2,500	2,500	2,500					Com/Other
Weno Power Distribu- tion	Chuuk/Weno	500	400			1,033	885			Com/Other
Tonoas Power Plant	Chuuk/S. Namoneas						9,824			Other
Tonoas Distribution	Chuuk/S. Namoneas				500	400	800			Compact II
Eten Submarine Cable	Chuuk/S. Namoneas						294			Compact II
Eten Power Supply	Chuuk/S. Namoneas						168			Compact II
Fefen Submarine Cable	e Chuuk/S. Namoneas						735			Compact II
Fefen Power Supply	Chuuk/S. Namoneas						1,062	1,280	797	Compact II
Unman Submarine Cable	Chuuk/S. Namoneas						490			Compact II
Unman Power Supply Tol Power Plant	Chuuk/S. Namoneas Chuuk/Faichuk						9,767	1,756		Compact II Other
Tol Power Supply	Chuuk/Faichuk						-,· - -	1,138	1,137	Compact II

Table 5.3 Electrical Power – Proposed Project Implementation Schedule (US\$ '000), Continued

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Paata Power Supply	Chuuk/Faichuk						1,062	519		Compact II
Polle Power Supply	Chuuk/Faichuk							1,062	867	Compact II
Wonei Power Supply	Chuuk/Faichuk							1,062	463	Compact II
Fanapanges Power Plant	Chuuk/Lagoon							1,450		Other
Fanapanges Distribution	Chuuk/Lagoon							297		Compact II
Romanum Power Plant	Chuuk/Lagoon							1,257		Other
Romanum Distribution	Chuuk/Lagoon							205		Compact II
Udot Power Plant	Chuuk/Lagoon							2,042		Other
Udot Distribution	Chuuk/Lagoon							694		Compact II
Eot Submarine Cable	Chuuk/Lagoon							147		Compact II
Eot Distribution	Chuuk/Lagoon							106		Compact II
Solar/diesel for schools	Chuuk/Outer Islands				634	1,000	2,000		2,400	Other
Solar/diesel for schools	Chuuk/Lagoon					332				Other
Solar/diesel for dispensaries	Chuuk/Outer Islands					100				Other
Solar/diesel for dispensaries	Chuuk/Lagoon					100				Other
Power Plant Rehabilitation	Kosrae				106		387			Compact II

Table 5.3 Electrical Power – Proposed Project Implementation Schedule (US\$ '000), Continued

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Power Distribution Solar/diesel for schools Solar/diesel for dispen- saries		197		500 558 100			542		1,000	Compact II Other Other
Yap Power Plant Upgrade	Yap Proper							1,500	1,500	Other
Yap Distribution Extension	Yap Proper						1,000		1,000	Compact II
Recurrent Costs										
Electric System Mainte- nance Fund	All	120	0	50	61	40	654	827	426	Compact II/State
Total:		1,317	2,900	4,408	3,801	3,405	40,423	15,342	9,590	

79 The Investment Program includes an allowance of 10% of the infrastructure cost funded by the Compact for maintenance. This cost will be funded 50% through the Compact and 50% by the states.

5.1.6 Institutional Restructuring and Strengthening

80 The major decisions on institutional strengthening have already been taken with the power sector now being managed by utility corporations in all four states. These corporations now need to continue to develop their capability in order to provide more efficient services thereby improving financial performance. The organizations need to outsource an increasing amount of their fieldwork, while concentrating on planning, monitoring, contract management and performance reporting functions.

The performance, in particular, of the Chuuk Power Utility Corporation has been disappointing and has resulted in the development of a critical situation in both the power and water/wastewater sectors in Chuuk. There may be a need for further intervention by the private sector in the CPUC activities such as in the form of a management contract to operate and maintain the utility systems on a fee for service basis.

Table 5.4 Electrical Power - Funded or Partially Funded Projects (US\$ '000)

Project	State	Location	Available Funding	Unfunded Amount	Source
Dekehtik Power Plant	Pohnpei	Kolonia	10,500 4,608		Other
Diesel/Solar Power for schools	Pohnpei	Outer Is- lands	1,253		Com/Other
Diesel/Solar Power for dispensaries	Pohnpei	Outer Is- lands	100		Com/Other
Weno Power Plant	Chuuk	Weno	8,000	9,055	Com/Other
Weno Power Dis- tribution	Chuuk	Weno	2,818		Compact II
Tonoas Power Plant	Chuuk	S. Na- moneas	9,824		Other
Tonoas Distribution	Chuuk	S. Na- moneas	1,700		Compact II
Eten Submarine Cable	Chuuk	S. Na- moneas	294		Compact II
Eten Power Sup- ply	Chuuk	S. Na- moneas	168		Compact II
Fefen Submarine Cable	Chuuk	S. Na- moneas	735		Compact II

Table 5.4 Electrical Power - Funded or Partially Funded Projects (US\$ '000), Continued

	ıtırıueu				
Project	State	Location	Available Funding	Unfunded Amount	Source
Fefen Power	Chuuk	S. Na-	3,139		Compact II
Supply Unman Subma- rine Cable	Chuuk	moneas S. Na- moneas	490		Compact II
Unman Power Supply	Chuuk	S. Na- moneas	1,756		Compact II
Tol Power Plant	Chuuk	Outer Faichuk	9,767		Other
Tol Power Supply	Chuuk	Outer Faichuk	2,275		Compact II
Paata Power Supply	Chuuk	Outer Faichuk	1,581		Compact II
Polle Power Sup-	Chuuk	Outer Faichuk	1,929		Compact II
Wonei Power Supply	Chuuk	Outer Faichuk	1,525		Compact II
Fanapanges Power Plant	Chuuk	Lagoon	1,450		Other
Fanapanges Dis- tribution	Chuuk	Lagoon	297		Compact II
Romanum Power Plant	Chuuk	Lagoon	1,257		Other
Romanum Distri- bution	Chuuk	Lagoon	205		Compact II
Udot Power Plant	Chuuk	Lagoon	2,042		Other
Udot Distribution	Chuuk	Lagoon	694		Compact II
Eot Submarine Cable	Chuuk	Lagoon	147		Compact II
Eot Distribution	Chuuk	Lagoon	106		Compact II
Solar/diesel for schools	Chuuk	Outer Is- lands	6,034		Other
Solar/diesel for schools	Chuuk	Lagoon	332		Other
Solar/diesel for dispensaries	Chuuk	Outer Is- lands	100		Other
Solar/diesel for dispensaries	Chuuk	Lagoon	100		Other
Power Plant Re- habilitation	Kosrae	Lelu	493		Compact II
Power Distribution	Kosrae	Kosrae	1,139		Compact II

Table 5.4 Continued

Project	State	Location	Available Funding	Unfunded Amount	Source
Solar/diesel for schools	Yap	Outer Is- lands	1,558	670	Other
Solar/diesel for dispensaries	Yap	Outer Is- lands	100		Other
Yap Power Plant Upgrade	Yap	Yap Proper	3,000	1,649	Compact II
Yap Distribution Extension	Yap	Yap Proper	2,000	832	Compact II
Recurrent Costs					
Electric Power System Maint. Fund	All		2,167		Compact/State
Total:			81,075	16,814	

Table 5.5 Electric Power - Unfunded Projects (US\$ '000)

Project	State	Location	Unfunded Amount
Waste Oil Recycling Plant	Pohnpei	Pohnpei	2,360
Decommission ALCO Plant	Pohnpei	Pohnpei .	47
Distribution System	Pohnpei	Pohnpei	1,139
Office/Computer Systems	Pohnpei	Pohnpei	2,006
Metering	Pohnpei	Pohnpei	1,121
Diesel/solar for Households	Pohnpei	Lagoon	776
Diesel/solar for Households	Pohnpei	Outer Islands	2,543
Diesel/Solar Power for Households	Chuuk	Lagoon	2,100
Solar/Diesel Power for Households	Chuuk	Outer Islands	13,983
Office/Systems/Metering - Weno	Chuuk	Weno	2,221
Office/Systems/Metering - S.Namoneas	Chuuk	S. Namoneas	1,852
Office/Systems/Metering - Faichuk	Chuuk	Faichuk	1,015
Office/Systems/Metering - Kosrae	Kosrae	Kosrae	3,127
Ulithi Transformer	Yap	Outer Islands	351
Woleai Generator	Yap	Outer Islands	35
Diesel/solar for households	Yap	Outer Islands	3,570
Office/Systems/Metering - Yap	Yap	Yap Proper	1,888
Total		·	40,134

5.2 Water/Wastewater Systems

5.2.1 Sector Objectives and Outcomes

82 The primary specific objectives of the provision of water and wastewater infrastructure are:

- Meet the demand for water supply and wastewater infrastructure in an effective and efficient manner
- Improve existing water abstraction, treatment and distribution systems
- Evaluate and institute technologically appropriate liquid waste management systems
- Improve and initiate wastewater facilities to increase coverage and contribute towards improvements in public health and environmental conditions
- Contribute towards the prevention of water borne diseases through the provision of potable water supplies

5.2.2 Existing Water Supply and Wastewater Systems

There are currently 15 major water supply systems in FSM that serve about 37,000 people, or slightly more than one-third of the FSM population. There are also five sewerage systems, serving the principal administrative and commercial areas of the four states. These systems are summarized in Tables 5.6 and 5.7.

Table 5.6 Existing Major Water Supply Systems

State	System	Coverage	Condition	Needs
Pohnpei ¹²	PUC Pohnpei Island Water System	54% of Pohnpei Island population and 30% of is- land area		Programs to provide for entire island coverage, including new water sources, treatment and dis- tribution facilities.
Pohnpei	Palikir Water System	FSM National Gov- ernment offices and COM na- tional campus	Satisfactory	Could be incorporated in PUC expansion for Palikir vicinity
Chuuk	Weno Water Supply Sys- tem	85% of residential areas of Weno	Was recently improved under ADB loan, but still not providing satisfactory water quality.	Rehabilitation of wells and distribution sys- tem
Chuuk	Tonoas Water Supply Sys- tem	75% of the population of Tonoas	Reasonable, considering its age	Will need rehabilitation

¹² In addition to the PUC system, there are 41 small rural systems serving communities beyond the PUC service area.

Table 5.6 Existing Major Water Supply Systems, Continued

State	System	Coverage	Condition	Needs
Kosrae	Tofol/Lelu Water Supply Sys- tem	State administrative center at Tofol, main Lelu urban center and commercial/tourism developments	No treatment and does not provide potable water.	Improvement of intake and provision of treatment facilities.
Kosrae	Malem Water Supply Sys- tem	Supplies main part of Malem	No treatment and does not pro- vide potable water. Pipes in poor condition	Rehabilitation of distri- bution system and provision of treat- ment facilities.
Kosrae	Okat Water Supply Sys- tem	Commercial port and airport.	Two wells out of five no longer functional	Construct additional wells to replace those now out of service
Kosrae	Tafuyat Water Supply Sys- tem	Supplies part of Lelu Municipality	No treatment or storage. Distri- bution pipeline satisfactory	Supplies need to be treated.
Kosrae	Yekula Water Supply Sys- tem	Supplies small area in Tafunsak Mu- nicipality	Source inade- quate, no treatment, poor water quality, inadequate dis- tribution sys- tem in poor condition.	•
Kosrae	Walung Water Supply Sys- tem	Walung village	No treatment, poor water quality	Treatment plant
Kosrae	Tafeut Water Supply Sys- tem	Most of Utwe Mu- nicipality	No treatment, poor water quality	Treatment Plant, ex- tension of distribu- tion system
Kosrae	Mutunte Water Supply Sys- tem	Supplies about 60% of Tafunsak Municipality	No treatment, poor water quality, distri- bution system inadequate and in poor condi- tion	Treatment plant and augmentation of distribution system

Table 5.6	Existina	Major	Water	Supply	S	vstems.	Continued

State	System	Coverage	Condition	Needs
Yap	Central Water Supply Sys- tem	Municipalities in vicinity of Colonia.	Recently im- proved and in good condition.	
Yap	Gagil-Tomil Water Supply System	Municipalities of Tomil and Gagil (part)	Generally satis- factory for the short term	Distribution system will require augmenta- tion in the longer term
Yap	Southern Yap Water Supply System	Municipalities of Rull (part, Gil- man Kanifay and Dalipebinaw)	Water source needs im- provement. Distribution system satis- factory in short term	Augmentation of water source. Distribution system will require augmentation in the longer term

- Besides Weno and Tonoas, none of the other inhabited islands of Chuuk lagoon have pressurized water supply systems. Water supplies on these islands derive from rainwater catchments, hand-dug wells, springs and water seeps and individual household systems from surface water courses. These systems are grossly inadequate to maintain appropriate health standards, support an improved economy and realize the tourism potential of the islands.
- In Yap, in addition to the three regional systems, there are 23 small scale village water supply systems using springs, streams or seeps as water sources. Some of these go dry during periods of low rainfall.
- The outer islands of Pohnpei, Chuuk and Yap obtain fresh water from rainfall catchment systems and from, mostly dug, shallow wells and utilize storage systems. Although pollution of the freshwater 'lens' under each of these islands can be a problem, a number of islands obtain water of reasonably good quality from the wells. For the most part water supplies for these islands appear to be adequate, especially in Yap where outer island water supplies come under the YSPSC.
- None of the inhabited islands in the Chuuk lagoon have a wastewater system, beyond channeling whatever wastewater is collected locally into the near-shore areas of the lagoon
- Water supply and sewerage systems in Pohnpei, Chuuk and Yap are operated by the PUC, CPUC and YSPSC respectively. In Kosrae the systems are owned and managed by the municipalities with technical assistance being provided by the Department of Public Works.

Table 5.7 Existing Sewerage Systems

Table 3.7	Laisting Gew	werage dystems					
State	System	Coverage	Condition	Needs			
Pohnpei	Kolonia Sew- erage Sys- tem	erage Sys- Pohnpei population		Treatment plant to be augmented or relocated. Extend system to in- crease coverage. Replacement of parts of existing			
			Generally satis- factory	system			
Chuuk	Weno Sewer- age System	Main urban center of Weno	Poor condition. Treatment plant out of operation. Raw sewage being pumped into the lagoon	New treatment plant. Repair and extension of ex- isting collection system.			
Kosrae	Lelu Sewerage System	Urban center of Lelu	Generally satis- factory. No treatment, but sea outfall	Extend collection system to in- crease coverage			
Kosrae	Tofol Sewer- age System	Government Admini- stration Buildings and Hospital	Operates satis- factorily. Util- izes oxidation ponds.				
Yap	Colonia Sew- erage Sys- tem	Main urban center of Colonia	No chlorination of primary treat- ment	Extend outfall. Possibly relocate treatment plant			

5.2.3 Short Term Needs of Existing Systems

A key strategic objective of the IDP is to ensure that existing infrastructure is rehabilitated as a first priority before implementation of new infrastructure. The immediate needs for rehabilitation of existing water supply and wastewater systems are described below.

a Pohnpei PUC Water Supply System

The water supply system supplying the current service area in Pohnpei Island is operating satisfactorily and the primary need is to extend the system to other parts of the island. This will be a continuing process as outlined in the stra-

tegic plans of the PUC¹³ and funding will need to be allocated during the period of the IDP for this purpose.

b Weno Water Supply System

Although supported by a recent ADB loan, the wells that constitute the primary source for water supplies continue to provide water of an unsatisfactory quality. There is an urgent need to rehabilitate these wells to ensure a safe, potable water supply for the consumers.

c Tonoas Water Supply System

This system is currently providing a satisfactory water supply, but will require rehabilitation during the course of the IDP as many of the system elements are reaching the end of their useful life.

d Kosrae Water Systems

Rehabilitation of the existing water supply systems on Kosrae is urgent as none have effective treatment and all are providing water of unsatisfactory quality to the consumers. Many of the existing water distribution pipelines are in poor condition and have inadequate capacity to supply water at an acceptable pressure.

e Yap Proper Water Systems

Although there is a need for some rehabilitation works for the Southern Yap water system, the three existing systems on Yap Proper are generally operating satisfactorily and require extensions and augmentations during the course of the IDP, rather than any current rehabilitation.

f Kolonia Sewerage System

The sewage treatment plant is nearing the end of its useful life, is under-capacity and will need to be rehabilitated, expanded or relocated at an early stage in the IDP. There is also potential to extend the collection system to some currently uncovered areas when funding is available

g Weno Sewerage System

The sewage treatment plant has not operated for the past two decades and raw sewage has been pumped through the outfall into the lagoon. The lagoon and its marine life constitute the principle resource for potential economic growth in the state, and continued pollution of lagoon waters could prevent the

¹³ Emergency Water/Wastewater Infrastructure Expansion & Extension Plan for Financing, Engineering and Construction, Pohnpei Utilities Corporation, September 2000

state from realization of its economic potential. The collection system is also in poor condition and overflows occur during rainy periods.

h Colonia Sewerage System

The current system generally meets the needs of Colonia. There may be a need to extend the sea outfall to reduce pollution in the immediate vicinity of the shoreline or to relocate the treatment plant.

5.2.4 Development Needs during the IDP Period (2004-2023)

a System Extension on the Principal Islands

The need for water supply and sewerage system extension and upgrading on the principal islands of the four FSM states are discussed briefly below.

b Pohnpei

PUC has plans to provide Pohnpei Island with a single integrated water supply system that will efficiently deliver good quality water to all developed areas of the island. PUC also proposes to provide new sewerage systems in densely populated areas currently without such systems, and to extend the outfalls from sewage treatment plants to beyond the reef surrounding the lagoon. These projects will be constructed incrementally as funds become available during the period of the IDP.

c Chuuk

The short term improvements for Weno Island outlined under 5.2.3 will provide a satisfactory water supply service for 85% of residents on Weno Island and a sewage collection service for the main urban area. Subject to funds availability, it will be necessary to provide extensions to areas not currently served and this will also require the construction of a second sewage treatment plant.

d Kosrae

101 Completion of the short-term improvement program for the water supply facilities as described in 5.2.3 will be adequate to satisfactorily serve all communities on the island. Any further long term expansion of the systems will be dependent on the development of the tourism potential on the island that may necessitate some focused expansion during the IDP period

e Yap

The most urgent future water development need for Yap Proper is the provision of a piped water supply for the municipalities of Maap and Rumung. Long term sewerage development needs may include the more densely populated areas of Gagil-Tomil and the southern portion of Yap Proper.

f Chuuk Lagoon Water Supply/Wastewater Development Needs

103 Of the 17 inhabited islands of the Chuuk lagoon, only Weno and Tonoas have piped water supply systems. The current water supplies on the other islands are unreliable and unsafe and provision of water supplies to these communities should be a medium term priority of the IDP. Most of the islands are too small or sparsely populated to justify development of sewerage systems, but the islands of Tonoas, Fefen and Uman should be provided with sewerage in the medium to long term to assist with their tourist potential.

5.2.5 Proposed IDP Investment Program

The May 2002 IDP report proposed an investment of \$392 million for water/wastewater sector investment over the period 2003-2017¹⁴. While this will meet the sector needs as outlined above, it is probably unaffordable given the availability of funding. A revised capital investment program shown in Table 5.8 has been prepared based on an assumed annual funding from the Compact and other sources for all infrastructure sectors of \$35 million per year. This program reflects the state government priorities for the period 2004 to 2008¹⁵. In the case of Pohnpei, the State has not included investments in the water and wastewater sector in the priority listings as these are considered to be the responsibility of the PUC. Nevertheless, these investments have been included in the IDP Program under funding outside the Compact.

Extension to the Pohnpei Island Water System is included in the program but it cannot be completed to cover the entire island within the IDP period unless the PUC is able to access additional funding than is considered to be normally available to FSM. A similar situation applies to the Kolonia Sewerage System extension and extensions to the water supply and sewerage system extensions on Weno. The immediate improvements required for the Kosrae water systems will be funded during the first five years of the IDP, but any further long-term extensions of these systems cannot be funded.

The IDP includes the provision of water supply systems to the Chuuk lagoon islands during the medium and long term of the IDP, but funds are unlikely to be sufficient to provide complete coverage in all the islands. Funding for the lagoon island water supply systems would need to be a mix of Compact and other funding sources. Sewerage facilities will only be provided in Tonoas and Fefen.

107 The timing of the projects as shown in Table 5.8 reflects their priority as follows:

¹⁴ FSM Infrastructure Development Plan FY 2003-FY 2017, May 2002

¹⁵ See Annex C for listing of state priorities for 2004-2008

- Rehabilitation of the Weno Water Supply System
- Provision of improved water supplies to the municipalities of Lelu, Malem,
 Tafunsak and Utwe in Kosrae
- Construction of new Weno Island Sewage Treatment Plant
- Rehabilitation of the existing Weno Sewerage System
- Provision of water supplies to the municipalities of Maap and Rumung in Yap
- Construction of new Kolonia Sewage Treatment Plant and Sea Outfall
- Extension of Pohnpei Water Supply System
- Improvements to the sewerage systems in Lelu/Tofo in Kosrae
- Rehabilitation of Tonoas Water Supply System
- Improvement of water supply systems in Chuuk Outer islands (Halls and Mortlock)
- Construction of water supply systems in Southern Namoneas Islands
- Construction of water supply systems in Outer and Inner Faichuk Islands
- Extension of the sea outfall in Colonia, Yap
- Extensions to the water supply systems in Gagil-Tomil and Southern Yap on Yap Proper

This corresponds to a total sector investment of \$142 million for the period 2004-2023. Projects that were proposed in the May 2002 IDP that either cannot be fully funded during this period or are unable to be commenced are indicated in Tables 5.9 and 5.10.

109 The Investment Program includes an allowance of 10% of the infrastructure cost funded by the Compact for maintenance. This cost will be funded 50% through the Compact and 50% by the states.

