

Key EBM Messages:

Preservation of functional integrity of Fiji's eco-scapes through multiple stakeholder management.

- Successful EBM relies on cross sectoral planning and management
- Inland and lowland communities need to manage resources together
- EBM protects habitat for all stages of life
- Improving land and fishing practices helps protect natural resources
- Public health and livelihoods depend on environmental health

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FIJI EBM PARTNERSHIP NEWSLETTER

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Ni Sa Bula Vinaka! Welcome to the first Ecosystem Based Management (EBM) partnership newsletter. This newsletter is aimed at our non-community based stakeholders regarding the adoption and practice of the EBM approach in Fiji. EBM relies on cross-sector planning and management and this newsletter serves to act as a conduit for related initiatives to communicate and advocate their activities. In this issue we are please to offer details of initiatives being run by Birdlife Fiji and IUCN.

Happy reading,
The EBM Partnership (WCS, WWF, and WI-O).

LAND-BASED IMPACTS

The Department of Land Resources Planning and Development, along with SPC/GTZ, organized a workshop aimed to develop a set of guidelines for sustainable land-use development. EBM partners presented the EBM concept, which emphasized the importance of maintaining healthy ridge-to-reef connectivity. Healthy connections between habitats are critical for animals, especially those that migrate during different phases of their lifecycle. These connections also enable harmful substances, such as pollution, nutrients and sediments to travel down the rivers and streams reducing water quality. These pollutants finally flow into the sea where they can affect coral reefs and fisheries.

However, healthy habitats in between terrestrial and marine environments, such as coastal wetlands and riparian vegetation, can do much to mitigate the damage. Located at the land and sea border, coastal wetlands effectively reduce land based impacts by slowing the flow of water from mountains to the sea, trapping sediments, and retaining or even transforming nutrients. Irreversible damage and loss of these important habitats can occur if nutrients and sediment discharge reach above critical levels. Sustainable land use and EBM practices include: limiting cutting trees right down to river's edge; reducing farming along adjacent river banks; limiting mangrove cutting and encouraging mangrove



Freshwater systems, such as this stream, connects terrestrial to marine habitat.

re-planting in areas where mangroves no longer exist. Making these activities common practice will ensure that our ecosystem integrity and health is maintained for future generations. The guidelines developed at the workshop are due to be published later this year. Visit www.spc.int for more information.

EBM PRESENTS TO NEC

Representatives from the EBM partnership delivered a presentation for the November 2008 meeting of the National Environmental Council (NEC). The NEC acts as a guiding council to the Government for all environment related work. It is composed of representatives from government ministries, NGOs, the commercial sector, manufacturing industries and the aca-

demic community. Delegates were advised by Fiji EBM project on how terrestrial, riverine and marine habitats are closely linked through the movement of materials and fauna. Delegates were informed about the partnerships' emerging scientific findings: these results are being adapted into Ecosystem Based Management plans that the communities will

use to sustainably manage their natural resources. Additionally, the EBM partnership presented results from a mapping study to identify areas in Fiji with highly intact connectivity between habitats. Information layers, such as rainfall, slope, land cover, invasive species, and habitat quality were integrated from cross-sectoral sources to make recom-

mendations for protected areas.

A follow up paper will be presented to the NEC at the next meeting scheduled for April.

Contributed by WCS



BIRDLIFE'S IBAs

Connectivity between various types of terrestrial habitat is vital for many species of birds, especially those that track seasonally flowering and fruiting species of trees (e.g. some Fijian parrots and doves). Therefore, to effectively conserve viable populations, more than one habitat type is required. It is important that these mosaics of different habitats are conserved and connected. Conservation of intact highland to lowland forests also provide important ecosystem services such as slowing flow of water, preventing soil erosion, and controlling weather. Birdlife International - Fiji

Program is currently working on advocating and implementing conservation of different Important Bird Areas (IBAs) within Fiji.

