

TUVALU DEPARTMENT OF ENVIRONMENT

NATIONAL ENVIRONMENT MANAGEMENT STRATEGY

2015–2020



An initiative of the African, Caribbean and Pacific Group of States funded by the European Union



SPREP
Secretariat of the Pacific Regional
Environment Programme

ACP MEAs 2



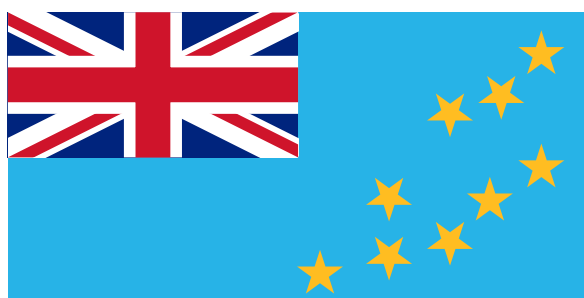
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A resilient Pacific environment sustaining our livelihoods and natural heritage in harmony with our cultures.

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FOREWORD FROM THE MINISTER FOR FOREIGN AFFAIRS, TRADE, TOURISM, ENVIRONMENT AND LABOUR

The Tuvalu National Environment Management Strategy (NEMS) 2015-2020 sets a solid policy platform for long term planning and action to respond to priority environmental issues. These are addressed by the Ministry of Foreign Affairs, Trade, Tourism, Environment and Labour (MFATTEL) through the Department of Environment (DoE). The first NEMS was developed in 1997 and it has taken more than a decade to prepare the second one.

The Tuvalu NEMS 2015-2020 follows a two year consultation process with government, private sector, non-government organisations (NGOs), and Kaupule planners. It was led by the Secretariat of the Pacific Regional Environment Programme (SPREP). The consultation process proved to be a challenge due to the geographical layout of our islands, broad coverage of the environment sector, and the wide range of stakeholders who were consulted.

The Government of Tuvalu recognises the environment as one of the three important pillars of sustainable development and an important part of national growth. The environment, its goods and services are the foundation of livelihoods, human health and economy in Tuvalu.

People will always rely heavily on the environment to service their needs. Protecting, managing and using the environment on a sustainable basis is vital. Development pressures such as population growth, rural-urban migration, infrastructure development, global warming and natural disasters, to name a few, affect our environment and bring with it many challenges.

The Tuvalu NEMS recognises these challenges and aims to support and complement all other government strategic policy documents. The strategy will enhance the government's efforts to mainstream the environment into national development planning, as well as provide a framework to assist government commitments to the "SAMOA Pathway", the Sustainable Development Goals and targets under the Rio+20 and other relevant Multilateral Environment Agreements (MEA) the Government of Tuvalu has ratified.

My Ministry has learnt a lot while developing the NEMS. I invite our partners to join me in implementing this strategic platform in order to maintain a sustainable environment for the people of Tuvalu and its future.

The Tuvalu Government acknowledges the technical support of SPREP, the United Nations Environment Program (UNEP), Multilateral Environment Agreements (MEA) and African Caribbean Pacific (ACP) Project, and all its partners to develop the Tuvalu NEMS 2015–2020.



Hon. Taukelina Finikaso
*Minister for Foreign Affairs, Trade, Tourism,
Environment and Labour,
Tuvalu*



MESSAGE FROM THE DIRECTOR OF THE DEPARTMENT OF ENVIRONMENT

The Department of Environment is pleased that it has put in place its 2015-2020 National Environment Management Strategy. The department plays an important role in the government, and with other development partners, in maintaining environment sustainability. The NEMS is not a standalone document. It is connected to other government ministry strategies, and regional and international multilateral agreements.

Tuvalu is faced with environment challenges such as the loss of island biodiversity, migration of invasive species, waste and pollution, the unsustainable use of natural resources and impacts of global climate change. Other pressures include a densely populated urban centre (i.e. Funafuti), increasing human population, more non-biodegradable wastes and pollution. These are putting both the environment and economy under tremendous strain.

The Tuvalu NEMS will set the pace and the direction for the DoE to work in a systematic way – in collaboration with local, regional and international partners – to address these challenges. I believe that the consultation process to develop the Tuvalu NEMS will contribute to the national strategic actions of the government.

The contributions by all our partners in the consultations are greatly appreciated. I also acknowledge SPREP for providing technical assistance, and the UNEP ACP/MEA Project for financial assistance in developing the Tuvalu NEMS 2015–2020.

Thank You.



