

# Local social dynamics key to success of tropical marine conservation areas

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As biologists and ecologists propose ever-larger conservation areas in the tropics, ones that encompass multiple countries, social scientists say it's local people banding together with their community leaders who ultimately determine the success or failure of such efforts in many parts of the world.

"When people sacrifice to conserve, they want to benefit from that sacrifice," says Patrick Christie, University of Washington associate professor of marine affairs and a Pew fellow in marine conservation. "People expect direct economic and social benefits from conservation."

Conflicts develop, however, when outsiders move in to take advantage of improving environmental conditions. Managing such conflicts poorly generally leads to the collapse conservation efforts, he says.

Friday during the American Association for the Advancement of Science annual meeting in San Diego, Christie reported on how such conflicts are being successfully handled by small, Filipino non-governmental organizations, community members and their mayors in 36 communities with marine protected areas. Marine protected areas are sites in which these communities do not fish in order to restore overfished [coral reefs](#).

Christie organized the session "Ensuring Marine Policy is Responsive to [Social Dynamics](#) and Management Experience" with Richard Pollnac of the University of Rhode Island. The session looked at marine

conservation efforts in the tropics in regions such as the six countries of the "Coral Triangle": Indonesia, Malaysia, Philippines, [Papua New Guinea](#), Solomon Island and Timor-Leste. The vast majority of ocean biodiversity is found in the tropics. Then too, most of the people who live there are highly dependent on marine resources for food, so sustaining those resources is a concern of leaders around the world from a food-security standpoint, Christie says.

Christie has conducted studies in the Philippines where residents have extensive experience with ecosystem-based management and hundreds of marine protected areas. The success of those protected areas varies widely, he says.

"What's exciting about work in the Philippines is that conservation can be successful if people don't see it as being forced on them. They need to have the sense they are in the driver's seat," he says.

Christie says social dynamics determine the success of ocean conservation. In his study in the Philippines, more than 500 people were asked such things as the number of community meetings they'd attended on conservation areas, how - on a scale of one-to-five - they thought their opinion mattered, if someone from their community was on the governance committee overseeing the area and if they felt their community's mayor listened to them.

Then there were measurements of biological changes once conservation areas were established to see, for example if fish numbers were up or corals were healthier. Residents also were asked if they felt catches had increased and if they felt there were more or less fish.

One important finding was that participatory planning and leadership at the mayoral level was key to dealing with the illegal fishing that troubles so many members of the communities making sacrifices in conservation

areas. Unlike in the United States, there is no Coast Guard to enforce rules and no courts to turn to for relief, so collaboration between localities becomes very important.

Fostering collaboration, perhaps by helping train community leaders, and focusing on other factors concerning governance and social conditions is as important to the success of conservation areas as using the right biological and ecological parameters, Christie says.

**More information:**

Related journal article: Coastal Management, April 2009 "Tropical Marine EBM Feasibility: A Synthesis of Case Studies and Comparative Analyses" [www.oneocean.org/download/db\\_f...ieetal.synthesis.CMJ%2009.pdf](http://www.oneocean.org/download/db_f...ieetal.synthesis.CMJ%2009.pdf)

Related journal article: Coastal Management, May 2009 "Back to Basics: An Empirical Study Demonstrating the Importance of Local-Level Dynamics for the Success of Tropical Marine Ecosystem-Based Management" [pdfserve.informaworld.com/5858...228499\\_910540296.pdf](http://pdfserve.informaworld.com/5858...228499_910540296.pdf)

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