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Lessons Learned from a Pilot Project in Western Province, Solomon Islands

Introduction

The Coral Triangle is considered the global epicenter of marine biodiversity, with more than one third of its 360 million residents directly dependent on coastal resources for their livelihoods and food security. However, coastal communities in the Coral Triangle are already experiencing the impacts of climate change. Severe storms, coastal inundation, rising sea level and sea surface temperatures are threatening safety and food security of more than 120 million people that depend directly on local marine and coastal resources for their income and livelihoods.

The Coral Triangle Initiative for Coral Reefs, Fisheries and Food Security (CTI) was founded in 2007 by six countries: Indonesia, Malaysia, Papua New Guinea, the Philippines, Timor-Leste and Solomon Islands. The CTI Regional Plan of Action, launched in 2009,

embodies a commitment and call to action by these countries to improve coastal resource management and food security. This commitment includes Climate Change Adaptation (CCA) as one of the five key goals, pledging to implement actions to reduce the impacts of and adapt to climate change.

Selection of the CTI LEAP Guide for a Community-based Adaptation Project

Solomon Islands' rural communities are resilient and have been adapting to environmental change for generations. However, a high reliance on natural resources for food and for income means that predicted climate change impacts could include an increase in sea and air temperatures, changing rain patterns, sea level rise and increased frequency of storms-have the potential to impact livelihoods, food security and community health.

In late 2011, two communities in the Western Province of Solomon Islands (SI) began a process to assess their vulnerability to climate change and develop an adaptation action plan. They worked with two NGOs, WWF-SI and WorldFish, which elected to use an early draft of the recently completed *LEAP Guide*¹. This initiative was funded through USAID's Coral Triangle Support Partnership.

The Solomon Islands' National Constitution recognizes customary marine tenure. More than 90% of inshore coastal areas, islands and islets are under customary marine tenure. Under customary tenure systems particular groups of people (e.g. family units, clans or tribes) have primary rights to access and use marine resources. In Solomon Islands, community-based initiatives like Community Based Resource Management (CBRM) build on customary tenure and use rights as the mechanism to manage resources. Championed by the Solomon Islands Government and local and international NGOs, CBRM is therefore

gaining traction in rural Solomon Islands communities interested in more proactively managing their local resources. The Solomon Islands Government endorses CBRM through the Ministry of Fisheries and Marine Resources' (MFMR) Inshore Fisheries Strategy and the Solomon Islands' National Adaptation Plan of Action (NAPA).

There are now a number of vulnerability assessments and adaptation planning tools available in the Pacific. The early version of the *LEAP Guide* was selected for use because it was one of the first to emerge based on a community-based adaptation concept that is consistent with Solomon Islands Government's approach.

A full accounting of the process and lessons learned from this CTI *LEAP Guide* pilot are available in a companion document titled "Fact Sheet: Local Early Action Planning (LEAP) for Climate Change Adaptation of Natural Resources in the Coastal Zone", which is available online at www.coraltriangleinitiative.org.



Coastal erosion (above photo) and coral bleaching (right photo) will increase with climate change, threatening the coastal and marine resources on which communities in the Solomon Islands depend. © WorldFish

¹ The *LEAP Guide* is the *CTI-CFF Climate Change Adaptation for Coral Triangle Communities: Guide for Vulnerability Assessment and Local Early Action Planning*. This guide is available online at www.coraltriangleinitiative.org



Box 1: Policy Brief Target Audience

The primary objective of the pilot exercise was to test the applicability of the LEAP tool to achieve community-based climate change adaptation plans in two communities. However, through the process of using the early draft of the guide, policy-related lessons were also identified. These lessons can inform processes and decisions taken by these Solomon Islands stakeholders to inform current and future activities:

- The Western Province Government;
- Other provincial governments;
- The CTI-CFF CCA Technical Working Group;
- The Climate Change Division of the Solomon Islands Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM);
- The Solomon Islands Ministry of Fisheries and Marine Resources (MFMR);
- The Solomon Islands National Climate Change Working Group within SI's CTI-CFF National Coordinating Committee (NCC); and
- Other coastal community-based CCA practitioners.

Box 2: Climate Change Adaptations Terms and Definitions

These definitions are taken from the CTI Integrated Glossary, available in the CTI EBM Guide, *Toward ecosystem-based coastal area and fisheries management in the Coral Triangle: Integrated strategies and guidance*. This guide is available online at www.coraltriangleinitiative.org

Adaptation – adjustment in natural or human systems in response to actual or expected climate and/or ocean change or their effects, which moderates harm or exploits beneficial opportunities.

