Strategies and on the Ground Options for Climate Change Adaptation and Disaster Risk Management in the Pacific

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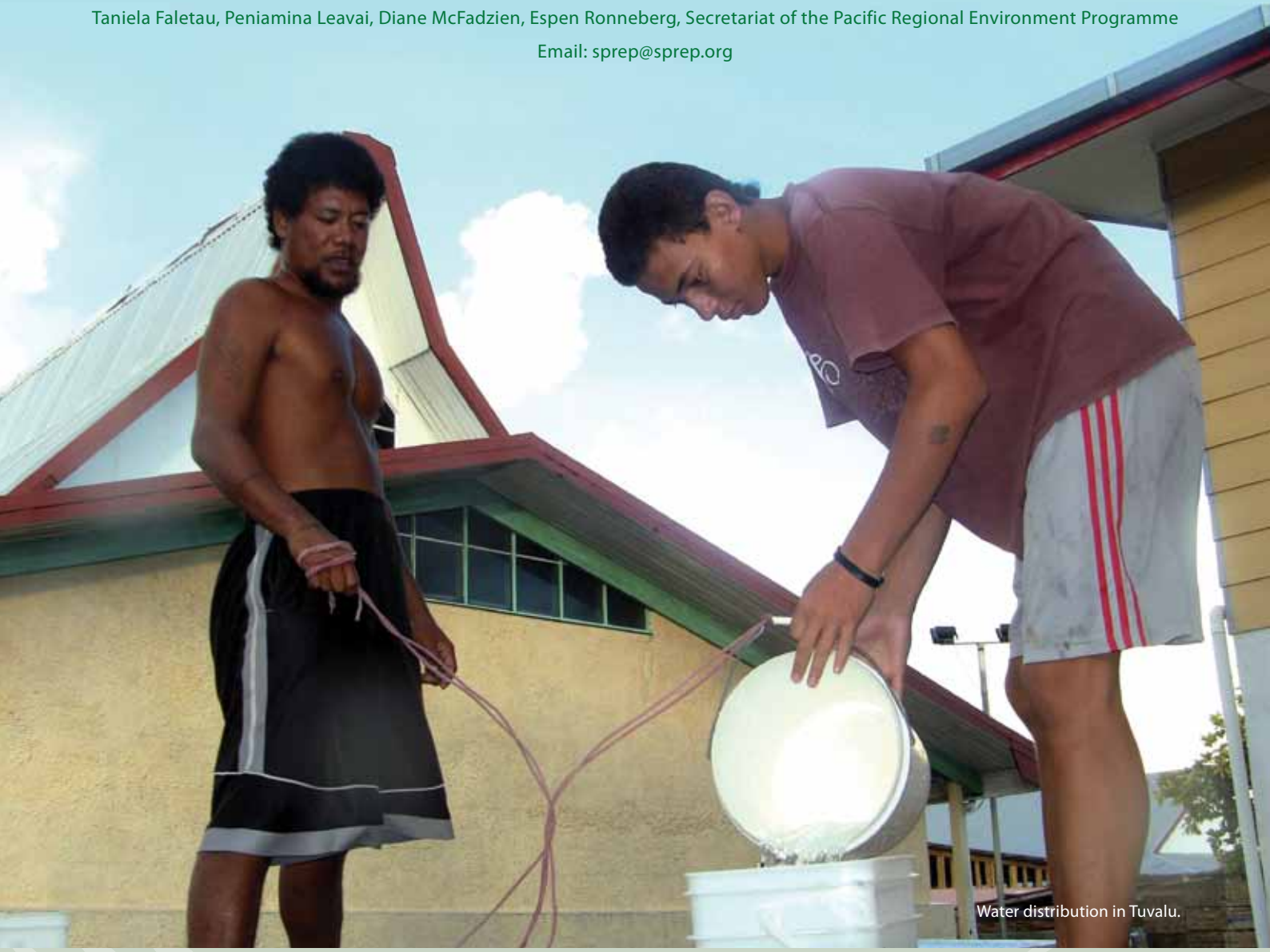

Water distribution in Tuvalu.

