Using Locals in Enforcement, Some MPA Managers See Improved Compliance as a Result

Where there is little or no community support for a marine protected area, compliance with MPA rules may be low and enforcement difficult. This point often underscores the adoption of community-based processes in planning protected areas. However, even with strong local involvement in planning, some level of non-compliance will likely persist, particularly at sites with no regular enforcement presence.

Seeking a way to enforce rules while adhering to the concept of community “ownership” of an MPA, some managers have instituted systems of using locals as enforcement officials. These local enforcement patrols — sometimes done in conjunction with professional rangers, sometimes not — have brought a range of benefits to MPAs, as well as some challenges. This month, MPA News examines three cases of local enforcement patrols and how the managers view their results.

Bunaken National Park: Benefits of joint patrols

In the late 1990s, blast and cyanide fishing were rampant in the 890-km² Bunaken National Park, located in North Sulawesi, Indonesia. Funding shortfalls from the national government had hamstrung the park’s enforcement efforts, severely limiting the patrols performed by rangers. In 2001 in a bid to increase the level of enforcement, the newly established Bunaken National Park Management Advisory Board — consisting of village representatives and other stakeholders — initiated a joint patrol system, placing community members side-by-side with professional enforcement officers.

That system now features 45 villagers, 16 park rangers (employed by the central government) and 5 water police officers (employed by the North Sulawesi provincial government). The villagers, mainly fishers from islands within the park, work full-time in this role and receive a salary competitive with the earnings of average fishers. Funding for their salaries comes from a park entrance fee charged to visitors. The village patrol members receive ongoing training in enforcement techniques and other aspects of park management, but do not have the authority to make arrests or carry weapons. A ranger or water police officer is present on every patrol for arrest authority.

The effect of this system has been dramatic, says Mark Erdmann, marine protected areas advisor for the park. “The incidence of blast and cyanide fishing within the park decreased dramatically in 2001-2002, with many villagers in the southern section of the park claiming that blast fishing has nearly ceased altogether,” says Erdmann. Collection of live coral for house foundations has also dropped off significantly. And the patrols have dismantled floating cages for temporarily holding grouper and Napoleon wrasse for the live reef food fish trade — illegal but once common throughout the park. “Village patrol members have an intimate knowledge of local reefs and the people exploiting them, both sustainably and in a destructive manner,” he says. “This allows them to target the activities and user groups that cause the most damage to the reefs.”

The benefits of the joint patrol system go beyond just enforcement, Erdmann says. The patrols provide alternative employment for fishers who would otherwise depend on reef resources. In addition, he says, the village patrol teams have effectively “socialized” the conservation and sustainable use goals of the park within their villages, explaining the reasons for protection and how everyone can benefit from it. “Village patrol team members socialize the park even during their free time when interacting with other villagers on a social basis,” he says.

The joint patrol system has not been without challenges. The village patrol members for the northern half of the park, for example, were all selected from just one island, which has resulted in accusations of bias from villagers on other islands in that region. “There is a strong feeling among villagers from other islands that when they put in a request for patrol help via the village VHF radio network, the village patrol members (all from Bunaken Island) are often apt to ignore the call or continued on next page
feign technical difficulties,” says Erdmann. The management advisory board is set to change the northern patrol system soon to a more representative approach, similar to the existing southern patrol.

Erdmann says that although broad communication of park rules has resulted in increased compliance, the economic incentive to illegally extract resources in the park only increases over time, necessitating a continuously vigilant patrol system. The need for such vigilance was made apparent earlier this year: a temporary work strike by village patrol members resulted in a spike in blasting and cyanide activities in the park within two weeks.

Portland Bight Protected Area: Contending with a culture of “system-beating”

In Jamaica, according to Peter Espeut of the Caribbean Coastal Area Management (C-CAM) Foundation, history has played a role in determining societal compliance with regulation in general. After slavery was outlawed in 1834, upper-class planters continued to control the formal economy and police into the 1900s, resulting in decades of civil unrest. “Distrust of the police, as well as a desire to beat a system perceived as unjust, are almost written into the genetic code of working-class Jamaicans,” says Espeut. “In this context, there is almost a ‘culture of system-beating’ in Jamaica.”

C-CAM bears management responsibility for the 1876-km² Portland Bight Protected Area under an arrangement in which the Jamaican government delegates authority for protected areas to qualified NGOs (MPA News 4:4). For C-CAM to manage Portland Bight effectively, it has had to confront the culture of system-beating, says Espeut. “Success in defeating that culture is not to be measured by the absence of law-breaking, but by the absence of community support for law-breaking,” he says. To achieve that, C-CAM has involved community fishers in setting fisheries regulations for the protected area, which now await formal government approval. C-CAM has also established a system of local enforcement agents.

“Even when the local community ‘owns’ the regulations, some may still resent outsiders coming in and arresting their relatives and friends for non-compliance,” says Espeut. “What better way is there to cement the new culture of compliance and natural resource management than to empower community leaders as enforcement officers?” Some 50 fishers have been appointed Honorary Game Wardens and Fishery Inspectors by Jamaica’s head of state, conveying powers to arrest, search without warrant, and impound vessels when evidence is found. C-CAM provides three days of training annually to each warden and inspector on all aspects of the work. The enforcement agents are all volunteers.

