

Capacity Building for the Development of Adaptation Measures in Pacific Island Countries [CBDAMPIC] Project



A Climate Change Adaptation Project executed in the Pacific by SPREP and funded by the Government of Canada



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FINAL REPORT:

Capacity Building for the Development of Adaptation Measures in Pacific Island Countries Project

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ACRONYMS

ADB – Asian Development Bank

AIACC - Integrated Methods and Models for Assessing Coastal Vulnerability and Adaptation to Climate Change

CBDAMPIC - Capacity Building for the Development of Adaptation Measures in Pacific Islands Countries

CCU – Climate Change Unit

CIDA - Canadian International Development Assistance (Asia-Pacific Bureau)

CLIMAP – Climate Adaptation Project

COP – Conference of the Parties

CV&A – Community Vulnerability Assessment and Action

DESP – Department of Economic and Sector Planning

EIA – Environmental Impact Assessment

ESD – Environment Significant Declaration

GCMs – General Circulation Models

GEF – Global Environment Facility

GHG – Green House Gas

IPCC – International Panel on Climate Change

LDC – Least Developed Country

NAPA – National Adaptation Programme of Action

NDMO – National Disaster Management Office

NGO – Non-Governmental Organisation

PCRC – Pacific Concerns Resource Centre

PICs – Pacific Island Countries

PICCAP – Pacific Islands Climate Change Assistance Project

PWD – Public Works Department

PIP – Project Implementation Plan

PIREP – Pacific Islands Renewable Energy Project

RCMs – Regional Circulation Models

SCCF – Special Climate Change Fund

SIDs – Small Island Developing States

SOPAC – South Pacific Applied Geosciences Commission

SPREP – Secretariat of the Pacific Regional Environment Programme

TAG – Technical Advisory Group

UNDP – United Nations Development Programme

UNFCCC – United Nations Framework Convention on Climate Change

USP – University of the South Pacific

VBTC – Vanuatu Broadcasting and Television Corporation

VMS – Vanuatu Meteorological Service

WMO – World Meteorological Organisation

WWF – The Global Conservation Organisation (South Pacific Programme)

EXECUTIVE SUMMARY

By all counts, the Capacity Building for the Development of Adaptation Measures in Pacific Island Countries (CBDAMPIC) project has successfully achieved its main purpose, which is to increase the resilience of 16 communities in four Pacific Island countries to the adverse effects of climate change. The project has indirectly and directly contributed to the direction that adaptation is now taking in the United Nations Framework Convention on Climate Change (UNFCCC) negotiations and funding through the Global Environment Facility (GEF). It has also contributed to the increase in the awareness level of policy makers in other Pacific Island governments on the need to integrate climate change into mainstream government planning and development.

The project has also developed and successfully demonstrated a framework of action that fuses the top-down and bottom-up approach to climate change vulnerability and adaptation assessments and action. This is an important development globally as some adaptation projects only promote either of the approaches for very good reasons. From such approaches, new models of action at the community level emerge that are specifically useful to particular cultural and geographical situations in the Pacific region or globally.

The CBDAMPIC project exhibits several innovative ways of project management building on the foundation that Pacific Islands Climate Change Assistance Programme (PICCAP) put in place. Although it is regionally executed, the bulk of implementation is carried out at the national level. Resources are made available to the national governments for their management and direct implementation of planned activities. The regional coordinating mechanism of the Secretariat of the Pacific Regional Environment Programme (SPREP) is therefore focused more on backstopping countries on technical capacity building, financial administration and other support needed from time to time. This is a slight departure from other regional projects where most project activities are carried out at the regional level and mostly by consultants.

In the Development field, this project is notable for its substantive consideration of (longer-term) climate change risks into development and resource management planning, and in efforts to improve adaptive capacities and enhance livelihoods. This project represents an excellent example of this integration. This project is also distinctive in the field of Climate Change impacts and adaptation, particularly in its:

- recognition of a wide range of risks associated with climate change, not only those derived from climate change models/scenarios;
- focus on community-based (and hence community-relevant) vulnerability assessment and community-based ("bottom-up") adaptation options;
- real community engagement in the processes of improving capacities to deal with climate-related risks; and
- incorporating adaptation to climate-change risks and related vulnerabilities into existing institutional and decision-making processes ("mainstreaming"), at both the community level and the national planning level.

At the community level the pilot projects have contributed to building the resilience of communities to climate related risks, improve livelihoods and alleviating poverty, which is a key priority for national governments.

Given the success of the pilots in the CBDMAPIC project, it is recommended to continue the approach on a more widespread scale, building on the expertise that has been gained at the national level, and using the capacity that was build regionally in other Pacific Island Countries and Territories.

1.0 SCOPE AND STRUCTURE

This is the end of project report for the CBDAMPIC project covering the period January 2002 to June 2006. It provides an overall discussion of the framework, methodology, outputs and outcomes achieved. The report also gives an account of the main constraints encountered by the Project and lessons learnt that would be useful to future adaptation programmes in the region. The report also suggests that the experience gained by the Project should be extended to other Pacific Island Countries and Territories.

2.0 GLOBAL AND REGIONAL CONTEXT

Climate change does not only affect a government but its people and their physical environment. It has now emerged as one of the most urgent, critical and contemporary societal issues of global concern. Most countries are already experiencing disruptive changes consistent with many of the anticipated consequences of global climate change, including extensive coastal erosion, droughts, coral bleaching, more widespread and frequent occurrence of mosquito-borne diseases, and higher sea levels making some soils too saline for cultivation of traditional crops. Increase in droughts, changes in rainfall patterns and sea-level, flash floods and severe tropical cyclones have already contributed to the displacement of people, loss of livelihoods, increase in poverty and devastation to economies of developing countries that are heavily dependent on natural resources. It adds on to the complex challenges that are already facing the world today particularly the Small Island Developing States. Issues such as traditional land and sea management systems and ownership, complex population patterns, the fragility of coastal ecosystems, limited natural resource bases, heavy reliance on foreign aid and geographic isolation are issues already plaguing the Pacific Islands. Climate change will only compound these existing problems.

Recognising that climate change is a major environmental challenge, Governments of Pacific Island countries have called for mitigation in the international and regional foras and also the need for adaptation. In a joint statement prepared for the 6th Conference of the Parties (COP), Pacific Island Governments urged the international community to consider the need for adaptation financing to assist Pacific Island Countries that are already facing the adverse effects of climate change. At present, most funds are channelled towards impacts studies, climate change modelling and capacity building in the area of risk management. The CBDAMPIC project is one of the 'first' projects to support adaptation implementation at the grassroots level.

In 2005, the Pacific Islands Forum Leaders Meeting and the SPREP Council Meeting endorsed the Pacific Islands Framework for Action on Climate Change (2006-2015) as the guiding document for climate change in the region. The PICs identified adaptation to climate change as the top priority that needs urgent action. Reducing the risks associated with the adverse effects of extreme weather and climate variability is a fundamental developmental challenge faced by PICs. This must be urgently addressed in order to contribute to improving livelihoods, economic well-being and health, as well as maintaining biodiversity and culture.

3.0 PROJECT BACKGROUND

CBDAMPIC is a 'first' climate change project in the Pacific region to pilot adaptation implementation. Decision 11 from the first Conference of the Parties (COP 1) laid out three stages of adaptation as follows: Stage I: Planning, which includes studies of possible impacts of climate change, to identify particularly vulnerable countries or regions and policy options for adaptation and appropriate capacity-building; Stage II: Measures, including further capacity-building, which may be taken to prepare for adaptation, as envisaged by Article 4.1(e); Stage III: Measures to facilitate adequate adaptation, including insurance, and other adaptation measures as envisaged by Article 4.1(b) and Article 4.4. Most climate change projects implemented in the Pacific region fitted into the Stages I and II category whilst the CBDAMPIC project is the first to proceed to Stage III.

The Canadian International Development Assistance (CIDA)-funded CBDAMPIC project is a three-year project (January 2002 to March 2005) that involved four countries: Cook Islands, Fiji, Samoa and Vanuatu. This is Canada's response to the call by Pacific Island States for adaptation assistance. The CBDAMPIC project aims to improve the sustainable livelihood of Pacific Island people by increasing their adaptive capacity to deal with climate change risks. The Canadian \$2.2 million dollar initiative of the CIDA is coordinated and executed by SPREP.

3.1 Institutional set-up for the Project at SPREP and in-country

The Regional Project Manager for the CBDAMPIC project commenced work at SPREP in January 2002. Some significant groundwork had been made by the predecessor that included the signing of the Contribution Agreement between SPREP and CIDA and the development of a draft Project Implementation Plan (PIP).

Institutional setting up was a priority activity, which included the signing of MoU's between SPREP and the four pilot countries, recruitment of national project coordinators, setting up of bank accounts (if needed) and formulation of national climate change country teams. The project did not wish to stray much from past institutional set-ups that were already in place at the country level by previous projects notably the SPREP/PICCAP project but worked to enhance country specific situations.

3.2 Changing direction mid-stream

The Regional Project Coordinator (Taito Nakalevu) understood very early that the draft PIP document that he had been handed with when joining the Climate Change Section was seriously wanting. Earlier configurations of the PIP had major budgetary commitments going to "integrated modelling" and "vulnerability and adaptation assessment methodology development". Upon consultations with countries, it was established that most were not comfortable on the project having to spend more time and funding on integrated modelling. Through PICCAP, several prototype climate models were developed for countries e.g. FIJICLIM, SAMOACLIM, and VANUATUCLIM etc. Most of these national climate models are largely unused due to lack of expertise as well as the inadequacy of the models to do anything else apart from what had been programmed.

The entire PIP was recasted putting the identification of vulnerability to adaptation back onto the community. CIDA wishing to validate the changes made to the PIP requested SPREP to hold-off on any implementation until the validation team headed by Professor Barry Smit (University of Queensland) carried out their visits to the pilot sites. This was done in late 2002 and in the words of Professor Barry Smit; “the new project design is innovative in its linking of climate change risks with national planning and community-based capacity building. The value of the project is well recognized in the region, and is strongly endorsed by the national governments”.

4.0 FRAMEWORK AND APPROACH

The CBDAMPIC project had set-out to employ a two tiered “top-down” and “bottom-up” “learning-by-doing” approach to adaptation to climate change. The project promotes climate change adaptation that empowers the local populace to start addressing the adverse effects of climate change using the participatory approach. While the global and regional community may provide solutions to common issues, local solutions should be the basis for longer-term adaptation to climate change.

4.1 Vulnerability driven/bottom-up approach

A conscious effort was made to develop a “bottom-up” “learning-by-doing” vulnerability assessment approach that suites the CBDAMPIC project’s overall vision and purpose. This approach is quite different from the scenario driven top-down approach, as the starting point is not the Global Climate Models (GCMs) and Regional Climate Models (RCMs) but the community. Traditionally in the climate change circle, climate change impact studies begin with projections of future greenhouse gas emissions, from which climate change scenarios are specified (GCMs and RCMs), biophysical impacts are then modelled, selected socio-economic impacts are estimated, and adaptive options to moderate detrimental impacts are assumed. Any residual impacts are interpreted as defining the vulnerability of the system. This approach has been widely used to estimate potential climate change impacts. However, it does not analyse actual adaptation processes and is not structured to contribute to capacity building. This has been the norm for many years and to deviate from this approach requires sound rationalisation and a good grasp of regional and national institutional capacities in the Pacific.

An important consideration that had obligated the CBDAMPIC project to take the vulnerability driven/bottom-up approach is the fact that nearly all Pacific Island countries do not have the capacity to run GCMs and RCMs. If the climate change impact studies approach is to be used, then Environment and Meteorology Departments will need to build support infrastructures, human resource capacity as well as partnership to access GCM and RCM technologies. In such a situation, government and regional institutions would continue to be dependent on international centres that have these technologies and also pay huge sums of money to access them. The end result would have been very little progress taking place at the community level for the CBDAMPIC project. This would have been an unacceptable outcome to many stakeholders given the funding support from the Government of Canada.

4.2 Project Execution and Management

The CBDAMPIC project exhibits several innovative ways of project execution and management building on the foundation that Pacific Islands Climate Change Assistance Project (PICCAP) had put in place. Although it is regionally executed, the bulk of implementation is carried out at the national level. Resources are made available to the national governments for their management and direct implementation of planned activities. The regional coordinating mechanism of SPREP is therefore directed more into backstopping to countries on technical capacity building, financial administration and other support needed from time to time. This is a slight departure from other regional projects where most project activities are carried out at the regional level and mostly by consultants.

