Acceptability of Territorial Use Rights in Fisheries: Towards Fisherfolk Participation in Fisheries Management

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Abstract

Municipal or small-scale fishing in the Philippines is defined as fishing that utilizes boats of three gross tons or less, or fishing without boats. In 1990, it contributed 45% to the country's total fish production and accounted for 68% of direct employment in Philippine fisheries.

The granting of territorial use rights in fisheries (TURFs) to fisherfolk associations, similar to that practiced in Japan, is recommended as a management tool for small-scale fisheries in the Philippines. This study was conducted to determine the acceptability of the practice under Philippine conditions.

A survey was conducted among 211 coastal dwellers of five municipalities in Panay Island, Central Philippines. Respondents of the survey generally perceived the practice of TURFs as acceptable since it would lead to an improvement of their catch. Results suggest that the respondents' present predicament of inadequacy of catch to support their livelihood is the starting point to introduce fisherfolk participation in fisheries management.

Introduction

The Philippines is a nation with abundant marine resources. Its coastline measures 17,460 kilometers (World Bank, 1989) with a coastal area of 266,000 square kilometers (National Statistics Office, 1987). In 1990, the fisheries sector contributed 3.8% to the gross national product (Bureau of Fisheries and Aquatic Resources, 1991).

Municipal or small-scale fishing in the Philippines is defined as fishing that utilizes boats of three gross tons or less, or fishing without boats. In 1990, it contributed 45% to the country's total fish production and accounted for 68% of direct employment in Philippine fisheries (Bureau of Fisheries and Aquatic Resources, 1991).

Low standard of living is the problem confronting small-scale fishers (Smith, 1979). This could be traced to the open access character of the resource and to the perishability of the catch (Smith, *et.al.*, 1980). In SEAFDEC's pilot site for its seafarming and searanching project, the average household income for 1990 was P 23,973 (CAD 1015.80). Income from fishing contributed 53% to total household income or P 12,785 (CAD 541.73).

Several development approaches have been implemented to increase fish production. The small-scale fishers, who are supposedly the beneficiaries of many development programs, barely benefited from them. Lacanilao (1989) cited the

following development approaches that worsened rather than mitigated the problems in fisheries: 1) development of mangrove swamps into aquaculture ponds, 2) intensification of fishpond culture, especially in shrimp farming, 3) increasing use of agricultural land for shrimp farming, 4) introduction of pen and cage culture in lakes, and 5) destructive fishing practices like the use of trawl and *muro-ami*.

The following organizational issues confront the management of Philippine natural resources: inappropriate mandates, resource limitations, confusion arising from reorganization, potential for corruption of line agencies charged with managing natural resources, ineffectiveness of local governments, and user groups that still need to be empowered (World Bank, 1989).

The participation of the fisherfolk themselves is believed to be the key to fisheries management (Ferrer, 1989). Community-based management has proved effective in maintaining coral reef habitat, improving species abundance, and arresting the decline of coastal productivity in Central Visayas, Philippines (White, 1988; Alix, 1989; White, 1989). The granting of territorial use rights in fisheries (TURFs) to fisherfolk associations, similar to that practiced in Japan (Ruddle, 1987), has been recommended as a management tool for municipal fisheries (Lacanilao, 1989). Since

granting TURFs to fisherfolk associations is yet to be institutionalized, a village survey was conducted to find out the acceptability of the practice under Philippine conditions.

TURFs carry with it the right of exclusion, i.e., the right to limit or control access to a territory; the right to determine the amount and kind of use within the territory, and the right to extract benefits from the use of the resource within the territory (Christy, 1982; Pollnac, 1984). The prevailing open access in fisheries has resulted in the following: wasteful exploitation of the resource as each fisher is unable to regulate his catch, economic waste brought about by too much effort on too little resource, decline in fishers' income, and the development of conflict among fishers using the same gear for the same resource, or those using different gears for the same resource (Hardin, 1968; Christy, 1982).

Methods and Study Area

A survey was conducted among 211 coastal dwellers between June and November 1990. Five coastal municipalities in Panay Island, Central Philippines (Fig. 1) were chosen as study areas. These were: Concepcion and San Dionisio in the province of Iloilo, Culasi and San Jose in the province of Antique, and Nueva Valencia in the sub-province of Guimaras.

