

The Micronesia Conservation Trust (MCT) and its Micronesia Challenge partners are excited to launch several new tools to support community-based climate adaptation in Micronesia. These tools were developed through a collaborative process with community members, resources managers, conservation practitioners, and climate change experts in Micronesia. They reflect local needs to overcome challenges faced in adapting to regional climate change conditions. Funding support for this project was provided by MCT with grants from the German Lifeweb, The Nature Conservancy (TNC), and the Pacific Islands Marine Protected Areas Community (PIMPAC).

Background:

In 2010, the Micronesia Conservation Trust and partners supported the development of community-based climate change adaptation tools for the Micronesia region. Community-based adaptation is a new field and many regions around the world are just now exploring how to carry out this work in an effective and meaningful way. As such, an innovative approach was needed to complete this task for Micronesia.



The first step in designing the most appropriate and useable products, involved a thorough review of existing climate adaptation materials and discussions with climate experts who offered lessons learned from Micronesia and other regions and efforts. Natural resource managers in the region who work with communities were also interviewed to understand the challenges in carrying out adaptation at the community level. These practitioners made two points clear; 1) few examples of community-based adaptation exist and therefore lessons and models were scarce indicating the need for a truly innovative approach, and 2) it is better to revise existing planning frameworks and approaches already being used to work with communities rather than to develop an entirely new approach specific to climate change adaptation.



The second step of this project was a regional workshop coordinated by MCT in September 2010 to gather information and direction on tool development directly from stakeholders. The workshop participants included community members from Micronesia, natural resource managers, and climate experts from various sectors. The objectives of the workshop were:



- Collect input from regional site-based managers, community members, and climate change experts on key components and content of an ecosystem based community-based climate adaptation guidebook for Micronesian communities.
- Identify ways to incorporate climate vulnerability assessment and planning tools into existing community-based planning processes.
- Identify key adaptation strategies and indicators of effectiveness to increase community resilience to the impacts of climate change in Micronesia, and
- Develop communication materials to share workshop information and to support dissemination of new climate change adaptation tools including identification of pilot sites to begin testing processes and strategies.

Project Outputs:

Based on input from this workshop, particularly regional stakeholders, the proposed outputs of this project were revised to reflect their needs to effectively carry out community-based adaptation in Micronesia. As such, the following products were developed:



1. Adapting to a Changing Climate Outreach Toolkit – One of the key challenges to carrying out adaptation activities lies in communicating climate change concepts in a way that is meaningful to community members. In particular, workshop participants noted an interest in engaging community leaders in a way that ensures that they have the information, understanding and tools to help lead the adaptation planning process. In response to this, MCT supported the development of an outreach toolkit designed to show concepts in a community context. It explores a "healthy community" that enjoys well-managed natural resources and sustainable socioeconomic well-being. It also depicts a contrasting community, "threatened" by man-made factors that have negative impacts to natural resources and social systems. The tools then demonstrate how climate change will have more negative impacts to the threatened natural and social systems. This toolkit consists of:

- Large flipcharts graphically depicting climate change concepts and actions that can be carried out to prepare and adapt to climate change impacts.
- Facilitators guide to accompany the flipcharts, which include page by page notes on items to point out on the flipcharts and concepts to explain.
- Booklets that provide the same visual content as the flipchart but offer more explanations. These are to be used by community members both during the presentation of the flip charts and afterward during their adaptation projects.
- A 30-minute video aimed at providing information about the following topics. What is climate change? What are the potential impacts of climate change? And what can communities do to prepare and adapt to climate change.

Adaptation Strategies to build resilience of Coral/Fisheries, and Coastal Vegetation

The best way to prepare for climate change and avoid negative impacts to important resources is to keep these resources as healthy and strong as possible