Another innovative departure was the agreement by CIDA for SPREP to directly execute the CBDAMPIC project in the Pacific. This is not usually the case as CIDA usually appoints a Canadian company to execute its international development projects. In the CBDAMPIC project, SPREP was the executing agency. This is an important development and it augurs well for SPREP's into the future as an executing agency for donor-funded projects.

4.3 Key Stakeholders

The CBDAMPIC project has several key stakeholders that are pertinent to the overall management and delivery of project outcomes. These are the Climate Change Country Teams, Core Group, Country-Coordinators, Departments of Environments and Meteorology, and the Pilot Communities. A brief explanation on the different stakeholders is provided below.

4.3.1 Climate Change Country Teams

The Country Teams play an important role in planning and implementing activities under the project. The Country Teams, are an inter-agency group responsible for advising on all climate change issues, through the Environment department. The Teams bring considerable experience, expertise as well as institutional support to the forum. The CBDAMPIC project carried out an appraisal of the country teams to determine whether additional membership was needed to ensure delivery of project outcomes and outputs. As a result, several improvements were recommended. In the case of Samoa, community representatives (*Mulinuu* – village mayor) were invited to be part of the country team. In Fiji, a new invitation was made to government institutions, regional institutions and NGOs such as The Global Conservation Organisation-South Pacific Region (WWF) and Pacific Concerns Resource Centre (PCRC) were invited to be part of the national country team. In the Cook Islands, a second country team was formed in the island of Aitutaki to take on the responsibility of steering the CBDAMPIC project activities in Aitutaki. The Cook Islands National Climate Change Country Team was also operational but their work was limited to providing advice to the Aitutaki Climate Change Country Team.

4.3.2 Core Group

As part of the institutional set-up in which the CBDAMPIC project operated, a ‘Core Group’ of experts identified from government ministries and Non-Governmental Organisations (NGOs) were trained to play a more active role in the pilot activities. The concept was introduced after an institutional analysis indicated that high-level policy makers were not in a position to carry out technical and operational fieldwork. This introduction proved very successful for the Project, as the Core Team were instrumental in the assessments as well as the implementation of adaptation interventions at the pilot sites. Currently the Core Group concept (as well as existing members) has been inherited by other climate change programmes e.g. NAPA and the Second National Communication. Inserted below is a picture of the Aitutaki Core CV&A Group that spearheaded fieldwork in Aitutaki (Plate 1.0).

Plate 1.0 Aitutaki Core CV&A Team



4.3.3 Country Co-ordinators

The CBDAMPIC project is being coordinated at national level by Co-ordinators and they are critical to the success of the project. The Co-ordinators have considerable expertise (relating to climate change) but some needed additional training on vulnerability and adaptation assessments using the participatory bottom-up approach, policy development and community engagement. The regional Project Manager provided this support in terms of training and actual fieldwork assistance where and when needed.

The names of National Project Coordinators per country are as follows:

- Cook Islands – Mr. Bobby Bishop and assisted by Technical Advisor Ms Pasha Carruthers;
- Fiji – Ms Iva Lewenikuro resigned and replaced by Ms Ilisapeci Neitoga;
- Samoa – Ms Violet Wulf and assisted by Anne Rasmussen; and
- Vanuatu – Mr. Nelson Rarua resigned and replaced by Mr. Brian Phillips.

4.3.4 Support and set up in Environment/Meteorology Departments

Coordination of the CBDAMPIC project is largely through the Environment Departments as they are the designated SPREP and climate change focal points at the national level. Vanuatu is slightly different as they are physically located at the Meteorology Department with daily oversight of the project carried out by the Director of Meteorology. Nevertheless, the Director of Environment is still heavily involved with the CBDAMPIC project as chairperson of the Vanuatu National Advisory Council on Climate Change.

Various set-ups have their merits and in the case of the CBDAMPIC project in Vanuatu, the Coordinator (Mr. Brian Phillips), has had a lot of support from the Meteorology Department staff. Commitment of time and effort by the National Co-ordinators to the project invariably requires the support of their Directors, including a common vision of the project and a common understanding of roles and responsibilities.

4.3.5 Pilot Communities

In choosing pilot communities for the CBDAMPIC Project, several key issues were considered. One of which was to consider all past assessments, grey literature, and consultations that have been carried out by previous climate change programmes. A classical example is the work carried out by the Pacific Island countries (PICs) under the PICCAP. Other studies of importance and relevance included; the World Bank funded Coastal Vulnerability Mapping in Samoa and the World Bank funded pilot studies in Fiji and Kiribati on coastal vulnerability¹. This is to ensure continuity in activities and capacity that is being built at the national level, and above all, not to duplicate efforts. The Project also carried out an extensive consultation at the institutional and community level and as a result of the processes above, the following countries and communities were chosen as pilot sites:

- Cook Islands – Eight villages in the Island of Aitutaki;
- Fiji - Tilivalevu, Bavu and Volivoli;
- Samoa – Lano and Saolufata; and
- Vanuatu – Panita, Luli and Tegua

5.0 PROJECT OUTCOMES AND OUTPUTS

The purpose of the CBDAMPIC project is to develop and implement a capacity-building programme that will increase four Pacific Island countries institutions and communities' ability to minimise the adverse effects of climate change. It endeavoured to achieve these through two main outcomes and five main outputs. The two main outcomes are:

- i) Climate change vulnerabilities and risks are mainstreamed into national planning and sectoral planning and budgeting processes; and
- ii) Communities' adaptive capacity to climate change related risks and vulnerabilities increased.

¹ Publication is called *Cities and Storms* (2002).

The five main outputs are:

- i) Increased awareness by policy and decision makers on climate change risks for their people's livelihoods and economic sectors and the adaptation options that could be put in place at national and community level to increase adaptive capacity;
- ii) Senior government policy makers committed to integrate and mainstream climate change adaptation into national and sectoral policies and a process is in place to incorporate climate change risk management into national planning;
- iii) Increased awareness by communities of the vulnerabilities associated with climate change and the adaptation options available (traditional and contemporary);
- iv) Pilot projects implemented in communities to reduce their vulnerabilities to climate change related risks; and
- v) Regional linkages developed and maintained that will ensure mutual advocacy platforms in the international arena and joint activities carried out to reduce vulnerabilities of Caribbean and Pacific regions to climate related risks.

Outputs one and two were developed specifically to address outcome one and outputs three and four addressed project outcome two. Output five is a unique one and it contributes to both outcomes. In the next several sections of this report, the project achievements based on the five main outputs will be reported on a country-by-country basis.

5.1 Output one: Increased Awareness of Decision Makers

Increased awareness by policy and decision makers on climate change risks for their people's livelihoods and economic sectors and the adaptation options that could be put in place at national and community level to increase adaptive capacity.

- *Indicator 1.1: Number of senior government officials from key planning/economic ministries attending CBDAMPIC seminars;*
- *Indicator 1.2: Levels of awareness on climate change by senior government officials and policy makers increased relative to pre-seminar level;*
- *Indicator 1.3: No. and quality of awareness materials produced for policy makers and resource managers; and*
- *Indicator 1.4: Number of climate change/adaptation policy and strategies developed.*

Summary

The awareness of climate change adaptation issues for policy makers, senior government officers, traditional leaders and the communities in the four CBDAMPIC pilot project countries' have increased markedly. This is due to the many coordinated and implemented institutional and community level capacity building programmes carried out in-country independently by the project or in collaboration with partners. Funding support from the project has also provided the opportunity for paperback awareness materials, posters, and videos to be developed that will be in use by the countries for many years to come.

Provided in some detail below are the outcomes of the various activities carried out under output one.

Cook Islands

A number of awareness materials and programmes have been developed for Aitutaki and the Cook Islands in general by the CBDAMPIC project. Television programmes, climate change diary for schools, traditional song competitions featuring climate change had been part of the awareness programmes. It has increased the awareness level of the general populace and the Island Councillors who are the main decision makers for Aitutaki.

Apart from material development, the CBDAMPIC Coordinator Mr. Bobby Bishop, also designated a week annually from 2002-2005 for climate change awareness campaigns. This is carried out to better inform decision makers and resource managers in Aitutaki on the need to be cognisant of climate change issues and what needs to be done now rather than later. The awareness campaign consisted of briefing sessions with the Aitutaki Island Council, Island Secretary, television interviews and newspaper articles in the Cook Islands dailies. These campaigns also target hotel owners, tour operators, small-time business owners' and youths on the need to protect Aitutaki's scarce resources from the adverse effects of climate change.

Several CBDAMPIC presentations were also made to the Cook Islands Theological College, Climate Adaptation Project (CLIMAP) policy makers and technical workshops, and the AusAID Sea Level Monitoring Project review. A wide variety of senior government officials were present during these presentations and in one of the sessions, the Deputy Prime Minister and Minister for Environment was also present. As a result, the strategic planning programme for Cook Islands 2005-2010 has incorporated climate change as part of the risks that needs careful analysis and proactive action.

Fiji

In Fiji, assessment on the awareness level of policy makers by the CBDAMPIC project has indicated a marked improvement in the climate change and adaptation knowledge of senior government officers collaborating closely with the CBDAMPIC project. The senior officers referred too here are representatives of mainstream government ministries whose capacity has been built by the project through seminars, reviews of community vulnerability and adaptation assessment reports and the development of the climate change policy. Awareness materials for policy makers have been developed by SPREP and Fiji is complimenting that with a climate change awareness kit for policy makers. The kit is already developed and in use in Fiji.

Samoa

The CBDAMPIC project has been very active in developing climate change based awareness programmes for the general public, and the two pilot communities Saoluafata and Lano. Awareness on climate change has been in the airwaves, newspapers and a day in the calendar year of Samoa is dedicated to climate change awareness. The Samoa CBDAMPIC project

has also been very innovative in the way it involves pilot communities in the awareness programmes over the years. Saoluaafata and Lano communities do perform songs/dances and dramas illustrating their understanding of climate change especially their vulnerability and adaptation needs. These events featured on Samoa's Government Radio Station (2AP) and Television Station prior to and after the climate change day. Newspapers do cover the event and also opinion columns are available in newspapers for general discussion. Both Lano and Saoluaafata community members showed a lot of understanding of climate change issues and what they need to do to adapt.

Cabinet ministers and heads of ministries attend this awareness day and the CBDAMPIC project activities feature prominently in this national event. As a result, the awareness of the general public has improved markedly and testimony to this is the increase in exchanges in the Letters to the Editor for the Samoa Observer on issues related to climate change by the public. Some effort has also been channelled towards improving the awareness level of religious leaders at community level. Church leaders are very important stakeholders in the community and recently, Samoa hosted the World Council of Churches conference on climate change which was attended by CBDAMPIC staff in Samoa and SPREP.

A documentary on the adverse impacts of climate change was jointly developed from funding provided by the CBDAMPIC and NAPA project. The documentary produced in the Samoan language focused on the CBDAMPIC pilot project sites (Lano and Saoluaafata). The documentary is now used as an awareness material and also aired on Television Samoa. A 'Poster Paper' was also developed and would be part of the Environment Departments awareness material well into the future. It is an important piece of work as it documents the CV&A process and results for Samoa.

Below is a list of CBDAMPIC publications for Samoa:

- 5000 Pamphlets for the CBDAMPIC project (English & Samoan)
- 2000 Pamphlets on impact of climate change in Samoa
- Poster papers- for CBDAMPIC project (include 4 poster for one set) (English & Samoan)
- Climate change documentary featuring the CBDAMPIC Project (English & Samoan) – co-finance with the Samoa NAPA Project
- Climate change documentary in DVDs (50)
- Community Vulnerability Assessment Report published and disseminated to the Ministerial level during National Climate change awareness day 2004.

Vanuatu

Awareness programmes in Vanuatu were carried out in a systematic and staged process. Target audience were grouped into five categories: i) politicians, ii) policy makers, iii) general public, iv) schools and v) rural communities. Awareness talks, programmes or workshops were always conducted with appropriate contextual adjustments in content, to meet the specific situations of the target groups, including simplicity and clarity for rural communities and schools. A survey conducted in early 2002 with communities on the main island of Efate

to trial awareness materials and information dissemination mediums found the use of a multimedia projector as the most effective way of information dissemination (64%). This was followed by radio and video (56%), drama (49%), posters (31%), leaflets/pamphlets (28%) and T-Shirts (15%).

