

Community-based Coastal Resource Management in Orion (Bataan, Philippines): Building Community Property Rights in a Fishing Community

LEO VAN MULEKOM and EBOY CRISPIN TRIA

Abstract

The Community-based Coastal Resource Management Project in Orion, Bataan, was started in 1991. The village level fishers organizations have formed a municipal-wide association called the Samahan at Ugnayan ng Pangisdaan sa Orion (SUGPO). It represents 70% of the small-scale fishers in Orion and has taken on the task of rehabilitating the degraded fishing grounds. The experience in Orion indicates that coastal resource management can be successful if the fishers have ownership of the program and the costs and benefits of the program are distributed equally in a manner acceptable to them.

Introduction

It is essential for community organizers to understand and take into account the perceptions and suggestions of local fishers to achieve successful solutions in fisheries management. Good community organization is crucial to the eventual sustainability of a community-based coastal resource management (CB-CRM) development. The CB-CRM Project in Orion, Bataan, demonstrates that CB-CRM development can be successful in overcrowded and overfished areas.

Orion is a medium-sized town on the borders of Manila Bay on the Bataan Peninsula. The town has nine coastal villages (barangays) within a 9-km municipal coastline. In these coastal barangays, approximately 40% of households depend on fishing for their means of livelihood. The population density in the coastal zone is estimated at 2 250 persons/km². An estimated 50 000 fishers derive their livelihood from the 1 500 km² Manila Bay whose fishing grounds are severely overfished, polluted and degraded. Although commercial fishing and motorized active gear are illegal, there is still rampant use of motorized gear.

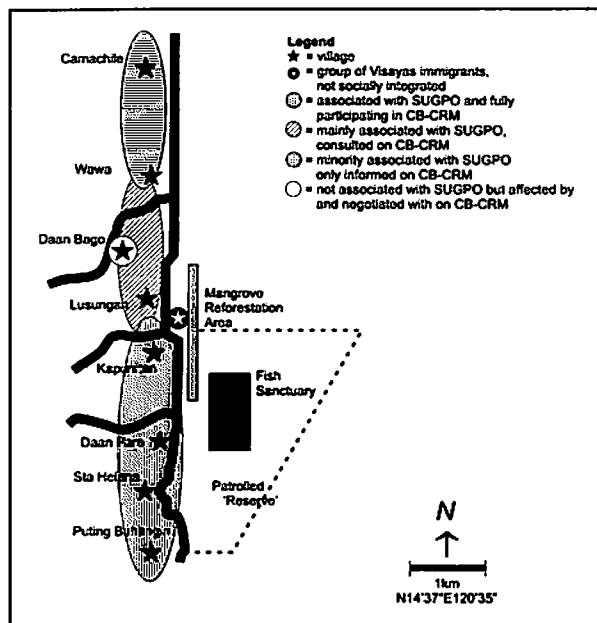


Fig. 1. Main social groups in fishing community of Orion, Bataan, in relation to CB-CRM.

CB-CRM in Orion: a Progress Report

Assisted by community organizers from an NGO, the Philippine Rural Reconstruction Movement (PRRM), and the fishing community of Orion began a community-based fisheries develop-

ment program in 1991. The community defined an approach to CRM, whereby the fishing grounds would ultimately be managed and controlled by the fishers themselves. In effect, this translates to the establishment of a 'de facto' community property rights system.

The PRRM's first step was to assist the village-level organizations of fishers to form a municipal-wide association of people's organizations called the Samahan at Ugnayan ng Pangisdaan sa Orion or SUGPO which held its first general assembly in June 1992. SUGPO initiated the existing municipal ordinances which prohibit destructive forms of fishing and motorized active fishing gear for both commercial and small-scale fishing, within municipal fishing grounds. Nonmember fishers from the same municipality are restricted to curb the use of destructive gears in the coastal waters. Most of these negotiations went in an informal manner, based on personal relationships between individuals.

SUGPO also took on the major task of rehabilitating the degraded fishing grounds. The first step was the reforestation of mangroves at several sites in the municipality. Then the fishing community established a 50-hectare fish sanctuary with a construction of bamboo and concrete artificial reefs embedded in a 6 km² area effectively monitored by the patrol boats.

As of early 1997, the project is in its sixth year. SUGPO now represents (either directly or indirectly) 70% of the small-scale fishers in Orion, in frequent negotiations with the municipal government. A Municipal Coastal Resource Management Council functions to advise the Municipal Council on a local fisheries management policy and in this council, the fishers hold a majority of seats.

Insights on Community Organization

In the process of organizing the fishing community, the community organizers gained some insight on community-based approaches that may have wider applicability. The most important lesson was that the social component in CB-CRM can only succeed if the program sufficiently incorporates the perceptions and objectives

of the small-scale fishing community with regard to fisheries development. The perceptions of fishers were not always clearly expressed, but the community organizers gradually learned to understand the distinct problems of the small-scale fisheries sector as well as their preferred solutions. In hindsight, the fishers in Orion had a remarkably rational and long-term grasp of fisheries management issues.

