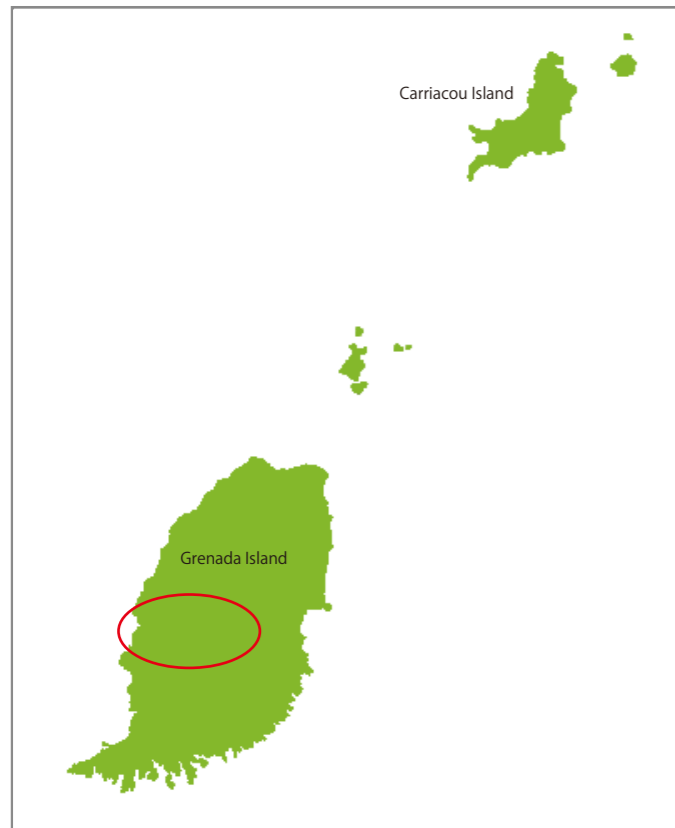


Grenada

Reef Guardian Stewardship Program in Grenada
(Oct. 2013~ongoing)



Project Location:
Beausejour watershed (encompassing all communities along the Beausejour River.)

How the project began

A report commissioned by the Organization of American States (OAS) on the nutrient and sediment inputs of the Beausejour River revealed that nutrient levels (phosphates and ammonia) entering the Moliniere-Beausejour Marine Protected Area (MBMPA) via the river system surpassed all maximum allowed limits recommended by the Caribbean Environmental Health Institute (CEHI) (S. Nimrod, et al. 2013). The report also indicated that the Beausejour River is a major source of sediment loading on some of the coral reefs within the Protected Area.

The Reef Guardian Stewardship Program was initiated by the Fisheries Division of the Ministry of Agriculture, Lands, Forestry, Fisheries and the Environment with small funding aid provided by the Australian Agency for International Development (AusAID), and the Great Barrier Reef Marine Park Authority (GBRMPA), through the Grenada Fund for Conservation (GFC).

Goal(s)

The project aims to achieve targets such as:

- To educate farmers on the importance of safeguarding coral reefs and associated ecosystems through Marine Protected Areas (MPAs);
- To demonstrate the linkages between land practices and the health of the marine environment; and
- To recognize, implement and promote good environmental practices (such as proper fertilizer application and good water quality and soil management practices).

Description of the project

The program is an awareness tool, which works by identifying, assessing, and promoting sustainable environmental practices by farmers. It uses a hands-on, community-based approach, aimed at guiding the everyday actions and decisions of stakeholders that would facilitate long-term environmental benefits for the reef. The Reef Guardian Stewardship Program originated and was transferred from Australia.

Reef Guardians support the ridge to reef concept by promoting sustainable land management (SLM) practices that encourage good water quality at the source, while remaining economically viable for its members. The concept aims to promote the vision that marine environments, including wetlands and coral reefs, are less vulnerable to damage when rivers are healthy.

The driving force behind the success of the Reef Guardians program is that it provides a platform where members can gain recognition for good environmental practices. Ultimately, these members will be encouraged to continue and improve environmentally safe, sustainable practices while motivating others to do the same.