Politicians, policy makers and the general public were targeted during the various national and provincial awareness programmes that have centred around national environmental and meteorological events (World Environment Day/Week, WMO Day/Week, National Disaster Week, Agriculture Trade Show) and numerous other national events. Having effectively delivered awareness presentations in the first few national events, the project coordinator, NACCC and the Core Team, have continuously been invited and requested to present on climate change and the work of the CBDAMPIC in workshops and national events organized by Government institutions, NGOS, Church and Youth Groups, Women's Groups and Schools.

The Vanuatu Broadcasting & Television Corporation (VBTC) also allocated one hour per week for the Vanuatu Environment Unit to be on air with environmental programmes, which included climate change issues. The work of the CBDAMPIC project was also aired regularly through the Environment Unit's radio programmes.

CBDAMPIC awareness programmes with schools continued throughout the project period. In total, 410 schools were covered with the projects education and awareness programmes/talks. Schools in Port Vila, the capital, benefited the most as they were involved annually in national environmental and meteorological awareness events and furthermore invited CBDAMPIC project personals annually to their schools to deliver climate change presentations. The CBDAMPIC project was also involved in annual national primary and secondary school teacher's workshops from 2002 – 2005. Project staff assisted teachers develop climate change adaptation materials for the primary and secondary schools. In addition, there were climate change and adaptation information briefs developed by the CBDAMPIC project in light of confusion among students and the public between the processes involved in global warming and ozone layer depletion.

The CBDAMPIC project Coordinator has also taken on the role as secretariat of the NACCC. He has convened many sessions where members (Directors and Senior Gov. officers) have deliberated on climate change and adaptation issues relating to CBDAMPIC and other climate change activities at the national level. The CBDAMPIC project has also conducted meetings with local provincial authorities, which have pilot sites under their jurisdictions to brief them on climate change adaptation as well as project issues.

5.2 Output two: Mainstreaming

Senior government policy makers committed to integrate and mainstream climate change adaptation into national and sectoral policies and a process is in place to incorporate climate change risk management into national planning.

Indicator 1: Cabinet level CBDAMPIC Memorandum of Understanding

Indicator 2: A process to incorporate adaptation into development processes in place by end of project.

Indicator 3: Climate change adaptation incorporated into Environmental Impact Assessment Processes.

Summary

Several tangible outcomes have been achieved at the regional and national level on this output. From the outset, the countries welcomed CBDAMPIC project and they demonstrated this by signing the SPREP and country Memorandum of Understanding (MoU) in the first six months of project implementation. From the regional level, a roadmap to mainstreaming at the national and community level was developed and agreed upon by all parties concerned in a formal gathering of project countries and stakeholders.

Countries have committed to mainstreaming climate change adaptation issues into the EIA documents, regional and international plans especially the World Summit on Sustainable Development (WSSD) documents, plans and policies. Line government ministries apart from Environment Departments had also provided a lot of support for the project hence the timely implementation schedule of project activities.

Memorandum of Understanding

The MoU between SPREP and the four pilot countries (Cook Islands, Fiji, Samoa and Vanuatu) were secured in the first 6 months of project implementation. This is an important achievement and it demonstrated government's commitment to the implementation of agreed project activities at the national level.

A Process to Incorporate Adaptation into the Development Plans of Governments – an approach for CBDAMPIC

A mainstreaming approach was developed for the CBDAMPIC project and it involved a two-pronged modus operandi; i) a top-down institutional mainstreaming and ii) bottom-up community level mainstreaming.

Top-down institutional mainstreaming involves strengthening the legislative, policy and administrative capacity of government institutions to carry out climate change adaptation programmes. Bottom-up mainstreaming involves empowering the people to better address the risks that they are facing from climate change.

In practice, it involves several activities. The top-down institutional mainstreaming activities included (but not restricted to):

- Climate change policy development;
- Climate change adaptation incorporated into national and sectoral development policies and plans (WSSD, Strategic Development Plans);
- Climate change adaptation incorporated into Environmental Impact Assessments (EIA);
- Awareness level of policy makers and relevant stakeholders improved; and
- Capacity on project management, participatory approaches, awareness programs developed.

Bottom-up community level mainstreaming:

At the community level, the CBDAMPIC project advocated three entry points to community mainstreaming. The three entry points are as follows; i) that the CV&A guideline currently used by the National Community Vulnerability and Adaptation Assessment Team (National CV&A Teams) be endorsed as one of the main assessment tools used by government to carry out community vulnerability and adaptation assessments; the second is to institutionalise a Multi-Sectoral CV&A Assessment Team that will work at community level to carry out vulnerability and adaptation assessments and develop adaptation recommendations that would be mainstreamed into the planning and budgeting machinery of government; and the third is for communities to use existing channels that are available within government to route their community adaptation recommendations for funding assistance and implementation.

Cook Islands

Increase in awareness at the national level by policy makers have been demonstrated in several forums of discussions. In the National Development Forum for the Cook Islands was held in Rarotonga (November 2003) the awareness levels of senior government officials, NGOs and community representatives who participated have improved greatly. The participants of the National Development Forum in their visioning exercise articulated the need to consider climate change in government's long-term planning. The continued assistance of the CBDAMPIC project team have assisted government by way of providing tangible and practical suggestions of activities that could be carried out at the national and community level on climate change adaptation.

The National Development Forum had also expressed concern on future impacts of climate change, however, there seems to be some reservation on the part of government to start incorporating adaptation, as part of it's long term planning due to the uncertainties surrounding cost. Presentations made by the Cook Island's Ministry of Finance & Economic Management officials have taken into consideration projected changes in climate and this is an important effort towards mainstreaming. Other mainstreaming results are as follows:

Government support enhanced

The capacity building programme targeted at the national government Water Works and Aitutaki Water works have resulted in the institution supporting the CBDAMPIC project in its pilot project implementation. The Water Works have also created a database for water related activities in Aitutaki that will be of use well into the future. This is a significant collaborative effort that has significantly improved awareness level, and resulted in tangible outcomes achieved.

Incorporating climate change adaptation issues into development plans and policies

Working in collaboration with senior officials and consultants from the Prime Ministers Office, the CBDAMPIC staffs have been able to incorporate climate change adaptation issues into the National Development Plan and the 15-year strategy for the Cook Islands.

The CBDAMPIC project also assisted in the review and changes made to the Environment Significance Declaration (ESD) form. This is an output of the Compliance Officer Antoine Nia's participation at the CBDAMPIC EIA and Climate Change Guidelines workshop in the Caribbean.

The awareness raising activities at the national level has raised public knowledge and awareness of climate change issues. There is now an increased public concern over foreshore development due to coastal erosion. Communities are now citing potential detrimental climate change and sea level rise effects as a component of their opposition to certain projects vying for development approval from the Environment Service. This is an indication of increasing awareness level of the general public on climate change and adaptation issues.

In collaboration with the CLIMAP project, the EIA and Building Codes of the Ministry of Works were reviewed to see how well it resisted strong winds, a potential aspect of future change in climate variability. It was found that the building code is likely to be adequate for the lifespan of 50-year structures however enforcement and implementation of the regulations may be an issue.

Fiji

Mainstreaming climate change into Fiji's draft Sustainable Development Bill

The Fiji CBDAMPIC project Country Team made submissions to the Environment Department with relation to climate change adaptation issues of importance to Fiji. This was submitted by the chair of the Country Team to the Director of Environment for incorporation into Fiji's draft Sustainable Development Bill.

Incorporating climate change adaptation concerns into EIA guidelines

Ms Premila Kumar a Senior Environment Officer, represented Fiji in the workshop organised by the CBDAMPIC project in the Caribbean. Upon return, she instigated several process changes to the Terms of Reference for EIA that resulted in the incorporation of climate change concerns in the EIA process. This includes the scoping stage where a TOR would be developed for an EIA study. The Terms of Reference to be developed for projects that are proposed for highly vulnerable environments such as coastal zones, flood plains, wetlands and sloping lands would specifically include detail analysis of how the development would be affected by climate change and vice versa.

Climate Change Policy

A climate change policy was developed in consultation with several government departments and non-government organisations. The policy has been finalised and will be presented to the cabinet sub-committee by the Director of Environment. There was a delayed tactic put in place by the Department of Environment because they had the Environment Bill with Government yet to be passed. Cabinet in late 2005 has passed the Environment Bill and this

should pave the way for Fiji's climate change policy to be forwarded to the Cabinet sub-committee for their deliberation.

The policy statements below have been agreed to by majority of government departments and NGOs involved in the process.

The Government of Fiji through the Environment Department and other Government Ministries, Civil Society and the Private Sector:

1. is committed to mainstreaming climate change issues in all its environmental, social, economic, planning structures and processes for sustainable development at the national and community level
2. is committed to improve and strengthen the Fiji Meteorological Service, PWD Hydrology Division and associated parties collection, analysis and use of data to monitor climate and sea level change patterns. The Fiji Government needs to protect all historical data archives and current monitoring sites especially those that have been in existence more than 30 years and other stations in key locations;
3. will promote understanding of climate change and raise awareness of the impacts, national vulnerability and possible adaptation measures.
4. will proactively identify the vulnerable areas and assets at risk, identification would be in the order of impacts of climate change and adaptation options developed that are appropriate, cost effective and culturally sensitive to reduce vulnerabilities.
5. will actively participate in international and regional forums of negotiations on matters pertaining to climate and climate change and other related concerns

Samoa

Climate Change Policy

Samoa's climate change policy is with the Cabinet Development Committee (CDC) for further consultation and comments before it is submitted to Cabinet. The draft climate change policy reiterates the need for Samoa to seriously take into consideration climate change issues and the necessity to incorporate climate change issues and concerns into government programmes, plans and policies. The Environment Department Chief Executive Office and members of the Samoa Climate Change Country Team are spearheading this task and it will continue after the lifetime of the CBDAMPIC project until cabinet approval.

Planning and Urban Management Agency (PUMA)

The incorporation of climate change adaptation into other government programmes has happened and it will continue after the life of the project. The CBDAMPIC project has

worked in partnership with PUMA senior officers to mainstream climate change activities into the Agencies Business Plan for 2004 and 2005. It is now part of the mainstream programme of the Planning and Urban Management Agency (PUMA).

Vanuatu

Government support enhanced

Vanuatu government departments are very supportive of the CBDAMPIC project. This is an outcome of the awareness programmes carried out by the project. The CBDAMPIC project carried out seminars on climate change adaptation with most Directors of Government Departments and NGOs. The seminars were very informative and generated a lot of constructive remarks, suggestions and recommendations for the improvement of the project in Vanuatu. The Directors provided directions as to how the community CV&A projects should pan out with key ministries' support. General suggestions and recommendations were also made for the CV&A report and the proposals.

Climate change policy

The Climate Change Policy and Implementation Strategy need to be finalized within the NACCC for submission to the Council of Ministers for endorsement. The process for endorsement has been delayed following NACCC's recommendation to have the policy document and implementation strategy separate as they were initially developed as a single document. It was also NACCC's desire to see the climate change policy and strategy structured along the same lines as existing environmental policies and implementation strategies. This task is currently being undertaken by members of the NACCC and will continue after the lifetime of the CBDAMPIC project until cabinet approval.

Establishment of Vanuatu Meteorological Services' (VMS) Climate Change Unit

The VMS as per its commitment under the draft national climate change policy and implementation strategy has in December of 2005 formally established a Climate Change Unit (CCU) (see annex) within the Climate Section of the department. The change in structure was effected to reflect the growing scope of work within the sector of meteorology and the VMS. It also showed NACCC's commitment towards mainstreaming climate change at the national level. The CCU will ensure an element of sustainable financing of climate change activities beyond lifetime of projects. Current climate change activities for Vanuatu have always been project based and therefore cease to continue after project life spans. The new VMS structure has been endorsed by the Vanuatu Public Service Commission and has come into effect as of 1st January 2006. However, positions for the CCU will not be budgeted for until 2008.

Environmental Impact Assessment

The CBDAMPIC programme and the NACCC have also been instrumental in ensuring climate change considerations are incorporated into the Environmental Impact Assessment (EIA) process of the Environment Management and Conservation Legislation. Climate

change considerations are reflected specifically in the Preliminary Environment Assessment (PEA) phase of the EIA process, which determines whether or not a full EIA is warranted. Climate change is part of a checklist of questions that query the potential environmental impact on proposed development projects. The impetus for this work was catalysed by the link the CBDAMPIC project had with the Mainstreaming Adaptation to Climate Change Project in the Caribbean.

