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THE COASTAL
COMMUNITY
ADAPTATION PROJECT

*Helping Pacific Island
Communities Adapt to
a Changing Climate*

C-CAP NEWSLETTER

AUGUST 2013

Climate adaptation project commencing at health clinic in Pari, Papua New Guinea

A written agreement to cooperate on the proposed infrastructure activity was signed on 30 August by C-CAP’s Chief of Party, Pari’s two Councilors, and a provincial Department of Health representative. With this formalized agreement in place, material procurement and construction can now proceed on cyclone-proofing the Pari village clinic.

The cyclone-proofing project will benefit over four-thousand people living in Pari by minimizing the risk of disruption to health services following extreme wind events. In addition to cyclone-proofing, C-CAP will install new guttering and piping to establish a stand-

alone water supply for the Clinic. This new connection will give the facility reliable access to water—a benefit of particular importance during the frequent disruptions to the village’s main water supply.

Lessons learned from the project will be used to develop a cyclone-proofing manual that can be used for other health center facilities within PNG’s National Capital District.



IMAGE BY C-CAP

The Pari project demonstrates that quick and simple climate change adaptation solutions can deliver significant benefits to communities.

ABOVE: Pari Councilors (Pari Taurama Ward Councilor Ovia Oala and Pari Taota Ward Councilor Guba Tom) sign the community agreement on 30 August 2013.

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Prioritizing infrastructure for climate adaptation in Tonga

Five coastal communities in Tonga—Ahau, Nukuleka, Popua, Sopu and Tatakamotonga—prioritize infrastructure assets with aim to increase resilience to the current and projected impacts of climate change. Infrastructure rehabilitation / construction to begin as early as December 2013.

The community leaders, men, women, and youth of these communities identified their infrastructure priorities—infrastructure construction, improvement, or maintenance activities for climate change adaptation—in late July during workshops facilitated by C-CAP's Senior Technical Adviser and Community Liaison Officer.

Prior to identifying priorities, communities were introduced to the Tonga country report from the Pacific Climate Change Science Program—the primary climate science resource used by the project. Trends and projections contained in the report include temperatures continuing to increase with more very hot days expected in the future; changing rainfall patterns with more

extreme rainfall days; and less frequent but more intense tropical cyclones.

Workshop participants also revisited their climate change observations and risk mapping from the Community Risk Assessment exercise conducted in their respective communities in January 2013. During these assessments, the C-CAP team recorded community perceptions of climate change and how it was impacting the community. Also, the community had mapped infrastructure assets and discussed their vulnerability to climate change impacts. During the infrastructure prioritization workshop, each community reviewed this information, and

Tongan communities identified rainwater catchment systems, evacuation centers / multi-purpose halls, sea walls, roads and drainage as adaptation priorities.

C-CAP worked to facilitate consensus on the top three infrastructure activity options to reduce local vulnerability. The relative priority of the three options was then quantified using C-CAP's Infrastructure Prioritization Index methodology.

Following the prioritization workshops, C-CAP consulted with national experts in government and non-government organizations to verify the feasibility and suitability of the options.

C-CAP's Infrastructure Specialist and Community Liaison Specialist will make a follow up visit to Tonga in September to further research the cost and feasibility of the identified priorities.



IMAGE BY C-CAP

ABOVE: Sopu community members working together to identify infrastructure priorities during a C-CAP workshop.

Adaptation in Motion **Checking in with C-CAP communities: Buretu and Daku, Fiji**

Climate change adaptation is a fluid process that the C-CAP team is helping 22 Pacific Island communities to navigate through a clear, logical progression of activities:

- Ensuring that partner communities are first attuned to climate projections and locally-observed (current) climate change impacts, by providing tailored climate science resources and cataloguing and mapping climate risk areas and assets;
- Working with partners to raise awareness of their own vulnerability by linking current and projected climate impacts to community assets like water systems, health centers, schools and coastal barriers through the Infrastructure Prioritization Index (IPI), a decision-support tool for objective ranking of vulnerable community assets; and
- Targeting limited adaptation resources to projects that the community has prioritized based on science-based climate projections, current climate impacts, and availability of local resources.

