

28508

SPC/2nd Pacific Community Fish. Mgmt. Workshop/BP 19
14 October 1998

ORIGINAL: ENGLISH

Not for loan

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SECOND PACIFIC COMMUNITY
FISHERIES MANAGEMENT WORKSHOP
(Noumea, New Caledonia, 12-16 October 1998)

DEVELOPING INSHORE SPORTFISHING IN PALAU

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Developing Inshore Sportfishing in Palau

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Second SPC Fisheries Management Workshop, 12-16 October, Noumea, New Caledonia

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PRE-PROJECT SITUATION

Fish stocks and fishing

The importance of fish and fishing to Palauans is enormous. Period. But fishermen in Palau have increasingly complained about the depletion of their reef fish resources, and most fishermen have recognized that limitations on fishing pressure must be put in place in order to stem the decline.² Fishing effort continues to increase, however, and most of the increase has been in the commercial sector, with more and more of the catch exported to feed the growing demand from Guam and Saipan. Within Palau, fishing pressure has been spreading farther and farther from the urban center of Koror where the demand is greatest. Larger boats and higher fish prices have allowed Koror-based commercial and recreational fishermen³ to make more distant fishing trips to the waters of Palau's outlying (and much less populous) states. Ngarchelong and Kayangel in the far north, for example, have only a few hundred residents each, but together own about one third of Palau's reef and lagoon areas—about 500 km² (see map on following page).

¹ PO Box 1811, Koror, Palau 96940

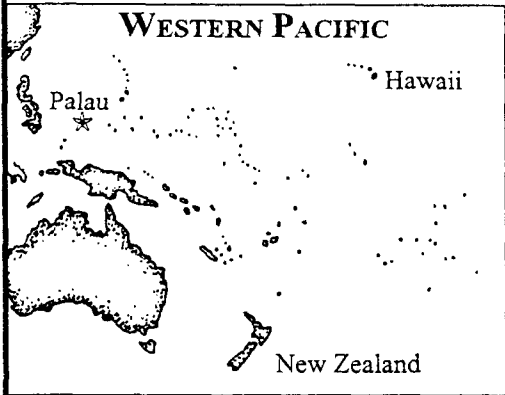
² See Johannes, R.E. (1991), Some suggested management initiatives in Palau's nearshore fisheries, and the relevance of traditional management. Palau Marine Resources Division Technical Report 91.14, Republic of Palau.

³ There are few people in Palau that rely exclusively on fishing for their livelihoods, but there are many "weekend" fishermen that fish for fun and a little profit, sometimes making distant day trips.

REPUBLIC OF PALAU

Ngauangel Reserve

Kayangal



Northern reefs

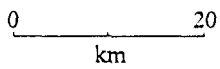
Ngaraard mangrove conservation area

Ngarchelong

Ngardmau

Ngaraard

Ngemai Conservation Area



Ngeremlengui

Ngiwal

Ngeremeduu Bay

Melekeok

Ngardok Nature Reserve

Ngatpang

Ngchesar

Aimeliik

Koror

Airai

Ngerumekaol Channel

7° 20' N

Ngerukewid Islands Wildlife Preserve

Rock Islands

Ngemelis No-Fishing Area

Peleliu

Angaur

REPUBLIC OF PALAU

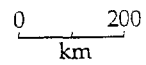
Main Islands

Southwest Islands

Sonsorol

Hatothobei

Helen Atoll



134° 10' E



Fishermen in these states have increasingly felt a loss of control over their marine resources and blame the depletion they see largely on outside fishermen.⁴ And the fishermen in these outlying states, partly in response to government initiatives during the last decade to develop the inshore fishery,⁵ have also been fishing more and more for commercial purposes, supplying Koror, Guam, and Saipan with reef fish.

Tourism development

Palau has been seeking alternative economic opportunities, especially since its gradual weaning from U.S. government funding after independence in 1994. Tourism is decidedly the most promising sector, and it has been growing steadily since the early 1980s. Tourism, however has been almost totally based on scuba diving and has thus been mostly confined to Palau's southern lagoon—an area that offers spectacular diving on the steep barrier reef walls, the beautiful scenery of the Rock Islands, and ready access from Koror. The economic benefits from tourism have not been making their way beyond Koror (except the large portion of benefits that flow directly out of Palau—a separate problem). Certainly, the many immigrants to Koror from Palau's outlying states have participated in the economic activity in Koror, and benefits have made their way to those states through family connections and through government taxation and spending. The problem has been that there are few opportunities to benefit from tourism without being based in Koror. Koror has become overcrowded while the communities of the outlying states have shrunk. While the outlying states have complained about fishermen from Koror taking their fish, Koror has complained about immigrants from the outlying states burdening their infrastructure and social services, as well as taking fish from Koror's waters.