Government Development Project Screening Process

The Department of Economic & Sector Planning (DESP) of the Government is responsible for approving donor funded development projects in Vanuatu, a significant role in the socio-economic and sustainable development of the country. Through its membership in the NACCC and its involvement in the CBDAMPIC process, the DESP screening process now includes climate change considerations. All prospective development projects are now considered in light of their vulnerability to climate and sea level change.

5.3 Output three: Community Capacity Building

Increased awareness by communities of the vulnerabilities associated with climate change and the adaptation options available (traditional and contemporary).

Indicator 1: Knowledge level of communities on climate change adaptation increased.

Summary

The CBDAMPIC project has contributed significantly to the increase in awareness levels of climate change adaptation issues at the community level of the four pilot countries. Through such efforts of the project, pilot communities' confidence are gained and in-turn they have contributed their time and resources to accomplish significant project activities. Testimony to this is the relocation of a whole community in Tegua, Vanuatu to a new site and at higher elevation. The project had covered new grounds in its work particularly empowering people to mobilise their own resources which when complimented with project resources have resulted in major adaptation investments implemented. Community confidence has translated into enthusiastic participation.

Cook Islands

In collaboration with the AIACC project funded by the Global Environment Facility (GEF), a household survey was conducted in March 2004. Results indicate a significant increase in the Aitutaki population's level of awareness of climate change issues relative to the July-Aug 2003 village CV&A consultations. People actually understood the meaning of the term climate change that had been quite foreign before and they were able to describe concerns about impacts. This finding is also evident in the eight villages climate change adaptation committees' feedback to a letter sent out by the CBDAMPIC project staff on household selection criteria. Responses by the village adaptation committees reflected a very clear understanding of climate change and water resources issues and who needs urgent assistance the most.

Other results of capacity improvement at the community level are as follows:

- Assistance provided in terms of provision of climate change adaptation materials and other necessary web materials to Vaitau School teacher, Miss Eteta Pitomaki, who had taken on a climate change correspondence programme, have enabled her to complete the course in time. She had been of great assistance to the project in terms of general awareness support.
- Youth groups involved in the climate change awareness campaigns have been very helpful in the implementation of pilot programmes in the eight villages. General awareness at the village level have also moved the people to better plan for the use of their water resources to minimise salt-water intrusion into galleries.
- The CV&A Core Team for Aitutaki (mostly community members) had been of tremendous assistance to the CBDAMPIC project. Their effort had led to the successful implementation of the project in the eight villages of Aitutaki. The capacity they have gained as crucial partners to the project should be helpful to the general populace in Aitutaki well beyond project life time.

Fiji

This section describes the awareness programmes carried out at the pilot sites in Fiji and the materials developed.

Information Kit

A climate change information kit was put together by the CBDAMPIC project in Fiji to assist in the continued improvement of awareness levels at community level on climate change adaptation issues. The awareness materials were translated into the vernacular (Fijian and Fiji-Hindi) for the benefit of people in pilot communities who might not be able to communicate in the English language.

Beyond Campaigns

After awareness campaigns were carried out, a simple survey on the awareness level of climate change and adaptation was conducted. Results gave an indication that the people of Tilivalevu, Bavu and Volivoli were now well aware of climate change and adaptation issues and the vulnerabilities they are facing. Communities had discussed actions that they should take on their part to reduce the adverse effects of climate change and these included reduction in the cutting down of trees in the watersheds and cultivation of steep slopes.

Community Support

As a result of increase in awareness, approval was also granted in the traditional manner for project activities to be implemented once approval by SPREP and CIDA was granted. For the predominantly Indo-Fijian community of Volivoli, prior consultation with landowners whose (through traditional knowledge) land may have a higher probability of having underground water were approached and consent for the use of their land requested and

received. In all these deliberations, meetings and community gatherings, climate change discussions were undertaken very informally. References would be made to the formal presentations made by the CBDAMPIC Core CV&A Team and community views were shared freely.

Plate 2.0 Community Vulnerability and Adaptation Assessment in Action



Samoa

The climate change awareness programme for Lano and Saoluaafata had achieved its objective to improve the awareness level of the target communities. Some of the achievements are as follows:

Documentary on climate change developed

Communities were involved in the documentary as main actors and cast. The documentary was developed in close collaboration between the Climate Section (Environment Department) and the community especially the various committees involved. It was a good opportunity to allow the communities to tell their story as the setting reflects their everyday life and their vulnerabilities. The documentary is in Samoan with English subtitles. The NAPA project funded the development of the documentary while CBDAMPIC funded the airing on TV. Both projects are credited in the documentary.

Poster papers for the community developed and printed

The poster paper was developed as a tool for awareness raising. It captures in details the assessments that were carried out in the pilots' sites and the adaptation needs of the two pilot communities. The poster is printed in Samoan and English with a broader audience in mind as well as its use by the project's multi-stakeholders. It will be used for awareness displays well beyond project lifetime.

CV&A report currently translated before distribution to the community

The CV&A report has already been distributed to Cabinet members who attended the climate change awareness day. The summary of the report had already been translated and copies made available to committee members of Saoluafata and Lano. This report will be with the communities documenting the work that had been carried out. This is an important undertaking as it ensures that knowledge of the work carried out will be with the communities' for a long period of time.

Continuous consultation with the communities has shown their improved level of understanding

During the NAPA consultations (a UNDP/GEF project executed nationally by Samoa), it was evident that the Saoluafata and Luli communities were well aware of the changes brought about by climate change, climate variability and extremes. It was gathered during the consultations that the two communities have continued to honour their commitments to ban deforestation around their watershed management areas. They also agreed to review their agricultural practices and ban activities that will increase their vulnerability for example unnecessary or uncontrolled burning. Villagers were making connections on their action upstream with repercussions downstream; this is a result of increase in awareness.

Plate 3.0 Community Awareness Programme in Saoluafata (Samoa)



Vanuatu

A main focus of the CBDAMPIC project's awareness programme in Vanuatu were the three pilot communities (Luli, Panita and Tegua). Materials were developed specifically for them in Bishlama or Pidgins, for ease of understanding of the issues concerned (table 1.0).

Table 1.0 Published awareness materials for pilot communities

Material	Detail	Language
1 poster	Depicting causes of climate change, cross cutting impacts of climate change and highlighting the significance of adaptation	Bislama/Pidjin (Nat. language)
1 Pamphlet	Communicating information on the CBDAMPIC project – background, purpose & outputs	Bislama/Pidjin (Nat. language)
1 Pamphlet	Communicating climate change impacts, future climate change and drawing out the significance of adaptation	Bislama/Pidjin (Nat. language)
1 Pamphlet	Explaining adaptation and communicating significance and need of adaptation at all levels, mainstreaming, community planning and adaptation	Bislama/Pidjin (Nat. language)

The awareness activities have made the people aware of their vulnerabilities now and into the future and what needs to be done to reduce that risk. A classic result of increase in awareness is that people are making bold decisions about reducing their vulnerabilities i.e. relocation.

Plate 3.0 A community awareness programme in Tegua



5.4 Output four: Pilot Project Implementation

Pilot projects implemented in communities to reduce their vulnerabilities to climate change related risks.

Indicator 1: Number and quality of CV&A reports produced and final report accepted by CIDA

Indicator 2: Local stakeholders actively managing project activities, and support project objectives.

Indicator 3: Pilot project activities at community level successfully implemented.

Summary

Community adaptation programmes in the four pilot countries have been implemented. This is a significant contribution by the CBDAMPIC project in increasing the adaptive capacity of communities to climate change risks. The lead up to the successful implementation involved several critical activities which included the development of the CV&A Guide by SPREP, completion of the community level vulnerability assessments, reports prepared by the Core CV&A Team and the review and endorsement process by SPREP and CIDA. At the community level the adaptation interventions implemented have significantly contributed to improving the people's livelihoods. It has contributed to alleviating poverty, which is a key issue that national governments need to address to meet their Millennium Development targets. The multiplier effect of the reduction in risk should allow the pilot communities opportunity to improve their general well-being.

In this section of the report, the project interventions that had already been implemented in the pilot sites will be reported. If there is a need to know the details of the vulnerability assessment carried out, it is suggested that interested parties consult the CV&A reports from the four pilot countries².

5.4.1 CV&A Guide

The CV&A Guide was developed under the CBDMPIC project by the Regional Project Manager primarily to give a framework and structure to the vulnerability driven/bottom-up approach. The preparation of this guideline is an important accomplishment, and provides a consistent framework and methodology for the community vulnerability and adaptation work. The CV&A guideline is an anthology of activities that provides a learning process to empower local communities to identify, analyse, and develop ways and means of increasing their local adaptive capacity to current and future challenges and opportunities related to climate change.

A weeklong hands-on training then followed for all the pilot countries on the theory as well as practical approaches, tools, and traditional protocols to be followed. The Project Manager CBDAMPIC project (Taito Nakalevu) and the SPREP Training Officer (Frank Wickham) conducted the trainings in all the pilot project countries and were assisted in-country by the National Coordinators.

In the CV&A process, the focus of data collection is the community that constitutes elders, men, women, youths and children. Their experience with relation to climate variability, change overtime, and extreme events are very important in this process. The assessment focuses on current vulnerability to both climate and non-climate related factors and examining current adaptive capacity. It then includes evaluation of vulnerability to future climate related risks involving key stakeholders in the evaluation process, and eventually leading to formulation of adaptation policies that would strengthen adaptive capacity. Climate modelling and scenario generation and social science have a role to play in the process but are not the starting point.

² SPREP would request interested individuals to contact the Environment Service in the four pilot countries directly for their CV&A reports.

This approach to vulnerability and adaptation assessment is an innovative one and quite different from the model based impact assessments commonly used globally and based largely on climate, geography, geology, and topography parameters. A CV&A Guide had been published and is in use in the four PICs and would be available as a resource material for other PICs into the future.

5.4.2 Cook Islands Pilot Adaptation Intervention

The three main adaptation interventions implemented for Aitutaki are:

- i) Water tanks;
- ii) Water Network Management; and
- iii) Demand Management

Adaptation Intervention One: Water tanks

Around 250-2000 litre water tanks have been successfully installed in the eight villages of Aitutaki. This will greatly improve the availability of drinking water to the various households that have benefited from this adaptation assistance. Most climate change scenarios show an increase of precipitation in the Southern part of the Cook Islands, but given the size of the island compared to the resolution of the models, their reliability is limited.

The support provided by the CBDAMPIC project has assisted numerous families who would not have otherwise able to purchase water tanks on their own (plate 2.0). The Aitutaki Water Works and the Environment Service Aitutaki would carry out regular water testing to ensure quality overtime.

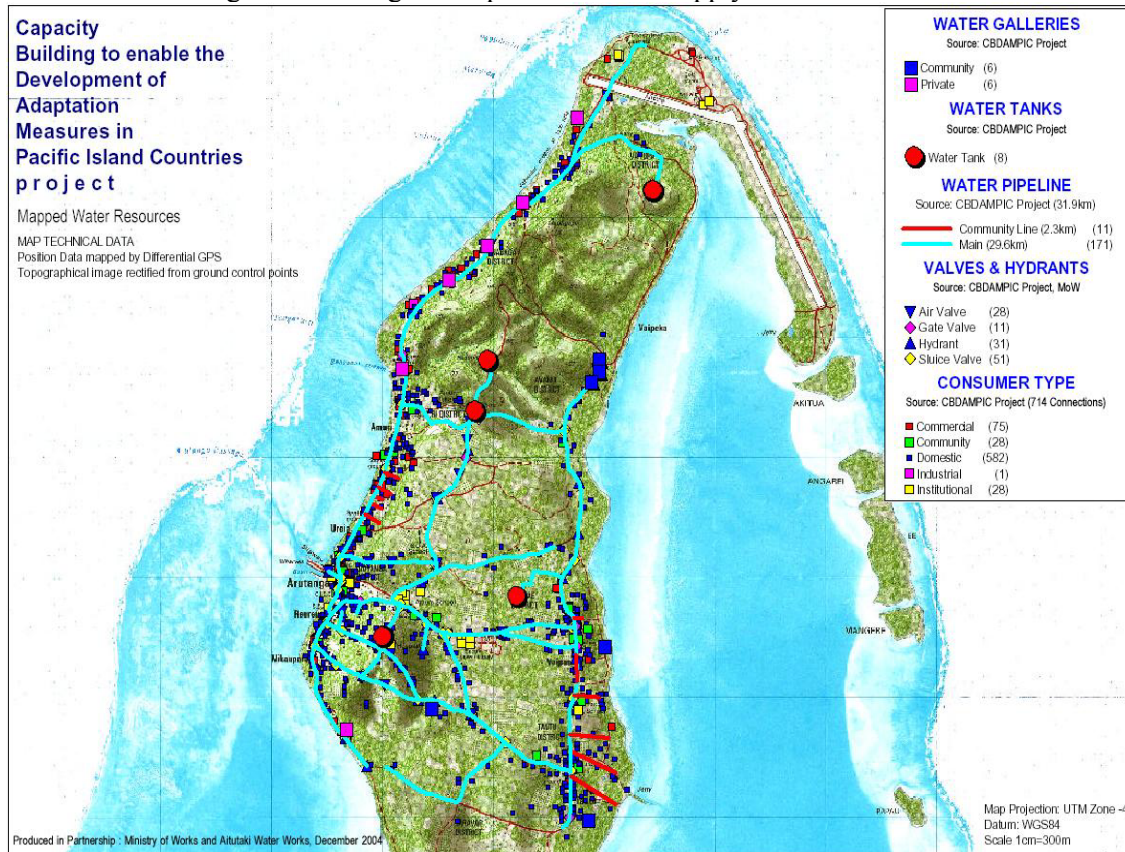
Plate 2.0 A family assisted by the CBDAMPIC Project



Adaptation Intervention Two: Water Network Management

The CBDAMPIC project has also provided for Aitutaki a basis for a sustainable water management programme. A detailed inventory of the water supply assets on site had been carried out and mapped in digital format (Figure 1.0). The system inventory in time will be the foundation of a total life cycle approach to management of water supply in Aitutaki.

