



VATU-I-RA COMMUNITY BULLETIN



Ni sa bula vinaka! Welcome to the eighteenth edition of the VATU-I-RA COMMUNITY BULLETIN. The bulletin brings together news and results from ongoing activities by the Wildlife Conservation Society within the Vatu-i-Ra Seascape.

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TRIP REPORT FROM THE MARINE SURVEYS IN BUA AND CAKAUDROVE

In April and May the WCS field team were in Bua and Cakaudrove Provinces conducting marine biodiversity surveys on the coral reefs. The team surveyed 143 sites across Solevu, Nadi, Wainunu, Kubulau and Wailevu Districts, altogether spending a total of 572 hours, or almost 24 days in the water! Despite the hard work, everyone agreed that it was a fantastic trip and would like to say vinaka vakalevu to our hosts in Nasavu, Daria and Natuvu villages, especially to the wonderful cooks and volunteers who came out on the boats with us each day.

We were fortunate to be blessed with perfect weather for the trip, with bright sunny skies and calm seas every day for five weeks. Everyone in the team had a different

role to play, recording the numbers and different species of fish and corals, or assessing other signs of reef "health" which indicate how well a reef might survive or recover from large storms or increasing temperatures associated with climate change, which can cause corals to die. Apart from revisiting a few long-term monitoring sites in the Namena reserve, all of the survey sites were new for the WCS team. We were excited to be the first people to dive on these reefs, and had no idea what to expect when we got underwater.

On the reefs offshore from Nadi and Solevu we were delighted to see sharks, manta rays and turtles every day, and even had a pod of dolphins accompanying our boat on a couple of occasions. The reefs are colourful and full of life, and could attract dive tourists to the area. However, it is clear that they are also attracting a lot of fishermen, so communities will need to consider how to manage these reefs to ensure that the fish stocks remain for future generations.

We expected the reefs inshore to be less spectacular, as run-off from the land usually means that the visibility underwater is poorer, and you are less likely to encounter the charismatic species which are attracted to the high current sites offshore. However we were pleasantly surprised on some of our survey sites where we encountered large schools of snapper. This shows that even inshore areas can support large fish populations if they are managed well.

Continued page 2...

KEY EBM MESSAGES:

Preservation of functional integrity of Fiji's ecosystems through community based 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*



Above: Reef scape from Nadi district

INSIDE THIS ISSUE:

TRIP REPORT CONTINUED	2
CETACEAN SURVEYS	3
CPUE TRAINING	3
IN THE NEWS...	4

TRIP REPORT CONTINUED....

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The reefs offshore from Wailevu District were full of surprises. We saw some large fish, including sharks and Giant Trevally, but the coral reefs themselves are less healthy. The reefs were likely damaged by cyclones last year, and further damage has been caused by the "crown of thorns" (Fijian = bula?) starfish. These starfish feed on corals, and when they occur in large numbers, they can destroy large areas of the reef. Unfortunately they have few natural predators, only the *davui* (triton shell) and (humphead wrasse) can cope with their poisonous, sharp spines.

The WCS staff are now busy back at our office in Suva entering and analysing all the data that we collected in the field. Later this year we will be back in Bua and Cakaudrove to present our results. We hope that our recommendations about which areas of the reef will benefit most from protection in marine protected areas or tabu areas will help communities to make decisions about how to manage their resources effectively.



Left : WCS team heading to a survey site in Solevu

Middle left: Mushroom coral

Top: Longnose filefish

Middle: WCS staff member Waisea Naisilisi getting his equipment ready before a survey.

Bottom: Pink Anemonefish

FIJI FISH RULER



Rastrelliger kanagurta
Indian mackerel • Salala
20cm



Lethrinus harak
Thumbprint emperor • Kabatia
25cm



Chlorurus sordidus
Bullethead parrotfish • Bose/Karakarawa
25cm



Acanthurus xanthopterus
Yellowfin surgeonfish • Balagi
25cm



Lutjanus argentimaculatus
Mangrove red snapper • Bati ni Veldogo
30cm



Lutjanus ehrenbergii
Blackspot snapper • Kake
30cm



Plectorhynchus chaetodonoides
Many spotted sweetlip • Sevaseva
25cm



Lethrinus obsoletus
Orange-striped emperor • Sabutu
25cm



Chlorurus bleekeri
Bleeker's parrotfish • Baluvula
25cm



Gtenochaetus striatus
Lined bristletooth • Dridri
25cm



Caranx melampygus
Bluefin trevally • Saqa
30cm



Naso unicornis
Bluespine unicornfish • Ta
30cm

Measurement in centimetres—minimum catch size shown in RED. Fish caught smaller than the minimum size must be thrown back.

