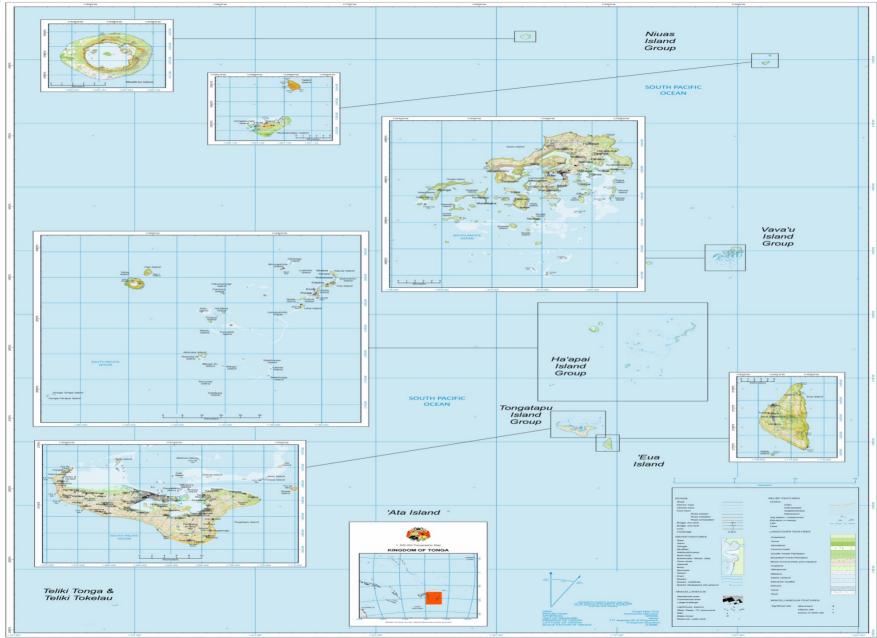
PACIFIC ADAPTATION TO CLIMATE CHANGE INCEPTION WORKSHOP

TONGA PACC PROJECT

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"Water is the essence of LIFE"

Sustainable development in Tonga without adequate freshwater supply for all its needs and services represents a very bleak outlook for future generations.

(Tonga National Assessment Report, 2002)

Introduction

Strategic Development Plans

- Environmental sustainability is stated as a priority in the SDP8, no explicit targets for addressing climate change.
- National Strategic Planning Framework (effective July 2009) addresses environmental sustainability and climate change as a priority for the next 5-10 years.

National Climate Change Policy

Objective 5: To protect the populations, resources and assets, vulnerable areas at risk from climate change impacts.

- Strategies: Identify vulnerable areas and develop adaptation options that are cost effective and culturally sensitive to reduce vulnerabilities (foreshore construction, tree planting).
- 5.1 Encourage the participation of communities in the planning, management and implementation of adaptation measures within their communities.

Water Safety Plans

- Draft Lomaiviti Water Safety Plan
 - Impact of Drought caused by weather and climate change

Strengthen evaluation and monitoring of underground water resources in Tonga. This includes strengthening MOH, TWB, MLSNRE surveillance and monitoring of drinking water supplies (urban and rural)

Water Resource Management Bill

General brief on adaptation projects

Direct relevance with PACC

- GEF Small Grants Programme
- EU Rainwater Installation Pilot Project
- Integrated Water Resource Management (IWRM)
- Water Safety Plans (not CC oriented)
- Second National Communications
 Indirect Relevance with PACC
- Renewable Solar Energy
- GTZ Climate Change/Forestry project
 SLM

Institutional Arrangements

 PACC Focal Point: MLSRNE
 PACC Executing Agency: Department of Environment & Natural Resources (Lead Agency)

Question: Why Department of Environment is lead agency?

Participating Agencies

- Ministry of Lands, Survey and Natural Resources (MLSNR)
- Tonga Water Board (TWB).
- Village Water Committees [VWC]
- Ministry of Health (MOH)
- Central Planning Department (CPD)
- Tonga Meteorological Services(TMS)
- Water Resources Committee [WRC]
- Ministry of Works (MOW)
- Ministry of Agriculture & Forestry [MAFF]
- Ministry of Finance (MOF)
- Private Consumers and NGOs.



The Government of Tonga has committed US\$1.5 million as co-financing for PACC

Pilot demonstration areas and projects

- Hihifo district [Western District] consists of 6 villages situated 15 kilometres west of Nuku'alofa.
- The water resources of Tongatapu are mainly from groundwater sources, supplemented by rainwater.

Climate change and sea-level rise has had a significant impact on the livelihoods of the communities in Hihifo District, which suffer from drought, and impacts of saltwater intrusion affecting ground water resources.

Challenges

- Recruitment of PACC Coordinator, skilled personnel
- Duration of waiting for 1st quarter PACC funds so project activities can commence
- Staff numbers at Department of Environment
- Current "on the ground" water upgrade projects for Hihifo villages awaits PACC project

WATER SUPPLY
 AND
 WATER RESOURCES

Self Introduction

- Water Act, Water Authorities
- Recent Water Projects in Tonga
- Water Sources Groundwater, Surface Water, Rainwater, Watershed and Harvesting
- Water Production and Distribution
- El-Nino and Drought
- Groundwater and Water Quality and Treatment
- Tonga Water Board and Village Water Supply System
- Hihifo [Project Area] Existing Water Reticulation Network and Quality
- Proposed Water Upgrading Project for Hihifo:
 - Option 1 Unified Water Reticulation Network and Storage Tanks
 - Option 2 Desalination Plant

Water Supply Problems

- high salinity water overexploitation
- high unaccounted for water
- management problem including financing and billing
- technical and maintenance problems
- pipeline and domestic leakages
- not running in 24 hours
- metering system

water production and pumping system problems