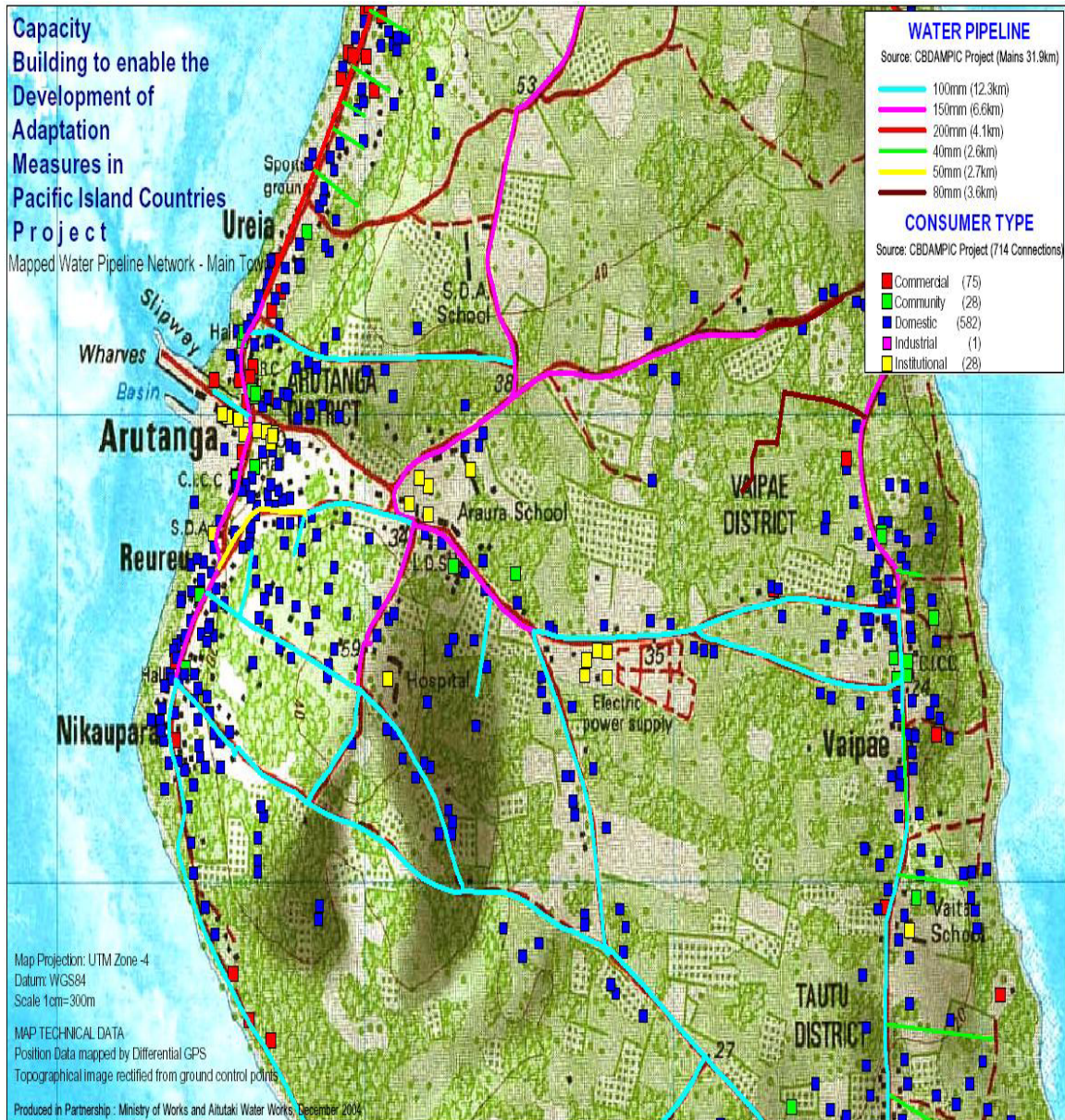
Figure 1.0 A Digital Map of the Water Supply Network in Aitutaki



Adaptation Intervention Three: Demand Management

The main purpose of this intervention is to provide spatial (locality) and tabular (database) data management capability that will add value and support to other activities of the project. As part of the water management activities in Aitutaki, management of infiltration galleries and water mains were also carried out. This involved the mapping out of the water supply infrastructure, gallery sites and the location of water mains. It also detailed consumer types whether it is private, hotels, or other institutions such as schools and the church (figure 2.0).

Figure 2.0 Pipelines and Consumer Types



All the above, work that had been carried out by the CBDAMPIC project would be the basis for a future maintenance system and system investment analysis.

5.4.3 Fiji's Pilot Adaptation Intervention

Three pilot programmes were executed in Fiji: i) Bavu, ii) Tilivalevu and iii) Volivoli. Two of the pilots have been completed and the third to be completed in 2006.

Bavu: Water harvesting project (additional community water tank)

The CBDAMPIC project has installed a 45,500 litres water holding tank at Bavu village. This was carried out to specification and with the satisfaction of the village communities. The increased capacity to store water from 27,300 litres to 45,500 litres will greatly improve the

resilience of the people to the periodic dry spells that the community is usually faced with. With the current population growth that has seen households grow from 25 to 55 with projections to more than 100 in the next five years, the existing water pump and holding tanks have reached their carrying capacity.

Since water is a basic necessity of life, the adaptation intervention for Bavu has placed the village at a much better position to deal with water problems as well as lessen their vulnerability to climate change. The additional water tank improves water availability to the village now and into the future.

The project's adaptation intervention has empowered the community to continue where the project had let-off and added new guttering from the church to the two holding tanks (the old and the new). As an alternative source of water supply, additional pressure on the borehole pumps would be reduced. The cost of this additional investment was borne by the community.

Tilivalevu: Water harvesting project (Borehole)

Water is the main vulnerability that the Tilivalevu community is facing. They are not only faced with quality and quantity issues but sustainability of supply is a major problem. Members of the village have frequently experienced water shortages during the dry season thus a good amount of time is spent daily by women and children to harvest water for bathing, cooking and agricultural use. This has contributed to decline in productivity overall and increased incidence of health related diseases such as diarrhoea and skin rashes.

The adaptation option implemented in Tilivalevu includes the changing of the piping systems and the instalment of two rainwater-collecting tanks in the village (plate 3.0). The above adaptation options would in the long-term help the Tilivalevu community adapt to current and future climate change.

Plate 3 Two water tanks installed in Tilivalevu



5.4.4 Samoa's Pilot Adaptation Intervention

The adaptation interventions recommended for Saoluafata and Lano have all been implemented successfully. These include the following:

- Construction of the structural coastal protection (seawall) for Saoluafata;
- Upgrading of five coastal springs within the two communities three for Saoluafata and two in Lano;
- Building of nurseries in each pilot site and training;
- Reforestation programme for each pilot site;
- Lano mangrove conservation;
- Workshops and trainings on natural disaster preparedness;
- Agriculture workshop to strengthen community awareness on how to improve agricultural activity, reforestation, etc. to enhance community capacity to cope with climate variability and extremes.

The Lano bridge (ford) improvement was also a priority activity identified for Lano. However, the huge infrastructural costs that will be involved prevented the CBDAMPIC project to address the activity. The CBDAMPIC Core Team for Samoa have therefore negotiated with the Chief Executive Officer Environment that the activity be redirected to the World Bank funded Infrastructural Management project (second phase) for funding.

Saoluafata: Sea wall protection

Saoluafata village suffers from extreme coastal erosion. About 30 meters of land have been lost in the last four years. The mechanism for this sudden increase in erosion is unknown, but sea level rise issues and increase in extreme events, plus deteriorating condition of coral reef are suspected. The sand removed apparently “disappears” from the system: possibly deposited over the reef-edge. It is also possible that the reef does not keep up with the local

sea level rise (i.e. aggravated by negative land movement), exceeding some threshold, enabling the wave-energy to reach the coast, suddenly increasing the coastal erosion. This has threatened a lot of homes along the coastal stretch and very few households have been able to protect their property. A much larger scale solution is needed.

The project provided the means (design and equipment) to the community to deal with the coastal erosion problem in a very straightforward way; the building of a sea wall. The design of the sea wall is of a low cost approach. The community contributed materials (soil and rocks), labour, hosting and food (for the technical staff). The community would also be responsible for the monitoring and maintenance of the coastal protection. Apart from providing hard structure support, the project has also built the capacity of the people to monitor and maintain the sea wall. This had resulted in the revegetation efforts along the sea wall.

Plate 3 Saloluafata Sea Wall



Lano: Water harvesting project (spring cleanup and protection)

Flood events and droughts have crippled the village water supply especially from coastal springs which play a major role not only in supplying water for consumption but more significantly as a symbol of their cultural identity and heritage. Most of the springs are already salinated due to salt-water intrusion whilst some have disappeared due to coastal erosion as a result of storm surges. These springs are also contaminated during flooding events from upstream sediments, which may also include fertilizer, or pesticides from farmers' plantations.

The cleaning, buffering and rehabilitation process ensured that the coastal springs would be a constant source of water supply for the two pilots. It therefore should increase the communities' resilience to droughts and water shortages (plate 4.0) The project has also provided capacity support links from the communities' to the Health Department

responsible for sanitation support in rural communities. This will enable the work carried out by the project to be sustained beyond project lifetime.

Plate 4 Coastal Spring Protection



Forestry Nurseries

Two nurseries had been built for the two pilot communities (Lano and Saoluafata). The Watershed Division of the Ministry of Natural Resources and Environment and Meteorology will be working with the communities to carry out replanting in their watersheds.

Partners

Table 2.0 below lists the project partners that have been constantly working with the CBDAMPIC project over the years. These partners had also ensured that the work of the project be mainstreamed into their department planning and budgeting processes.

Table 2.0 CBDAMPIC Project Partners in Samoa

Project Activity	Partners
Awareness programs such as, trainings and workshops	PUMA, MNREM, Ministry of Education, Ministry of Agriculture, Ministry of Health, Ministry of Women, Community & Social Development, Red Cross Society
Coastal springs	Ministry of Health, PUMA, Samoa Water Authority, Community committee, Meteorology division, MNREM
Mangrove conservation	Fisheries Division (MOA), Marine conservation division (MNREM), Climate change section (MNREM), national parks and reserves, community committee
Reforestation program	Watershed management division (MNREM), forestry division (MNREM), International waters project (MNREM) , Community
Coastal infrastructure protection	PUMA, MWTI, MNREM, Community committees
Community Water tank	Community, SWA, MNREM

5.4.5 Vanuatu Pilot Adaptation Programme

Three projects were implemented in Vanuatu: Lateu (relocation), Luli (water harvesting) and Panita (relocation).