ABSTRACT

Small Island developing states (SIDS) have ongoing projects and projects in the pipeline which are targeted at implementing adaptation measures. In the Pacific alone there have been a range of such initiatives starting with the PICCAP project in the late 90s to the ongoing PACC project, the latter building on the lessons learnt from its predecessors to help increase resilience to the impacts of climate change. On a global, regional and national level these projects have stringently involved strengthening of institutions, policy and regulations, but more importantly evolved to implement on the ground-level tasks, many of which follow on from, or are acting in synergy with other projects for the mainstreaming of climate change adaptation (CCA) and disaster risk reduction (DRR) initiatives in communities. A key challenge in this context for decision makers, policy makers, and development partners is to understand and adopt strategies that are effective in mobilizing people and resources in response to CCA and DRR. All efforts in this context must be made to learn from past lessons and concerted action taken to refine, augment and deploy these initiatives appropriately and urgently.

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1 INTRODUCTION

The Fourth Assessment Report for the Intergovernmental Panel on Climate Change (IPCC) reinforced that sea level rise is expected to intensify inundation, storm surges, erosion and other coastal hazards. In the Pacific more than 50% of the population lives within 1.5 km of the shore with major infrastructure such as roads, airports, power and water utilities, and businesses highly susceptible to natural disasters. These mounting challenges underline the increasing need for practical and focused adaptation responses to climate change in the Pacific region [1]. In 1997, three years after the Barbados Programme of Action (BPOA) drew special attention to Small Island Developing States (SIDS) and their unique circumstances, the Pacific Islands Climate Change Assistance Programme (PICCAP) commenced in the region. This three year programme funded by the Global Environment Facility (GEF) and implemented by the Secretariat of the Pacific Regional Environment Programme (SPREP) was the first of its kind in the region to introduce relevant strategies and on the ground options to address emergent climate change issues.

Building upon the foundations laid by PICCAP in 2000, from 2002 - 2006 the Capacity Building for the Development of Adaptation Measures in Pacific Island Countries (CBDAMPIC) project funded by the Canadian International Development Agency (CIDA) through SPREP, piloted climate change adaptation (CCA) implementation in the Pacific. Given the success of the pilots in the CBDMAPIC project, it was recommended to continue the approach on a more widespread scale. The Pacific Adaptation to Climate Change (PACC) Project fundamentally is the first UNDP project in the Pacific islands region to draw on resources for on the ground adaptation from the Special Climate Change Fund (SCCF) managed by GEF. The Project which began in 2009 and is currently ongoing is a response to country-driven priorities for adaptation identified in the National Communications to the UNFCCC under PICCAP, and is consistent with National Adaptation Programmes for Action (NAPAs), as well as the regionally endorsed Pacific Islands Framework for Action on Climate Change (PIFACC) and relevant regional frameworks such as the Regional Framework for Action for Disaster Risk Reduction (DRR) and Disaster Risk Management (DRM) 2005-2015. It has also taken on the role as an institutional framework for adaptation implementation, through the national, regional and donor structures that have been put in place, and is also a major contribution to work on mainstreaming of adaptation and disaster risk in the region.

2 OVERVIEW

a) PICCAP Lessons Learned

Fundamental to PICCAP's working programme were the key areas of preparing country Greenhouse Gas (GHG) inventories, the establishment of national vulnerability assessments, but more importantly from the point of view of the PICs was the identification of options on how best to adapt to the impacts of climate change . The key outcomes fashioned for adaptation in PIC's was the development of the following set of guidelines and strategies for policymakers and development planners:

- **Strategy 1:** Incorporating climate change and sea level rise considerations into all development planning.
- **Strategy 2:** Developing proposals that are specifically aimed at addressing possible effects of climate change and sea level rise.
- **Strategy 3:** Developing proposals within the PICCAP process for implementation after the completion of PICCA that are aimed at building institutional and technical capacity to facilitate strategies 1 and 2 and to manage the effects of climate change and sea level rise [2].

