changes in fishery laws and regulations without sufficient knowledge about how people have organized the use of marine resources locally available to them have often resulted in breakdown of both social systems and biological resources. In Mozambique, de facto rights giving access to marine resources is part of a subsistence economy. Subsistence fishery needs no licenses. However, as the case from Inhassoro indicates, the border between subsistence and commercial fishery may be vague and floating. In order to optimize the resources available to them, people functioning in a money economy will sometimes have to sell their catch. At times, some may start to take advantage

of the system, and in fact become illegal, commercial fishers. If the authorities take action against such activities without sufficient knowledge, it could easily result in people who have exercised their rights in a proper way being punished, and, in the worst case, unreasonably being denied access to the source of their livelihood. As the experience from Inhassoro shows, co-management systems will also include the knowledge about local conditions necessary to avoid such unwanted socioeconomic consequences.

## Acknowledgements

This article is based on a study by a joint group of researchers

from IDPPE (Instituto de Desenvolvimento da Pesca de Pequena Escala) and IIP (Instituto de Investigações Pesqueiras) in Maputo, using the Rapid Rural Appraisal Method. The work was made possible through a grant from the DANIDA funded: "Fisheries co-management; A Worldwide, Collaborative Research Project". The project is coordinated by ICLARM and the IFM at North Sea Centre at Hirtshals, Denmark.

A. Kristiansen and E. Poiosse are from the Ministerio da Agricultura e Pescas, Instituto de Desenvolvimento da Pesca de Pequena Escala (IDPPE), Maputo, Mozambique.

## Impact Evaluation of Community-Based Coastal Resource Management Projects in the Philippines

Evaluation de l'impact des projets de gestion communautaire des ressources côtières aux Philippines

## Robert S. Pomeroy, Richard B. Pollnac, Canesio D. Predo and Brenda M. Katon

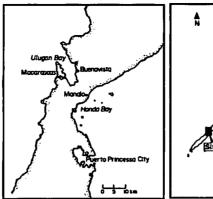
The benefits of decentralizing the management of coastal resources to local governments and resource users have long been recognized, but the best systems for coastal resource management depend on many factors. A number of community-based management and co-management projects were started in the Philippines in the early 1980s. This report describes a comparative assessment of these projects to determine where improvements can be made in the design of future community-based coastal resource management projects. Early and continuing involvement by project beneficiaries is one of the factors that contributes to the success of project development, implementation, and evaluation.

Les avantages de la décentralisation et du transfert de la gestion des ressources côtières aux collectivités locales et aux utilisateurs de ces ressources, ont depuis longtemps été reconnus bien que la viabilité de ces systèmes d'aménagement dépende toutefois de nombreux facteurs. Un certain nombre de projets communautaires d'aménagement ont été mis en place aux Philippines au début des années 1980. L'étude comparative ici proposée de ces projets vise à cerner les aires d'amélioration nécessaire dans la mise au point de futurs projets communautaires d'aménagement côtier. La participation précoce et continue des bénéficiaires de projets est l'un des facteurs qui contribuent à la réussite des phases de conception, de mise en oeuvre et d'évaluation de ces projets.

Recognizing the need to decentralize the management of coastal resources to local governments and resource users and to increase the participation of resource users in management, a number of locally- and foreignfunded projects were initiated across the Philippines by government and nongovernmental organizations and others beginning in the early 1980s. These projects employed strategies of community-based management and co-management. From 1984 to 1994, over 100 community-based coastal resource management (CBCRM) projects (targeting fisheries, mangroves and coral reef resources) were implemented in the Philippines.

These CBCRM projects provide a vast pool of untapped information which can be analyzed to gain increased knowledge about variables and conditions for the successful planning and implementation of CBCRM. To date, there has been no comprehensive quantitative evaluation of these projects. While project evaluations were undertaken by project staff and consultants for many of the individual projects, no comparative evaluation of the CBCRM projects using a standardized methodology has been done.

A review and evaluation study was undertaken to provide a critical assessment of the implementation, impact, and performance of completed CBCRM projects to serve as a basis for improving design and implementation of new CBCRM projects in the Philippines and elsewhere. Nine study sites representing completed CBCRM





Location map of Honda Bay Resource Management Project site in Palawan, Philippines.

projects were selected in the Central Visayas (Cebu and Negros Oriental provinces) and Palawan province.

