

Improving communications with Papua New Guinea's coastal fishers

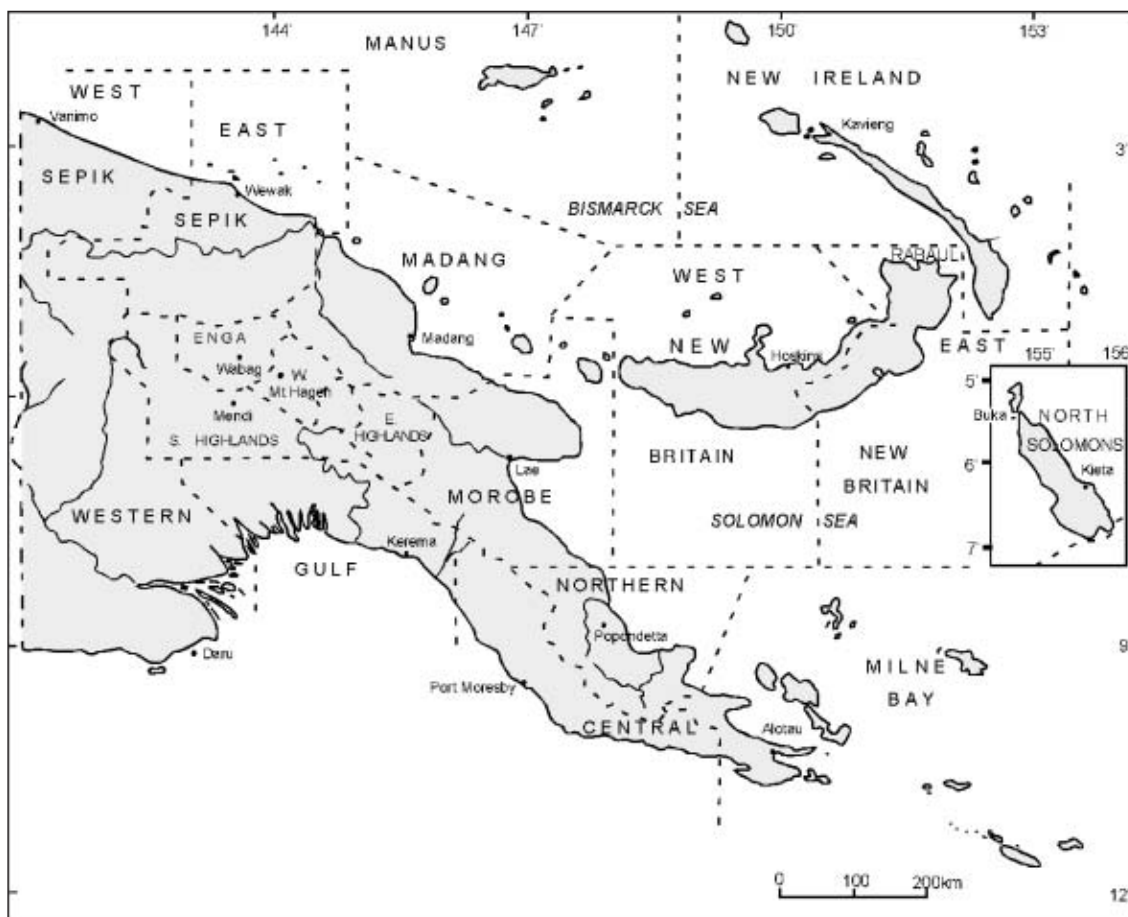
Kim Des Rochers¹ and Clare Ame²

A lack of information about fisheries and environmental issues, as well the poor exchange of information between various stakeholders and sectors, have been identified as major constraints to coastal fisheries development in Papua New Guinea (PNG).

The importance of information to fisheries development came to light during the planning phase of the PNG Coastal Fisheries Management and Development Project (CFMDP). This undertaking, funded by the Asian Development Bank, seeks to promote the sustainable exploitation of marine resources in PNG's coastal waters. The project is operating out of PNG's National Fisheries Authority (NFA).

During scoping meetings, stakeholders — who included members of local communities, commercial and subsistence fishers, national and provincial governments, non-governmental organisations (NGOs), and fishing industry workers — consistently repeated that they needed better and more regular information on various fisheries-related topics. These topics covered a wide range of issues, including fishing regulations, processing methods, marketing strategies, basic marine biology and ecology, aquaculture, more efficient fishing methods, and fisheries management.

As a consequence of the demonstrated interest in improved information related to fisheries and



The CFMDP operates primarily within the PNG provinces of New Ireland, Morobe and Milne Bay.