Mr Mataio Tekinene
*Director, Department of Environment,
Tuvalu*



DEFINITIONS

Strategy:

The identification of basic long-term goals and objectives of an organisation/activity, setting a clear course of action with the allocation of resources necessary for carrying out these goals. Strategy is about shaping the future e.g. 'Climate Change Strategy'. A strategy can be the first step before the plan.

Plan:

A plan can be a diagram or a list of steps, with the timing and resources to be used to achieve an objective. A plan is an important management tool.

Environmental Framework:

The EF includes the following instruments – legislation, regulations, policies, Multilateral Environmental Agreement (MEA), Memorandum of Understanding (MOU), and Collaboration Agreements. The EF also refers to procedures, guidelines and protocols.

Policy:

A policy is a 'statement of intent' and sets out the principles or rules to guide decisions to achieve rational outcomes. A policy is then implemented as a procedure or protocol. In Tuvalu the government establishes the policy and the ministries develop the procedures and protocols. Policies are generally adopted by a board or senior governance body within an organisation, whereas the procedures or protocols are developed and adopted by senior or technical staff.

Governance:

A set of policies, procedures and guidelines as well as roles and responsibilities, that enable an organisation to guide and control workplace practices to achieve stated goals.

Customer Service:

Customer service is a series of activities designed to increase the level of 'customer satisfaction'. The importance of customer service may vary by product or service, industry and customer, but it is about attending to the customer's needs at every level. The perception of success depends on how well the employees serve their customers. A customer service experience can change the entire perception a customer has of the organisation.

Customers:

Government ministries, kaupule, departments, provincial governments, local authorities, non-governmental organisations (NGOs), civil society, church-based organisations (CBOs), communities, schools, donors, development partners and the general public.









ACRONYMS

CA	Conservation area	NCSA	National Capacity Self Assessment
CBO	Church-based organisations	NES	National Environment Strategy
CFC	Chlorofluorocarbon		National Strategy for Sustainable Development
COP	Conference of the Parties	NSSD	National Solid Waste Management Strategy
DoE	Department of Environment	NSWMS	Non Government Organisation
EIA	Environmental Impact Assessment	NGO	Office of the Prime Minister
EMA	Environment Management Act	OPM	Persistent Organic Pollutants
HCFC	Hydrochlorofluorocarbon	POPs	swamp taro
Kaupule	Executive arm of island assembly of elders, similar to a local council	Pulaka	Small Islands Developing States
LMMA	Local Marine Managed Area	SIDS	State of Environment Report
	International Convention for the Prevention of Pollution from Ships	SOE	Secretariat of the Pacific Regional Environment Programme
MARPOL	from Ships	SPREP	Tuvalu Association of Non Government Organisations
MDG	Millennium Development Goal		National Strategy for Sustainable Development 2005–2015
MEA	Multilateral Environment Agreement	TANGO	Tuvalu National Council of Women
MHA	Ministry of Home Affairs	Te Kakeega II	National Private Sector Organisation
MoE	Ministry of Education	TNCW	(Ed: this acronym appears several times without a long form)
	Ministry of Foreign Affairs, Trade, Tourism, Environment and Labour	TNPSO	United Nations
MFATTEL	Labour	TUFHA	United Nations Convention on Biological Diversity
MPF	Ministry of Planning and Finance	UN	United Nations Framework Convention on Climate Change
MOU	Memorandum of Understanding	UNCBD	World Health Organisation
NBSAP	National Biodiversity Strategic Action Plan	UNFCCC	
		WHO	



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These include:

1. Attorney General's Office
2. Coping with Climate Change in the Pacific Islands Region Team
3. Department of Agriculture
4. Department of Energy
6. Department of Fisheries
7. Department of Foreign Affairs and Industries
8. Department of Lands and Survey
9. Department of Public Health
10. Gender Affairs Department
11. GIZ Project (German Development Cooperation)
12. Global Climate Change Alliance (GCCA) Project
13. Kaupule Planner (Nui, Funafuti, Nukufetau, Vaitupu)
14. Ministry of Public Utilities
15. NAPA Project
16. Planning and Budget Division
17. Tuvalu Association of NGOs (TANGO)
18. Tuvalu National Council of Women (TNCW)
19. Tuvalu National Private Sector Organisation (TNPSO)
20. Tuvalu Red Cross

The support and guidance provided by the Department of Environment staff throughout the whole process is gratefully acknowledged.

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INTRODUCTION

Tuvalu's national development plan, Te Kakeega II: National Strategy for Sustainable Development 2005–2015, is the overarching framework that drives Tuvalu's development path and resource allocation. The protection and sound management of the environment is vital in order to attain the Vision: "To achieve a healthier, more educated, peaceful and prosperous Tuvalu".

