

# Pacific Adaptation to Climate Change Project



## The need for Adaptation to Climate Change

Small island developing States (SIDS) are highly vulnerable to climate change and sea level rise owing partly to their small land masses surrounded by ocean, and their location in regions prone to natural disasters. SIDS are often characterized by having relatively large populations for the area they occupy with high growth rates and densities; poorly developed infrastructure and limited natural, human and economic resources, and their high dependence on marine resources for their livelihood needs. Most of their economies are reliant on a limited resource base and are vulnerable to external forces, such as changing terms of trade, trade liberalization, and migration flows. Adaptive capacity to climate change is generally low.

Given the foregoing urgency for the need for adaptation to climate change in the Pacific island countries, a Pacific Adaptation to Climate Change (PACC) has been developed to assist with the implementation of adaptation measures in 11 countries of the region. The Kingdom of Tonga (Tonga), as one of the countries will participate in the PACC to implement adaptation measures to enhance its resilience to the adverse impacts of climate change in the longer term.



The Kingdom of Tonga acceded to the United Nations Framework on Climate Change Convention and Tonga is committed to strengthen its obligations by implementing capacity development to address climate change impacts at the highest level possible. On behalf of the Government of Tonga, the Ministry of Environment and Climate Change and the Pacific Adaptation to Climate Change Project Management Unit, we are thankful for the major donors the United Nations Development Programme (UNDP), and the Global Environment Facility (GEF) for funding and to the South Pacific Regional Environment Programme (SPREP) for executing the project.

The PACC Project is the first project to be implemented in the region that responds directly to the call by Pacific Island Leaders for urgent action while supporting the systematic and

institutional capacity to address adaptation to climate change across the Pacific Region. The Pacific Island Countries are already experiencing the impacts of climate change and the vulnerabilities and risks associated with climate change are not currently being addressed in any systematic way nor reflected in national and community level planning and government processes. The PACC Project aims to significantly improve the effectiveness of the response to climate change in the Pacific. The project will improve technical capacities to support appropriate adaptation centric policies, demonstrate cost-effective adaptation techniques in key sectors, and promote regional cooperation. It is designed to lay the framework for effective and efficient future investment on climate change adaptation in the Pacific.

Through this project, we are glad that Tonga is making the utmost efforts at all levels to address climate change in our small Pacific Nation. But of course, these efforts need to be translated into real actions that bring tangible results to local communities and Tonga as a whole. It is our beliefs that ending of climate change is about people taking control of their own actions towards the environment as a whole and we see this PACC Project as a bridge to make this happen.

Hon. Lord Ma'afu Tukui'aulahi  
Minister for MECC



# Tonga PACC Inception Meeting

*“Tonga’s ready to adapt to Climate Change”*



Hon. Minister Lord Ma’afu, Rev. Tevita Havea, ‘Asipeli Palaki (Director for MECC), Taito Nakalevu (SPREP), Fine Lao (SPREP) and all the participants for PACC Inception Meeting

NUKU’ALOFA: The PACC Inception Meeting was carried out on the 2nd of March at the Moulton Hall, Free Wesleyan Church in Nuku’alofa.



Participant from key stakeholders on PACC Inception workshop

The workshop was opened by Hon. Lord Ma’afu, the Minister for Environment and Climate Change. He indicated that Tonga is making the utmost efforts at all levels to address climate change and the PACC project is contributing to that endeavor in a considerable way.

According to the PACC Coordinator Mr. Paula Taufa, the Inception Meeting was a success as a lot of critical issues such as implementation arrangements and funding



**Taito Nakalevu**– PACC Regional Project Manager



**Paula F. Taufa**  
**National**  
**Coordinator**

were clarified – “it is usually good to have a clear understanding of project details between us the Project staff and the communities so that no misunderstanding creeps in”.

Key PACC stakeholders that attended the meeting included the Tonga Water Board (TWB), Ministry of Health (MOH), Ministry of Land, Survey and Natural Resources (MLSNR), Ministry of Agriculture and Forestry, Finance

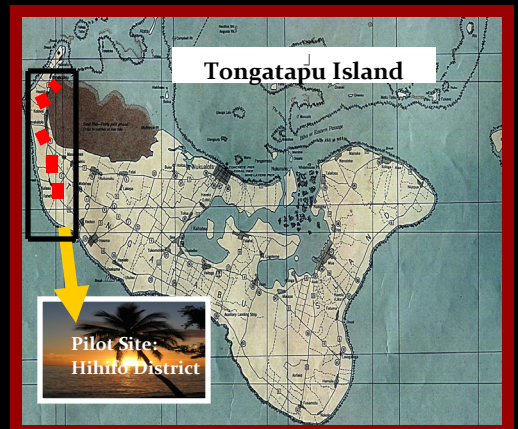
SPREP was represented at the Inception Meeting by the Project Manager Mr. Nakalevu and the Climate Change Adaptation Officer Mr. Fine Lao

At present, about 95% of the Village population are served by the water supply. However the shortage of water supply is a major problem for these villages especially the far northern villages of Haatafu, Ahau and Kanokupolu. Water resources of Tongatapu is mainly from groundwater sources and supplemented by rainwater. The Hihifo District at the northwestern end of the island also relies heavily on groundwater sources for consumption and other use needs. Climate change and sea-level rise will have a significant impact on the livelihoods of the communities in Hihifo District which suffer from drought and impacts of saltwater intrusion affecting ground water.

