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**THE CASE FOR COMMUNITY - BASED MANAGEMENT FISHERIES
MANAGEMENT IN TONGA**

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Introduction

The Kingdom of Tonga consists of 150 islands of which 36 are inhabited. There are three main island groups (Tongatapu, Ha'apai, Vava'u) and outlying islands to the north and south. The total land area is about 687 sq km.

Population is an important consideration for fisheries management. SPC (1993) estimates the current population of Tonga to be 98,900. Given the present demographic trends, in 15 years the population will reach 106,200 or about 7% more than at present as compared to a 47% increase for the Pacific Island region as a whole. In this respect, Tonga may be in a relatively favourable position, but as in many neighboring countries, there will be a increasing concentration of people in urban areas. It also should be noted that the present population is many times greater than in traditional times.

Tonga's political history is important in a discussion of fisheries management. King Taufa'ahau Tupou I united all of Tonga in the mid-1800s and the result was a consolidation of power greater than in any other Pacific Island country. In 1875 a Constitution became effective which declared that all land and sea belonged to the King. Tonga's sea areas were defined by Royal Proclamation in 1887 to be all islands, rocks, reefs, foreshores and water lying between 15 and 23.5 degrees south latitude and between 173 and 177 degrees west longitude. In other words, Tonga was defined as being all that inside a boxed area and that all geographic features are owned by the King. The Land Act of 1927 further reinforced this ownership. With respect to fishing, this has resulted in two consequences: (1) all Tongans have equal fishing access to all Tongan waters and (2) any traditional claim of local control or management authority over fishing areas was abolished. It has been pointed out (Crocombe 1994) that, although Tonga is the only Pacific Island country not to have been colonized, it is the only country in the region to have done away entirely with any traditional fisheries management which may have existed. Although this notion is true, it should be noted that in the Tongan context this is not incongruous: the King is the maker of traditions in Tonga.

The degree of local village management of marine resources in Tonga prior to the current century is uncertain. Some works such as the Environmental Management Plan for the Kingdom of Tonga (IDEC 1990) state that Tonga may never have had reef tenure systems. However, in-depth investigations (Gifford 1929) indicates that in traditional Tongan society the fishing rights for an area belonged to those that lived in

the adjacent area. It is likely that Tonga had systems similar to surrounding Polynesian island groups.

Legislation Related to Fisheries

In addition to the above mentioned Constitution, Royal Proclamation and Land Act, the following are important in fisheries management:

"Fisheries Act" (1989): This Act is designed to promote the sustainable development and management of the Kingdom's fishery resources, and is basically a corporate plan for the national fisheries. The main features of the Act are:

- The Director of Fisheries must prepare fishery management plans
- All local fishing vessels must be registered and licensed
- Permission must be obtained for all foreign involvement in fisheries
- All foreign fishing vessels must have a valid license for Tongan waters
- No explosives or poisons be used to take fish
- The Minister may declare any area a reserve for subsistence fishing
- A license is required to operate a fish processing facility
- The government may lease land for aquaculture
- Permission is required for the import/export of live fish
- The Minister, with the consent of Cabinet, may make regulations covering any of 25 named issues

"Fisheries Regulations" (1994): These are subsidiary regulations under the Fisheries Act of 1989. The main provisions of the regulations are:

- The export of live fish requires a permit
- A ban on fishing for marine mammals unless exceptionally authorized by the Secretary for Fisheries for the purpose of international scientific research
- A ban on the use of SCUBA or hookah gear for fishing without written permission
- Minimum mesh sizes for dragnets, beach seines, and cast nets
- A ban on net fishing within 200 metres of a fish fence
- Specified minimum sizes for lobsters (7.5 cm carapace length), for slipper lobsters (15 cm carapace length), for winged pearl oyster (20 cm for winged pearl), triton shell (20 cm long), and for various species (*Tridacna* spp.) of giant clams and beche-de-mer
- A ban on the taking of coral or aquarium fish without written permission.
- A ban on taking or possessing turtle eggs, interfering with turtle nesting, use of a spear for taking turtles, taking turtles less than 15 cm (carapace length), taking turtles during certain specified closed seasons, and taking any leatherback turtles
- A ban on taking mullet during specified closed seasons
- A requirement for a fish fence license and specifications for maximum and minimum dimensions
- Requirements for fish aggregation devices

The above laws were prepared by the Forum Fisheries Agency with input from the Ministry of Fisheries.