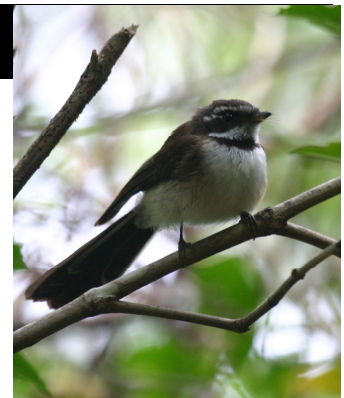
IBAs are internationally recognized sites that are important for the conservation of birds. IBAs are large enough to support sustainable populations of important birds and are small enough for conservation management to be practicable.

A network of IBAs is essential for capturing a suite of adjacent habitats for conservation of birds. The project involves building the capacity of local community groups and

land owning communities to develop protected area status, while developing management plans and monitoring protocols for the protection and sustainable use of the resources within their ecosystem.

The Kadavu IBA of Nabukelevu together with Forestry Department and Global Environment Facility (GEF), secured funding to set up a nursery.

The nursery is expected to provide seedlings for reforestation of areas to prevent soil erosion which can harm the surrounding reefs. The project is a welcoming initiative for the communities of



Kadavu Fantail in Nabukelevu (Photo by Ian Morley)

Nabukelevu as it is also expected to improve agricultural practices for the communities and hence enable them to develop sustainable land management practices in order to conserve their forests. An SSG has also been established in this IBA.

Contributed by the Birdlife International-Fiji Program



Integrated Water Management Essential for Fisheries Conservation?

IUCN’s Water and Nature Initiative (WANI) and Institute of Applied Science (IAS) are assisting the people of Kadavu Island to achieve their vision for restoration, protection and sustainable use of their precious resources. WANI builds on earlier marine management efforts of Nakasaleka *tikina* (district) on Kadavu to better manage their marine resources. Referring to their natural resources as “living wealth” or *yaubula*, the people of Nakasaleka had earlier developed a marine resource management plan for their *qoliqoli*

(fishing area). The WANI input will strengthen this plan by integrating management of land-based threats to the island’s marine resources. “Other important threats to coastal fisheries resulting from poor management of catchment areas further upstream are rarely considered when addressing coastal fisheries,” says Philippe Gerbeaux, Chief Technical Adviser and WANI Project Leader. “We hope to help improve the overall management of coastal marine resources by enabling communities to apply a more

holistic “ridge to reef” approach to natural resource management.” A similar approach is being developed in Samoa, also under WANI, in collaboration with the Water Resources division of the Ministry of Natural Resources and Environment. The ultimate goal of WANI is “the mainstreaming of ecosystem services into water management, planning and policies, to support a sustainable use of water resources for poverty reduction, economic growth and protection of the environment”.



Land-based threats affects water quality in streams and rivers, affects coastal fisheries and humans

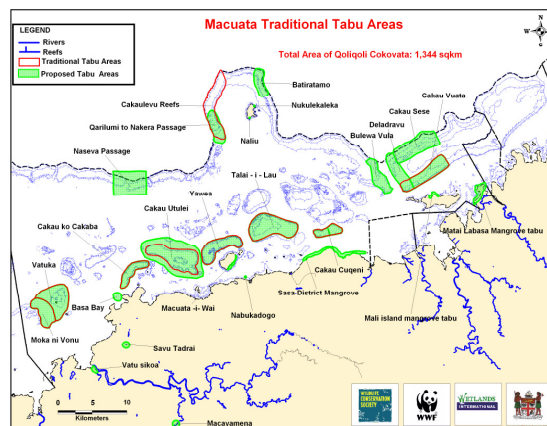
Contributed by IUCN Oceania



FISH FOR FUTURE

As part of ongoing efforts to better manage fisheries and other resources, community representatives from the districts of Dreketi, Macuata, Sasa and Mali in Macuata Province met in Labasa to discuss proposed changes to their network of tabu areas. The existing Marine Protected Areas (MPAs) were established based on best traditional knowledge, and information on fish breeding sites and habitats. Since then, extensive scientific and socio-economic surveys have been carried out, results of which have been used to

enhance and increase the existing MPAs. After reconfiguration, the number of Protected Areas will likely increase from 9 to 27 (including marine, coastal, mangrove, and forest areas). This increased number of MPAs will give better protection to a larger percentage of the reef and different marine habitat types, providing greater ongoing protection to the reef, and to the food security of the Macuata communities. Tui Macuata, Ratu Aisea Katonivere, said, “The challenge is to ensure that we conserve some re-



