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Case Studies: From Ridge to Reef

International Coral Reef Initiative

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Case Studies:
From Ridge to Reef

Implementing coral reef conservation and management through a community-based approach emphasizing land-sea connectivity

Ministry of the Environment Government of Japan

ICRI
International Coral Reef Initiative

WWF
WORKING WITH ICRI TO SAVE CORAL REEFS

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Purpose of this report

Recognizing the importance of engaging sectors and stakeholders throughout a watershed in order for coral reef conservation and management to be most effective, the ICRI Assembly adopted a resolution on promoting an integrated approach to community-based coral reef conservation and management emphasizing land-sea connectivity at its 29th General Meeting in Okinawa. In this resolution, it was noted that model case studies would be compiled and shared at the 30th General Meeting, and that the final output would be published on the ICRI official website and through various media.

Following this resolution, the ICRI Secretariat reviewed and selected community-based coral reef conservation and management projects emphasizing land-sea connectivity from the annual reports that are submitted from the Members. The Secretariat then collected further information about specific activities using a survey form which was completed by those involved in the projects.

This report presents an overview of eight projects, their main achievements to date, and lessons learned. In addition, through an analysis of the common factors that appeared across the different projects, key enabling conditions at each stage of a project cycle were identified and summarized in the form of a flow chart. We hope that the diagram could serve as a reference for those involved in the designing, launching or reviewing of similar conservation projects.

The main point of contact for each project is listed at the end of this booklet. We would like to take this opportunity to express our appreciation for the time and help these individuals have provided in putting this report together.

While bearing in mind that no two projects are the same and that each project occurs within a unique context with different natural environments, cultural backgrounds, and economic circumstances, it is our hope that this report would help connect the people involved in the effort for coral reef conservation and help contribute to the further expansion of coral reef conservation activities across the globe.

奥主喜美

Yoshimi Okunushi
Director General, Nature Conservation Bureau
Ministry of the Environment, Japan
Joint Secretariat hosts of the International Coral Reef Initiative
Japan-Thailand 2014-2016

Case Study Project Site Map

Japan

Establishment of Community Based Management (CBM) in Nansei Shoto Ecoregion Region and Reinforcement of Eco-Friendly Village at Shiraho Community

Thailand

Assessing the Conditions of Coral Reefs and Seagrass Communities in the Gulf of Thailand and the Andaman Sea

USA

West Maui Ridge to Reef Initiative, Hawaii

Grenada

Reef Guardian Stewardship Program in Grenada

Maldives

Project REGENERATE: Reefs Generate Environmental and Economic Resiliency for Atoll Ecosystems

Australia

Reef Guardian Stewardship Program

Fiji

Community-Based Integrated Land-Sea Management in Kubulau District: Fiji's First District-Level Ridge-to-Reef Management Plan

Indonesia

Integrated Waste Management (IWM): Building Partnership for Effective Management of Komodo National Park

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Sediment run off following rain is a key stressor on coral reefs

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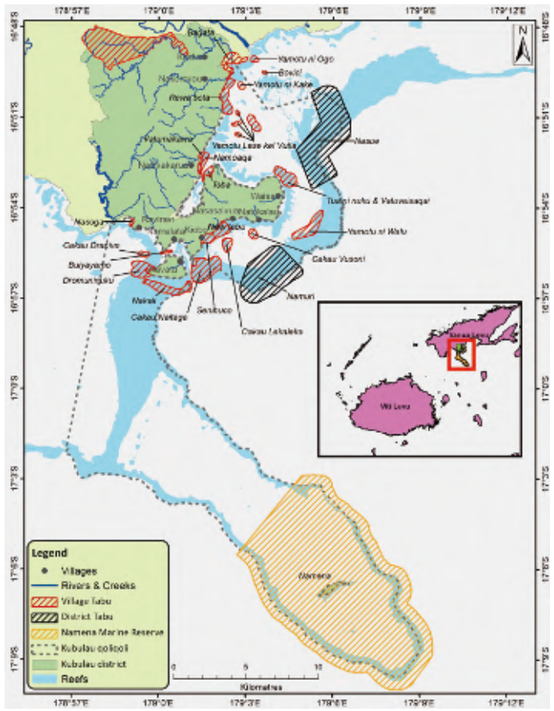
Fiji

