

COMMUNITY-BASED COASTAL FISHERIES MANAGEMENT IN ASIA AND THE PACIFIC

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1. INTRODUCTION

The IPFC Symposium on Socio-economic Issues in Coastal Fisheries Management held in Bangkok in November 1993 revealed that fisheries management programmes implemented in the region had rarely helped to improve fishermen's incomes. It was noted that the problem of low fishermen's incomes would not immediately disappear with the removal of open access which had been considered one of the major reasons for the poor state of fishermen's households.

Lack of alternative employment opportunities is another reason for low fishermen income, since it is highly probable that the low incomes of many fishermen result from low-opportunity incomes. In this context, the Symposium recommended that governments should promote economic diversification and enterprise development among rural fishing communities to generate opportunities for alternative employment in the coastal fisheries sector.

"Top-down" centrally-controlled management regimes are not effective if they fail to reflect fishermen's needs on management planning. The shortcomings of "top-down" approaches could be overcome by involving fishermen in the process of planning, designing and implementation of fishery management schemes. This recognition has prompted governments to consider new means of managing fisheries which integrate participatory approaches in fishery management strategies. The fishery management under the authority of the central government emphasizes mainly the biological, conservation and economic areas of fishery management, whereas participatory approaches stress the importance of social and cultural aspects of fishing communities in addition to the economic gains that fishermen seek.

Successful experiments in CBFM have shown that if fishermen play decisive roles in management decisions (e.g., determination of sustainable harvest levels and allocations to fishermen), there is a high rate of adherence to fishery regulations. Such management decisions are usually made to bring forth increase of incomes. Provision of economic incentives and assurance of resource availability through appropriate management (e.g., combining marketing with management measures) would enhance the degree of fishermen's compliance with regulatory measures.

2. SUCCESSFUL EXAMPLES OF COMMUNITY-BASED FISHERY MANAGEMENT

CBFM offers potential as a way to improve the conservation of fish resources in coastal areas. The government does not have the resources required to manage a great many fishermen and enforce resource conservation for long coastlines. Inshore community fisheries management could be supported in selected locations where topographic conditions are suitable. Past experience shows that community management works best where a tradition of local knowledge exists on the state of fish resources, traditional conservation methods are practised, there is respect for community leaders, and viable organizations in fishing communities exist.

2.1 Examples from Asia

Japan has a very effective system of community fisheries management which is operated by fisheries co-operatives. These co-operatives are given exclusive fishing rights to control fisheries resources adjacent to villages. The legal status of fishing rights in Japan is equal to that of land ownership. Coastal areas under the jurisdiction of fisheries co-operatives are, in effect, the private property of the fisheries co-operatives concerned. The area covered by fishing rights stretches some 10 km from the shore at the most and averages 2 to 3 km. Unless fishermen are members of the co-operatives, they are not allowed to fish in these areas. This legal set-up obliges inshore fishermen to join co-operatives. In fact, the great majority of coastal fishermen in Japan are members of co-operatives; this ensures strong solidarity.

Because coastal waters belong to fishermen, they are interested in the conservation and management of coastal fisheries resources. Regulations are enforced by each co-operative to prevent reckless fishing. In order to enhance fishery resources, each co-operative tries to improve its fishing ground by stocking seedlings of fish, shellfish and seaweed. Research institutes provide necessary information combined with extension services offered by prefectural government. Because the network of co-operatives is firmly established through three tier systems (i.e., national, prefectural, village), policies on the use of the nation's fishery resources filter down effectively to individual fishermen from the central government through prefectural government and fishermen's co-operatives.

The traditional *sasi* system in Maluku of Indonesia contains a variety of legal and institutional arrangements which promote effective micro-environmental management, economic distributive justice (fairness or equity), effective law enforcement, and secure economic benefits to the local community (Zerner, 1992). Local fishermen have devised a variety of regulations which affect (a) timing of fishing seasons (b) permitted and unpermitted gear (c) permitted and prohibited fishing behaviors or techniques (d) species or stock specific regulations (e) establishment of specific fishing seasons within the community waters (f)

boundary concepts and physical markets. The regulations are enforced by the communities concerned and a variety of sanctions are imposed on violators which include fines, public shaming, temporary confiscation of fishing gear, permanent confiscation and sale of the gear, and corporal punishment.