Table 5.8 Water Supply/Wastewater – Proposed Project Implementation Schedule (US\$ '000)

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Extension of PUC Water Supply Sys- tem	Pohnpei			767	2,765	2,765	5,500	5,500	5,500	Other
Kolonia Wastewater Treatment Plant	Pohnpei/Kolonia	477	1,000	1,476						Other
Kolonia Sewerage System Extension	Pohnpei/Kolonia				1,250	1,250		2,500	2,500	Other
Ocean Outfall Extension	Pohnpei/Kolonia			1,151						Other
Household Water Supply Systems	Pohnpei/Lagoon						552			Compact II
Weno Water Supply	Chuuk/Weno	300	650						2,500	Compact II
Weno Sewage Treatment Plant	Chuuk/Weno		1,000	250					1,770	Com/Other
Weno Sewerage Extension	Chuuk/Weno		600	250	500	700	1,000	1,000	2,000	Com/Other
Tonoas Water Supply	Chuuk/Weno		150	1,000			1,200	1,200	1,418	Compact II
Fefen Water Supply	Chuuk/S. Na- moneas				800	200	1,500	1,500	1,500	Compact II
Unman Water Supply	Chuuk/S. Na- moneas					800	1,500	1,500	1,279	Compact II
Tonoas Sewerage	Chuuk/S. Na- moneas							2,140	1,000	Compact II

Table 5.8 Water Supply/Wastewater – Proposed Project Implementation Schedule (US\$ '000), Continued

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Fefen Sewerage	Chuuk/S. Na-							2,000	1,000	Compact II
Common Sewer out-	moneas Chuuk/S. Na- moneas							2,000		Compact II
Tol Water Supply	Chuuk/Faichuk					750	2,500	1,000	1,250	Compact II
Paata Water Supply	Chuuk/Faichuk						1,500	1,500	1,104	Compact II
Polle Water Supply	Chuuk/Faichuk						1,500	1,000	1,000	Compact II
Wonei Water Supply	Chuuk/Faichuk						,	2,000	1,778	Compact II
Eot Water Supply	Chuuk/Lagoon							1,033		Compact II
Fanapanges Water Supply	Chuuk/Lagoon							1,033	593	Compact II
Romanum Water Supply	Chuuk/Lagoon						730	729		Compact II
Udot Water Supply	Chuuk/Lagoon						730	729	500	Compact II
Halls Island Water Supply	Chuuk/Outer Islands			100		250	1,000	825		Compact II
	Chuuk/Outer Islands			150		250	1,250	1,250	1,250	Compact II
Lelu Water Supply	Kosrae	1,176	1,500	1,125					1,500	Other
Malem Water Supply	Kosrae	,	,	1,000	1,500				1,500	Other
Tafunsak Water Sup-		500	1,000	500					1,500	Other
Utwe Water Supply	Kosrae	500	750	250					1,500	Other

Table 5.8 W	ater Supply/Waste	ewater – Pr	oposed F	Project In	nplement	ation Sc	hedule (US	\$ '000), C	ontinued	
Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Lelu/Tofol Wastewa- ter	Kosrae		409	437	800			4,500	568	Compact II
Maap-Rumung Water Supply	r Yap Proper	500	1,000	500					904	Other
Gagil-Tomil Water Supply	Yap Proper						1,450	1,450	886	Compact II
Southern Yap Water Supply	Yap Proper						1,714	429		Compact II
Household Septic Tanks	Yap Proper						484	484		Compact II
Extension of Ocean Outfall Recurrent Costs	Yap Proper				500		1,214			Other
Water/Wastewater Maintenance Fund	l	30	281	219	210	295	1,761	2,830	1,763	Com/State
Total Projects with Funding		3,483	8,340	9,175	8,325	7,260	27,085	40,132	38,063	

Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000)

Project	State	Location	Available Funding	Available Amount	Source
Extension of PUP Water Supply System	Pohnpei	Pohnpei	22,797	12,994	Other
Kolonia Wastewater Treatment Plant	Pohnpei	Kolonia	2,953		Other
Kolonia Sewerage System Extension	Pohnpei	Kolonia	7,500	9,593	Com/Other
Ocean Outfall Extension	Pohnpei	Kolonia	1,151		Com/Other
Household Water Supply Systems	Pohnpei	Lagoon	552		Compact II
Weno Water Supply	Chuuk	Weno	3,450	8,483	Compact II
Weno Sewage Treatment Plant	Chuuk	Weno	3,020		Compact II
Weno Sewerage Rehab/Extension	Chuuk	Weno	6,050	7,071	Compact II
Tonoas Water Supply	Chuuk	Weno	4,968		Compact II
Fefen Water Supply	Chuuk	S. Namoneas	5,500	3,769	Compact II
Uman Water Supply	Chuuk	S. Namoneas	5,079		Compact II
Tonoas Sewerage	Chuuk	S. Namoneas	3,140	4,272	Compact II
Fefen Sewerage	Chuuk	S. Namoneas	3,000	4,607	Compact II
Common Sewer Outfall	Chuuk	S. Namoneas	2,000	1,963	Compact II
Tol Water Supply	Chuuk	Faichuk	5,500	9,856	Other
Paata Water Supply	Chuuk	Faichuk	4,104		Other
Polle Water Supply	Chuuk	Faichuk	3,500	1,799	Other
Wonei Water Supply	Chuuk	Faichuk	3,778		Other
Eot Water Supply	Chuuk	Lagoon	1,033		Compact II
Fanapanges Water Supply	Chuuk	Lagoon	1,626		Compact II
Romanum Water Supply	Chuuk	Lagoon	1,459		Compact II
Udot Water Supply	Chuuk	Lagoon	1,959	1,040	Compact II
Halls Island Water Supply	Chuuk	Outer Islands	2,175		Compact II
Mortlock Islands Water Supply	Chuuk	Outer Islands	4,150	2,682	Compact II

Table 5.9 Water/Wastewater – Funded or Partially Funded Projects (US\$ '000), Continued

Project	State	Location	Available Funding	Available Amount	Source
Lelu Water Supply	Kosrae	Lelu	5,301	2,437	Other
Malem Water Supply	Kosrae	Malem	4,000	4,029	Other
Tafunsak Water Supply	Kosrae	Tafunsak	3,500	8,941	Other
Utwe Water Supply	Kosrae	Utwe	3,000	2,509	Other
Lelu/Tofol Wastewater	Kosrae	Lelu	6,714		Compact II
Maap-Rumung Water Supply	Yap	Yap Proper	2,904		Other
Gagil-Tomil Water Supply	Yap	Yap Proper	3,786		Compact II
Southern Yap Water Supply	Yap	Yap Proper	2,143		Compact II
Household Septic Tanks	Yap	Yap Proper	968		Compact II
Extension of Ocean Outfall	Yap	Yap Proper	1,714		Compact II
Recurrent Costs					·
Water/Wastewater Maint. Fund	All		7,388	8,605	Com/State
Total:			141,862	94,650	

44

The 2002 IDP report recommended that a Water/wastewater Systems Master Plan and Cost Recovery Study to be conducted on commencement of the IDP period. This was to include final designs for the systems improvements. However, the utility corporations and the funding agencies are generally preparing feasibility studies on a project-by-project basis and detailed design would normally form part of the project cost. This planning activity has therefore been excluded from the IDP.

5.2.6 Institutional Restructuring and Strengthening

Currently in Pohnpei, Yap and Chuuk, public utility corporations have responsibility for both the power and the water sectors. The Kosrae Utilities Authority (KUA) in Kosrae, however, only has responsibility for the power sector. In order to approach commercial sustainability, a part of the institutional restructuring program is to shift overall responsibility for the development and maintenance of the Kosrae water supply and wastewater systems to the KUA. Public utility water divisions on the principal islands and lagoon islands should be commercially sustainable. Kosrae must introduce the concept of charging for water sector services and sector oversight and full maintenance responsibility of KUA.

There is also a need for institutional reform of the CPUC where operation and maintenance of both the power and water sectors has been unsatisfactory and neither sector, especially water and wastewater, has achieved anywhere near commercial sustainability. Institutional reform may include options such as providing the private sector with a management contract to operate and maintain the power, water supply and wastewater systems.

Table 5.10	Water/Wastewater -	 Unfunded P 	rojects	(US\$	(000)	ļ
------------	--------------------	--------------------------------	---------	-------	-------	---

Project	State	Location	Unfunded Amount
Kitti Sewerage System	Pohnpei	Kitti	16,308
Madolenihmw Sewerage System	Pohnpei	Madolenihmw	21,196
Household Sewage Disposal Systems	Pohnpei .	Outer Islands	552
Outer Island water Supply Systems	Pohnpei	Outer Islands	4,844
Ocean Outfall Extension	Chuuk	Weno	3,427
Unman Wastewater System	Chuuk	S.Namoneas	4,888
Paata Sewerage	Chuuk	Outer Faichuks	2,992
Polle Sewerage	Chuuk	Outer Faichuks	4,206
Tol Sewerage	Chuuk	Outer Faichuks	7,113
Wonei Sewerage	Chuuk	Outer Faichuks	2,422
Septic Tanks/Pit latrines	Chuuk	Outer Faichuks	5,241

Table 5.10 Water/Wastewater - Unfunded Projects (US\$ '000), Continued

ornana	ca i τοjecto (σοφ	oooj, continuca
State	Location	Unfunded Amount
Chuuk	Lagoon	2,620
Chuuk	Lagoon	252
Chuuk	Lagoon	494
Chuuk	Lagoon	420
Chuuk	Lagoon	1,108
Chuuk	Lagoon	1,571
Chuuk	Outer Islands	1,269
Chuuk	Outer Islands	2,531
Chuuk	Outer Islands	1,232
Chuuk	Outer Islands	3,976
Chuuk	Outer Islands	771
Chuuk	Outer Islands	1,571
Kosrae	Malem	5,685
Kosrae	Utwe	5,509
Kosrae	Tafunsak	12,014
Yap	Yap Proper	12,825
Yap	Colonia	5,900
Yap	Colonia	10,122
Yap	Yap Proper	10,352
Yap	Yap Proper	10,362
Yap	Outer Islands	1,500
Yap	Outer Islands	1,625
Yap	Outer Islands	1,095
Yap	Outer Islands	817
Yap	Outer Islands	1,633
Yap	Outer Islands	1,095
		171,538
	State Chuuk Chuup Yap Yap Yap Yap Yap Yap Yap Yap Yap Ya	Chuuk Lagoon Chuuk Outer Islands Yap Yap Proper Yap Colonia Yap Yap Proper Yap Yap Proper Yap Yap Proper Yap Outer Islands

5.3 Solid Waste Management

5.3.1 Sector Objectives and Outcomes

- The primary specific objectives of the provision of solid waste management infrastructure are:
- Meet the demand for solid waste infrastructure in an effective and efficient manner
- Evaluate and institute technologically appropriate solid waste management systems
- Reduce volume of solid waste for disposal by maximizing recycling and separation opportunities and by extending the life of equipment and appliances that otherwise add to the solid waste quantities, thereby minimizing the land area required.

Prevent solid waste having adverse effects on the terrestrial and marine environments

5.3.2 Existing Solid Waste Management Systems

There are limited solid waste collection facilities in each of the principal islands of each state and dumpsites are located in the main centers of Pohnpei, Yap and Chuuk and in each municipality of Kosrae. None of these facilities approaches an acceptable landfill. In each state the government has plans to develop a new landfill site, but has been constrained by land and funding availability. The situation is most critical in Chuuk where the current dumpsite is neither secure nor environmentally acceptable and where solid waste of all descriptions is visible in all parts of Weno. Details of the solid waste facilities in each state are described below.

a Pohnpei

- The only solid waste facility on Pohnpei is the dumpsite on Dekethik Island on the east side of the causeway at its northern end. The facility has an operations shed, a battery recovery shed, and separated areas for aluminum can compaction and storage and fuel drum sludge product extraction and storage. The larger potion of the area is used for trash intended for disposal, without recovery efforts. A private company, Pohnpei Waste Management Services (PWMS) provides most trash collection services, although the Kolonia Municipal Government provides collection services for about half the residents and commercial establishments in the town. The State Department of Public Works has had overall responsibility for the sector.
- There is no effective recycling operation, but PWMS is making an attempt to set up recovery operations for aluminum cans, car batteries and oil sludge.

b Chuuk

- The existing solid waste facilities on Chuuk comprise the Fanipat dumpsite on Weno, a small site on Tonoas Island and the Weno Recycling Facility (WRF). The latter has responsibility for collection, compaction and shipment of aluminum cans although it is currently not operating effectively. Responsibility for solid waste management rests with the Department of Public Works.
- The Fanipat dumpsite on Weno Island is on prime land along the island's southwest coast. The site has no fence, no buildings and no personnel. There are also several unofficial dumpsites along Weno roads and abundant uncollected trash, car bodies and derelict equipment all over the island. Trash collection is scheduled three times a week, but is reportedly not reliably operated.

- The official dumpsite on Tonoas Island is near the village of Sampras. It serves a large part of the island and most Tonoas residents deliver their household wastes to the facility.
- On other islands of the lagoon, the absence of roads means that each community generally has its own local dumpsite.

c Kosrae

- The solid waste facilities in Kosrae comprise five dumpsites and aluminum can compaction and storage facility. The dumpsites are:
- Lelu Municipality dumpsite, which is the largest of the five and occupies a
 hillside opposite the KUA power plant. Cover material is available for this
 site, but it should ideally be moved to a bona fide landfill facility. This is
 the only site to have a public collection service. A dump truck is employed
 for roadside collection of trash along the circumferential road, two times per
 week.
- The Tafunsak Municipality dumpsite, a small area located east of the airport and commercial port
- The Malem Municipality dumpsite, a small area located south of the Lelu causeway along the circumferential road
- Very small dumpsites located at Utwe and Walung village.
- In all cases the dumpsites are located near residential and/or administrative areas, none have fences or any evidence of an organized operation.
- There are two more or less satisfactory operations to reduce trash, namely an aluminum can operation and the recovery of oil sludge.
- No state government body is specifically charged with responsibility for solid waste management, but this role is taken on by default by the Department of Public Works. The Kosrae State Government prepared a Solid Waste Management Plan in 1997, but the plan has yet to be implemented. An effort has been made to decentralize responsibility for the sector, and municipal governments have now been empowered to deal with solid waste management at the municipal level.

d Yap

The only Yap solid waste management facility is the Fitkabeetinaem landfill adjacent to the YSPSC power plant west of Colonia. Waste is regularly collected once or twice a week from a wide area by Department of Public Works and Transportation for delivery to the landfill, where it is dumped and compacted. It is estimated that about 60% of the waste generated in Yap Proper being collected.

126 An aluminum can collection operation has been taken on by a local company, the WAAB Transportation Company.

5.3.3 Approach to Solid Waste Management

As a result of the limited land area in FSM, the primary strategy for solid waste management should be to minimize the area needed for landfill. The options are to prevent waste accumulation in the first place, or to divert waste to a process leading to its immediate or eventual reuse. Some limited efforts have already been made to divert wastes from landfills through incineration (hospital waste) or recycling (oil sludge and aluminum cans).

Some approaches to accomplish this are:

- Use policy also to achieve a shift from non-biodegradable trash that is difficult to divert from landfills to other types that are easier to divert.
- Set up an institutional arrangement for reaching agreement on solid waste sector policy, strategy for implementation of policy, and action plans for diversion of solid waste from landfills, and to monitor solid waste prevention and diversion.
- Carry out planning efforts to assist in trash avoidance, diversion, and disposal.
- Establish regulatory and oversight authority and arrangements in the sector, and carry out any necessary institutional development efforts that might be necessary to make responsible government bodies fully effective.
- Enter into appropriate regular trash collection, sorting, and disposal arrangements.
- Select optimal locations for landfills, and enter into satisfactory arrangements for landfill development, operation, monitoring, and eventually closure.
- The FSM also needs to develop an inventory of all the solid waste that could usefully be collected in one-time-only collection efforts, such as partially submerged and barely submerged vessel hulks, derelict road vehicles, derelict containers, derelict construction and maintenance equipment, office equipment, and household appliances like refrigerators and washing machines
- In order to develop these approaches further it is proposed that a Solid Waste Disposal Needs Minimization Study¹⁶ will be prepared to outline policies for solid waste volume reduction and strategies for diverting waste where possible from landfills.

¹⁶ See Annex B, Volume III, Nathan report for TOR for this study

5.3.4 Development Needs during the IDP Period (2004-2023)

a Development on the Principal Islands

New landfill developments are required on each of the main islands. These requirements have been projected for some time in each of the states but with the exception of Pohnpei, where a potential site does appear to be available; land acquisition has been a major constraint. Following completion of the Solid Waste Needs Minimization Study, it is proposed that a Solid Waste Management Landfills Planbe prepared at a time when prospects for reduction in volumes can be assessed and potential sites can be evaluated and confirmed. It is unlikely that due to the time taken for land acquisition that any construction of a new landfill could commence until towards the end of the first five years of the IDP. In the interim period, some rehabilitation of the existing dumpsites, especially in Weno, need to be addressed to contain immediate environmental damage.

b Chuuk Lagoon

- Landfill options for the islands of Chuuk lagoon range from operating a landfill on every inhabited island, to having landfills on none, and moving trash to uninhabited islands. The recommended option that will need to be verified in the Solid Waste Management Landfills Plan is to construct three new landfills on Weno, Fefen and on one of the Outer Faichuk Islands together with trash loading/unloading facilities for small barge accommodation, with trash separation areas at appropriate locations on each island. Trash loading points for small barge accommodation would be provided on the coast of the other inhabited islands.
- The landfill on Weno would also take the Fono and Piis-Paneu trash as well as Weno that on Fefen would serve Southern Namoneas, and that on Faichuk would serve those closely grouped four islands as well as the four inhabited Inner Faichuk Islands.

5.3.5 Proposed IDP Investment Program

The draft IDP completed in 2002 proposed an investment of \$149 million for solid waste management investment over the period 2003-2017^{17.} While this will meet the sector needs as outlined above, it is probably unaffordable given the availability of funding. It is also a high cost for the development required, but assumes the adoption of U.S. Environmental Protection Agency Guidelines for ensuring that landfills have no adverse effects on groundwater and the area surrounding a landfill.

¹⁷ FSM Infrastructure Development Plan FY 2003-FY 2017, May 2002

- A revised capital investment program shown in Table 5.11 has been prepared based on an assumed annual funding from the Compact and other sources for all infrastructure sectors of \$35 million per year. This program reflects the state government priorities for the period 2004 to 2008^{18.} This includes the development of new landfills on the principal islands, but not the full development cost as indicated in the 2002 IDP report. While sufficient land should be purchased to allow full development, the development costs can be incremental. The funding does not allow for development of landfills for the Chuuk lagoon islands (except Weno) and these will either need to be developed through funding in addition to that which can be normally expected or deferred until after the IDP period. Funding outside the Compact is largely envisaged for development of the landfills as these projects should be suitable for at least soft loans, or could be developed by the private sector.
- The IDP also includes an allowance for a National Solid Waste Policy & Recycling Fund, which is a capital fund to assist in the implementation of a solid waste management policy for avoidance of waste and to increase diversion of unavoidable waste from landfills. The Fund will also be used to establish trash diversion activities, such as community composting areas, waste compaction and packing operations, crushing and grinding operations and small reprocessing operations.
- 137 The timing of the projects as shown in Table 5.11 reflects their priority as follows:
- Rehabilitation of the existing Weno dumpsite
- Closure of existing landfill sites in Pohnpei and Yap
- Construction of new landfill sites in each of the four principal islands
- This corresponds to a total sector investment of \$41 million for the period 2004-2023. Projects that were proposed in the May 2002 IDP that either cannot be fully funded during this period or are unable to be commenced are indicated in Tables 5.12 and 5.13.
- 139 The Investment Program includes an allowance of 10% of the infrastructure cost funded by the Compact for maintenance. This cost will be funded 50% through the Compact and 50% by the states.

5.3.6 Institutional Restructuring and Strengthening

140 Currently there is no effective solid waste management in FSM. The State Departments of Public Works have been assigned a waste collection function in each of the four states, and the public utility corporations have some legal

¹⁸ See Annex C for listing of state priorities for 2004-2008

responsibility for the sector (Yap) or are proposed to take on responsibility (Pohnpei).

The 2002 IDP report recommended that the State Environmental Protection Agencies (SEPA) be provided with the responsibility for making solid waste management fully effective throughout the State. It is not proposed to implement this recommendation at this point in time as the SEPA has environmental and regulatory functions that could constitute a conflict of interest. It is recommended that the thrust be to contract out solid waste management to the private sector under the oversight of either the municipalities or the State Public Works. While providing the utility corporations with responsibility may be a long-term solution, for the present it is considered that the corporations should concentrate on their current role of making the power and water/wastewater sectors commercially viable.

5.4 Roads and Pedestrian Facilities

5.4.1 Sector Objectives and Outcomes

- The primary specific objectives of the provision of roads and pedestrian facilities infrastructure are:
- To provide the infrastructure to enable transportation facilities to be adequate in terms of condition, capacity, reliability and safety to enable market opportunities to be realized for all areas of the country, including labor market opportunities, and to enhance the level of integration of state economies and the national economy.
- To meet the demand for road and pedestrian infrastructure in an effective and efficient manner, including concrete/asphalt paving of all primary road systems.
- To incorporate pedestrian walkways in the design and construction of roads
- To complete cross-island road and inner roads to facilitate agricultural and other development.

5.4.2 Existing Road Networks and Pedestrian Facilities

The combined road network length of the four FSM states is approximately 200 miles, of which about 60% is paved. The road networks in each of the four states are briefly described below in Table 5.14

52

Table 5.11 Solid Waste Management – Proposed Project Implementation Schedule (US\$ '000)

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Closure of Existing Landfill in De- kehtik	Pohnpei	Dekehtik				1,018				
Development of New Pohnpei Landfill	Pohnpei	Pohnpei				2,182		2,500	2,500	2,500
Rehab of Existing Landfill	Chuuk	Weno	300	200						
Development of Weno Landfill	Chuuk	Weno					1,000	3,500	2,500	2,500
Development of Kosrae Landfill Closure of Existing Yap Landfill	Kosrae Yap	Lelu Yap Proper						2,500 1,333	2,500	2,500
Development of new Yap Landfill Recurrent Costs	Yap	Yap Proper						4,500	1,838	2,500
Infrastructure Maintenance Fund	All		30	20	0	320	0	133	0	0
Waste Recycling Support Fund	All					50	50	375	750	750
Total:			330	220	0	3,570	1,050	14,841	10,088	10,750

Table 5.12 Solid Waste Management – Funded or Partially Funded Projects (US\$ '000)

Project	State	Location	Available Fundina	Unfunded Amount	Source
			1 unung	Amount	
Closure of Existing Landfill in Dekehtik	Pohnpei	Dekehtik	1,018		Compact II
Development of New Pohnpei Landfill	Pohnpei	Pohnpei	9,682	32,682	Compact/ADB
Rehab of Existing Landfill	Chuuk	Weno	500		Compact II
Development of Weno Landfill	Chuuk	Weno	9,500	13,417	Compact II
Development of Kosrae Landfill	Kosrae	Lelu	7,500	5,836	Compact II
Closure of Existing Yap Landfill	Yap	Yap Proper	1,333		Compact II
Development of new Yap Landfill	Yap	Yap Proper	8,838	4,500	Compact II
Infrastructure Maintenance Fund	All [.]	• •	503	5,644	Com/State
Waste Recycling Support Fund	All		1,975	,	Compact II
Total:			40,849	62,079	•

Table 5.13 Solid Waste Management – Unfunded Projects (US\$ '000)

Project	State	Location	Unfunded Amount
Southern Nanomeas Landfill Faichuk Landfill Chuuk Lagoon Collection System Total	Chuuk Chuuk Chuuk	S. Namoneas Outer Faichuk Lagoon	15,567 18,638 11,217 45,422

Table 5.14 Existing Road Network

Table 5.1	14 Existing F	Road Network		
State	Road Class.	Extent	Condition	Defects
Pohnpei	Primary	Circumferential Road	Paved – 20 year life span	Lack of roadside maintenance; Lack
		Paved 33 miles	Unpaved –	of drainage; Poor asphalt mix design;
		Unpaved 15 miles	poor/very poor	Unsafe/narrow bridges
Dohanoi	Casandani	Dekehtik Cause- way Paved 39 miles	Variable payed	Lack of roadside
Politipei	Roads		Variable - paved roads generally	maintenance
		Unpaved 12 miles	fair to good	Lack of drainage
		Coral roads		Poor asphalt mix design
Pohnpei	Kolonia Urban Streets	Major streets AC Minor streets PCC	PCC surface streets need major repail Edge cracking of AC roads	s Lack of drainage r Lack of maintenance of culverts Edge cracking of AC roads Broken pavement on PCC roads
Chuuk	Weno Circum- ferential Road	Paved 7 miles Unpaved 4.5 miles No road 2 miles	Very poor with majo cracking and large potholes	r Lack of drainage lead- ing to road failure No continuous road shoulders or side- walk
Chuuk	Tonoas Circumferen tial Road	Unpaved with coa - sub-base	Partly very good, partly very poor	No roadside drainage or maintenance; Seawall damaged by coastal erosion

Table 5.14 Existing Road Network, Continued

		F. Level		Difficulty
State	Road Class.	Extent	Condition	Defects
Kosrae	Primary Roads	Circumferential Road Paved 19 miles Unpaved 6 miles No road 6 miles Airport Access Road Paved 1.2 miles Lelu Causeway Paved	airport access	Lack of pedestrian facilities on Lelu Causeway
Kosrae	Secondary Roads	Paved 3 miles Unpaved 2 miles	Generally satisfac- tory	Undefined road shoul- ders on unpaved roads
Yap	Primary Roads	North-South Road Paved 14 miles Unpaved 5 miles Yap Central Loop Paved 9 miles Tomil Main Road Unpaved 3 miles Gagil Main Road Paved 0.3 miles Unpaved 3.6 miles	Paved roads generally in good condition with good road shoulders Unpaved sections of Tomil and Gagil roads have poor drainage and potholes.	Lack of drainage on unpaved roads Some cracking and raveling Colonia bridges se- verely corroded
Yap	Secondary Roads	Unpaved 15 miles	Variable, but generally fair to good.	Some lack shoulders and effective drainage.

- Aside from the road networks indicated in the above table, the islands in Chuuk lagoon have footpaths connecting the coastal villages. Roads on Tol and Uman have now deteriorated to the state where they serve as footpaths rather than roads. Some outer islands have roads that are now in a seriously deteriorated condition. The outer islands of Woleai and Ulithi in Yap have motor vehicles. The road transport on Woleai is basically wheel tracks that encircle the island. On Ulithi, the road pavement consists of a sub-base layer of coral material.
- Pedestrian facilities are very limited in the FSM, with the exception of unimproved trails on the principal islands.

5.4.3 Short Term Needs of Existing Road Networks

A key strategic objective of this IDP is to ensure that existing infrastructure is rehabilitated as a first priority before implementation of new infrastructure. The immediate needs for rehabilitation of existing road network are discussed below.

a Pohnpei Road Network

The Pohnpei Island circumferential road is in critical condition where it remains unpaved (14.5 miles) and is, for the most part, in unsatisfactory condition where it is paved. Lateral drainage is mostly absent, as are properly shaped road shoulders. The AC pavement, which theoretically should have a life measured in decades in FSM, because of the low volumes of heavy vehicle traffic, is deteriorating in many locations due to standing water on the road surface. No construction work should proceed on this road until the road is adequately designed to include super-elevation on curves, cross-fall, properly shaped shoulders that are not elevated above the pavement edge, and lateral drainage, preferably lined for permanence.

b Weno Road Network

The Weno Island circumferential road is in critical condition. The west coast segment of the road, however, probably should be shifted inland to allow for desirable development of the commercial port area, a fishing port, two separate ferry terminals for a lagoon ferry operation and for larger, outer island ferries, a small boats basin, and a recreational wharf, with related tourism facilities. A plan will need to be prepared for redevelopment of the entire waterfront area, which means that this segment of the Weno circumferential road might be designed and reconstructed in 2005 or 2006 after the completion of this plan. Work can get underway earlier on other portions of the road, including construction of the missing two-mile segment through a mangrove swamp area. Past inadequate attention to drainage is responsible for the current critical state of the road, and any new construction effort must ensure that drainage will be entirely adequate.

c Yap Road Network

The critical needs of the Yap Proper road network are limited to the replacement of two short, under-strength bridges in Colonia. Otherwise, upgrading of the surface of the trunk road to AC pavement standard is desirable. The desirability of this project, however, is not based on any identified inadequacy of the trunk road, which is kept in well-maintained condition. Rather, pavement upgrading is desirable to reduce road maintenance requirements, and particularly the need for large quantities of crushed coral to keep a low-standard surface in satisfactory operating condition.

d Kosrae Road Network

150 The Kosrae road sector has no critical needs, although it is desirable that the seven miles of circumferential road awaiting paving be paved before deterioration of the unpaved road sets in. The Kosrae State Government considers that extension of the road to Walung (requiring 3.2 miles of new construction) is critical, but the Walung residents themselves seem less concerned with

ending their isolation. Nevertheless, whenever the paving project is implemented, it would be logical to extend the road end from its current location to a Walung village access road.

