

Australasian Centre of Excellence



Solomon Islands and Makira Province

Managing marine resources at the local level - Makira Province, Solomon Islands

The Coral Reef Targeted Research & Capacity Building for Management Program (CRTR) is a leading international coral reef research initiative that provides a coordinated approach to credible, factual and scientifically-proven knowledge for improved coral reef management.

The CRTR Program is a proactive research and capacity building partnership that aims to lay the foundation in filling crucial knowledge gaps in the core research areas of Coral Bleaching, Connectivity, Coral Diseases, Coral Restoration and Remediation, Remote Sensing and Modeling and Decision Support.

Each of these research areas are facilitated by Working Groups underpinned by the skills of many of the world's leading coral reef researchers. The CRTR also supports four Centres of Excellence in priority regions, serving as important regional centers for building confidence and skills in research, training and capacity building.

The CRTR Program is a partnership between the Global Environment Facility, the World Bank, The University of Queensland (Australia), the United States National Oceanic and Atmospheric Administration (NOAA) and approximately 50 research institutes and other third parties around the world.

October 2009

Product code: CRTR 007/2009

The Coral Reef Targeted Research & Capacity Building for Management (CRTR) Program's Australasian Centre of Excellence (CoE) has worked with the Kahua Association in the Makira-Ulawa Province in the Solomon Islands to determine coastal impacts and prioritise an action list on how the community can work towards reducing these impacts. This project is part of the CRTR Program's Local Government Initiative.

Makira Province

Kahua comprises West and East Wanione of Makira-Ulawa Province on the remote island of Makira, Solomon Islands. This region has approximately 4000 people in both coastal and upland villages, predominantly living a subsistence existence. Infrastructure within Kahua is very limited, with no roads or telephone communications and only a few portable generators.

The Kahua Association (KA) is a registered grassroots charitable organisation, and is a local governance structure which works in collaboration with the Makira Provincial Governor. It was formed to promote sustainable development and more effective resource management through community actions. The KA is made up of a team of four executives and an extended network of subordinate

bodies with equal authority, including councils of chiefs, women, youth, ecumenical, conservation and biodiversity, as well as the Kahua Development Corporation. It is ideally set up for promoting participatory development at the local level.

About the CRTR Local Government Initiative

The Coral Reef Targeted Research & Capacity Building for Management (CRTR) Program's Local Government Initiative (LGI) aimed to reach out to local governments and communities associated with the four Centres of Excellence to share new knowledge about threats to their coral reefs and the measures that can be taken locally to address these, in order to strengthen coral reef policy and management. Within this framework the LGI aimed to:

- Raise awareness about good management practices in their region
- Interpret research findings for the benefit of local resource managers
- Partner with local governments to help bring their policies and business practices in line with those factors essential to maintaining coral reef health and productivity.

Coastal and marine resources stocktake

Following the invitation from the KA, and working closely with the members and village communities, the CRTR Australasian CoE team undertook a rapid survey of the coastal and marine resources of Kahua. This investigation involved a number of community meetings and qualitative underwater surveys along the coast from Rama in Western Kahua to Pehuru in the east. Observations from the survey included:

Economic drivers

The economic drivers of coastal resource use were subsistence fishing, reef gleaning and collection of coral for the production of lime. No commercial fishing operations were presently operating in the villages surveyed. No villages had power to generate refrigeration units and there are no significant local markets in the region.



Level of fishing effort

The level of fishing effort was determined using indicators of size and the power of fishing vessels, gear type and the number of people involved. The level of fishing effort during the survey period can be described as 'low'. This could be a reflection on the amount of fish stock available to the villages in the near-shore area and as there are no structured markets in the Province there is no commercial outlet that demands large quantities of finfish, crayfish or shellfish.



Photos: Glen Holmes and Geoff Dews

Use of marine resources

Fishing was mainly for subsistence, although each village reported sighting large tuna vessels offshore in particular seasons. There was no indication of any resource use conflicts between the subsistence fishers and the offshore commercial fishers. There was no evidence to suggest that the commercial fishers are impacting on the subsistence catch, although a more comprehensive survey should be considered at a provincial level.

