

FISH FOR TODAY AND TOMORROW: COMMUNITY-BASED FISHERIES DEVELOPMENT AND MANAGEMENT ENSURES LONG-TERM SUSTAINABILITY

Nearshore fisheries are critically important to Pacific Island people, both for food security and income, but expanding populations and environmental degradation are placing increasing pressure on these fisheries.

And while Pacific Island governments use regulations to manage nearshore fisheries resources, these regulations are rarely successful for a variety of reasons. Problems include the difficulty of enforcing national regulations in subsistence fisheries, which involve large numbers of fishers, the great variety of species that are targeted, the myriad fishing methods employed in nearshore waters, and the (often) small individual catches. In addition, most Pacific Island fisheries agencies are under-staffed and have very limited budgets, making research, management and enforcement difficult for many.

Government enforcement of fisheries regulations is particularly difficult in a country such as Papua New Guinea (PNG), which has extensive coastlines, numerous island groups, and many isolated coastal communities with different languages and vastly differing cultural practices. Enforcement is further complicated by the fact that coastal communities often operate under their own traditional governing structure, and may resent what they consider to be government interference.

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Enabling a community to take some form of control over the management of its reefs and mangroves is essential for the successful management and long-term sustainability of these resources. The Coastal Fisheries Management and Development Project (CFMDP), through its community-based management component, is building community capacity to manage reefs and mangroves within three coastal provinces in PNG.

The CFMDP is a 3.5-year project that promotes the sustainable exploitation of marine resources in PNG's coastal waters; the main goals of the project include improving management of inshore fisheries resources in PNG, and assisting in alleviating poverty through sustainable marine resource use. The project, which is funded by the PNG government through a concessionary loan by the Asian Development Bank, is being implemented by Gillett, Preston and Associates, Inc., through the PNG National Fisheries Authority (NFA).

NFA is in the process of devolving some of its authoritative powers to provincial and local level governments around coastal PNG. This is being done because NFA recognizes that it is impossible for them to effectively

manage the country's inshore fisheries resources from the capital in Port Moresby.

Community-based resource management in PNG

Conservation and sustainable management of fisheries resources can be difficult to achieve at a community level because marine resource conservation measures and the need to earn a cash income are often viewed by fishers as incompatible. The solution lies in education and awareness, and the CFMDP is working with local PNG-based NGOs to raise awareness about fisheries and marine resource-related issues. By working with NGOs, the project is maximizing the long-term sustainability of its community-based management work, which should continue long after the project comes to a close in 2007.

The CFMDP has enlisted the support of Ailan Awareness, an environmental NGO, to help educate and raise awareness in rural coastal communities in New Ireland Province about the importance of community-based resource management. Ailan Awareness regularly visits remote coastal communities, performing marine environmental awareness shows using music, dance, videos and distributing information materials developed by the project.

The CFMDP also holds training workshops for provincial fisheries officers, relevant NGOs, and people from the private fisheries sector. The training aims to enable provincial fisheries and other resource people to effectively initiate and support community-based management (CBM) activities, both now and after the project ends. CFMDP training workshops are in two parts. Participants are first educated

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Alleviating poverty through community-based management

One of the main functions of the CFMDP is to alleviate poverty. This is being addressed, in part, through the project's infrastructure work (e.g. small wharves, jetties, and fish processing plants), which makes it possible for fishermen to get their fish catches to markets. But to ensure that fishermen do not overfish — now that they have a ready way to earn cash from their catch — CFMDP has instituted a community-based management aspect to the project, whose work includes educating fishermen and women about how to take care of their resources, so that resources can be sustainably harvested for generations to come. In addition, it's impossible for PNG's National Fisheries Authority, or even provincial fisheries offices, to manage resources in the more remote parts of PNG (provincial fisheries departments in PNG are typically understaffed and lack operating budgets). So it is only obvious and natural for communities to take responsibility for their resources, looking after them in a way that their grandchildren and their grandchildren will always have fish.

about various coastal ecosystems (e.g. reefs, mangroves, and estuaries), their biological and ecological function, and how they are inter-related. Participants also learn what management of fisheries and marine resources entails, and why it's necessary and important. This part of the training emphasizes the necessary techniques and skills required to prepare and present information (such as fisheries biology and management techniques) at the village level.