5.4.4 Development Needs during the IDP Period (2004-2023)

a Principal Islands

i Pohnpei

- Rehabilitation of the paved circumferential road and upgrading of the unpaved section will be commenced as an early priority project and will be continued incrementally during the course of the IDP depending on available funding. This program will include the provision of adequate drainage, road shoulders along the entire length of the road and replacement of the road's 62 old, narrow bridges. The Japanese Government will be providing assistance for this road upgrading starting 2004.
- 152 Improvement of urban street networks and traffic control infrastructure in Kolonia will also be required during the initial five years of the IDP and at later intervals during the IDP period.

ii Chuuk

- Upgrading of the Weno circumferential road will be commenced as an early priority project and will be continued incrementally during the course of the IDP dependent on available funding. The road alignment of the middle portion of the west coast section will need to be changed as discussed above. This is an urgent project, but the construction of the middle portion of the west coast section will need to wait for completion of the Weno Island Waterfront Redevelopment Plan in order that its alignment can be established.
- Improvement of urban street networks and traffic control infrastructure in the urban center will also be required during the initial five years of the IDP and at later intervals during the IDP period.

iii Kosrae

155 Completion and upgrading of the Kosrae circumferential road will be commenced as an early priority project and will be continued throughout the course of the IDP. Improvements to the Lelu causeway to provide adequate pedestrian access will also be completed during the initial five years of the IDP.

iv Yap

Aside from the reconstruction of the two bridges in Colonia that will be completed as an early priority project, upgrading of the North-South Trunk road to bring the road to good AC pavement standard will be completed during the IDP period.

b Pedestrian Facilities

Development of improved pedestrian facilities such as sidewalks, bicycle/pedestrian paths, trails and boardwalks are also required in each of the principal islands to improve pedestrian safety and enhance the tourism experience generally. However, it is difficult at this stage to identify funding to enable these works to be completed to the level envisaged in the 2002 IDP report. Sidewalks in urban areas should be funded as part of the road network.

c Chuuk Lagoon Road Network Requirements

- Aside from Weno Island, there are other islands in the Chuuk lagoon that require road network development, although some of the islands are too small for motorized vehicles to be useful. The Chuuk State Government development plan¹⁹ indicates that eleven islands, in addition to Weno and Tonoas, could be usefully provided with a road.
- The Outer Faichuk Islands comprising Tol, Polle, Wonei and Paata are so closely grouped that a single continuous circumferential road with length of approximately 40 miles can be provided. The connection between Wonei and Paata will, however, require a causeway. This road, together with an electric power system, is essential for economic development of these islands.
- The current rehabilitation of the Tonoas circumferential road should be upgraded to an AC paved road with appropriate drainage and road shoulders.
- The existing circumferential road in Fefen is in very poor condition and is impassable in places due to erosion. This road should be upgraded to a two-lane AC paved road with appropriate drainage and road shoulders. Fefen has considerable tourism potential and has the potential to supply the tourism industry with fresh flowers, fruits and vegetables. The road is also needed for the Southern Namoneas landfill facility, proposed to be established on the island as discussed in Section 5.3
- 162 Uman Island has essentially a circumferential footpath and it is recommended to upgrade this to a two lane paved AC road with appropriate drainage and road shoulders.
- Short unpaved roads of two or three miles in length are recommended for the lagoon islands of Fanapanges, Romanum, Parem and Etten, but it is unlikely that funding will be available for these works during the IDP period.

¹⁹ Chuuk State Infrastructure Development Plan (2001-2020)

5.4.5 Proposed IDP Investment Program

- The 2002 IDP report proposed an investment of \$292 million for road network and pedestrian facility investment over the period 2003-2017²⁰. While this will meet the sector needs as outlined above, it is probably unaffordable given the availability of funding. A revised capital investment program shown in Table 5.15. has been prepared based on an assumed annual funding from the Compact and other sources for all infrastructure sectors of \$35 million per year. This program reflects the state government priorities for the period 2004 to 2008²¹. The program includes the upgrading of circumferential roads in the principal island of all four states although completion of this upgrading may require additional funds than those, which have in the past been available to FSM.
- Upgrading and construction of roads in Tonoas, Fefen, Tol, Paata, Polle and Wonei will also be undertaken although not all can be completed within the IDP period with the available funding.
- It is proposed that a Primary Roads Master Plan²² be prepared to develop feasibility studies for the proposed primary road networks that are proposed to be funded under the IDP including those in the Chuuk lagoon island. These feasibility studies will be required to obtain funding for many of these projects. Detailed design activities should, however be funded as part of the construction cost.
- A Weno Island Waterfront Redevelopment Plan should also be prepared in coordination with the Primary Roads Master Plan. This will provide guidance on the alignment of the Weno west coast road by establishing the most appropriate location for marine facilities on the island. Further, the Japanese Government is proposing to support the improvement of the harbor facilities in Weno starting 2006, and completion of the redevelopment plan would be timely to focus this investment as part of an integrated port development.
- The timing of the projects as shown in Table 5.15 reflects their priority as follows:
- Upgrading of Weno West Coast Road
- Reconstruction of bridges in Colonia, Yap
- Rehabilitation and upgrading of circumferential road in Pohnpei, including rehabilitation of bridges and drainage
- Construction of new circumferential road and damaged seawall in Kosrae

²⁰ FSM Infrastructure Development Plan FY 2003-FY 2017, May 2002

²¹ See Annex C for listing of state priorities for 2004-2008

See Annex B, Volume 3, Nathan report for TOR for this study

- Upgrading of North-South Trunk Road in Yap
- Rehabilitation of Tonoas circumferential road
- Construction of cross-island road in Kosrae
- Street lighting and road appurtenance improvements in Kolonia, Pohnpei
- Upgrading of circumferential road in Kosrae
- Construction of Fefen circumferential road
- Construction of Faichuk circumferential road
- This corresponds to a total sector investment of \$124 million for the period 2004-2023. Projects that were proposed in the May 2002 IDP that either cannot be fully funded during this period or are unable to be commenced are indicated in Tables 5.16 and 5.17. These projects for which funding has not been identified include proposed primary road construction in the Inner Faichuk Islands, secondary road construction and improvements in all four states, the Dekehtik causeway improvements, and pedestrian facilities in all four states,
- 170 The Investment Program includes an allowance of 10% of the infrastructure cost funded by the Compact for maintenance. This cost will be funded 50% through the Compact and 50% by the states.

5.4.6 Institutional Restructuring and Strengthening

- 171 There are three types of institutional reform that are needed in the roads and pedestrian facility sector:
- The public body responsible for roads should become a sector manager, rather than a construction organization. Road design and construction should be outsourced to the private sector.
- Road and pedestrian facility maintenance should be funded through dedicated funds created for the purpose.
- A mechanism for shifting all road and pedestrian facility construction and maintenance work to the private sector must be created.

Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000)

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Rehab Paved Circumferential Road	Pohnpei			500		1,000	3,175	3,175	3,500	Other
Upgrade Unpaved Cir- cumf. Road	Pohnpei	6,000	4,500							Other
Primary Roads Drainage	Pohnpei/Kolonia					800		596	1,078	Other
Primary Roads Bridges	Pohnpei/Kolonia			500			295		ŕ	Other
Provide street lighting, traffic lights etc	Pohnpei/Kolonia			300			415			Other
West Coast Road	Chuuk/Weno	2,000	1,500	1,000	1,556	1,256				Compact II
Upgrade/Complete Cir- cumf. Road	Chuuk/Weno						1,500	1,500	1,500	Other
Bridges/Water Crossing Structures	Chuuk/Weno						1,180	1,180	1,142	Other
Weno Road Appurte- nances	Chuuk/Weno			256			169			Compact II
Tonoas Circumferential Road	Chuuk/S. Namonea	S		800	1,000	500	2,000	1,565		Compact II
Tonoas Water Crossings	Chuuk/S. Namonea	s					750	750		Compact II
Fefen Circumferential Road	Chuuk/S. Namonea	S				500	1,298	1,298	1,500	Compact II
Fefen Water Crossings	Chuuk/S. Namonea	S					686	500		Compact II
Paata Primary Road	Chuuk/Faichuk							2,000	1,500	Compact II

Table 5.15 Roads/Pedestrian Facilities – Proposed Project Implementation Schedule (US\$ '000), Continued

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Polle Primary Roads Tol Primary Roads	Chuuk/Faichuk Chuuk/Faichuk						1,000	2,000 2,500	1,500 2,500	Compact II Compact II
Wonei Primary Roads	Chuuk/Faichuk						500	1,000	1,000	Compact II
Wonei/Paata Causeway	Chuuk/Faichuk							1,000	912	Compact II
Water Crossings	Chuuk/Faichuk						500	1,500	1,500	Compact II
Upgrade Circumferential Road	Kosrae					1,500	2,000	1,500	1,917	Compact II
New Circumferential Road Constr.	d Kosrae	600	600	600			2,500	2,500	2,500	Com/Other
Lelu Causeway Widening	Kosrae	125							1,000	Compact II
Circumferential Road - Seawall	Kosrae	240			1,000					Com/Other
Upgrade Secondary Roads	Kosrae	85		795	1,200				1,000	Compact II
Water Crossings - New Roads	Kosrae					500	1,000	700		Other
Bridge Reconstruction	Yap/Colonia		1,500							Compact II
Trunk Road Upgrading	Yap			2,956		3,115	2,500	2,500	2,500	Com/Other
Recurrent Costs										
Road Maintenance Fund Total:	All	305 9,355	360 8,460	641 8,348	476 5,232	687 9,858	890 22,358	1,561 29,325	1,433 27,982	Com/State

Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000)

Project	State	Location	Available	Unfunded	Source
			Funding	Amount	
Rehab Paved Circumferential Road Upgrade Unpaved Circumf. Road Primary Roads Drainage	Pohnpei Pohnpei Pohnpei	Pohnpei Pohnpei Kolonia	11,350 13,502 2,474	1,588 4,217	Compact/Other Other Other
Primary Roads Bridges	Pohnpei	Kolonia	795		Compact II
Street lighting, traffic lights, etc.	Pohnpei	Kolonia	715		Compact II
West Coast Road Upgrade/Complete Circumf. Road Bridges/Water Crossing Structures	Chuuk Chuuk Chuuk	Weno Weno Weno	7,312 4,500 3,502	3,308 4,426	Compact II Other Other
Weno Road Appurtenances	Chuuk	Weno	425		Compact II
Tonoas Circumferential Road	Chuuk	S. Namoneas	5,865		Compact II
Tonoas Water Crossings Fefen Circumferential Road Fefen Water Crossings Paata Primary Road Polle Primary Roads Tol Primary Roads Wonei Primary Roads Wonei/Paata Causeway	Chuuk Chuuk Chuuk Chuuk Chuuk Chuuk Chuuk Chuuk	S. Namoneas S. Namoneas S. Namoneas Faichuk Faichuk Faichuk Faichuk Faichuk Faichuk	1,500 4,596 1,186 3,500 3,500 6,000 2,500 1,912	1,025 5,178 1,419 1,377 5,438 9,960 1,953	Compact II
Water Crossings	Chuuk	Faichuk	3,500	7,120	Compact II

64 FSM Infrastructure Development Plan

Table 5.16 Roads/Pedestrian Facilities – Funded or Partially Funded Projects (US\$ '000), continued

Project	State	State Location		Unfunded	Source	
			Funding	Amount		
Upgrade Circumferential Road New Circumf. Road Construction Lelu Causeway Widening Circumferential Road - Seawall Upgrade Secondary Roads Water Crossings - New Roads Bridge Reconstruction	Kosrae Kosrae Kosrae Kosrae Kosrae Yap	Kosrae Kosrae Lelu Kosrae Kosrae Kosrae Colonia	6,917 9,300 1,126 1,242 3,083 2,200 1,500	417 10,309 981 2,298 2,735 2,213	Compact II Compact/Other Compact II Compact II Compact II Compact II Compact II	
Trunk Road Upgrading Recurrent Costs	Yap	Yap	13,571	4,515	Compact II	
Road Maintenance Fund Total:	All		6,504 124,077	7,048 77,525	Compact/State	

It is important that a high standard of design and construction is maintained for the road network, together with an effective and well-funded maintenance program. Under these circumstances, there will never be the need for a road sector development program of the magnitude of that included in the IDP. With the implementation of the IDP program, road capacity will be perpetually sufficient on most islands.

Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000)

Table 5.17 Hoads/i edestilani	aciiilics Oi	nunucu i rojecta	(664 666)
Project	State	Location	Unfunded Amount
Pohnpei Secondary Roads	Pohnpei	Pohnpei	6,181
Secondary Road Drainage	Pohnpei	Pohnpei	739
Secondary Road Bridges	Pohnpei	Pohnpei .	465
Dekehtik Causeway Upgrade	Pohnpei	Pohnpei .	4,992
Lidakihka Road Upgrade	Pohnpei	Pohnpei	1,634
Off-road bicycle paths	Pohnpei	Pohnpei	2,230
Pedestrian trails	Pohnpei	Pohnpei .	1,104
Sidewalks/boardwalks	Pohnpei	Pohnpei	1,363
Lagoon/Outer Island facilities	Pohnpei	Outer Islands	578
Pedestrian Trails	Chuuk	Weno	307
Tonoas Secondary Roads	Chuuk	S. Namomeas	2,370
Tonoas Pedestian Facilities	Chuuk	S. Namomeas	307
Fefen Pedestrian Facilities	Chuuk	S. Namomeas	839
Paata Secondary Roads	Chuuk	Faichuk	192
Polle Secondary Roads	Chuuk	Faichuk	878
Tol Secondary Roads	Chuuk	Faichuk	1,323
Wonei Secondary Roads	Chuuk	Faichuk	165
Pedestrian/Bicycle Facilities	Chuuk	Faichuk	1,569
Etten Primary Roads	Chuuk	Lagoon	931
Fanapanges Primary Roads	Chuuk	Lagoon	2,707
Romanum Primary Roads	Chuuk	Lagoon	1,608
Udot Primary Roads	Chuuk	Lagoon	7,107
Unman Primary Roads	Chuuk	Lagoon	4,230
Parem Primary Roads	Chuuk	Lagoon	2,369
Etten Secondary Roads	Chuuk	Lagoon	384
Udot Secondary Roads	Chuuk	Lagoon	658
Romanum Secondary Roads	Chuuk	Lagoon	110
Water Crossings/Road Appurte- nances	Chuuk	Lagoon	6,756
Pedestrian Trails	Chuuk	Lagoon	4,028
Pedestrian/Bicycle Facilities	Chuuk	Outer Islands	1,982

Table 5.17 Roads/Pedestrian Facilities – Unfunded Projects (US\$ '000), continued

Project	State	Location	Unfunded Amount
Upgrade Bridges and Culverts	Kosrae	Kosrae	1,773
Water Crossings	Kosrae	Kosrae	4,413
Bicycle Paths	Kosrae	Kosrae	1,569
Pedestrian Trails	Kosrae	Kosrae	736
Sidewalks and Boardwalks	Kosrae	Kosrae	682
Secondary Road Upgrading	Yap	Yap Proper	8,667
Coastal Road Protection Structures	Yap	Yap Proper	2,124
Bicycle Paths	Yap	Yap Proper	909
Hiking Trails	Yap	Yap Proper	623
Sidewalks and Boardwalks	Yap	Yap Proper	1,136
Outer Island Pedestrian Facilities	Yap	Outer Islands	1,487
Total			78,044

5.5 Maritime Transportation

5.5.1 Sector Objectives and Outcomes

173 The primary specific objectives of the provision maritime transportation infrastructure are:

- To provide the facilities necessary to enable market opportunities to be realized for all areas of the country, including labor market opportunities, and to enhance the level of integration of state economies and the national economy.
- To realize the fisheries potential of all four states of the FSM in a manner that ensures sustainability of that sector
- To provide improved dock facilities to meet both fisheries and commercial shipping needs
- To facilitate the provision of modern, safe and efficient inter-state and interisland passenger and cargo vessels
- To continue to coordinate and facilitate the improvement of aids to navigation

5.5.2 Existing Maritime Transportation Systems

FSM is a maritime nation, with a long tradition of maritime transportation and exploitation of marine resources. Much of the country's tourism potential derives from the variety of marine recreational activities that can eventually be offered in each of the four states, especially in the lagoons and encompassing reefs of the principal islands. The FSM maritime sector must be developed to adequately serve international trade, inter-island trade and person movements,

the fishing industry, and recreational activities for both FSM residents and visiting tourists. Currently, most of these objectives are not being fully achieved by the maritime sector.

a Commercial Ports

175 The four major ports in the four states are more-or-less adequate in that they have adequate capacity to meet current demand, and the physical condition of their principal infrastructure is quite satisfactory. The situation at each of the principal ports is briefly discussed below.

b Dekehtik Port, Pohnpei

The port is owned and operated by the Pohnpei Ports Authority (PPA). The port has a 323-meter quay, part of which is leased by Caroline Fisheries. Commercial port operations are constrained therefore along the quay, but also behind it by an old, fairly large hotel, which is located where, open or covered storage areas ought to be. There is an area of 1.8 acres for container open storage however, and there are two transit sheds in reasonably good condition with a combined capacity of about 1700 square feet of floor space.

177 The port's critical problem is its entrance channel, which is narrow and shallow at places making it necessary for large vessels to weave entering into and leaving the harbor. If one of these vessels sinks or grounds, the port will be unusable to commercial shipping for a considerable period.

c Weno Port, Chuuk

178 Weno Port is located on the west coast of Weno Island. There is fairly deep water almost up to the shore, so there is no need for a marked entrance channel to the port. This openness to the sea, however, is also a disadvantage to port operations. Rough water in the port area occurs fairly frequently, making the rubber fenders along the quay face essential for prevention of damage to both the quay and vessels at berth. The quays are in good condition, with a portion of the quay being relatively new. The port has no perimeter fence and essentially no security whatever. An estimated 35 percent of the port area is unusable for operations because it is strewn with derelict vehicles, containers, other equipment, and scrap metal and uncollected cargo. The warehouses have not been maintained, and are in such bad shape that replacement, rather than rehabilitation, is warranted. Besides having at least one-third of its cargo handling and storage areas unavailable for operations, two of the port's vessel berths are occupied for prolonged, indefinite periods, by the two vessels assigned to Chuuk State for serving the outer islands.

d Okat Port, Kosrae

Okat Port is a natural harbor on the northwest coast of Kosrae. Kosrae Terminal & Stevedoring Company (KT&SC) has operated the port since it was

built in 1984. The port has a quay 168 meters in length with alongside water depth of approximately 9.1 meters. The quay apron is approximately 19 meters in width, and in very good condition. Behind a portion of this apron is a sizable building that belonged to Pacific Tuna Industries (PTI), until PTI ceased operation in January 2001. The exterior of this building is in quite good shape, but the interior is in poor condition, although its flash freezing system is still in working order. The port also has nearly two acres for container open storage, a warehouse of 1,050 square meters floor space, and eight refrigerated container (reefer) plugs. An Okat Port improvement project, financed by the Japanese Government, was completed in February 2001, so the port is generally in good condition. Philippines, Micronesia & Orient Navigation Company (PM&O) and Kyowa Shipping Company (KSC) have been serving the port, with PM&O calling every 21 days and KSC calling once a month. The quay is adequate for serving only one of these vessels at a time, but, considering the call frequency, that is sufficient. The port entrance channel is approximately 0.85 mile in length, and has good water depth along its centerline, but might desirably be widened somewhat, as the PM&O vessels approach the maximum size that can safely negotiate the channel.

e Yap Port

180 Yap Port is located on the Colonia Peninsula extending into Tamil Bay. Currently the port is administered by the Department of Public Works and Transportation, but legislation has been considered to establish a Yap State Port Authority (YSPA). The quay has an old, 140-meter section, at the northwest end, and a 112-meter section was added in the 1990s. The 112-meter section was constructed as the first phase of a port master plan, but then in contravention of that plan, a fisheries investor was permitted to construct a refrigerated warehouse of 2,730 square meters of floor area just 25 meters from the face of the new shipping berth. The existence of this facility, currently unused, has severely disrupted container handling and storage operations at the port. Waab Stevedoring Company leases the old section of the quay, and performs most cargo-handling services. PM&O, Kyowa, Kambara Lines, and Palau Shipping call at the port. The port entrance channel is about 2.25 miles in length, and sections of the channel pose navigation difficulties because of narrowness, a 40degree turn, reef outcroppings posing navigational hazards, and a swift current, and the turning basin is fairly small (diameter of around 400 meters). To dock at the commercial pier, a vessel must make a 70-degree turn to starboard, and do this by pivoting off the anchor.

f Small Ports

Most of the Chuuk lagoon islands do not have an adequate dock to accommodate ferries. Most islands had a useful dock during the Japanese administration, but these facilities are now mostly in advanced stages of deterioration. The islands of Tonoas, Fefen, and Romanum have adequate docks, however,

and both Uman and Etten have docks that could be satisfactorily rehabilitated for ferry accommodation.

The outer islands are virtually bereft of dock facilities and at present, loading/unloading operations are generally hazardous. Potential does, however, exist for making the operations at most islands much less hazardous.

g Domestic Shipping Services

- Domestic shipping services are largely limited to services being provided to the outer islands by the Pohnpei, Chuuk and Yap State Governments, National Government interstate services, primarily cargo services, and what might be characterized as "emergency services" being provided to the Chuuk State outer islands by a variety of privately-owned and operated vessels.
- The four vessels being used by the state governments were all constructed in the 1977-1978 period. The vessels have lifeboat capacity for 125 persons but reportedly the total often exceeds that number. Because of its large population and several groups of outer islands, Chuuk State uses two vessels, the Micro Dawn and the Micro Trader. Yap State employs the Micro Spirit while Pohnpei State uses the Micro Glory.
- Both of the vessels operated by the Chuuk State Government are sitting for indefinite periods at the Weno commercial port, awaiting engine repairs.
- The vessel operated by the Yap State Government and the vessel operated by the Pohnpei Government underwent, in 2000 and 2001, respectively, major repair and rehabilitation efforts, and therefore are once again able to keep fairly regular service schedules.

h Fisheries Facilities

- As discussed above, fisheries facilities in the new section of Yap Port and at Dekehtik Port are causing problems for the container-handling operations at those ports. At Okat Port in Kosrae, the quay is satisfactory for commercial shipping operations due to the reduced numbers of fishing vessels at the port. At Weno Port, a fisheries equipment maintenance operation contributes to commercial shipping space constraints at the port. In Yap, Pohnpei, and Chuuk States, the fisheries sector also has dedicated facilities, as briefly discussed below.
- 188 Yap State has the most extensive fisheries port in FSM and the port is operationally separate from the commercial port, which constitutes an advantage for both facilities. The fisheries port facilities are generally in good condition, and adequate in design and capacity.
- Weno has a fisheries pier that is also separate from the commercial port. The quay is in satisfactory condition, but requires new fenders to prevent damage to the quay and fishing vessels. The pier and its related facilities are

adequate for current demand, although a more vibrant and varied fisheries industry in Chuuk State would require a more developed fisheries port.

The new 100-meter dedicated fisheries quay at Dekehtik Port will hopefully make possible removal of some or even all of the fisheries operations along what should be the commercial shipping quay. Whereas the new quay will probably be sufficient to serve off-loading fishing vessels, it is unclear that a good balance is being provided between off-loading capacity, and processing, packing, and storage capacity.

5.5.3 Short Term Needs of Existing Systems

A key strategic objective of this Infrastructure Development Plan is to ensure that existing infrastructure is rehabilitated as a first priority before implementation of new infrastructure. The immediate needs for improvement of the ports in each state discussed below.

a Dekehtik Port, Pohnpei

- The most urgent need is the improvement of the Dekehtik port entrance channel. This should be preceded by a hydrographic survey of the entrance channel and turning basin in order to define a desirable dredging program for the area.
- 193 The Pohnpei Port also needs to reclaim the commercial key for cargo purposes, shifting all fisheries port operations to the new, dedicated quay for fisheries. The space behind the apron, partly occupied by a hotel needs to be secured by PPA to ensure that the two-berth commercial quay will have adequate open storage space for container handling operations.

b Weno Port, Chuuk.

