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The Economy and Environment Program for Southeast Asia (EEPSEA) was established in May 1993 to support training and research in environmental and resource economics across its 10 member countries: Cambodia, China, Indonesia, Lao PDR, Malaysia, Papua New Guinea, the Philippines, Sri Lanka, Thailand, and Vietnam. Its goal is to strengthen local capacity for the economic analysis of environmental problems so that researchers can provide sound advice to policymakers.

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Making Waves: Improving The Management of Philippine Marine Reserves

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One of the key challenges facing conservationists across Southeast Asia - and indeed the world - is how best to manage protected wildlife areas. This is especially true for marine conservation, where illegal fishing, global warming and pollution are putting pressure on fragile coastal habitats. New research from the Philippines has investigated the management of protected marine and coastal areas. It found that the type of institutions in charge of these sites made little difference. Instead good leadership, adequate manpower and funds and the provision of sustainable livelihoods for local communities are critical. ➔

A summary of EEPSEA Research Report 2003-RR5, Do Institutions Affect the Performance of Marine Protected Areas? Evidence from the Philippines by Esmyra Parado Javier (Resources, Environment and Economics Center for Studies Inc., (REECS) Suite 405 Tower at Emerald Square, P.Tuazon corner J.P. Rizal Sts. Project 4, Quezon City, Philippines 1109. Contact: esmyra@email.com or reecs@skyinet.net)

The community can be t

Marine protected areas

Esmyra Parado Javier, from the Resources, Environment and Economics Center for Studies (REECS) in Quezon City, carried out the research. She wanted to understand how Marine Protected Areas (MPAs) are performing, from both an environmental and a social point of view, and to see how different management regimes affect this performance.

MPAs are legally protected inter-tidal or sub-tidal areas. They are usually set up to restore, maintain and protect biodiversity and to ensure that marine and coastal resources are used in a sustainable and equitable way. There are about 160 MPAs in the Philippines, including national marine parks and reserves, tourist zones and wilderness areas. They are generally governed by the national government through the Department of Environment and Natural Resources (DENR). Recently there has been a move to devolve the management of some areas to other groups, particularly non-government organizations (NGOs) such as the WWF, Conservation International and the Haribon Foundation. Local government units (LGUs) and people's organizations (POs) have also become more involved. Because of this, there are now three distinct

management arrangements: DENR/NGO teams; LGU/NGO teams; and community management. All the teams managing MPAs face a lack of financial and manpower resources; the demands of a complicated bureaucracy; and problems getting sufficient community support for their work.

Investigating management

Javier's study covered nine sites, including the Apo Reef Marine Natural Park, the Sagay Marine Reserve and Panggangan Island. Each of the three main institutional arrangements were represented by three sites in Javier's study. Study sites were also chosen because they had high levels of biodiversity and were ecologically significant. Other criteria used to short-list sites included the presence of active management committees; the availability of good information from independent studies; and the implementation of eco-tourism projects. Information for the study came from a number of sources. A lot of secondary data came from existing literature and recent studies. Key informant interviews were conducted with representatives from the DENR. Household surveys were also conducted, mainly with fisherfolk. The situation before the establishment of each MPA was

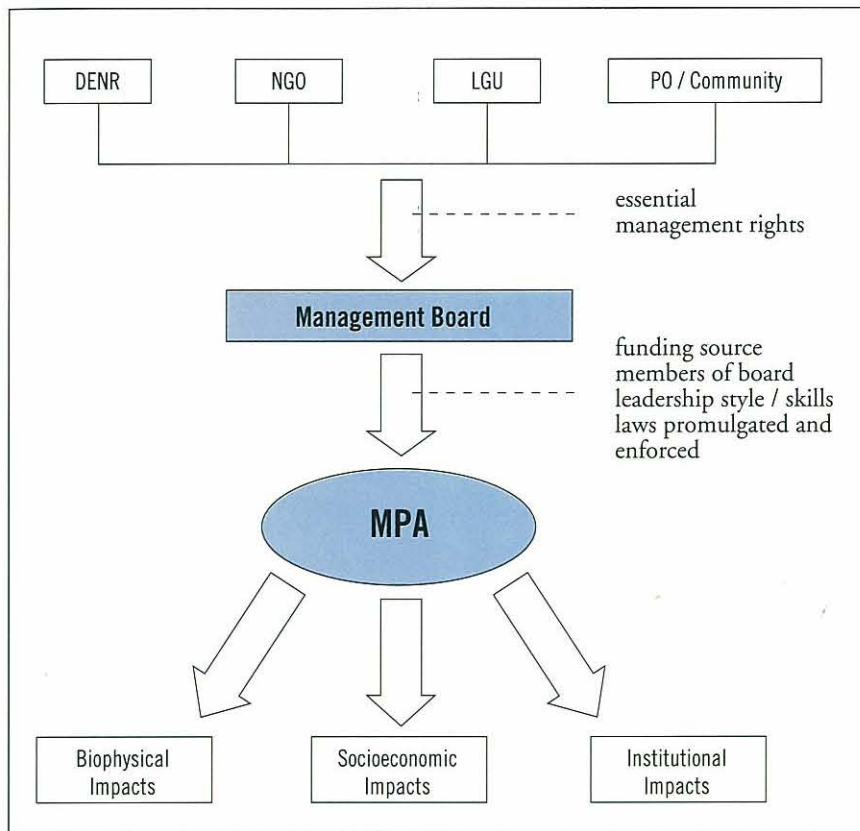
compared with current performance. In cases where there were no "before" data, the study relied on the recollection of the respondents and key informants.

