

PACIFIC ADAPTATION TO CLIMATE CHANGE INCEPTION WORKSHOP

TONGA PACC PROJECT

Tupe Samani
Lisiate Bloomfield

June 29th to July 3rd 2009

Apia, SAMOA

“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***
- ▣ ***UNCCD NAP***
- ▣ 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

1. PACC Focal Point: MLSRNE
2. 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.

Co-financing

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

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