To strengthen the link to the plan, the Department of Environment (DoE), with the support of SPREP, developed the Tuvalu National Environment Management Strategy 2015–2020.

The DoE is mandated by the 2008 Environment Act where the Minister for environment is responsible for climate change, environmental impact assessments (EIA), waste management, conservation and protected areas, and the sustainable development of land and marine areas.

In 2012, Tuvalu endorsed its Climate Change Policy 2012–2021 titled Te Kaniva. The policy defined the strategic direction for responding to climate change impacts and related risks to disasters for ten years. The development of the climate change policy is a big achievement for the government as it is one of the major activities under the Te Kakeega II. The Tuvalu NEMS supports the implementation of the climate change policy and the core functions of the DoE.

The previous Tuvalu NEMS was developed in 1997 with financial assistance from the United Nations Development Program (UNDP) and the Australian Agency for

International Development (AusAID). It has taken more than a decade to develop the second NEMS.

The Tuvalu NEMS is a five year policy guide (2015–2020). This will ensure that the action plan is regularly monitored to keep it relevant to national priorities under the National Sustainable Development Strategy, and other national strategic action plans endorsed by the Tuvalu Government. It also signals a commitment by Tuvalu towards the Multilateral Environment Agreements (MEA) it has signed, and for agreements under the Small Islands Developing States (SIDS) "Samoa Pathway".

Tuvalu Setting

Tuvalu, formerly known as the Ellice Islands, is midway between Hawaii and Australia in the South Pacific Ocean. It comprises nine islands (four reef islands and five coral atolls).

Tuvalu is located in the southwest Pacific Ocean between latitudes 5 degrees and 11 degrees south and longitudes 176 degrees and 180 degrees east. The nine small islands are scattered over 500,000 square kilometres of the western Pacific.

The islands include Niulakita, Nukulaelae, Funafuti, Nukufetau, Vaitupu, Nui, Niutao, Nanumaga and Nanumea. The total land area is only 27 square kilometres and all of the islands are less than five meters above sea level (Tuvalu NBSAP 2009).



Location of Tuvalu on World Map. source: www.worldatlas.com/webimage/countrys/oceania/tv.htm



The population in 2012 was 10,782 according to the Tuvalu National Population and Housing Census 2012. This is an increase of 13.7% since the previous census in 2002. The population consisted of 5,424 males and 5,216 females. The residents of Funafuti added 1,474 people – from 3,962 in 2002 to 5,436 in 2012 – an increase of 37.2%. The resident population of the outer islands declined by 3.6% – down from 5,397 in 2002 to 5,204 in 2012. Most of the population is involved in subsistence fishing and agriculture. Remittances from seafarers working on overseas vessels are a significant source of income for many families. The money economy is dominated by government activity.

Tuvalu is vulnerable to natural disasters, and the impacts of sea level rise and climate change are visible in the islands. According to the Tuvalu National Assessment report, some villages have relocated to drier grounds in recent years.

Funafuti is the capital of Tuvalu. Most administration offices are located in Vaiaku village on Fogafale Islet, Funafuti atoll. There is a regular communication service on Funafuti atoll, with connections to all the outer islands through the post offices. Communications with the outer islands is via mobile phones, internet links and radiophones.

Internet services have been available since late 1999. The main roads on Funafuti were constructed in the late 1990s and are the only sealed roads in Tuvalu. There are regular air services from Funafuti International Airport to Suva, Fiji. Radio Tuvalu is the only local radio station. Tuvalu has cargo services via Fiji or Kiribati and an inter-island boat service between Funafuti and the rest of Tuvalu.



1 POLICY FRAMEWORK

Environmental management in Tuvalu faces two key challenges:

1. the numerous issues arising from the growing urbanisation of Funafuti; and,
2. the national impacts associated with climate change and sea level rise, specifically salt-water inundation of pulaka pits, coastal erosion and flooding, which are blamed either wholly or partly on global warming.

In addition, waste management is one of the most pressing environment problems with direct implications for human and ecosystem health, especially in Funafuti. If waste is collected and disposed of properly, this reduces pollution of lagoon waters and slows the accumulation of waste that could lead to disease and other public health issues. There is institutional weakness and limited capacity to deal effectively with waste management, especially since there is very little land available.

Land resources face increased pressure from population growth (especially in Funafuti), waste pollution, land use changes, coastal erosion from sea level rise, and drought.