Scoring success

Javier rated the performance of MPAs using selected biophysical, socio-economic and institutional indicators. Changes in species numbers, habitat types and levels of resource exploitation were among the biophysical aspects analysed. Socio-economic factors included the costs of meeting the MPA's conservation goals through information dissemination, communication and enforcement. Institutional indicators included the laws enforced in the MPAs and the type and level of enforcement. Javier also sought the opinions of both experts and lay people on the general performance of the MPAs in terms of biodiversity conservation and socio-economic benefits. She also asked for their thoughts on the reasons for the success or failure of the respective management regimes.

The different regimes were then analysed using an institutional arrangement matrix. This was designed to allow comparisons based on how property rights were controlled within each area. Ultimately, a composite measure of

the strongest ally of an MPA



Analytical Framework

accomplishments was derived using Multi-Criteria Analysis. This entailed asking representatives from different key institutions to rank the given performance indicators.

MPA's work

Javier found that the performance rankings for all the MPAs she studied were all quite high, indicating that the MPAs are successful. She did find that coral cover and fish numbers had declined in all sites but this was ascribed to the effects of El Nino in 1997; Javier found faster recovery in

the study areas compared to non-protected sites. Illegal fishing activities had decreased thanks to the formation of MPAs. Javier established that management boards were the key factor behind this success. She also found that fisherfolk from outside the MPAs had committed most of the illegal fishing.

From her socio-economic analysis, Javier discovered that household income in the sites she studied had not significantly changed over the years. However, environmental consciousness has

increased and there was greater community participation in resource management. Moreover, Javier noticed that many MPAs had taken measures to provide alternative sustainable livelihoods for local communities, most successfully through eco-tourism projects.

The elements of good management

Javier found that the LGU/NGO-managed sites seemed to be slightly better managed than the other MPAs. However, the differences in performance were not statistically significant. This seems to indicate that, no matter what type of institution is in charge, an MPA can perform well as long as its management is effective. Javier found that the key elements for the successful management of an MPA were good leadership, adequate manpower support and the availability of funding - both from external sources and from economic activity within the site. She also observed that fisherfolk belonging to POs had more access to information. This led to a sense of community stewardship that resulted in a more sustainable use of resources. Javier concluded that this type of empowerment was essential to the success of any MPA and that, whatever type of management is in

place, cooperation with the community is essential. She concluded that the community can, given the right motivation and support, be the strongest ally of any MPA management team.

Community key to success

To help develop this type of cooperation, Javier recommended that community groups should have a place on any MPA management committee. She also underlined that any workable management plan must

help provide a sustainable alternative livelihood for local communities. She noted that such communities are generally hostile to any management programs that might limit their access to coastal areas and so hamper or threaten their earning capacity. Such exclusion might also drive some fisherfolk to illegal and destructive fishing. Javier also emphasised that the protection of an MPA from illegal fishing activities is strengthened if coastal resources in

nearby provinces and other islands are well protected and well managed. If this is to happen effectively, there must be better cooperation between coastal communities throughout the country.

Javier conclude that, if an MPA is well protected from outsiders and provides sustainable incomes to locals, both the community and the wildlife that live within its boundaries will benefit from its existence.

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