Weno Port needs in the short term to: raze existing warehouses; clean up the entire port area; remove a fisheries equipment maintenance operation from the port; build a security fence and establish effective security in the port, including removal of squatters and a commercial food service establishment; provide new warehousing, probably requiring less area than at present; and end disabled government vessel occupation of two commercial berths.

c Okat Port, Kosrae

Okat Port needs to convert the large building, formerly owned by PTI, to cargo storage area usable for port operations. The PTI building is immediately behind the apron, and could be used for stuffing and emptying of containers, as well as for storage of commodities, including Kosrae citrus fruit

d Yap Port

196 Yap Port can be made more efficient by destroying the fisheries structure constructed behind the new portion of the commercial quay. This building

is not being used by the fisheries industry, in any case, and has serious disruptive efforts on container handling and storage operations at the port.

5.5.4 Development Needs during the IDP Period (2004-2023)

a Commercial Ports

In the long term, both fisheries operations and passenger service operations should be entirely removed from the commercial ports so that much of the long-term capacity requirements can be obtained simply by freeing up existing space. The short-term improvements discussed in the previous section will help make the four ports much more efficient than they presently are and accommodate a higher throughput without any significant further investment during the IDP period.

b Fisheries Port Development

i Pohnpei

The new quay dedicated to fisheries will not be sufficient in the long term and a second phase expansion will be required with sufficient room behind the quay face for all necessary fish processing and storage facilities, and for vessel and fishing equipment maintenance areas. This, however, may not be able to be funded during the IDP period under the current foreseeable funding constraints.

ii Chuuk

The Weno fishing port currently serves only longliners and needs to be redeveloped to serve the entire fisheries industry. Other islands in the lagoon also have needs for fishing ports, although development of ferry services in the lagoon will make it unnecessary for each island to have its own fishing port. Again funding constraints may result in this expansion not proceeding during the IDP period.

iii Kosrae

200 Kosrae is not expected to require any development of its fishing ports during the IDP period

iv Yap

The Yap State Government is implementing a long-term port master plan that includes fisheries port development. A new fisheries wharf, cold storage facility as well as major fish processing and packing facilities are proposed, but funding needs to be identified.

v Chuuk Lagoon Ferry Services

To integrate the economy of Chuuk lagoon, it is essential to establish an adequate ferry service, providing safe, reliable service connections among the

inhabited islands. The principal ferry terminal for this system will be on the Weno west coast. This facility will be part of the redevelopment of the Weno waterfront that will be envisaged in the Weno Island Waterfront Development Plan described in Section 5.4. The Japanese Government is also proposing to provide assistance to improvement of the Weno waterfront area commencing in 2006.

Once the Weno terminal is established, renovation of the existing docks in Tonoas and Fefen will equip them for regular accommodation of inter-island ferries. Both Tonoas and Fefen will require second terminals located diagonally across the islands to minimize ferry trip distances from different directions. The smaller island of Romanum has an adequate dock, whilst the islands of Etten and Uman have docks that can be made adequate through rehabilitation.

The four closely grouped Outer Faichuk Islands will require three terminals, with the islands of Paata and Wonei being jointly served by a terminal along the planned causeway between them. New ferry docks will need to be provided on the islands of Parem, Siis, Udot, Fanapaanges, Fono and Piis-Paneu.

vi Outer Island Ferry Services

Improvement of maritime transportation services to the outer islands of Pohnpei, Chuuk and Yap states involves:

- For some inhabited islands, where appropriate, improvement of access to the lagoons by dredging. This would need to be preceded by hydrographic survey and mapping activities to define the dredging programs.
- Construction of dock facilities on one or more inhabited island of an atoll, where accessible and where direct service by ocean-going vessels is realistically possible
- In cases where the atoll lagoon is not accessible, an anchored detached and floating dock can be constructed to assist with the transfer of passengers and cargo from ocean-going vessels to small boats
- Construction of fuel stations on Nukuoro, Puluwat, Satawan, Onoun, Ulithi and Woleai to fuel outer island ferries on their longer routes
- On the principal islands in each of the three states, construction of separate outer island ferry terminals apart from the commercial port operations
- After completion of hydrographic and dredging activities, a navigational aids program to improve the safety of the outer island ferry services.

5.5.5 Proposed IDP Investment Program

The 2002 IDP report proposed an investment of \$235 million for maritime transportation system investment over the period 2003-2017²³. While this will meet the sector needs as outlined above, it is probably unaffordable given the availability of funding. A revised capital investment program shown in Table 5.18. Has been prepared based on an assumed annual funding from the Compact and other sources for all infrastructure sectors of \$35 million per year. This program reflects the state government priorities for the period 2004 to 2008²⁴. The program includes immediate investment requirements for commercial ports in Pohnpei, Weno, and Yap, commencement of dredging programs at Dekehtik Port, Yap Port and the Pohnpei outer islands and development of ferry systems for Chuuk lagoon and the outer islands of Pohnpei, Chuuk and Yap through the construction of ferry terminals and docks.

207 It is proposed that a Maritime Transportation Development Plan²⁵ be prepared to prepare feasibility studies for the projects proposed to be funded under the IDP. This would be preceded by a hydrographic surveying and mapping effort to define the required dredging programs. Detailed design activities should, however be funded as part of the construction cost.

- The timing of the projects as shown in Table 5.18 reflects their priority as follows:
- Construction of dock and ferry terminal at Colonia for outer island ferry services
- Construction of dock and ferry terminals on Weno, Southern Namoneas and Faichuk for Chuuk lagoon and outer island ferry system
- Short –term improvements for commercial ports in each of the four states
- Construction of dock and ferry terminal at Dekehtik Port for outer island ferry services
- Dredging programs for Dekehtik and Yap Ports and Pohnpei outer islands

This corresponds to a total sector investment of \$89 million for the period 2004-2023. Projects that were proposed in the May 2002 IDP that either cannot be fully funded during this period or are unable to be commenced are indicated in Tables 5.19 and 5.20. These projects for which funding has not been identified include proposed completion of dredging programs in Pohnpei and Yap Ports, completion of the Chuuk lagoon ferry terminals and facilities for the outer island ferry services in Pohnpei, Chuuk and Yap as well as improvements

²³ FSM Infrastructure Development Plan FY 2003-FY 2017, May 2002

See Annex C for listing of state priorities for 2004-2008

²⁵ See Annex B, Volume 3, Nathan Report for TOR for this study.

to the fisheries facilities at ports in Pohnpei, Chuuk and Yap. For the latter, investment from the private sector may be sought given the likely shortfall in other sources of funding for these developments.

The Investment Program includes an allowance of 10% of the infrastructure cost funded by the Compact for maintenance. This cost will be funded 50% through the Compact and 50% by the states. An additional allocation has been included for a Small Ports Fund that will provide for outer island dock maintenance, which will require government subsidies, unlike the commercial ports that should be self-sustaining from income generated from operations.

5.5.6 Institutional Restructuring and Strengthening

- 210 The two areas in the maritime transportation sector requiring institutional reform are:
- Seaport development and management
- Maritime safety, including protection of the marine environment
- With regard to port development and management, it is suggested that the creation of independent state port authorities to own and operate all port facilities is the most appropriate direction. The independent authority should retain all revenue generated from operations; have full responsibility for making investments and for its debt servicing and operating costs.
- With regard to maritime safety, there is a need to create at the national level a Maritime Safety Authority to address needs related to navigational aids, coastal communication stations, inspection of vessels for seaworthiness and safety equipping, certification of training standards for vessel crews and search and rescue services.
- 213 The IDP has allocated funding for the establishment of a Maritime Safety Authority. It is proposed that a Maritime Safety Capital Fund be employed by the Maritime Safety Authority to carry out improvements required for maritime safety purposes. These improvements will include the provision of navigational aids, provision of coastal communication stations and the establishment of maritime safety emergency systems such as search and rescue in each of the four states.

Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000)

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Dekehtik Port Dredging Dekehtik Commercial Port Improvements	Pohnpei Pohnpei			500	500	1,000	2,500	5,000 1,500	5,000 1,000	Com/Other Other
Kolonia Outer Island Ferry Terminal	Pohnpei					1,500			943	Other
Outer Island Dredging	Pohnpei/Outer Is- lands						1,770			Compact II
Island Ferry Docks/Mooring Buoys	Pohnpei/Outer Is- lands						1,320	1,320		Compact II
Weno Commercial Port Improvements	Chuuk/Weno			2,080						Other
Weno Ferry Terminal Building	Chuuk/Weno				1,333					Other
Dock for Lagoon/Outer Island Ferry	Chuuk/Weno		160	2,500	2,000	2,000			2,734	Com/Other
Southern Namoneas Ferry Terminals	Chuuk/S. Namoneas					1,000	2,000	2,000	3,000	Other
Outer Faichuk Ferry Terminals	Chuuk/Faichuk					500	1,000	5,000	5,000	Other
Conversion of Tuna In- dustry Building	Kosrae		118							Other
Dredging Colonia Ap- proach Channel	Yap						1,500	5,000	5,000	Compact II
Yap Commercial Port Improvements	Yap			500	500			1,500	1,000	Other

Table 5.18 Maritime Transportation – Proposed Project Implementation Schedule (US\$ '000)

Project		Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Colonia Dock and Ferry Terminal	Yap					500	500		2,000	696	Other
Reconstruct Fisheries Refrig. W/house Recurrent Costs	Yap							3,540			Other
Infrastructure Mainte- nance Fund	All		0	16	0	0	0	709	1,132	1,000	Compact II
National Small Ports Fund	All				300	300	300	1,500	1,500	1,500	Compact II
Maritime Safety Opera- tions Fund	All					100	100	500	500	500	Compact II
Total:			0	294	5,880	5,233	6,900	16,339	26,452	27,373	

Table 5.19 Maritime Transportation – Funded or Partially Funded Projects (US\$ '000)

Project	State	Location	Available Funding	Unfunded Amount	Source
Port Dredging Commercial Port Improvement Outer Island Ferry Terminal	Pohnpei Pohnpei Pohnpei	Dekehtik Dekehtik Dekehtik	13,500 3,500 2,443	29,721 1,478	Compact/Other Other Compact II
Outer Island Dredging	Pohnpei	Outer Islands	1,770		Compact II
Island Ferry Docks/Mooring Buoys	Pohnpei	Outer Islands	2,640		Compact II
Commercial Port Improvements	Chuuk	Weno	2,080		Other
Ferry Terminal Building	Chuuk	Weno	1,333		Other
Dock for Lagoon/Outer Island Ferry Services	Chuuk	Weno	9,394		Compact II
S. Namoneas Ferry Terminals Faichuk Ferry Terminals Conversion of Tuna Industry Building	Chuuk Chuuk Kosrae	S. Namoneas Faichuk Kosrae	8,000 11,500 118	1,312 2,519	Compact II Compact II Other
Dredging Approach Channel Yap Commercial Port Improvements Colonia Dock and Ferry Terminal	Yap Yap Yap	Colonia Colonia Colonia	11,500 3,500 3,696	12,070 3,449	Other Other Other
Reconstruct Fisheries Refrig. W/house	Yap	Colonia	3,540		Other
Recurrent Costs					
Infrastructure Maintenance Fund	All		3,201		Compact/State
National Small Ports Fund	All		5,400		Compact II
Maritime Safety Operations Fund	All		1,700		Compact II
Total:			88,815	50,549	

Table 5.20 Maritime Transportation – Unfunded Projects (US\$ '000)

Table 5.20 Maritime Transportar	ilon – Oniui	ided i rojecia (O	οφ σσο ή
Project	State	Location	Unfunded Amount
Nukuoro Petroleum Fuel Dock/Station	Pohnpei	Outer Islands	1,225
Remove Existing Fisheries Structures	Pohnpei	Dekehtik	614
Extend quay west of Dekehtik Causeway	Pohnpei	Dekehtik	4,106
Fisheries Port perimeter fence	Pohnpei	Dekehtik	106
Inner Faichuks Ferry Termials	Chuuk	Faichuk	6,189
Small Lagoon Islands Ferry Terminals	Chuuk	Lagoon	4,126
Small Boat Basins	Chuuk	Lagoon	3,080
Outer Island Passageway Dredging	Chuuk	Outer Islands	5,310
Outer Island Ferry Docks/Mooring Buoys	Chuuk	Outer Islands	16,591
Outer Island Petroleum Facilities	Chuuk	Outer Islands	3,675
Weno Fishing Dock	Chuuk	Weno	6,485
Tonoas Fishing Dock	Chuuk	S. Namomeas	4,518
Fefen Fishing Dock	Chuuk	S. Namomeas	4,518
Faichuk Fishing Dock	Chuuk	Faichuk	4,518
Dredging Okat Port Channel	Kosrae	Kosrae	2,635
Outer Island Passageway Dredging	Yap	Outer Islands	3,540
Outer Island Ferry Docks/Mooring Buoys	Yap	Outer Islands	12,976
Ulithi/Woleai Petroleum Facilities	Yap	Outer Islands	2,450
Extend Fishing Wharf	Yap	Yap Proper	909
Backfill/Compact Reclaimed Area	Yap	Yap Proper	3,502
Total	-		91,073

5.6 Air Transportation

5.6.1 Sector Objectives and Outcomes

- 214 The primary specific objectives of the provision of air transportation infrastructure are:
- To provide adequate air transportation facilities and services in terms of condition, frequency, capacity, reliability and safety to enable market opportunities to be realized for all areas of the country.
- To enable the air carrier airports to improve safety and eliminate payload restrictions
- To improve all domestic airports to the required standards of safety

5.6.2 Existing Air Transportation Infrastructure

- Each of the four FSM states has an international airport. These airports are small by international airport standards, with relatively short runways, aprons with capacity for two international service aircraft, and short taxiways connecting the runways and aprons. The airport terminals are roughly adequate for current levels of traffic, except that the Yap Airport has wholly inadequate space for passenger check-in. Facilities are inadequate for cargo accommodation, particularly the export of sashimi-quality tuna. Parking and interface with public transportation are not satisfactory.
- Traffic at the international airports is very limited, and traffic control towers are therefore not required. The U.S. Federal Aviation Administration (FAA) has provided FSM continuous support in the installation, operation, and maintenance of navigational aids and telecommunications equipment at the four international airports.
- There are no interstate air transport services in FSM, except as legs of international flights.

a Outer Island Airstrips

- Three of the five Pohnpei outer islands, namely Pingelap, Sapwuahfik and Mokil have short airstrips that permit use of aircraft. The Pingelap airstrip requires near term attention as one end of the runway reportedly dips toward the sea and constitutes a risk for air service operations. The Sapwuahfil and Mokil airstrips are reportedly in satisfactory condition.
- Three of the twenty-four municipalities in the Chuuk outer islands have airstrips, namely Onoun (Namonuito Atoll), Ta (Lower Mortlocks), and Houk (Western Islands). Air transport services have not been provided to these airstrips for several years and it is generally believed that they are not in operating condition.
- There are three airstrips on Yap outer islands, namely on Ulithi, Fais and Woleai. The Ulithi runway is in good condition, that on Fais is operable but the condition is such that landing of aircraft can be somewhat risky and that on Woleai cannot be used due to the condition of the runway.

b Short Term Needs of Existing Air Transportation Infrastructure

A key strategic objective of this Infrastructure Development Plan is to ensure that existing infrastructure is rehabilitated as a first priority before implementation of new infrastructure. The immediate needs for improvement of the airports in each state discussed below.

c Pohnpei International Airport

- The runway, taxiway and apron pavements at Pohnpei International Airport all urgently require pavement overlay, as serious pavement deterioration is occurring at many locations. This is especially dangerous because of the B737-800 aircraft being employed in FSM by Continental Airlines. These aircraft are appropriate for the short runways at FSM airports, and are fuel efficient, but they have low-slung engines. As pavement deteriorates to the point of creating loose gravel, there is a real danger that stones will be sucked up into the aircraft engines, causing engine damage and possibly an accident.
- At about the 4200-foot mark measured from the west end of the runway, there is a construction defect. The pavement has inadequate support beneath it and gradually subsides, creating a depression in the runway. A permanent solution to this problem would not be costly or difficult, but would entail airport closure for a period of three or four weeks. Since the need for repair of this section coincides with the urgent need for pavement overlay, it would seem logical to combine the two projects into a single project. If done together, the pavement ought not again to require attention until after the IDP period

d Chuuk, Kosrae and Yap International Airports

The runways at each of these airports are in satisfactory condition. Passenger terminal needs are less urgent, but will in each case need to be expanded and modernized. Cargo terminals with cold storage facilities also need to be established at each of the airports. The runway in Chuuk has recently received a pavement overlay and is now in excellent condition. However, there is still some outstanding repayment to be made for these works as well as for the acquisition of the land where the runway is located. Improvements to the airport terminal are in progress, but this improvement program needs to be expanded and accelerated to bring the airport up to international standard. The initial five year capital improvement program has included these projects, including the land acquisition payment, since it is clearly in the interest of the Government to hold title for the land of an international airport.

e Outer Island Airstrips

Airstrips at Pingelap in Pohnpei, Woleai and Fais in Yap and Onuon, Ta and Houk in Chuuk are in poor condition and need improvements in the short term to make them operable. It is recommended that the Woleai airport be an upgrading project to convert the existing airport into a small airport capable of accommodating small to medium-sizes turboprop aircraft. This would enable a new domestic turboprop service between Chuuk and Yap to have Woleai as a regular or occasional immediate stop.

5.6.3 Development Needs during the IDP Period (2004-2023)

a International Airport Runways

All FSM state governments would like to extend their airport runways sufficiently to accommodate larger aircraft which could operate direct flights over distances of 2,000 miles or more without any load restrictions. An earlier pre-feasibility study conducted by Japanese consultants in 1997 concluded that a Pohnpei airport runway extension to 8,000 feet might be economically feasible provided that a development program to achieve successful tourism were also designed and implemented. While it is true that extension of the runways of one or more of the international airports would generate some amount of benefits for tourism, trade and international travel by FSM citizens, it is questionable whether these benefits would outweigh the costs of runway extension. The other issue is that of safety and whether the four international airport runways need to be extended for some minimum distance for reasons of safety.

The 2002 IDP report concluded that, in the cases of Pohnpei, Kosrae and Yap airports, where short extensions of the runway would not be prohibitively expensive, short extensions, at least, might be usefully implemented. Whether or not longer extensions might be justified will depend on estimates of incremental tourist traffic volumes that might result from the institution of direct flights, especially between FSM and Japan. Extension of the Chuuk runway would be expensive since it has fairly deep water at both ends of the runway.

5.6.4 Proposed IDP Investment Program

The draft IDP completed in 2002 proposed an investment of \$77 million for air transportation infrastructure investment over the period 2003-2017²⁶. While this will meet the sector needs as outlined above, it is probably unaffordable given the availability of funding. A revised capital investment program shown in Table 5.21. has been prepared based on an assumed annual funding from the Compact and other sources for all infrastructure sectors of \$35 million per year. This program reflects the state government priorities for the period 2004 to 2008. This program includes runway rehabilitation and extension for Pohnpei, Yap and Kosrae airports, loan repayment for work completed on Chuuk runway and land acquisition costs for Chuuk airport, airport terminal improvements in at all four international airports and improvement of airstrips in the outer islands of Pingelap, Woleai, Fais, Onuon, Murilo, Ta and Houk.

It is proposed that an Air Transportation Development Plan²⁸ be prepared to prepare feasibility studies for the projects proposed to be funded under

²⁶ FSM Infrastructure Development Plan FY 2003-FY 2017, May 2002

²⁷ See Annex C for listing of state priorities for 2004-2008

²⁸ See Annex B, Volume 3, Nathan Report for TOR for this study

the IDP. Detailed design activities should, however be funded as part of the construction cost.

- The timing of the projects as shown in Table 5.21 reflects their priority as follows:
- Runway, Taxiway and Apron rehabilitation at Pohnpei International Airport
- Runway Extension at Pohnpei International Airport.
- Loan repayment for work completed on Chuuk runway and airport land acquisition costs
- Airport Terminal improvements/expansions at Pohnpei, Chuuk, Kosrae and Yap airports
- Improvement/upgrading of airstrips at the outer islands of Pingelap, Woleai, Fais Onuon, Ta and Houk
- This corresponds to a total sector investment of \$69 million for the period 2004-2023. Projects that were proposed in the May 2002 IDP that either cannot be fully funded during this period or are unable to be commenced are indicated in Tables 5.22 and 5.23. These projects include the improvement of outer island airstrips that are already serviceable. The IDP program does not include major long-term commercial airport terminal expansion. This may best be achieved through private sector investment under BOT arrangements or joint venture undertakings between the private sector and the airport entities, as these are potentially commercially sustainable activities.
- The Investment Program includes an allowance of 10% of the infrastructure cost funded by the Compact for maintenance. This cost will be funded 50% through the Compact and 50% by the states. An additional allocation has been included for a Small Airports Fund, which will provide for maintenance of outer island airstrips that will require government subsidies, unlike the commercial airports that should be self-sustaining from income generated from operations.

5.6.5 Institutional Restructuring and Strengthening

- The two areas in the air transportation sector requiring institutional reform are:
- Establishment of airport authorities or corporations
- Establishment of a Air Transportation Safety Authority (ATSA)

Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000)

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Runway, Taxiway, Apron Rehabilitation	Pohnpei	Pohnpei/Kolonia	4,000							4,000
Runway Extension	Pohnpei	Pohnpei/Kolonia		7,000						
Air Terminal Expan- sion/Equipment	Pohnpei	Pohnpei/Kolonia					1,000	1,561		
Pingelap Airstrip Rehabilitation	Pohnpei	Pohnpei/Outer Islands				881				
Airport Runway Improvement	Chuuk	Chuuk/Weno	1,700	1,000	750	750	750			
Airport Terminal Expansion/Equipment	- Chuuk	Chuuk/Weno		322	250	250	250	1,905		749
Onuon, Ta, Houk Air- strip Rehab	Chuuk	Chuuk/Outer Is- lands				1,347	1,347	2,694	5,387	
Runway Exten- sion/Improvement	Kosrae	Kosrae		400						4,000
Terminal Expan- sion/Equipment	Kosrae	Kosrae		265						1,000
Runway Apron Exten-	Yap	Yap Proper					1,548	374		
Airport Termi- nal/Equipment	Yap	Yap Proper				5,000				
Woleai/Fais Airstrip Rehab	Yap	Yap/Outer Islands				1,000	1,000	2,644	4,645	

Table 5.21 Air Transportation – Proposed Project Implementation Schedule (US\$ '000)

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Recurrent Costs Infrastructure Mainte- nance Fund	All		360	498	100	600	255	37	0	100
National Small Airports Fund	All				300	300	300	1,500	1,500	1,500
National Air Transporta- tion Safety Fund	- All					75	75	375	375	375
Total:			6,060	9,485	1,400	10,203	6,525	11,090	11,907	11,724

Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000)

Project	State	Location	Available Funding	Unfunded Amount	Source
Runway, Taxiway, Apron Rehabilitation	Pohnpei	Kolonia	8,000	1,339	Compact II
Runway Extension	Pohnpei	Kolonia	7,000	2,641	Compact II
Airport Terminal Expansion/Equipment	Pohnpei	Kolonia	2,561		Other
Pingelap Airstrip Rehabilitation	Pohnpei	Outer Islands	881		Other
Airport Runway Improvement	Chuuk	Weno	4,950		Compact II
Airport Terminal Expansion/Equipment (incl cargo)	Chuuk	Weno	3,726		Compact/Other
Onuon, Ta, Houk Airstrip Rehabilitation	Chuuk	Outer Islands	10,775		Other
Runway Extension/Improvement	Kosrae		4,400	5,241	Compact/Other

Table 5.22 Air Transportation – Funded or Partially Funded Projects (US\$ '000), continued

Project	State	Location	Available Funding	Unfunded Amount	Source
Terminal Expansion/Equipment (incl cargo) Runway Apron Extension	Kosrae Yap		1,265 1,922	1,568	Compact II Compact II
Airport Terminal/Equipment (incl. cargo)	Yap		5,000		Compact II
Woleai Airstrip Rehab	Yap	Outer Islands	9,289		Other
Recurrent Costs				1,919	
nfrastructure Maintenance Fund	All		2,561	1,079	Compact II
National Small Airports Fund	All		5,490	6,461	Compact II
National Air Transp. Safety Fund	All		1,275	11,983	Compact II
				2,476	
Гotal:			69,095	11,868	

- The airport entities should be streamlined, specialized, commercially oriented and autonomous. All revenue generated by the airports should be retained by the airport entities to cover all costs of operation and maintenance, and the costs of eventual replacement of equipment.
- The ASTA should be formed to assume the air transport responsibilities of the sector while continuing to rely on the FAA for assistance in the change-over to the new global air navigation and management systems. In addition to traffic control, the ASTA would be responsible for setting up and enforcing standards for commercial aircraft airworthiness, commercial and non-commercial pilot qualifications and airport safety and cleanliness standards.