The primary objective of the approach taken by PICCAP in this context was to seek to incorporate adaptation into the national development process with the expectation that each of these strategies would subsequently be supported by adaptation funding. However, this has been shown to be a premature expectation, even under the current fast start financing. In essence the climate change and sea level rise step by step process further illustrated in Fig.1 is not a prescriptive process, but rather an additional tool to provide information for decision-makers intent on integrating findings into existing planning, participatory procedures and other decision-making protocols.

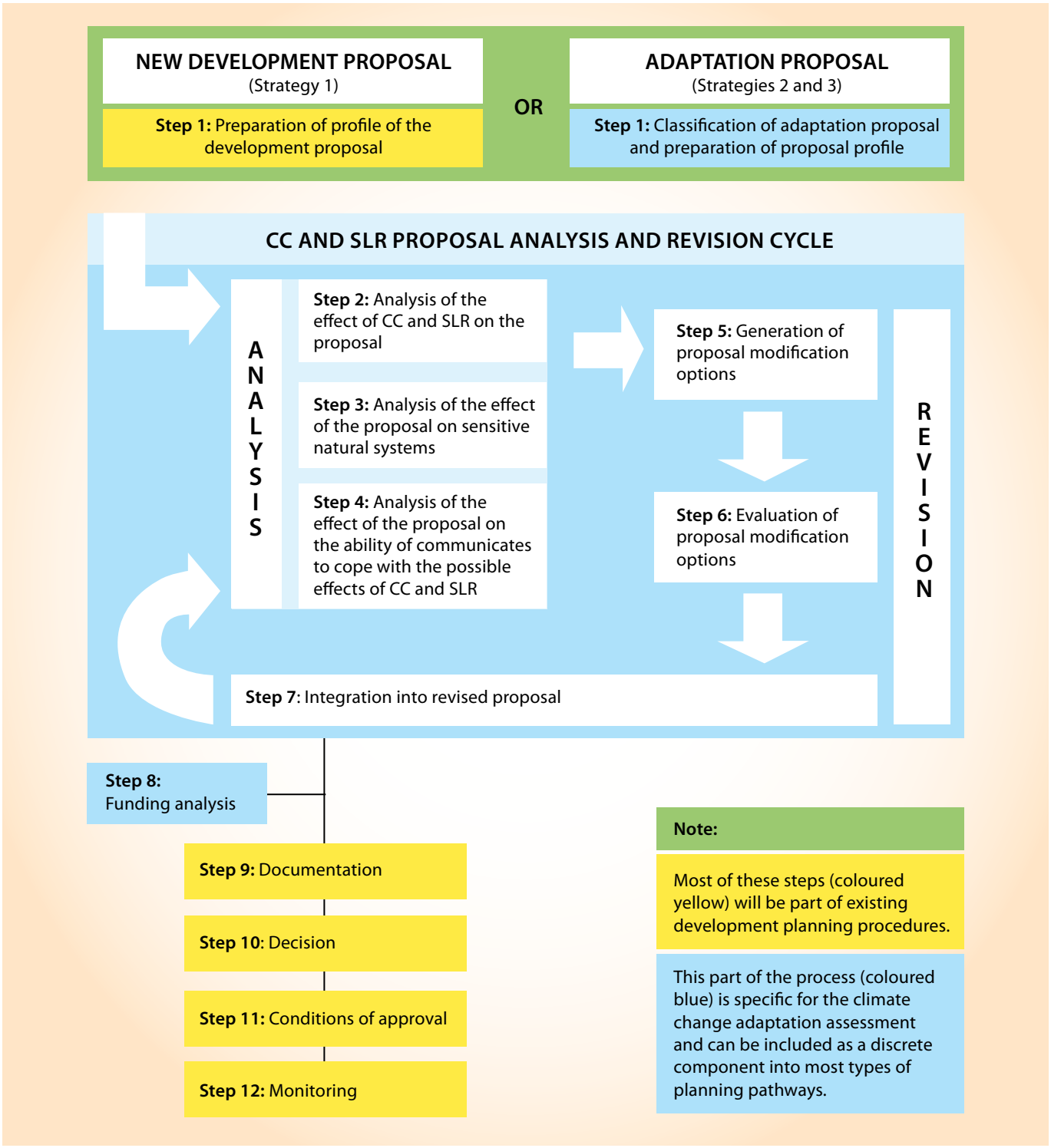
- Step 1 thus is the starting point for a normal development proposal (Strategy 1) or an adaptation proposal (Strategy 2 and 3).
- Steps 2-7 are the key steps in analyzing the proposal in terms of climate change and modifying it to incorporate adaptation considerations. These steps are essentially repeated until an acceptable outcome is obtained.
- Step 8-11 is intended to provide an indication of funding the proposal may attract from international adaptation funds such as the Clean Development Mechanism (CDM). They also entail steps common to most development pathways through the provision of information to decision-makers, proposal approval and implementation [2].