Espeut says concerns about the local enforcement system — including that wardens and inspectors would excuse their friends and relatives and harass their enemies, or take bribes — have not come to pass. In fact, the reverse has been found: wardens and inspectors advise their relatives and friends not to embarrass them by committing an offense, as they would be forced to personally arrest them to prove they are not corrupt, says Espeut. The effect of the enforcement system on illegal activity has been evident: illegally caught lobsters, for example, are no longer openly exposed for sale during closed seasons.

Notably, just one case of an offense has gone to trial. This is partly due to the emphasis C-CAM places on warning offenders rather than taking them to court. Also, regulations governing the protected area do not adequately cover some of the most destructive activities affecting Portland Bight — like fishing with dynamite — that will be addressed in the upcoming fisheries regulations for the protected area.

Once the fisheries regulations are approved by the national environment minister, enforcement could become a higher-stakes task. “It is not our intention that these community volunteers should risk life and limb — and it might come to that with the dynamiters — even in defense of their economic well-being,” says Espeut. “C-CAM’s intention is that when the fisheries regulations are in place, we will hire full-time, paid ranger corps, who under the Natural Resources Conservation Act will have special police powers.” The wardens and inspectors would continue to serve, but more as the “eyes and ears” of the ranger corps, he says.

Tanga region, Tanzania: Guarding against the use of excessive force

The Tanga region of Tanzania, in eastern Africa, extends southward along the Indian Ocean from the
country’s border with Kenya. Characterized by coral reefs, mangroves, seagrass beds, estuaries, and bays, Tanga’s coastline has experienced lower fish catches and deteriorating reef health since the 1980s, due to widespread use of destructive fishing methods. It is estimated that 12% of the region’s reefs have been completely destroyed, with another 64% in poor or moderate condition.

The Tanga Coastal Zone Conservation and Development Program (TCZCDP) was launched in 1994 by IUCN in collaboration with the Tanga region to reverse these trends. Involving three district governments in the region and 47 villages, TCZCDP has worked to end the destructive fishing practices and close certain reefs to serve as source areas for fisheries. (The project is funded by Ireland Aid, with technical assistance from IUCN.)

The project has closed seven reefs to fishing. These closures are part of area management plans, formulated and reviewed in a participatory way by local stakeholders. To ensure compliance, the project has implemented a joint enforcement program, involving local villagers and the Tanzanian Navy. The nature of the joint enforcement program is indicative of the collaborative project as a whole, ensuring the rights of local communities are protected. “The role of the Navy is to provide the enforcement unit with security in case they are facing aggressive or armed offenders,” says Eric Verheij, IUCN’s technical advisor to TCZCDP. “The role of the villagers is to ensure that the law enforcers are not using excessive force during operations, which might be counterproductive to our participatory approach.” In addition to pursuing illegal fishing practices, the enforcement units also check licenses and permits of fishers. Dynamite fishing has declined significantly since the start of the joint patrols, and local appreciation for the effect of closures on fish populations has increased.

One of the main challenges the project has faced regarding enforcement and compliance, according to Verheij, has been creating an atmosphere where law enforcers — the Navy, carrying out their civil role like “coast guards” in many other countries — can work smoothly with the communities. To this end, technical staffers at the district level have served as bridges between the communities and the Navy, and villages have provided housing for Navy personnel.

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IUCN project to examine application, impacts of precautionary principle

The precautionary principle states that action to protect the environment may be necessary before scientific certainty of harm is established. In light of the principle’s increasing use in natural resource management, IUCN has co-launched an initiative to determine what such precaution means in actual practice, and develop guidelines for its application. (Other partners on the project include TRAFFIC, Fauna & Flora International, and Resource Africa.)

The Precautionary Principle Project seeks input from practitioners worldwide of on-the-ground experiences with the principle and perspectives on issues/problems related to its application, particularly in the developing world. “The precautionary principle is a vital policy principle in natural resource management and conservation, but it needs to be applied in ways that are equitable and effective in the context of developing countries,” says Rosie Cooney, project coordinator. She says uncertainty is perhaps more fundamental in marine systems than terrestrial ones, due to humans’ comparative lack of knowledge about underwater environments. The project website, with background on the principle and the project’s activities, is http://www.pprinciple.net. For more information: Rosie Cooney, Fauna and Flora International, Great Eastern House, Tenison Road, Cambridge CB1 2TT, UK. Tel: +44 1223 579020; E-mail: rosie.cooney@fauna-flora.org.

Indonesia pledges to double its MPAs in three years

The Indonesian minister of marine affairs and fisheries has pledged to double the size of his nation’s MPAs in the next three years and ensure that any fishing in these areas is sustainable. Signing a letter of intent in June, Minister Rokhmin Dahuri said the effort would increase Indonesia’s MPA holdings to 10 million hectares (100,000 km²). In a joint announcement, Conservation International, a US-based NGO, said it would provide US$1 million to create a trust fund to support management of these MPAs, and is seeking other donors to participate. Dahuri said he hoped other Southeast Asian nations would follow his country’s lead in protecting marine resources. “Only through protected areas can we protect the long-term prosperity of our fisherman,” he said. For more information: Brad Phillips, Conservation International, 1919 M Street, NW Suite 600, Washington, DC 20036. Tel: +1 202 912 1532; E-mail: b.phillips@conservation.org.