Table 5.23 Air Transportation – Unfunded Projects (US\$ '000)

Project	State	Location	Unfunded Amount
Cargo Terminal Extension	Pohnpei	Kolonia	1,024
Mokil and Sapwuahfik Airstrips	Pohnpei	Outer Islands	382
New Nama Airstrip	Chuuk	Outer Islands	1,283
New Namoluk Airstrip	Chuuk	Outer Islands	1,086
Ulithi Airstrip Rehab	Chuuk	S. Namoneas	389
New Satawal Airstrip	Chuuk	Faichuk	1,086
Total:			5,250

5.7 Education

a Sector Objectives and Outcomes

- The primary specific objectives of the provision of infrastructure for the education sector are:
- To ensure that the learning experience is enhanced and diversified. To improve student and faculty interest and morale, and thereby improve the effectiveness of education and significantly increase the student retention rates through graduation from elementary or secondary schools
- To remove constraints on the availability of high school education for all graduates of elementary school, and to provide an array of post-secondary education opportunities for all high school graduates who seek further education
- To continue to assist and strengthen private educational institutions to the nation
- To develop facilities improvement programs that address the need for maintenance, renovation and construction of new facilities to support quality student instruction
- To develop equipment maintenance guidelines

b Existing Education System Facilities

The principal issues related to the existing public school infrastructure are as follows:

- In general, public elementary and secondary schools are poorly maintained with failure of power and water supplies a common occurrence. A large number of schools, particularly in Chuuk State, are in a severely deteriorated condition.
- There are severe shortages of school furniture, blackboards or whiteboards, wall maps, equipment, tools, utensils and books. These shortages appear to derive from inadequate sector and individual facility management, in particular lack of proper recurrent budgeting.
- Few schools have diversified capacity, such as an auditorium, covered sports area, cafeteria, music rooms or adequate facilities for vocational training, home economics and arts and crafts
- These issues, amongst other constraints such as inadequately qualified teachers, low retention rates of students, inappropriate school curricula and lack of vocational training mean that schools are far from meeting the qualified manpower needs of the FSM.
- Details of the existing elementary and secondary school infrastructure in each of the states are described below.

c Pohnpei

- 239 Pohnpei State has 33 public schools, only one of which is a high school. The Pohnpei Central Island School (PICS) can accommodate only 1600 students, so there are many elementary school graduates that cannot be accommodated at the school. The southern portion of the circumferential road is unpaved and in very poor condition, and it is therefore difficult for students from that portion of the island to commute to PICS on a daily basis. There are also students from Pohnpei's outer islands that need accommodation, preferably in a PICS dormitory. The dormitories have capacity for only 120 students (60 male and 60 female); so several hundred students must seek off-campus accommodations. A planned second public high school in the southern portion of Pohnpei Island will considerably reduce current constraints on high school capacity, and particularly on dormitory capacity. Also, upgrading of the circumferential road will make travel between the southern and northern parts of Pohnpei Island much faster and easier, thereby making daily commutes to PICS a satisfactory option, and further limiting demand for on-campus dormitory living.
- Each of the five outer island municipalities in Pohnpei has one elementary school. It is reported that all five schools have only a single school building, and none have electricity or water supplies. None of the structures are new, and

require at least a rehabilitation effort, but might preferably be rebuilt as more modern facilities.

The breakdown of public elementary and high schools in Pohnpei as of 2001 is indicated in Table 5.24.

Table 5.24 Elementary and High Schools in Pohnpei

Municipality	No. of Ele- mentary Schools	No. of Ele- mentary Students	Condition	No. of High Schools	No. of High Schoool Students
Pohnpei Island					
Kolonia Town Sokehs Nett Uh Kitti Madolenihmw Outer Islands	2 6 2 2 7 8	1,515 1,317 955 610 1,313 1,155	Fair/Poor Fair/Poor Fair Fair Poor Fair/Poor	1 0 0 0 0	1,600
Kapingamarangi	1	104	Very Poor		
Nukuoro	1	36	Very Poor		
Mokil	1	116	Very Poor		
Pingelap	1	129	Very Poor		
Sapwuahfik	1	165	Very Poor		
Total	32	7,415		1	1,600

d Chuuk

- 242 Chuuk State has 94 public schools, including eight high schools. Although there are a few exceptions, in general the conditions of these schools are poor. Inadequate budgeting for maintenance is a principal cause of poor school condition, and, even when funded, maintenance schemes and procedures appear to be less than optimal.
- However, the education sector in Chuuk State is placed in a disadvantageous position by the wholesale inadequacy of other infrastructure sectors. Many schools do not have an access road, or even an improved trail. On most islands, schools have no electric power or running water and available water is of poor quality. Even on Weno Island, where infrastructure is more developed, electricity is unreliable, drainage is virtually non-existent, road conditions are poor, and pressurized water supply is not potable.
- The breakdown of public elementary and high schools in Chuuk as of 2001 is indicated in Table 5.25.

Table 5.25 Elementary and High Schools in Chuuk

Table 5.25 Elementary and High Schools in Chuuk							
Municipality	No. of Ele- mentary Schools	No. of Elemen- tary Stu- dents		No. of High Schools	No. of High School Students		
N. Namoneas							
Weno	7	2,401	Poor	2	1,732		
Piis-Paneu	6	130	Poor				
Fono	2	80	Very Poor				
S. Namoneas							
Tonoas/Etten	5	827	Fair/Poor		415		
Fefen	7	1,144	Fair	1	New		
Parem	1	90	Very Poor				
Siis	1	125	Fair				
Uman	3	731	Poor				
Faichuk Islands							
Paata	3	382	Fair				
Polle	5	462	Fair				
Tol Wonei	13 3	1,487 289	Fair/Poor Fair/Good	1	121		
Eot	1	92	Very Poor				
Fanapanges	1	50	Very Poor				
Romanum	1	400	Very Poor				
Udot	2	44	Poor				
Outer Islands							
Mortlocks	12	2,088	Poor/V.Poor	1	161		
Halls	4	357	Fair/Poor	1			
Namonuito	5 4	200 567	Poor A Poor	1	107 90		
Western Islands Total	86	11,946	Poor/V.Poor	1 8	2,626		

e Kosrae

Kosrae has seven public schools, one of which is the Kosrae High School. The Walung elementary school is a prime example of a community taking full responsibility for its local school, including its design, construction, maintenance, and management. The school is in excellent condition, and has adequate capacity to accommodate student body growth in the future. Most other Kosrae schools are kept in more-or-less satisfactory condition.

The breakdown of public elementary and high schools in Kosrae as of 2001 is indicated in Table 5.26.

Table 5.26 Elementary and High Schools in Kosrae

Municipality	No. of Elemen- tary Schools	No. of Ele- mentary Students	Condition	No. of High Schools	No. of High School Students
Lelu Malem	1 1	493 400	Fair Poor	1	522
Tafunsak	2	660	Fair		
Utwe	1	280	Fair		
Total	6	1,836		1	522

f Yap

Yap State has 33 public schools of which 13 are on the four closely grouped islands of Yap Proper, and the remaining 20 are on the outer islands. Three of the schools are high schools. Yap High School serves all of Yap Proper, and there are high schools also on the Falalop Islands of both Ulithi and Woleai atolls. The Woleai high school is new, and has left the Ulithi Outer Islands High School with excess capacity, since the high school no longer needs to serve the eastern islands.

The breakdown of public elementary and high schools in Yap as of 2001 is indicated in Table 5.27.

Table 5.27 Elementary and High Schools in Yap

	•	•	•		
Municipality	No. of Elementary Schools	No. of Ele- mentary Students	Condition	No. of High Schools	No. of High Schoool Students
Yap Proper					
Ruul	3	440	Fair	1	600
Dalipebinaw	1	90	Good		
Kanifay	2	114	Fair/Poor		
Fanif	2	107	Fair/Good		
Tomil	1	115	Poor		
Gagil	1	90	Fair		
Маар	1	122	Fair		
Rumung	1	38	Poor		

No. of High No. of High Municipality No. of Ele-No. of Ele-Condition Schools School mentary mentary Schools Students Students Outer Islands Ulithi 6 275 Fair/Poor 95 Woleai 9 491 125 Poor 1 3 Fair/Poor Satawal 332 Total 30 2.241 820

Table 5.27 Elementary and High Schools in Yap, continued

g College of Micronesia

- The COM-FSM national campus at Palikir has 73 acres of land, which is not yet fully occupied, and the area allows for significant expansion of facilities. Existing buildings are well constructed and maintained. A large gymnasium has been recently constructed.
- 250 The Pohnpei campus is in Kolonia, and occupies the original site of the national campus. This site is no longer adequate, and the campus is suffering severe land area constraints. Most of the school's buildings, however, are single-story structures, fairly old, and in fair-to-poor condition, so that redevelopment is under consideration by the campus administration
- The Kosrae COM-FSM campus has just a limited area adjacent to the Kosrae High School. Currently, the COM-FSM Kosrae campus has a multipurpose building, constructed in 1997, under an FSM Congress appropriation. The building houses the campus administration, a computer laboratory, a science laboratory, and a standard classroom. The school does not have its own library, but uses the fairly well developed library that serves the high school and the community.
- 252 The existing Chuuk campus of COM-FSM is located on Weno Island and occupies several old buildings, at high rental cost. In spring 2001, 600 students were enrolled, and an estimated 200 applicants to enter had to be turned away because of capacity constraints. The campus administration acquired, a few years ago, a three-acre site for building a campus, and plans call for constructing a school that could accommodate 1,000 students, but without any dormitories.
- 253 There is a small COM-FSM campus in Yap. The campus accommodates fewer than 100 students, and offers courses for teaching elementary school and pre-school children. In addition to the COM-FSM campus in Yap State, COM-FSM has established and operates there the FSM Fisheries and Maritime Institute (FMI).

5.7.2 Short Term Needs of Education Infrastructure

- There is a myriad of short-term facility rehabilitation, upgrading and new education needs in the FSM education sector, but the most important single project is a second high school for Pohnpei. Currently the student retention rate drops from more than 70% in eighth grade to only 44% in ninth, and the principal reason for this is the constraint on high school capacity. This will be provided through the construction of the Pohnlangas High school in Madolenihmw municipality.
- A second priority project is the development of a new Weno Island campus of COM-FSM. There is also a lack of sports facilities for schools on Weno and it is proposed to provide a single sports facility to cover all schools on Weno Island.
- Details of the many other needs of the elementary and secondary school infrastructure should be finalized subject to the completion of an Elementary and Secondary Schools design study proposed to be undertaken as part of the IDP. This study will address, amongst other things, the need to minimize land area when developing schools to address the land constraint issues that arise in FSM.

5.7.3 Development Needs during the IDP Period (2004-2023)

a Elementary Education

There are probably sufficient elementary schools for the student population, but the facilities at the schools are generally inadequate. Most of the elementary schools need to be provided with additional facilities such as appropriate sports facilities, arts and craft areas, a music room and a school cafeteria. Design of the schools should be improved through provision of adequate lighting and use of materials such as aluminum roofing and steel frames that are less subject to rapid deterioration than is the present case.

b Secondary Education

While the number of elementary schools is probably now adequate for the school population, this is not the case with secondary schools where capacity is the main constraint to students continuing beyond the end of elementary school and is a principal factor in the lack of qualified manpower in FSM. As can be seen from Tables 5.24 to 5.27 there is a current capacity for over 23,000 elementary school students, but only 5500 secondary school students. Construction of additional secondary schools or expansion of the existing schools is therefore an important priority in the education needs of the nation. In addition the secondary schools must have increased diversified classroom capacity such as additional science laboratories, shops for provision of vocational education and 'hands on' experience and home economics facilities.

c Post-secondary Education

259 The development of post-secondary education in FSM is a key need as severe shortages of qualified manpower threaten the sustainability of all the infrastructure sectors. There is a need to develop the engineers, architects and managers who will have the qualifications needed, and will reside and work in the FSM.

With this in mind, the COM-FSM needs to raise and broaden its goals in regard to meeting FSM qualified manpower needs. The five FSM governments, with support from the private sector, need to work with COM-FSM to set new, higher goals with an assurance that funding will be available to enable them to do so.

5.7.4 Proposed IDP Investment Program

The 2002 IDP report proposed an investment of \$244 million for education facility investment over the period 2003-201729. While this will meet the sector needs as outlined above, it is probably unaffordable given the availability of funding. A revised capital investment program shown in Table 5,28 has been prepared based on an assumed annual funding from the Compact and other sources for all infrastructure sectors of \$35 million per year. This program reflects the state government priorities for the period 2004 to 2008³⁰. This program includes construction of new high schools in Pohnpei, Southern Namoneas, Chuuk and Walung, Kosrae, a continuous upgrading of elementary schools in all states, construction of a new COM Weno campus and development activities at the COM-FSM National campus and the state campuses in Pohnpei, Kosrae and Yap.

It is proposed that an Elementary & Secondary Schools Design Study be prepared. This study will survey all existing public elementary and secondary schools in FSM and, in consultation with the community will prepare school management and development plans. The study will develop design and construction standards for schools that will result in more sustainable infrastructure. Detailed design activities should, however be funded as part of the construction cost.

The timing of the projects as shown in Table 5.28 reflects their priority as follows:

- Improvements at Chuuk High School and Weno Junior High
- Improvements at Kosrae High School
- Improvements to high schools in Chuuk and Yap

²⁹ FSM Infrastructure Development Plan FY 2003-FY 2017, May 2002

³⁰ See Annex C for listing of state priorities for 2004-2008

- Construction of a sports facility for schools on Weno Island
- Commencement of program of improvements at elementary schools in all four states
- Construction of Pohnlangas High School in Pohnpei
- Construction of new high school in Walung, Kosrae
- Construction of new high school in Southern Namoneas, Chuuk
- Development of new COM-FSM campus in Weno
- Redevelopment of COM-FSM Pohnpei State Campus
- Development of enlarged COM-FSM campus in Kosrae.
- Improvements to COM-FSM campus in Yap

This corresponds to a total sector investment of \$134 million for the period 2004-2023. Projects that were proposed in the May 2002 IDP that either cannot be fully funded during this period or are unable to be commenced are indicated in Tables 5.29 and 5.30. These projects for which funding has not been identified include completing the improvement projects for the elementary schools in all states, development of second state campuses for COM-FSM in Pohnpei and Chuuk, a proposed COM-FSM Nursing School campus in Kosrae and a proposed COM-FSM Fisheries and Maritime Institute in Yap

The Investment Program includes an allowance of 10% of the infrastructure cost funded by the Compact for maintenance. This cost will be funded 50% through the Compact and 50% by the states. An annual allocation has also been included for provision of essential equipment required in the elementary and secondary schools.

5.7.5 Institutional Restructuring and Strengthening

The public sector offices responsible for the education sector of the Federated States of Micronesia (FSM) are:

- At the National Government level, the National Division of Education (NDE) of the Department of Health, Education and Social Affairs.
- At the State Government level, in Chuuk, Kosrae and Pohnpei States, the Department of Education (DOE), and in Yap State, the State Enterprising Education Department (SEED).
- Boards of Education in Yap, Chuuk, and Pohnpei States.
- College of Micronesia-FSM (COM-FSM), with a national campus at Palikir, four state campuses, and the Fisheries & Maritime Institute (FMI) in Yap State.

- At the local level, there are parent-teacher associations (PTAs) and school boards. In Yap State, progress appears to have been made in strengthening school boards and engendering community ownership of local schools. The other states do not seem to have made significant progress in this regard.
- 268 There are two principal recommendations for institutional reform and strengthening in the education sector:
- The establishment of community school boards in Pohnpei, Kosrae and Chuuk, similar to those already in place in Yap.
- Creation of a National Board of Education, an advisory body with a broad mandate of concern for public education, including post-secondary education.
- The National Board of Education would oversee implementation of the IDP investment and recurrent cost programs, advise on education sector policies, and conduct inspections of education sector operations in the four states.

Table 5.28 Education – Proposed Project Implementation Schedule (US\$ '000)

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Pohnlangas High School - Mado- lenihmw	Pohnpei				3,345	4,155				Com/Other
Kitti Elementary Schools	Pohnpei	250			200		1,000	1,000	1,000	Com/Other
Kolonia Elementary Schools	Pohnpei	250			150		750	750	750	Com/Other
Pohnpei Island Central School - Kolonia	Pohnpei						1,250	1,250	1,250	Compact II
Madolenihmw Elementary Schools	Pohnpei	250			268		1,500	1,500	1,500	Com/Other
Nett Elementary Schools	Pohnpei	250			132		500	500	500	Com/Other
Sokehs Elementary Schools	Pohnpei	250			100		1,000	1,000	1,000	Com/Other
Uh Elementary Schools	s Pohnpei	250			150		1,000		872	Com/Other
Outer Island Elemen- tary Schools	Pohnpei					500	1,000	1,000	400	Com/Other
COM -Redevelopment of Pohnpei State Campus	Pohnpei						3,000	1,500	500	Other
COM - National Campus	Pohnpei							1,500	1,500	Other
Northern Namoneas Elementary Schools	Chuuk		500	500	300	300	1,000	1,000	1,000	Compact II

Table 5.28 Education – Proposed Project Implementation Schedule (US\$ '000), continued

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
School Sports Facilities	Chuuk	2,655								Compact II
Weno Junior High	Chuuk	150		250	500	250	1,171			Compact II
Chuuk High School	Chuuk	1,245							1,000	Compact II
Faichuk Elementary Schools	Chuuk		500	500	300	300	1,000	1,000	1,000	Compact II
Faichuk High School	Chuuk		125	250	400	250			1,000	Compact II
S. Namoneas Elementary Schools	Chuuk		450	400	350	300	1,000	1,000	1,000	Compact II
New Southern Na- moneas High School	Chuuk		750	250			1,250	1,250	810	Compact II
Tonoas High School	Chuuk		300	250	200		1,000		1,000	Compact II
Halls Elementary Schools	Chuuk			200	300		500	500	756	Compact II
Mortlocks Elementary Schools	Chuuk			200	300	200	1,000	1,000	1,000	Compact II
Mortlocks Junior High	Chuuk		125		250	250	500	500	888	Compact II
Namonuioto Elementary Schools	Chuuk					300		1,000	949	Compact II
Weipat Junior High	Chuuk		125				500	500	1,000	Compact II
Western Islands Elementary Schools	Chuuk			200	200		750	750	655	Compact II

Table 5.28 Education – Proposed Project Implementation Schedule (US\$ '000), continued

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Pattiw Junior High	Chuuk		100					750	599	Compact II
COM - New Weno Cam- pus	Chuuk			1,500	1,500					Other
Kosrae High School (Tofol)	Kosrae	300			150	150	1,000	1,000	1,274	Compact II
Walung High School	Kosrae		150	150			150			Compact II
Kosrae Elementary Schools	Kosrae	480	150	150	100	150	1,000	1,000	1,000	Compact II
COM - Enlarged Kosrae Campus	Kosrae						1,000		1,000	Other
Yap High School	Yap		646				1,500		1,000	Compact II
Colonia Middle School	Yap		1,179							Compact II
Yap Proper Community Schools	Yap		1,669	1,343			1,500	1,500	1,000	Compact II
Ulithi Community Schools	Yap							900		Compact II
Ulithi High School	Yap						1,000			Compact II
Woleai Community Schools	Yap							1,000	1,000	Compact II
Woleai High School	Yap						500			Compact II

Table 5.28 Education – Proposed Project Implementation Schedule (US\$ '000), continued

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Satawal Community Schools	Yap							900	854	Compact II
COM - Yap State Campus	Yap						1,000	1,000	1,000	Other
Recurrent Costs	All									
Educ. Facilities Mainte- nance Fund	All	483	677	464	397	636	2,432	2,255	2,606	Compact II
Educ. Facilities Equip- ment Fund	All	200	200	200	200	200	1,000	1,000	1,000	Compact II
Total:		7,013	7,646	6,807	9,792	7,941	32,753	29,805	33,663	

Table 5.29 Education – Funded or Partially Funded Projects (US\$ '000)

Project	State	Location	Available Funding	Unfunded Amount	Source
Pohnlangas High School - Madolenihmw	Pohnpei	Madolenihmw	7,500		Compact II
Kitti Elementary Schools	Pohnpei	Kitti	3,250	2,851	Compact II
Kolonia Elementary Schools	Pohnpei	Kolonia	2,400	3,809	Compact II
Pohnpei Island Central School - Kolonia	Pohnpei	Kolonia	3,750	10,004	Compact II
Madolenihmw Elementary Schools	Pohnpei	Madolenihmw	4,800	3,220	Compact II
Nett Elementary Schools	Pohnpei	Nett	1,650	2,051	Compact II
Sokehs Elementary Schools	Pohnpei	Sokehs	3,200	3,281	Compact II
Uh Elementary Schools	Pohnpei	Uh	2,022		Compact II
Outer Island Elementary Schools	Pohnpei	Outer Islands	2,900		Compact II
COM -Redevelopment of Pohnpei State Campus	Pohnpei		5,000		Compact II
COM - National Campus	Pohnpei		3,000	6,000	Compact II
N. Namoneas Elementary Schools	Chuuk	S. Namoneas	4,600	8,728	Compact II
School Sports Facilities	Chuuk	Weno	2,655		Compact II
Weno Junior High	Chuuk	Weno	2,321		Compact II
Chuuk High School	Chuuk	Weno	2,245	3,280	Compact II
Faichuk Elementary Schools	Chuuk	Faichuk	4,600	15,943	Compact II
Faichuk High School	Chuuk	Faichuk	2,025	3,291	Compact II
Southern Namoneas Elementary Schools	Chuuk	S. Namoneas	4,500	13,195	Compact II
New S. Namoneas High School	Chuuk	S. Namoneas	4,310		Compact II
Tonoas High School	Chuuk	S. Namoneas	2,750	2,672	Compact II
Halls Elementary Schools	Chuuk	Outer Islands	2,256	-	Compact II
Mortlocks Elementary Schools	Chuuk	Outer Islands	3,700	6,624	Compact II
Mortlocks Junior High	Chuuk	Outer Islands	2,513		Compact II

Table 5.29 Education – Funded or Partially Funded Projects (US\$ '000), continued

Project	State	Location	Available Funding	Unfunded Amount	Source
Namonuioto Elementary Schools Weipat Junior High Western Islands Elementary Schools	Chuuk Chuuk Chuuk	Outer Islands Outer Islands Outer Islands	2,249 2,125 2,555	1,369	Compact II Compact II
Pattiw Junior High	Chuuk	Outer Islands	1,449		Compact II
COM - New Weno Campus	Chuuk	Weno	3,000		Compact II
Kosrae High School (Tofol)	Kosrae	Lelu	3,874		Compact II
Walung High School	Kosrae	Walung	450		Compact II
Kosrae Elementary Schools	Kosrae		3,832	3,821	Compact II
COM - Enlarged Kosrae Campus	Kosrae		2,000	2,000	Compact II
Yap High School Colonia Middle School	Yap Yap	Colonia Colonia	3,146 1,179	2,571	Compact II Compact II
Yap Proper Community Schools	Yap	Yap Proper	7,012		Compact II
Project, continued	State	Location	Available Funding	Unfunded Amount	Source
Jlithi Community Schools Jlithi High School	Yap Yap	Outer Islands Outer Islands	900 1,000	1,507 2,123	Compact II
Noleai Community Schools Noleai High School	Yap Yap	Outer Islands Outer Islands	2,000 500	717 854	Compact II
Satawal Community Schools	Yap	Outer Islands	1,754		Compact II
COM - Yap State Campus	Yap	Yap Proper	3,000	2,000	Compact II

Table 5.29 Education – Funded or Partially Funded Projects (US\$ '000), continued

Project	State	Location	Available Funding	Unfunded Amount	Source
Recurrent Costs Education Facilities Maint. Fund	All		10,397	10,191	Compact/State
Educational Facilities Equip. Fund	All		4,000	,	Compact II
Total			134,369	112,102	

Table 5.30 Education – Unfunded Projects (US\$ '000)

Project	State	Location	Unfunded Amount
Pohnpei State Second Campus	Pohnpei	Pohnpei	4,000
Chuuk State Second Campus	Pohnpei	Outer Islands	13,000
Kosrae Nursing School Campus	Pohnpei	Outer Islands	5,000
Yap Fisheries & Maritime Institute	Pohnpei	Outer Islands	4,000
Total	·		26,000
Total			26,000

5.8 Health

5.8.1 Sector Objectives and Outcomes

270 The primary specific objectives of the provision of infrastructure for the health sector are:

- To construct modern and efficient hospital facilities to meet the health needs of the nation
- To upgrade the curative health system to minimize the needs for referrals to foreign medical facilities.
- To develop the capability and provide for a national referral hospital
- To provide health care facilities within reasonable access of all citizens
- To develop facilities improvement programs that addresses the need for maintenance, renovation and construction of new facilities.
- To ensure adequate funds for maintenance are budgeted to prevent rapid deterioration of facilities.

5.8.2 Existing Health System Facilities

a Elementary and Secondary Education Facilities

The principal issues related to the existing health infrastructure are as follows:

- The state hospitals are in poor condition, primarily due to a lack of budget for maintenance (except in Yap state), although improvements are now in place through a \$2 million US DOI grant with matching funds from each state
- Many items of equipment are out of order, primarily because of lack of capacity for maintenance of hospital equipment.
- Demand for hospital care is high, given the high incidence of water-borne diseases, the high incidence of road accidents and the many 'lifestyle' health problems.