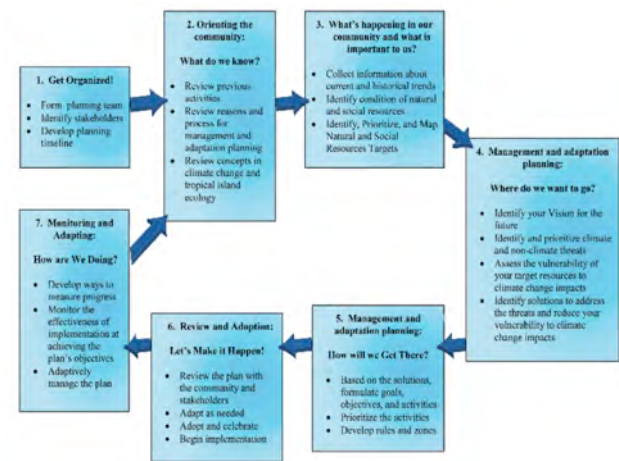
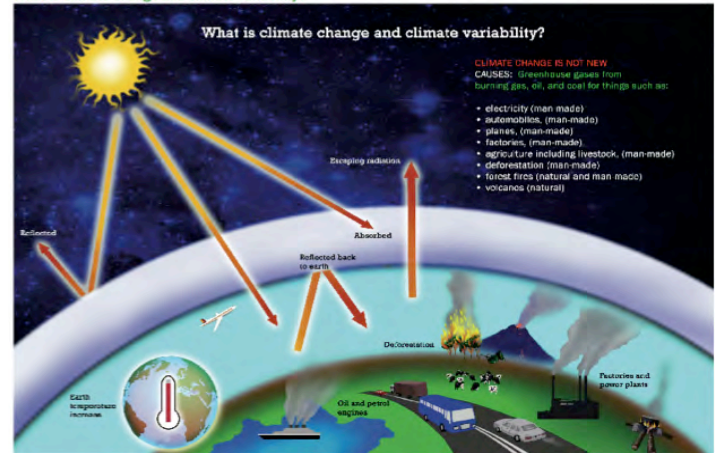
Coral Reefs and Fisheries Adaptation strategies:

- Establish a Locally Marine Managed Area (LMMA) that includes:
 - Protection of herbivorous fish that eat algae and prevent algae from smothering and killing live coral.
 - Protection of spawning aggregations.
 - Protection of coral reefs near up-welling, fishing, and shading.
 - Protection of a range of habitats (beach, mangrove, seagrass, coral).
- Pericalline Fish Aggregation Devices to reduce pressure on reef fish.
- Small Pond Aquaculture.
- Develop supplementary or alternative livelihoods that are less dependent on reefs.

Coastal land/vegetation Adaptation Strategies:

- Re-planting native coastal vegetation (mangroves, trees).
- Establish community rules to protect mangroves, coastal vegetation, and seaweed beds (e.g. Set benches of homes and coastal infrastructure).
- Coastal protection:
 - "Hard options" – concrete, stone, seawall
 - "Soft options" – vegetation, sand bags
- Work with local and national governments to ensure development of buildings and roads are not built on shorelines where they are susceptible to sea level rise.
- Work with local and national governments to ensure development of buildings and roads are not built on shorelines where they are susceptible to sea level rise.
- Reduce cutting of vegetation by using appropriate fuel or renewable energy sources for cooking.

What is climate change and climate variability?



2. Revised PIMPAC management planning guidance – In an effort to incorporate climate adaptation into existing community-based initiatives, the workshop participants requested a revision of the natural resource management planning process they already use to guide communities. Therefore the PIMPAC management planning guidance was revised to integrate a climate change lens through:

- Revised steps in the planning process to ensure that important stakeholders are involved and key questions are answered to address climate change
- New steps including a historical timeline, a seasonal calendar, a SWOT analysis, and a vulnerability assessment matrix to help assess social and biological resource vulnerability to the impacts of climate change.

TARGET RESOURCES:	THREATS: (climate and non-climate)	EXPOSURE:	SENSITIVITY	IMPACTS:	ADAPTIVE CAPACITY (Natural Resources)	ADAPTIVE CAPACITY (Social Capacity)	VULNERABILITY
What social and natural resource targets are most important to your community?	What are the climate and non-climate threats to your priority social and natural resource targets?	How much area of your target resource are affected by climate change events? Specify which events? (All/ Most/ Some/ Little/ None)	How severely will your target resources be impacted by increased climate events? And why? (Severely/ Moderately/ Hardly)	What are the current and likely impacts from these event to your target resources and your community?	How would you rate the ability of your target resources to cope with impacts climate change events? (High/ Medium/ Low)	How would you rate the ability of your community to cope with impacts to target resources and your climate change events? (High/ Medium/ Low)	Rate the vulnerability of each target resources (High/ Medium/ Low)

Next Steps: MCT is currently working on obtaining funds to carry out a training program for the region on use of these tools. This will include training in each jurisdiction on the effective use of the outreach tools and PIMPAC guidance, training of regional mentors to continue the work, and a small regional workshop to revise materials after field-testing. The training will be aimed at community leaders and jurisdictional teams with members from various sectors (e.g. health, hazard mitigation, resource management and others who can support community-based adaptation).