Although these customary rights and practices are recognized as extremely effective to sustain local fishery resources, they are not formally integrated into the national legal framework for protection, implementation or litigation.

This has led to changes in the allocation of rights and the management of inshore marine environments, which include appropriation of the *sasi* system by government officials. Also, private sector control of the flow of credit to local fishers and control of the flow of benefits from community-managed reef resources may affect equity and *de facto* rights. Community-based legal systems and institutions for fisheries management are no panacea; problems in national fisheries law and administration remain and must be worked out at both the central and provincial level.

2.2 South Pacific examples

Village-based marine conservation has experienced a remarkable upsurge in Vanuatu since 1990 (Johannes, 1994). Vanuatu's shallow water marine resources are legally owned and controlled by villagers. While traditional fishing taboos mainly on trochus and green snails had existed for many years, their controls have since 1990 been diversified to cover other marine resources such as crabs, Beche-de-mer, turtles, clams, octopus, parrotfish, rudderfish and rock lobsters. Restrictive measures have been implemented in respect of fishing areas, fishing seasons, size limitations, gears (e.g., gillnets and night spearing using underwater torches are banned). Educational efforts of the Fisheries Department have played a major role in strengthening management measures in inshore waters.

Fishermen generally have a good knowledge of local resources such as the seasonal movements and spawning aggregations of fishes in inshore waters. There is no single body of custom in relation to the marine tenure in Vanuatu; there are over 100 different language groups with differing resource tenure customs. In many places, land and sea tenure rights are inherited through men, but in some it passes down through women.

Ownership of marine resources created opportunities not only for resource management but also for dispute resolution. There are six levels of dispute-resolution available for fishing rights owners within a clan. In the event that such a dispute-solving process still proves unsatisfactory, a dispute can be taken to an island court which is staffed by justices who are knowledgeable about custom.

The Department of Fisheries has provided advice and motivation in the development of management strategies. Strengthening extension in fishery management is considered important to increase the impact of management measures.

3. REQUIREMENTS FOR DEVELOPMENT OF CBFM

A number of issues must be taken into account when CBFM is planned and promoted. These are described below:

(a) **Cohesive community organizations:** The existence of voluntary community organizations (e.g. co-operatives, associations, community councils etc.) with strong solidarity is essential.

(b) **Territorial use rights in fisheries (TURF):** Establishment of demarcated areas in which the right to harvest a particular stock might facilitate community-based approaches in fishery management.

(c) **Initiatives by communities:** It is important that initiatives to establish management plans should come from communities.

(d) **Modifiable:** It is necessary that management regulations should be easily modified to accommodate changing circumstances with a minimum degree of cumbersome legislative procedures for revision.

(e) **Enforcement:** Fishermen should be involved in the enforcement of fishery management measures.

(f) **Economic benefits:** Controlling access to fishery resources by outsiders may guarantee economic benefits to local coastal communities.

(g) **Respect for community authority:** This is essential to maintain the solidarity of the community.

4. PARTICIPATORY APPROACHES IN FISHERY MANAGEMENT AND FISHERMEN'S ORGANIZATIONS

There is a need for strengthening fisheries co-operatives to enhance the effective participation of fishermen in the management process. In many countries, fishermen have had a bitter experience with co-operatives because of their lack of viability. A satisfactory level of economic performance needs to be achieved to win fishermen's trust in co-operatives.

Besides economic viability, the following checkpoints may be considered to determine whether fisheries co-operatives could undertake management tasks.

- (a) Social viability: the great majority of fishermen should be members of a co-operative; a high rate of homogeneity is likewise an important factor.
- (b) Equitable distribution of benefits and prevention of possible misuse of power by co-operative leaders.
- (c) Availability of government assistance in terms of legal backup, information on the state of fishery resources, extension and research.

5. CONCLUSION

Management measures are not permanent, and need to be revised in accordance with the state of fish resources which changes constantly. Awareness-building and education on the long-term benefits of fishery management in terms of higher economic returns are important among fishermen. For example, mesh size limitation might give fishermen opportunities to increase incomes since larger-sized fish fetch higher prices than small ones.

A high management cost constrains fishery management. One of CBFM's advantages is its cost effectiveness. Enforcement of fisheries regulations is greatly facilitated when fishermen understand the purpose of the regulation and support it. Fisheries enforcement can be assisted by decentralizing the management authority that deals with the fishing communities.

6. REFERENCES

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