A structured interview schedule, translated into the local dialect and pre-tested, was used to gather data. The interview schedule covered the following: socio-demographic characteristics of respondents like sex, age, educational attainment, and source of livelihood; experiences regarding collective undertaking and problem-solving within the village; perception regarding ownership, utilization, and management of coastal resources; perception regarding adequacy of catch to support livelihood, and the acceptability of TURFs.

Acceptability of TURFs was measured by the following questions: 1) whether the fisherfolk association has the right or not to establish rules and regulations pertaining to the utilization of a fishery; 2) whether granting TURFs to fisherfolk associations is beneficial or not to small-scale fishers in general; 3) whether granting TURFs to a fisherfolk association in his/her village is beneficial or not to respondent and family; 4) whether respondent would cooperate or not with fisherfolk association in regulating fishing activity to lessen pressure on a fishery, and 5) respondent's perception on whether other fisherfolk in the village would cooperate or not with association in regulating fishing activity.

The questions listed above were answerable by "yes" or "no". Regression models for each measure were estimated.

Models with the highest multiple squared R were selected through a backward elimination procedure (Morris, Kim, and Valera, 1986). Logit regression analysis (Darlington, 1990), the appropriate statistical tool for dichotomous dependent variables, was then conducted for each of these models.

Results

There were 115 males and 96 females interviewed in the survey. The average male fisher is 41.2 years old, has lived in his village for 31.7 years, and has 5.6 years of schooling. The average female respondent is 44.1 years old, has lived in her village for 31.8 years, and has 5.8 years of schooling. Fishing is male-dominated. However, 15.6 percent of female respondents are engaged in it. Except for three, all of the male respondents are fishers. Sources of livelihood like fish vending, fry-gathering, and farming are associated with women. Less than half (41.7 percent) of all respondents are members of an association. Membership is highest for males than for females.

Almost three-fourths (74.9%) of all respondents indicated that there had been instances in the past when the villagers worked as one big group. The activities centered predominantly on the construction of village projects like chapel, road, deep well, and hall. The same percentage

indicated that they had experienced solving a problem collectively in their village. These problems are usually of an emergency nature like death, accidents, or illness. This same category of problems would impel the villagers to put their acts together.

A little more than half of the respondents (54.0%) remarked that they work with others in the village in the accomplishment of some task because it is for the good of everybody. Meetings called by village officials are still the prevailing venue by which people are gathered to inform them about a village-level activity.

As regards ownership, utilization, and management of coastal resources, 45 percent stated that the people in the village own the coastal resources, 94.3 percent said that the people have the right to utilize those coastal resources, and almost half (49.3 percent) identified the government as responsible for managing them.

More than half (56.9 percent) stated that their present catch is inadequate to support their family's basic needs.

Responses to each measure of acceptability are presented in Table 1.

A little more than four-fifths (82.0 percent) believe that a fisherfolk association that has been granted TURFs has the right to establish rules and regulations pertaining to the utilization of a fishery. They agreed so because the association is authorized by the municipality.

More than four-fifths (84.8 percent) foresee that granting TURFs to fisherfolk associations is beneficial to small-scale fishers in general. However, 80.1 percent indicated that they would be directly benefited if a fisherfolk association in their village is granted TURFs. An improvement of their livelihood as a result of increased catch is the outcome that they expect from the practice of exclusive fishing rights.

Nearly nine-tenths (89.6 percent) said that they are willing to cooperate with the association in regulating fishing activity to lessen pressure on the fishery. However, only 63.0 percent are sure that other fisherfolk in the village would do so. Respondents who indicated cooperation with the association remarked that this would redound to their own benefit. Those who think that others would cooperate commented that other villagers have no reason not to cooperate towards something that is beneficial to everybody.

Factors Affecting Acceptability of TURFs

Age ($P < 0.05$) and educational attainment ($P < 0.01$) positively affect respondent's perception regarding the right of a fisherfolk association to establish rules and regulations pertaining to the utilization of a fishery.

This means that the older the respondent and the higher the educational attainment, the higher is the probability that he or she will perceive that a fisherfolk association has the right to establish rules governing the utilization of a fishery.

A fisher ($P < 0.01$) and a farmer ($P < 0.05$) have higher probabilities of perceiving that granting TURFs to fisherfolk associations is beneficial. On the other hand, a fish vendor and a farmer have higher probabilities of agreeing that granting TURFs to a fisherfolk association in their village is beneficial to them and their family.