Map of Macuata’s network of existing and proposed tabu sites.

sources for our children and their children. We should take action now, and I am proud that we have been given the challenge to manage the third longest reef in the world.”

Contributed by WWF



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FIJI EBM PROJECT OVERVIEW

FOR MORE INFORMATION, QUERIES OR TO SEND ANY FUTURE EBM ARTICLES PLEASE CONTACT

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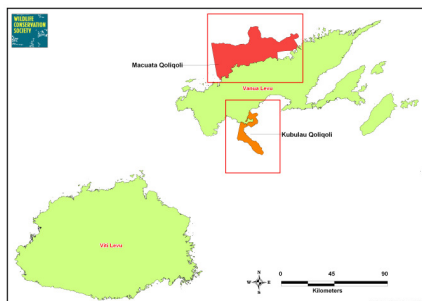
The Wildlife Conservation Society (WCS), in partnership with WWF and Wetlands International-Oceania (WI-O), are working directly with communities and government towards the vision of protecting the Vatu-i-Ra and Cakau Levu Reefs Seascape using Ecosystem-Based Management (EBM) principles and approaches.

Science-based marine protected areas (MPAs) have been demonstrated to protect exploited marine resources, may increase coral reef ecosystem resilience, and are considered an essential tool for the long-term management and conservation of high priority seascapes around the world. Recognizing the connectivity between terrestrial and ma-

rine systems has led to a more holistic approach that also includes terrestrial processes and their potential impact on marine habitats. For example, sedimentation and nutrient enrichment have been found to be key threats to the health of nearshore marine ecosystems and therefore understanding the potential impacts of runoff from watersheds on the adjacent marine areas is vital.

Our research and advocacy as part of this EBM project is building an applied understanding of how terrestrial and marine systems are connected in terms of fauna and habitat quality, and what the implications are for conservation management in a tropical high island setting. The areas we are investigating include

the aquatic fauna that utilize "wet" ecosystem types during different life stages (living connections between the land and the sea), spatial patterns of perceptions of ecosystem change, community resource use, potential influence of terrestrial nutrients and runoff on near shore environments, the effects of intensive harvesting of a traditional MPA on reef fish communities, fish community responses to management in Fiji, a low cost resource mapping approach for Pacific Islands, the connectivity of marine habitats, including understanding the movement ranges of adult reef fishes from MPAs, and priority conservation regions (Ecoscapes) for Fiji Islands to preserve ecosystem connectivity.



The Fiji Ecosystem Based Management (EBM) project has two focal sites, Macuata and Kubulau, on the island of Vanua Levu. This is the second largest island in Fiji (5,538 km²). Macuata is made up of four districts, including 37 villages with a population of approximately 10,000, while Kubulau is made up of one district, encompassing 10 villages and 1 settlement with a population of approximately 1,000. Macuata has a total *qoliqoli* (traditional fisheries management region) area of 1,349 km² out of which 112 km² is currently protected through a network of 9 marine protected areas (MPAs). Kubulau, with a total *qoliqoli* size of 260 km² has a network incorporating 16 MPAs (89 km²) and 1 proposed forest reserve (0.8 km²).



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The Fiji Ecosystem-Based Management project is primarily funded by the David and Lucile Packard Foundation and the Gordon and Betty Moore Foundation, which started in 2004. It is led by WCS, with the partners WWF and WI-O.