Another problem has been the “intrusion” of tourism—mostly scuba diving—into waters traditionally used by fishermen, and the resultant tension, between fishermen and tour operators. As tourism has effectively edged fishermen out of the southern lagoon's most popular dive sites, fishermen have felt their fishing grounds dwindle in size. In 1995, for example, Koror State declared off-limits to fishing a 30 km² area of reef that includes many of Palau's most popular dive sites. The growth of dive-based tourism has, of course, provided alternative opportunities for fishermen and others, and many fishermen have switched occupations from fishermen to dive guide. Tension between the two groups, however, has continued, and it is naturally linked to the importance of fishing to Palauans. Whether it be for subsistence, fun, or commercial purposes, fishing plays such a central role in Palauan culture that any changes or threats to traditional fishing rights and patterns is sure to be met with some resistance.

Sportfishing

Sportfishing has long been an activity available to tourists in Palau, but few tourists have taken advantage of the opportunity—most of them only as a secondary activity. Very few have visited Palau for the primary purpose of sportfishing. Many of the thirty-odd Koror-based tour companies offer fishing, but there are no companies that offer nothing but fishing. There probably hasn't been enough sportfishing to cause much resentment among local

⁴ Although there are only a couple dozen fishermen that reside in these communities, there are others from these communities that reside in Koror; these have a status somewhere between “insider” and “outsider.”

⁵ Many of these initiatives were funded through Japanese grant aid; activities included the provision of fishing boats and gears, development of port and ice-making facilities, and development of village-based fishing cooperatives.

fishermen, but the potential for conflict has been an important concern. A bigger cause of resentment among Palauans has been tourists harvesting giant clams and removing corals and shells.

PROJECT PURPOSE

In 1993 a team that included the marine resources office of the Palau national government, The Nature Conservancy, and several of Palau's outlying communities and local governments embarked on a project to develop a tourist-based inshore sportfishery. After two years the newly founded Palau Conservation Society took over as project leader. Funding was provided by the U.S. government through the Saltonstall-Kennedy program of the National Marine Fisheries Service. Other collaborators included the Palau Visitors Authority, the South Pacific Commission, the Forum Fisheries Agency, the Guam Division of Aquatic and Wildlife Resources, and the Japan Tourism Bureau.

The project responded to two main problems: disappearing reef fish resources from fishing and the failure of Palau's outlying communities to receive an adequate share of the benefits from Palau's growing and most promising economic sector—tourism. From the perspective of resource management, these problems could together be described as one of Palau's reef fish resources not being put to the best possible use.

Given Palau's relatively abundant fish resources, its natural beauty, and its growing reputation as a desirable vacation destination, a sportfishery would almost certainly have developed without the "intervention" of this project. But the purpose of the project was not just to see the development of the sportfishery; it was to see it develop with certain characteristics:

- The sportfishery would contribute to the conservation of fish resources rather than to their depletion.
- The emerging sportfishing businesses would be controlled to the extent possible by local interests, and especially by people in the target communities.
- Participation in the industry by Palauans would be maximized to the extent possible, and fishermen in the target communities would participate as fishing guides as an alternative to commercial, extractive fishing.
- The reputation of Palau as a fishing destination would be a positive one from the beginning, helping to ensure the sustainability of the industry—that is, visiting anglers would be satisfied through great fishing, safe boats and equipment, and good services, as well as positive non-fishing experiences.
- The sportfishery would develop in harmony with, rather than in conflict with, the subsistence and commercial fisheries, as well as with scuba diving and other marine tourism activities.

PROGRESS TO DATE

The sportfishing development project has progressed through two main phases, assessment and demonstration. Concurrent with those phases, several communities have been taking initiatives to conserve and make better use of their inshore resources. These initiatives were

aimed at issues of resource management broader than just the development of a sportfishery, but to the extent that they related to sportfishing, they are discussed here.

Assessment

The first two years of the project were dedicated to assessing the feasibility of developing an inshore sportfishery and identifying the issues that would have to be addressed in such development.⁶

Vessels and gear: An assessment of equipment and gear needs recognized that the vessel and gear requirements for offshore trolling would be well beyond the means of all the target fishermen. Thus the preferred strategy was to focus on inshore fishing (casting and nearshore trolling), which can be done from smaller boats and with less sophisticated gear. Most of the boats already owned by the fishermen—generally open fiberglass boats in the 20 to 24 foot range with single outboards—would not be quite adequate, twin engines being an important requisite for safety. An investment of \$20,000 to \$25,000 would be needed for an ideal boat. An additional few thousand dollars would provide for the fishing, safety, and other gear needed for inshore casting and trolling.