Each FSM state has a state hospital. All hospital buildings are structurally sound and adequate in terms of in-patient capacity. Of the four hospitals, only the Kosrae State Hospital is poorly designed for its purpose. All the hospitals require some renovation and rehabilitation efforts. The efforts most urgently required at the four state hospitals are being addressed through \$2 million grant support from the US DOI with a matching amount from the states. Further investment will, however, be required in the long term to bring these hospitals up to the required standards

- The outer islands of Pohnpei, Chuuk and Yap states also benefit from a medical ship, the Sea Haven, owned and operated by Pacific Missionary Aviation staffed by medical volunteers.
- Details of the existing health infrastructure in each of the states are described below.

b Pohnpei State Hospital

Pohnpei State hospital is a 104-bed facility constructed in 1978. At the present time the hospital is adequate for the population it serves and the functional/spatial layout of the hospital rooms is adequate. There are some structural problems with the building as well as problems with the plumbing and air conditioning systems. While the maintenance of the hospital is in general quite satisfactory, there are areas where the maintenance staff lacks expertise such as in air conditioning, electrical, carpentry and bio-medical equipment operation and repair. There is no expertise on-island to maintain and repair sophisticated medical equipment, and some cases spare parts for the equipment in use cannot be obtained as the equipment is now out of date

c Pohnpei Dispensaries

- There are seven dispensaries on Pohnpei Island at Kolonia, Sokehs, Saladak, Madolenihmw, Pohnlangas, Wone and Lukopw. The dispensaries at Pohnlangas, Wone and Lukopw have been fairly well maintained and only require minor repairs. The Madolenihmw and Sokehs dispensaries are also in fairly good repair but require some structural improvement. The Saladak and Kolonia dispensaries are in less good condition.
- In general, the dispensaries have often lacked equipment, drugs and other supplies and are irregularly staffed with health assistants, nurses and/or medical officers. The municipalities are responsible for maintaining their dispensaries, but the Pohnpei DHS is now attempting to reform the system by arranging for the municipalities to enter into formal, signed agreements with the DHS to support, use and maintain the dispensaries within their respective borders in exchange for increased personnel support from DHS and adequate supplies of medicines.
- The five outer island dispensaries are in poor condition and need to be replaced. Each of these dispensaries has only a health assistant as staff and there is no immediate prospect of this situation changing. The PMA Sea Haven also occasionally serves some of the Pohnpei outer islands, but much of the ship's time is spent among the more numerous outer islands in Chuuk and Yap

d Chuuk State Hospital

The Chuuk State Hospital is a 140-bed facility constructed in 1971. The size of the hospital appears adequate for the population it serves. The hospi-

tal suffered from many structural as well as mechanical and electrical equipment defects, which have to some extent been rectified under the recent hospital improvements program. However, there is no maintenance budget for the hospital and no on-island expertise to maintain and repair sophisticated medical equipment.

e Chuuk Dispensaries

- There are 14 dispensaries in the Chuuk lagoon, although it is understood that three of these are no longer operated. The other lagoon dispensaries have also not been performing well, in part due to lack of supplies at these facilities, but also due in some cases to disputes with landowners.
- Dispensaries tend to operate more effectively on the outer islands due to the absence of other health facilities and significant community support. although there are problems of inadequate supplies and limited qualified medical services. There are nominally 57 dispensaries in the outer islands, but most are nothing more than an arrangement with an individual paid to control and dispense small stocks of medicines.
- Two prefabricated super dispensaries have been constructed in recent years, one of which serves the Faichuk Islands and the other, the outer islands. The Chuuk State
- Government proposes to increase this network of super dispensaries.

f Kosrae State Hospital

- The Kosrae State Hospital is a 40-bed facility, constructed in 1971. Due to the many ad-hoc additions that have been made over the years to the hospital, generally the functional-spatial layout is not satisfactory and results in inefficient and ineffective operations. However, the capacity of the hospital is adequate for the population that it serves.
- The hospital requires many improvements in terms of the building structure, ventilation, lighting, plumbing, and air conditioning as well in repair of out of order equipment. Moreover, there is no systematic approach to preventative and routine maintenance and no on-island expertise to repair sophisticated medical equipment. In general the overall sanitary conditions in the hospital are unsatisfactory and there appears to be a serious need for improved management, supervision and training of custodial staff.

g Other Kosrae Health Facilities

The only dispensary in Kosrae State is a structure in the village of Walung that once belonged to the school, but is now being converted to use as a dispensary. This will, however, require renovation of the building to make it suitable.

Kosrae has health centers that are housed in municipal buildings, but do not have drugs on hand, as do dispensaries. These centers are primarily used for immunization programs and for pre-natal care, and doctors and other medical personnel visit on a regular basis, generally once a week.

h Yap State Hospital

Yap State Hospital is a 43-bed facility constructed in 1979 and is considered to be adequate and appropriate for the population that it serves. The building appears to be structurally sound and the functional/spatial layout efficient and effective. Maintenance is reasonable and the staff has expertise in air conditioning, electrical and diesel mechanics, although there appears to be no systematic approach to preventative and routine maintenance. As in the other states, there is no on-island expertise in sophisticated medical equipment and some of the equipment is now out-dated and no spare parts are available.

i Yap Dispensaries

- The majority of the 30 dispensaries in Yap State are constructed of timber and corrugated iron and have been severely affected by termites and rust. They are in poor condition and require almost continuous maintenance and repair. Those on Yap
- 290 Proper have been closed for several years and will require extensive repair and renovation.

5.8.3 Short Term Needs of Health Infrastructure

The most urgent short-term need in the health infrastructure sector is the rehabilitation of the four state hospitals. This is currently being done through a \$2 million US DOI grant with matching funds from the states. There is also a need to renovate and, in some cases, reconstruct the dispensaries in all states.

5.8.4 Development Needs during the IDP Period (2004-2023)

- The objectives of the health sector during the IDP period are reducing the incidence of illness and reduce the demand upon the FSM health system and to upgrade the system to minimize the need for referrals to foreign medical facilities. The former can be achieved through improvements in other infrastructure sectors such as water/wastewater, education and roads. The second can be achieved through improving the standards of the medical facilities at the four State hospitals and in providing appropriate health care at the dispensaries to reduce the load on the State Hospitals.
- In order to reduce referrals to foreign medical services, the merits of converting what are essentially four state health systems into a national system which is able to develop different specializations in medical services at the four state hospitals has also been discussed in FSM in recent years. In the longer term, it may be appropriate to construct a new National Referral Hospital. This

has been considered for funding by the Japanese Government, and is still under discussion.

5.8.5 Proposed IDP Investment Program

The draft IDP completed in 2002 proposed an investment of \$35 million for health facility investment over the period 2003-2017³¹. Given the funding already available for the renovation of the state hospitals, and the funding likely to be available for the sector over the IDP period, it is believed that all of the proposed health facilities can be constructed during the 20-year period. Table 5.31 indicates the program for this investment over the period 2004-2023. This program reflects the state government priorities for the period 2004 to 2008³². The program includes construction of new hospital in Kosrae, some additional improvements in hospitals over and above those being implemented under the current US DOI grant and upgrading of all dispensaries where required and the construction of a National Referral Hospital.

It is proposed that some funding be allocated for activities related to a study to be prepared of the process of transforming the four state health systems into a national system, including a more detailed study of the health needs from a national perspective and the preparation of a more detailed health infrastructure investment program. In particular the study will investigate and recommend institutional working relationships between the State Health Service Divisions, the National Division of Health and a proposed National Public Health Board.

296 The timing of the projects as shown in Table 5.31 reflects their priority as follows:

- Renovations of dispensaries and construction of new dispensaries in all states.
- Construction of super dispensaries on Chuuk lagoon an outer islands.
- Construction of a new Kosrae State Hospital
- Upgrading of state hospitals in Pohnpei, Chuuk and Yap
- Construction of a National Referral Hospital

The Investment Program includes an allowance of 10% of the infrastructure cost funded by the Compact for maintenance. This cost will be funded 50% through the Compact and 50% by the states. An annual allocation has also been provided for the provision of essential equipment required by the hospitals and dispensaries.

³¹ FSM Infrastructure Development Plan FY 2003-FY 2017, May 2002

³² See Annex C for listing of state priorities for 2004-2008

5.8.6 Institutional Restructuring and Strengthening

There are two principal recommendations for institutional reform and strengthening in the health sector:

- The establishment or strengthening of Hospital Boards with private sector membership to take on primary responsibility for ensuring that all facilities are being properly used and maintained.
- The establishment of a National Public Health Board, an advisory body that will take a holistic approach to the health sector through advising on health policy, coordination with other agencies on health problem prevention and have an oversight on health sector operations in the four states.

Table 5.31 Health – Proposed Project Implementation Schedule (US\$ '000)

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Pohnpei State										
Pohnpei State Hospital	Kolonia					200		3,000		Other
Renovate Island Dispensaries	Pohnpei Island					150				Other
Replace Outer Island Dispensaries Chuuk State	Outer Islands					150	150			Other
Chuuk State Hospital	Weno		250						3,000	Com/Other
Renovation of Existing Dispensaries	Chuuk		500							Com/Other
Construction of New Dispensaries	Chuuk			500	400	400	860			Com/Other
Construction of Super Dispensaries Kosrae State	Chuuk			500	400	400	270			Com/Other
Kosrae New Hospital	Lelu					3,000	3,000			Other
Reconstruct Dispensaries	Kosrae			100	200	100				Compact II
Yap State										
Yap Proper Dispensaries	Yap Proper	100			500	500	1,124			Com/Other
Outer Island Dispensaries	Outer Islands	500								Com/Other
Yap State Hospital	Yap Proper								2,000	Other

Table 5.31 Health – Proposed Project Implementation Schedule (US\$ '000), continued

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
National										
National Referral Hospital	Chuuk						6,000			Other
Recurrent Costs										
Health Facilities Maint. Fund		60	75	110	100	90	0	0	0	Com/State
Health Facilities Equipping Fund			200	200	200	200	1,000	1,000	1,000	Compact II
Total:		660	1,025	1,410	1,800	5,190	12,404	4,000	6,000	

Table 5.32 Health – Funded or Partially Funded Projects (US\$ '000)

Project	State	Location	Available Funding	Unfunded Amount	Source
Pohnpei State					
Pohnpei State Hospital	Pohnpei	Kolonia	3,200		Compact/Other
Renovate Pohnpei Island Dispensaries	Pohnpei	Pohnpei Island	150		Compact/Other
Replace Outer Island Dispensaries	Pohnpei	Outer Island	300		Compact/Other
Chuuk State					
Chuuk State Hospital	Chuuk	Weno	3,250		Compact/Other
Renovation of Existing Dispensaries	Chuuk	Chuuk	500		Compact/Other
Construction of New Dispensaries	Chuuk	Chuuk	2,160		Compact/Other
Construction of Super Dispensaries	Chuuk	Chuuk	1,570		Compact/Other

Table 5.32 Health – Funded or Partially Funded Projects (US\$ '000), continued

Project	State	Location	Available	Unfunded	Source
			Funding	Amount	
Kosrae State					
Kosrae New Hospital	Kosrae	Lelu	6,000		Other
Reconstruct Dispensaries	Kosrae	Kosrae	400		Other
Yap State					
Yap Proper Dispensaries	Yap	Yap Proper	2,224		Compact/Other
Outer Island Dispensaries	Yap	Outer Islands	500		Compact/Other
Yap State Hospital	Yap	Yap Proper	2,000		Other
Studies					
Health Sector Master Plan	All		400		Compact II
Recurrent Costs					
Health Facilities Maintenance Fund	All		2,646		Compact/Other
Health Facilities Equipping Fund	All		1,400		Compact II
Total:			26,700		

5.9 Government Administrative Buildings

5.9.1 Sector Objectives and Outcomes

Government buildings, such as schools and hospitals, are to a large extent covered under the other infrastructure sectors. However, there is also a need to improve existing and construct new government administrative buildings to serve the functions of the Executive and Legislative branches in administering the government's programs. This was not included in the May 2002 IDP report, but is considered to be an infrastructure cost that should come under the IDP.

The primary specific objectives of the provision of infrastructure for government administrative functions are:

- To construct modern and efficient facilities required for government personnel to effectively undertake their functions
- To provide an environment that enables equipment used by government personnel to be adequately maintained
- To encourage a high morale and work ethic amongst government employees by providing a suitable work environment
- To provide elected officials with suitable office space and chambers in which to conduct their responsibilities

5.9.2 Existing Government Administrative Buildings

301 These vary from state to state. In Pohnpei, most of the government administrative buildings are fairly old and are not in an appropriate condition in which to undertake government business. This applies both to the Executive and Legislative branches that are housed in one compound, as well as the various government buildings scattered around Kolonia. In Chuuk, the situation is even worse than Pohnpei. Most government administrative buildings are in a very poor condition and need either renovation or complete replacement. This applies to both the Executive and Legislative branches. In Kosrae, a new building for the Office of the Governor and related departments was commissioned in 2003 and will be suitable for the remainder of the IDP period. However, offices for the legislators still remain to be improved, together with various other government offices scattered around Tofol. In Yap, the government offices are in better condition than those in Chuuk and Pohnpei, but will require improvements during the period of the IDP. There is a more urgent need for an appropriate conference center to enable inter-government and international meetings and fora to be facilitated.

5.9.3 Short Term Needs for Government Administrative Buildings

The most urgent short-term for government administrative buildings is the development of a new complexes for the Executive branches in Pohnpei and Chuuk, rehabilitation of other existing government buildings in both states and construction of a state government conference center in Yap. The conference center in Yap could also be hired out to the public for conferences thereby earning revenue for the state government and promoting Yap as a location for interstate meetings and conferences

5.9.4 Development Needs during the IDP Period (2004-2023)

With the exception of Kosrae, all states will need new Executive complexes during the IDP period. A rehabilitation program for other Government administrative buildings will also need to be developed for all states, including Kosrae. This program will be commenced in Pohnpei during 2004 and will continue in the other states during the period 2009 until 2023. New Legislative Branch complexes are also required in all states during the IDP period, but will not be implemented until later in the IDP period. With the exception of the short term needs in Pohnpei and Yap as outlined above, it is likely that the remainder of the infrastructure required will be funded outside of the Compact.

The program for rehabilitation of government buildings includes the post offices in each of the four states that are proposed to be funded under the National Government allocation of the Compact. A new post office will be constructed in Kosrae and the existing facilities rehabilitated in the other states.

305 The FSM national government complex in Palikir is adequate and is currently in good condition. No additional funding is required during the IDP period for this complex.

5.9.5 Proposed IDP Investment Program

The draft IDP completed in 2002 did not make an allowance for the construction of government administrative buildings, but is considered that an investment of approximately \$27 million will be required to provide appropriate facilities for state government personnel during the IDP period. Details of the requirements, the costings and the schedule are shown in Table 5.32. This should be sufficient for all requirements for government administrative building investment over the period 2004-2023. This program also reflects the state government priorities for the period 2004 to 2008³³. The program includes construction of new Executive Government complexes in Pohnpei, Chuuk and Yap, a government conference center in Yap, rehabilitation of government buildings in all states and new Legislative branch complexes in all states.

33

See Annex C for listing of state priorities for 2004-2008

114 FSM Infrastructure Development Plan

307 The timing of the projects as shown in Figure 5.32 reflects their priority as follows:

- Construction of a State Government Conference Center in Yap
- Construction of a new Executive Government Complex in Pohnpei
- Rehabilitation of Government buildings in Pohnpei
- Construction of a new Executive Government Complex in Chuuk Construct
- Rehabilitation of government buildings in all states
- Construction of new Legislative complexes in all states

308 The Investment Program includes an allowance of 10% of the infrastructure cost funded by the Compact for maintenance. This cost will be funded 50% through the Compact and 50% by the states.

Table 5.33 Government Administration Buildings – Proposed Project Implementation Schedule (US\$ '000)

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Pohnpei State										
Executive Government Complex	Pohnpei			4,000						Com/Other
Rehabilitate Government Buildings	Pohnpei			400			1,000	1,000	1,000	Other
New Legislative Branch Complex	Pohnpei						2,000			Other
Chuuk State										
Executive Government Complex	Chuuk						4,000			Other
Rehabilitate Government Buildings	Chuuk						1,000	1,000	1,000	Other
New Legislative Branch Complex	Chuuk						2,000			Other
Kosrae State										
Rehabilitate Government Buildings	Kosrae	175	100	100	100	100	500	500		Compact II
New Legislative Branch Complex	Kosrae							1,000		Other
Yap State										
State Govt Conference Building	Yap	474								Compact II
Rehabilitate Government Buildings	Yap						1,000	1,000	1,000	Other
New Legisl. Branch Complex	Yap								2,000	Other

116 FSM Infrastructure Development Plan

Table 5.33 Government Administration Buildings – Proposed Project Implementation Schedule (US\$ '000), continued

Project	Location	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
National Government Pohnpei Post Office	Pohnpei	50								Compact II
Chuuk Post Office	Chuuk	50								Compact II
Kosrae Post Office	Kosrae		150							Compact II
Yap Post Office	Yap	50								Compact II
Recurrent Costs										
Admin Building Maint. Fu Total :	nd All	80 879	25 275	346 4,846	10 110	10 110	50 11,550	50 4,550	0 5,000	Com/State

5.10 Telecommunications Sector

- The FSM Telecommunications Corporation (FSM Telecom) has rebuilt FSM's domestic network enabling thousands of families and businesses to receive improved and first time service. Yet this was only the first step as there are many communities living on outer islands currently without service or with limited radio communications capabilities. To reach these outer communities FSM Telecom is deploying a combination of fixed/mobile cellular, very small aperture satellite terminals and wireless local loop technologies.
- The FSM is developing a National IT Plan for the use of communications and information technology to enhance the delivery and capabilities of a wide range of services including health, education, emergency and disaster relief, tourism, marketing, e-commerce, government services and law enforcement. A critical aspect of the National IT Plan must be connectivity of the FSM to the world via a fiber optic cable; a submarine cable will provide the much-needed broadband connectivity for hospitals, educational institutions, libraries, businesses etc.
- The cost of developing these communications links is high. A submarine fiber optic cable will cost at least \$30 million and probably much more to connect all four states. Connecting all four states to the cable is necessary to eliminate satellite delays and to provide the broadband connectivity necessary for all of the states to be able to take advantage of the many benefits this technology will bring.
- The 2002 Draft IDP included an allocation of \$30 million for the laying of a submarine cable to connect all four states. While this is an important project and will provide economic and social benefits to FSM, it has not been included in this IDP since it may cost well in excess of that amount and is probably too large a project to be funded from the annual sector grants or the funding generally available from other sources. Additional funding sources either from the private sector or in addition to those that have been generally available for FSM in the past will need to be identified for this infrastructure.

6 Plan Implementation

6.1 Commitment and Conditions Precedent

6.1.1 Public Information and Commitment

- Section 5 of this IDP has outlined a series of infrastructure projects that it is proposed will be funded from a variety of funding sources during the 20-year time frame of the Plan. Some of these projects, that reflect immediate priorities, will be able to be commenced in 2004 or 2005 because necessary planning and design efforts have already been completed. Implementation of most of the 20-year investment program, however, will only proceed after inputs from some of the in-depth planning efforts described in Section 5. This will result in a continuing re-evaluation of the Plan as these planning efforts are completed and as priorities of the national and state governments necessarily are re-evaluated over time.
- Further, in order for major investment projects to obtain funding, these proposals will need to be subjected to full feasibility study including financial and economic analysis before funding agencies are likely to approve the funding. This is already recognized for the Compact funding under the Fiscal Procedures Agreement.
- In order for the IDP to proceed along the time frame indicated in this report, social and political activities need to be proceeding in parallel with the technical planning studies. These social and political activities need to address the following issues:
- Land tenure problems which tend to seriously impede implementation of many infrastructure projects and which are especially critical in Chuuk State.
- Involvement of the private sector in infrastructure planning, design, construction and O&M
- Awareness by the community of the importance of environmental preservation of the natural assets of the nation.
- A public commitment to the importance of education with the removal of constraints on entrance to high schools, improvement of student retention rates, and on the expansion of post-secondary educational opportunities.
- In this context, there is a need for the national and state governments and society in general, to agree on the basic, economic, social, environmental and political goals and commit themselves to the achievement of these goals. This should be a significant outcome of the National Economic Summit due to

be conducted early in 2004 and should be reflected in the National Strategic Plan.

6.1.2 Conditions Precedent

- 317 Conditions precedent to IDP implementation are intended to motivate governments to take actions to preclude possible impediments to effective and efficient implementation. The conditions precedent for the IDP have not yet been agreed, but it is suggested that the following activities are required prior to IDP implementation.
- Creation of a State Infrastructure Plan Implementation Committees (IPIC), or assignment of IPIC responsibilities to an existing committee or other suitable entity.
- Dissemination of the IDP to a wide spectrum of public and private sector stakeholders.
- Conduct of a stakeholder meeting for the purpose of discussing the IDP and the social and political issues that need to be addressed
- Statement by the State IPICS to the effect that the proposed arrangements for the Program Management Unit (PMU) have been reviewed and mechanisms for the working arrangements between the states and the PMU have been agreed.
- Following the conduct of these actions, the national and state IPICs would meet to discuss IDP implementation procedures and reporting responsibilities, and to assess possible needs for further conditions precedent to IDP implementation.

6.2 Infrastructure Plan Implementation Committees

6.2.1 Plan Implementation Responsibilities

The national government and the five state governments need to establish accountability for the IDP implementation process. It is proposed that five Infrastructure Plan Implementation Committees (IPIC) be established, one at the national level and one at each state level. Members of these committees that will be responsible for driving IDP processes should have a diversified membership that represents the several infrastructure and beneficiary sectors. In accordance with the thrust in FSM in recent years to reduce the public sector, it is proposed, where appropriate, that existing committees and secretariats take on the role of the IPIC. The National Steering Committee for the IDP has indicated that the national Economic Policy Implementation Committee (EPIC) will be assigned to take on the responsibility for IDP implementation and the Department of Transportation, Communications and Infrastructure (DTC&I) will take on the duties of the national secretariat.

6.2.2 IPIC Functions and Schedule

- 320 The proposed Terms of Reference for the IPICS can be found in Volume III of the draft 2002 IDP report. It is critical that the IPICs be established or become functional as soon as possible after approval of the IDP since an early function will be in 'selling' the IDP throughout FSM through a process of wide consultation.
- As soon as possible after the commencement of the IDP period, a launch meeting or workshop should be conducted in order to communicate the Plan's fundamental social, economic and environmental objectives and obtain public and institutional commitment to implementation of the Plan.
- Following the launch meeting, it is proposed that a second workshop be conducted to agree on IPIC implementation procedures, and especially to develop effective working relationships between the state and national levels. An IPIC Functions and Procedures Document should be prepared prior to this meeting for discussion purposes and finalized after the meeting, by no later than March 2004. The IPIC should also ensure early implementation of the critical IDP projects scheduled to commence in 2004 for which significant planning and design activities are not required or have been completed. Agreement by the IPICs on the form of program management (see section 6.3) will be required at the commencement of implementation of the IDP by January 2004, and the scale of the planning, institutional and database activities to be conducted under the IDP will need to be agreed during 2004 to allow these programs to proceed.
- The national IPIC, with the assistance of the four state IPICs and the PMU, will need to produce and distribute its first annual report on IDP implementation as soon as possible after December 2004.
- The estimated cost for maintaining the IPICs is indicated in Table 6.1.

6.3 Infrastructure Plan Implementation Committees

6.3.1 Need for Program Management Units

- The size of the IDP investment program is such that if it is to be executed successfully and according to schedule, substantial improvement of the implementation capacity currently available in FSM will be required. Further, the Terms and Conditions of Infrastructure Assistance of the Fiscal Procedures Agreement for the Compact (which represents over 50% of the IDP budget) requires, amongst others, the following documentation prior to draw down of funds.
- Evidence of title leasehold agreement, or other legal authority for use of the land upon which the capital improvement project is to be constructed.

- A detailed project budget of costs for planning, engineering and design, real estate costs, supervision and administration, construction, construction management and inspection
- A scope of work that describes the work to be performed and the schedule for planning through to completion of construction. A certified professional engineer or architect shall sign both the scope of work and budget for each construction project.
- Prior to the draw down of funds for actual project construction, the Government of the United States may request to review a set of the construction plans and specifications; a revised detailed cost estimate and a detailed construction schedule.
- Reporting requirements in accordance with the FPA will require quarterly reports submitted within 30 days after the end of the quarter to which it applies. The report shall include accounting information and a status of progress for each project funded by the Compact grant. A Federal Cash Transactions Report also needs to be submitted on a quarterly basis. This report will need to provide actual dates, project identification and amounts of draw down for the quarter.
- 328 The FPA also outlines the required Procurement procedures for all Compact grants which require documentation on tender evaluation, methods of procurement permissible for different contract amounts and the required program monitoring, performance reporting and records retention.
- It is clear that the IDP will require a high level of program management, technical skills, and financial and reporting skills to undertake the detailed planning, technical analysis, resource mobilization, financial management, and reporting systems to meet the requirements of the funding agencies and to successfully implement the IDP. During the initial year, there will need to be a period of developing systems for program management and providing the capacity building necessary to implement these systems. This capacity needs to be built within the national level secretariat of the IPIC to provide support to the states as necessary and to ensure that project documentation is in order to meet the requirements of the FPA and the other funding agencies.
- 330 The required program management activities are outlined in more detail in Volume III of the draft 2002 IDP

6.3.2 Structure of Program Management Organization

331 It is proposed that Program Management Units (PMU) be established both within the national level secretariat (that is, within the DTC&I), and within the state secretariats. The state PMUs would be responsible for program management at the state level including annual state program reviews, bidding and

award of contracts, contract supervision and reporting to the national PMU on project performance. The national PMU would be responsible for development of program management systems, training of national and state personnel in these systems, review of project documentation to ensure compliance with funding agency requirements, preparation of annual consolidated FSM program reviews and consolidated FSM performance reports as well as program management implementation assistance to the states as required.