Five Principal Lessons Seen as Vital to the Success of CB-CRM

1. In Orion, organizational work only gained real momentum once certain existing social boundaries and processes were recognized. It became clear that the fishers in the Orion municipality are not one but three socially integrated groups of small-scale fishers. At each step of the development of a fisheries management plan, the groups reached a certain consensus using a perspective generated from their own group interests in estimating costs and benefits of a particular proposal. Intergroup consultations would then follow. SUGPO would only address management issues and proposals after the more informal consultation processes were completed. Similarity in gear use, social ties such as extended family, and geographical proximity may all be factors in social group formation.

2. The fishers stated that issues concerning resource control such as equity in and control over access to the resource should be addressed first. They felt that a management process should incorporate developments providing increased and enforceable guarantees that any investment in resource management (time, money or effort) should lead to benefits for them and not dissipated to encroaching outsiders.

3. The guiding management principles of the fisherfolk emerged. In Orion, it became clear that fishers wanted management approaches that

would not 'force' any fisher from the fisheries and would not negatively affect net incomes. The first could be assisted by supplemental and alternative livelihood development based on voluntary participation; the latter could be compensated for at the individual household levels. Reduction of fishing time and the aggregating effects of artificial reefs are possible approaches (see below). Fisherfolk in Orion also favored a management process that pursues implementation only *after* consensus-building. This point was exemplified by the influence of a non-associated group of small-scale trawlers on the implementation of the sanctuary. Although the sanctuary in Orion was legally recognized and patrolled, fisherfolk placed surrounding buoys only after an appropriate level of negotiations on compliance with the 'non-member community'.

4. During discussions with fishing community leaders, it was often stated that the current emphasis in fisheries management to reduce fishing to maximum sustainable yield (MSY) was only partly justified even in Manila Bay. The fisherfolk understood overfishing in terms of a total harvested ecosystem and biomass production, including production not 'captured' in conventional MSY estimates. The fisherfolk did not deny that overfishing negatively affected their livelihood, but they had alternative strategies so that they could easily shift between gears, methods and target species. Similarly they felt that management putting too much emphasis on the present-day monetary value of catch (e.g., the use of MEY in small-scale fisheries management) was not appropriate, since fishers were aware of changes in markets and consumer demands. One fisher even asked what future prospects a jellyfish-based fishery would have in Manila Bay.

The key to long-term sustainability for small-scale fisherfolk is diversity in catch and species. Instead of overfishing, less can be caught from a wider variety of species. Long-term

management approaches should incorporate continuous flexibility in both catch and economic strategies.

5. The management objective of a reduced fishing effort is often translated into a single management approach which is to help small-scale fisherfolk develop alternative livelihoods. Unfortunately, this often leads to development strategies in which fishers are induced to leave their profession. Most fishers in Orion pre-

ferred diversification through supplemental livelihood developments combining fishing and nonfishing income generation. Fishing leaders in Orion identified the reduction of fishing time (given an equal catch) as a possible approach towards supplemental livelihood development. Less fishing time would not only increase productivity per hour but, more importantly, would give them more time to develop supplemental income.

In the authors' view, the fishers can only invest in developing a more diversified livelihood after ensuring a sustainable base for their fisheries. Establishing community control over the resource and the development of supplemental livelihoods should be closely linked to solution-targetted management strategies.

Table 1. The design principles of community property rights institutions (Ostrom 1990) and their current application in Orion. (Numbers refer to Table 3.1, p. 90 in Ostrom 1990).

