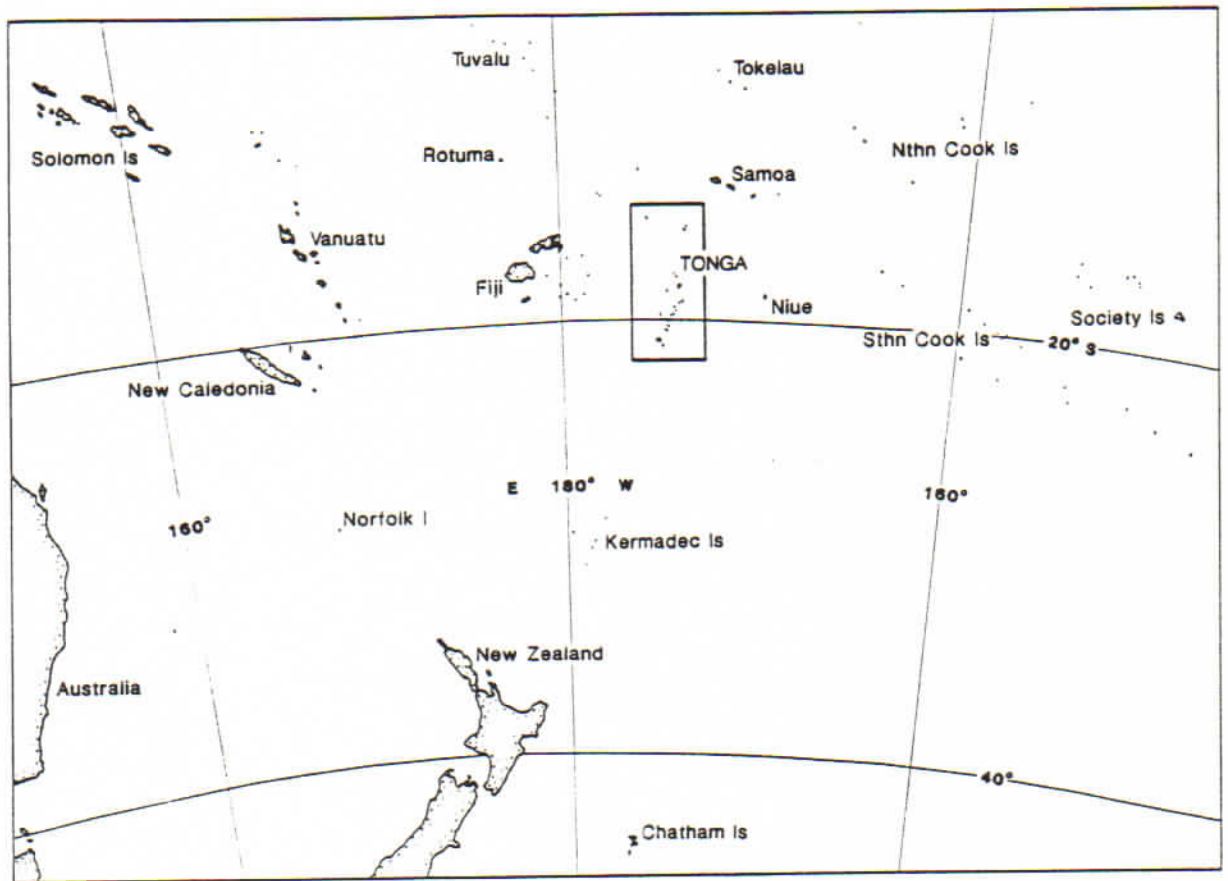


**LOCATION MAP**

**Figure 4.1**

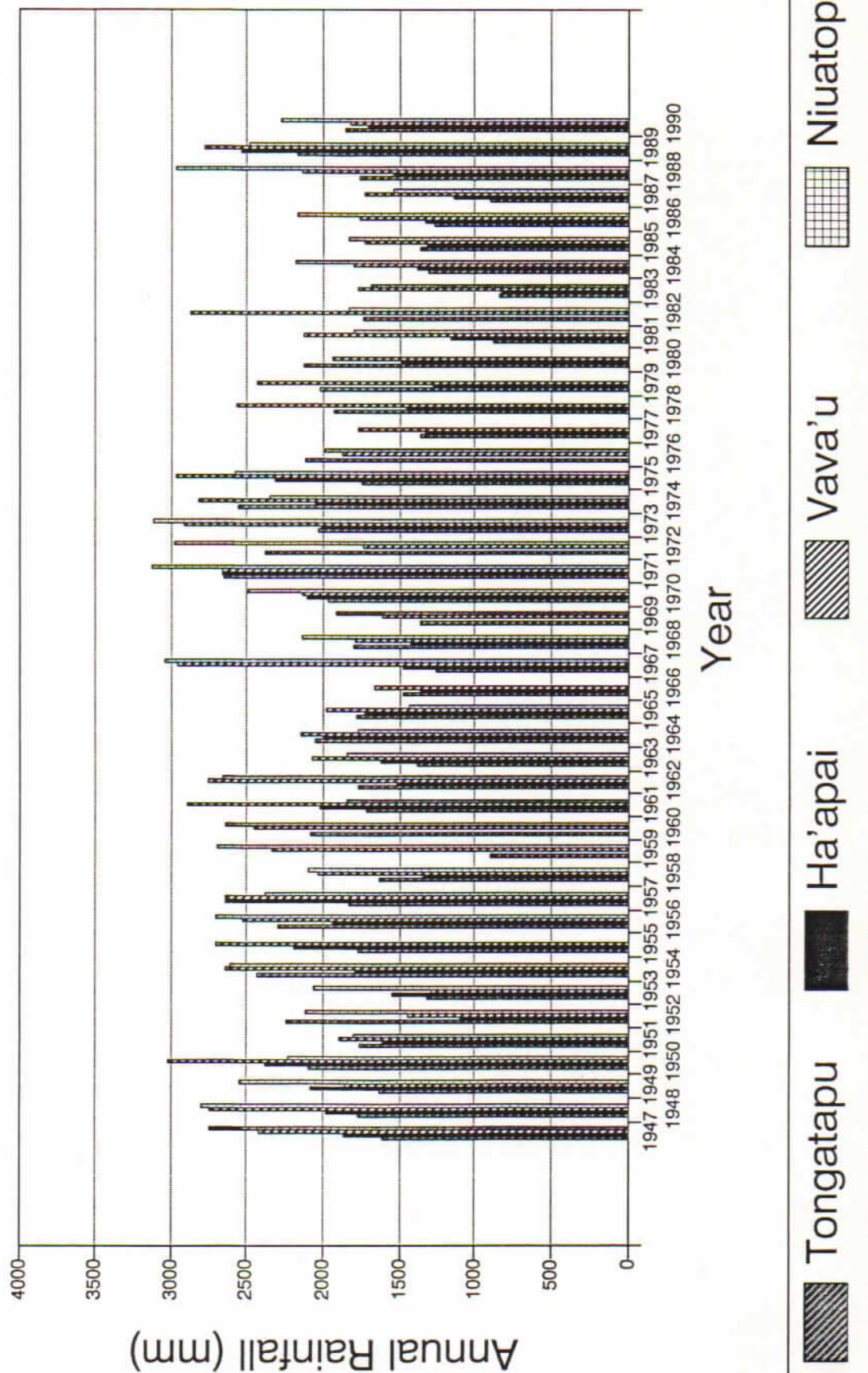


**MAP OF THE KINGDOM OF TONGA**

**Figure 4.2**

# Tonga

## Annual Rainfall from 1947 to 1990



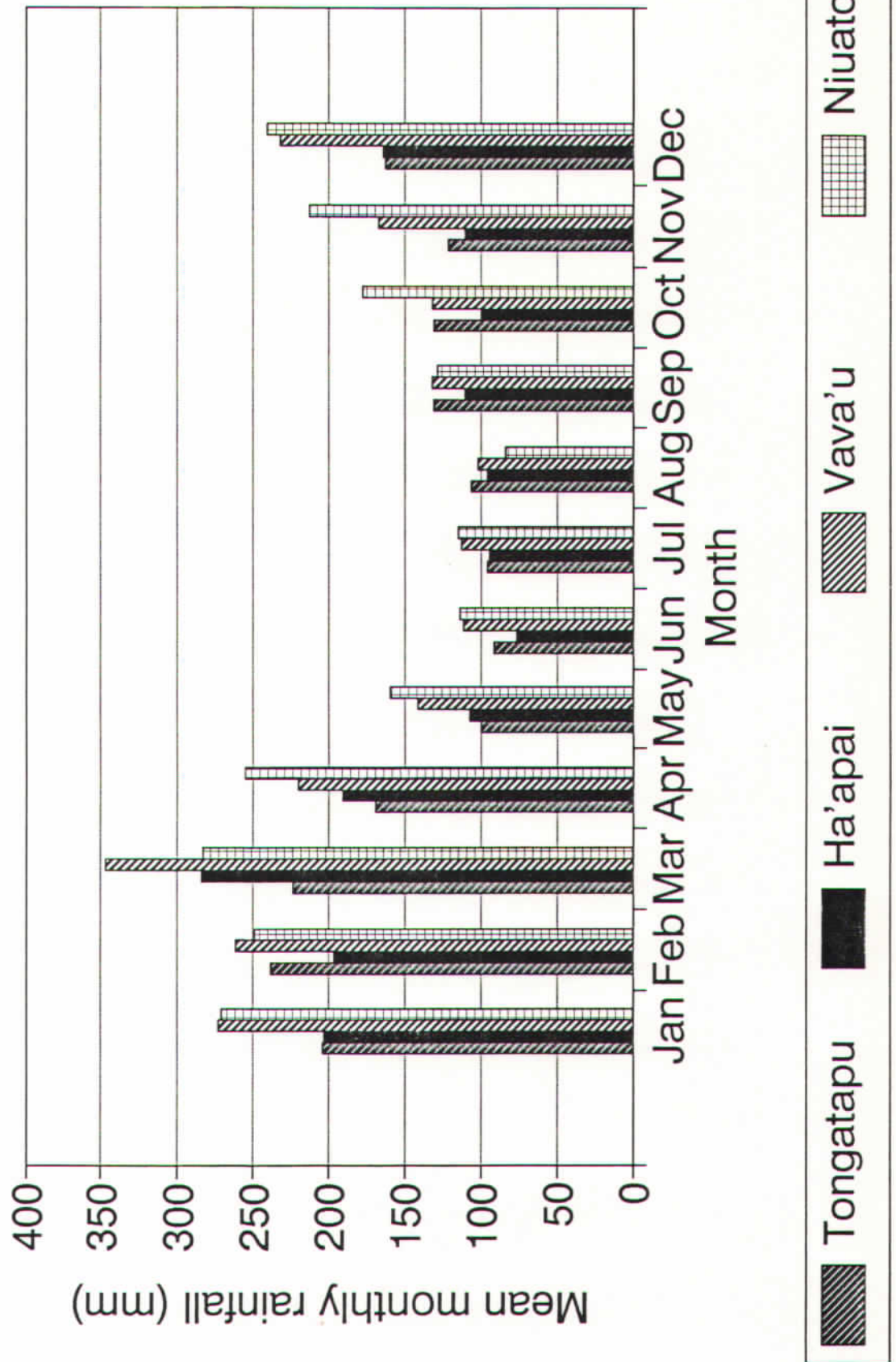
ANNUAL RAINFALL ON TONGATAPU, HA' APAI, VAVA'U AND NIUATOPUTAPU: 1947-1990

Figure 4.3