The national PMU may be staffed by existing personnel from the 332 DTC&I but will, at least during the first 3-5 years of the IDP, require assistance from either a Program Management consultant or recruitment of several key staff on an individual basis. The latter is probably the less expensive option if appropriate personnel can be recruited. The PMU needs to include at least one registered engineer or architect to sign the scope of work and budget for each project funded through the Compact in accordance with the FPA. The minimum requirement would be two senior expatriate personnel; a Team Leader with a background in Program Management/Contracts and a Civil Engineer with the required administrative assistance. Given the extent of the program in Chuuk, it may be also appropriate to include an additional Project Engineer to be located in Chuuk to assist the Chuuk State PMU implement the program. The cost for this assistance would be in the order of \$600,000 per annum, as indicated in Table 6.1. This represents less than 2% of the average infrastructure budget under the IDP and is low by standards of the program management costs of other programs such as the recent ADB funded Water Supply and Sanitation Loan, where the PMU costs were in excess of 10% of the loan amount.

6.3.3 Mechanisms of Funding the National PMU

- There are several options for funding the assistance package required by the national PMU.
- It could be provided as an aid package either through the US Government in addition to the Compact Infrastructure Fund or another aid agency. This could include concessional loan funding from ADB.
- It could be provided through an allocation of in the order of 3% of the Compact Infrastructure funds for Program Management through the same mechanism as the 5% allocation for maintenance. This would deduct from the amount used for the implementation of each project.
- It could be provided through the Compact Infrastructure funds, on the basis that the states would contribute, say 3% of their allocation of the Infrastructure fund, but then be billed against this based on the actual amount of assistance provided by the national PMU to the states. This billing would then be drawn down against the initial contribution.
- Another variation on the second option is that there would be no fixed contribution from the states, but that they would be billed based on the actual

amount of assistance provide by the national PMU and would be expected to pay from their infrastructure fund based on the billing.

Since no funds have been allocated to the PMU for the 2004 budget, it will be necessary to obtain grant support outside the Compact infrastructure funding for at least the first year while the systems are being established and the value of the PMU assistance is being evaluated by the States. Following an initial one or two years of grant assistance, it is recommended that future PMU assistance funds are drawn from the Compact infrastructure funds on the basis of the second option described above. Since the IDP is expected to commence in early 2004, and there are significant program management needs during the first year of implementation, it is essential that funding agencies be approached as a matter of urgency regarding funding for the national PMU assistance.

6.4 Public Sector Institutional Reform, Restructuring and Strengthening

The need for public sector reform, restructuring and strengthening in each of the infrastructure sectors has been discussed to some extent in Section 5 and is further summarized in the following section. The 2002 IDP report allocated funding for a range of institutional strengthening studies to be conducted in the first few years of the IDP. It is considered that several of these programs can be funded internally as part of the overall government restructuring program so these studies have been reduced accordingly. Details of the studies still requiring funding is indicated in Table 6.1.

6.4.1 Public Sector Utilities

- The electric power and water/wastewater sectors are the two IDP sectors where public sector institutional reform, restructuring and strengthening has already been accomplished to a considerable extent. The four FSM States created public utilities corporations or authorities, during the 1990s, to upgrade public sector capability for meeting its responsibilities in the power and water sectors. In Pohnpei, Chuuk, and Yap States, the public utilities corporations have responsibility for both the power and the water sectors, whereas the Kosrae Utilities Authority (KUA) has responsibility for the power sector only. The YSPSC also has legal responsibility for solid waste management. However, YSPSC authority over the solid waste management sector had not actually become effective, as of December 2003.
- Management of all of these public utility corporations recognizes there are further needs for institutional strengthening. Before institutional strengthening programs can be determined, however, it is advisable to consider the possibilities for further reform and restructuring. Specifically:

- There needs to be established a regulatory authority for the power and water sectors. This role could possibly be taken by a branch of the state environmental protection agencies
- The water sector in Kosrae needs to be transferred to the KUA to enable cost recovery to be achieved through user pay systems
- The public utility corporations need to outsource development and maintenance programs currently undertaken in-house to reduce costs and increase efficiency.
- Once agreement is reached on the ultimate goals of public utility corporation reform and restructuring, needs for strengthening can better be identified. There are at least two areas where institutional strengthening will be important in the early years of the IDP period:
- Strengthening boards of directors through additional training and extending
 the selection of members beyond FSM to foreign utilities that are more advanced technologically and in terms of financial sustainability, thereby increasing the level of know-how on the boards.
- Strengthening oversight capability, especially for entrance into well designed contracts, and effective management of contracts.

6.4.2 Solid Waste Management

- Although the states of Kosrae, Yap, and Pohnpei made progress in setting up solid waste management systems during the 1990s, none of these states yet has an adequate institutional approach to the sector, and the state of Chuuk has yet to effectively begin to meet solid waste management needs.
- In order even start to develop an acceptable solid waste management program in any of the states, institutional change must be effected urgently. The recommended approach is:
- Legislate to place overall authority for solid waste management to an appropriate government agency that could be either the municipalities of the state public works departments. Assigning responsibility for solid waste management at this stage to the public corporations is not considered appropriate given the need for the corporations to first achieve financial sustainability for the power and water sectors.
- Encourage outsourcing of most of the solid waste management activities leaving the role of the responsible government agency as one of essentially contract management and performance reporting
- Provide the state environmental agencies with the authority to enforce legislation to relating to effective solid waste management.

 Establish Solid Waste Minimization Councils in each state to arrive at a strategy for diverting large proportions of prospective future solid waste away from landfills.

6.4.3 Roads and Pedestrian Facilities

341 The principal recommendation for institutional reform in the roads sector is to reduce the size of the road agencies that have not been effective in providing adequate road maintenance and increasing the degree of outsourcing for construction and maintenance. The role of the road agencies could be limited to planning, inspection and contract management.

6.4.4 Maritime Transportation

- There are two areas of institutional concern in the maritime transportation sector port development and management, and maritime safety.
- It is recommended that the other states follow the lead of Yap and create an independent port authority that will retain all revenue generated from operations, and will have full responsibility for making investments and for its debt service and operating costs. It is not recommended that seaports and airports be combined in a single organization such, as is the current situation in Pohnpei.
- With regard to maritime safety, there is a need to create at the national government level a Maritime Safety Authority. This Authority would be responsible for ensuring navigational aids are provided, coordination of the hydrographic survey and mapping activities, provision of coastal communication stations, inspection and certification of vessels for seaworthiness, certification of crew training standards, control of loading of vessels and search and rescue needs.

6.4.5 Air Transportation

- 345 The air transportation sector requires institutional changes comparable to those just discussed for the maritime transportation sector.
- State airport authorities are needed for administration of the international airports and to assist their respective state governments in the development, maintenance and operation of small airports and airstrips, with work on small airports proceeding through contracts with private contractors.
- A national Air Transportation Safety Authority (ATSA) is needed to make it possible for FSM to meet its air traffic safety obligations and to regulate domestic air transportation services.
- 346 ATSA will have oversight duties, including inspection of air traffic safety facilities and equipment, airport runway inspection, domestic airline maintenance operations inspection, domestic commercial aircraft inspection, and

pilot testing, certification, and licensing. Private contractors will carry out other air traffic safety functions, including air traffic control, aircraft guidance system installation and maintenance, and meeting flight information region (FIR) responsibilities.

The airport authorities will be mainly concerned with development, maintenance and operation of their respective airports, and will enter into a variety of agreements and contracts for this purpose.

6.4.6 Education

There are four main institutional initiatives recommended for the education sector.

- Increased coordination between the College of Micronesia and other postsecondary and training programs in order that COM-FSM can design programs appropriate for the workforce needs of FSM;
- Increased coordination between secondary education and post-secondary education in order that the post-secondary institutes can design programs that address the anticipated knowledge of students on completion of secondary school;
- Establishment of a national Board of Education that would provide the necessary guidance to ensure the education programs address the future workforce needs of FSM, together with strengthening of the State Boards of Education to provide inputs into this function; and
- Establishment of School Community Boards in each state, as has occurred
 in Yap in order to obtain community involvement to ensure that the schools
 are well maintained and in all respects adequate to the task of educating
 their students
- With regard to the latter, an effective school board will include among its members leaders of the community and school officials. It is useful, also, to have at least one member on each board that is knowledgeable about the ultimate objectives of elementary and secondary education, again to ensure that a measure of coordination is developed and maintained.

6.4.7 Health

As the health sector is currently developed and operated, it comprises four state systems, and does not effectively constitute a national system. Currently each of the four state governments has a Department of Health Services responsible for running the state hospital, dispensaries, and for carrying out public health campaigns. However, the condition of the health infrastructure tends to be sub-standard. Transformation of the health sector into a national system could significantly raise health standards in the country. In order to do this, there must be a national institution that is capable of identifying the potentials

for specialization and coordination, developing an action plan for realization of the identified potentials, and driving the implementation effort.

351 In order to achieve this, it is recommended to create a National Public Health Board (NPHB) with responsibilities for advising on health policies, advising and handling coordination with other economic sectors on health problem prevention programs and public information campaigns and conducting regular inspections of health sector operations in the four states, and advising the NDH on any needs for penalties or other actions to improve standards of performance and/or cost control.

6.5 Databases and Planning Studies

- As it currently exists, the IDP represents the product of a broad-brush planning effort, amended to take into account the comments of the four FSM State Governments and of the IDP National Steering Committee (NSC) on the draft IDP report. For the most part, investments included in the IDP are urgently required by FSM, and this is especially true for investments scheduled for the first quinquennium of the IDP period. Nevertheless, there are design options for most of these projects, and they should therefore be subjected to more in-depth evaluation, including feasibility analysis. Once assessed as feasible, preparation of final designs, construction specifications and cost estimates can proceed, but these activities would be considered as part of the construction cost of the project.
- However, even before most planning efforts get underway, there are needs to prepare for effective planning, by providing some basic databases and maps. Much of the database development required is ongoing, and there is only a need in such a case to supplement funding, and thereby make possible accelerated completion of the database development and mapping efforts.
- Only when the various planning efforts have been completed, with results finalized on the basis of comments received on the draft reports and designs, will it become possible to "finalize" the IDP. Even after finalization, there will be continuing needs for monitoring implementation progress, and amending the implementation schedule to keep it as realistic as possible.
- 355 Details of the proposed planning studies and database development are indicated in Table 6.1

6.5.1 Database Development

There is a need for an up-to-date GIS on the FSM and each of its islands and surrounding seas. Much of this information should become available by the time that the first of the recommended planning studies get underway in 2004, when all of the geographic information should also be available.

357 Hydrographic surveying and mapping is also needed, for planning in the maritime transportation sector.

6.5.2 Planning Studies and Schedule

- 358 The planning studies that need to be carried out during 2004 to 2008 are identified and briefly discussed below. The Terms of Reference for the planning studies are included in Annex B of Volume III of the 2002 IDP report. The scope of some of these studies has been reduced, since the preparation of detailed designs and specifications for the infrastructure projects should be included in the construction cost.
- 359 **Chuuk Lagoon Electrification Master Plan.** The Plan will produce outline designs for the electrification of inhabited islands of the Chuuk lagoon. For the smaller islands, hybrid diesel/solar energy systems will be considered. The Plan will identify all system maintenance and operational needs, and will identify appropriate rate structures and levels for full cost recovery.
- Solid Waste Disposal Needs Minimization Study. The study will recommend a strategy for reduction of the total amount of solid waste that needs to be disposed of at landfills. Strategies will include policy introduction to limit some types of solid waste, waste material recycling within FSM or shipment to external recycling locations, and other approaches for minimizing needs to dispose of solid waste.
- Solid Waste Management Landfills Plan. The Landfills Plan will be conducted several months after the Disposal Needs Minimization Study, in order to ascertain how effectively waste quantities are being reduced or diverted from requiring disposal at landfills. The Landfills Plan will recommend an effective and efficient system of disposal for each of the principal islands, and other islands of the Chuuk lagoon, and will examine in a more general manner needs for waste disposal on the outer islands.
- 362 **Primary Roads Master Plan.** The Plan will provide final outlines for completion and upgrading of existing circumferential and other primary roads, and for recommended new roads on islands of the Chuuk lagoon. During conduct of the PRMP, it is intended that road agency staff will be fully involved, in part for technology transfer purposes.
- Weno Island Waterfront Redevelopment Plan. There is a need to redesign the Weno Island western waterfront for purposes of serving adequately the sea transport services industry, the fishing industry, and the tourism industry. The construction of a passenger ferry terminal is critical for establishing regular public ferry services within the lagoon, and also for improving the longer distance ferry services to the Chuuk State outer islands. The Weno Island Waterfront Redevelopment Plan will also give attention to the plan implementation process and in particular to dealing effectively with land tenure considerations.

- Air Transportation Development Plan. This planning study will provide outline designs for airport improvement projects, including passenger terminal expansion projects, runway extensions that the study finds feasible, apron area expansion, and any other recommended improvement projects. In addition to the four international airports, the study will give consideration to upgrading the Woleai airstrip to airport status, enabling turboprop aircraft to stop there when operating between the Chuuk and Yap airports. The planning effort will also consider the needs for new airstrips on the outer islands.
- Maritime Transportation Development Plan. This planning study will provide outline designs for recommended port development projects, including entrance channel improvement projects, the rehabilitation or upgrading of existing wharves and quays, expansion of storage and holding areas, and other improvements, and will provide specifications for appropriate vessels to provide new or improved maritime transport services. Passenger ship and ferry terminal areas, outside of the commercial ports, will be identified, with recommendations for their capacity, design, shore-based equipment and facilities, and operations. For all ports and terminals, recommendations will be made for attaining financial sustainability.
- Elementary & Secondary Schools Design Study. The study will survey all existing public elementary and secondary schools in FSM, and will hold community meetings to discuss each school. The study will then identify design implications of these objectives relative to existing school facilities and areas, and will reach agreement with leaders of the community on preliminary designs. The study will also consider and make recommendations regarding national and state Board of Education membership, responsibilities, and procedures.
- College of Micronesia-FSM Master Plan Study. The study will provide final plans for expanding the national and state campuses of COM-FSM to meet the needs of the nation in terms of the numbers and qualifications of manpower required for economic sustainability.
- 368 **Health Sector Master Plan Study.** The study will recommend an approach for transforming four state health systems into a national system. The study will give consideration to health problem prevention, as well as curative services, and will recommend an array of desirable prevention initiatives. The study will recommend institutional working relationships between state Health Service Divisions, a National Health Service Division, and a National Public Health Board (NPHB).
- Risk Assessment Related to Natural Hazards. These studies should be conducted at the state level and focus on existing risks to infrastructure (e.g. typhoon, landslides, drought) as well as determining how those risks will be increased as a result of changes in the future, including the consequences of global climate change. The study will develop guidelines and identify and rec-

ommend other measures to ensure the exposure of infrastructure to current and future risks are reduced to acceptable levels

6.6 IDP Implementation Schedule

6.6.1 IDP Finalization

- 370 It is now anticipated that with the submission of this report, that the IDP will be approved by the state and national governments at the National Economic Summit in early 2004. The recommended planning efforts are needed, however, for in-depth analysis of the IDP investment program, and there will undoubtedly be many changes deriving from those study efforts.
- Each of the planning studies will need to have its own National Steering Committee, which will provide comments and guidance during the course of study. When the draft report for a planning study becomes available, however, review should be extended beyond the NSC, to all of the state governments involved and to the national and state IPICs and the core stakeholder groups that are appropriate to the sector in question. Ideally, a national stakeholder workshop should be held after completion of the draft report for each planning study, and IDP funds for IPICs reflect the costs of holding such national workshops.
- The national IPIC, through the national PMU, is charged with making recommendations on how the IDP is to be changed to take into account finalized planning study findings and recommendations. If the planning schedule can be maintained, as currently set forth in the IDP, all planning efforts will have been finished by early in 2007. Thus, at that point in time, the IDP can be finalized, in the sense that it will then incorporate all of the results of in-depth planning studies. Should there be delays in project implementation, however, the IDP will require further adjustment after 2007, in order that it is kept realistic in regard to implementation schedule.

6.6.2 Proposed Schedule

- The schedule for implementation of the IDP is very ambitious. The implementation period can essentially be divided into four stages as follows:
- Preparations, including establishment of IDP management.
- Conduct of planning studies.
- Project implementation.
- Setting up mechanisms to provide assurance of adequate funding to meet maintenance needs and other critical recurrent costs.
- The preparation stage must be completed by mid-2004 or it will prove impossible to keep to schedule during the first IDP year. Planning studies are scheduled for 2003-2007, and the importance of coordination among these stud-

ies makes it critical that none of them be delayed. The implementation of some projects for which detailed planning has been completed or is in progress can proceed during the 2004-2007 planning period. There are some critical projects in this group, including Pohnpei Airport pavement overlay and rehabilitation of Weno Power plant generators and other facilities. Most project implementation, however, can only get underway after 2006, as final designs and construction specifications become available.

Recurrent funds would not normally be included in an investment program. However, the past record of maintenance of infrastructure, or rather the lack of attention to maintenance, argues for giving special attention to this funding need and this is required for the Compact funding under the Fiscal Procedures Agreement. Moreover, schools and hospitals require replenishment of equipment, furniture and materials, since there are chronic, serious shortages that must be addressed.

6.6.3 Schedule Adherence Concerns

- The size of the IDP far exceeds any investment program implemented in the FSM to date, and in the past the record of implementation capacity of the five FSM governments has not been good. This emphasizes the importance of developing an effective PMU at the national level, with adequate resources to manage a program of this magnitude, provide the required documentation to the funding agencies to maintain the program funds flow and provide assurance on the standard of construction of all projects implemented under the program
- Now that the IDP report has been finalized, there is also a need for a major effort on the part of all five FSM governments to ensure that the FSM private sector is fully involved with IDP implementation from mid-2004 onward. This report is recommending that the IPICs hold meetings at the state and national levels with stakeholders to discuss the IDP and its implementation in detail, and to obtain general stakeholder support and commitment. Core stakeholder groups (CSGs) should be formed for each sector in each state to give good assurance that the private sector will remain fully involved with IDP implementation throughout the IDP period.
- Provided that the five governments and their respective IPICs can ensure early 2004 mobilization for the PMU, this will help considerably to maintain implementation momentum through the end of the planning study period. A good beginning will help the IPICs to keep to IDP implementation schedule through the end of the period.

6.6.4 Schedule Adjustment

379 PMU will be responsible for recommending annual adjustment of the IDP implementation schedule. Initially the adjustments required will include those made on the basis of recommendations of planning studies, as these rec-

ommendations shall be confirmed or amended by stakeholder meetings held for that purpose. Schedule adjustment will also be necessary for any delays in conduct of planning studies and/or in implementation of capital investment projects.

- Whenever the nature and scope of projects require adjustment, the concerned state governments will need to be involved in the adjustment decisions. When adjustment is being made only to reflect implementation delays, however, the national IPIC would appear to be the appropriate body to make adjustment decisions.
- Depending on how well IDP implementation proceeds, the repeated need to adjust implementation schedules for one or more infrastructure sector and/or for one or more FSM state could become embarrassing. Even so, it is important that adjustments continue to be made. If current schedules for implementation become unrealistic, the IDP could become irrelevant. If, on the other hand, necessary adjustments are made throughout the implementation period, the IDP can be kept relevant for each of nine infrastructure sectors in each of four FSM states.

Table 6.1 Program Preparation and Management (US\$ '000)

Project	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
Program Management									
Infrastructure Plan Implementation Committees	100	100	100	100	100	250	250	250	Compact II
Program Management Database & Institutional Development		600	600	600	600				Compact II
Hydrographic Survey and Mapping		200	200						Compact II
Aerial Photography and Mapping		250							Compact II
Cadastral Database Dev. and Mapping		50	50	50					Compact II
Institutional Restructuring Programs		250	400	250					Compact II
Maritime Safety Authority			300	300					Compact II
Air Transport Safety Authority Studies and Plans			200	200					Compact II
FSM Solid Waste Disposal Needs Minimization Study	300	150							Compact II
FSM Solid Waste Landfills Plan			200	200					Compact II
Kosrae Dock Master Plan	75								Compact II
FSM Maritime Transportation Dev. Plan		200	100						Compact II
Kosrae Airport Master Plan	75								Compact II

Table 6.1 Program Preparation and Management (US\$ '000), continued

Project	FY04	FY05	FY06	FY07	FY08	FY09-13	FY14-18	FY19-23	Total
FSM Air Transportation Development Plan		150	150						Compact II
FSM-COM Master Plan Study			150	200					Compact II
FSM Elem. and Sec. Schools Design Study		150	150						Compact II
Chuuk Lagoon Electrification Master Plan		300	150						Compact II
Primary Roads Master Plan		250	200						Compact II
Weno Waterfront Redevelopment Plan		250	200						Compact II
Health Sector Master Plan			200	200					Compact II
Risk Assessment Related to Natural Hazards			300						·
TOTAL	550	2,900	3,650	2,100	700	250	250	250	

Annex A Infrastructure Sector Strategic Planning Matrix

Annex B Proposed Projects to be Undertaken Under IDP by State (US\$ '000)

Table B.1 Chuuk State

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Electrical Power										
Weno Power Plant	Weno	2,700	2,500	1,500	1,300					Com/Other
Weno Power Distribution	Weno S. Na-	1,000	400			533	885			Com/Other
Tonoas Power Plant	moneas S. Na-						9,824			Other
Tonoas Distribution	moneas S. Na-				500	400	800			Compact II
Eten Submarine Cable	moneas S. Na-						294			Compact II
Eten Power Supply	moneas S. Na-						168			Compact II
Fefen Submarine Cable	moneas S. Na-						735			Compact II
Fefen Power Supply	moneas S. Na-						1,062	1,280	797	Compact II
Unman Submarine Cable	moneas S. Na-						490			Compact II
Unman Power Supply Tol Power Plant	moneas Faichuk						9,767	1,756		Compact II Other
Tol Power Supply	Faichuk						5,707	1,138	1,137	Compact II
Paata Power Supply	Faichuk						1,062	519	,	Compact II
Polle Power Supply	Faichuk						•	1,062	867	Compact II

Table B.1 Chuuk State, Continued

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Wonei Power Supply Fanapanges Power Plant	Faichuk Lagoon							1,062 1,450	463	Compact II Other
Fanapanges Distribution Romanum Power Plant Romanum Distribution Udot Power Plant Udot Distribution Eot Submarine Cable Eot Distribution	Lagoon Lagoon Lagoon Lagoon Lagoon Lagoon Outer Is-							297 1,257 205 2,042 694 147 106		Compact II Other Compact II Other Compact II Compact II Compact II
Solar/diesel for schools Solar/diesel for schools Solar/diesel for dispensa-	lands Lagoon Outer Is-				634	1,000 332	2,000		2,400	Other Other
ries Solar/diesel for dispensa-	lands					100				Other
ries Water/Wastewater	Lagoon					100				Other
Weno Water Supply Weno Sewage Treatment	Weno	300	650						2,500	Compact II
Plant	Weno		1,000	250					1,770	Com/Other
Weno Sewerage Extension	Weno		600	250	500	700	1,000	1,000	2,000	Com/Other
Tonoas Water Supply	Weno S. Na-		150	1,000			1,200	1,200	1,418	Compact II
Fefen Water Supply	moneas				800	200	1,500	1,500	1,500	Compact II

Table B.1 Chuuk State, Continued

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
	S. Na-									
Unman Water Supply	moneas					800	1,500	1,500	1,279	Compact II
	S. Na-									
Tonoas Sewerage	moneas							2,140	1,000	Compact II
	S. Na-									
Fefen Sewerage	moneas							2,000	1,000	Compact II
	S. Na-									
Common Sewer outfall	moneas							2,000		Compact II
Tol Water Supply	Faichuk					750	2,500	1,000	1,250	Compact II
Paata Water Supply	Faichuk						1,500	1,500	1,104	Compact II
Polle Water Supply	Faichuk						1,500	1,000	1,000	Compact II
Wonei Water Supply	Faichuk							2,000	1,778	Compact II
Eot Water Supply	Lagoon							1,033		Compact II
Fanapanges Water Supply	Lagoon							1,033	593	Compact II
Romanum Water Supply	Lagoon						730	729		Compact II
Udot Water Supply	Lagoon						730	729	500	Compact II
	Outer Is-									
Halls Island Water Supply	lands			100		250	1,000	825		Compact II
Mortlock Islands Water	Outer Is-									
Supply	lands			150		250	1,250	1,250	1,250	Compact II
Solid Waste Management										
Rehab of Existing Landfill	Weno	300	200							Compact II