1. **A: CLEARLY DEFINED BOUNDARIES: FISHING GROUND:**
In political advocacies, the whole Manila Bay is seen as one fishing ground. In Orion, fisherfolk follow municipal boundaries and attempt CPR establishment. The first stage involves a 6 km² area.
- B: CLEARLY DEFINED BOUNDARIES: FISHING COMMUNITY:**
In political advocacies, the community is defined as all small-scale fisherfolk around the bay. Orion fisherfolk define as small-scale those gears using less than 10 crew and engine power 16 hp maximum. In Orion, the first stage involves all small-scale fisherfolk in five villages, however 'outsiders' are not excluded but only asked to comply to regulations.
2. **CONGRUENCE BETWEEN RULES AND LOCAL CONDITIONS:**
Is provided for by locally defined fisheries management. Even within the 6 km² area, rules differ depending on local ecological properties and adjacent prevalence of gear. At the moment, this is only apparent through the choices made by patrolling the fishers in terms of when and whom to apprehend. These choices are discussed and evaluated in the social groups. A zoning policy on gear-use is under development.
3. **COLLECTIVE CHOICE ARRANGEMENTS:**
Municipal-wide effective proposals and options first go through separate informal consultations in three social groups of fishers, before the 11 POs formulate opinions. A general assembly of SUGPO (PO decides representatives) on final drafts for submission to the LGU.
This process is adapted when a more localized decisionmaking is favored (e.g., user-rights decisions on a mangrove reforestation in the area of one PO are seen as exclusive to that PO).
4. **MONITORING:**
Is done through a fisherfolk-based patrol; in collaboration with the municipal police. Revenues from fines are allocated to fund patrolling expenses.
5. **GRADUATED SANCTIONS:**
The patrols sometimes 'negotiate' apprehension and/or classification of the violation with apprehended fishers. Sometimes this happens on the water! The patrols are particularly sensitive to the 'intent' to violate rules and the violators' socioeconomic situation. Subsequent reporting (on paper) and evaluations are part of the process. Convictions are the responsibility of the Municipal Government. In this, penalties depend on whether the offender is a 'first-timer'.
6. **CONFLICT-RESOLUTION MECHANISMS:**
Through social ties and informal discussions. Jokes are used to get a point across in a nonconfrontational manner. Time is used as a factor to 'de-fuse' potential explosion of conflicts.
7. **MINIMAL RECOGNITION OF THE RIGHT TO ORGANIZE**
Provided by the Local Government Code (1991) of the Philippines, and the Municipal Government's recognition of SUGPO as partner in consultations.
8. **NESTED ENTERPRISES: MULTIPLE LAYERS OF INSTITUTIONS**
Social and informal contacts work in the first line. SUGPO's organizational formal works in second line. Regular government agencies work at a third (official level).



Fisher-volunteers attending a community meeting.



Mangrove seedlings prepared for a reforestation.



The Bantay Dagat ("sea guard") team with their first patrol boat.



The haricot; the use of this gear is now a topic of discussion among fishers in Orion.

Flowchart of Developments in CB-CRM in Orion, Bataan

This flowchart summarizes eight years of small-scale fisheries development in Orion (Bataan, Philippines). It demonstrates the long-term process from a small beginning, through both successes and failures, to a larger-scale comprehensive approach to CB-CRM.

** = activity or significant development

() = outcome/result; for 1997 objective

Date	Activity
1989	** Attempts to organize fisherfolk patrols (citizen arrests)
1990	** Discontinued patrols (no convictions)
1991	** Fisherfolk Association (FA) initiative (clear landing site)
	** Proposal for artificial reefs (ARs) to Department of Agriculture and nongovernment organization (PRRM) (training on ARs)
1992	** 10 FAs discuss municipal FA formation (SUGPO)
	** Fishing restrictions on ARs (training on fisheries laws/monitoring of ARs by an individual/ex-dynamite fisher)
	** SUGPO'S first general assembly (criticism on ARs destroyed by commercial trawls)
	** First discussion with Municipal Council (on enforcement problems)

continued...	
DATE	ACTIVITY
1993	** New AR-modules placed (destroyed by typhoon)
	** Re-activated fisherfolk patrolling (citizen arrests)
	** SUGPO/DA/municipal dialogue (request for municipal ordinances on fish sanctuary and fisherfolk-based patrols)
1994	** First Municipal Ordinance (MO) (on fisheries/taxes)
	** Three MOs (penalty division; 40% SUGPO, 60% LGU) (exclusion of active commercial gears) (establishment of 50 ha fish sanctuaries)
	** Donation of two patrol boats (pork barrel)
1995 Feb-Apr	** CRM plan discussions in SUGPO and EAs
Feb-Aug	** Two MOs initiated: (mangrove protection) (fishing reserve; 6 km ²) (both legalized in 1996)
Apr	** Start of a participatory weekly data gathering on socioeconomic parameters (50 volunteers)
Sep	** Pilot mangrove reforestation (0.3 ha destroyed in typhoon)
	** Regular meetings with MC evolve into a 'de facto' advisory MCRMC (bimonthly consultation)
1996 Feb-Apr	** SUGPO appoints new board members
Jul	** Patrols are regularly scheduled (apprehension and convictions)
	** Preparation-works for sanctuary and concrete ARs
Sep	** A second mangrove reforestation (0.8 ha)
Oct	** Deployment of bamboo ARs
1996	** Ongoing negotiations among groups of fisherfolks on phasing out of certain illegal and destructive small-scale gear from the municipality
	** More fisherfolk take up supplemental income generation spontaneously
	** Fisherfolk from neighboring villages and municipalities express interest in CB-CRM in Orion
1997	** Deployment of sanctuary marker buoys and concrete ARs
	** Third mangrove reforestation (1.0 ha)
	** Negotiations with Municipal Government on status of MCRMC (delegated powers of decisionmaking and responsibility)

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L. VAN MULEKOM is from the Netherlands Development Organization (SNV) while E.C. TAN is from the Philippine Rural Reconstruction Movement-Bataan.