Lateu: Relocation project

This relocation took place in August 2005 and it involved a population of about 100 people. The main stakeholders engaged in the implementation process include the Geology, Mines and Rural Water Supplies Department, Department of Health, Department of Meteorology, Department of Environment, the Torba Province, the Church of Melanesia and general oversight from SPREP.

Severe coastal erosion of about 50 meters over the last 20 years (2.5 m/yr), sea level change and geological processes have raised the underground water lenses, creating permanent flooding and standing pools of water throughout the village. The situation is aggravated during spring tides and higher than usual high tides associated with the south-westerly winds as well as heavy rainfall during cyclones. The result is a village surrounded by permanent pools of water that bring about a series of health related issues that affect the daily livelihood of the people of Lateu. The periodic flooding of dwellings deteriorates housing rapidly, prevents or completely stops cooking on the ground (fireplaces) and results in endless dampness, a health hazard. The flooding also triggers the overflow of pit toilets, which threatens to contaminate the settlement's only underground water well. The flooding condition also creates favourable conditions for water-borne diseases, which have increased significantly, including malaria, diarrhoea and skin infections, especially among children.

The Lateu community prioritised relocation of their settlement (including aid post, church and rainwater catchments and tank) and improved rainwater harvesting technologies (tanks

and catchments facilities) as the most appropriate adaptation measure to boost their adaptive capacity.

The CBDAMPIC project purchased the necessary working tools and water catchments and storage materials and facilities, while the Geology, Mines and Rural Water Supplies Department provided the engineers to oversee the construction of the catchment's facilities and set up of the storage tanks. The Department of Health provided toilet facilities and the Church of Melanesia will be relocating the community Church. The community assisted by way of providing and allocating the necessary land and labour for the relocation process.

Through the collaboration of all stakeholders the problems of flooding, water shortage and contamination and sanitation have been reduced. A total of 100 people and their households have relocated to the new site called Lirak, about 500 meters inland with a rainwater storage capacity boost of 36000 litres (plate 5.0). Each individual now uses 480 litres of water per day, an amount well over the WHO standard of 50 litres per person per day. The construction and installation of facilities was followed by a water management training that was conducted by the Geology, Mines & Rural Water Supplies Department so as to enable sound management of the facilities and the water resource by the community.

It is envisaged that all sectors of the community will benefit from the relocation of the community (principal adaptation option), which include women and children. Such a measure will be a "first" in Vanuatu and the experiences gained will be invaluable to the rest of the archipelago especially in the area of climate change adaptation involving a small island and small population.

Plate 5.0 Opening of the new Lirak Community in Tegua



Luli: Water harvesting project

A severe lack of quality and constant supply of drinking water was highlighted and prioritized by the Luli community as the major climate related vulnerability that affects the daily livelihood of the community. With limited access to the main urban centre of Port Vila, or other nearby islands, availability of quality and a continuous supply of water is a critical need that surpasses other socio-economic requirements of the Luli community. Half of the people's effort in a 12-hour period is used on trying to access water wherever it is available particularly in the case of a prolonged drought as was the case during the April-September cold and dry season of 2003. Also, with transportation limited to the use of animal power and canoes with limited carrying capacity, all work that are related to the carting of water for daily consumption is made by human power and largely by women and children.

The Luli project was completed in September 2005. This was after the installation of 24 tanks of 2400 litres each complete with catchment facilities. Also as part of the adaptation intervention, a water management training was conducted by the Geology, Mines & Rural Water Supplies Department. It should improve the community's capacity to better manage and monitor the water tanks and the catchment facilities provided by the project. The adaptation intervention for Luli would greatly improve the community's capacity to withstand droughts. Other additional benefits include;

- Less time spent on fetching water by women and children, therefore other productive activities would be carried out;
- More livelihood opportunities such as small scale tourism projects could be entertained that a steady supply of water is now available; and
- It would be a lifeline for other villages in close proximity in case of future droughts.

Plate 5.0 Opening of the Luli Water Harvesting programme



5.5 Output five: Inter Regional Collaboration

Regional linkages developed and maintained that will ensure mutual advocacy platforms in the international arena and joint activities carried out to reduce vulnerabilities of Caribbean and Pacific regions to climate related risks.

Indicator 1: Number of programmes and activities developed by the 2 regions implemented successfully.

5.5.1 Incorporating climate change adaptation into the Environmental Impact Assessment EIA process

In February 2004, a Pacific Team³ attended a training workshop in Barbados on Incorporating Climate Change concerns into the EIA process. Prior to the training, the Pacific Team had been contributing to a guide that will be put out jointly by the Pacific and the Caribbean region on climate change and EIA.

As part of this work, an assessment was carried out to determine whether the current EIA guideline is sufficient to cover climate change impacts on projects or vice versa. Results indicate that although climate related disasters are one of the major issues threatening the very existence of Pacific people, the EIA process of most PICs do not specifically consider climate or climate change as a separate issue for any detail assessment but amalgamates it into the broader biophysical issues in the scoping stages of EIA. EIA is one of the many tools available to ensure that development results have minimal environmental and resource damages, and reduce threats to the carrying capacity of island systems (ecological, social and economic). It is considered an important element to achieve sustainable development in the Pacific and several countries have instituted EIA legislation or policy processes to reflect this. The guide that is currently developed by the two regions will only help to enhance current EIA guidelines, it does not in anyway supersede.

The guide identifies specific areas on how climate change concerns can be taken into consideration in the existing EIA processes of governments e.g. the review of the terms of reference for consultants to carry out EIA, the review of the preliminary environment assessment process check list to see that climate change concerns are adequately addressed. Other than evaluating the potential environmental risks and impacts a project will have in its area of influence, the EIA process should additionally:

- identify and evaluate potential impacts from climate change on the project's area of influence;
- examine project alternatives;
- enhance/support the selection of adaptation strategies through identifying ways of improving project selection, citing, planning, design, and implementation by preventing, minimizing, mitigating, or compensating for adverse environmental impacts and anticipated adverse impacts from climate change, and enhancing positive impacts; and

³ The Pacific Team consisted of Senior EIA officers from Cook Islands, Fiji, Samoa, Vanuatu and the Regional Project Manager CBDAMPIC project based at SPREP.

- include the process of mitigating and adapting to adverse environmental impacts and anticipated adverse impacts from climate change throughout project implementation.

This guide was completed and published in 2005 for use by the two regions and interested parties.

5.5.2 Joint Side Event at UNFCCC COP 8, 9 and 10

The Caribbean and Pacific advocacy partners have worked the corridors of the UNFCCC Conference of the Parties (COP) for the last four years to jointly promote adaptation implementation. This aspect of climate change is clearly not something that can easily be digested by developed country partners, given the enormous amount of resources it may consume. However, with continuous pressure at the annual sessions and other foras at the regional and national level, there is now a shift in emphasis at the Global Environment Facility (GEF) from funding impact studies and climate modelling to funding pilot demonstrate projects. There is a programme recently developed by the GEF called the Strategic Priority to Pilot Adaptation (SPA). Under this programme, funds are made available for countries to start piloting best practices on adaptation implementation.

In retrospect, the side events have been well attended by international organizations, funding agencies, country representatives and members of Small Island Developing States (SIDs). Through such interventions, the global climate change community are informed of the work the two regions are carrying out. Not only that, it also provided an opportunity for experiences and lessons learnt to be shared to other regions of the globe and donors to be familiar with the issues of Small Island Developing States.

6.0 FINANCIAL

The total project funding for the CBDAMPIC project was Canadian 2.2 million or USD 1.389 million for a duration of 3 years from 2001-2003. However, due to the late recruitment of the Project Manager who began work in January 2002, the commencement of the Project was also delayed. Other issues that played a role in the delayed implementation were the replanning of the Project, which changed the whole focus of the project, the validation mission by CIDA to the Pacific and delay in implementation at the national level.

Although the CBDAMPIC project was regionally executed, the bulk of implementation was carried out at the national level. This translated into more funds made available to the national governments for their management and direct implementation of planned activities. It proved to be an effective and constructive arrangement that worked well with all the Parties concerned.

In summary, the percentage use of funds is as follows:

Table 3.0 Funds provision at regional and national level

Activities	Final Revised Budget 2005 (US\$)	Total Budget Utilized 2006 (US\$)	Percentage of Total Budget	National Implement %	Regional Implement %	Project Management
Capacity Building	115,200	115,200	8.28	8.28		
Integrated Assessment	16,500	16,500	1.19		1.19	
Pilot Implementation	600,000	600,000	43.14	43.14		
Mainstreaming	38,000	38,000	2.73	2.73		
Inter Regional Corporation	35,815	35,815	2.58		2.58	
Monitoring and Evaluation	122,251	122,251	8.79		8.79	
National Coordination and consultation	122,500	122,500	8.81	8.81		
Regional Consultation	70,670	70,670	5.08		5.08	
Regional Coordination	269,749	269,749	19.40			19.40
Total	1,390,685	1,390,685	100	62.96	17.64	19.40

7.0 CONSTRAINTS TO CBDAMPIC PROJECT IMPLEMENTATION

Given the vast ocean divide between SPREP and the project pilots and the number of people involved in the CBDAMPIC project, it is only natural that a few glitches will hinder progress along the way. Some of these have been identified as risks prior to project implementation and have been addressed accordingly. Others were later encountered along the way. It would be important to note these constraints for successful adaptation project implementation in PICTs.

7.1 Lack of staff and its impact

A key constraint to progress is the lack of staff and resources in government departments. The CBDAMPIC country co-ordinators have been frequently obliged to work on matters that are not directly contributing to the CBDAMPIC project. This is an inherent constraint that has been identified from the onset and lead government agencies have been notified accordingly. This involvement has certainly helped with government awareness and mainstreaming, but it had also contributed to the delay in implementation of project outputs.

7.2 Project finances at national level

There is a clear need to seriously strategise well in advance on the routes that need to be taken at the national level to address financial procedures. In some pilot countries, project funds are treated as government funds therefore are being subjected to stringent administrative government bureaucracies. Project managers at the regional and national level need to anticipate procedural issues well in advance to be able to place measures that will improve the situation. The lack of staff at the Ministries of Finances of government departments as well as the lack of knowledge of procedures also does not help. Delays in processing of payments and purchase orders as well as wrong advice given to national project coordinators have stalled project activities and in several cases have seriously contributed to delay in implementation.

7.3 Project duration too short

The CBDAMPIC 3 year project period is too short for proper implementation of adaptation projects. Given the remoteness of some of the PICTs, the vast physical geography of individual countries interspersed with oceans and the inconsistency of shipping and telecommunication services, accessing project pilots are quite a challenge. Future adaptation project periods need to cater for these challenges especially when working with multiple pilots to ensure timely implementation and effective completion of activities.

7.4 Challenges of a participatory CV&A process

The CBDAMPIC project uses the bottom up approach therefore requires consultations with communities in almost all aspects of the project. On the one hand, community ownership is crucial therefore they need to be consulted in most aspects of the pilot project activities. These consultations take time, preparation, resource mobilisation, and disappointments if a

community cannot receive the team due to prior commitments. Conversely, the project works on strict timelines that have been agreed upon well in advance by the executing agencies⁴ and the donor. The other part of the audition is the team of experts that make up the Core CV&A Team. Most are officials of government ministries and at times are not available for CV&A work. These are examples of challenges that participatory CV&As can undergo. Careful balancing and advance planning are essential for success.

8.0 LESSONS FOR THE FUTURE

Summarised below are some of the main lessons learned in the CBDAMPIC project. These lessons are drawn from the experiences of the project stakeholders at the national and regional level. The lessons are structured into two main parts, the first is institutional or systemic and the second is technical lessons. Each lesson is expressed first in general terms applicable to other projects and then with specific reference to the project.

Institutional

The most effective approach to climate change adaptation in the Pacific should represent a mix of national top-down institutional capacity building and bottom-up community level project implementation.

Careful consideration needs to be made of the approach to be taken when carrying out climate change adaptation in the Pacific region.

At the global level, climate change adaptation has been approached through climate change impact studies. The impact studies approach takes into consideration projections of future greenhouse gas emissions, from which climate change scenarios are specified, biophysical impacts are then modelled, selected socio-economic impacts are estimated, and adaptive options to moderate detrimental impacts are assumed. The climate change impacts study has been widely used to estimate potential climate change impacts, however, it does not analyse actual adaptation processes and is not structured to contribute to capacity building.