Economics: An assessment of the economic feasibility of small-scale inshore sportfishing businesses concluded that a fisherman that switched occupations from commercial fisherman to fishing guide would stand to make about the same level of profits. The assessment, however, did not account for the possible “conservation” benefits that development of the fishery might bring to Palau’s inshore fisheries as a whole.

Fishing action: An assessment of fishing grounds and target species found that the far northern waters of Ngarchelong and Kayangel probably offered enough variety of habitat and species and enough fish to provide a satisfactory fishing experience to most anglers. An assessment to the south, in the waters of Peleliu and Koror, was less positive. In both cases, the assessment found that the perpetual protection of some areas, such as through the establishment of catch-and-release-only zones, would probably be necessary to guarantee an adequate number of fish to satisfy visiting anglers.

Tourist markets: An assessment of Japan’s tourist market recognized the large potential of drawing both serious anglers and marine enthusiasts that would engage in sportfishing as a secondary activity. Markets not assessed but recognized to also have considerable potential were the U.S. and Europe.

Community interest: Community meetings and workshops with fishermen in Kayangel, Ngarchelong, and Koror were held in order to gauge the local interest in developing a sportfishery and to identify outstanding issues. In general, the local leadership and residents saw sportfishing as a desirable economic alternative, but only if the community maintained adequate control and if an adequate level of benefits ended up in the community. In general, the fishermen were interested in sportfishing as an alternative occupation. It was recognized that the profound differences between sportfishing as a service occupation and fishing for food and income as an occupation that values independence would limit interest to only some of the fishermen. The fishermen received preliminary training in safety and other service-

⁶ The results of this assessment are available in: Anon. (1996), Small-scale sustainable sport fishery development for Palau: assessment, strategy, and consensus-building. Report by Division of Marine Resources, Bureau of Natural Resources and Development, Republic of Palau.

related aspects of sportfishing in order for them to better assess their own interest in the business.

Institutions and resource management: The importance of both fishing and tourism to Palau's economy and way of life has led to the Palau government having a substantial institutional system dedicated to both these sectors.⁷ But sportfishing is not a traditional component of either sector. The central government objectives in fisheries have been developing underutilized resources, improving marketing, and protecting vulnerable reef-associated species. The central objective in tourism has been promoting scuba diving. Non-government groups involved in fishing and tourism include a tourism industry association and a sportfishing association.⁸ The latter has mostly occupied itself with organizing offshore fishing tournaments. Inshore sportfishing has generally fallen between the institutional cracks.

An assessment of the institutional environment found that legislative and other initiatives would be necessary at the national and local levels in order to create an environment conducive to sportfishery development. At the national level, initiatives would be desirable to provide incentives for fishermen to switch to sportfishing, such as tax breaks and low-interest loans. Safety in the industry would have to be ensured through a national system of certification or licensing for guides and boat operators. Participation in the industry by Palauans might be controlled through occupation restrictions, such as those already in place for tour guides and taxi drivers. The Palau Visitors Authority would have to actively promote sportfishing abroad.

At the local level, the state governments (e.g., Kayangel and Ngarchelong), would have to put in place systems to: 1) better control access to their fisheries resources, 2) conserve adequate fish and fishing grounds for visiting anglers, and 3) extract rent from the fishery.⁹ The first could be done through restrictions on who could act as fishing guides in the states' waters (e.g., as part of the national guide certification system). The second could be done through the establishment of catch-and-release fishing zones. The third could be done through permit systems that levy fishing fees on tourists.¹⁰ Because separate permit systems in each of the states could cause unreasonable hassles for the visiting angler, another chore for the national government would be to harmonize and possibly act as clearinghouse for the state permit systems.

Both national and model state-level laws were drafted that would accomplish all of the above institutional and policy objectives. At the national level, legislation was introduced in 1996 but no action has been taken. Actions taken at the state level are discussed further below.

⁷ The Division of Marine Resources is concerned with fisheries management and development; it has sections devoted to foreign offshore fishing, marketing, and aquaculture; the Palau Visitors Authority is in charge of tourism development.

⁸ The Belau Tourism Association and the Palau Sport Fishing Association, respectively.

⁹ The 16 states of Palau are accorded "exclusive ownership" of living and non-living resources out to 12 miles from the outer reef. It follows that any public sector benefits gained from those resources should be directed to the state governments rather than the national government.

¹⁰ Kayangel and Koror are the only two states with such systems in place. Koror's applies to all visitors to its Rock Islands, regardless of activity; Kayangel's applies to virtually all tourists, with the fee level depending on the activity.