CETACEAN SURVEYS

A Cetacean survey will be conducted in the Vatu-i-Ra Seascape by the WCS team under the direction of WCS Marine Program Cetacean expert Brian Smith. The WCS team with the assistance of Department of Fisheries will be interviewing local villagers in the districts of Bua, Cakaudrove on Vanua Levu and Rakiraki, Saivou, Nakorotubu, Sawakasa and Verata on Viti Levu. These surveys will be happening between July 4th– 25th.

The surveys will ask villagers if they encounter dolphins or whales and if they do, can they identify species by the pictures they will be shown. Questions about what time of the year that the cetaceans are sighted and how often they are seen will also be asked. How people feel about dolphins and whales and cultural significancies will also be determined. The information collected will then be used for some targeted sea-based



Above: Humpback whales during the cetacean survey in Levuka last year.

CPUE TRAINING

Marine managers around the world are using various methods of protection including monitoring and surveying details, such as the size and numbers of fish caught to increase fish stock. These monitoring and survey methods help us understand the life cycles of protected fish species and their various growth phases from larvae to adulthood. A monitoring method that can provide information on the size distribution of fish species along with effort and size information is the Catch Survey method. From this data collected the Catch Per Unit Effort (CPUE) can be calculated. CPUE is the weight (biomass) of fish and invertebrates caught in a given area during a fishing period using a certain fishing technique. CPUE generally gives the fish/invertebrates caught per fishermen per time period.

CPUE training for the villages of Natuvu and Naiqai in the

district of Wailevu, Kiobo and Natokalau in the district of Kubulau, Saolo and Nakawakawa in the district of Wainunu from the 28-30th June. These villages have been chosen because they have been observed to be utilizing marine resources more frequently. 20 households from each of these villages will be chosen to conduct this CPUE and will be trained on how they will be required to collect this data. Each household will be provided with data sheets and maps to help them record data and identify fishing spots.

WCS has produced a ruler which is shown below to assist in the measurement of all fish and invertebrates caught. Most of the food fish are on the fish ruler with their respective maturity size and also included are the threatened and endangered fish species.



NEWS www.700news.com

Discovering Solevu reefs

Women of Solevu waded to mangroves to look for food for their families.

Environmental activists help villagers see back to life

By DR STACY JUPITER

IHAD come to the chiefly village in Milne District with 10 women from our team and the male in-charge, most Solevu Village, where we are staying in Nadi District, in order to present our surveys.

When visiting a village in PNG, it is traditional protocol to ask permission of the local chiefs before undertaking any marine survey in their waters.

In this village, their chief is a woman and she was particularly interested in how we could help her people restore their vanishing lobster.

Although illegal under the PNG Fisheries Act, I learned that the women from Solevu village have been regularly using fish poison from their root to poison their catch. Lately many women have come home empty handed.

"We're feeding our children lobster soup," the man next to me smiled.

"That is not healthy".

A mountain house of Koro were devastated. I learned the person I met was a woman named Lany and lived about 300 km from the village, where the Wildlife Conservation Society (WCS) has been working with communities since 2004.

When we were in the last village, there was a beautiful male

Dr Stacy Jupiter. Photo: ARC CENTRE OF EXCELLENCE FOR CORAL REEF STUDIES

one of the marine protected area. The Solevu's commitment was made for help and they wanted us to start immediately.

Fortunately, that's why we are here. We are doing initial surveys of all of the reef habitats of Solevu District in order to make recommendations of where might be the best places to establish new protected areas.

We will present all of the results back to the villagers later this year. Then, the chiefs will work the same against the costs of clearing or areas in fishing to ultimately decide the size and location of the marine reserves.

So far, there have been pleasant surprises, but also some worrying signs.

The pleasant surprises have in-

A diver surveys one of Solevu's reefs.

Photo: KEITH ELLENBOGG

cluded a marine, a shovel dug up grey reef sharks, banded wrasse and further all four characteristic species which might draw the attention to the area.

The worrying signs on first inspection are that the quantity and size of food fish are very low. However, there is opportunity to restore the fish populations.

The sharks are thriving across

complex reef structures, which means that if the fish are given the chance, they will come back. But future generations of Solevu children and bring them back to health.

Dr Stacy Jupiter is an expert on marine life and is the Wildlife Conservation Society Fiji Country Consultant Director.