# Tonga

## Mean monthly rainfall

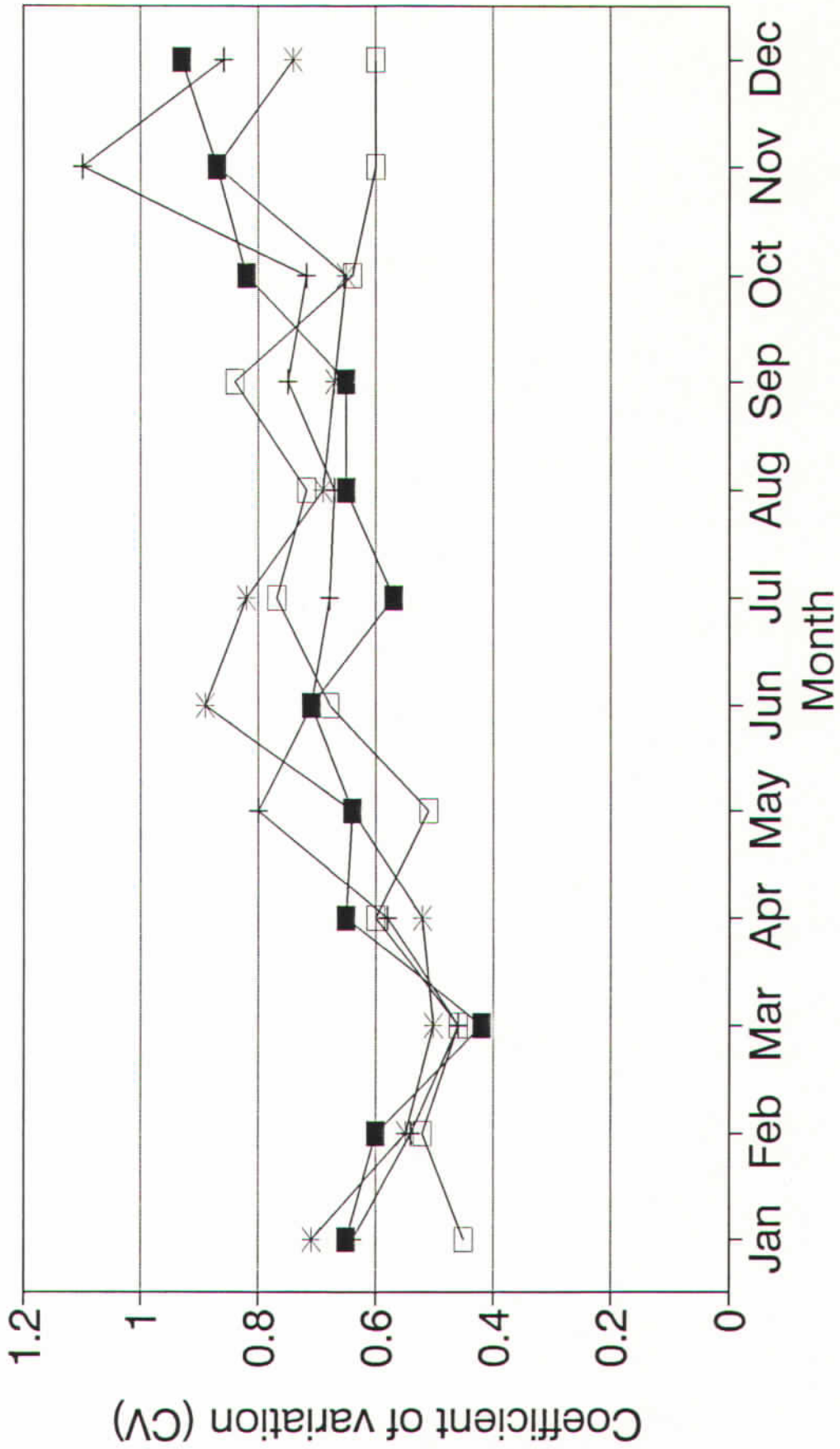


MEAN MONTHLY RAINFALL ON TONGATAPU, HA' APAI, VAVA'U AND NIUATOPUTAPU: 1947-1990

Figure 4.4

# Tonga

CV of monthly rainfall



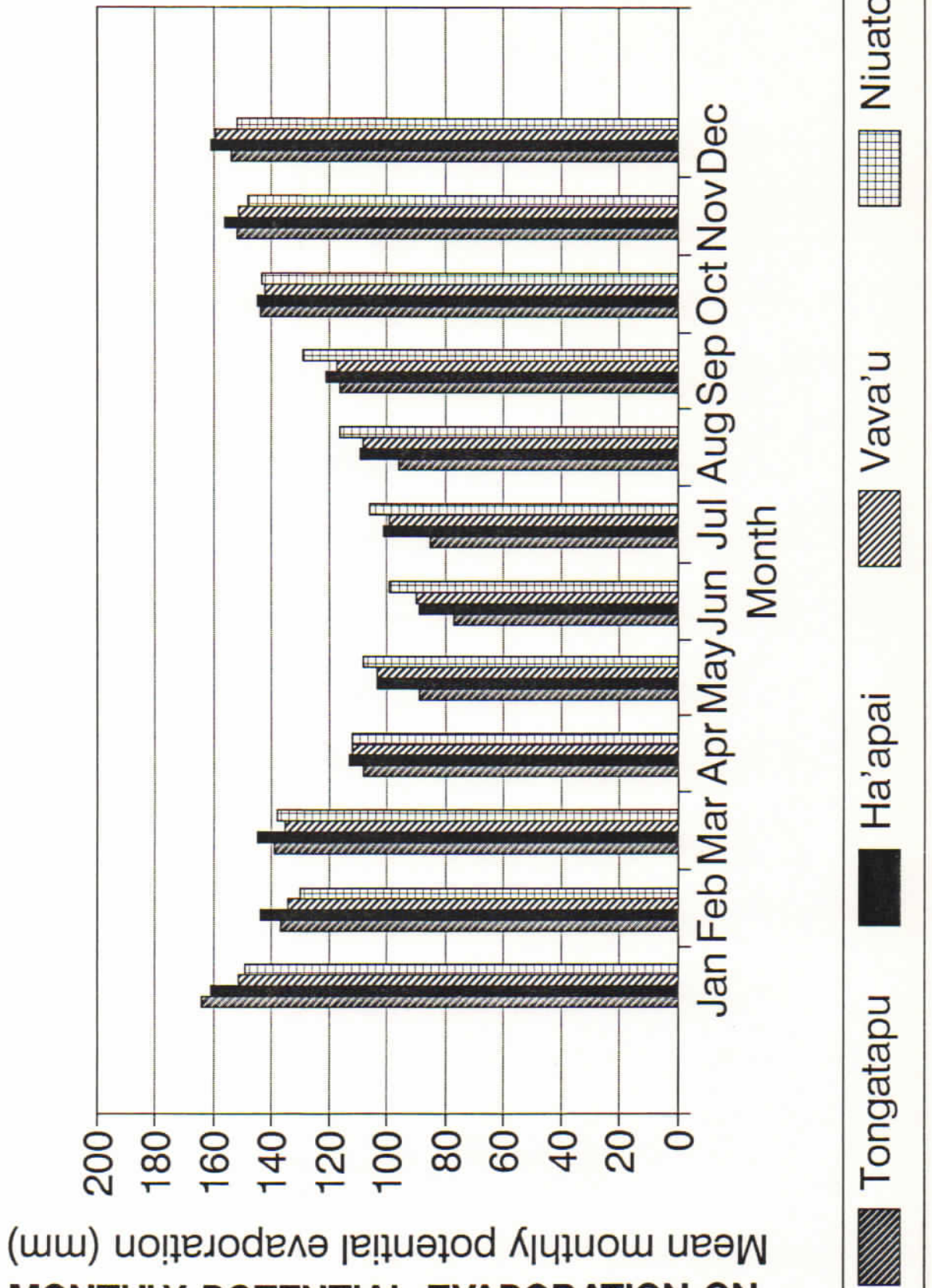
COEFFICIENT OF MONTHLY RAINFALL ON TONGATAPU, HA'APAI, VAVA'U AND NIUATOPUTAPU: 1947-1990