Community-Based Integrated Land-Sea Management in Kubulau District:
Fiji's First District-Level Ridge-to-Reef Management Plan (2005~ongoing)



Project Location: Kubulau District, Bua Province, Fiji

How the project began

Increasing levels of exploitation of coastal resources and land cover changes were threatening Kubulau coral reefs and causing concern among coastal communities. In particular, in 1998, a massive fish and coral kill downstream from the Yanawai River may have resulted from runoff from a breached mine tailings dam. There is also growing concern about increasing fishing pressure causing declines in fish catches and other marine resources as economic markets grow and expand.

In the early 2000, Kubulau chiefs approached the provincial government with concerns about the declining state of natural resources. In 2005, the Wildlife Conservation Society, through the invitation of the provincial government and village chiefs, began providing assistance to the 10 villages of the Kubulau District to develop locally appropriate integrated management.

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Goal(s)

Ecosystem-based management in Kubulau is community-driven and centers around a shared vision of healthy people, processes, and systems. The overarching goal of ecosystem-based management in Kubulau is the preservation of the functional integrity of Kubulau's ecosystems, from the ridge to the reef, through community-based management.

Description of the project

The Kubulau ecosystem-based management framework combines the most successful elements of the Locally Managed Marine Area (LMMA) network with broad protected area design principles for biodiversity conservation that take advantage of both traditional and Western approaches to marine coastal fisheries management. Management rules for a network of three permanently closed marine reserves, twenty-one periodically harvested fisheries closures, one community-managed forest area, and various restrictions of activities within and adjacent to freshwater habitats are outlined in a comprehensive ridge-to-reef management plan that was endorsed by all village chiefs in 2009. The planning process was informed by extensive scientific and socioeconomic research, as well as local and traditional ecological knowledge. Each rule, which is sourced from national legislation or community consensus, is coupled to a list of management actions for terrestrial, freshwater, coastal, and marine ecosystems with responsible parties designated for carrying out each action. The plan also contains different options for enforcement, as well as a framework for changing rules in response to environmental change in order to flexibly manage Kubulau's coastal and marine resources. The plan was adapted in 2012 based on an evaluation of monitoring data collected between 2007 and 2010.

What has been achieved

From 2005 to 2009, household surveys showed that people have an increasingly positive outlook on the status of their fishery in terms of catch size, fish size, fish diversity, and reef state. Total average fish biomass increased both inside and outside the MPAs. With revenue generated from diver entry fees into the Namena Marine Reserve, over 143 scholarships have been granted to students from Kubulau. The Kubulau management scheme was one of the top 10 finalists in the Rareplanet solution search for "Turning the Tides for Coastal Fisheries." And the Prince's Charities International Sustainability Unit selected Kubulau as one of 50 case studies to feature in a report on fisheries transitioning to sustainability. The Wildlife Conservation Society has been able to leverage the success from the marine protected area network to harness new resources in 2015 to develop a conservation lease for the upstream Kilaka Forest Conservation Area, which the landowners have informally protected for almost 10 years to maintain water quality and provide other forest ecosystem services.

Lessons learned

The project learned lessons and reasons as follows:

- Management of coastal resources should always commence with an understanding of traditional practices and open communication with communities via contact with their leaders;
- Ecosystem management processes should respect the needs, interests, rights and aspirations of local communities and contribute to local and national goals;
- Protected areas need to be placed in a broader ecosystem management framework to reduce disturbance from outside the boundaries;
- Ecosystem-based management (EBM) requires close collaboration between upland and lowland communities, as well as active, participatory engagement of stakeholders from all relevant sectors, which can include fisheries, forestry, agriculture, tourism and culture;
- EBM should be adaptive and iterative as new information becomes available; and
- EBM provides a cost-effective approach for reducing vulnerability to climate change impacts.

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

Wildlife Conservation Society Fiji Program
Kubulau Resource Management Committee
Kubulau Business and Development Committee

Kubulau Resource Management Committee (KRMC): Composed of a representative from each of the 10 villages plus a chair
Kubulau hierarchy council: A council of chiefs
Kubulau Business and Development Committee (KBDC): Composed of Kubulau natives who now reside in Suva (Fiji's capital)