Under the National Strategy for Sustainable Development (NSSD) the priorities and strategies for environment management are to:

- develop and implement an urban and waste management plan for Funafuti;
- establish national climate change adaptation and mitigation policies;
- encourage international adoption of MEAs, including the Kyoto Protocol; and
- increase the number of conservation areas and ensure regulatory compliance.

Rationale for the Tuvalu National Environment Management Strategy

Tuvalu's environment quality is rapidly deteriorating. It is ranked as one of the most environmentally vulnerable states in the region, largely due to its low-lying and small land area. The key risks confronting the environment are:

- sea level rise as a result of climate change;
- climate variability and disaster;
- rising population density in Funafuti;
- decline in traditional resource management;
- unsustainable use of natural resources, and
- poor waste management and pollution control.



NEMS Consultation in Tuvalu. Photo: Jope Davetanivalu



The development of the NEMS will assist the Tuvalu Government and the DoE to restore and rehabilitate the deteriorating environment. The NEMS identifies key stakeholders who will assist in the implementation of its programmes – this will allow better coordination of core environment activities of the department.

The Tuvalu NEMS focuses on the core businesses of the DoE under its legislation, policies and agreements. The strategy is a tool that will contribute to the implementation of the National Strategy of Sustainable Development.

Process of Tuvalu NEMS Formulation

A national consultation was held with the DoE and its stakeholders in July 2014, with a second round of consultations in February 2015. The photo below shows one of the consultations.

Mandate and Scope of Strategy

The NEMS aims to strengthen the international, regional and national coordination of the government’s efforts to cope with complex environment needs. Some of the immediate challenges are to stop unregulated development and degradation of the environment. There is also a need to increase the number of marine and terrestrial conservation areas, and to minimise climate change impacts.

The Director of the DoE is the national focal point for the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Convention on Biological Diversity (UNCBD). The department seeks to ensure that environment development is in line with the government’s commitments under its international and regional treaties and agreements.

The Environmental Protection Act 2008 provides for the functions of the DoE.

Policy Goals and Objectives

The policy goals fall into four thematic areas: environmental governance; island biodiversity conservation and management; waste management and pollution control, and improving environment awareness and education.

Climate change is not reflected under the Tuvalu NEMS as it has its own policy and strategic directions. However, the Tuvalu NEMS contributes to the achievement of goals under the climate change policy.

The table below sets out the thematic policy goals and strategic objectives. These form the basis of the priority strategies and targets for the policy implementation, presented in Section 3.

ENVIRONMENT THEME	POLICY GOAL	STRATEGIC POLICY OBJECTIVES
Environmental Governance	To strengthen capacity and institutional frameworks for environmental planning and monitoring, management and sustainable development.	All existing regulations, legislations and policies are revised to go in line with growth and development in Tuvalu. Establish an effective and efficient enforcement system of environment laws. Sustainable Financing. Capacity Building Programmes to be implemented by the Ministry. Commitments to Regional and International MEA effectively implemented. Effective monitoring and reporting.
Island Biodiversity Conservation and Management	To protect and conserve the biodiversity of Tuvalu.	All existing biodiversity legislations and policies are revised to align with national development in Tuvalu. An effective and efficient knowledge management, education and awareness system. Promote registration of Conservation Areas for biodiversity conservation. Protection and management of threatened species. Prevent the entry of invasive species and manage their impacts on biodiversity.
Waste Management and Pollution Control	Waste is minimised and managed within acceptable levels. ensure environment for the people of Kiribati through effective and sound waste	Every citizen to practice responsible waste management behaviour and participate in waste management programmes, and activities, while complying with the applicable laws through awareness and education.
Environment Awareness and Education	Providing an enabling environment free from discrimination and having access to information, knowledge and understanding.	Review and upgrade environment education policies and programmes.



2 GUIDING PRINCIPLES

This policy is guided by four key principles: leadership and good governance; collective responsibility for the environment; indigenous knowledge, practices and innovations; and integration of the environment and development.

2.1 LEADERSHIP AND GOOD GOVERNANCE

The Government of Tuvalu will lead efforts to protect, manage and promote the sustainable use of the country's environment and its natural resources. This implies upholding good governing practices of transparency, accountability, shared responsibility and equity in the consideration of environmental requirements in development practices. It respects everyone's right to a clean and healthy environment. It also recognises key principles for respecting the needs and capacities of the natural environment such as the precautionary, polluter pays and carrying capacity principles.

The Precautionary Principle is defined in the UN Agenda 21 Rio Declaration as "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation".

The Polluter Pays Principle means that populations are justly responsible for the waste and pollution they generate either directly or through payments for the available mitigation and management services. The principle extends to society's responsibility to pay for the programmes that help to replenish, restore and rehabilitate natural resources and the environment that were exploited or degraded through extensive development activities.