Figure 4.5



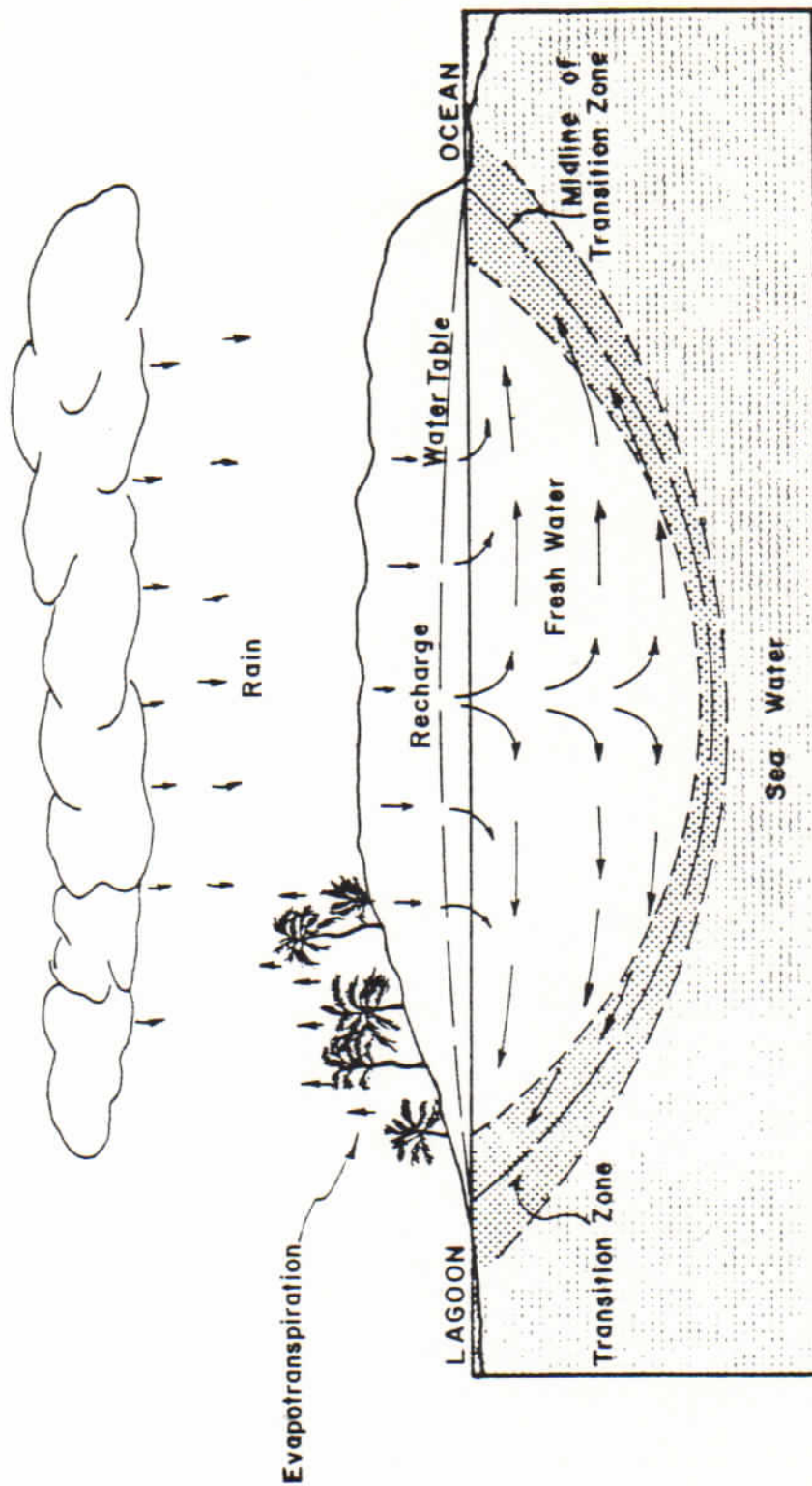
# Tonga

Mean monthly potential evaporation



MEAN MONTHLY POTENTIAL EVAPORATION ON TONGATAPU, HA'APAI, VAVA'U AND NIUATOPUTAPU: 1947-1990

Figure 4.6

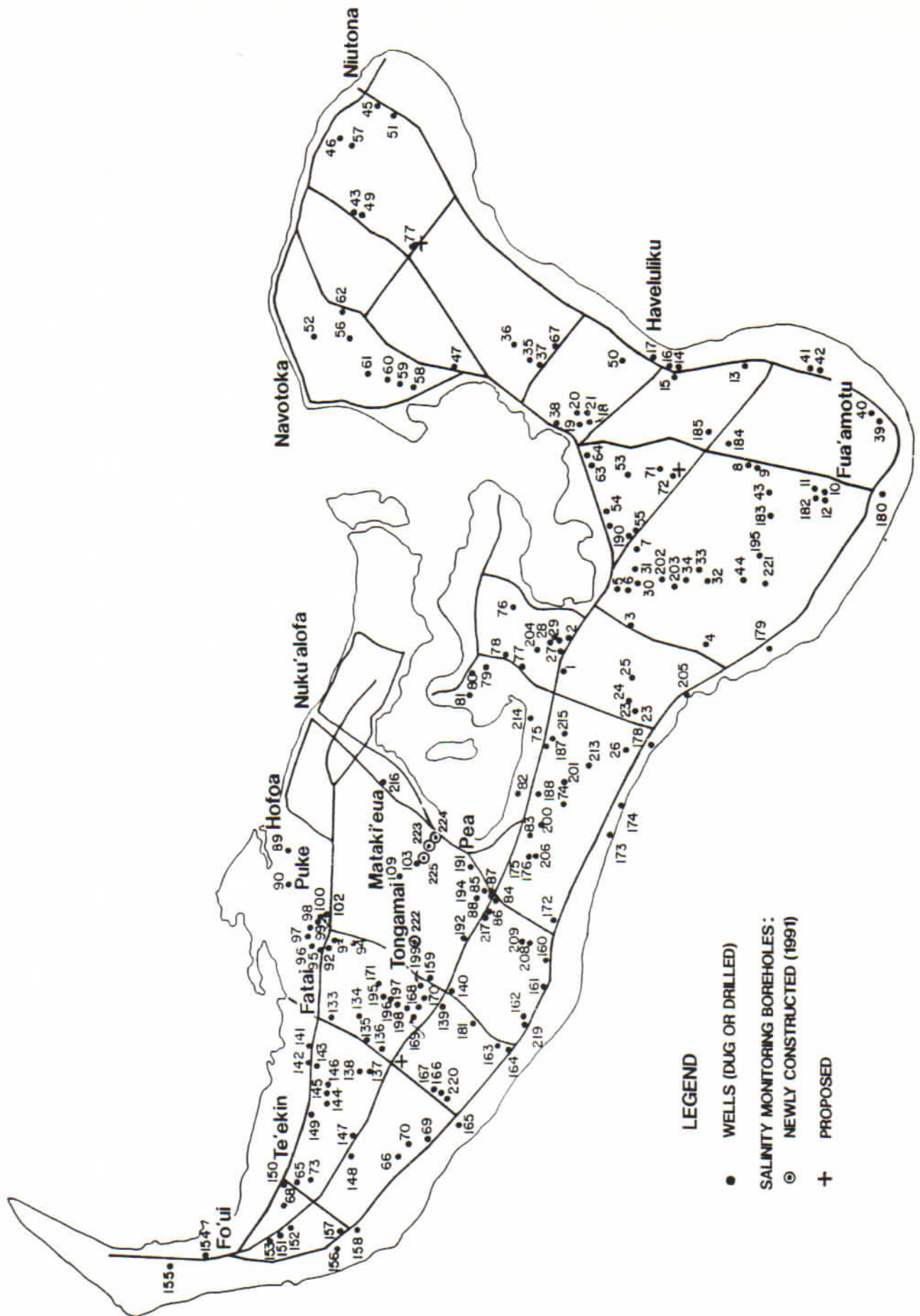


CROSS SECTION THROUGH A TYPICAL ATOLL

**IDEALISED FRESHWATER LENS  
ON A SMALL CORAL ISLAND**

**Figure 4.7**

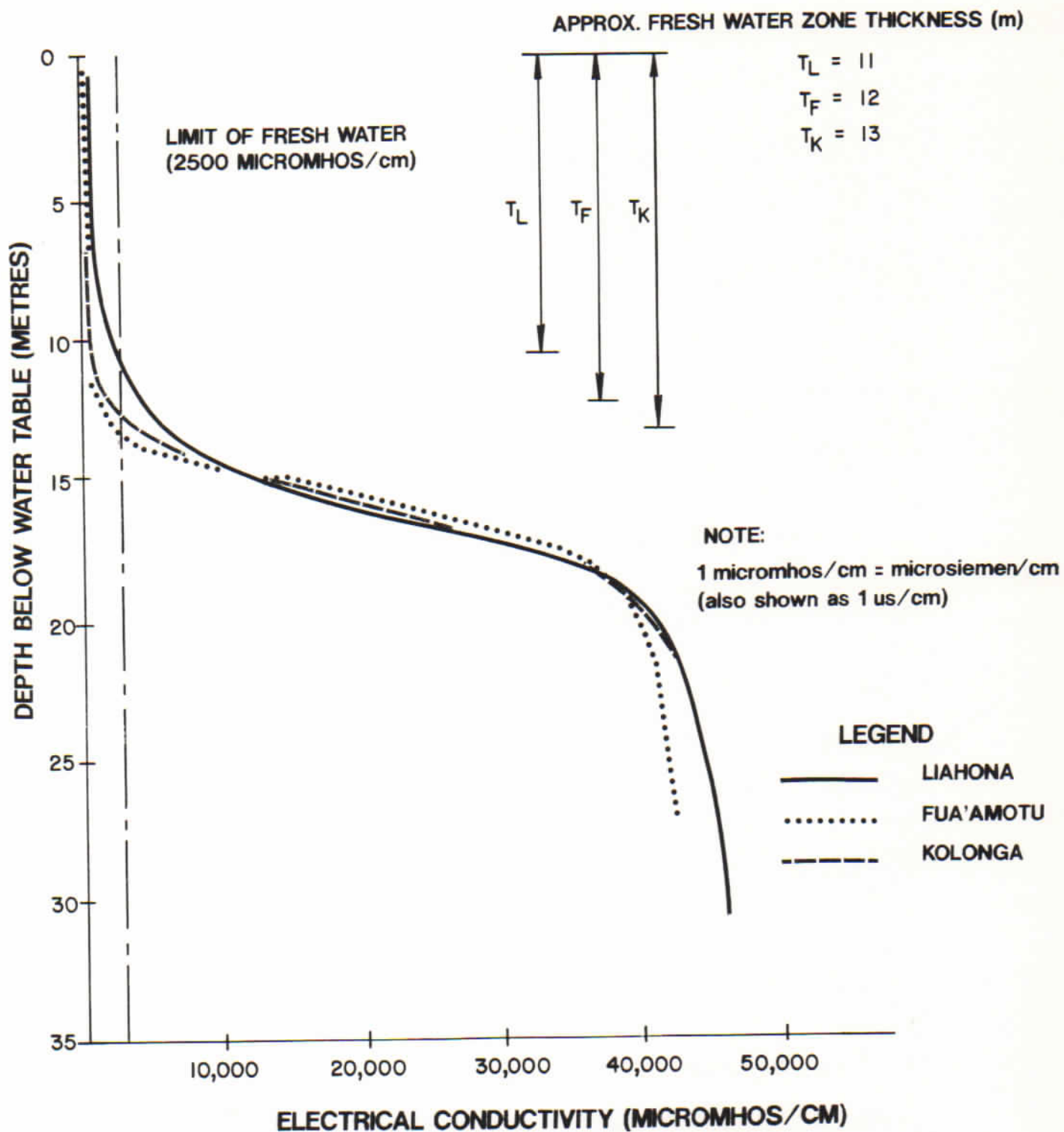




**MAP OF TONGATAPU SHOWING LOCATION OF WELLS INCLUDED IN CENSUS**

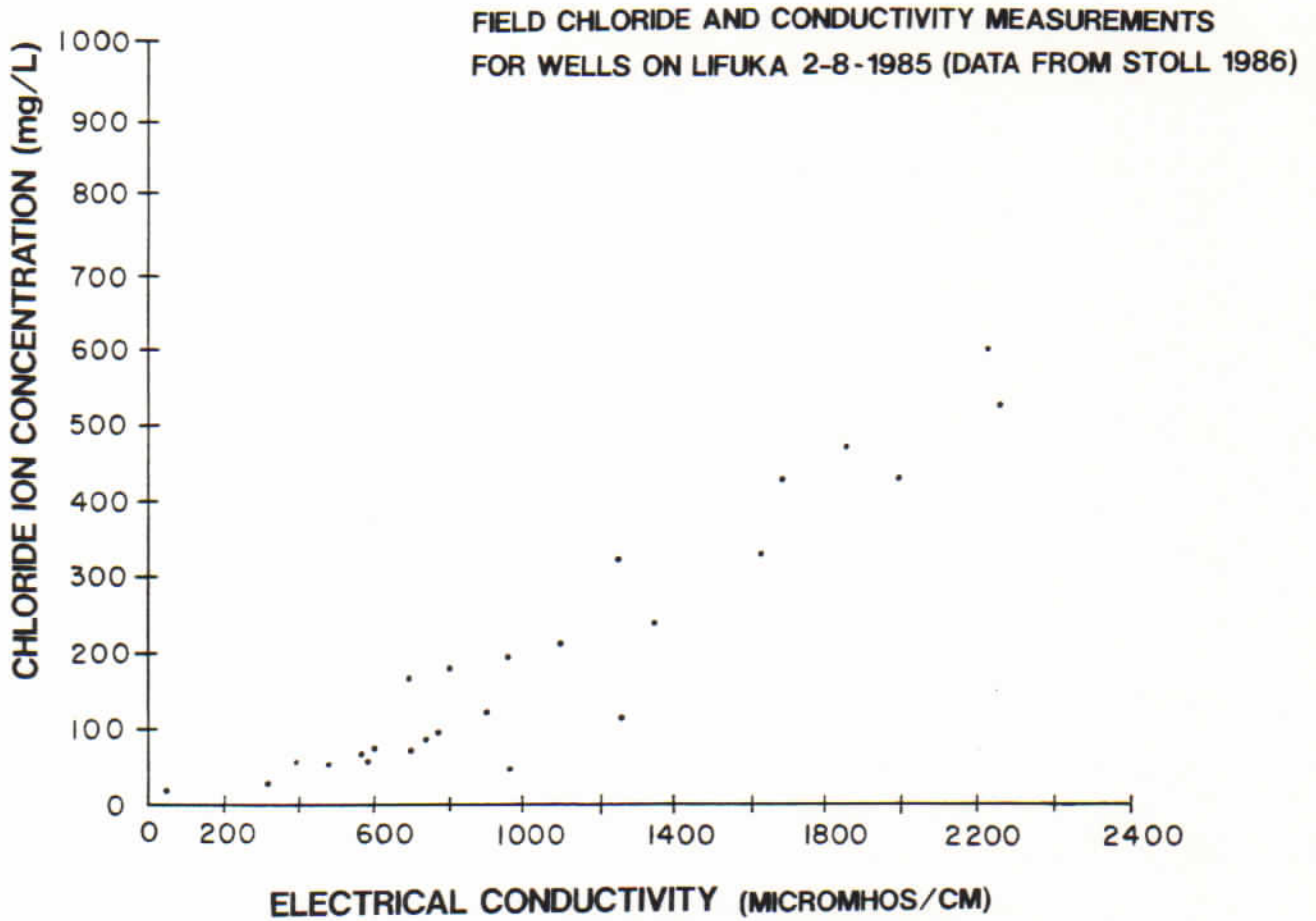