Resources

As in other Pacific Island countries, the inshore resources in Tonga are heavily exploited. Many recent studies indicate there has been a large decrease in the

availability of many species. This is pronounced for the high value species such as lobsters, clams, and beche-de-mer, but also applicable to many common food species.

The over-exploitation of inshore fisheries resources, especially close to urban areas, is causing an increasing amount of concern as it has family food supply implications. It should be noted that this overfishing is not a new phenomena. A survey carried out across the Pacific Islands region in the early 1900s (Alexander 1902) reported that in front of the capital city "compared to many other reefs of a similar character, a scarcity of fish and other animal life was found".

The recent Fisheries Resource Profiles prepared by the Forum Fisheries Agency (Bell et al., 1994) provide detailed information on the 19 species groups most important in Tonga.

Problems in Fisheries Management

The open access nature of fisheries in Tonga is in some respects compatible with the sharing nature of Tongan society. Nobody would refuse to give food to a hungry person and to discourage somebody from fishing in an area regardless of the purpose or how close to a village was thought to be equally selfish. This system may have worked reasonably well in the era of subsistence fisheries, but it has fairly recently collided with commercial realities and the carrying capacity of inshore resources. A recent survey team (Thaman et al. 1995) visited 11 villages in Ha'apai to discuss development issues (land, marine, health, environment, etc.). In many of the villages the priority concern was the fact that Tongans from anywhere, especially commercial operators from Tongatapu, could harvest the food resources adjacent to villages thereby affecting the food security situation. One frequent comment from villagers in Ha'apai is that, even if a community conserves and manages its adjacent marine resources, it may be a useless exercise as outsiders can, and have, moved in to over-harvest.

Another effect of open access and associated lack of community control is that the conditions do not encourage a long-term relationship with the resource. The first-come-first-serve regime now prevailing is an incentive to harvest as much as possible, as fast as possible.

Fisheries management in Tonga is currently being attempted on a centralized basis. Fisheries legislation is enacted in the capital. Similarly, the management section in the Ministry of fisheries and all of the section's staff is located in the capital. For budgetary and other reasons, these staff are rarely able to travel to other island groups in Tonga. In reality, fisheries laws made in the capital have little effect on the situation in the outer islands and remote villages where there is frequently no authorized enforcement officer or even knowledge of the fisheries laws.

In urban areas there are also problems with the nature of fisheries laws. Although the legislation is reasonably comprehensive, enforcement and prosecution can be impractical in the context of Tongan society where lack of social friction is important. For example, in the past three years, despite no shortage of illegal activity, there has been only one successful prosecution for a fisheries offense and that involved two non-Tongans.

The marine parks situation illustrates many of the difficulties with present fisheries management. Five marine parks were established in 1979, but practical terms there is not much difference between these parks and ordinary marine areas; dynamiting, commercial fishing and reef gleaning activities occur often in the parks without triggering enforcement mechanisms. Lack of community involvement, understanding of the rationale, awareness of benefits, and enthusiasm for enforcement apply to the marine park situation as well as the management of many fisheries.

Central Versus Community-Based Management

There is the perception in the Ministry of Fisheries that many of the difficulties with fisheries management are related to inadequate Ministry of Fisheries resources or the organizational structure of the Ministry of Fisheries. Alternatively, the view is often expressed in villages that fisheries management authority should be de-centralized to a lower level. In practical terms, it is difficult to visualize that major improvements could be made in the effectiveness of management of inshore resources unless the villages are given at least some management authority. Some types of fisheries management (e.g. offshore tuna fishery, deepwater snapper, and those inshore resources near the capital) are best done at the national level. Conversely, there needs to be recognition that some management functions cannot be effectively carried out centrally. Although limited government funds and geographically dispersed fishing areas can be cited as reasons why central management cannot function in some areas, the fundamental difficulty is the nature of the system; quite simply, central management is not part of the community.