Demonstration

During 1996 and 1997, the project team undertook a series of activities to test the fledgling sportfishery “system”—that is, everything from the services of the guides, boat operators, and hotels to the fishing itself. Experienced anglers were recruited from the Japan and the U.S. and put in the care of local fishing guides for a few days of fishing in the waters of Kayangel and Ngarchelong. Because the target fishermen in those communities were still not adequately equipped with vessels and fishing gear, the vessels and services of experienced Koror-based tour/fishing guides were used in these fishing trials. But prospective guides from Ngarchelong and Kayangel accompanied these guides as “apprentice” guides. While the Koror-based guides were more experienced in serving tourists, the fishermen from Ngarchelong and Kayangel were more knowledgeable about the local fishing grounds. Together, they made very effective teams.

At the end of the trials, the anglers provided detailed assessments of their fishing experiences, with evaluations of fishing action, vessels and gear, the services of guides and others, accommodations, and their non-fishing experiences while in Palau. The assessments were generally positive, but highly variable from angler to angler. To some, for example, fishing action was the only important attribute to be judged. For others, scenery, accommodations, food, comfort, and other attributes were just as important as the fishing itself.

Fishing action: There was a consensus among the test anglers that Palau’s northern reefs held enough fish to satisfy most anglers. The second of two trials saw especially good fishing, and one very experienced angler ranked Palau as his third favorite fishing destination in the world, behind Panama and Midway. There was concern among the anglers, however, that Palau’s reefs were not very extensive, so they might be vulnerable to being fished-out, and controls would have to be put in place to protect the fish stocks. A little offshore trolling was done in addition to reef casting, but the results were not impressive. The anglers attributed it to either Palau not having much pelagic fish, or the guides not being knowledgeable enough about the times and places to find the various species of pelagic fish. Although the anglers found the vessels and gear to be adequate, they offered numerous recommendations for minor improvements.

Services: The services of the guides, boat operators, and others were generally rated as good, but it was acknowledged that the fishing guides would need more experience and training in order to better know what kind of experience visiting anglers are looking for.

Accommodations: The assessments of the accommodations in Koror were, almost without exception, very good. The northern fishing grounds, however, are about two hours by boat from Koror. The anglers that chose to make the trip every day from Koror found it too long. Those that chose to lodge near the fishing grounds found the accommodations inadequate. Clearly, improved lodging at Kayangel and/or Ngarchelong would be necessary.

Non-fishing experiences: Except for the few anglers that had no interests beyond fishing, there was a consensus that Palau had a lot to offer besides good fishing. The scenic value of its coastlines and reefs especially impressed the visitors. The city attractions of Koror got moderate evaluations from the anglers.

Conservation

One anticipated outcome and benefit of the sportfishery development project was that communities that stood to benefit from the sportfishery, as well as the national government, would put in place controls over fishing that would safeguard the fish stocks necessary to sustain the fishery. For example, catch-and-release would be the general rule for visiting anglers, and fishing zones would be established that allowed only catch-and-release fishing. As the fishery developed, it was expected that nationwide controls less directly related to sportfishing would also be put in place, such as limits on the amount of reef fish exported from Palau.

Several relevant pieces of legislation have been considered by the national legislature. One would prohibit the export of reef fishes from Palau. Another would create a marine reserve in the far north of Palau. But no relevant national laws have been enacted since 1994, when groupers were protected from fishing for four months a year and the export of lobsters, giant clams, coconut crabs, mangrove crabs, humphead parrotfish, and napoleon wrasse was prohibited.

Some of Palau's 16 states have recently taken some steps towards protecting and making better use of their fisheries resources. In 1994, the traditional leaders of Ngarchelong and Kayangel put a seasonal ban on fishing in certain reef channels known to hold spawning aggregations of groupers. In 1996, partly as steps towards pursuing sportfishing as an alternative enterprise, the leadership of Kayangel enacted two laws. The first established a permit system whereby all tourists, including anglers, would have to pay a permit fee to engage in any marine activities in the state. The second established the Ngaruangel Reserve, 35 km² of excellent fishing habitat comprising Ngaruangel atoll, about 10 km north of the community of Kayangel. The law puts the atoll completely off-limits for three years, during which time the community will prepare a long-term management plan for the Reserve. One option being considered is for Ngaruangel to be reserved for catch-and-release fishing and perhaps diving.