**Figure 5.1**





**SALINITY PROFILES FROM DEEP MONITORING BORES  
ON TONGATAPU, NOVEMBER 1978**

**Figure 5.2**

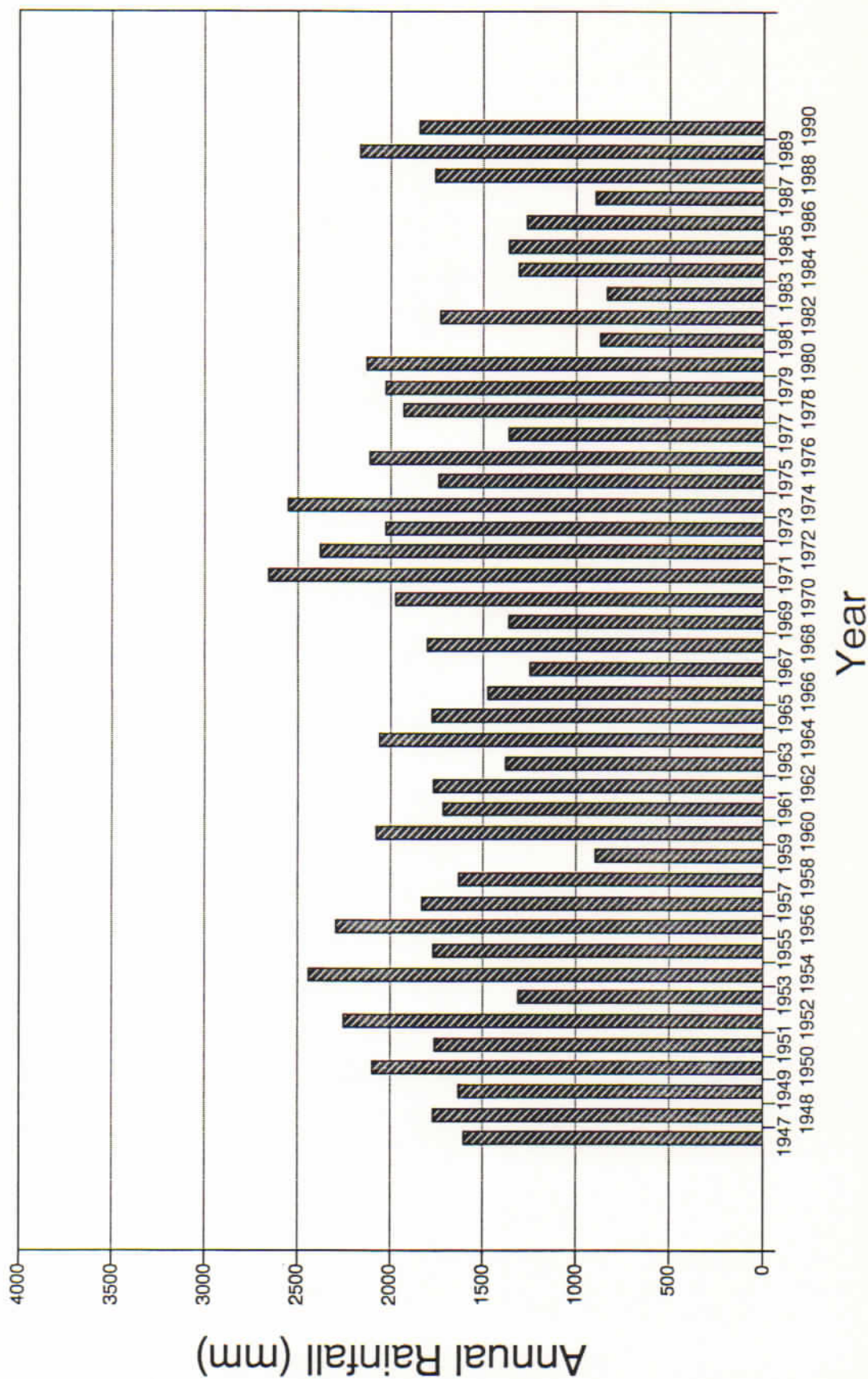


**RELATIONSHIP BETWEEN CHLORIDE ION  
CONCENTRATION AND ELECTRICAL  
CONDUCTIVITY**

**Figure 5.3**

# Tongatapu

## Annual Rainfall from 1947 to 1990



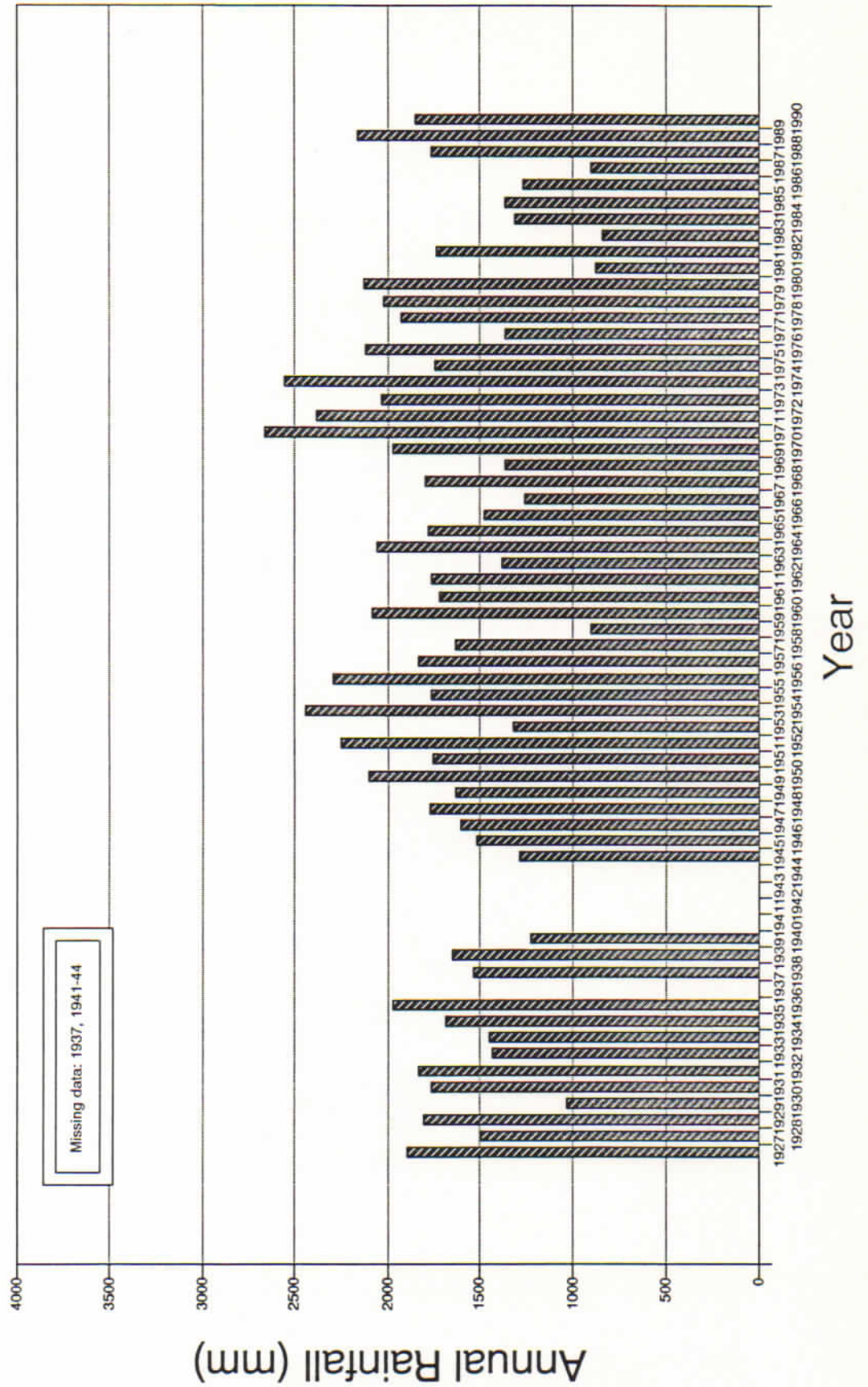
**ANNUAL RAINFALL AT NUKU'ALOFA,  
TONGATAPU, 1947-1990**