Table B.1 Chuuk State, Continued

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Development of Weno	Weno					1 000	0.500	0.500	0.500	Other
Landfill Roads/Pedestrian Facilities	vveno					1,000	3,500	2,500	2,500	Other
West Coast Road Upgrade/Complete Circumf	Weno	2,000	1,500	1,000	1,556	1,256				Compact II
Road Bridges/Water Crossing	Weno						1,500	1,500	1,500	Other
Structures Weno Road Appurtenances	Weno Weno			256			1,180 169	1,180	1,142	Other Compact II
Tonoas Circumferential Road	S. Na- moneas			800	1,000	500	2,000	1,565		Compact II
	S. Na-			000	1,000	000	750	750		·
Tonoas Water Crossings	moneas S. Na-									Compact II
Fefen Circumferential Road	l moneas S. Na-					500	1,298	1,298	1,500	Compact II
Fefen Water Crossings Paata Primary Road	moneas Faichuk						686	500 2,000	1,500	Compact II Compact II
Polle Primary Roads Tol Primary Roads	Faichuk Faichuk						1,000	2,000 2,500	1,500 2,500	Compact II
Wonei Primary Roads Wonei/Paata Causeway	Faichuk Faichuk						500	1,000 1,000	1,000 912	Compact II
Water Crossings	Faichuk						500	1,500	1,500	Compact II

Table B.1 Chuuk State, Continued

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Maritime Transportation										
Weno Commercial Port										
Improvements	Weno			2,080						Other
Weno Ferry Terminal Build-	-									
ing	Weno				1,333					Other
Dock for Lagoon/Outer Is-										
land Ferry	Weno		160	2,500	2,000	2,000			2,734	Com/Other
Southern Namoneas Ferry	S. Na-									
Terminals	moneas					1,000	2,000	2,000	3,000	Other
Faichuk Ferry Terminals	Faichuk					500	1,000	5,000	5,000	Other
Air Transportation										
Airport Runway Improve-										
ment	Weno		1,000	750	750	750	1,700			Compact II
Airport Terminal Expan-										
sion/Equipment	Weno		322	250	250	250	1,905		749	Com/Other
Onuon, Murilo, Ta, Houk	Outer Is-									0.1
Airstrip Rehab.	lands				1,347	1,347	2,694	5,387		Other
Education										
N. Namoneas Elementary	S. Na-		500	500	000	000	4 000	4 000	4 000	0
Schools	moneas	4 055	500	500	300	300	1,000	1,000	1,000	Compact II
School Sports Facilities	Weno	1,655		050	500	050	1,000			Compact II
Weno Junior High	Weno	150		250	500	250	1,171		1 000	Compact II
Chuuk High School	Weno	1,245							1,000	Compact II
Faichuk Elementary	Faialand		F00	F00	000	000	1 000	1 000	1 000	0
Schools	Faichuk		500	500	300	300	1,000	1,000	1,000	Compact II

Table B.1 Chuuk State, Continued

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Faichuk High School	Faichuk		125	250	400	250			1,000	Compact II
S. Namoneas Elementary	S. Na-		450	400	050	000	4 000	4 000	4 000	0
Schools	moneas		450	400	350	300	1,000	1,000	1,000	Compact II
New Southern Namoneas	S. Na-		750	OFO			1.050	1.050	010	Compact II
High School	moneas		750	250			1,250	1,250	810	Compact II
Tanaga High Cahaal	S. Na-		200	250	200		1 000		1 000	Compost II
Tonoas High School	moneas Outer Is-		300	250	200		1,000		1,000	Compact II
Halls Elementary Schools	lands			200	300		500	500	756	Compact II
Mortlocks Elementary	Outer Is-			200	300		300	300	750	Compact ii
Schools	lands			200	300	200	1,000	1,000	1,000	Compact II
20110010	Outer Is-			200	000	200	1,000	1,000	1,000	Compact ii
Mortlocks Junior High	lands		125		250	250	500	500	888	Compact II
Namonuioto Elementary	Outer Is-		0		_00		000		000	oopaot
Schools	lands					300		1,000	949	Compact II
	Outer Is-							•		•
Weipat Junior High	lands		125				500	500	1,000	Compact II
Western Islands Elementai	ry Outer Is-									•
Schools	lands			200	200		750	750	655	Compact II
	Outer Is-									-
Pattiw Junior High	lands		100					750	599	Compact II
COM - New Weno Campu	s Weno			1,500	1,500					Other

Table B.1 Chuuk State, Continued

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	8 FY14-18	FY19-23	Source
Health										
Chuuk State Hospital	Weno		250						3,000	Com/Other
Renovation of Existing Dis- pensaries Construction of New Dis-	Chuuk		500							Com/Other
pensaries	Chuuk			500	400	400	860			Com/Other
Construction of Super Dispensaries	Chuuk			500	400	400	270			Com/Other
Government Admin. Buildings										
Executive Government Complex	Chuuk						4,000			Other
Rehabilitate Government Buildings New Legislative Branch	Chuuk						1,000	1,000	1,000	Other
Complex Infrastructure Mainte-	Chuuk						2,000			Other
nance Fund Total:		935 10,285	931 13,138	1,106 17,492	1,126 18,496	1,156 18,624	3,460 86,410	5,307 82,691	4,524 73,824	

Table B.2 Kosrae State

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Electrical Power										
Power Plant Rehabilitation	Lelu				106		387			Compact II
Power Distribution	Kosrae	197		500			542			Compact II
Water/Wastewater										-
Lelu Water Supply	Lelu	1,176	1,500	1,125					1,500	Other
Malem Water Supply	Malem			1,000	1,500				1,500	Other
Tafunsak Water Supply	Tafunsak	500	1,000	500					1,500	Other
Utwe Water Supply	Utwe	500	750	250					1,500	Other
Lelu/Tofol Wastewater	Lelu		409	437	800			4,500	568	Compact II
Solid Waste Management										
Development of Kosrae Landfill	Lelu						2,500	2,500	2,500	Other
Roads and Pedestrian Facilities										
Upgrade Circumferential Road	Kosrae					1,500	2,000	1,500	1,917	Compact II
New Circumferential Road Constr.	Kosrae	600	600	600			2,500	2,500	2,500	Com/Other
Lelu Causeway Widening	Lelu	125							1,000	Compact II
Circumferential Road - Seawall	Kosrae	240					1,000		•	Com/Other
Upgrade Secondary Roads	Kosrae	85		795	1,200				1,000	Compact II

Table B.2 Kosrae State, continued

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Water Crossings - New Roads	Kosrae					500	1,000	700		Other
Maritime Transportation										
Conversion of Tuna Industry Building	/Kosrae		118							Other
Air Transportation										
Runway Exten- sion/Improvement			400						4,000	Com/Other
Terminal Expan- sion/Equipment			265						1,000	Compact II
Education										
Kosrae High School (Tofol) Walung High School	Lelu Walung	300	150	150	150	150	1,000 150	1,000	1,274	Compact II
Kosrae Elementary Schools COM - Enlarged Kosrae Campus	Kosrae Kosrae	480	150	150	100	150	1,000 1,000	1,000	1,000 1,000	Compact II Other
Health										
Kosrae New Hospital Reconstruct Dispensaries	Lelu Kosrae			100	200	3,000 100	3,000			Other Compact II

Table B.2 Kosrae State, continued

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Government Administrative Buildings										
Rehabilitate Government Buildings	Lelu	175	100	100	100	100	500	500		Compact II
New Legislative Branch Complex	Lelu							1,000		Other
Infrastructure Mainte- nance Fund		220	207	283	266	200	558	850	776	
Total:		4,598	5,649	5,990	4,422	5,700	17,137	16,050	24,535	

Table B.3 Pohnpei State

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Electrical Power										
Dekehtik Power Plant	Kolonia						10,500			Other
Diesel/Solar Power for schools	Outer Is- lands			700		300	253			Other
Diesel/Solar Power for dispensaries	Outer Is- lands					100				Other
water/Wastewater										
Extension of PUC Water Supply System	Pohnpei			767	2,765	2,765	5,500	5,500	5,500	Other
Kolonia Wastewater Treat- ment Plant	Kolonia	477	1,000	1,476						Other
Kolonia Sewerage System Extension	Kolonia				1,250	1,250		2,500	2,500	Other
Ocean Outfall Extension	Kolonia			1,151						Other
Household Water Supply Systems	Lagoon						552			Compact II
Solid Waste Management										
Closure of Existing Landfill in Dekehtik	Dekehtik				1,018					Compact II
Development of New Pohnpei Landfill	Pohnpei				2,182		2,500	2,500	2,500	Com/Other

Table B.3 Pohnpei State, continued

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Roads and Pedestrian Fa- cilities										
Rehab Paved Circumferential Road	Pohnpei			500		1,000	3,175	3,175	3,500	Other
Upgrade Unpaved Circumferential Road	Pohnpei	6,000	4,500							Other
Primary Roads Drainage	Kolonia					800		596	1,078	Other
Primary Roads Bridges	Kolonia			500			295			Other
Provide street lighting, traffic lights etc	Kolonia			300			415			Other
Maritime Transportation										
Dekehtik Port Dredging	Dekehtik					1,000	2,500	5,000	5,000	Other
Dekehtik Commercial Port Improvements	Dekehtik			500	500			1,500	1,000	Other
Kolonia Outer Island Ferry Terminal	Kolonia					1,500			943	Other
Outer Island Dredging	Outer Is- lands						1,770			Compact II
Island Ferry Docks/Mooring Buoys	Outer Is- lands						1,320	1,320		Compact II

Table B.3 Pohnpei State, continued

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Air Transportation										
Runway, Taxiway, Apron Rehabilitation	Kolonia	4,000							4,000	Com/Other
Runway Extension	Kolonia		7,000							Com/Other
Airport Terminal Expansion/Equipment	Kolonia					1,000	1,561			Other
Pingelap Airstrip Rehabilita- tion	Outer Is- lands				881					Other
Education										
Pohnlangas High School - Madolenihmw	Mado- lenihmw				3,345	4,155				Com/Other
Kitti Elementary Schools	Kitti	250			200		1,000	1,000	1,000	Com/Other
Kolonia Elementary Schools	Kolonia	250			150		750	750	750	Com/Other
Pohnpei Island Central Schoo - Kolonia	l Kolonia						1,250	1,250	1,250	Compact II
Madolenihmw Elementary Schools	Mado- lenihmw	250			300		1,500	1,500	1,500	Com/Other
Nett Elementary Schools	Nett	250			100		500	500	500	Com/Other
Sokehs Elementary Schools	Sokehs	250			100		1,000	1,000	1,000	Com/Other
Uh Elementary Schools	Uh	250			150		1,000		872	Com/Other
Outer Island Elementary Schools	Outer Is- lands					500	1,000	1,000	400	Compact II

Table B.3 Pohnpei State, continued

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
COM -Redevelopment of Pohnpei State Campus							3,000	1,500	500	Other
COM - National Campus								1,500	1,500	Other
Health										
Pohnpei State Hospital	Kolonia					200		3,000		Other
Renovate Pohnpei Island Dispensaries	Pohnpei					150				Other
Replace Outer Island Dispensaries	Outer Is- lands					150	150			Other
Government Administrative	10111010									
Buildings										
Executive Government Complex	Kolonia			4,000						Com/Other
Rehabilitate Government Buildings	Kolonia			400			1,000	1,000	1,000	Other
New Legislative Branch Complex	Kolonia						2,000			Other
Infrastructure Maintenance Fund		189	299	336	382	390	1,485	1,332	1,322	
Total:		12,166	12,799	10,630	13,323	15,260	45,976	37,423	37,615	

Table B.4 Yap State

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Electrical Power										
Solar/diesel for schools	Outer Is- lands			558					1,000	Other
Solar/diesel for dispensaries	Outer Is- lands			100						Other
Yap Power Plant Upgrade	Yap Proper							1,500	1,500	Other
Yap Distribution Extension	Yap Proper						1,000		1,000	Compact II
Water/Wastewater										•
Maap-Rumung Water Supply	Yap Proper	500	1,000	500					904	Other
Gagil-Tomil Water Supply	Yap Proper						1,450	1,450	886	Compact II
Southern Yap Water Supply	Yap Proper						1,714	429		Compact II
Household Septic Tanks	Yap Proper						484	484		Compact II
Extension of Ocean Outfall	Yap Proper				500		1,214			Other
Solid Waste Management										
Closure of Existing Yap Land- fill	Yap Proper						1,333			Compact II
Development of new Yap Landfill	Yap Proper						4,500	1,838	2,500	Other

Table B.4 Yap State, continued

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Roads and Pedestrian Facil ties	i-									
Bridge Reconstruction	Colonia		1,500							Compact II
Trunk Road Upgrading	Yap			2,956		3,115	2,500	2,500	2,500	Com/Other
Maritime Transportation	-									
Dredging Approach Channel	Colonia						1,500	5,000	5,000	Compact II
Yap Commercial Port Improvements	Colonia			500	500			1,500	1,000	Other
Colonia Dock and Ferry Ter- minal	Colonia				500	500		2,000	696	Other
Reconstruct Fisheries Refrig. W/house	Colonia						3,540			Other
Air Transportation										
Runway, Apron Extension Airport Terminal/Equipment					5,000	1,548	374			Compact II
Woleai/Fais Airstrip Rehab	Outer Is- lands				1,000	1,000	2,644	4,645		Other

Table B.4 Yap State, continued

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Education										
Yap High School	Colonia		646				1,500		1,000	Compact II
Colonia Middle School	Colonia		1,179							Compact II
Yap Proper Community Schools	Yap Proper		1,669	1,343			1,500	1,500	1,000	Compact II
Ulithi Community Schools	Outer Is- lands							900		Compact II
Ulithi High School	Outer Is- lands						1,000			Compact II
Woleai Community Schools	Outer Is- lands							1,000	1,000	Compact II
Woleai High School	Outer Is- lands						500			Compact II
Satawal Community Schools	Outer Is- lands							900	854	Compact II
COM - Yap State Campus	Yap Proper						1,000	1,000	1,000	Other

Table B.4 Yap State, continued

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Health										
Yap Proper Dispensaries	Yap Proper	100			500	500	1,124			Com- pact/Other
Outer Island Dispensaries	Outer Is- lands	500								Com- pact/Other
Yap State Hospital Government Admin. Buildings	Yap Proper								2,000	Other
State Govt Conference Building	Colonia	474								Compact II
Rehabilitate Government Buildings	Colonia						1,000	1,000	1,000	Other
New Legislative Branch Complex	Colonia								2,000	Other
Infrastructure Maintenance Fund		107	499	430	500	466	1,236	1,166	1,074	
Total:		1,681	6,493	6,387	8,500	7,129	31,113	28,812	27,914	

Table B.5 National Government

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Program Management										
Infrastructure Plan Implementation Committees					100	100	250	250	250	Compact II
Program Management			500	500	600	600				Compact II
Maritime Transportation										
National Small Ports Fund				300	300	300	1,500	1,500	1,500	Compact II
Maritime Safety Operations Fund					100	100	500	500	500	Compact II
Air Transportation										
National Small Airports Fund				300	300	300	1,500	1,500	1,500	Compact II
National Air Transportation Safety Fund					75	75	375	375	375	Compact II

Table B.5 National Government, continued

Project	Location	FY04	FY05	FY 06	FY 07	FY 08	FY09-13	FY14-18	FY19-23	Source
Education										
COM –Redev. of Pohnpei State Campus							3,000	1,500	500	Other
COM - National Campus								1,500	1,500	Other
COM - New Weno Campus		350		1,500	1,500					Other
COM - Enlarged Kosrae Campus							1,000		1,000	Other
COM - Yap State Campus			350				1,000	1,000	1,000	Other
Government Administrative Buildings										
Pohnpei Post Office					50					Compact II
Chuuk Post Office					50					Compact II
Kosrae Post Office					150					Compact II
Yap Post Office					50					Compact II
Infrastructure Maintenance Fund				0	0	0	0	0	0	
Total:		350	850	1,600	3,275	1,475	9,125	8,125	8,125	

Annex C Proposed Projects to be Funded Under Amended Compact Infrastructure Grant (FY2004-2008) by State

Table C.1 Chuuk State

FY2004 Projects	US \$ Costs
Weno Road & Drainage Development (Phase I)	2,000,000
Weno Power Generation & Distribution System	3,700,000
Outdoor Stadium	1,655,994
Chuuk High School Dorm. Building with Water Catchment	700,000
Chuuk High School Vocational Building	150,000
Chuuk High School Library Building	150,000
Chuuk High School Sc. Lab, other classrooms & High tech.	150,000
Weno High School Classroom Building	150,000
Weno Solid Waste Disposal (Phase I)	300,000
Weno Water System Improvement (Phase I)	300,000
IMF	487,159
FY2004 Total	9,743,153
FY2005 Projects	
1 12000 1 10,000	
Nomosofo Junior High School Dormitory	150,000
Nomosofo Junior High School Cafeteria	100,000
PPO Junior High School Dormitory	150,000
PPO Junior High School Cafeteria	100,000
Weno High School classroom & office	300,000
Faichuk Junior High School classroom Renovation	125,000
Weipat Junior High School classroom Renovation	125,000
Mortlock Junior High School classroom Renovation	125,000
Pattiw Junior High School classroom Renovation	100,000
Southern Namoneas High School Library	150,000
Elementary & Sec. School Building Renovation & Construction & other related Cost	1,499,000
Weno Sewer Treatment Plant Rehabilitation	1,000,000
Completion of Sewer Lift Station (Pou Bay, Tunnuk, Sapuk, Neauo Beach Road)	250,000
Sewer line extension of Xavier High School	250,000
Weno Water System Improvement (Phase II)	650,000
Tonoas Water System Improvement (Phase I)	150,000
Weno Sewer System (Phase I)	100,000
Weno Solid Waste Disposal	200,000
Chuuk Hospital & Public Health Interior Renovation	250,000
Dispensary Repair Rehabilitation	500,000

Table C.1 Chuuk State, continued

Table C.1 Chuuk State, continued	
FY2005 Projects, continued	
Weno Road and Drainage Development (Phase II)	1,500,000
Weno Dock Structural Repair	160,000
Chuuk Int. Airport Development Projects (Phase II, Land Acquisition)	1,000,000
Chuuk Int. Airport Development Projects (Phase II, Terminal)	322,024
IMF	488,000
FY2005 Total	9,744,024
FV0000 Purious	ПО Ф О 1 -
FY2006 Projects	US \$ Costs
Elementary School Facility Renovation	2,000,000
Secondary School Facility Renovation	1,000,000
Const. & Renovations Health Facilities (new & Existing)	1,000,000
Chuuk Lagoon Islands Water Imp. Projects	1,000,000
Health Hazard Mitigation Projects	200,000
Sewer Line (Phase II: extension to inner Nepukos)	250,000
Outer island Water Improvement	250,000
Weno road and drainage (Phase III)	1,000,000
Upgrade safety equipment & lighting system	256,024
Tonoas road and drainage (Phase I)	800,000
Chuuk Int. Airport Development (Phase III, Land Acquisition)	1,000,000
IMF	488,000
FY2006 Total	9,244,024
FY2007 Projects	
Elementary School Facilities Renovation	1,500,000
Secondary School facilities renovation	1,000,000
Recreation & Library (Junior High School)	500,000
Const. & Renov. New & existing Dispensaries	800,000
Chuuk lagoon islands water improvement projects (Phase I)	800,000
Weno sewer line expansion (Phase II)	500,000
Health Hazard Mitigation	100,000
Weno road & drainage development (Phase IV)	1,556,024
Tonoas road and drainage (Phase II)	1,000,000
Tonoas power Gen & Dist System (Phase II)	500,000
Chuuk Int. Airport Dev Project (Phase IV, Land Acquisition)	1,000,000
IMF	487,159
FY2007 Total	9,743,183

Table C.1 Chuuk State, continued

FY2008 Projects	
Elementary school facilities renovation	1,500,000
Secondary school facilities renovation	1,000,000
Const & Renov. New & existing Dispensaries	800,000
Chuuk lagoon islands water improvement (Phase II)	1,000,000
Outer islands water improvement projects (Phase I)	500,000
Weno sewer line expansion (Phase III)	700,000
Health hazard mitigation	100,000
Weno road and drainage (Phase V)	1,256,024
Tonoas road and drainage (Phase III)	500,000
Fefan road and drainage (Phase I)	500,000
Tonoas power Gen & Dist System (Phase III)	400,000
Chuuk Int. Airport Dev Project (Phase V, Land Acquisition)	1,000,000
IMF	488,000
FY2008 Total	9,744,024

Table C.2 Kosrae State

Tubic O.L Toolub Olulo	
FY2004 Projects	US \$ Costs
Causeway/Road Paving/RS-4	725,000
River Bank & Shoreline Reventment for road protection	240,000
Inner Roads Construction	85,000
Power Distribution/Overhaul	197,000
Water System	176,000
Dock Masterplan	75,000
Airport Masterplan	75,000
School Facilities Construction	780,000
Government Administrative Buildings	175,000
IMF	127,000
FY2004 Total	2,655,000
FY2005 Projects	US \$ Costs
	σο φ σοσισ
Circumferential Road	600,000
Tofol Oxidation Ponds	350,000
Lelu Wastewater (Air Relief)	59,000
Airport Terminal/Runway Improvement	665,000
School Facilities Construction	300,000
Government Administrative Buildings	100,000
IMF	104,000
FY2005 Total	2,178,000
EVOCOC Projects	110 0 0 + -
FY2006 Projects	US \$ Costs
Cross Island Road	795,000
Circumferential Road	600,000
Power Distribution Line to Walung Village	500,000
Lelu/Tofol Wastewater Outfall	437,000
School Facilities Construction	300,000
Health Centers (Dispensaries)	100,000
Government Administrative Buildings	100,000
IMF	142,000
FY2006 Total	2,974,000

Table C.2 Kosrae State, continued

FY2007 Projects	US \$ Costs
Inner Roads Construction	1,200,000
Power Generator Overhaul	106,000
Extension of Lelu/Tofol Wastewater Collection System	800,000
School Facilities Construction	200,000
Health Centers (Dispensaries)	200,000
Government Administrative Buildings	100,000
IMF	131,000
FY2007 Total	2,737,000
FY2008 Projects	US \$ Costs
Roads: RS1, RS2a&b AC Pavement	1,500,000
Okat Water System	300,000
School Facilities Construction	300,000
Health Centers (Dispensaries)	100,000
Government Administrative Buildings	100,000
IMF	115,000
FY2008 Total	2,415,000

Table C.3 Pohnpei State

FY2004 Projects	US \$ Costs
Airport Runway Rehabilitation	1,984,000
IMF	100,000
FY2004 Total	2,084,000
FY2005 Projects	US \$ Costs
Airport Extension	3,136,000
IMF	157,000
FY2005 Total	3,293,000
FY2006 Projects	US \$ Costs
Executive Government Buildings	3,523,000
· ·	177,000
FY2006 Total	3,700,000
FY2007 Projects	US \$ Costs
Closure/Transfer New Dumping Site	3,200,000
Elementary School Buildings	800,000
IMF	200,000
FY2007 Total	4,200,000
FY2008 Projects	US \$ Costs
Elementary School Buildings	200,000
State Secondary School Buildings	4,110,000
IMF	215,000
FY2008 Total	4,525,000

Table C.4 Yap State

FY2004 Projects	US \$ Costs
Fathray Island Dispensary	50,000
Seliap Island Dispensary	50,000
Elato Island Dispensary	50,000
Falalus Island Dispensary	50,000
Wattagai Island Dispensary	50,000
Asor Island Dispensary	50,000
Piig Island Dispensary	50,000
Fachalap Island Dispensary	50,000
Ifilik Island Dispensary	50,000
Tagaillap Island Dispensary	50,000
Gagil Municipal Dispensary	50,000
Maap Municipal Dispensary	50,000
Extension Emergency Power System	45,000
State Gov. Conference Building	474,000
FY2004 Total	1,119,000
FY2005 Projects	US \$ Costs
Yap High School	646,000
Colonia Middle School	1,179,000
Falalop Ulithi Community School	471,000
Bael Community School	529,000
Reconstruction of Colonia Bridges, 3ea	1,500,000
Gagil Community School	669,000
FY2005 Total	4,994,000
FV0000 Purious	110 A O
FY2006 Projects	US \$ Costs
Gaanelay Community School	1,343,000
Gaagil-Tomil Phase V&VII, 3.7 miles	2,956,000
FY2006 Total	4,299,000
FY2007 Projects	US \$ Costs
Air-terminal expansion	5,000,000
FY2007 Total	5,000,000
FY2008 Projects	US \$ Costs
Road Improvement (Phase I-VI, 7.8 miles)	3,115,000
Runway Extension	1,548,000
FY2008 Total	4,663,000