The Legal Basis for Community-Based Management

With outside commercial fishing pressure having an effect on local food supplies, there is mounting pressure to give some type of differential access to inshore resources to adjacent villages. Although it is often heard that restricting access by Tongans to any of Tonga's marine resources is unconstitutional, this appears not to be the case. There are a number of possibilities consistent with the Fisheries Act 1989. These options include selective vessel licensing, selective exclusion of commercial fishing, aquaculture leasing, limited entry, and exclusion of fishing around FADs:

Selective vessel licensing: the Fisheries Act requires that all local fishing vessels over 6 metres in length require a fishing license issued by the Ministry of Fisheries. (Sec 5(1))

- A license may be refused if it is necessary to give effect to any licensing programme specified in a fishery plan. (Sec 5(4)a)

- A fishing license is only valid for the areas, the fishery, the method of fishing, and the type/quantity of fishing gear endorsed on the license. (Sec 6(1))
- The Minister may by regulation prescribe different classes of local fishing vessels and the areas or distances from shore within which each class of local fishing vessel may fish or operate. (Sec 6(2))
- The Ministry of Fisheries may, under the direction of the Minister, establish local committees to consult and advise him on the numbers of fishing vessels to be allowed in certain areas or fisheries and the allocation of licenses. Such local committees shall be appointed by the Ministry of Fisheries with the approval of the Minister from professional fishermen involved in the fishery concerned. (Sec 7(1&2))

Selective exclusion of commercial fishing:

The Minister may declare any area of the fisheries waters to be a reserved area for subsistence fishing operations and may specify the types or classes of vessel that may be allowed to fish in such areas and the methods of fishing that may be used. (Sec 22(1)).

Aquaculture leasing:

The Government may lease areas, land, lagoons, the foreshore, and sea-bed for the purpose of aquaculture. (Sec 25(1)). The provisions of the Land Act shall apply to the leasing of these areas for aquaculture. (Sec 25(3))

Limited entry:

The Minister may make regulations not inconsistent with the Fisheries Act dealing with closed areas and limited entry into all or any specified fisheries. (Sec 59(2)c)

Exclusion of fishing around FADs:

The Ministry of Fisheries may declare any fish aggregating device (FAD) placed by the Ministry a designated FAD and no person shall fish around the FAD except with the permission of the Ministry of Fisheries. (Reg 32)

Alternatively, existing legislation other than the Fisheries Act could be used to increase community involvement in fisheries management. The Parks and Reserves Act (Cap 89) establishes an authority which may declare in consent with the Privy Council any sea area to be a reserve (Sec 4). The Authority may make regulations prescribing conditions and restrictions for the reserve (Sec 5a) and enter into agreements which carry into effect any purpose of the Act (Sec 6b). This power could conceivably be used to both restrict commercial fishing by certain groups in the reserve and delegate management authority to adjacent communities.

Endorsement of Community Involvement in Fisheries

The concept of community based management appears to be consistent with the sentiments in the Cabinet-approved Sixth Development Plan. The plan promotes community participation in resource management, district-based fishing management committees, and indicates that village elders are to be authorized as fisheries wardens.

On the basis of an extended visit to Tonga, the Forum Fisheries Agency concluded: "An important aspect of fisheries resource management that is gaining recognition in some South Pacific countries is the application of community based resource management. This is of particular importance

where commercial exploitation of shallow reef resources is concerned. Even though there seems to be no traditional marine resource or area ownership in Tonga, the general principle offers a practical and meaningful option" (Bell et al. 1994).

Summary

In many cases, especially the outer islands and remote communities, the net result of well-intentioned central management of fisheries in Tonga is the absence of management. The prevailing system of totally open access does not foster a long-term relationship with the resource and therefore inshore fishery conditions are likely to degenerate in the future. Some form of community management and differential access is urgently required and it appears as though this can be accommodated within the existing Fisheries Act.

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