**Figure 5.4**



# Tongatapu

## Annual Rainfall from 1927 to 1990

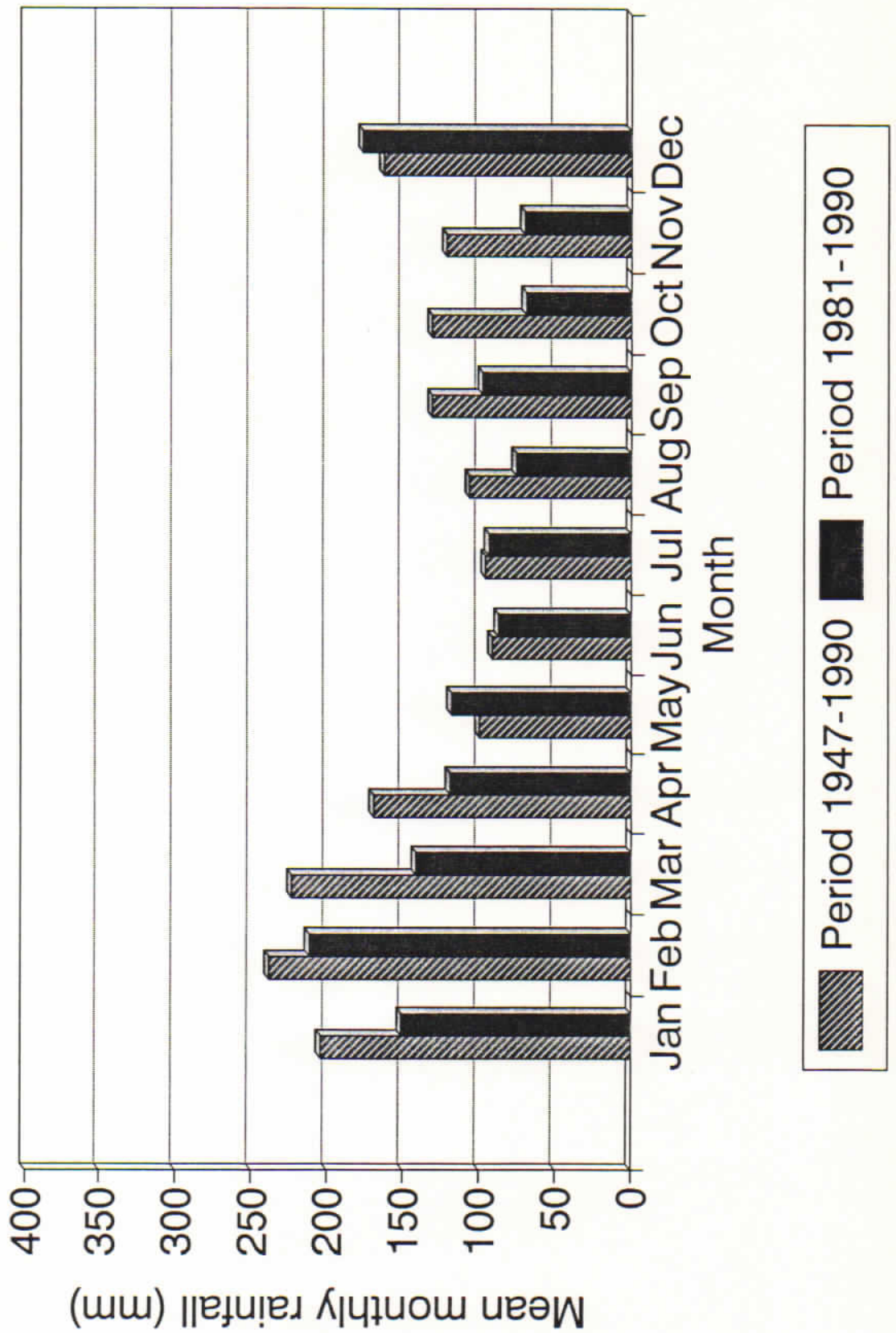


**ANNUAL RAINFALL AT NUKU'ALOFA,  
TONGATAPU, 1927-1990**

**Figure 5.5**

# Tongatapu

## Mean monthly rainfall at Nuku'alofa



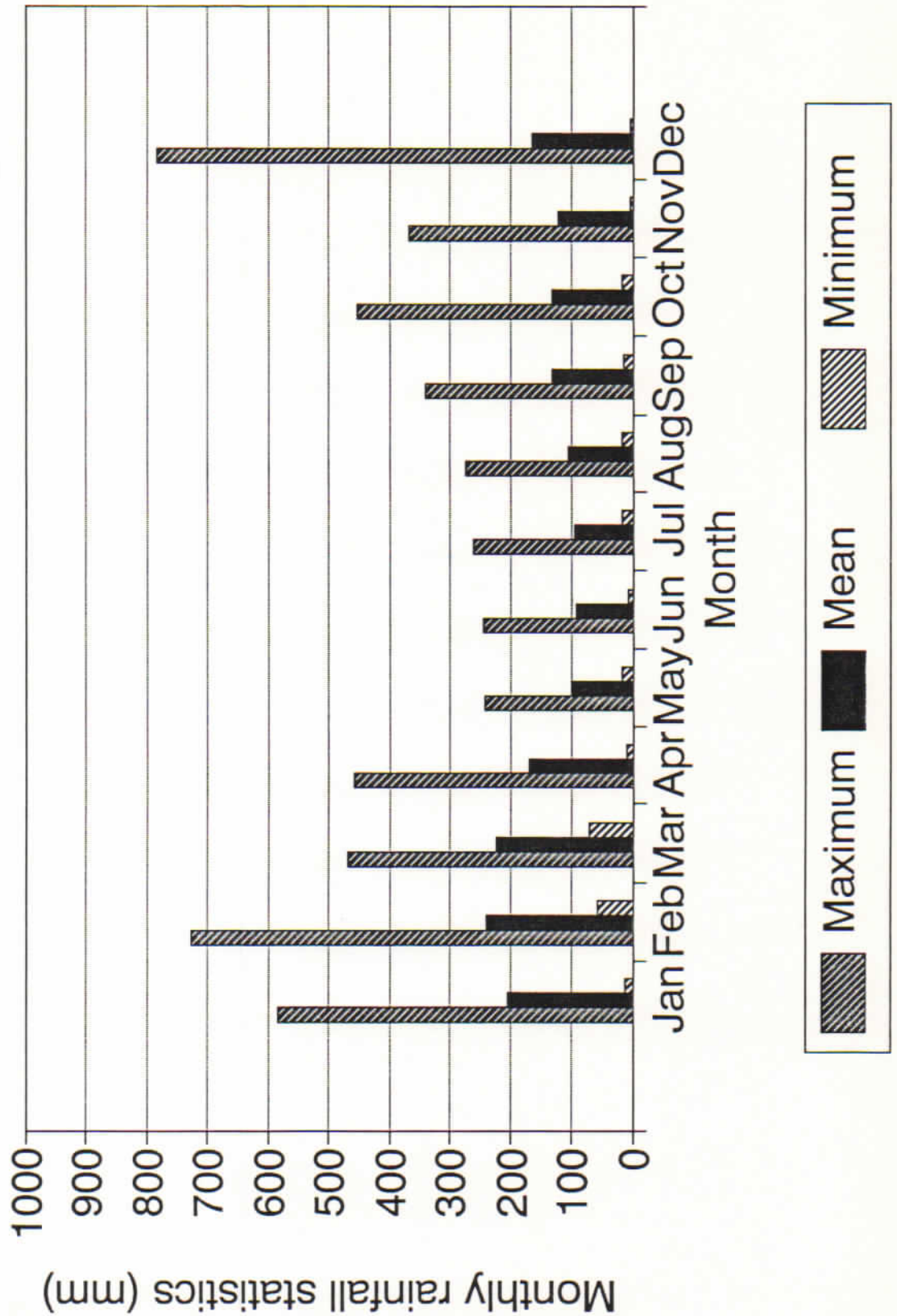
**MEAN MONTHLY RAINFALL AT NUKU'ALOFA, TONGATAPU FOR PERIODS 1947-1990 and 1981-1990**