The CV&A approach to vulnerability and adaptation that was championed by the CBDAMPIC project in the Pacific begins with documenting the current exposure and current capacity of the community to cope with climate change. The ultimate objective is to identify opportunities to strengthen the adaptive capacity of communities to climate change. The engagement of local stakeholders is encouraged at each stage of the assessment process. This approach was actively promoted as most Pacific Islands lacked the climate modelling and scenario generating capacity necessary for detailed climate change impacts studies.

Mainstreaming climate change should not mean transferring full climate change adaptation costs to Pacific Island Governments.

Mainstreaming is traditionally described as the incorporation of climate change issues into operational plans, policies and budgetary processes of governments. A concern discussed during this session (and may warrant further debate not only in the Pacific), is mainstreaming

⁴ Could be national governments or regional organisations or both.

as potentially transferring most climate change adaptation costs to vulnerable developing country governments for resourcing. It was recognised that these governments are already inundated with an enormous resourcing burden at the national level that encompasses education, health, waste, poverty eradication, housing, increases in squatter settlements and many others.

The UN Framework Convention on Climate Change (Article 4.4) notes that developed country parties and other developed parties included in Annex II shall assist the developing country parties that are particularly vulnerable to the adverse effects of climate change in meeting the costs of adaptation. to those adverse effects. In essence, this means that adaptation should be a shared cost between the major emitters of greenhouse gases that lead to global warming and climate change, and people who are suffering the consequences.

For the Pacific region this is an important consideration. A more detailed analysis will need to be made on what adaptation issues should be mainstreamed for government support and other urgent adaptation needs that will require GEF support and other multilateral and bilateral funds.

Adaptation to climate change will be manageable and cost effective when shared and carried out in a collaborative way.

Adaptation costs will be manageable and cost effective when shared and carried out in a collaborative way. People who do not have financial means to carry out adaptation have other resources that they can contribute that would significantly reduce the cost of adaptation measures.

Presentations from the CBDAMPIC pilot projects indicate that the costs of adaptation can be manageable when shared amongst interested parties. In the case of the CBDAMPIC project in Samoa, the cost of the sea wall to minimise coastal erosion was reduced by 50 percent when the community provided raw materials such as amour rocks and soils for back filling and labour. In the Torres Islands in Vanuatu, the CBDAMPIC project was only responsible for 30 percent of the total cost of relocation. The Lateu community and the Church of Melanesia absorbed most of the costs, as they had to move their own dwellings and the church to the new site. In the Cook Islands communities used their own resources to upgrade community rainwater tanks once these had been identified as a priority through the project, and use an existing health inspection system for ongoing monitoring.

Climate change adaptation should be pursued on its own merits but long-term success will require factoring climate change adaptation into sustainable development planning at national, regional and international levels.

Climate change has major implications for development and should be factored into current and future sustainable development priorities of Pacific island governments, however climate change issues could also warrant their own agenda at local and national levels.

Discussions on this issue lingered on several levels. First, it was suggested that adaptation has to be factored into national plans and policies because current development priorities

have funding earmarked either directly from government coffers or through overseas development assistance (ODA).

Another viewpoint was that climate change may be absorbed under disaster management, which for the Pacific has meant focusing largely on disaster rehabilitation and recovery as opposed to preparedness. This approach would stifle any momentum of climate change preparedness being implemented at national and regional levels.

The third viewpoint expressed is that climate change is a global issue that warrants a stand-alone agenda at the national and community level. Its present and long-term impacts would be disastrous to national development and people's livelihoods. Pacific Island communities contribute the least to this global problem, but have fewer resources to cope with the additional shocks and stresses under a changed climate. Assistance from developed countries is needed to adapt to specific local circumstances.

Technical

Empowering the local community to adapt through a participatory process that combines bottom-up and top-down approaches is the way to go for the Pacific region.

Empowering the local community to adapt in a participatory bottom-up and top-down approach to climate change adaptation is the way to go for the Pacific region. These two approaches must be employed simultaneously with 'one feeding off the other' for better appraisal and understanding.

Presentations by CBDAMPIC project countries noted that at the outset of project implementation at the community level, a good rapport needs to be struck between Climate Change Country Teams who represent government interests, and the Core Community Vulnerability and Adaptation (CV&A) teams that include community representation. From experience, the continuous dialogue and exchange of information between the two parties created an atmosphere of understanding and tolerance of each other's distinctiveness and constraints.

Capacity building in all facets of climate change needs to be an evolutionary process and every effort should be made to develop the capacity of all ministries and communities to carry out climate change adaptation activities.

Capacity building in all facets of climate change needs to be an evolutionary process and every effort should be made to develop the capacity of all ministries and communities to carry out climate change adaptation activities. Efforts should also be focused on how capacity that has been built could be maintained.

One of the major challenges described by country representatives is the lack of capacity at the national and community level. Most of the capacity to date has been channelled to Environment Departments. Due to the limited number of personnel within Environment Departments who can implement climate change activities locally, external expertise is sought often at very high costs. There is a need to broaden the capacity base and awareness

levels. More effort is needed with institutional arrangements, and human resource development.

This constraint brings us to examining the wider capacity building issues in the region; whose capacity is being built, and to what extent this will promote community adaptation. In this regard there is a need to look at the broader development community and who may be able to assist at the national and regional level. NGOs and the church's capacity to take on some of the adaptation responsibilities particularly at the community level also need to be developed.

Implementation of climate change adaptation should utilize an open, transparent and highly-participatory process that engages the community in the exploration of options to reduce vulnerability and effectively balances the needs and interests of a variety of stakeholders.

The process of arriving at who and what should be assisted in an adaptation programme in the Pacific region where communal living is the norm in many rural areas needs to be clearly mapped out before any implementation.. Analysis needs to be grounded on robust cultural, ecological and socio-economic assessments of vulnerability and coping capacity and communicated well to the people to avoid misunderstandings and internal rifts.

Adaptation projects implemented at community level have a potential to cause division in the community if handled in a non-transparent approach. Future adaptation projects should be aware of sensitive issues such as who needs to be supported in terms of adaptation; is it the community, individual households, or specific stakeholder groups like farmers or fishers? Project partners need to avoid misunderstandings or creating ill will amongst stakeholders. An open line of communication with the community and better understanding of vulnerability and coping capacity will help define the necessary boundaries.

Cost effective and culturally appropriate technologies can enhance communities' resilience to climate-related risks.

Cost effective and culturally appropriate technologies can enhance communities' resilience to climate related risks.

The pilot projects made use of a number of technologies in their efforts to increase the resilience of communities to climate change, these included; water resource solutions (tanks, springs, filters, purification, hydroponics, roof catchments...) engineering bridge and drainage designs, and also preservation, promotion and use of traditional knowledge and adaptive technologies (e.g. old wells in water shortages).

Participants also heard about the Radio and Internet (RANNET) programme that began in Africa in 1998, and is now being introduced in the CBDAMPIC pilot project sites in Vanuatu. The objective is to make weather and related environmental information more accessible and useful to rural and resource poor populations in order to aid day-to-day resource decisions to prepare for natural hazards. The system improves dissemination capacities of national hydrological and related national services, NGOs, and other information producers, thereby enhancing adaptive capacity as it provides access to the latest information on the weather, storms or the general climate. The system is multi-purpose and

is used by a diversity of sectors: education, health, agriculture, environment etc. Activities are done in collaboration and with approval of communities and the National Meteorological Departments.

A conduit to enable community vulnerability and adaptation needs to be mainstreamed into the operational plans of government ministries and departments and international agencies should be established.

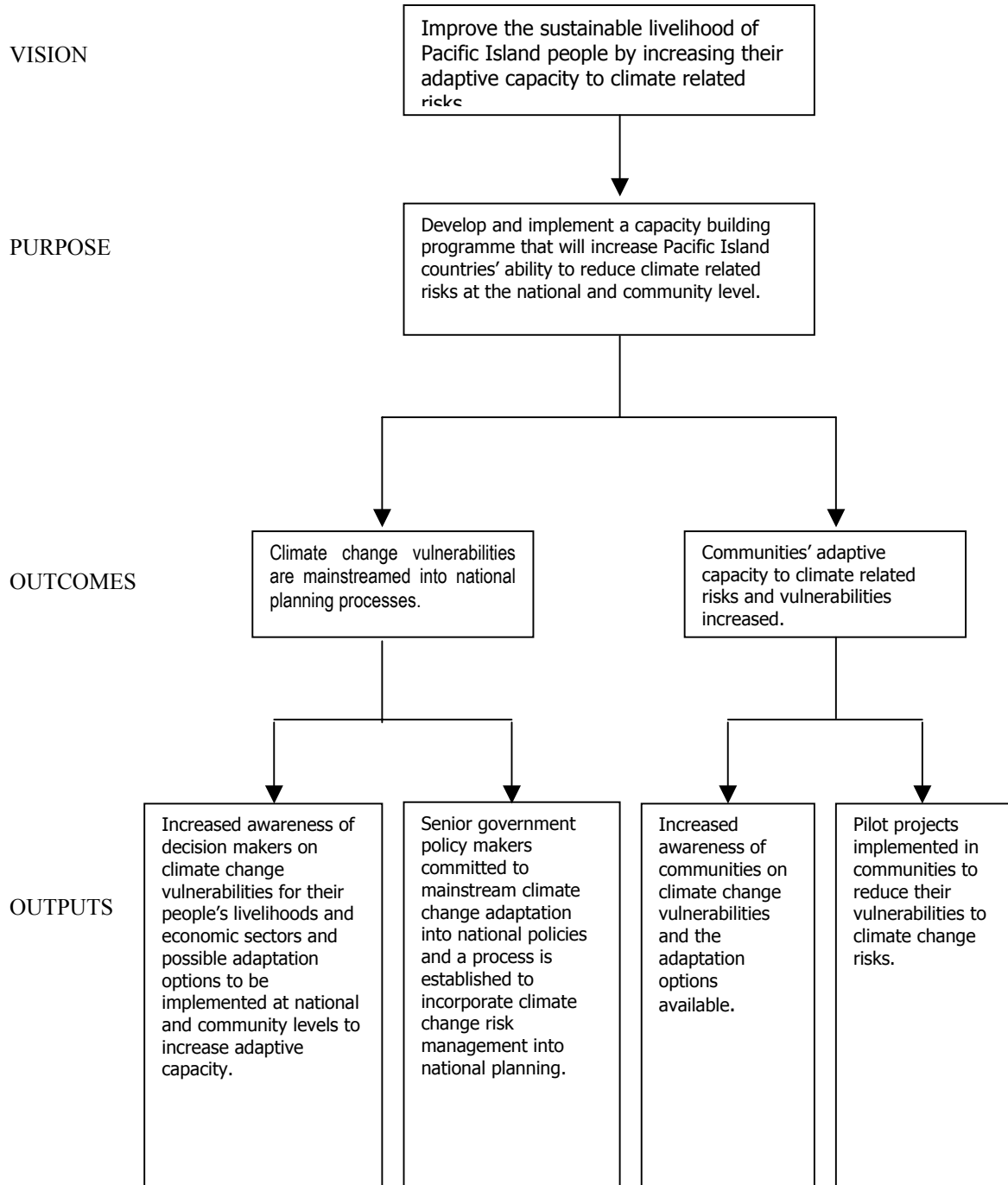
Based on the CBDAMPIC project experience, three entry points are proposed; i) that the CV&A guideline currently used by the National Community Vulnerability and Adaptation Assessment Team (National CV&A Teams) be endorsed as one of the main assessment tools used by government to carry out community vulnerability and adaptation assessments; ii) institutionalise a Multi-Sectoral CV&A Assessment Team that will work at community level to carry out vulnerability and adaptation assessments and develop adaptation recommendations that would be mainstreamed into the planning and budgeting machinery of government; and iii) communities to use existing channels that are available within government to route their community adaptation recommendations for funding assistance and implementation by government.

9.0 CONCLUSIONS AND RECOMMENDATIONS

This report highlights a success story of piloting adaptation at the community level. It sure will again trigger a debate on global environmental versus local adaptation benefits or adaptation projects versus development projects. In the context of the CBDAMPIC project, working simultaneously through the national government policies that affect programs and activities of government departments (top-down) and through community-based activities that usually involve government agencies through authorization or implementation (bottom-up) has particularly been effective. Awareness levels of policy makers, senior government officers, traditional leaders and the communities in the four CBDAMPIC pilot project countries' have increased. At the community level the adaptation interventions implemented have significantly contributed to improving the people's livelihoods. Project interventions have contributed to poverty alleviation, which is a key issue that national governments need to address to meet their Millennium Development targets. The project had covered new grounds in its work particularly empowering people to mobilise their own resources which when complimented with project resources have resulted in major adaptation investments implemented. Community confidence has translated into wholehearted involvement.

