Cross-scale linkages and adaptive management: Fisheries co-management in Asia

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Abstract

The present paper reviews research done in Asian countries during the second phase of the Worldwide Collaborative Research Project on Fisheries Co-management. Building on the results of the first phase, the paper focuses on stakeholder conflict, and social and geographical scale. Several conclusions emerge from common patterns. Community motivations for co-management are often related more to the protection of fisheries resources from outsiders than to conservation. Access rights are important but exclusion from food resources in a context of widespread poverty should be approached carefully. Cross-scale institutional linkages make adaptive management possible by bringing together groups with broad local foci and ones with narrow trans-local mandates. The role of the government is balancing interactions between these various groups. This is not a role that is compatible with top-down management.
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1. Introduction

Between 1993 and 2003, the Worldwide Collaborative Research Project on Fisheries Co-management (WCRPFC) involved African, Asian and European partners in empirical research on the general subject of fisheries co-management. The project was in two phases. Phase I focused on the assessment of co-management experiences and the conditions for success. Phase I produced a large number of research products, culminating in an edited volume reviewing global experiences with co-management [1] and a policy brief [2]. Phase II focused on pursuing a particular subset of issues that the first phase had identified as critical to understanding co-management institutions. The present paper is the first of several reviews of the Phase II work. The subject here is Asian experiences. While almost all of the work done in Asia in Phase II under the WCRPFC contributes to our discussion, we have not hesitated to pull in other related research.

The policy brief from Phase I [2, p. 158–9] concluded with the following list of key co-management issues:

1. Developing co-management institutions on a larger scale than the local community.
2. Reconciling local and global agendas…governments have a double obligation of attending to international agreements while sharing authority with the communities.
3. Identifying a knowledge base for management that is considered valid by stakeholders.
4. Managing conflicts between resource users who have acquired exclusion rights to a resource through the co-management process and those who are excluded.
5. Developing appropriate approaches for empowering local communities to participate in the setting

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of management objectives through institutional reform.

The WCRPFC was based on a loose community of researchers being pulled in the same direction by empirical findings rather than being pushed the same way through a specific research protocol. Self-contained proposals tailored for particular research questions tied to sets of co-management programmes were considered and funded individually. Proposals were encouraged to focus on hypotheses that linked interactions between stakeholder groups and the ways that co-management programmes were structured to outcomes around transaction costs, equity and the strength of the management institutions.

Our review begins with a discussion of the role of conflict in co-management. Then we turn to scale, examining the questions of determining the appropriate scale and emerging, cross-scale institutional linkages. Next we look at co-management and stakeholder roles, corresponding to the issues under number five in the list above. The topics here are the respective roles of government, communities and NGOs, a broad discussion of experiences with empowerment. The third topic is co-management and global agendas. Finally, we discuss co-management and the knowledge base for management.

2. Fisheries co-management and conflict

2.1. Defining co-management

Following Sen and Raakjær Nielsen [3] we define fisheries co-management as an arrangement where responsibility for resource management is shared between the government and user groups. They suggest a typology of co-management from "instructive co-management", where in the government makes all the decisions but does allow a minimal exchange of information between themselves and the user groups to "informative co-management" in which the government delegates responsibility and authority and the users groups keep the government informed about progress. Such a broad definition is necessary for analysis, but it dulls the critical edge of the co-management ideal of shared responsibility [4]. These definitional questions are further challenged by the rising phenomenon of multi-functionality and multi-tasking in co-management institutions. Successful co-management institutions can easily become magnets for other issues that people are looking for ways to address. As Baird [5] puts it in his discussion of fisheries co-management on the Mekong River in Laos "when solidarity increases as a result of co-management, there are also many spin-off benefits in terms of community development" (p. 19).

2.2. Fisheries co-management and conflict

Those motivations for participation in co-management programmes are often about dealing with conflicts have been observed not only in WCRPFC research in Asia and Africa, but also in programmes involving indigenous peoples globally [6].

2.2.1. Communities need the state

In conflict situations, communities encounter their need for the state [7]. Katon et al. [8] in their examination of San Salvador Island in the Philippines, e.g., found that purely community-based management was not adequate for dealing with problems that arise outside of the community. In-migration had created a heterogeneous population and the villagers need outside legal authority to settle disputes. They argue that collective arrangements developed in response to resource decline and conflicts, and that co-management worked because of the provision of legal and policy support and enforcement that could not have been done without state involvement.

One of the most common patterns in programmes with strong local support is a community looking for help in keeping outsiders away from resources they see as theirs. This is often expressed by defining the outsiders' gear as 'destructive', which in many instances simply means more efficient than the gears they are using. This pattern emerged, e.g., in one case in the Philippines with co-management arrangements of the LEPASECU Bay Management Council (LBMC) and the adjacent Malalison Island. Air compressors were used by migrants and were more efficient than local techniques; the result was a total ban on their use by the local government. By contrast, trawlers proved an even more difficult issue in the four municipalities in the LBMC. Rather than being outsiders the trawlers were concentrated in one of the municipalities, which insisted on allowing them. This resulted in tensions between this municipality and the other three where there were no trawlers [9,10]. Russell and Alexander [11] examine both formal co-management and informal community management on San Miguel Bay in the Philippines. The formal management aspects are essentially an attempt to protect the interest of the non-trawler fishers against incursion from trawlers. Organizing communities around resistance to push nets and trawlers has been a critical aspect of organising co-management around Thailand [12].

The greater success in community management argued to be found in homogeneous communities [13–15] may exist in part because the salient variables by which such homogeneity is locally defined derive from conflicts. Desire for exclusion of others generates solidarity that results in support for the co-management programme [7]. But the question of who is included is