In principle, PICCAP through this staged approach process established specific measures for adapting to climate change and sea level rise. In the process however it highlighted the fact that this can only be implemented if a number of associated actions are taken, aimed at providing a favourable context for adaptation measures. Adaptive capacity in this context not only includes the intrinsic resilience of natural ecosystems but goes well beyond that to include institutional, political, financial and cultural factors that influence the ability of ecosystems to cope with and adjust to climate change [3].

b) The CBDAMPIC Initiative

In a joint statement prepared for the Sixth Conference of the Parties (COP 6) to the UN Framework Convention on Climate Change (UNFCCC), Pacific Island Governments urged the international community to consider the need for funding climate change adaptation (COP Preparatory Workshop, 2001). At that workshop, the Canadian Government announced a grant that would in effect seek to meet that call, at least in part, and four PICs were self-selected to participate in the proposed project, which was to be titled CBDAMPIC.

Fig .1: Flow Chart of Climate Change and Sea Level Rise Adaptation Process under PICCAP



Source: Modified from [2]

The purpose of the CBDAMPIC project which was thus developed and implemented was to pursue a capacity building programme to increase the self-selected countries capabilities to reduce climate related risks at the institutional and community level [4]. In this context the aim was to help build the capacities of Pacific island countries government structures and communities themselves to better deal with climate change risks and vulnerabilities. The project more importantly developed and successfully demonstrated a process for taking action that fuses the top-down and bottom-up approach to climate change community vulnerability and adaptation assessments and action (CV&A). The CV&A Guide developed as a consequence outlined six main phases for execution at local community level:

- Adaptation Context,
- Diagnostic,
- Assessment and Evaluation,
- Development,
- Implementation, and
- Monitoring phases [5].

The community-focused approach to vulnerability and adaptation assessment employed by CBDAMPIC was innovative and different from the global circulation model-based impact assessments commonly used world-wide. These models have a very large resolution, and countries like PICs often fall entirely within one of the grids utilized, making its utility for decision making unreliable. The CV&A guide developed essentially builds on the various participatory methodologies that have already been introduced into the Pacific. These include; Rapid Rural Appraisal (RRA), Participatory Learning and Action (PLA), and Comprehensive Hazard and Risk Management (CHARM) all adhering to the following principles:

- Community participation and consultation in any development is critical in the Pacific, as the majority of natural resources are community-owned and their endorsement is vital before any implementation can be carried out.
- Engaging communities at the outset of any development process that affects them will ensure appropriate input and ownership.
- The CV&A approach adopts the premise that climate change is already happening now in the Pacific and is already affecting the livelihood of communities. Thus, support should be provided now to communities so that their resilience to current and future climate change is enhanced.
- This guide should assist facilitators and the community to centre principally on how climate change affects people's livelihood, their current coping mechanisms and develop strategies to build resilience to future climate change [5].

Water tanks provided to communities in Aitutaki, Cook Islands as part of the CBDAMPIC project.

(c) The PACC Mandate

The PACC Project is the first adaptation project to be implemented in the region by responding directly to the call to improve the effectiveness of the response to the consequences of climate change in the Pacific. In this context, the project has been designed to address these key issues on three fronts:

- Improving the capacity of Pacific island governments to mainstream climate change adaptation into government policies and plans;
- Addressing the urgent need for adaptation measures through developing systematic guidelines for adaptation and demonstrating their use at a pilot scale in the coastal management, food security and water resources sectors; and
- Laying the foundation for a comprehensive approach to address adaptation over the medium-long term at the regional level [6].