What has been achieved

Achievements that have been made by this project include the following:

- A series of educational training workshops have been held with the Northeast Farmers Organization (NEFO) members on the functions and importance of MPAs, linkages between farming and marine ecosystems, sustainable farming methods, and water quality testing.
- NEFO members have received training in proper methods of composting and are implementing composting on their farms, thus reducing the use of chemical fertilizers and the resultant runoff into river systems.
- Two new mechanical shredders were donated to the NEFO: Farmers have also implemented the use of shredders to reuse materials on their properties. Using shredded materials as mulch helps to keep moisture in soils and reduces the amount of water that runs off the farmland. It also lessens on the use of chemical fertilizers because plant nutrients are essential recycled.
- One bio-gas digester was constructed for one livestock farmer to be used as a demonstration for other farmers. This is a pilot and other bio-gas digesters will be donated to livestock farmers. This will prevent farmers washing waste from piggens, which goes directly into the river and flows out into the marine protected area.

Lessons learned

The success of the program thus far is greatly attributed to the superb level of organization and the passion and willingness of the NEFO farmers to assist. Thus working with an organized group has proven to be more efficient than working with individuals. As a base, it is extremely important to establish a strong relationship based on trust with group members. It is also equally important to get them to understand the impacts of their environmental footprints and develop within them a desire to reduce these impacts. One of the limiting factors in implementing sustainable land management practices is financial capability. Many farmers do not possess the financial resources to purchase costly equipment such as shredders or to build infrastructure such as soakaway systems for livestock. It is therefore important to assist completely or partially with the provision of funding. The Caribbean Aqua-Terrestrial Solutions (CATS) program has provided the funding for the implementation of sustainable practices on reef guardian farms.



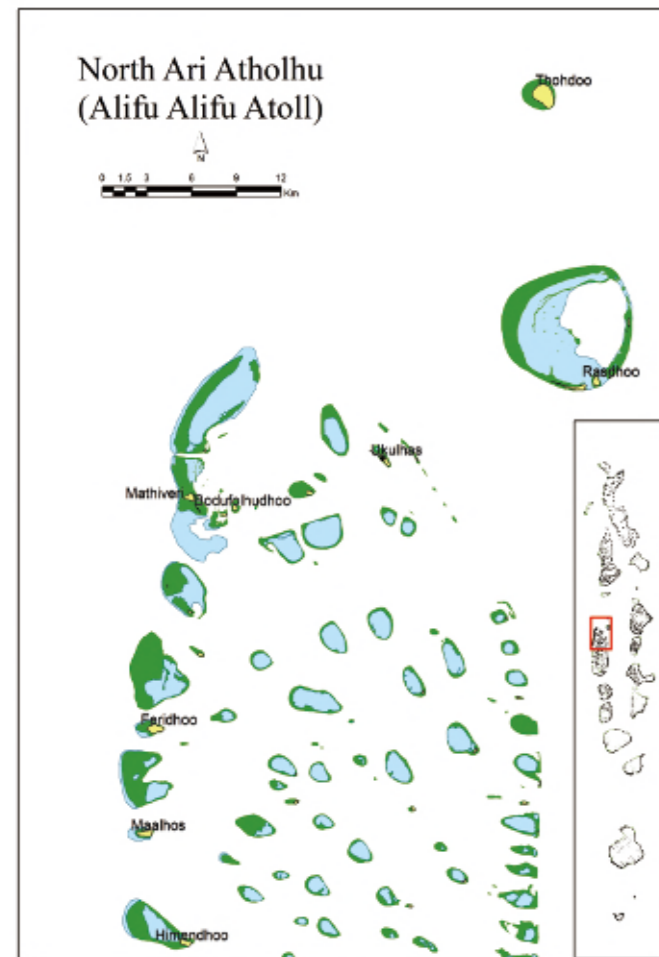
Main organizer(s) and stakeholder(s) of the project

Ministry of Agriculture, Lands, Forestry, Fisheries and the Environment

Communities along the Beausejour River catchment area, Local crop and livestock farmers and fishers and the Northeast Farmers Organization (NEFO): a voluntary group of local farmers to train and implement sustainable agricultural practices

Maldives

Project REGENERATE: Reefs Generate Environmental and Economic Resiliency for Atoll Ecosystems (2013~2015 End of Phase I, 2019 End of Phase II)



Project Location: North Ari Atoll, Maldives

How the project began

Mass coral bleaching in 1998 and 2010 killed a majority of shallow corals. Coral reefs play a fundamental role in food provision, shoreline protection, and tourism revenue in the Maldives.