Given the success of the pilots in the CBDAMPIC project, it is recommended to continue the approach on a more widespread scale, building on the expertise that has been gained by the country teams, and using the capacity that was build regionally in other Pacific Island Countries and Territories.

Annex 1 CBDAMPIC Logical Framework



Annex 2 Preliminary Environment Impact Assessment Sheet

A: Agency conducting the PEA

1. Name of agency conducting PEA: _____
2. Name and position of person conducting PEA: _____
3. Was a site visit conducted? _____
4. Name and position of people consulted? _____

B: The Development

5. Name & address of Developer: _____
6. Name of proposal: _____
7. Development site/ address: _____
8. Island: _____
9. Closest village or town: _____
10. Is the development on a lease or customary land? (*please circle*)
11. Description of development activity _____

12. Description of existing environment at the development site

_____ (or attach photos)

C: Possible impacts on the environment

13. Is it likely that the development will

- a) have adverse impacts on the marine environment? Yes / No / Don't know
- b) have adverse impacts on coral reefs or sea grass meadows? Yes / No / Don't know

- c) have adverse impacts on coastal processes, tidal movement, beaches? Yes / No / Don't know
- d) have adverse impacts on rivers, lakes or other surface water? Yes / No / Don't know
- e) have adverse impacts on under ground water? Yes / No / Don't know
- f) affect any historical sites? Yes / No / Don't know
- g) affect any custom or tabu places? Yes / No / Don't know
- h) adversely affect any people or group of people? Yes / No / Don't know
- i) block long standing rights of access to resources or places? Yes / No / Don't know
- j) cause any kind of pollution? Yes / No / Don't know
- k) generate any problem wastes? Yes / No / Don't know
- l) use any dangerous substances or chemicals? Yes / No / Don't know
- m) affect any conservation area? Yes / No / Don't know
- n) affect any plants or animals that are important? Yes / No / Don't know
- o) be affected by cyclones? Yes / No / Don't know
- p) be affected by storm surges? Yes / No / Don't know
- q) be affected by climate and sea level change? Yes / No / Don't know
- r) affected by volcanoes? Yes / No / Don't know
- s) affected by landslides? Yes / No / Don't know
- t) cause erosion or increased water run off? Yes / No / Don't know

14. If you answered yes to any of these questions please describe the impacts that might occur?

15. In what ways has the developer addressed these environmental threats within his plans?

16. Do you feel these measure will minimise or adequately mitigate against these environmental risks?

D. Decision

17 Recommendation

- (a) Development does not need further environmental impact assessment.

- (b) The Development does not need a full impact assessment but the developer must meet the following environmental conditions.

- (c) Further information and a full EIA is required.

Sign:

Date:

(Full name and position)

Please attach any additional information, which you think will be helpful? For example: copy of development plan or proposal, site maps, details of people who provided custom information etc.)

Annex 3 The Official Opening of Lateu Settlement

A Brief Account of the Opening Ceremony for the New Lateu Settlement, Torba Province, Vanuatu: For the benefit of supporters of climate change adaptation

Taito Nakalevu⁵ and Brian Phillips⁶

Acknowledgement

We wish to acknowledge the Canadian International Development Agency (CIDA) for the funding support they had provided to enable this project to get-off the ground. Contributions from government agencies, Non-Government Organisations, the Church of Melanesia and in particular the Vanuatu National Advisory Council on Climate Change (NACCC) and Meteorology Department in terms of political, technical and administrative support is deeply acknowledged. Not forgetting the communities for their firm support all the way; to you all we devote the success of this resettlement programme.

Introduction

This report briefly summarises the opening ceremony for the new Lateu settlement in the Torba Province, Vanuatu. It is part of the Capacity Building for the Development of Adaptation in Pacific Island Countries project (CBDAMPIC) funded by the CIDA and executed in the Pacific region by the Secretariat of the Pacific Regional Environment Programme (SPREP). Proceedings are described as they unfold. A short background is also provided to give context to the event. This short account of the opening ceremony also serves to inform the climate change community on the progress that has been made in one of the first relocation programmes globally to be undertaken due to the adverse effects of climate change.

Official Delegation

On Tuesday 23rd August, the official delegation of the Minister for Ni Vanuatu Business, the Hon Joshua Kalkasua arrived at Lateu in Tegua to officially open the new settlement where the community of Lateu have relocated. Tegua is part of the Torba province, the northern most group of islands in the Vanuatu chain with only canoes as their connection to the outside world. Trading ships only visit Lateu once or twice a year from Santo and intermittently by neighbours from other islands in the province.

The Minister's delegation included the Director General for the Ministry of Works and Public Utilities Mr. Manasah Tari, the Director Meteorology Mr. Jotham Napat, the Head of the Hydrology Section, Department of Geology and Mines Ms Rossette Kalmet, the Secretary General for the Torba Province Father Boldwin Lonsdale and the Regional Project Manager for the CBDAMPIC project and SPREP representative Mr. Taito Nakalevu.

The official delegation was welcomed with garlands prepared from exotic flowers and plants that grow abundantly on the island. The Chief traditionally welcomed the delegation and in his speech pointed out that there has not been any development as significant as this that had reached the shores of Lateu 25 years after Vanuatu's independence.

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⁶ CBDAMPIC Project National Coordinator, Vanuatu Meteorological Office, PMB 9054, Port Vila

Plate 1 Villagers singing a welcome song to the delegation



Brief Background

Lateu community is one of the three pilot projects for the CBDAMPIC project in Vanuatu. It is very vulnerable to storm surges and tidal waves due to its very low elevation and has suffered from frequent inundation and coastal erosion of 2 to 3 meters per annum. The village is 5 m from the high water mark (HWM) and any strong south easterly during high tides will generate waves that will overtop the 1m coral strands that act as barrier and floods the whole village and dwellings. The most recent flooding was in July 26-28, 2005.

Plate 2 Lateu village by the sea



Sleeping houses are built on foundations of accumulated limestone rocks to avoid flooding at high tide. Kitchens are a separate building from the sleeping house where fireplaces are raised on limestone rocks to keep them dry. The village grounds are permanently wet, muddy and slippery from flooding and this is aggravated during periods of prolonged rain. Furthermore extensive salt marshes located behind the village contribute significantly to flooding in the event of heavy rain.

Plate 3 Cooking places have to be raised to avoid flooding



Malaria and skin infections especially among children are the most common health problems. These health problem stem from the regular flooding or inundation of the village compound, coupled with existence of extensive swamp areas, which create favourable conditions for mosquitoes and water borne infections. A small health aid post on the island caters for minor medical problems while serious cases are referred to Loh or Santo.

CBDAMPIC Project Intervention

The main problem that has prevented the people of Lateu from relocating to higher grounds on their own is the issue of water. Their main source of water at present is a small water tank that was supplied by the Government years ago and fresh water springs at low tides. There are no above ground water sources in the whole island of Lateu and people rely on rainwater they harvest to maintain a constant supply for their daily sustenance. Containers to hold water are scarce and people rely on buoys that drift into the shores of Lateu to hold water that are harvested.

The CBDAMPIC project intervention included improving the ability of people to harvest water and be able to store for longer periods of time than is currently the case. In practical terms these included providing the people of Lateu six water tanks of 6,000 litres each, which gives a total 36,000 litres of quality fresh water now available to the people of Lateu. The CBDAMPIC project also funded roofing irons that were erected as shelters to harvest water for the tanks. The project intervention enabled several things to happen. The people are now moving to higher grounds therefore avoiding coastal inundation that they have been vulnerable too for many years. People now have an abundant source of water, which is a basic need for all human beings. They have stopped using latrines that are usually flooded when the village is inundated thus minimising health risks to the community.

In terms of adaptive capacity enhancement, the CBDAMPIC project intervention has greatly improved the people of Lateu's resilience to current and future climate change risks.

Dedication Service

A dedication church service followed where the thanksgiving was given to the Almighty God for his providence and interventions in the life of the people of Lateu. Father John Andrew Siota from the Anglican Diocese led the service to dedicate the new village site to the Lord Jesus and

also thank CIDA, SPREP and the Government of Vanuatu for the assistance they have provided to enable the CBDAMPIC project to be implemented in Lateu.

Plate 4 Dedication Service



After the dedication service, the procession to the new settlement, which is now named Lirak, was led by Father Siota who sprinkled holy water along the way to the new settlement and around the new site.

Plate 5 On the way to the new settlement, Lirak



Lirak is the name of the land where the village is located and it is now the new name for the settlement. It is a tradition for this community to use names of places or living things that have sustained them for generations to either name their houses, sons and daughters or new places they move to. The official opening to mark the opening of the new Lirak was made by Hon Joshua Kalsakau, the Minister for Ni-Vanuatu Business.

Plate 6 Hon Joshua Kalsakau conducting the honour of opening the new Lirak Settlement



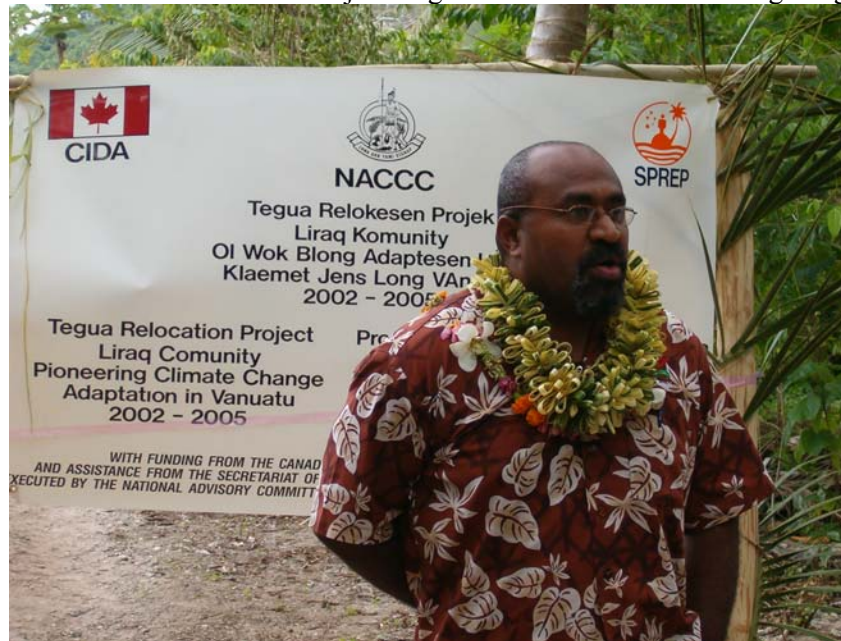
Chief Reuben on behalf of the new Liraq community thanked CIDA for providing the funds to enable all the developments to happen and SPREP in successfully providing guidance and technical support in the overall execution of the project. Vanuatu Government was also being praised by the community in the way they have handled the situation and the help each ministry and departments have provided the project to make the project implementation happen according to plan.

Plate 7 Chief Reuben giving an emotional address



Mr. Nakalevu also addressed the community on behalf of the Director of SPREP and CIDA. He indicated that this is a significant development regionally as well as globally. Small Island Developing States have been asking assistance from developed countries for adaptation implementation and CIDA had responded positively. Very recently, GEF had also allocated resources that will be available for further demonstration of pilot adaptation projects. This is a significant development globally and should be welcomed by all Pacific Island countries.

Plate 8 SPREP and CBDAMPIC Project Regional Coordinator addressing the gathering



The Official delegation entered the village and followed the church elders as they went about blessing the new village and all the project interventions that have been implemented which included six water tanks and roofing's for water harvesting. The CBDAMPIC project provided the iron roofing materials and some timbers whilst the board that serves as the walls are obtained by the villagers from palm that grows wild around the village.

Plate 9 Father Siota sprinkling holy water on the water tanks



As the officials have been given the tourage of the village a whole community photo session was undertaken in memory of the opening of the new village.

Plate 10 The whole community gather with celebration in their new settlement



The community of Lirak were overwhelmed with appreciation and they treated the delegation with custom dances and food (in abundance).

Plate 11 Director General Infrastructure and Public Utilities enjoying a custom dance



The delegation returned to Vila deeply satisfied with the achievement and in the word of the Director General for Public Works and Utilities, Mr Manasah Tari; “at least we know that in the next 50 years, the community of Lirak will be safe from flooding, tsunami and storm surges”.

Annex 4. Vanuatu Meteorological Service Revised Structure