## Tonga PACC project select Hihifo community to host pilot project

The selection of the thematic area for adaptation intervention was based on a number of factors which resulted from in-country consultations and the documents made available to the PACC Consultation Team. The selection was initially suggested by the Director of the Environment who was first consulted .

During the Tonga country consultations by the PACC team, it has been agreed to focus adaptation intervention on increasing the resilience of water resources management in Hihifo District of Tongatapu. This pilot project will provide lessons learned and recommendations and design of follow-up projects will complement the pilot and will produce recommendations and the follow-up schemes for potential replication on a wider scale in Tonga and elsewhere. The Upper Hihifo District consists of 6 Villages, Foui, Ha’avakatolo, Kolovai, ‘Ahau, Kanokupolu, and Ha’atafu. These Villages are situated 15 kilometers south east of Nuku’alofa, on the main Island of Tongatapu. The Upper Hihifo District lies on north south direction is the home of the Prime Minister and 4 Tourist Beach Resorts including the only surfing resort in the Kingdom. The Water supply system of Upper Hihifo District was launched around the mid sixties. A Village Water Committee elected by the Village Community governs the Upper Hihifo District Water supply.



# PACC Project, Hihifo Community Workshop

The objective of this workshop are as follows, to introduce PACC project and its outcomes and outputs to the community which should provide a good basis for detail assessment activities in preparation for implementation . To gather information to design a process for general community participation and for the

development of appropriate awareness materials for the community; and to compile basic village data that would assist both problem analysis and project planning; identify and assess community perceptions of the causes of problems; explore possible solution



Kolovai



Fo'ui

However, this workshop lead to an outcome, of different views from local people on how the impact of climate change affecting there water resource and management.

For each village, this workshop find out that problems were different from each village, and it show that it's getting worse year after year. O ne of the major problem facing with this six village is that water is not running 24 hour's and for the village of Ha'atafu has no water at all



Ha'avakatolo

*"Ke anga 'a e kakai 'o Hihifo  
ki he feliuliuaki 'ae'Ea.."*



Ha'atafu



Kanokupolu



'Ahau

## Pilot site population

The population of the Hihifo District as recorded from the Hihifo Health Centre 2009. The total population range from age (1-70+)

Villages (Pilot Demonstration Site)	Population (2009)
Fo'ui	517
Ha'avakatolo	231
Kolovai	584
'Ahau	383
Kanokupolu	304
Ha'atafu	213
<b>TOTAL</b>	<b>2,232</b>

## Technical Team ready to roll

*"..Stakeholders participate for technical support.."*

The first meeting of the Tonga PACC Technical Team was carried on the 3rd of March at the Ministry of Environment and Climate Change conference room (MECC). The PACC Coordinator Mr. Paula Taufa, call up for member's from key stakeholder's to assisting the Tonga PACC PMU in providing advice on technical issues related to the PACC project. Since the PACC project is focusing on water in Hihifo district, quite a number of water experts have been invited to be part of the Technical Team.



PACC Technical Team first meeting

# World Environment Day

## “Many Species”

....PACC project promote adaptation and resilience to climate change.....



One Tonga...! One People

For this year Environment Week, PACC PMU participate on the Open day, as part of promoting adaptation to climate change issues. As for this year 2010, The biodiversity theme “ Many Species”, “Me’amo’ui kehekehe... kaha’u ‘o Tonga” Environment week begin on the 1st June to the 4th, with different programs include cleaning up of the Nuku’alofa area, school awareness program, re-planting of mangrove and the highlight for the week was the Open Day. Government ministry participate for the Open day include Ministry of Land and Survey, Ministry of Forestry, Fisheries and Food, JICA and the four major division on the Ministry of Environment.

PACC project promote on the Opening day the important of adaptation and resilience to climate change issues. Officers from PACC PMU provide information for students and for public, the major role of PACC project that deal with the community due to climate change. Reports and brochure were also given out for public as for more details on PACC activities and update



The MECC staff at the Vuna Road, during the cleaning up day



The Official Opening of the PACC Review Meeting

## Tonga attended Regional PACC Multipartite Review Meeting— Apia, Samoa

PACC Project in the region, commemorated its first year anniversary with a review with all stakeholders to reflect upon challenges faced and successful stories of the initial year of the five year PACC project. The multipartite review was held in Apia, Samoa on the 10<sup>th</sup>-14<sup>th</sup> April 2010. It brought together PACC Project Coordinators from the 13 Pacific Island countries and territories; Cook Islands, Federated States of Micronesia, Fiji, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu along with development partners and stakeholders. The meeting was officially opened by the Director of SPREP, Mr. David Sheppard . Tonga PACC project was represented by Mr. Paula. F. Taufu the National Coordinator and also with the Project Officer Mr. Saia Kami. Tonga is based on Water sector as to build resilience to Climate Change impact

## Visit from SPREP

Mr. Taito Nakalevu and Mr. Fine Lao represent SPREP the PACC implementing partner. This official visit from SPREP and PACC regional management, include the Tonga PACC Inception workshop and also the briefing of the PACC PMU here in Tonga.

