

# Long term solutions for water security in Lulunga District, Tonga

## Introduction

Lack of water is a priority issue in the district of Lulunga, in Tonga's remote Ha'apai island group. The 17 island archipelago has a population of over 500 people within six communities, who are mostly situated in the district centre of Ha'afeva. A lack of water in these communities leads to illnesses such as typhoid, dengue fever and diarrhoea. Crops and livestock are also adversely affected by low rainfall which leads to overreliance on rice and imported foods, leading to poor nutrition.

The geography of the islands is largely to blame for the low water supply in these communities. All water in Lulunga District is rain fed because the highly saline ground water is unusable. Loamy soils also make the islands prone to quick water loss, which is further exacerbated by a lack of vegetation. In addition, the islands are influenced by El Nino events, which tend to bring much drier conditions to Tonga. Community members also speak of changing rainfall patterns. As a result, water cartage is often required by boat from Tongatapu, Tonga's capital which is 200km away. Measures to supplement local water supply, such as use of plastic bottles, create further plastic pollution, and desalination equipment is costly to run, meaning these provide only short term emergency measures.



Low water availability is a priority issue in the Lulunga District Development Plan, in Tonga's remote Ha'apai island group. Photo credit: Live and Learn Environmental Education.

Unsurprisingly, improved water supply was the top priority identified by women, youth and men's groups during 'risk informed' community development planning across all six communities in the district. The communities, in partnership with the Tongan Government; multiple non-government organisations including MORDI Tonga Trust, Live and Learn Environmental Education and Rotary New Zealand; the University of the South Pacific and United Nations Development Programme's Pacific Risk Resilience Programme, assisted with addressing water scarcity. Partners also worked to systematically strengthen local governance to ensure sustainability. As a result of long term partnerships, the communities have become far more water secure, and this approach is being replicated across Tonga. The major lesson learned has been that systematic strengthening

leads to longer term, self replicating outcomes to address the root causes of disaster and climate risk in Tonga.

## Approach

This briefing note outlines steps which have been undertaken by communities, government and NGOs to deliver long term solutions for water security in Lulunga Village, Ha'apai. In this regard, the UNDP Pacific Risk Resilience Programme, along with significant government and NGO partnership, were able to support:

- **Dedicated capacity:** PRRP helped establish a full time government post dedicated to CCDRM in Ha'apai island group and a Deputy CEO position in MIA.
- **Risk informed training:** District and Town Officers trained in development planning that considers CCDRM and social risks.
- **Risk informed community development planning:** through collaboration between communities, local government and NGO partners 6 community development plans (CDPs) were developed and aggregated into the Lulunga District Development Plan (DDP).
- **Risk informed project implementation:** District and Town Officers (DTO) for Lulunga led development planning, and project implementation was undertaken with a community water sub-committee.
- **Gender and social inclusion:** Safe and equitable access to water tanks was a key factor in deciding their location.

## Activities

Climate change, disaster, gender and social risk considerations were built into the project management cycle for the community's priority water management projects:

### Design Phase:

**Consultation and risk assessment key to the water project design.** Community consultations were undertaken to discuss site selection, including addressing issues such as safe access to water at night and accessibility for people with disabilities and the elderly. This identified multiple social issues and ways to address these (e.g. construction of the tanks closer to homes belonging to people with disabilities).

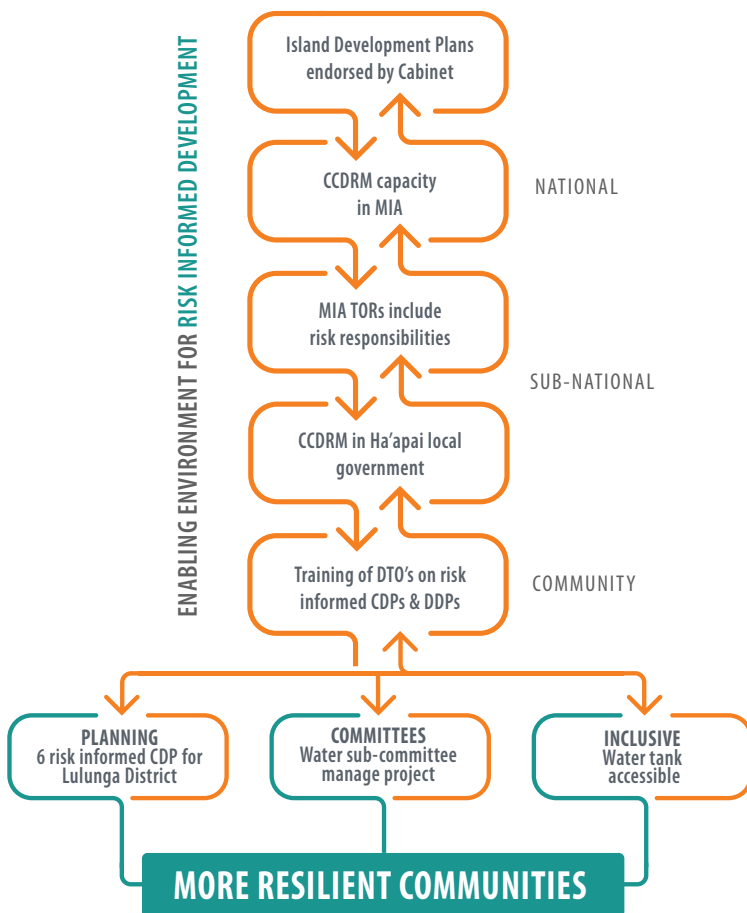
### Implementation phase:

**A multi-stakeholder, multi-sector approach to increasing community resilience.** The pooling of technical and financial resources from a wide range of government and non-government agencies enabled implementation of community development priorities. Purchasing power was increased as a cooperative of agencies, which meant that some of the logistical challenges of transporting equipment to isolated islands were overcome.

## Project oversight:

**Drawing upon local volunteers and capacity**, such as engineers, ensured that capacity to implement and maintain the project was kept local. Village water committees were trained in tank maintenance, record keeping and technical capacity to manage water during periods of low rainfall. Low-tech water gauges were installed for early warning signs and preparedness.

The following diagram highlights the activities from national to community level undertaken to deliver long term solutions for water security in Lulunga, Tonga, including changes that the enabling environment has undergone to facilitate the initiatives. Importantly, strengthening the enabling environment, rather than just delivering the projects, will ensure climate change and disaster risks are integral considerations in local level development in the future.



## Results

**Implementation of community priorities has led to improved water security in Lulunga village.** There has been a significant reduction in water cartage within the villages, especially for women, girls, elderly and persons with disabilities. This is due to increased awareness within the community on the consideration of different peoples' needs. The village water committees continue to be actively involved in maintenance of the tanks.



A community development plan being developed by youth, women and men's groups in Ha'apai. Photo credit: Live and Learn Environmental Education.

**The Ha'apai CCDRM post and MIA Deputy CEO post have been absorbed into the government's public service.** There are plans to replicate the island level approach to CCDRM capacity in other parts of Tonga.

**Ensuring risk management is everyone's business.** The terms of reference for DTO and Regional Development Committees (RDC) across Tonga now incorporate the requirement for managing risks to and from development projects.

**The Ministry of Finance and National Planning (MFNP) is beginning to make decisions based on the community needs and priorities outlined in community development plans from across Tonga.** Constituency funds are also being used to implement community priorities. There is opportunity to further align sector Ministry work plans and priorities with island development plans.

**Connecting top down and bottom up.** MFNP has started piloting risk screening of development projects funded through the national budget. This enables further systematisation of risk informed approach throughout government, including in the Tropical Cyclone Gita recovery.

## Lessons Learned

**Dedicated government CCDRM capacity in local government at national and island levels** ensured that risks were considered within local government decision making structures and personnel (including updated TORs).

**Collaboration was key to the success.** Government and non-government partners at many levels collaborated to pool resources and expertise. This resulted in a better coordinated, more targeted approach to community development that incorporated social, climate change and disaster risks.

**Risk management measures were inexpensive.** Considering the safety and accessibility of the water project added very little to the overall project budget. Low-tech approaches to water management were needed for sustainability of projects on remote islands. This approach is now being replicated across Tonga.

**Service delivery is only part of the equation.** Strengthening the enabling environment, including institutionalising risk management, demonstrates a sustainable approach to 'bottom up' development that is resilient to climate change and disasters and leaves no one behind.

### For more information:

Pacific Risk Resilience Programme  
United Nations Development Programme (UNDP) Pacific Office in Fiji  
Level 7, Kadavu House  
414 Victoria Parade, Suva, Fiji  
Email: registry.fj@undp.org  
Ph: +679 331-2500 | Fax: +679 330-1718



LIVE&LEARN  
Environmental Education



Empowered lives.  
Resilient nations.