The PACC activities undertaken at national level are being carried out by national project teams. Specific measures to reduce vulnerabilities of key investments are being implemented in the form of demonstrations. The Project implements a framework of action that fuses the top-down (mainstreaming) and bottom-up approaches to climate change vulnerability assessments and action. This is an important development, regionally as well as globally. Most other adaptation projects have pursued only one or other of these two approaches. The dual approach of PACC encourages and facilitates new modes of action that are consistent with both community and national priorities and plans [7].

(d) The Pacific DRR and Disaster Risk Management Partnership Network

While adaptation to climate change work in the Pacific is relatively new the Pacific has a much longer history with DRM work. Many of the disasters that the Pacific deals with are in fact climate related (i.e. cyclones, droughts, floods, fires, health outbreaks etc) The division between natural climate variability and longer term anthropogenic climate impacts is really an artificial one, created by the mandate of the policies dealing with each of the fields. As such – there are many lessons that climate change practitioners can draw from the DRM community. There are advantages to dealing with the two together:

- The DRM community has a lot of experience in dealing with risk, having been around longer than the climate one, in the Pacific. The DRM community has strong existing national structures which reach across many levels at the national level. That is most PICs have national DMO offices, national DRM teams in place, with strong involvement of community based groups such as the Red Cross and other civil society organizations whereas while the climate community has also now established similar structures, it originally stemmed from a top down international policy approach – (i.e. its legal mandate has come from an internationally negotiated treaty, the UNFCCC).
- By reducing vulnerability to disasters/risk, one also addresses longer term climate change concerns.

In the Pacific, some governments have also started to take an approach of combining the two communities – through Joint National Action Plans (JNAPs) integrating climate risk into existing National DRM Action Plans. The advantages are that it builds upon existing methodologies and structures avoiding duplication of resources [8]. DRR and DRM in this context essentially emphasize the importance of proactive, multi-faceted, cross-sectoral approaches to integrating disaster risk considerations into national planning with effective partnerships between stakeholders at all levels, encouraging and increasing coordination among those levels, avoiding duplication, and promoting ownership and endorsement of the Pacific DRM Framework as a feasible long-term strategy for sustainable development. In this context recent DRM work in Pacific Countries such as Fiji has shown that community preparedness to disasters, including climate related disasters such as floods relies on the following procedures to be put in place:

- Adequate early warning systems (ie rainfall monitoring, river level monitoring)
- Adequate interpretation of such data – including clearly defined roles and responsibilities of institutions charged with monitoring.
- Message construction relevant and clear – general country wide messages often do not work. Messages in this context must be relevant and targeted to the specific communities and sites at risk (as opposed to generic nationwide warnings).
- Communication channels must be clearly defined and targeted so that those must vulnerable receive information in a timely manner – for example, generic radio bulletins can be missed, while targeted phone calls or door to door visits have a higher success rate for vulnerable populations.
- Adequate preparedness and knowledge of protective behavior – i.e. adequate responses based on warning received (e.g. asset protection, relocation to safer ground) [9].

3 DISCUSSION

Lessons Learned

- In the Pacific region a key issue consistent throughout is that development initiatives have tended to be handled in isolation and designed in the context of immediate needs and short-term government and donor imperatives. There is little appreciation of the practical implementation of adaptation measures as an integral component of socio-economic development activities.
- Employing comparable methods that are in turn based on international best practices however over a number of PIC's ensures that differentiated adaptive capacities and adaptation options and strategies can now be recognised and addressed through coordinated stage approaches.
- Adaptive capacity in this context must be understood not only in the intrinsic resilience of natural ecosystems but well beyond that to include institutional, political, financial, cultural and other human factors that influence the ability of systems to cope with, or adjust to, climate change.
- Employing a 'bottom-up' 'learning-by-doing' approach with communities is highly recommended in contrast to scientific scenario driven top-down approaches such as the Global Climate Models (GCMs) and Regional Climate Models (RCMs) that demand technical capacities.
- Strategies fashioned such as the CC/SLR adaptation approach and the CV&A Guide and
- similar systemic approaches are successful and distinct at grassroots level for the level of responsibility and empowerment it gives 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.