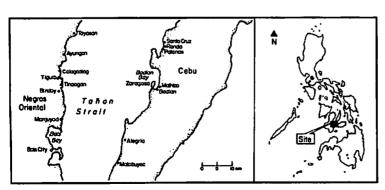
Several important lessons have been learned, or confirmed, by the analysis of the nine CBCRM projects in the Philippines. The lessons presented here are meant to guide the planning and implementation of future CBCRM projects.

1. Evaluations of project success by project staff and beneficiaries vary probably because they use different criteria. Both may be valid, in their own terms, but it is evaluations by the community members themselves that will influence their subsequent behavior and hence the potential sustainability of the project. It

appears that project staff were focusing more on observable impacts (e.g., functioning fishers' association, area of mangrove successfully replanted, number of artificial reefs remaining in operation, etc.). Despite

the lack of sustainability of most project material interventions at the nine sites, the fishers generally perceived that the CBCRM project was a success. They felt a sense of empowerment, they had more information with which to make decisions and improve their life, they had more skills, and they felt more integrated into the economic and political mainstream.

Early and continuous participation of project beneficiaries in project planning and implementation is related to their positive evaluation of impacts. Not only does this type of involvement serve to adapt project activities to local needs, but participants also gain a better understanding of the problems involved in project implementation and a sense of empowerment. Community level project objectives should be developed jointly by the cooperators and the project personnel. Objectives need to be clear, simple and achievable. The project itself and its staff must be flexible and adaptive to changing conditions and needs.



Location map of Contral Visayas Regional Project 1 sites (Philippines) covered by the impact evaluation.

- Project cooperators must recognize incentive(s) economic, social, and/or political—to participate in the project. Expected personal benefits from the project must outweigh the expected costs of participation. This is why it is critical to have a shared understanding of project objectives by both cooperators and project staff.
- 5. Capability-building efforts enhance the perception of empowerment and sense of confidence of project cooperators to undertake new tasks and to meet current and future challenges. While many of the material interventions of the projects failed, the fishers reported an increased perception of empowerment from participating in project meetings and trainings. The meetings and trainings provided the fishers with information and skills with which to improve the resource, their life and livelihood, and their community. This increased perception of empowerment was found to stay with the fishers after the completion of the project.
- 6. Project cooperators, as well as non-cooperators, perceive positive changes in the impact indicators, with little difference between the two groups. This "spread-effect" is probably the consequence of early, open involvement of all community members in the project and subsequent face-to-face interactions in a small community setting where everyone observes and talks about what is going on. This type of "spread" is essential to avoid divisive competition between "haves" and "have-nots" and its potentially negative impact on

- project sustainability, and to maintain and enhance social equity in the community. If benefits accrue only to cooperators, new social strata will be created in the beneficiary community, potentially resulting in conflict and weakening the ability of the community to work together for the common good.
- 7. User rights to material interventions must be specified and enforced. These user rights - either individual or collective should address the ownership of the resources, and define the mechanisms (economic, administrative, collective) and the structures required for allocating use rights to optimize use and ensure conservation of resources, and the means and procedures for enforcement. The experiences at the case study sites showed that when user rights are specified and secure (such as with a mangrove certificate of stewardship contract), there is a change in the behavior and attitude of the fisher toward conservation and a much greater chance that the intervention will be maintained. In addition, the case studies showed that government support through legislation, funding, and enforcement is crucial to sustaining the intervention. In most cases, local initiatives require active collaboration with government to enforce user rights.
- 8. The data indicate that fishers like their occupation and would not necessarily change to another job, suggesting that the development of supplemental, rather than alternative, occupations may be the most effective strategy. These

supplemental activities could be spread over a larger number of fishers, reducing rather than eliminating their fishing activity, and probably having a great or greater effect than trying to attract (or force) fishers to some alternative form of employment.

Learning more about what fishers like about their occupation as well as characteristics of those who would like to leave the occupation would serve both to facilitate identification of appropriate alternative or supplemental occupations and to target them at the appropriate individuals. Future CBCRM projects should build on the already existing occupational multiplicity of most fishers and fishing households. The interventions are more likely to be sustainable since they would fit into the successful adaptive strategy of occupational multiplicity.

## Acknowledgements

This research was conducted through the Fisheries Co-Management Project with funding support from the United States Agency for International Development (USAID) and the Danish International Development Assistance (DANIDA).

ICLARM Contribution No. 1338

R.S. Pomeroy is an ICLARM Senior Scientist.
R.B. Polluac is a faculty member of the University of Rhode Island, Kingston, URI, USA.
C.D. Predo was an ICLARM Research Associate at the time of the study and B.M Katou is an ICLARM Research Associate.