With this USAID support, C-CAP partners across the Pacific Islands region better understand how climate science applies to their community and are in a position to implement adaptation projects that increase their resilience to the current and projected impacts of climate change. While C-CAP tools and resources can be sustainably used for ongoing adaptation



ABOVE: Assistant Roko (kneeling) addresses Buretu community leaders during a C-CAP site visit.

beyond the life of the project, the first C-CAP inspired adaptation projects are now being launched throughout the region. This column is an opportunity to check in on this adaptation in motion, taking place in two communities from Fiji's Rewa Delta, Buretu and Daku.

With a population of more than 25,000, Tailevu South is located on the southeastern corner of Fiji's main island of Viti Levu. C-CAP interventions are planned for two communities there—Buretu and Daku. The communities report a number of climate change impacts, including soil erosion to foreshore areas, regular flooding, and saltwater intrusion, which are expected to worsen in the absence of appropriate interventions. Both communities report that their main crops—taro in Buretu and coconut in Daku—are suffering from saltwater intrusion, which impacts local livelihoods and food security. Decreasing yields of subsistence agriculture also

contribute to increased consumption of processed foods that the communities link with an observed rise in incidence of non-communicable diseases.

The Buretu and Daku C-CAP community committees recently completed C-CAP's Infrastructure Prioritization Index, identifying infrastructure investments to mitigate the impacts of flooding, which both communities interpret as the root cause of many of their challenges. In Buretu, C-CAP is facilitating inspection of degraded erosion control interventions on the village-facing bank of the tidal Navolau River. Through engineering design, and in consultation with the community, the project will identify adaptations to the current system using both nature-based and hard infrastructure. The goal of the intervention will be to stabilize the eroding riverbank, restore vegetative growth and prevent flooding during heavy rains, extreme tides and storm surges.

Community representatives and facilitators are assisting the C-CAP team to work effectively with indigenous communities. C-CAP's Country Mobilizers (country-level experts from each of the participating countries) also ensure that project operations are sympathetic to the social and cultural contexts within which C-CAP is working.

Just West of Buretu, despite extensive work to increase the height of the village sea wall and to install three flood gates, Daku continues to experience flooding. Owing to the village's low elevation relative to sea level, rising sea levels and heavy

rainfall, the current flood prevention infrastructure has been insufficient — and given climate projections, their experience will worsen in years to come. C-CAP is leading site inspections of drainage and reclamation works which will

inform the identification of adaptation projects to improve drainage in the village.

Engineering design and construction is slated to take place in the first and second quarters of 2013-14 fiscal year.

COMMUNITY SNAPSHOTS

Daku and Buretu are situated on the banks of Navolau River, a tributary of the River Rewa in Tailevu Province. As low-lying communities situated within a delta environment, they are particularly vulnerable to impacts of climate change.

Daku:

The Daku community was part of the late 19th Century diaspora hailing from Levuka on the eastern coast of the Fijian island of Ovalau. Approximately 215 people currently reside in the village. After the community arrived at the present site of Daku, they worked to expand the narrow village area by reclaiming the land, which was done by hand and accomplished by 1937. Because the entirety of the village is low-lying, Daku is very vulnerable to flooding, erosion, and saltwater intrusion from sea level rise, tidal events, and storm surges. C-CAP's work will complement the climate change adaptation activities already undertaken in Daku by UNDP and other agencies, which has included the construction of large berms and floodgates.



IMAGE BY C-CAP



IMAGE BY C-CAP

Buretu:

The village of Buretu has a population of approximately 130 people, whose representatives report that the low-lying village is prone to inundation due to sea level rise and heavy rainfall events. As with Daku, flooding is intensified when rain storms coincide with spring tides. Older residents of Buretu report that the houses closest to the shoreline used to be at the back of the village, and the river has also claimed a playing field. Overharvesting and death of mangroves in the foreshore area has degraded a major fish habitat, impacting artisanal fishermen and women. C-CAP is working with the community to identify and implement sustainable climate change adaptation strategies that will help alleviate some of these challenges.

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