Adaptation actions – management actions prioritized for implementation to adapt a system or target resource to the predicted impacts of climate or ocean change or other new and newly emerging threats. For a social resource target such as housing, options for adaptation actions may include moving housing, developing new building standards, or retrofitting existing housing to withstand a climate threat. For natural resources targets, such as coral reefs, options may include strengthening or expanding existing management efforts such as improving enforcement of existing marine protected area or expanding protection to a network of marine protected areas.

Climate change – a change in the state of the climate that can be identified (e.g. using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer.

Climate change adaptation (CCA) – actions taken to help society, communities, and ecosystems moderate, cope with, or take advantage of actual or expected changes in climate conditions. Adaptation can reduce vulnerability, both in the short and long term.

Community-based resource management (CBRM) – natural resource management planning and implementation carried out by the people and stakeholders in a community.

Vulnerability assessment (VA) – an evaluation of the exposure, sensitivity, and adaptive capacity of a target resource to climate and/or ocean change threats. It serves as a primary input to adaptation planning.

Vulnerability to Climate Change – the degree to which a human or natural system is susceptible to, and unable to cope with, adverse effects of climate and/or ocean change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate change and variation to which a system is exposed, its sensitivity, and its adaptive capacity.

- **Adaptive capacity** – the ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences.
- **Exposure** – is the extent to which a region, resource, or community experiences changes in climate. For example, a house on the shoreline will be more exposed to storm surges than a house further inland at a higher elevation.
- **Sensitivity** – the degree to which a system is affected, either adversely or beneficially, by climate variability or change. The effect may be direct (e.g. a change in crop yield in response to a change in the mean, range or variability of temperature) or indirect (e.g. damages caused by an increase in the frequency of coastal flooding due to sea-level rise).

Examples of Community-selected Adaptation Actions

Adapting is part of the Solomon Islands culture and the way people have done things to survive over time. Communities have a wealth of knowledge about the environment and change, which, if preserved, can be used to adapt to the likely impacts from climate change. It is important to stimulate people into thinking about using their local knowledge when talking about potential local adaptation.

The two participating communities identified a range of adaptation options through the LEAP process. During the development of the community action plans there was a strong focus on “nature-based adaptation planning” meaning building on, and protecting, the natural resources the communities had available to them, including sustainable resource use. Community adaptation options that were identified by communities testing the LEAP tool were categorized under four main headings (Table 1). Other coastal communities in Solomon Islands may identify similar options.

There are important policy barriers that may need to be addressed before some of these adaptation actions are undertaken. For example, the adaptation action “relocate to higher ground” may face significant challenges if land tenure rights are not addressed at

the outset, whereas “reduce cutting of mangroves for firewood” will be a challenge without a viable low-cost fuel alternative that may require significant government, NGO, or private sector investment.

Recommendations for Advancing Community Based CCA in the Western Province and at the National Level

Climate Change adaptation has been identified as a national priority for Solomon Islands. To assist the Ministry of Environment, Climate Change, Disaster Management and Meteorology’s (MECDM) Climate Change Division and MFMR to identify the next steps in Climate Change Adaptation (CCA) at a national level, some suggested practical steps are summarized here. This list was developed based on direct field experience and on subsequent discussions with members of the CTI National Coordinating Committee (NCC) and staff of MECDM.

Provincial governments have an important role to play in supporting communities to adapt to climate change, too. Communities require support to undertake vulnerability assessments, identify adaptation options and develop adaptation plans, and importantly to implement them. Specific recommended actions are listed in Table 2.

