

Key Messages:

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

- Successful 'ridge-to-reef' management depends on broad stakeholder input
- Inland and coastal communities need to manage their actions and resources together
- 'Ridge-to-reef' management protects habitat for all stages of life
- The success of protected areas for conservation and livelihoods relies on combining bottom-up community engagement with top-down planning
- Public health and livelihoods depend on environmental health
- Healthy ecosystems are the best defense against climate change impacts to livelihoods

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Community Educators Network Training—Module 3



As part of WCS Fiji's core objective in protecting iconic species, maintaining habitat connectivity and preserving livelihood by integrating community based management with science based solutions, participants of this workshop from the villages of Kubulau were trained to carry out awareness programmes to their respective communities. Issues regarding the importance of mangroves and their functions, the need to understand and respect spawning aggregations of aquatic species, the importance of understanding and following environmental management regulations and understanding climate change and its impacts.

WCS teamed up with various stakeholders from Coral Reef Alliance, SEAWEB, Conservation International, Environmental Law Association and the Kubulau Resource Management Committee to provide participants in this workshop with educational resources to continue the awareness work they had carried out from the two previous CENT Modules. This addresses our vision in communicating the value of EBM in Fiji on the slogan of: "Healthy people, processes and systems".

Additionally this workshop empowers the members of the Kubulau district to educate their fellow kinsman, families, peers and friends in understanding the role of having a healthy ecosystem and preserving it, which in turn will protect their livelihoods and health during this onset of rapid developments and unpredictable climate disturbances.



The COWRIE Project

The COWRIE project (Coastal and Watershed Restoration for the Integrity of Island Environments) was a twelve month project undertaken in 2010 under the Coral Reef Initiative for the Pacific (CRISP) programme. The main aim of the project was to empower communities in Fiji and Vanuatu to undertake management decisions towards the restoration/protection of their watersheds. The approach taken built upon the participatory community based work done under the Locally Managed Marine Area programme.

Fiji project activities focused on two districts in the Province of Ra, northeast of Viti Levu, and included:

- Replanting of ten hectares of a mix of native and exotic species in each of three villages in the District of Naroko as demonstration plots.

- Awareness and Management Planning workshops and the development of community nurseries and the establishment of tree stock for later planting out at the second site, Nakorotubu District

The project coincided with the Fiji government's strategic objective to plant one million trees in 2010 in Fiji; and the Forestry department along with Conservation International were key partners in the implementation of the project.

Similar work was implemented in two sites (Aneityum and Epau) in Vanuatu.

A range of tools and community guides developed under the project are available and Leigh-Anne Buliruarua can be contacted on buliruarua_l@usp.ac.fj for copies or more details.

Article and photos submitted by James Comley, IAS.



Assessing adaptive capacity of Pacific island communities

A study of the adaptive capacity of Pacific island communities to climate change is currently being undertaken by the Institute of Applied Science (USP) in partnership with the Secretariat of the Pacific Community and the Red Cross Climate Centre with financial support from the Australian Commonwealth Department of Climate Change and Energy Efficiency (DCCEE). The Pacific islands face increasing challenges exacerbated by climate changes of slowly rising sea levels and, more intense extreme events (cyclones and droughts) that will threaten freshwater resources and the food supply. Given the Pacific islands' special vulnerability to climate change and their long history of adapting to change, the study of adaptive capacity is especially important for the Pacific.

The adaptive capacity of local communities in Vanuatu, Solomon Islands, Tuvalu, Samoa, Kiribati, Cook Islands, Palau and Fiji will be assessed in

a range of sectors critical to adaptation including water supply and sanitation, food security, relocation and coastal protection. The assessment will be based on the seven adaptive capacity factors identified collectively by the partnering organizations including:

- Human capital
- Social capital/community cohesiveness
- Belief systems/worldviews/values
- Resources and distribution
- Adaptation options
- Information/awareness
- History of dealing with climate stresses

The IPCC report asserts that "current knowledge of adaptation and adaptive capacity is insufficient ... for rigorous evaluation of planned adaptation options." In the Pacific we need to analyse past climate change adaptation projects through such a framework, being cognizant that IPCC guidelines

often are developed by those with a Western development framework. Pacific socio-cultural hallmarks of kinship and reciprocity and past responses to extreme events need to be considered as part of adaptive capacity.

It is being increasingly recognized that successful environmental management requires a strong local community focus, one using participatory methods that encourage adaptation to belong to the community and combines the best of traditional knowledge with an international best-practice approach appropriate for the Pacific context. This project will develop an appropriate Pacific adaptive capacity analysis framework and apply it to the identified case studies of completed climate change adaptation projects.

Article submitted by Patrina Dumarua, IAS.