For DRR there are many lessons that are relevant for the adaptation community and in particular from the Pacific DRM Partnership Network:

- The need for institutions to have clear mandates and understanding of who is responsible for which of the above steps (i.e. monitoring of warning stations, data interpretation, communications and management of response) as disaster experience have shown that unclear roles and mandates have led to steps being left out, or vulnerable communities not receiving vital information, and lives lost.
- Communications must be clearly targeted, so that it is understandable and relevant, and to ensure that those most vulnerable will receive it (as more common forms of communication can be compromised during times of disaster).
- While the climate change community may be responding to slower onset impacts, clear institutional structures and communications systems are just as vitally important [9]
- Both the CBDAMPIC and PACC projects have utilized significantly the community consultative process, in conjunction with the top down approach. This has allowed additional elements of concern to the community to be fully explored and solutions proposed that address multiple issues, and not just the climate change issues. For example, the road upgrading project in Kosrae, FSM, will also avoid interfering with or damaging a valuable coastal forest and mangroves. Since this has both cultural and coastal protection values it was a multiple win-win for this part of the project.
- Furthermore, the community consultative process also ensures that the key stakeholders and beneficiaries are engaged from the very beginning. This ensures the full buy-in of the community, facilitates their engagement in terms of in-kind services, and that their acceptance of the options implemented gives added impetus to maintenance and upkeep, as well as monitoring, evaluation and re-adjustment over time.
- Finally, PACC has established a framework for cooperation on adaptation in the region that is being recognized by other donors as a valuable asset in ensuring that adaptation implementation will be successful. This framework includes the physical linkages to national climate change focal points and adaptation experts, regional and international expertise, linkages to all relevant line ministries and agencies in-country, and a reporting and monitoring framework that is operational.

4 CONCLUSIONS

Implications for Policy and Actions

The design of the PACC Project gives priority to activities that will reduce the risks to the sustainability of national and sectoral development initiatives arising from climate change. In this context the Project emphasis is not only implementing activities themselves, but also on *monitoring* and *evaluating their effectiveness*. The linkages and synergies are not simply something to be indentified during project preparation, and then cast to one side. Rather, it is important that PACC demonstrates the extent to which the adaptation interventions have indeed reduced the risks to the sustainability of national and other development initiatives

There is also an urgent need to address the current shortfalls in technical assistance. This would include formalizing and operationalising those *collaborative partnerships* which were recognized as being critical to providing countries with the targeted technical assistance they require to implement the Project in a successful manner. Priority should be given to ensuring the full and effective involvement of the relevant CROP agencies, on not only an individual basis but also working collaboratively in ways that synergize their individual *comparative advantages*. Extreme care should be taken to ensure that assistance from organizations based outside the region is provided only when they have a compelling comparative advantage. Any such assistance should address the specific and well-documented needs of the countries and be of immediate practical value in helping countries deliver the outputs and achieve the outcomes for which they are responsible. Any assistance must also be delivered in a timely and *cost effective* manner.

One of the most critical issues presently faced by SCCF-funded projects, such as PACC, is the difficulty of obtaining and retaining *co-financing*, especially if there is a delay in the project being approved or funds disbursed from the donor. Co-financing is provided by the baseline development activities. It is difficult if not impossible to put these activities on hold if there is a delay in the project approval process. It is likely that if such a delay does occur, critical project activities will have to be changed in order to reflect completion of the baseline development activities while project approval has been awaited.

A further conclusion as referenced above is the establishment through PACC of a functional and *operational framework* for adaptation implementation in the region. This incorporates most of the regionally identified ingredients for success, such as community consultation, Government commitment and engagement, and reporting structures that have engendered the trust of donors. This allows further resources to be cost-effectively channeled through this PACC framework in a flexible manner, and while the originating structure for PACC was focused on the SPREP, UNDP and GEF partnership, it can be adjusted to allow for individual donor partners to work with the national and regional institutions cooperatively. Greater transparency and information sharing is also facilitated in this manner.

Community Socio-economic assessment underway in Papua New Guinea, PACC project.

Community water distribution in Funafuti, Tuvalu.

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