The Carrying Capacity Principle may be defined as the ability of the environment to sustain the needs of human development and its own natural requirements. Development should respect the limits of the carrying capacities of its hosting environment if it is to achieve a more sustainable pathway.

2.2 COLLECTIVE RESPONSIBILITY FOR THE ENVIRONMENT

Protecting, managing and sustainably using the environment and its goods and services are generally accepted as everyone's responsibility. This is carried out at the individual and collective levels. This principle recognises each individual as holding the key responsibility. It also recognises the relevant roles and influences that all sectors and institutions of the society have in contributing to the protection and management of Tuvalu's environment and its goods and services.

2.3 INDIGENOUS KNOWLEDGE, PRACTICES AND INNOVATIONS

Tuvalu has developed valuable indigenous knowledge and practices. These can contribute positively to the sustainable use and effective management of natural resources and the environment. These traditions and practices are important elements of Tuvalu culture and heritage that form the national identity. They will also be integrated into the implementation of this policy. The DoE has a significant role in protecting, managing and sustainably using island biodiversity, which also supports indigenous knowledge, practices and innovation.

2.4 INTEGRATION OF THE ENVIRONMENT AND DEVELOPMENT

This principle recognises that the environment underpins development. It recognises the challenges in balancing the needs of the environment and the development needs of human society in Tuvalu. It is vital that economic and/or physical development must be linked with environmental protection, to facilitate long-term sustainability. This principle emphasises the importance of credible scientific information to support the integration of the environment into development planning and implementation. It also recognises appropriate value systems of the people in Tuvalu that promote the integrity of the environment.



3 TUVALU NATIONAL ENVIRONMENT MANAGEMENT STRATEGY 2015–2020

This strategy is composed of the priority activities for implementation in the next five years under the four environmental themes of governance, biodiversity management, waste and pollution, and environment awareness and education.

3.1 ENVIRONMENT GOVERNANCE

Goal:

To strengthen capacity and institutional frameworks for environmental planning and monitoring, management and sustainable development.



NEMS Environment Governance Consultation. Photo: Jope Davetanivalu



ENVIRONMENT GOVERNANCE	STRATEGIES 2014–2020	TARGETS	PERFORMANCE INDICATORS	KEY IMPLEMENTING PARTNERS
EG 1: All existing regulations, legislations and policies are revised to align with growth and development in Tuvalu.				
Legal and Policy Framework	Develop and revise legislations. Mainstream environment considerations into Government activities.	Ongoing assistance in the review of environment policies and by-laws in the Kaupule e.g. Foreshore development by-laws. Review of EIA Regulation. Complete review of NBSAP by August 2015. Review of National Solid Waste Management Strategy (NSWMS) by 2016.	By-laws and policies passed and implemented in Kaupule. EIA Regulation reviewed and passed by Cabinet in 2016. NBSAP reviewed and passed by Cabinet for implementation by September 2015. NSWMS reviewed and passed by Cabinet for implementation in 2016.	OPM and AG's Office, MFATTEL, MHA, MPF, Kaupule.
		Review of National Environment Management Strategy (NEMS) in 2015. Develop the State of Environment (SOE) Report for Tuvalu in 2016/17.	NEMS reviewed and passed by Cabinet for implementation by 2015. SOE passed by Cabinet in 2017.	
EG 2: Establish an effective and efficient Enforcement system of Environment Laws				
Enforcement	Effective and Efficient Enforcement of Environment Law.	Delegation of powers under the environment legislations and regulations in 2017–2018. Undertake annual training on enforcement of laws and prosecution of cases.	Powers delegated to Secretaries and Planners of all the Kaupule. Number of trainings organised and registry of enforcement officers gazetted annually.	OPM and AG's Office, MFATTEL, MHA, MPF, Kaupule.
EG 3: Sustainable Financing				
Sustainable Financing	Create a sustainable financing system to better implement environmental programmes, activities and projects.	Set up an Environment Trust fund in 2020. Environment tax from Departure Tax in 2018. Yearly Compliance Campaigns to promote Environment Legislations and regulation. Develop partnership through MOUs with private sector and development partners.	Trust Fund endorsed by Cabinet and in operation by 2020. Environment tax established under regulation. Fees collected from non-compliance. Non compliance reduced. Cost recovery for all EIA functions. Private sector and development partners engagement established.	OPM and AG's Office, MFATTEL, MHA, MPF, Kaupule.
EG 4: Commitments to Regional and International Multilateral Environment Agreements effectively implemented				
Sub-regional, Regional and International Multilateral Agreements	Implement Government commitment to sub- regional, regional and MEA.	Effective participation in MEA COP. Use opportunity offered by regional organisation such as SPREP, PIFS, etc.	Positive growth in capacity in the areas of finance, technology, and policy development and projects. More awareness on international treaties and obligations. Project support implementation from regional organisation.	OPM and AG's Office, MFATTEL, MHA, MPF, Kaupule.
EG 7: Effective monitoring and Reporting.				
National Environment Reporting	Submission of National Environment Reports.	SOE Developed in 2018. NEMS Report in 2015. Monitoring and Evaluation included in the DoE's new structure in 2016.	SOE developed and endorsed by Government. NEMS endorsed by Government and in line with National Development Plan. Setting up of unit to monitor and evaluate reports, projects, plans and operation of the DoE.	OPM and AG's Office, MFATTEL, MHA, MPF, Kaupule.