Mr. ‘Asipeli Palaki (Director MECC) welcoming this two representative followed by a visit to the Minister Hon. Lord Ma’afu as to present PACC implementing here in Tonga.

During Mr. Nakalevu were here in Tonga, he also able to visit the PACC



Hon. Minister welcoming the representative from

Pilot site at the Hihifo district as from Fo’ui to Ha’atafu. Training were also conduct by Mr. Nakalevu based for the PACC PMU here in Tonga.

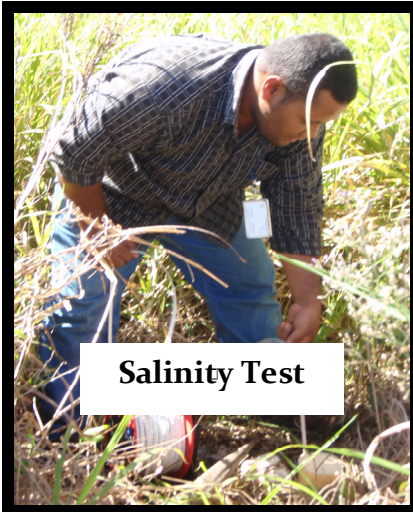
This training include Annual work plan, activities, output & outcome and also mainstreaming



Site's monitoring



GIS data collection



Salinity Test

## Hihifo Ground water

### Monitoring

The survey for Hihifo Underground water is currently conducted by technical Officers and member's from Tonga Geologist as to identify the level of salinity and for bacteria and pollution test also. This survey include field assement report's on climate change impact's on water sites.

PMU would like to acknowledge all Town Officers on the Hihifo district for there cooperation with our survey team. Further survey will be taking on the pilot site as from Fo'ui to Ha'atafu

## GIS, GPS training

Climate Change project's working together to achieve adaptation

In August 2nd to the 18th, SLM and GTZ project host a GIS and GPS training for Officer's on Climate Change project's as to further the knowledge on GIS and GPS. Mr. Kami PACC Project Officer participate as to familiarize adaptation and climate change impact on water and land. This training include field observation on climate change impact on pilot site. Different Key stakeholders participate on the training



GPS Training



Field training on pilot site mapping

## Strengthening the Communication for Adaptation

Tonga PACC project are now progressing on developing its first website link with the Ministry of Environment and Climate Change as to mark the implementation of Adaptation in Tonga.

The procurement of the server, Hardware and installation of Editing software has already done while the design of the website will be ready by the end of this month.

According to the PACC Coordinator Mr. Paula Taufu, that this website will strengthen the communication through the region and also benefit for the Whole Ministry.



New Apple Mac Server for PACC and MECC website

## DID YOU KNOW!

### Amazing percentages

Chickens are 65% water

Jellyfish are 95% water

Humans are 65% water

### WATER IN YOUR BODY

Your brain is.....75%

Your skin.....70%

Your teeth.....10%

# Helping hands

....Malo e tokoni..



Trace

PACC PMU has work together with three volunteers from the AustAid for the implementing of PACC project in the Kingdom. Since PACC project establish in the Ministry these volunteers help a lot in providing technical, environmental and legal advice for the PMU.

In June Sarah and Trace left the Kingdom, and the PMU has only one extra help from the last AustAid volunteers to leave as for the last week of this month.

The PACC Coordinator and the rest of the PACC Officers would like to thanks Kathy Zischka, Trace White and Sarah Burrows for the contribution for the



Kathy

# Upcoming Events & Activities

## • Launching Website

PACC PMU are currently progressing on the design and set up of website under the Ministry of Environment and Climate Change. This website will be host under the Ministry of Environment, and it's target to be launching before the end of this Quarter. PACC project is funding this website as to promote and building resilience to Climate Change and Regional sharing of Information.

## • PACC Billboard

PACC PMU will put up it's first billboard for the Hihifo district by the end of this Month. This billboard is to mark the implementing of PACC project on Hihifo District

## Technical Activities

## • Underground water survey

Water monitoring on the Hihifo water site is currently taken as by the end of this Quarter the report submit for the PMU. This survey include water salinity and bacteria test to classified different type of pollution on Hihifo water.

## • Community Awareness

The PACC PMU is preparing for the second community consultation as it will be based on awareness programs for the community. This will include radio and TV awareness and also community workshop. This activities will be based on the Hihifo pilot site

## PACC PROJECT IS FUNDED by

Pacific Adaptation to Climate Change Project

Implementing Partners SPREP

Global Environment Facility

United Nation Development Program

Our Partners for the future

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