The second part of the workshop focuses on training participants in the CBM process, and covers how to launch an awareness-raising campaign in village communities, how to engage villagers in discussions about marine resource issues in their community, and how to help communities develop and draft their own set of rules and regulations governing the marine resources they depend on.

Some fishing communities possess detailed knowledge about the marine environment that is based on experience. This knowledge can contribute towards more enlightened, effective, and equitable remedies and solutions for managing reefs and mangroves, and provides a basis on which communities can be

encouraged and motivated to manage their own marine resources.

Village fisheries management plans

When working with communities, Ailan Awareness invites community members to contact the CFMDP office if they want assistance with or advice on managing their resources and developing rules and regulations specific to their communities' reefs and coastal areas, but makes it clear that it is up to the communities to seek out CFMDP's help. This ensures that the project works only with communities that are serious about and committed to managing their fisheries resources.

When the CFMDP office receives requests for assistance in developing a CBM strategy, Ailan Awareness and a CFMDP staff member pay a visit to that community to talk with villagers about the CBM process. They help identify various marine resource issues in the community, and work with the community to devise a list of solutions to address these issues. This problem-solution list forms the basis of a village fisheries management plan (FMP). The list of fisheries and marine resource con-

cerns in any given village's FMP might include the following: dynamite fishing, anchor damage to reefs, driving fish into gill nets, harvesting female lobsters and crabs with eggs, and dumping rubbish into the sea.

One of the main points that CFMDP drives home, both to its workshop participants and to communities, is the importance of community ownership of FMPs. If everyone in the community isn't onboard or in agreement with the actions and penalties within their FMP, then community-based management doesn't stand a chance of actually working.

Fines and penalties

A resource issue mentioned in just about every community is the use of Derris, a plant found throughout much of the Pacific, and which is used to stun fish to make them easier to catch. An active ingredient in Derris is rotenone, a pesticide that also harms other marine animals, not just the fish that are being targeted. Solutions to problems such as this most often take the form of fines. For example, one community has decided to place a ban against cutting mangrove trees within a certain distance from the shoreline. If someone is caught and found guilty, that person must pay a fine within two weeks of the offence. In most instances, the community elects a committee to enforce the rules it draws up.

Once an initial FMP has been drafted, it is taken back to the community for final approval. This part of the CBM process is necessary so that communities feel the FMP belongs to them and that everyone is in agreement about what should be contained within it.

The question has arisen whether it is possible for communities to actually enforce the penalties set forth in their own FMP, because just about everyone is related to

one another. In response to this, the CFMDP's Coastal Fisheries Advisor, Peter Watt, gave the example of a community that had drafted its own FMP, and where a village magistrate recently heard a case involving fishermen driving fish into their gill nets. This particular community's FMP stated that such an action was punishable. The magistrate found the fishermen guilty, and ordered their fishing nets to be confiscated. Watt explained that one of the things CFMDP tries to instill in communities is a sense of ownership in their resources and their FMP. "If they have that, then there's a chance that community members will put pressure on one another to adhere to it," he said.

What will give the village FMPs some "bite" is the soon-to-be

enacted revised PNG Fisheries Management Act, which acknowledges FMPs as actual laws. Because of the new Act, the FMPs are not just a wish list of solutions to resource problems, they are, in fact, gazetted and drafted into the national law.

To date, seven communities in New Ireland Province have developed their own FMPs, and more communities are in the process of doing so. Although the CFMDP has moved into the other target provinces, the CBM process continues in New Ireland and requests for help are directed solely to Ailan Awareness and the cadre of participants that have been trained by the CFMDP for this purpose.

What's next?

One of the goals of the CFMDP is to reduce fish catches of the more heavily fished species. To this end, the project is developing alternative income-generating projects for fishermen. As an example, the project is rigging and deploying fish aggregating devices (FADs) to move fishing pressure offshore to less targeted fish species. Ailan Awareness is assisting in this endeavour by giving a workshop to interested community members on how the FADs are made and work. This will hopefully give community members a better appreciation for these and encourage them to look after and maintain them.

