Factors that promote the scaling-up and resilience of the fisheries co-management system in Banate Bay, Philippines

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SUMMARY: This paper presents an overview of the institutionalization of coastal and fisheries management systems in the Philippines in the last decade through a case study of an intermunicipal management effort in Banate Bay, Iloilo Province, Western Visayas, Philippines. In the process, key factors that promote scaling-up and resilience of the co-management system are identified and evaluated. Using a civic science perspective and field methodologies of policy analysis conducted periodically between 1998 to 2001, the data reveal that co-management efforts in Banate Bay have been successful due to: the guidance and of a policy network; funding and technical assistance of state agencies and civil society groups; participation of small-scale fishers in the decisionmaking process; effective database management, and; administrative coordination between state and civil society actors through an intermunicipal management council.

KEY WORDS: Philippines, coastal management, co-management, resilience, scale, civic science

INTRODUCTION

This paper provides an overview and assessment of coastal area and fisheries management initiatives and policy in the Philippines. The national fisheries and coastal co-management regime is then contextualized by describing and analyzing the institutional and strategic processes involved in building a baywide coastal management system in Banate Bay, Iloilo Province, Panay Island, Western Visayas, Philippines.

Environmental problems in most less well-managed economies like the Philippines reflects mainly a tragedy of enclosure rather than a tragedy of the commons.¹⁾ In this process, business and/or multilateral institutions with the aid of the state, denies grassroots civil society actors access to common property resources that may be regulated by communal rules and practices.²⁾ In effect, local commons and management regimes are taken over by allied or networked business interests using the legal-political powers of the state, or; the state for large-scale commercial exploitation by its own agencies and other private enterprises.^{3,4,5)}

METHODS

This article adopts a "civic science" perspective in understanding the operationalization and implementation of coastal and fisheries management strategies. Civic science is a form of science that is deliberative, inclusive, participatory, transparent, open to learning from errors, builds consensus, designed to promote equity and minimizes losers.⁶⁾

Its purpose is to recognize that various interest groups in society have to be involved in decisionmaking if more equitable and more comprehensive decisions are to be made about issues that are complex and broad in scope.⁷⁾

The study made use of different sources of data. Factors that promote the scaling-up and resilience of coastal and fisheries co-management systems were identified through content analysis of project reports, technical papers and other references. Through open-ended interviews with key informants, validated through focused group discussions, an attempt was then made to assess levels of institutional resilience in the study site. The key factors of institutional resilience were situated within a three-tiered assessment instrument to provide a simple measure of the strong (high), considerable (medium) or low presence of important variables for the success of a management regime. Although precision is sacrificed, the technique provides a ready measure of levels of success and can also be useful in comparing the achievements of different co-management contexts or sites.

Field visits and interviews with key informants were conducted in Banate Bay in the months of April 1998, September 1999, September 2000 and September 2001. The various data sources were reviewed and analyzed together by the interdisciplinary research team so that findings were based on convergence of information from different origins. The development of converging lines of inquiry through the process of triangulation allowed for the corroboration of evidence.

RESULTS

The term "co-management" refers to various levels of institutional partnership between state-level management systems and civil society groups (academe, church, interest groups etc.) that share visions, resources and expertise. Co-management involves levels or rungs of civil society participation in sustainable development activities and the enabling policy of government. Levels of partnership between/among civil society groups have been described by Pomeroy⁸⁾, and Sen and Nielsen⁹⁾. On the other hand, the key conditions for its success are outlined by Pomeroy and Williams.¹⁰⁾ A scaled-up co-management system refers to the increase in the depth and scope of issues and concerns addressed by an organization. Resilience, on the other hand, refers to the ability of communities and their institutions to absorb and deal with changes or shocks while still providing stability and meaning to social behavior.