**Figure 5.6**



# Tongatapu

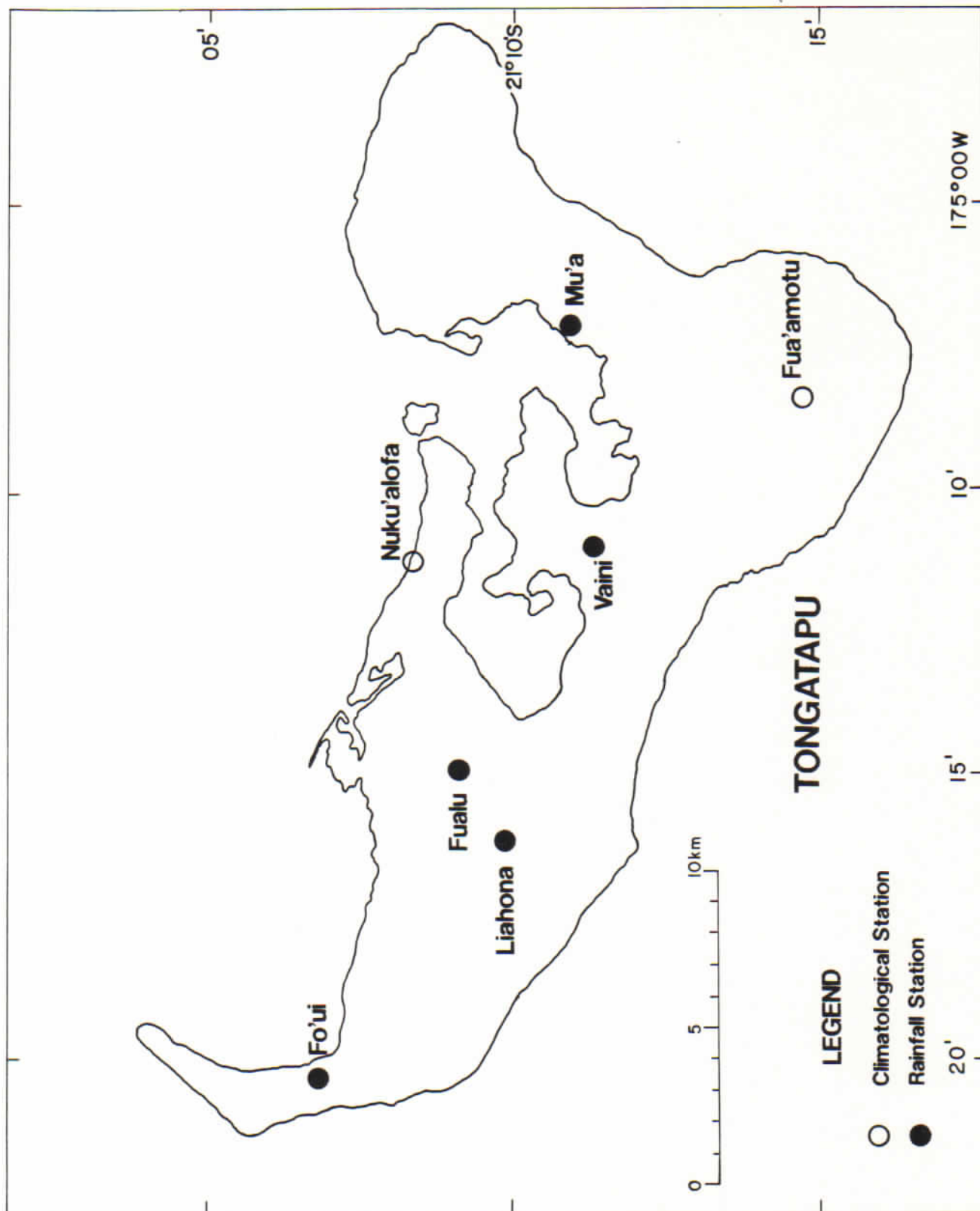
Monthly rainfall statistics: Nuku'alofa



**MAXIMUM, MEAN AND MINIMUM MONTHLY RAINFALL AT NUKU'ALOFA, TONGATAPU FOR PERIOD 1947-1990**

**Figure 5.7**



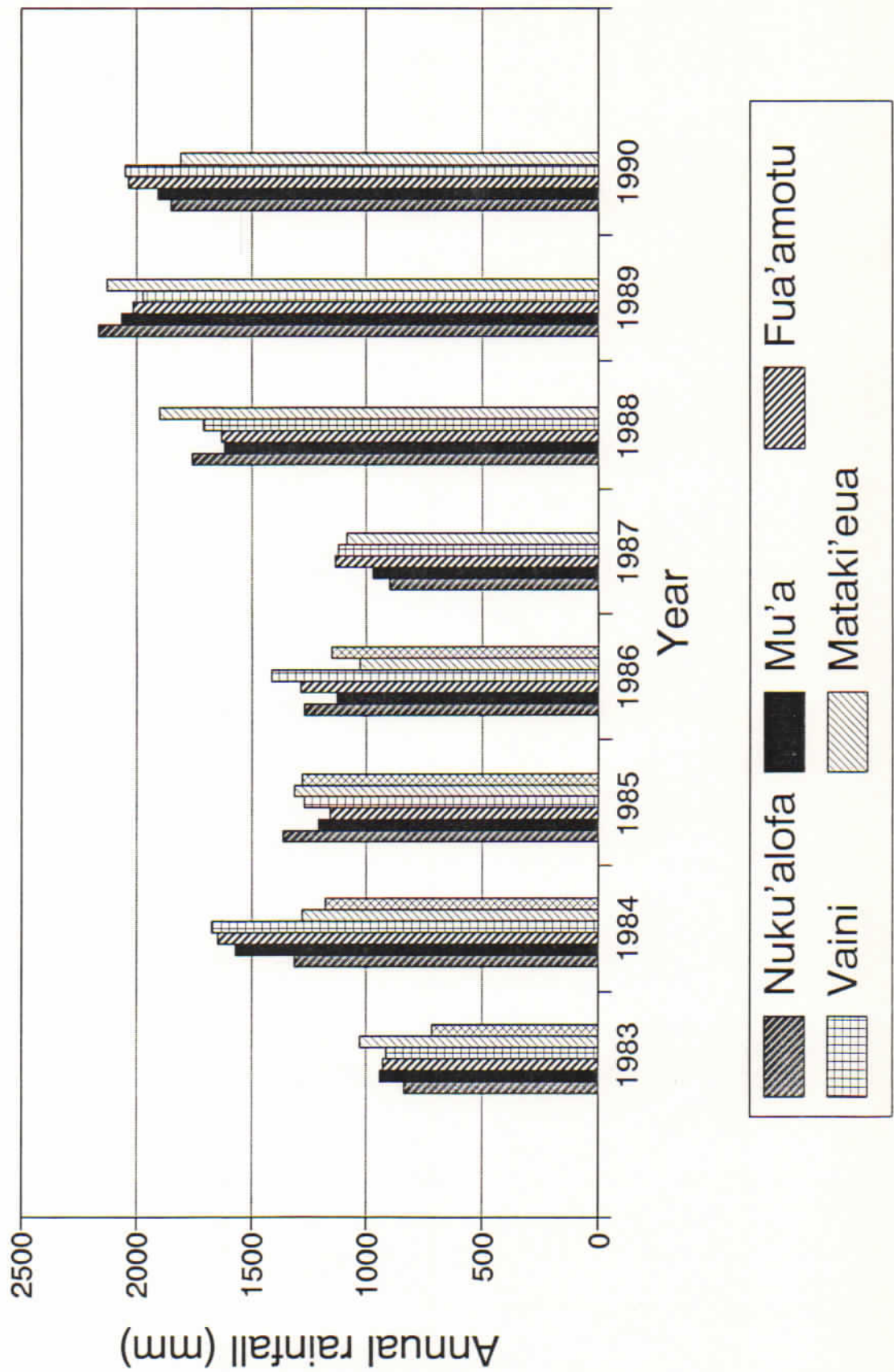


**LOCATION OF RAINFALL GAUGES ON TONGATAPU**

**Figure 5.8**

# Tongatapu

## Annual rainfall at selected stations

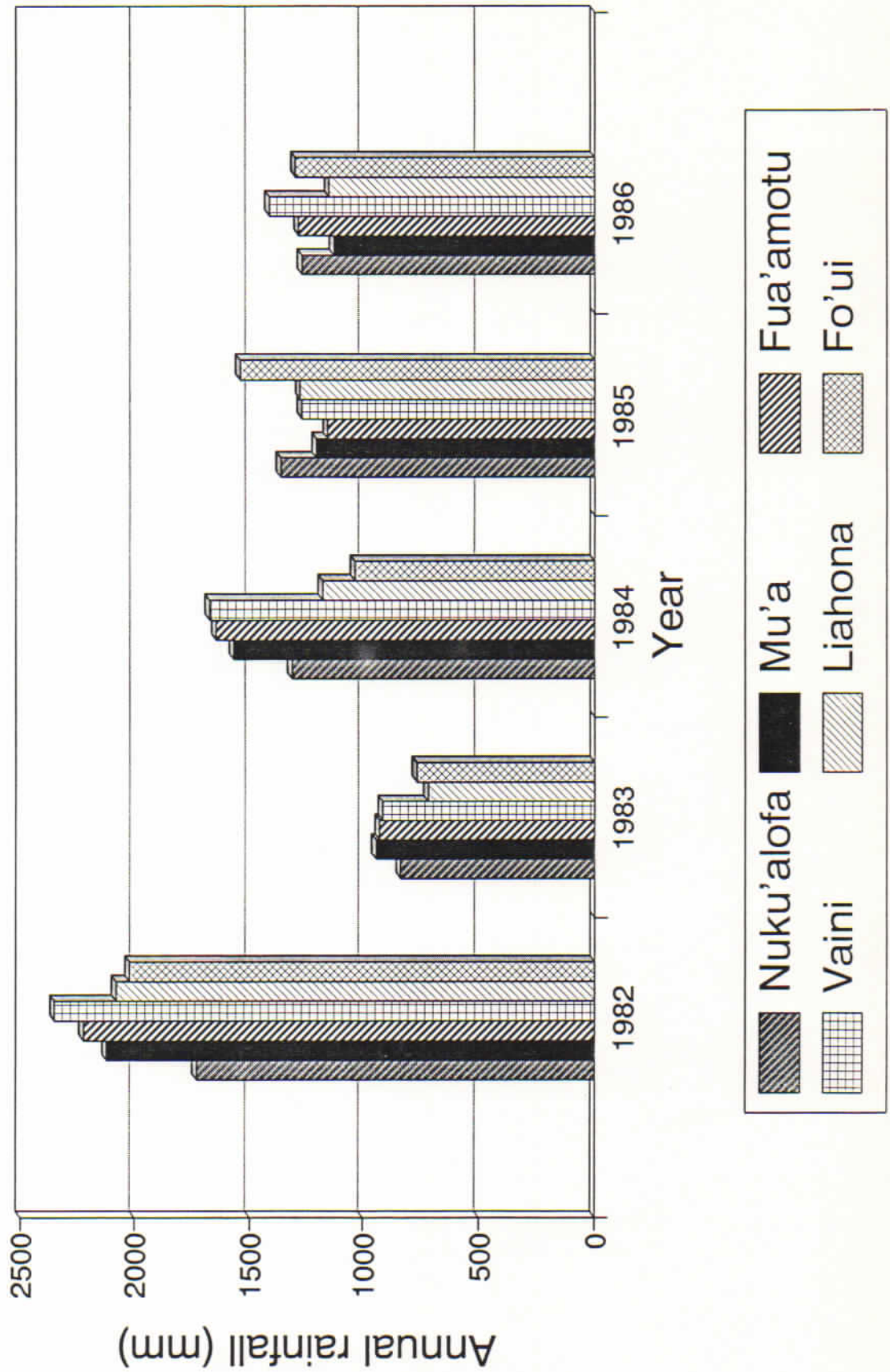


ANNUAL RAINFALL AT NUKU'ALOFA, MU'A, FUA'AMOTU, VAINI AND MATAKI'EUA, 1983-1990

Figure 5.9

# Tongatapu

## Annual rainfall at selected stations



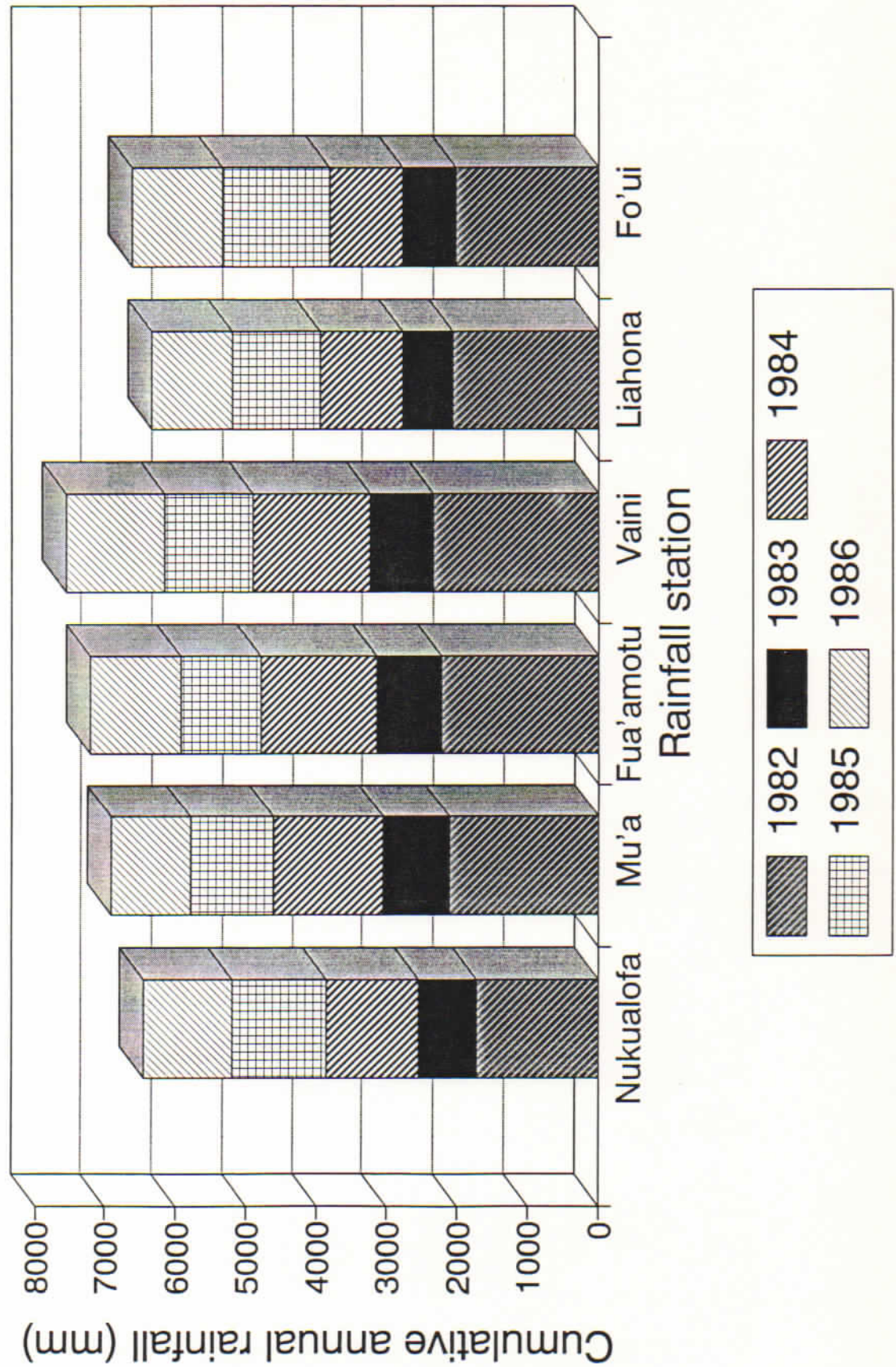
ANNUAL RAINFALL AT NUKU'ALOFA, MU'A, FUA'AMOTU, VAINI, LIAHONA AND FO'UI, 1982-1986

