

Fishing it up

The state of Nauru reef fisheries

Before going into reef fisheries let's consider tuna for a minute. There are plenty of skipjack tuna in Nauru waters. Oceangoing fishing vessels catch around 50,000 tonnes a year here — a catch that the best scientific minds of the Pacific reckon is fully sustainable — and the income from which contributes in a major way to the Nauru economy.

It's not just foreign consumers and the Nauru government budget that benefits from this healthy tuna resource. Small boats and canoes fishing in the blue water just outside the Nauru reef can bring in plenty of tuna on a good day.

But talk to Nauru fishermen about the fish on the Nauru reef and they turn pessimistic. "Things were better in the old days", they will say. "We used to be able to catch big coral trout and groupers, but nowadays we hardly see them. We used to catch plenty of lobsters. We used to see giant clams".

And unlike some other Pacific Islands, which put the blame on tourists or climate change, Nauru fishermen are clear-sighted about where the problem lies: Too many people fishing in too small an area!

What is the answer? Again, if you ask fishermen, the reply is usually "the Government needs to do something about it".

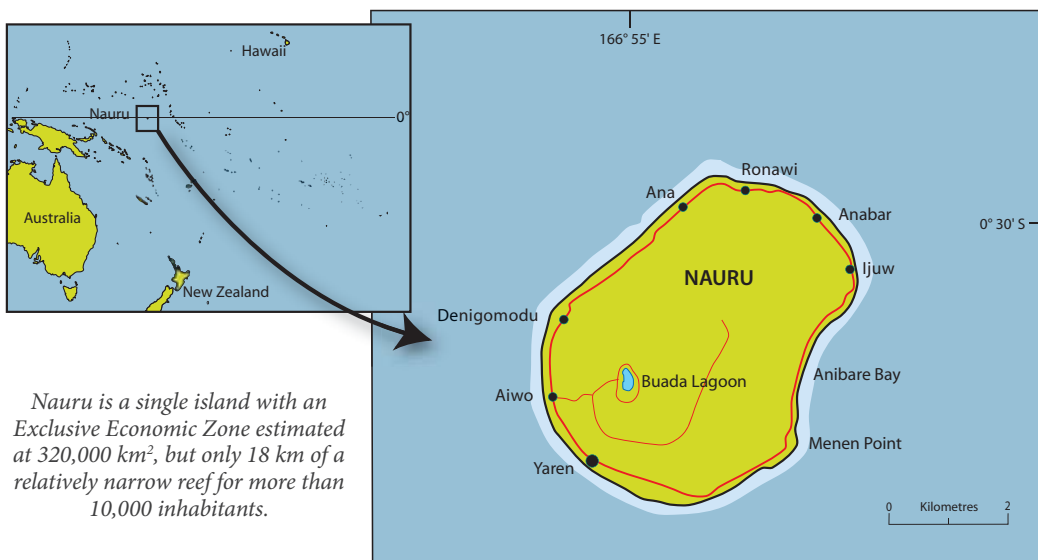
The trouble is, Governments in most Pacific Island countries have problems finding enough money to manage reef fisheries — even reef fisheries which are in much better shape than Nauru's — when that money is urgently needed for national priorities in health, education and public infrastructure.

Why is this? Why do Pacific Islands have one of the best-managed joint tuna fisheries in the world when some of them are struggling with their own reef fisheries?

Pacific Island Governments are able to effectively manage tuna fisheries for three main reasons:

- there are only three or four tuna species to look after (depending on the area) and we already know a lot about their biology;
- the vast majority of tuna is caught by oceangoing vessels that are used to providing comprehensive catch reports, being monitored by independent observers (paid for by the boats themselves), with satellite position locators switched on at all times;
- governments work together: there is a high level of inter-Pacific Island cooperation to control these fisheries, expressed through organisations such as the Nauru Agreement, the Forum Fisheries Agency and the Oceanic Fisheries Programme of the Secretariat of the Pacific Community.

But for reef fisheries covering hundreds of species, involving large numbers of small boats or divers, most of whom are not accustomed or not able to report to government every time they land a catch of fish, with few incentives for regional cooperation, and with little



known about the biology and sustainable levels of fishing for most of these species and, of course, no hope of full “cost recovery” from the fishermen to finance government management, things are much more difficult.

However, despite these region-wide constraints, many Pacific Islands’ reef fisheries are in better shape than Nauru’s because of fisheries management traditions.

In some islands this may be manifested through strong community ownership of exclusive rights to fish, or to control the activities of others on specific areas of reef. In others there are age-old understandings within the community about what kind of fish it is proper to catch in what season, or in what area, or with what kind of fishing gear, coupled with occasional bans on all fishing for a time in certain areas.

In short, these reef fisheries are in better shape because Government does not have the entire responsibility of sustaining these highly diverse, diffuse coastal fisheries, and can rely upon local communities themselves to play a part in looking after their own reef areas – the areas where they have traditionally exercised custodial responsibility.

Nauru used to have such systems, but the various trials and tribulations of the 20th century have caused these traditions to all but disappear. And where there are no longer many traditional understandings to fall back on, it is a risk for anyone who decides to restrict their own fishing when they know there is a good chance that their neighbour will not do the same thing. Especially when food is needed for the family table and paid employment is scarce.