“FROM THE WESTSIDE TO THE WEST PACIFIC”

“From the Westside to the West Pacific” program will provide teens the opportunity to engage with digital media technologies, science and each other. The program developed by the Chicago Field Museum is involving Marist Brothers High School in Suva and the VOISE Academy in Chicago, USA. Members of the WCS team and FLMMMA members are facilitating the program.

The goal of the program is to increase young peoples understanding of biodiversity and engage them in real conservation practises. Using game play in WhyReef, a virtual coral reef, participants will gain actionable knowledge in reef biology and ecology. Participants exchange blogs, photo essays, and videos on the social network FijiReef (<http://fijireef.ning.com>) to address challenges in coral reef ecology and conservation. All challenges and activities are supplemented by direct contact with marine biologists and conservation scientists from The Field Museum, Wildlife Conservation Society Fiji and Fiji Locally Managed Marine Area.

WhyReef (<http://reef.whyville.net>) is a simulated coral reef in the virtual world of Whyville.net, developed by the Field Museum and Whyville. Players explore the the Reef Station and virtually dive to count and identify 50 dynamic reef species, play the Food Web game to discover how these creatures depend on one another, use the Reef Simulator to create hypothesizes on events that impact reefs, and participate in efforts to save and conserve reefs.

More than 50 youths from Chicago and Fiji are involved in this program to gain knowledge in reef biology. They are learning about the signs of healthy reef and find out what can make it sick. Find out about different creatures that live in and around a coral reef, and find out who eats who on a reef.

For the Chicago youth at VOISE Academy, digital learning is part of their daily routine. But in Suva these resources are limited. The Marist students have access to laptop computers, the internet, digital cameras and video cameras. The students are learning how to use this equipment and are able to share pictures from their local environment with those students in Chicago. Some of these Chicago students had never heard of Fiji before the start of this program.

Stacy Jupiter says, “these issues (of conservation) are important to Fijians. They take pride in being able to have coastal resources that they can depend on for the future and it is important to share their culture with other people in the world.”



Above—Students from VOISE Academy in Chicago, USA, learning about Fijian reefs online with www.whyville.net

Left—The internet reef simulation on WHYVILLE. Students click on the fish or coral and detailed information will be available on the species

Below Left—Students from Marist Brothers High School, Suva with the facilitators.

Below Right—Marist students practising their videoing skills.





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2ND FIJI CONSERVATION SCIENCE FORUM



2nd Fiji Conservation Science Forum

Confronting the Climate-Biodiversity Crisis • Suva • September 14-16, 2011

Under the Convention on Biological Diversity, countries committed to reducing the rate of biodiversity declines by 2010. By most accounts and indicators, the goal has not been reached. Species population trends, extinction risk, and habitat area and condition are continuing to decline, while pressures on biodiversity are increasing (Butchart et al. 2010), in particular from global climate change. Future climate scenarios and evidence of extinctions from past shifts suggest that changes to biodiversity may occur over time frames as rapid as decades (Hannah et al. 2002). These changes are particularly acute on small, islands where ranges are restricted and entire systems may be simultaneously affected by the same climate disturbance. Thus, there is great urgency to develop new, integrated conservation and management strategies that can respond dynamically to changes in ecosystems.

In order to focus our attention on these pressing issues, the main theme of the 2nd Fiji Conservation Science Forum is **Confronting the Climate-Biodiversity Crisis**. Topics that will be covered within this theme include:

- Future Climate Scenarios
- Community-based Adaptation
- Species Responses
- Climate Change and Public Health
- Economics of Climate Change
- Scaling-up Local to National Management approaches

We are pleased to announce that the call for abstracts for oral and poster presentations for the 2nd Fiji Conservation Science Forum – **Confronting the Climate-Biodiversity Crisis**, is now open. The deadline for proposals is 1st June 2011. You can find submission guidelines online at:

<http://conservationsscienceforum.wcsfiji.org>

WCS EXPANDS EBM IN BUA PROVINCE

The next phase of WCS work has begun with the expansion of the management planning districts in Bua Province, Vanua Levu. In November 2010, WCS conducted successful Introductory Workshops to begin the process of what will be a multi-year project in Wainunu and Wailevu districts which are adjacent to Kubulau where WCS began working in 2005. Requests were also made from the nearby districts of Nadi and Solevu to be involved in these workshops at their own costs to continue their management planning education.

Socio-economic surveys were conducted in February 2011. These consisted of two parts; firstly household surveys were conducted in 27 villages and secondly focus groups were held in the evenings which included information

gathering of traditional ecological knowledge and local resource use. The information gathered will ensure that placement of protected areas minimizes opportunity costs to resource users.

The WCS marine team are now in the field for the next 6-weeks performing the baseline marine biological surveys identifying hotspots for resilience, diversity and productivity.

These efforts will be combined later in the year with community consultation workshops to present findings and make recommendations for areas of protection in order to build management plans for these districts.