National trends and outcomes

A cursory review of coastal area management efforts and patterns in the Philippines since the 1980s reveal that:

1. There is an increase in foreign/multilateral-funded intermunicipal or gulf/lake/bay-wide coastal management projects/programs in the country.
2. An assessment of projects through literature review is limited since independent evaluation is uncommon, objectives are multiple and not always clear, and there is a lack of performance indicators. Also, assessing the socio-economic and governance component is not as well-developed as the methods to monitor and assess the condition of the natural system.¹¹⁾
3. No one government agency has full jurisdictional scope or capability to address all important issues. Moreover, institutional mechanisms (i.e., judicial, legislative and administrative) are not well developed and fragmented.^{12,13)}
4. There is an increased shift in responsibilities to local government contexts due to: increased national debt and financial constraints; failure of national government to manage common property resources; the growing politicization of coastal communities, and; the enactment of the 1991 Local Government Code and 1998 Fisheries Code.^{14,11)}
5. A framework to promote integrated area and sustainable development exists through Philippines Agenda 21 but its implementation as a guide is limited.¹⁵⁾

6. There is increased recognition that the setting up of marine protected areas (MPAs) or sanctuaries since the 1970s¹⁶⁾, is a key component of coastal/marine biodiversity conservation and protection.¹⁷⁾

These international and domestic trends have led to the institutionalization of co-management regimes in the country. The experience of Banate Bay in co-management is a case in point.

Promising trends at the local level

Banate Bay is located at the eastern portion of Panay Island, Western Visayas about 550 kilometers southwest of Manila, Philippines. The Banate Bay area fronts Guimaras Strait leading northward to the Visayan Sea and covers an area of roughly 144 square kilometers. Figure 1 is a location map of Banate Bay, indicating key ecological and management zones.

Figure 1. Location Map of Banate Bay, Philippines

The bay is a common fishing and livelihood ground for 22 coastal barrios of the municipalities of Anilao, Banate and Barotac Nuevo that traverse the bay. Banate Bay has a sandy and rocky beach ecosystem. Pelagic fish abound and are usually caught by gillnet and handlines. Fisherfolks mostly engage in fishing during the dry months of November to April. Fish caught are used for home consumption and sold as fresh or dried in local markets. Table 1 presents an overview of fisheries conditions in the Province of Iloilo as compared with Banate Bay.

In the past decade, the small fisherfolks of Banate Bay have witnessed a decline in their fishery catch and livelihood income due to: fishpond and infrastructure development that destroyed mangrove areas; passive fishing gear congestion; household waste pollution; illegal fishing (i.e., dynamite and

Table 1 General Condition of Fisheries in the Province of Iloilo in 1998 and Banate Bay in 1999.^{18,19)}

Fisheries Resource	Iloilo	Banate Bay
1. Coastal Municipalities/Cities	20	3
2. Fisherfolks /a	17,863	1,404
3. Fishing Boats	7,295	344 /b
4. Fishpond Area (has.)	11,079.22	3,674.5
5. Fisheries Production (metric tons) /c	50,810	1,636 /d
6. Aquaculture Production (tons) /e	12,731	5,924.2
7. Commercial Fisheries Production (tons) /f	68,015	not available

/a Does not include dependents of actual fishers.

/b Figure excludes Anilao data

/c Refers to fishing using boats of 3 gross tons or less. Species caught are usually composed of sardines, anchovies, seabreams, herrings, mackerel, slipmouth, squid, bluecrabs, shells and seaweeds.

/d Figure excludes Anilao data. Species cultured are usually milkfish and prawn.

/e Includes mariculture (mussel, oyster and seaweed), brakishwater and freshwater production.

/f Refers to fishing using boats of more than 3 gross tons.

cyanide fishing, use of fine net mesh size) and; intrusion of commercial fishing boats in municipal waters. These problems and concerns, as well as the political will of key municipal officials, prompted the creation of a fisheries co-management system in July 1996 through the Banate Bay Resource Management Council Incorporated (BBRMCI), a non-profit organization.

Key to the creation of the BBRMCI is the effort of a network of individuals from state (municipal and provincial) and the civil society (non-state actors with training in community organizing) who were enabled by the devolution of natural resource management responsibilities, and inspired by the success of community efforts at management in Apo Island in Cebu. After a series of informal meetings, a funding outlay of PhP996,000 for capability building was provided by the cooperating municipalities, the Province of Iloilo and the Canadian International Development Agency-Local Government Support Program or CIDA-LGSP. Technical advise was later sought, and now institutionalized as a technical working group that meets once a month, from the UP Visayas and other state agencies. During the succeeding two years BBRMCI achieved a tremendous track record in capability building, community organizing and linking with other partner agencies. In 1998 the BBRMCI received the "Galing Pook" national award as a successful development-oriented intermunicipal organization in the country.