- 1 Corresponding author: Fisheries Information Adviser for the Coastal Fisheries Management and Development Project.
Email: kimdesrochersinnoumea@yahoo.com
- 2 Documentalist and Information Specialist, Coastal Fisheries Management and Development Project.
Email: came@fisheries.gov.pg

marine resources, CFMDP includes a significant information component. Operating in three coastal PNG provinces (New Ireland, Milne Bay and Morobe), this component assists national, provincial and local fisheries administrations and other agencies in developing appropriate information products and in establishing effective information delivery mechanisms.

Constraints to information distribution in PNG

Given PNG's size and widely dispersed and remotely located population, it is not surprising that information flows are poor and in need of improvement. Twenty-five per cent of PNG's population resides in coastal areas where communication systems are poor, unreliable or do not function at all. Towns of any size are often accessible only by boat; recent increases in petrol costs have made even that access problematic for many people. Literacy rates in the more isolated communities are quite low, particularly among girls and women. In addition, hundreds of different languages are spoken in the coastal areas, and there are vastly differing cultural practices. The exchange of information is further hampered by the inability of various levels of government — national, provincial, local and ward — to communicate effectively with one another.

To overcome the various constraints of getting information to stakeholders in the coastal fisheries sector, it is important to consider as many options for information dissemination as possible; no single strategy will provide the answer in a country as diverse as PNG. Remote coastal communities are an important target group and, for them, direct communication methods are the best answer. Strategies to reach villagers in these communities include talking one-on-one with fishermen and women, working with church and women's groups, talking directly with village leaders (who can in turn help change public opinion), and working with teachers to introduce and improve school curricula on marine environmental processes.

Education is of particular importance. As the manager of NFA's Monitoring and Surveillance section stated, "targeting children and youth with messages about conservation and teaching them the basics of marine resources and processes is essential for conservation and for making decisions about the marine environment." Other strategies include using theatre groups (which can deliver important messages about protecting marine resources in a lively and captivating way that is understood by all members of the community) and video, both of which have proven effective in rural coastal areas outside of PNG.

Reasons for poor information flow

CFMDP has been underway for about one year. One of the project's first information-related tasks was to undertake an initial assessment of fisheries information needs and constraints within NFA. The assessment also covered provincial fisheries offices, NGOs, fishing companies, fisheries exporters, and local communities.

The assessment found that several factors contributed to the poor exchange of information:

- a lack of motivation and enthusiasm on the part of provincial fisheries officers;
- a lack of physical and financial resources for getting information to isolated communities;
- a lack of understanding of basic marine environmental processes on the part of communities;
- an inability on the part of national and provincial fisheries officers and NGOs to effectively communicate and raise awareness about marine environmental issues; and
- a failure to make use of the various means by which information can be disseminated.

If fisheries information is to be effectively disseminated, action must be taken to upgrade procedures, staff capacity and information products within both NFA and provincial fisheries offices. It also requires a better understanding of the information needs of communities, fishing industry workers, and small- and medium-scale fishers, as well as an understanding of what is constraining the exchange of information with these various stakeholders. Improving communication will help influence policies and decisions, sway public opinion, and enable stakeholders to share information.

Improving information dissemination and communication with communities

Talking directly with communities and individuals, and holding workshops and meetings are both potentially effective approaches to information dissemination and communication. These strategies have been used by many NGOs and provincial fisheries officers in the past. With either approach, words and form of language need to be carefully chosen, as not everyone in the community may be familiar with scientific terms or development jargon (e.g. "total allowable catch", "sustainable development"); it is important to always keep the target audience in mind when explaining any aspect of fisheries science or management.

Another useful method of helping villagers understand new concepts is to use alternative explanations or examples. For example, an NFA Resource Management Officer reported that he once was

involved in a workshop on spawning aggregations, where nearly all the workshop participants were unfamiliar with the terms “spawning” and “aggregation”. To clearly explain why areas where spawning aggregations occur should be protected, he likened spawning aggregation grounds to a hospital, where a pregnant mother goes to give birth. In the hospital she is protected and looked after and allowed to recover afterwards, allowing her child the best possible chance of survival and good health. Likewise, he said, spawning aggregations should be protected so that juvenile fish may mature and eventually reproduce. These analogies proved effective for the NFA officer. Similar approaches can be developed to help convey other unfamiliar concepts.

Not all information may be welcomed by community members, however. One NFA Fisheries Management Officer stated that messages regarding closures, minimum fish length, mesh-size limits, etc. have not been well received in certain coastal areas in PNG, and that some people are quite resentful that NFA imposes such restrictions. The officer said that some communities see such laws and regulations as a threat to their livelihoods and that such attitudes must be changed.

