

Towards participatory management of lagoon fisheries in French Polynesia

Lagoon fishing is one of the leading sources of income for half of all Pacific Island households. Fish accounts for 50–90% of animal protein intake in Pacific Island diets (SPC 2015). Regionally, coastal fisheries are particularly important in cultural and economic terms (SPC 2015). They are estimated to supply 49% of the fishing industry's contribution to gross domestic product, reflecting how central they are to the Pacific Island lifestyles (SPC 2015). The population of many Pacific Island countries and territories is increasing steeply while coastal fisheries resources are dwindling, and population pressure is widening the gap between the amount of fish required for Pacific Island food security and the volume that can be caught without jeopardising coastal fish stocks (SPC 2015).

The Polynesian region has the lowest reef fish catches in the Pacific at 28,338 t in 2014 – a 12% increase over 2007 – while catches in Melanesia have reached approximately 100,000 t. Lagoon fishing in Polynesia is practised for both subsistence and commercial purposes, whereas it is essentially a subsistence occupation in the other Pacific regions. Polynesians take the prize, however, for eating seafood, particularly in Tuvalu and Tokelau, where they eat 142–150 kg per person per year: nearly twice as much as the overall Pacific yearly rate estimated at 75 kg per person (Pinca et al. 2010). The status of lagoon resources in Polynesia is difficult to gauge because there are more than a thousand islands, and gathering information on such a scale is no small task. Research conducted to date on a small number of islands, particularly under the Pacific Community's PROCFish project, shows that Polynesian countries' lagoon resources are being overfished. PROCFish findings point to fish biomasses below the regional average of 118 t/km² on 65% of sites examined in Polynesia (Pinca et al. 2010). Some islands, such as Tutuila in American Samoa, would require a 40-year outright fishing ban to restore stocks to their original level (McNeil et al. 2015). The main causes of the lagoon resource stock depletion are related to watershed mismanagement (particularly the failure to involve stakeholders in development), and overfishing, destructive fishing methods, increased seafood demand to meet household needs, and changing values in the fishing industry. While former generations used environmentally sound fishing methods, younger people appear to be gradually losing their regard for nature and are adopting a more utilitarian approach to resources as a means of purchasing consumer goods. They also appear less knowledgeable about managing resources. The fact that communities do not own lagoon resources, which the public therefore has access to, is also seen as one of the causes leading to the resource damage. Urban sprawl along coastal areas and, more generally, public policy driven more by development than management are yet additional factors contributing to lagoon resource depletion. Climate change, however, is at the top of the list of dangers thought to be the most serious for Polynesian countries.

In order to deal with these trends – spanning many years now – Polynesian countries have adopted a variety of coastal resource management strategies, and the most conclusive so far have been those that fully involve fishers. The term “conclusive” refers less to scientific evidence that stocks are statistically on the rise than to a perceived improvement in resource status according to local managers, after developing local management measures and effective implementation by the communities involved. Legal frameworks for the co-management of resources have been developed in Samoa, Tuvalu, American Samoa, Tonga and New Zealand. Samoa has introduced a community fisheries management programme that currently involves some one hundred villages. Tonga has set up 27 special management areas, while Tuvalu has introduced locally managed marine areas on four different islands, and New Zealand has set up mataitai (customary fishing) reserves. Management in all cases is exercised under a partnership between the governments and communities, with governments adjusting their legal frameworks so that local communities can manage their resources, take part in enforcing the rules they have agreed to, and sometimes, as in the case of Tonga, even restrict access by neighbouring communities to managed areas. In French Polynesia, Hawaii and the Cook Islands, community management is still highly informal and practised on remote islands, such as Rapa in French Polynesia or Mangaia and Pukapuka in the Cook Islands, where the traditional resource management method, *rahui*, is used outside any legal framework.

Against a backdrop of increasing pressure and the declining influence of traditional leaders near urban and other developing areas, countries such as French Polynesia are searching for management methods that are relevant to the country's development context and are manageable by its administrative resources. French Polynesia, to a greater extent than its neighbours, has inherited a highly-centralised management system that does offer little opportunity for non-government players to take part in managing lagoon resources. Because French Polynesia does not have the staff required to implement such a centralised policy, with the Department of Marine and Mining

Resources having fewer than five dedicated lagoon management officers for a territory comprising 118 islands and 15,000 km² of lagoon, the country is lagging behind in terms introducing lagoon resource management measures at a time when resources are becoming increasingly scarce near areas under population pressure. During a regional workshop held on Tahiti from 10–13 April this year under INTEGRE,¹ French Polynesia learned from lagoon fisheries participatory management experience spanning the last 20 years in some parts of Polynesia, including American Samoa, Cook Islands, Hawai'i, New Zealand, Rapa Nui, Samoa, Tonga and Tuvalu, as well as in Chile, Fiji, and New Caledonia.² The meeting was attended by 60 participants who provided a broad outline for implementing management that was more inclusive of fishers across French Polynesia.