3.2 BIODIVERSITY

Goal:

To protect and conserve the biodiversity of Tuvalu.

BIODIVERSITY & CONSERVATION	STRATEGIES 2015–2020	TARGETS	PERFORMANCE INDICATORS	KEY IMPLEMENTING AGENCIES/PARTNERS
BD 1. All existing biodiversity legislations and policies are revised to align with national development in Tuvalu.				
Legal and Policy Framework Aichi Target 4,6,7.	Revise existing regulations and legislations and polices on biodiversity. Sustainable Land Management	Review the following by 2017. NBSAP review and Biodiversity inventory. Community Conservation Area Regulations. Invasive Species Strategy and Regulation. Protect Soil and coastal erosion. Protect sand erosion around the Kaupule.	Reviewed biodiversity action plan in 2015 legislation and policies passed in Parliament. Submit to CBD by November 2015. Improvement in the area by 2020. Land size and fertility maintained. Reduction of coastal erosion and sand stabilisation through tree planting etc. Improve land ownership, rights, and security.	OPM and AG's Office, MFATTEL, MHA, MPF, Kaupule. Business Community, Solicitor General's Office, TANGO, TUFHA, TNPSO, TNCW. Information and Media Department.
BD 2: An effective and efficient knowledge management, education and awareness systems.				
Knowledge Management, education and awareness. Aichi Target 18	Conserve Traditional Knowledge.	Document the traditional conservation methods in 2017.	Documentation completed.	OPM and AG's Office, MFATTEL, MHA, MPF, Kaupule. Business Community, Solicitor General's Office, TANGO, TUFHA, TNPSO, TNCW. Information and Media Department.
		Linking traditional conservation mechanism and national conservation.	Traditional conservation linked into national conservation mechanism	
		Network of traditional conservation Practitioners in 2017.	Network in place and functioning.	
	Research Development	Database of all Biodiversity researches in Tuvalu compiled and made available in 2018.	Database completed and accessible.	
		Status of Research Publication submitted.	Development of research yearly reports.	
BD 3: Promote registration of Conservation Areas for biodiversity conservation.				
Conservation Area Registration Aichi Target 6	Facilitate and coordinate registration of protected areas.	Ongoing registration of Conservation Areas (CA) and Local Marine Managed Areas (LMMA)	Registration of CA and LMMA in the Environment Laws and Regulations.	OPM and AG's Office, MFATTEL, MHA, MPF, Kaupule, Business Community, Solicitor General's Office, TANGO, TUFHA, TNPSO, TNCW. Information and Media Department.
		Develop registered maps of: CA LMMA	Registered maps of CA and LMMA developed.	
		Develop GIS Database for CA and LMMA by 2019.	GIS Database for CCA and LMMA developed 2020.	
		Protected area management plans developed by 2018.	Protected area management plan developed for the Kaupule with supporting activities such as awareness, financing and others.	



BIODIVERSITY & CONSERVATION	STRATEGIES 2015–2020	TARGETS	PERFORMANCE INDICATORS	KEY IMPLEMENTING AGENCIES/PARTNERS
BD 4: Protection and management of threatened Species				
Threatened Species Aichi Target 12	Effectively manage and protect threatened species.	Develop a national database for national and internationally threatened species in 2018.	Database for national and internationally threatened species developed.	OPM and AG's Office, MFATTEL, MHA, MPF, Kaupule. Business Community, Solicitor General's Office, TANGO, TUFHA, TNPSO, TNCW. Information and Media Department.
		Develop a plan on the management and protection of threatened species.	Management Strategy for the protection of threatened species developed.	
		Update species list for different flora and fauna.	List of threatened species updated.	
		Prioritise species research on population and health.	Recovery plan for threatened species.	
BD 5: Prevent the entry of invasive species and manage their impact on biodiversity.				
Invasive Species Aichi Target 9	Control and manage invasive species.	Develop a GIS map of priority invasive species distribution by 2019.	GIS map of priority and number of invasive species developed.	OPM and AG's Office, MFATTEL, MHA, MPF, Kaupule. Business Community, Solicitor General's Office, TANGO, TUFHA, TNPSO, TNCW. Information and Media Department.
		Develop a strategy on the management and eradication of threatened species.	Management Strategy for the management and eradication of invasive species developed by 2020.	
		Update invasive species list and monitor change and distribution of invasive species.	Invasive species list and distribution updated.	
		Biosecurity Bill to be developed in 2015.	Biosecurity bill passed in Parliament and enforced.	