Understanding basic biological processes and benefiting from research

A common theme that emerged during the project’s information needs assessment (which was

voiced by national and provincial fisheries officers as well as by members of the NGO community) was that many communities lacked a basic understanding of marine biology and ecology, and had no concept or understanding of how their activities impacted on fisheries, marine resources and the marine environment as a whole. Many contributing factors were identified, including an erosion of traditional customs and related conservation practices, information from scientific studies not getting back to communities, information contained in international conventions and laws on conservation not reaching the right people, and information being distributed in forms that are not readily understood by many fisheries stakeholders (especially rural villagers).

One NFA fisheries manager stated that, in his view, “a primary information need is extracting data from technical reports and ‘translating’ this information into understandable language for non-scientific fisheries stakeholders, such as communities (especially village fishermen and women), the fishing industry, and government decision-makers”. In many coastal communities in PNG, women are very active fishers, yet they are rarely included in the information loop. The Director of Conservation International’s Melanesia Program stated that many scientists working in the field do not release their data in a form that communities can use and understand, and that such information is critical for village decision-makers. Much of the information that does reach communities is in English, and



CFMDP information materials target not only adults, but also children and youth with messages about conservation and basic marine ecological processes.

is useless to people with little education and who have limited opportunity to read, especially outside their local language.

Another NFA fisheries manager said that perhaps one of his biggest information-related problems was that some community leaders do not pass the information they learn from meetings and workshops back to members of the community. This may be due to the absence of a real climate of information-sharing about work activities in PNG.

Approaches to communicating fisheries information

Each type of media or information product has its own strengths and weaknesses. These need to be taken into consideration when developing communication strategies.

Radio

Non-print media — such as radio — can be both very rapid and cost-effective, and may be one of the few options for reaching remote villages. Nearly every stakeholder interviewed in the project's needs assessment identified radio as the most effective way to communicate information to everyone with a concern about fisheries and marine-related issues.

An effective strategy for reaching a wide range of people in the provinces is to work with a local radio station to organise regular announcements and produce a 15-minute radio programme that addresses issues related to marine environments and fisheries. To be effective, the programme needs to be aired regularly (i.e. at least once a week). It also must use a variety of formats, such as interviews with fisheries staff in which they explain rules and regulations, drama scripts that impart a message about destructive fishing practices, interviews with someone from the maritime industry describing their work, and interviews with village elders describing changes to their village's reefs.

CFMMDP has, to date, over 25 radio scripts, each 15 minutes long, on a variety of topics related to marine resources, such as the live reef fish trade, marine protected areas, destructive fishing practices, and how to start a small fishing business. More scripts will be produced as the project continues, and these will become part of NFA's regular work programme. The radio scripts will be broadcast in English and/or Pidgin, depending on the province they are to be aired in. The project is in the process of recording these scripts so that they can be broadcast from national and provincial radio stations around coastal PNG.

Brochures

Brochures targeting community members need to be carefully written — without using scientific jargon and technical terms — and with a minimum of text. Literacy rates are quite low among villagers living in remote areas, making images far more important than text. Brochures (and posters) must be well thought out to take the power of images into account while still imparting an important message that will be understood by all. Moreover, that message must not be too abbreviated: communities are too often bombarded with messages about saving reefs, but typically no information is given about the process by which to do this. Likewise, villagers already receive messages against taking too many turtles or undersized fish, but these messages are not reinforced with adequate background information, such as an explanation as to why they should not, and what the repercussions are if they do.

Not only should words be carefully chosen, but so should the images to be included in brochures. Many messages for marine environmental awareness include images that do not represent reality to local villagers, are meaningless (e.g. cartoon representations of marine animals) or can be misinterpreted. CFMMDP regularly consults its staff of PNG nationals and works with local NGOs to ensure that both the written text and the images will reach the target audience.

CFMMDP is working with the Fisheries Information Section of the Secretariat of the Pacific Community in Noumea, New Caledonia on the production of a brochure on PNG's fisheries regulations for specific resources (e.g. dugongs, lobsters and beche-de-mer). Many fishermen and women claim they are not aware of government laws and regulations regarding resources, and do not know where to go to get such information.

Posters

In reflecting on the shortcomings common to many posters, one member of a non-governmental organisation said "The failure of many posters is that they describe a problem, but do not offer solutions or give information about the 'next step' that should be taken. For instance, they often do not suggest where to go for further information or what needs to be done to alleviate a certain problem, or the action a community should take. Communities are bombarded with messages about saving reefs, but no information is given about the process by which to do this."

So, although posters are one of the most commonly used information media by NGOs and others — often containing lovely photographs of reefs, turtles and fish — they rarely deliver a message that will change the behaviour or attitude of villagers, despite such change being the critical, underlying goal.