Overall, French Polynesia needs to decentralise management as much as possible, formalise the community management approach to make it more accessible and attractive to fishers and community members, and overhaul regulations. In terms of implementing participatory fisheries management on the ground, four major stages were outlined, each with its own challenges, and requiring the most pragmatic solutions possible.

1. *Defining stakeholders or the community*

The crux of good resource management is managing communities, which raises two subsets of challenges: first, managing activity-, gender- and age-representativeness and authority; and, second, the “community’s” connectedness to the environment it wishes to preserve or protect, as traditional social structures give way to modern lifestyles. It would appear necessary – in terms of influence and community involvement, reaching beyond the bounds of fisheries – to use existing structures such as associations and churches and to rely on local government authorities, to opt for a volunteer approach, and, finally, to identify other incentives.

2. *Planning*

This challenge involves defining the objectives and actions by using the right method and the right tools. Simplicity and repeatable models should be aimed for, drawing inspiration from what has been done elsewhere. Thought should be given to the cost of participatory management in terms of people and time. Local culture and traditional knowledge must be integrated into the selected management options. French Polynesia’s Department of Marine and Mining Resources must build capacity, both quantitatively



Fakarava Atoll, Tuamotu Islands, French Polynesia (image: © Julien Girardot)

(number of positions) and qualitatively (social science skills for consultation and awareness). The role of local government must also be formalised and strengthened for the consultation process. Whether work needs to be contracted out, at least in the early stages, with help from regional bodies or non-governmental organisations, must also be discussed.

3. *Implementation*

The main challenge is setting a limit – based on community commitment and skills and on the government’s human, financial and regulatory resources. The sine qua non of successfully implementing

¹ INTEGRE (Pacific Territories Initiative for Regional Management of the Environment) is a joint sustainable development project involving four European Pacific overseas countries and territories (OCTs): New Caledonia, Pitcairn, French Polynesia, and Wallis and Futuna. It is funded under the 10th Regional European Development Fund and implemented by the Pacific Community.

² The workshop was also co-funded by the French government through the Pacific Fund.

participatory integrated management is to take a pragmatic approach based on the progress made in acquiring capacities (“start small”). Implementation must be based on representative management committees with accepted terms of reference to ensure that decisions are transparent, information is passed on, and local stakeholders are involved in the monitoring work. Participatory management implementation must go hand in hand with awareness training, which can become easier as success stories emerge that can generate enthusiasm for duplicating them.

4. *Monitoring, assessment and adaptation*

Here, the key is keeping to essentials and not trying to cover everything. The challenge is involving local stakeholders and being effective and transparent through participatory monitoring that is neither time-consuming nor a drain on resources, but based on assessing governance and on the perception of the state of resources and benefits, using Fiji’s Locally Managed Marine Area network model. More elaborate forms of monitoring are also relevant, but cannot be developed on a large scale.

5. *Networking*

The challenge here is to change the scale. The network does not matter much if there are not many sites, but as more are managed, networking becomes a solution for improving information flow, peer-to-peer training of managers, creating positive emulation for better resource management, and even having a greater influence on fisheries management policies. This has been demonstrated by the Locally Managed Marine Area network in Fiji that now covers more than 300 partner-villages working together towards food security for the community and future generations.

By implementing these solutions drawn from the experience of their Polynesian neighbours, French Polynesian authorities will be required to delegate some of their powers to local stakeholders in a relationship based on trust that must be developed. This is no minor change, but it has been made by neighbouring countries and has resulted

in highly significant improvements in lagoon resource management. It should support local communities in the management options they choose to pursue by fostering local initiative, adapting to local practices and organisation methods, and involving stakeholders in producing regulatory frameworks. It should also create opportunities by introducing adaptive legal frameworks and fostering discussion and decision-making forums. Also, all stakeholders’ facilitation, consultation and information sharing capacities must be strengthened.

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