

## Sea cucumber identification cards help sustainable reef management in Fiji

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*Waitabu Marine Park in the Vanua Bouma of Taveuni Island, is one of the original community-based marine managed areas in Fiji. Started in 1998, Waitabu's no-take, or "tabu vakdua" area, was one of the first of the Fiji Locally Managed Marine Areas (FLMMA) network in 2001. Protected for 15 years, the tabu vakadua area is now rich in fish, coral and invertebrate life, and the community has recently started a new project; a temporary closure known as a tabu tara.*

The concept of the tabu tara is to close an area of reef neighbouring the long-term tabu vakadua, allow marine life to increase in the newly closed area, and then to open it for short-term specific harvests. In this way, it is hoped that a form of sustainable "farming" of marine resources, with regular harvesting will occur.

Sea cucumbers have been a trade item in Fiji for 200 years. Unfortunately, in recent times, advancing technology such as scuba and hookah (underwater breathing equipment) has allowed fishers to go deeper and collect for longer periods than in the past, resulting in many reefs being completely stripped of these important reef cleaners. Without sea cucumbers, the seabed may become covered in anoxic sediments and detritus, and corals may eventually become unhealthy and die. When corals are in poor health, all life on the reef suffers.

In Waitabu's tabu tara, the community has begun counting and studying their sea cucumber populations, so that a sustainable harvest can be decided upon, which will eventually allow them to regularly take a certain number of cucumbers, while enough are left to breed and re-stock the reef.

If this is to succeed, it is important for community member to understand sea cucumber biology and lifecycles, so that they can make informed decisions about harvesting frequency and size. During the recent annual tabu area surveys (11–16 February 2013), a training session on sea cucumbers was held.



*Sea cucumber identification cards and information sheets in use during training.*

## NEWS FROM IN AND AROUND THE REGION



Identification cards in use during the survey. Note the rope strap attached to the ID card set to facilitate its underwater use.

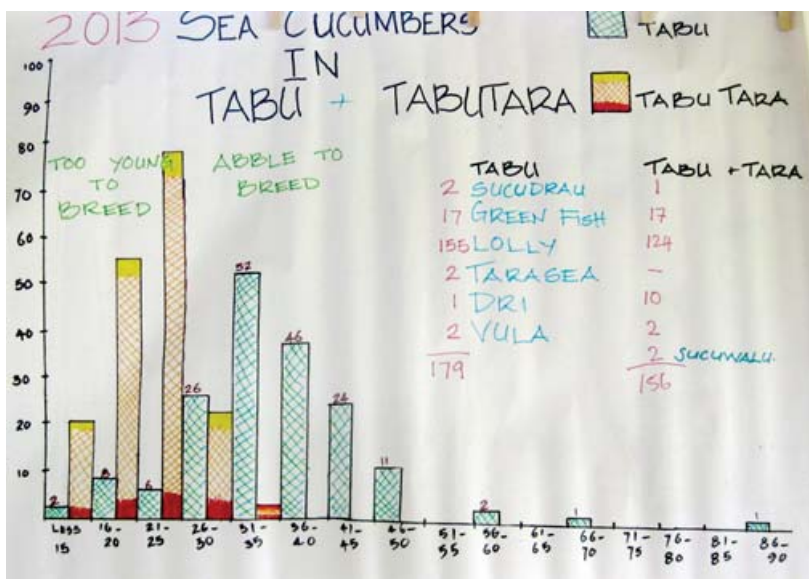
Participants from four of the Vanua Bouma communities — Waitabu, Wai, Korovou and Lavena — learned about the lifecycle of sea cucumbers in general from information sheets compiled by the LMMA network and the Secretariat of the Pacific Community (SPC), and to identify specific species using a set of waterproof cards provided by SPC.

A survey of sea cucumber numbers, species, and sizes was then carried out over both the long-term tabu vakadua and the new temporary tabu tara areas.

While many sea cucumbers were found in both areas, they were noticeably larger in the long-term tabu vakadua than in the tabu tara.

The community was advised that many of the sea cucumbers in the tabu tara were as yet below optimal breeding size, and that surveys should continue until they equalled the size of those found in the Tabu Vakadua, at which time a controlled harvest could be organised as part of the sustainable management of their marine resources.

A set of sea cucumber identification cards was given to each of the four communities involved in order to aid them in future surveys.



A graph of sea cucumber survey results was presented to and discussed with the community.