So what is to be done for Nauru’s reef fisheries? The answer most likely lies in government-community collaboration, or “co-management”. Government develops the regulatory framework, provides scientifically-valid information and advice, and some initial help to communities in getting things up and running, whilst communities themselves take charge of many of the day-to-day decisions about how best to restore reef fisheries to sustainable levels of production.

This plan is already in action. The Nauru Fisheries and Marine Resources Authority (NMFRA) has been holding consultations to help communities design management plans for local fisheries, and is currently developing a legal framework for Cabinet consideration, which could allow communities to take part in decisions about their own fisheries or to discuss with other communities and help decide how fisheries which cover more than one district should be managed. The last piece of the puzzle — the government advisory service on reef fishery resources — is now beginning to take shape.

Being Yeeting and Deirdre Brogan from the Secretariat of the Pacific Community are currently in Nauru

helping NFMRA staff to design an artisanal fisheries survey programme, and provide training in operating the programme — survey and measuring techniques, fish identification, and entering, analysing and reporting the information collected.

Nauru fishermen are in for an interesting time, if being interrogated by NFMRA staff every time they land their catch can be called interesting. But it is all in a good cause, and at least the information is being compiled for them instead of needing to be written down and sent in to the regulatory authority by the fishermen themselves, as happens in most other countries.

NFMRA has had an artisanal (small-scale fisheries) data-collection activity running for some years, but it has concentrated on the local boat-based tuna catch to help fulfil Nauru’s international reporting obligations. This is the first time the system has been systematically expanded to cover as many small-scale fisheries as possible, including reef gleaning, spearfishing and night fishing, and with enough coverage to get reasonably accurate results.

As well as helping NFMRA develop its regular reef fisheries monitoring and community fisheries information service, this work will contribute to Nauru’s efforts to monitor the effects of climate change — by identifying changes in reef fish populations and species composition that might be correlated with climate trends — and it will also help pinpoint the fish and invertebrates that are most in need of concentrated attention by communities, and identify the areas that might make the best Marine Protected Areas (MPAs). MPAs have recently been demonstrated to provide greater benefits¹ — in terms of the juvenile fish they contribute to surrounding fishable areas — than the problems they cause by displacing fishermen into those surrounding areas — something that was previously in doubt.

It will even help to make Nauru’s Gross Domestic Product estimates more accurate, by providing regular and more reliable figures on how much fish is landed in Nauru by Nauruans, and what contribution this may have to the local economy.

Deirdre and Being have both been working for SPC for several years, and between them have a vast fund of Pacific Island fisheries experience.

Deirdre, from Ireland, previously worked with observer data-collection programmes aboard fishing vessels, and was the first female observer to work aboard tuna boats in the Pacific Islands region. Although her work is now more land-based, she spends much of her time travelling from country to country helping Pacific Island governments improve their national tuna fishery monitoring.

¹ See : <http://www.sciencedaily.com/releases/2012/05/120524123019.htm>

Being, from Kiribati, has been working on the coastal fisheries side, and has also been just about everywhere. Previously, he concentrated specifically on helping Pacific Island governments and communities in the management of live reef food fish and aquarium fish export industries, but is now covering the entire range of reef fisheries.

So what else can NFMRA do to help Nauru communities from fishing themselves out of reef fish? Nearshore Fish Aggregation Devices are one of the Authority's other tools. FADs help fishermen to target more abundant oceanic fish and still bring home a catch whilst relieving pressure on the vulnerable reef- and bottom-dwelling fish.

Also, NFMRA has applied for an extension of the AusAID-funded Fisheries Management Institutional Strengthening Project (FM-ISP), which has been helping NFMRA for three years to improve its management of the industrial tuna fishery — in particular consolidating the crucial foreign exchange revenue that foreign fishing on Nauru's rich tuna resources generates for the national economy. This revenue has achieved a major and sustainable increase during the lifetime of the project, and now it is time to turn attention to Nauru's beleaguered reef fisheries.

If approved, the FM-ISP extension will help NFMRA to achieve a similar quantum leap in the protection and management of coastal fisheries. If implemented with care, this protection should eventually result in an

increase in reef fishery production, by restoring areas to full productivity. Once a fish resource becomes overfished, increasing the fishing pressure reduces the catch, since the breeding stock becomes too small to replenish the biomass. It may seem paradoxical, but reducing the total amount of fishing, or setting areas aside for total protection, should actually increase the total catch.

This only works for severely overfished resources of course. Reducing fishing on a resource that is not overfished can only reduce the catch. It is NFMRA's job, with the assistance of SPC, to determine which reef resources are in fact severely overfished, and where community and government effort will do the most good, without costing more than the country can afford.

These reef fisheries may not generate millions of dollars for the Nauru economy, but they provide a good part of the nutritional protein that is the bedrock of Nauru's continuing food security.

And, as most Nauruans will admit, they taste better than tuna and other ocean surface fish. We may be able to continue living off abundant sustainable tuna resources, but it will be sad day when we have tasted our last blue-line snapper or black trevally.

Source: Nauru Fisheries and Marine Resources News, 7 June 2012 (<http://nfmra.blogspot.com.au/2012/06/fishing-it-up.html>).



Casting a throw-net in Nauru lagoon (image: A. Vunisea).