Figure 5.10



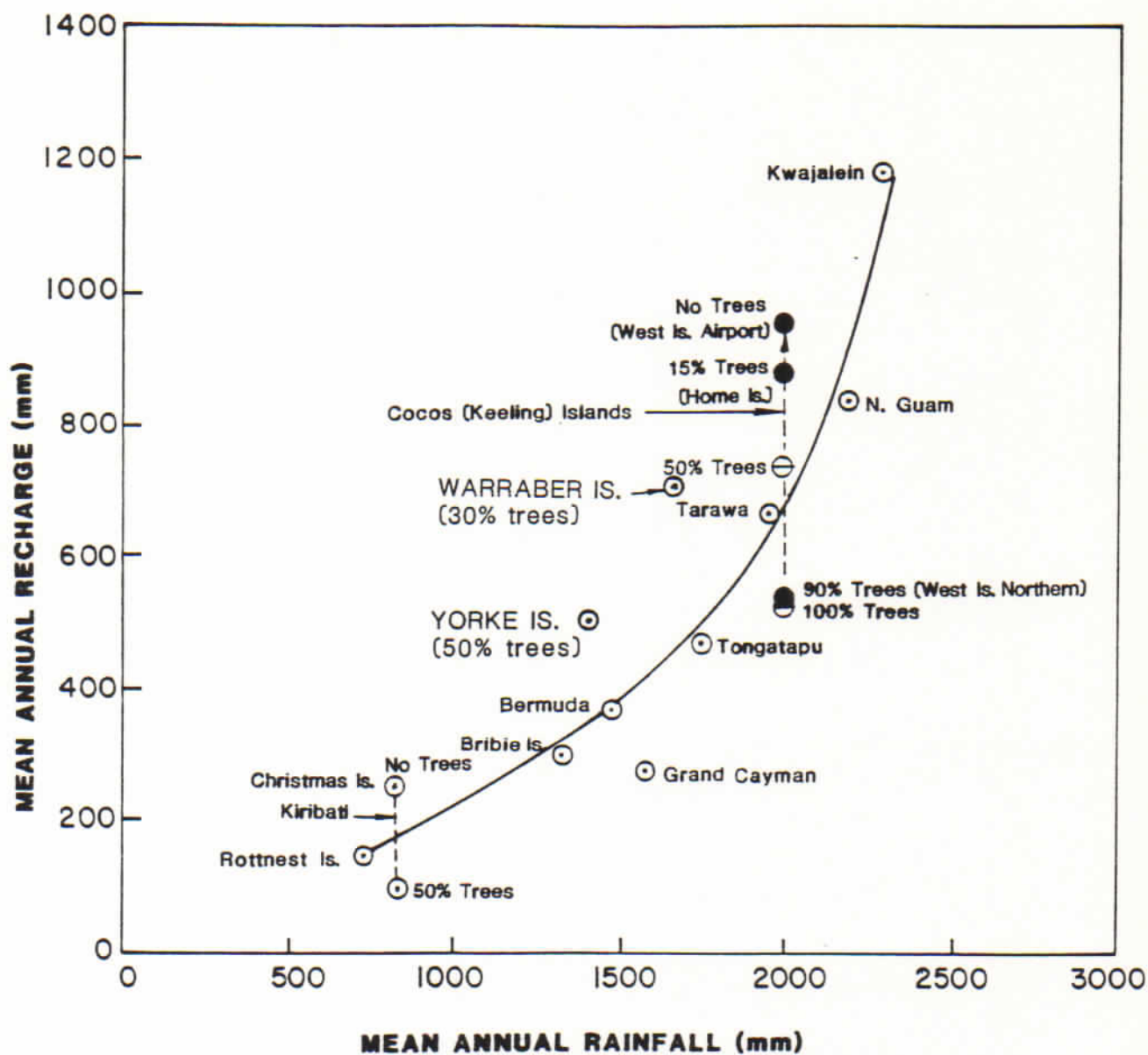
# Tongatapu

Cumulative annual rainfall at stations



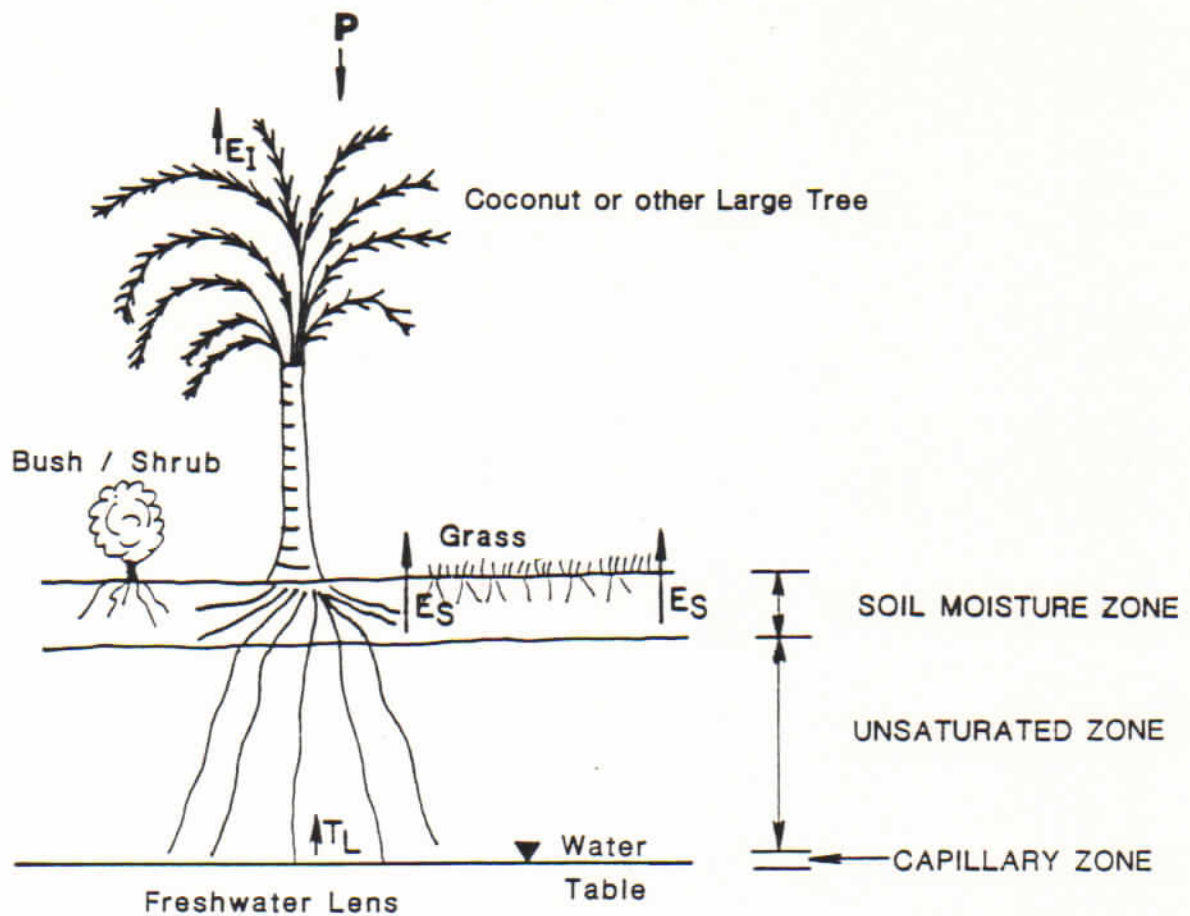
CUMULATIVE ANNUAL RAINFALL AT NUKU'ALOFA, MU'A, FUA'AMOTU, VIANI, LIAHONA AND FO'UI, 1982-1986