State of the environment

The state of the coastal environment can be described as 'intact' which is a reflection of the historically low levels of human population in the district, the lack of any commercial forestry operation, and the absence of mining or extensive agriculture either on the coastal plateau or in the high hills. Land-based impacts on coastal resources would come from elevated nutrient levels from the human and pig populations, sediment loads from the (small) agricultural plots, and the use of mosquito spray as a fishing method in the streams.



Level of existing capacity

The communities visited are located close to narrow fringing coral reefs. Most people interviewed had no real measure of the condition of the corals over time (i.e. if the reef was in decline or not), although at each community meeting the general opinion was that the catch had declined in recent times. There is a strong desire of individuals within the region to better understand the biology of the corals and reef fish.

Environmental damage

Only one isolated site indicated any obvious elevated level of pollutants and environmental damage. This site was in a section of a river near a Pehuru village (Eastern Kahua), close to a community and a pig-holding yard. The site had a layer of dense green algae on the riverbed indicating high levels of nitrogen and phosphate.



Recommendations for sustainability

As a result of the survey, the CRTR CoE team recommended three measures that the KA could coordinate to help improve the sustainability of the region's marine resources:

1. Introduce an education program into the region's schools, through the provision of teaching texts, so that future generations better understand the marine environment
2. Establish no-take (taboo) areas for shellfish collection
3. Begin a simple monitoring program to establish a baseline for the amount of marine resources harvested.



Community action

The community is taking decisive action on these recommendations.

Discussions with the KA president, Mr Jude-Edward Hagasua, and the Biodiversity and Conservation Council identified the region between Rama community and Kahua Point as ideal for the establishment of a pilot no-take area. This four kilometre region of protected coastline is predominantly comprised of a rocky inter-tidal shelf where the women of the local communities (from Rama to Huni) collect shellfish. It was also suggested that the pilot project be established in such a way as to require minimal external expertise. This proposal was approved by members of the KA. The Biodiversity and Conservation Council is to undertake a community consultation process so that full community agreement can be reached prior to implementation (a process that may take six months).

Once agreement is reached among the communities, three sites will be selected (by the communities) and designated as taboo areas for collecting shellfish. Each site will be approximately 100m in length.

In conjunction with the establishment of the taboo areas for shellfish collection, the communities will also begin a monitoring program to measure the change (if any) in the volume of shellfish. This will be through a count of the number and frequency of women collecting shellfish and amount (a standard volume) of shellfish collected.

The KA will distribute educational materials provided by the team to schools within Kahua as teaching aids.



Conditions for success

Conditions for the success of coastal resource management projects such as this include:

- Both provincial and community agreement is required for coastal resource management decisions i.e. co-management.
- Decisions must be based on robust scientific information.
- Management of resources must be linked to community capacity and expectations, and the ability to manage and monitor the resources.
- Management of coastal resources must be linked to land-based management.
- Dependence on external expertise must be reduced so that responsibility lies with local communities and the provincial government. If communities have the confidence to run a project, they will better sustain the activity.
- Mechanisms for on-going engagement need to be established through the provision of advice (e.g. mentoring and training), and through the establishment of linkages with national or provincial government activities such as fisheries or environment management plans.



Further Information

Project Executing Agency
Coral Reef Targeted Research
& Capacity Building for
Management Program
C/- Centre for Marine Studies
The University of Queensland
St Lucia QLD 4072
Australia

Telephone: +61 7 3346 9942
Facsimile: +61 7 3365 4755
Email: info@gefcoral.org

The CRTR Program is a partnership between the Global Environment Facility, The World Bank, The University of Queensland (Australia), the United States National Oceanic and Atmospheric Administration (NOAA) and approximately 50 research institutes and other third-parties around the world.

About the Centre of Excellence

The CRTR Program's Australasian Centre of Excellence (CoE) is based at the Centre for Marine Studies at the University of Queensland, Brisbane, with its research station situated at the Heron Island Research Station on the Great Barrier Reef. Heron Island is a 16 hectare, densely forested sand cay, on the leeward edge of a flourishing platform of coral reef. Bisected by the Tropic of Capricorn, Heron Reef is home to around 900 of the 1500 species of fish and around 72% of the coral species found in the Great Barrier Reef.

The CoE comprises a number of leading internationally recognised researchers and scholars who are working in the areas of climate change impacts on coastal and marine ecosystems; coastal zone management; coral physiology and disease; remote sensing; modelling and decision support; and reef ecology.