With this option in mind, the second sportfishing trial, conducted in May, 1998, focused its fishing at Ngaruangel—both to assess the reef in general, and, if possible, to see whether the previous 18 months of closure had had any effect on the atoll's fish stocks. Although only preliminary, the results were impressive. Fishing action was non-stop at times, and two desired species, the giant and bluefin trevallies, were especially abundant and large. The giant trevally had been completely absent during a fishing trial two years before. The positive fishing results provided important reassurance to the people of Kayangel that their Ngaruangel Reserve initiative was on the right track.

OUTSTANDING ISSUES

Important progress has been made in seeing a sportfishery with the right characteristics develop in Palau. Most important have been the local conservation initiatives, the positive assessments of fishing action and economic feasibility, and the gaining of consensus in the communities and among fishermen that such a fishery is desirable. There remain, however, a number of outstanding issues.

Distribution of benefits: First, there is uncertainty as to how to make sure the benefits from the fishery get to the people who need them (e.g., the communities that own the fisheries resources). Although the entrepreneurial prospects of a sportfishing business look good, no village-based fishermen have yet made the leap of investing in the necessary equipment and gear. In the meantime, experienced and well-financed Koror-based tour businesses are gearing up for fishing. A group of Koror-based boat owners and fishing guides recently organized themselves into a loose sportfishing association, with the idea of cooperating at least in promotion. Although such steps reflect positively on the prospects for developing a successful industry, there is the concern that the village-based fishermen will be left behind. It appears that the best strategy, at least initially, will be to encourage the Koror businesses to team up with the village fishermen, the former taking advantage of the fishermen's superior knowledge of the northern fishing grounds.

Limited fishing grounds: The conservation initiatives taken by the community of Kayangel have been very encouraging. But a single reef full of fish in the extreme north of Palau may not be enough to sustain a flourishing sportfishery. Protection of other fishing grounds, such as the more accessible and sheltered reefs between Kayangel and Ngarchelong, may be necessary. Consultations with Ngarchelong regarding sportfishing and fish conservation have received feedback just as positive as in Kayangel, but little action has been taken by the local leadership. Another area with sportfishing potential—especially deep jigging and trolling—is Velasco, the extensive deep reef extending north from Ngaruangel.

Difficult access to fishing grounds: The long boat ride to the northern reefs and lack of adequate accommodations in the northern villages is a serious constraint to the growth of the industry. Options are now being examined for developing a fishing lodge near the northern reefs. By the year 2002, there will be a new surfaced road around the island of Babeldaob. The road will allow quick and easy access to the northern tip of Babeldaob, perhaps allowing development of Ngarchelong as a staging area for sportfishing in the northern waters of Palau.

National government leadership: The Palau national leadership, including representatives of the legislature, resource management agencies, and the tourism office, has been involved in this project from the beginning, and support is generally universal. But the only national-level action taken so far in support of sportfishery development has been some promotion of sportfishing abroad. In addition to its role in creating an environment conducive to industry development, it would seem important that the national government recognize, support, and work to harmonize the community-level management initiatives. Especially for local initiatives that require some degree of enforcement effort, such as area closures and permit requirements, national support—both moral and material—is essential for success.

Acceptance of sportfishing: The transition from the occupation of subsistence or commercial fisherman to the occupation of fishing guide is a dramatic one. It is a change from a livelihood in which independence and freedom are central attributes to a service occupation in which the wants of the customer are most important. It will certainly not appeal to all fishermen. But judging from the high level of participation by Palauans—all of who are fishermen—in Palau's scuba diving industry, this does not seem to be a serious constraint to the growth of sportfishing. Another question is how prospective guides and others will adjust to the exotic idea of catching fish (and releasing them) for the sake of fun rather than for food. Again, judging from the success of the scuba diving industry, in which

guides take visitors in search of fish merely to look at them, it shouldn't be much of a problem.

Industry development: The most important achievement of the project so far has been gaining a consensus among interested parties—from the resource owners to the business sector—that inshore sportfishing offers a viable long-term alternative use of Palau's fish resources. Without that consensus, it is likely that as the industry developed, sportfishing guides would have found themselves battling with fishermen over access to dwindling resources, local communities would have felt cheated, visiting anglers would have left disappointed, and Palau would be struggling to improve its second-rate reputation as a sportfishing destination. Perhaps the project cannot be credited with having avoided quite so much mayhem. But it is clear that the project's step-by-step approach to industry development has resulted in an environment where all the players are more aware of the risks and rewards of developing a sportfishery and more prepared to work together towards mutually beneficial goals. One of these players is the entrepreneur who is going to take the risk of putting money into a sportfishing business or a fishing lodge. It is not clear whether these investors are going to be Palauan, foreign, or joint venture. But after the intervention of this project, it is clear that they will have to be committed to working closely with the communities that own the fish and committed to maintaining the long-term viability of the resource.