Figure 5.12

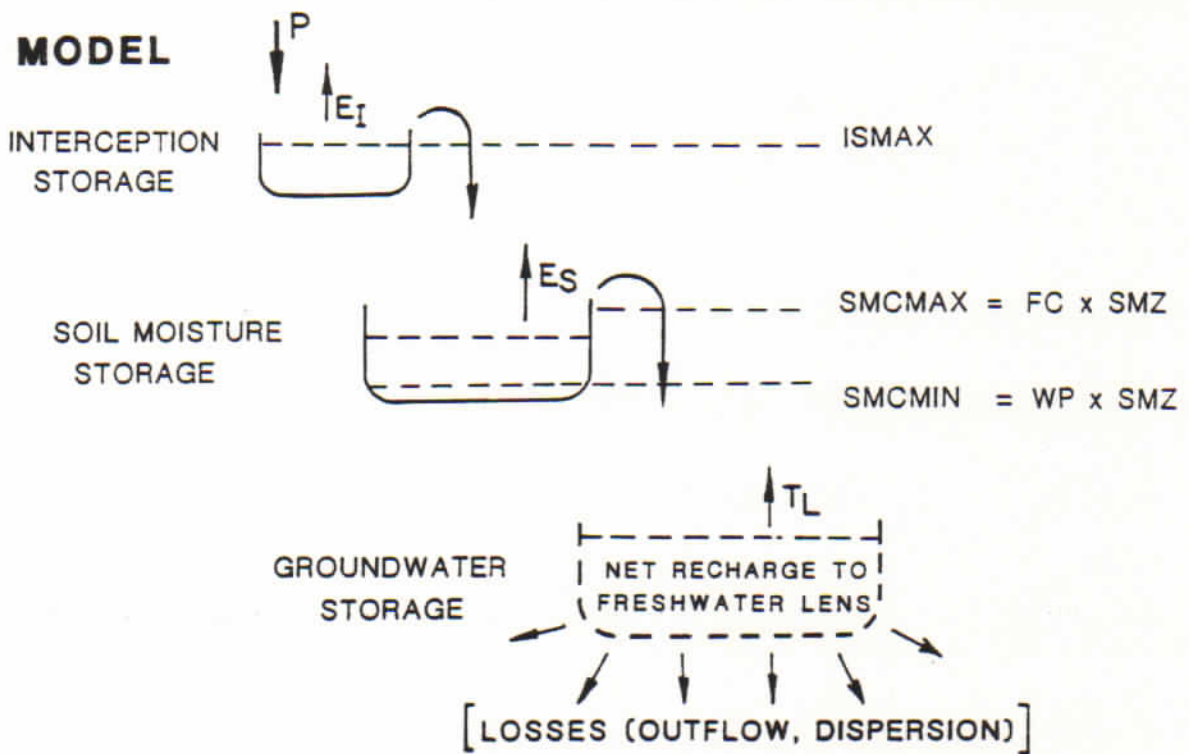


**RELATIONSHIP BETWEEN ANNUAL RAINFALL AND ANNUAL RECHARGE ON SMALL LOW - LYING ISLANDS**

**Figure 5.13**



**MODEL**



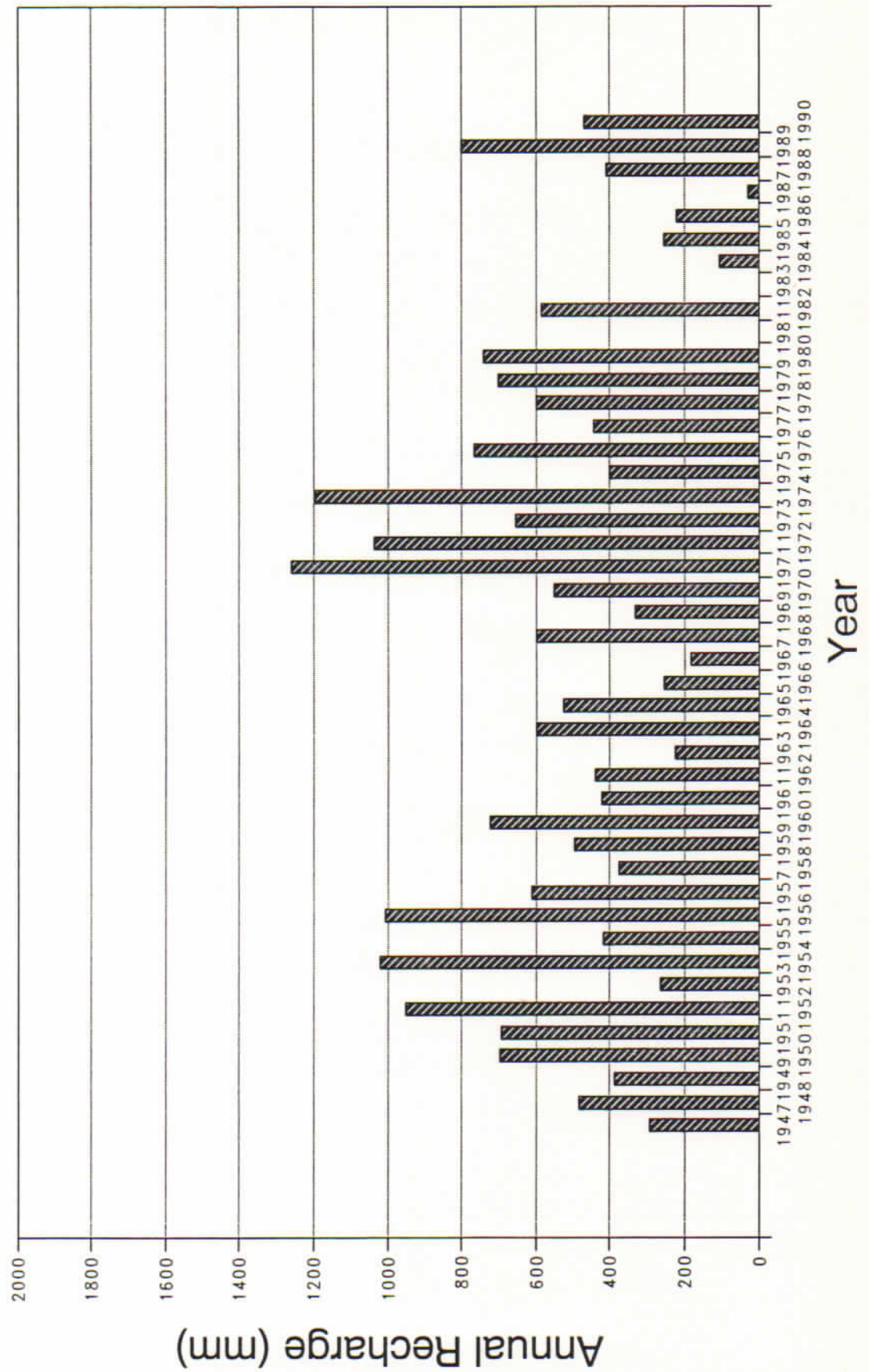
**RECHARGE MODEL**

**Figure 5.14**



# Tongatapu

## Annual Recharge from 1947 to 1990

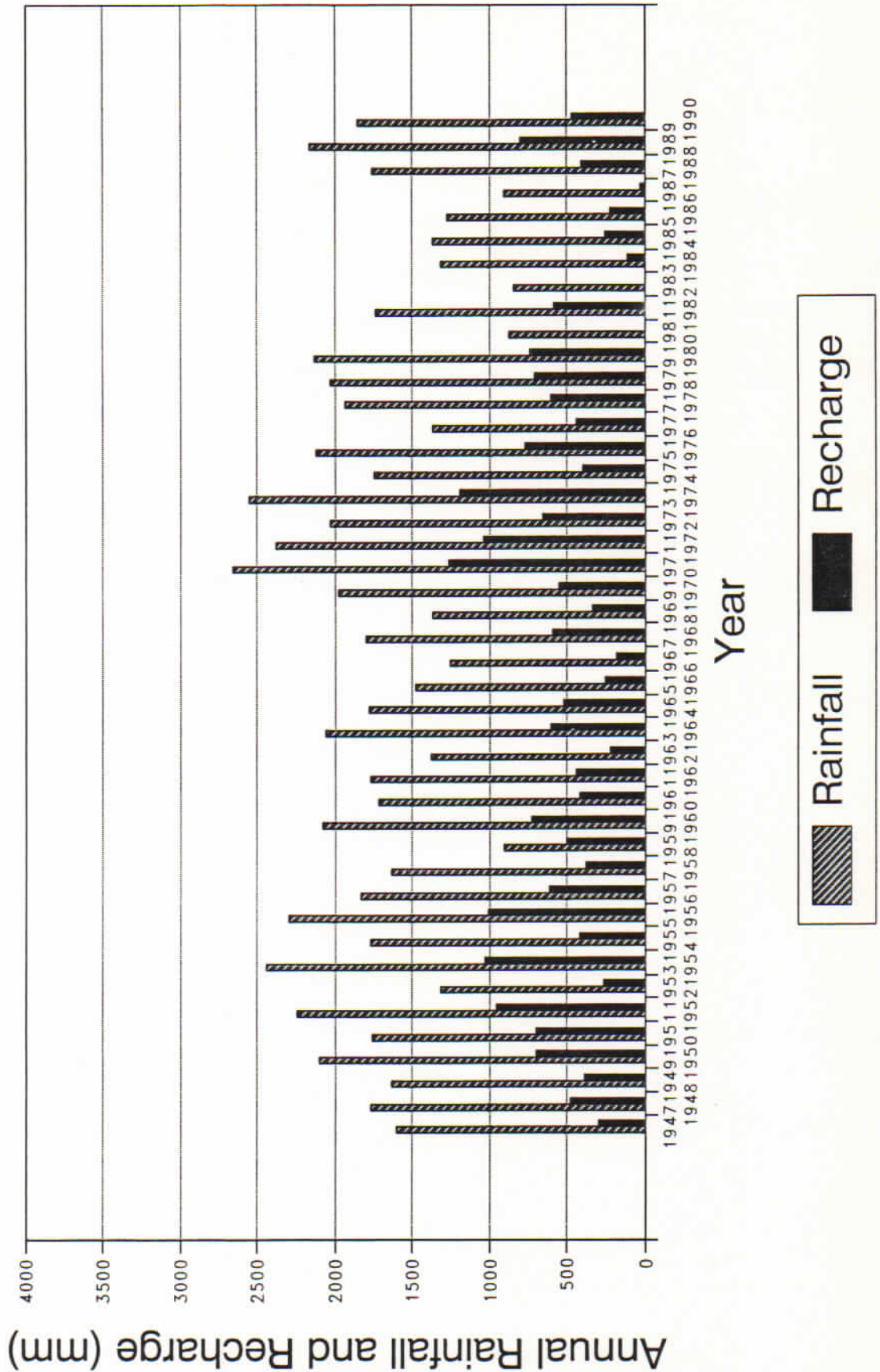


ANNUAL RECHARGE ON TONGATAPU, 1947-1990

Figure 5.15

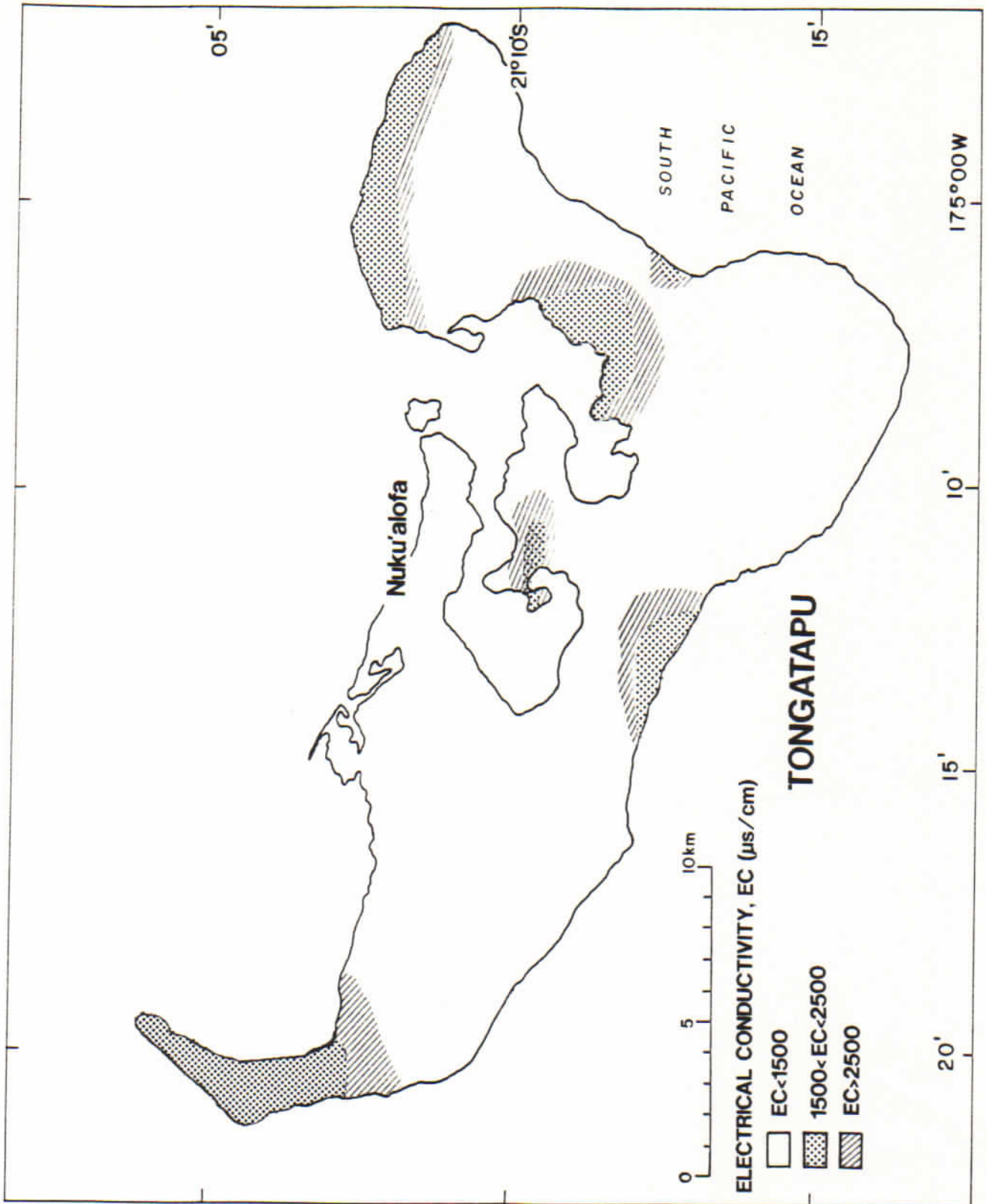
# Tongatapu

## Rainfall and Recharge from 1947 to 1990



COMPARISON OF ANNUAL RAINFALL AND RECHARGE ON TONGATAPU, 1947-1990

Figure 5.16



**WATER SALINITY MAP OF TONGATAPU, MAY 1990**

**Figure 5.17**