Mulitefala Islet. Photo: Moe Saitala



3.3 WASTE MANAGEMENT

Goal:

Waste is appropriately minimised and managed within acceptable levels

WASTE MANAGEMENT AND POLLUTION CONTROL POLICY (WMPC) AREA	STRATEGIES 2015–2020	TARGETS	PERFORMANCE INDICATORS	KEY IMPLEMENTING AGENCIES/PARTNERS
Every citizen (individual and corporate) to practice responsible waste management behaviour and participate in waste management programmes and activities, while complying with the applicable laws through awareness and education.				
Waste Policy and Legislation	Development of Waste Management policies, plans and legislation to assist in management of waste.	Develop the Tuvalu National Solid Waste Management Strategy (NSWMS) and action plans. Review of National Implementation Plan of the Stockholm Convention on POPs in 2016. Development of Kaupule waste inventories. Waste Pollution and Ozone Layer Protection regulation reviewed.	Tuvalu NSWMS with proper budget endorsed by Government. NIP Reviewed. Kaupule waste inventories developed and awareness raised. Reviewed of Waste Pollution and Ozone regulation.	OPM and AG's Office, MFATTEL, MHA, MPF, Kaupule. Business Community, Solicitor General's Office, TANGO, Churches, Solid Waste Agency.
Enforcement	Effective and Efficient Enforcement of Environment Laws.	Environment Protection Officers appointed and gazetted under the law. Enforcement, compliance, monitoring and awareness carried out for protection officers.	Effective enforcement of Environment Laws.	OPM and AG's Office, MFATTEL, MHA, MPF, Kaupule. Business Community, Tuvalu Waste Agency, TANGO, Churches.
Infrastructure and Capital Projects	Upgrading of Tuvalu Dumpsites. New Garbage Trucks and Pollution Control Equipments Borrow Pits Rehabilitation	Ongoing proper management of Tuvalu Rubbish Dump site. Put in plan for land acquisition for future rubbish dumping sites. Develop project proposal on purchase of rubbish trucks and rubbish bins for the Kaupule. Assist responsible agency on rehabilitation of borrow pits pulalea pits.	Tuvalu Rubbish Dump site continues its operation. Plan in place with land secured for expansion of rubbish dumps. Other options on waste management available with proper funding sources identified and with donor partners. Proposal developed and submitted to donors. Trucks and Bins for the Kaupule secured. Assistance rendered with proper recommendations implemented.	OPM and AG's Office, MFATTEL, MHA, MPF, Kaupule. Business Community, Tuvalu Waste Agency, TANGO, Churches. Donor agencies such as JICA etc.
Waste Management Awareness and Education	Formal and informal education on waste management and pollution control. Community Programmes on waste minimisation, composting and 3Rs. Radio programmes and TV footage documentary on waste management and pollution control.	Communities trained. Mainstream waste management education into school programme. Practicing of Composting and 3Rs and Ozone Depletion Substances management by communities. Development of Radio Programmes and TV documentary.	Enhanced Community Knowledge Education system in Tuvalu integrate waste management and pollution control in Tuvalu into school curriculum. Composting and 3R activities existing in communities. Availability of Radio Programmes, TV documentary for use to create awareness. Clean up campaigns implemented in the Kaupule.	OPM and AG's Office, MFATTEL, MHA, MPF, Kaupule. Business Community, Ministry of Education, Women's Groups, Tuvalu Waste Agency, TANGO.