Educational attainment ($P < 0.05$) and adequacy of catch to support the family's livelihood ($P < 0.001$) significantly affect the respondent's cooperative behavior towards regulation of fishing activity to lessen pressure on the fishery. The latter is negatively related with cooperative behavior. This means that those who experience inadequate catch are more likely to cooperate with the association in regulating fishing activity than those who state that their catch is still adequate to support their livelihood. Moreover, the more educated the respondent is, the higher is the probability that he or she will cooperate with the association.

Age ($P < 0.05$) and educational attainment ($P < 0.01$) positively influence the respondent's perception about other fisherfolk's cooperative behavior. The older the respondent and the higher the educational attainment, the more likely that he or she will perceive that other people in the village would cooperate with the association in regulating fishing activity to lessen pressure on a certain fishery.

Policy Implications

The inverse relationship between adequacy of catch to support livelihood and the respondent's cooperative behavior is the most appropriate link to the introduction of fisherfolk participation in fisheries management. Community organizing will play a vital role in the mobilization of the fisherfolk to overcome their present predicament of catch inadequacy. In this connection, the support of non-government organizations (NGOs) who have rich and long experiences in organizing marginalized sectors toward self-reliance must be solicited and encouraged. Moreover, both male and female fishers should be the target groups to be organized. Women have as much role to play in coastal resources management as the men. Venues for their participation should be recognized, opened up and enhanced.

The significant and positive influence of educational attainment on acceptability underscores the importance of an extension program to make the fisherfolk understand the rights, responsibilities and benefits associated with their participation in the management of coastal resources. This could come in the form of an education campaign using various media like radio and audio-visual materials discussing the current state of the country's marine ecosystems like coral reefs, seagrasses and mangroves. Through this, the fisherfolk could be made to understand that they are confronting a critical situation that must be resolved urgently.

There is a necessity for practices associated with TURFs to be codified into law and to establish delineations of legal authority that belong to the municipality. Traditional rights of some fishers to some specific areas that have been practiced and recognized by the community should be respected, provided this is not disadvantageous to other members of the association.

Fisherfolk associations must be able to demonstrate capabilities and track records to carry out municipal ordinances and fisheries administrative orders. Since it is in the best interest of coastal dwellers to stop illegal fishing practices like blast fishing and the use of fine mesh nets, a successful and sustained campaign against illegal fishing activities would be a favorable starting point for the association to establish its credibility.

TURFs carry with it the right of exclusion, i.e., the right to determine who are entitled to utilize the area covered by it. Conflicts are bound to arise between members and non-members of the association, and fishers from other communities utilizing the area covered by TURFs. To minimize such conflicts, the designation of a certain area for TURFs must be preceded by an identification of users of the area, up to what extent it is utilized by them, and the alternatives that could be offered to those who would be adversely affected. The delimitation of a certain area for TURFs should also take into account the capability of the association to effectively manage it.

The precariousness of fishing as a source of livelihood should compel government to offer our coastal dwellers alternative sources of livelihood. This would also serve to dissuade new entrants to the fishery and lessen pressure on overfished areas.

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Table 1. Acceptability of TURFs in five fishing villages of Panay.

Measure of acceptability	San Dionisio n=45	Concepcion n=43	Nueva Valencia n=56	Culasi n=34	San Jose n=33	All Sites N=211
			Percent			
1. Do you think a fisherfolk association has the right to establish rules and regulations pertaining to the utilization of a fishery?						
a) Yes	68.9	100.0	83.9	73.5	81.8	82.0
b) No	31.1	0.0	16.1	26.5	18.2	18.0
2. Do you think that granting TURFs to fisherfolk associations is beneficial to small-scale fishers?						
a) Yes	64.4	90.7	92.8	85.3	90.9	84.8
b) No	35.6	9.3	7.2	14.7	9.1	15.2
3. Would it be beneficial for you and your family if a fisherfolk association in your village is granted TURFs?						
a) Yes	60.0	88.3	87.5	85.3	78.8	80.1
b) No	40.0	11.7	12.5	14.7	21.2	19.9
4. Would you cooperate with association in regulating fishing activity to lessen pressure on the fishery?						
a) Yes	77.8	97.7	100.0	73.5	93.9	89.6
b) No	22.2	2.3	0.0	26.5	6.1	10.4
5. Do you think other fisherfolk in the village would cooperate with association in regulating fishing activity?						
a) Yes	44.4	81.4	66.1	58.8	63.6	63.0
b) No	55.6	18.6	33.9	41.2	36.4	37.0