DISCUSSION OF KEY FINDINGS

The resilience of the coastal co-management system in Banate Bay, amidst continued financial and technical difficulties, can be attributed to the presence

of a policy network that trade information and share the burden of decisionmaking. The network created order by focusing on coastal resource management, and simplified the policy process by limiting the number of problems to be addressed and options to be considered. The relatively small policy network that coordinates through the BBRMCI illustrate the closed and consensual nature of the policy process. It indicates that important policy decisions, such as the creation of BBRMCI and a co-management plan for Banate Bay, is made in informal settings outside the reach of formal democratic controls such as legislative scrutiny and bureaucratic control.

Based on data collected in the field Table 2 presents an index to assess the magnitude of key factors that enhance the resilience of the co-management system in Banate Bay. The basic idea is to situate the key factors within a three-tiered assessment instrument.

Table 2 A Matrix of Key Factors that Promote Sustainable Fisheries Co-Management in Banate Bay

Key Conditions	Rating		
	Low	Med	High
1. Clearly defined physical boundary			√
2. Resource users are identified			√
3. Group cohesion		√	
4. Existing organizational experience			√
5. Benefits exceed costs			√
6. Participation by those affected		√	
7. Management rules enforced		√	
8. Legal rights to organize exist			√
9. Cooperation and leadership at community level		√	
10. Decentralization and delegation of authority		√	
11. Coordination between State and civil society			√
12. Participation and coordination of private enterprises	√		

Note: Key Conditions from number 1 to 11 were adapted from Pomeroy and Williams.¹⁰⁾

The study site has a "high" rating for the first category due to the presence of a clearly defined physical boundary for the fishery resources. The fishing households and their organizations are clearly identified and some are involved in the management of coastal resources. Group cohesion can be marked as "medium" as various resource users, particularly fishing gear groups and private land/fishpond owners, still lack coordination in their plans and activities.

Most of the research participants felt that benefits have exceeded the costs of managing the bay. The perception of efficient management is attributed to the funding and technical support of state and non-state institutions. Despite this gain, participation by fishers can be classified as medium

since most coastal villages have not undergone community organizing efforts. Limited funds prevented organizing efforts in all coastal towns and only one town in each of the three partner municipalities underwent participatory planning in 1997. The hope of a trickle effect elsewhere have not materialized and disputes on resource access and use between local fishers and fishpond owners remain unresolved.

An average of 48 apprehensions per year due to fishery rule violations have been logged from 1996-2000 and a local fishery enforcement team augments the efforts of the coast guard. Cooperation and leadership at the community level, however, need to be strengthened by encouraging more fisherfolk participation in the enforcement regime. Without the full and sustained cooperation of local households, change in political leadership will disrupt law enforcement and management efforts. This was the case that happened during the 1998 local elections when the activities of the BBRMCI were paralyzed due to changes in mayoral leadership in two of the three partner municipalities.

Since decentralization or devolution of resource management was established in the Philippines in 1991, and further strengthened within the fisheries sector in 1998, the rating for Banate Bay is "high" in this aspect. But problems caused by lack of capabilities and personnel have emerged. A common complaint among BBRMCI staff members is the lack of competent staff to perform secretariat and technical functions.

On the other hand, the coordination of state and non-state groups is rated "high" due to the coordinating efforts of BBRMCI with state and non-state actors alike through a series of monthly meetings. Despite this positive rating, private sector participation in the CRM framework is yet to be achieved. Although difficult to achieve, business groups that use or are proximate to the coastal zone need to get involved in the management regime for they either can be a source of environmental/social problems or have the financial or technical capacity to improve the management system.

CONCLUSION

Since the downfall of the Marcos dictatorship in 1986 the democratization and decentralization processes in state, civil society and market forces in the Philippines have been favourable to the setting up of community-based and bay-wide co-management systems. But major threats remain in the scaling-up and resilience of the management system, such as:

lack of participation by civil society forces in the decisionmaking process to ensure that management arrangements remain stable amidst changes in political leadership, and; need for updated and acceptable integrated coastal area and participatory plan to curb property rights conflict and ensure that there is congruence between political and biogeographic zones.

ACKNOWLEDGEMENTS

The authors are grateful to the Core University Program in Fisheries Science under the Japan Society for the Promotion of Science (JSPS) and the Department of Science and Technology (DOST) in the Philippines for the financial support and administrative supervision. The authors also relay their gratitude to Mary Lou Larroza of the BBRMCI for her cooperation and assistance.

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