WASTE MANAGEMENT AND POLLUTION CONTROL POLICY (WMPC) AREA	STRATEGIES 2015–2020	TARGETS	PERFORMANCE INDICATORS	KEY IMPLEMENTING AGENCIES/PARTNERS
Capacity Building	Train the trainers programme for waste management and pollution control practitioners.	Training package developed for practitioners 2017.	Use of training package and programmes for community groups, organisations, etc.	OPM and AG's Office, MFATTEL, MHA, MPF, Kaupule, Business Community, Ministry of Education, Women Groups, Tuvalu Waste Agency, TANGO.
Sustainable Finance	Identification of investment opportunities from bilateral, multilateral, international agencies for waste management and pollution control.	Secure investment opportunities on waste management with development partners such as JICA, etc. Annually. Establish Waste Permit allocation in Environment Trust Fund 2019.	Availability of funds and other resources for waste management and pollution control. Waste Permit Fees collected directed to Environment Trust Fund 2019.	OPM and AG's Office, MFATTEL, MHA, MPF, Kaupule, Business Community, Solicitor General's Office, TANGO.



Funafuti Rubbish Dump. Photo: Ruruteiti Kaiarake



3.4 IMPROVING ENVIRONMENT AWARENESS AND EDUCATION

Goal:

Providing an enabling environment free from discrimination and having access to information, knowledge and understanding.

ENVIRONMENT AWARENESS AND EDUCATION	STRATEGIES 2015–2020	TARGETS	PERFORMANCE INDICATORS	KEY IMPLEMENTING AGENCIES/PARTNERS
Review and upgrade environment and education				
Environment awareness and education.	Review and implement environment education activities and programmes.	Publish bi-monthly newsletter on environment. Establish a one hour radio programme on environment for schools. Revisit and review environment and education policy.	Secure sources of funding for development newsletter. Newsletter developed and distributed to all partners. Radio programme delivered weekly/ monthly to schools. Environment education policy reviewed, developed and implemented.	DoE, Ministry of Education (MoE), Kaupule, Parents PTA, Men and Women's Groups, National Planning, Environment NGOs, Churches, Youth Groups, Public, Civil Society Organisations (CSO), TANGO.
	Building capacities and awareness within Government and Non Government Organisations	Review and upgrade DoE Website. Review and upgrade database on environment. Organise yearly negotiation and MEAs. Implement awareness/capacity building programme on environment core functions yearly.	Website upgraded and used by public. Database developed. Training organised with assistance from partners such as SPREP, UNDP, SPC ADB, etc. Knowledge raised amongst public and communities.	DoE, MoE, Kaupule, Parents PTA, Men and Women's Groups, National Planning Environment NGOs, Churches, Youth Groups, Public, CSO.
	Carry out community awareness.	Design and implement community awareness programme half yearly.	Environment training in all islands. Behavioural change with community on safekeeping of environment.	DoE, MoE, Kaupule, Parents PTA, Men and Women's Groups, National Planning Environment NGOs, Churches, Youth Groups, Public, CSO.
	Preserve and apply traditional knowledge.	Documentation of traditional knowledge such as navigational skills, weather predictions, and also on environment conservation. Organise yearly training on traditional knowledge and its relationship to environment.	Document on traditional knowledge published and used as awareness material. To be produced in English and Tuvalu language. Increase in knowledge.	



Mr. Penehuro Hauma & Peniela Paulo. Photo: Moe Saitala



4 HUMAN AND FINANCIAL RESOURCES IMPLICATIONS

4.1 HUMAN RESOURCES AND FINANCIAL IMPLICATIONS

The DoE plan for more human resources will contribute to the effective implementation of the Tuvalu NEMS. The support of the wider network of partner agencies and stakeholders, whose portfolios overlap with environment protection and management, is also vital.

The expansion of human and financial resources to meet the implementation needs of this strategy will be guided by the priorities of the government.

The Tuvalu NEMS will identify key areas where funding proposals can be made to donor partners. It will also guide donor contributions to support livelihoods, human health, the economy and sustainable development.



5 IMPLEMENTATION, MONITORING AND REVIEWING SCHEDULE

The implementation of the Tuvalu NEMS will take effect when it is approved by government. The NEMS contributes to the Te Kakeega II: National Strategy for Sustainable Development 2005–2015.

Operational performance indicators are to be monitored and reviewed annually by the DoE and the government monitoring unit which will act as a tracking tool towards their performances on achieving respective SDGs. Strategic impact indicators will be defined as part of Tuvalu's State of the Environment monitoring and reviewing system.



REFERENCES

Climate Change Policy 2012–2021, Te Kaniva.

Te Kakeega II: National Strategy for Sustainable Development 2005–2015

Tuvalu National Population and Housing Census 2012

Tuvalu National Biodiversity Strategic Action Plan 2009

Tuvalu National Environment Management Strategy 1997

Tuvalu NSAP for Climate Change and Disaster Risk Management 2012–2016





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