Table 1. Natural and Social Resources and Adaptation Actions Prioritized by Pilot Communities Using an Early Version of the LEAP Guide

Important natural or social resource	High-priority Community-selected Adaptation Actions
Coral reefs and fish	<ul style="list-style-type: none"> • Protect and manage key marine habitats (reefs, lagoons and seagrass beds) • Protect spawning aggregation sites • Use nearshore fish aggregating devices to reduce pressure off the reef
Coastal vegetation	<ul style="list-style-type: none"> • Plant vegetation (mangroves) around coastline • Reduce cutting of mangroves for firewood • Construct sea walls to protect important infrastructure
Coastal land and gardens	<ul style="list-style-type: none"> • Preserve food (drying nuts, smoking fish) • Use traditional knowledge to manage freshwater during times of drought
Communities	<ul style="list-style-type: none"> • Use traditional knowledge and practices for adaptation • Install household tanks for freshwater storage • Relocate to higher ground • Improve education and awareness about climate change

Table 2: Specific Recommended Actions for Provincial and National Level Support for Community Based CCA in Solomon Islands

Category • Action	Recommended for Provincial Govt.	Recommended for National Govt.
Strategic Communications		
• Serve as a repository of awareness material on climate change for use in communities (Provincial Level); Collate available awareness material on climate change for use nationally (National Level).	X	X
• Increase community awareness about the need for climate change adaptation.		X
• Identify common adaptation actions at regional, national, provincial and community levels and implementation options. Raise awareness about these and promote behavioral change.		X
• Increase community awareness about climate change adaptation options, lessons learned, and success stories from other communities and organizations. Use local awareness materials that are now available through the LEAP pilot and other experiences.	X	X
Strategic Planning and Oversight		
• Using an appropriate tool, and in a consultative setting (workshop) identify at a national and provincial level the sites/communities that are most vulnerable to climate change and prioritize these for the Province and for the country.	X	X
Policy and Governance		
• Rather than invest in completely new adaptation planning tools, build on established approaches like CBRM. CBRM and Community-based CCA are compatible in approach, process, and anticipated outcomes.		X
• Integrate CCA planning into existing processes where relevant, e.g. DRR or CBRM planning at the community level.		X
• Identify barriers to climate change adaptation provincial and national levels. Develop actions to address these.	X	X
• Where there is NGO support for communities to undertake adaptation planning, the Provincial Government must still be involved to understand the community threats and adaptation options. By attending meetings the Provincial Government can answer questions from the community about adaption they propose that involve the Provincial Government.	X	
Capacity Development (Training and Learning Networks)		
• Build Provincial Government capacity in climate change adaptation planning to support communities. Apply a 'train the trainer' approach and call for regional CCA training for provincial government, SILMMA, NGOs to attend. Ensure representation from 'high vulnerability/priority' areas.	X	X
• Build climate change adaptation training into existing training forums including SICHE, and SILMM network. Climate Change Division of MECDM is well positioned to lead this.		X
• Work with MECDM, SILMMA, and NGOs to develop and participate in regional CCA trainings. Include representation from 'high vulnerability/priority' communities in such opportunities.	X	
• Work with MECDM to develop and provide resources and guidance for communities to undertake adaptation planning and to implement their adaptation plans.	X	X
• Establish and promote learning networks at local, provincial, national and regional levels.	X	X
Technical Support		
• Collate and review climate change Vulnerability Assessment and Adaptation Planning tools that are available and have been used in the Pacific; assess them for their suitability for use in Solomon Islands.		X
• Assess suitability of common adaptation actions already identified at regional, national provincial and community levels for adoption in a specific Province.	X	
• Identify barriers to adaptation that communities may require external assistance to overcome.	X	
• Provide technical support to communities and answer community questions.	X	
Financial Support		
• Identify opportunities to financially support implementation of adaptation options.	X	X
• Incorporate funding allocation into the Provincial Government Strengthening Project (PGSP) budget.	X	



Blast or dynamite fishing (left photo) and the harvest of live coral for building materials (right photo) both increase the vulnerability of coral reefs to climate threats, such as increased water temperatures and stronger storms. Photo Credit: left photo, © WorldFish; right photo, © James Morgan



Adaptation actions such as coral reef research and rehabilitation such as this one at the WorldFish Center in Gizo (left photo) and mangrove rehabilitation (right photo) can help improve natural resource health and reduce communities' vulnerability to climate change. Photo Credit: left photo, © James Morgan; right photo, © WorldFish



Facilitators in Gizo explain the greenhouse effect by asking a volunteer to sit inside a mosquito net and smoke a cigarette at a community workshop on climate change adaptation. Photo Credit: © WorldFish

Youth in Saeraghi participate in the LEAP process by interviewing a community elder for a "photo story" activity. Photo Credit: © WorldFish



Communities gathered in the Solomon Islands to identify vulnerable natural and social resources and to develop their Local Early Action Plan (LEAP) for Climate Change Adaptation. Photo credit: © WorldFish

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