In keeping with the underlying goal, then, poster images and text should aim to inform and influence people's behaviour and attitudes. They should encourage people to consider how their behaviour and actions affect the environment around them.

CFMDP is taking a hard look at how to deliver messages effectively, so that they change the attitudes and behaviours of a community, or provide specific answers to pressing problems, which allow direct and relevant actions to be taken. The project has hired local artists to design and illustrate posters on a variety of topics/themes, such as government regulations regarding the size limits of various marine animals, the hazards and impacts of using dynamite to catch fish, before-and-after underwater images of reef organisms that have been affected by the use of poisonous plants to catch fish, establishment of marine protected areas, and safety at sea.

Other print and non-print materials

In addition to the "standard" information materials mentioned above, discussions with provincial fisheries officers and NGOs in the three target provinces highlighted the need for other types of awareness and information materials designed for

villagers and communities. Such resources are critical in particular for villagers who lack a clear understanding of how their activities affect the marine environment. For example, some people do not understand that the use of a small-mesh gill net results in the capture of juvenile fish that have not yet reproduced. It was also reported that some villagers do not understand the impacts of cutting down mangroves on various species of fish, crabs, shellfish and birds that depend on these forests.

In response to the need for alternative types of materials, CFMDP is developing a series of comic book stories that contain messages about properly managing reef resources, the dangers of HIV/AIDS, impacts of destructive fishing methods (e.g. dynamite and poisonous plants), sea safety, marine conservation areas, etc. These comic books are being illustrated by local PNG artists. To date, two comics have been printed: one tells a story of a fisherwoman who contracts HIV from the crew member of a foreign fishing vessel; and the other is about an underwater classroom where sea animals learn about the dangers of using dynamite and fishing with poisonous plants. Two other comic books are currently being illustrated and developed (one on sea safety and the other on marine conservation areas). The comic books are aimed at school-aged children as well as adults, and will be produced in both English and Pidgin.

CFMDP is also developing a tide calendar that provides the daily times for high and low tides, and highlights a particular resource each month. Basic information about each resource is presented along with any applicable regulations. The calendar is expected to be out early in 2005.



In addition to "standard" information materials CFMDP is also working with theatre groups to convey marine conservation messages.



Besides producing comic books with conservation messages, CFMDP has also produced a comic that tells of the dangers of AIDS and fishermen and fisherwomen.

Video

CFMDP is currently filming two docu-dramas, each of about 15–20 minutes duration. One focuses on overfishing and the other on destructive fishing practices. The project has enlisted the help of a professional film-maker in Kavieng to produce the videos. The scripts for these videos were developed by CFMDP staff, and will be performed by local actors. All footage is being taken in New Ireland Province, but will be done in such a way that the videos are relevant to other coastal PNG communities.

All video materials (docu-dramas as well as puppet shows) will be used as community engagement

tools that provide a topic or discussion point to be raised during village visits by the project team, and visits by environmental NGOs.

Theatre

Theatre groups and/or puppet shows can also be highly effective methods of communicating difficult concepts. Mahonia na Dari (an NGO based in New Britain) has a highly successful marine education programme that has proven to be a powerful tool in building a grassroots constituency for conservation. CFMDP has filmed two of Mahonia na Dari's puppet shows, which are being recorded onto VHS and shown in remote coastal village communities in



CFMDP has filmed two puppet shows put on by “Mahonia na Dari” (a New Britain-based NGO), a highly successful marine education programme that has proven to be a powerful tool in building a grassroots constituency for conservation.

PNG. To distribute these videos further, CFMDP is working with local NGOs; it is also investigating possible work with other theatre groups.

TV

At this time, CFMDP is not making use of television because it is both costly and inaccessible for most people in coastal PNG. However, the project may use it at a later date in order to reach politicians and other decision-makers.

What's next?

The above-mentioned information products are being trialled in New Ireland Province for an expected period of about one year. Once feedback is received on these various information products, the project will adapt or modify the products for the other two provinces involved in its information component. We anticipate that the adaptations for the other provinces will involve slight variations from what has been developed for New Ireland. For instance, for Milne Bay Province, the project may produce specific information on beche-de-mer (e.g. price sheets for individual species, or rules and regulations regarding seasonal closures), in addition to other information materials.

Likewise, the docu-drama produced for that province may focus more on harvesting beche-de-mer and trochus, or on the destruction of sea turtle nests.

CFMDP ends in 2007. One of its primary goals is to make certain that its work will continue afterwards through the efforts of NFA, NGOs, provincial fisheries offices, and other agencies and individuals. To this end, PNG nationals are being trained in various areas, including socioeconomic survey work, information production and dissemination, and community fisheries management and development.