The IUCN Global Marine and Polar Program produced and submitted the proposal for Project REGENERATE that is funded by the USAID. IUCN is the implementing agency, and the Project is a partnership between the government of Maldives, USAID, and IUCN.

Objective(s)

- Enhancing the use of GIS in the national environmental decision-making process
- Enhancing understanding of resilience to climate change in North Ari Atoll
- Building the capacity of civil society to monitor and improve management of marine resources
- Supporting environmental education and public awareness at the national level
- Supporting private sector to developed, ecosystem-based management approaches

Description of the project

A major goal of this project is to develop a Resilience-Based Management (RBM) framework to improve the ability of policymakers and stakeholders in the Maldives to understand and address the risks from global, regional, and local-scale pressures on their environment. Resilience can be defined as the capacity of a system (ecological or social) to withstand and absorb shocks without collapsing into a different, often less favorable, state. RBM is an innovative approach to environmental management because it recognizes the inevitability of change, emphasizes adaptation to change, and focuses on building resilience rather than the conservation of a steady-state environment. At completion, this project will provide the foundation for reef managers to improve the outlook for coral reef ecosystems and the communities dependent on them. It will enhance our understanding of socio-ecological resilience, improve access to knowledge, and increase the capacity to manage coral reefs in the Maldives.

What has been achieved

The project has achieved a number of milestones such as the following:

- Capacity to use GIS in government enhanced through ESRI training.
- Government's environmental data plotted for use in NGIS.
- Social surveys with North Ari fishermen on bait and reef fisheries.
- High-resolution ecological data collected and analyzed for 36 sites in North Ari atoll.



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- Social resilience data collected from more than 25% of the population of North Ari.
- An ecosystem services assessment completed for North Ari.
- Natural resources and human use mapped out for North Ari that will elucidate conflict zones.
- Workshops on a wide range of citizen science protocols that will train over 500 people.
- 16 public seminars that raised awareness of critical environmental issues.
- Coral reefs of resorts surveyed and data used for developing management plans for MMAs.
- A generic house reef management plan for resorts produced and presented to the Ministry of Tourism for national adoption.
- Dive centers adopted Green Fins best practices for diving, and new national Green Fins coordinators were trained.
- Workshops organized for local island councilors, resort managers, and central government ministries on managing coral reefs.
- Physical vulnerability to climate change was assessed for 23 community, uninhabited, and resort islands in North Ari.
- A policy review of the potential for implementing ecosystem-based adaptation strategies in the Maldives was carried out.
- Several infographics produced to communicate the science of coral reef resilience, ecosystem services, and turtle life cycles.
- Short documentary on sea grass produced and aired on national television.
- Newsletters disseminated to a wide range of interested parties through a distribution list.
- A one-stop shop for all information on marine conservation, science, and management for the Maldives with the development of the Maldives Conservation Portal.
- IUCN Fellowship Programme for interns, apprentices, and fellows provided thirteen job opportunities and two coral reef fellowships for Maldivians in the field of environmental management, thus raising the profile of the Bachelors in Environmental Management course at Maldives National University and enhancing the capacity of government officials to manage coral reefs.

Lessons learned

- It is challenging to integrate best practice reef management at resorts and communities due to the business sector bottom line, capacity, and resources.
- GIS is currently an underused tool in the Maldives and could be integrated better into the decision-making process for decentralized monitoring and governance of marine and coral reef resources.

Main organizer(s) and stakeholder(s) of the project

IUCN, Government of Maldives (Ministry of Fisheries and Agriculture, Ministry of Environment and Energy, Marine Research Center)

Local island communities, resort management, private sector business, students of primary to secondary levels, civil society groups