Draft strategy released for MPA social science research in US

The MPA Science Institute of the (US) Marine Protected Areas Center has released a draft strategy to guide the nation’s social science research related to planning, management, and evaluation of MPAs. Prioritizing key information needs and describing the methods necessary to meet those needs, the draft strategy is based on an expert workshop in 2002 (MPA News 4:1) and is open for public comment until July 11, 2003. It is available online in PDF format at http://mpa.gov. The final strategy is expected to be published in August 2003. For more information: Sarah Lyons, MPA Center Science Institute, 99 Pacific St., Suite 100F, Monterey, CA 93940, USA. Tel: +1 831 242 2054; E-mail: sarah.lyons@noaa.gov.
Draft Zoning for Great Barrier Reef Draws Reaction, Faces Changes

The draft plan to re-zone the massive Great Barrier Reef Marine Park, proposing to set aside roughly one-third of the park as no-take areas, has drawn strong reactions from stakeholder groups throughout the state of Queensland (Australia). Released in June and open for public comment until August 4, 2003, the plan is expected to undergo changes before heading forward in the legislative process.

“There is room to move boundaries and/or proposed no-take zones in some bioregions, so I have no doubt that there will be amendments,” says Jon Day, Director of Conservation for the Great Barrier Reef Marine Park Authority (GBRMPA). GBRMPA is committed, however, to having at least 20% of each of the marine park’s 70 bioregions set aside as no-take under the plan. Presently, fishing and other extractive activities are off-limits in just 4.6% of the marine park.

Following a review of public comment, GBRMPA will forward a revised zoning plan to Australia’s environment minister, who will in turn introduce enabling legislation to the Australian Parliament. Parliament, which could further amend the plan, must approve the legislation before the plan can come into effect.

Reactions for and against

Imogen Zethoven of the nongovernmental organization WWF Australia says the re-zoning effort is a “once in a lifetime opportunity” to give the 350,000-km² marine park the protection it needs. Stating that the greatest threats facing the Great Barrier Reef are climate change and resultant coral bleaching, Zethoven says the re-zoning plan will help protect the park by making coral reefs healthier and stronger. “A major increase in no-take zones will enhance the resilience of the Great Barrier Reef to major bleaching events,” she says. The re-zoning plan could be better, she says, with an even larger percentage of the marine park set aside as no-take. WWF has called for around 50% of the park to be closed to fishing to protect its full range of biodiversity.

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The mayor of the city of Cairns, a center for dive tour operators and recreational fishing charters, criticizes tourism-industry support for the draft plan as a “winner take all” approach. “There was an intimation they wanted more of the marine park locked away from recreational and commercial fisheries — enabling more sole use for themselves,” says Mayor Kevin Byrne. He says the draft zoning plan would have little effect on the real threats to the park, including agricultural runoff from land. While acknowledging that overfishing is a problem, Byrne says it should be managed instead through such methods as catch reductions and buyout schemes for commercial fishing, and reductions in bag limits for anglers. “(The state of Queensland, not GBRMPA, manages fisheries in the marine park.)

Darren Cleland, executive officer of Ecofish, a commercial fishing association, agrees that anglers would rather have lower bag limits than expanded no-take zones. Even so, he says, they would be more satisfied with the draft zoning plan if no-take zones were off-limits to everyone, not just the fishing community. Citing scientific evidence that swimmers can interfere with spawning aggregations and other fish behavior, Veitch says, “If these areas are to be genuinely protected and, as claimed, become a source of increased fish diversity and productivity that will spill over to other areas, then we must stop all on-site impacts.”

GBRMPA officials acknowledge that some effort displacement may occur as a result of re-zoning, but that it has been minimized through placement of no-take zones to limit impact on existing fishing patterns. GBRMPA also expects the re-zoning to be complemented by new and proposed Queensland fisheries management arrangements to reduce fishing effort across all fisheries.

Draft zoning plan is online

The GBRMPA draft zoning plan is available online at http://www.reefed.edu.au/rap/index.html. The website features maps showing the proposed no-take zones by region, explanations of the criteria considered in re-zoning, and a submission form for comments.
Since its inauguration 38 years ago, the Neptune Coastline Campaign of the National Trust has raised over £50 million (US$83.5 million) for the acquisition and subsequent management of coastline in England, Wales, and Northern Ireland. Each year, the National Trust has acquired an average of seven miles of coastline using Neptune funds, and has carried out countless projects to improve access, protect coastal buildings, and enhance nature conservation.

While the purchase of threatened coastal land may be the “sexiest” focus for fundraising, many apparently mundane projects such as repair of footpaths or vehicle maintenance can be packaged to make them sound vital to the continued conservation of an area. Through imaginative marketing, the National Trust has even managed to raise money for the repair of rest rooms. We give our fundraisers a very wide range of coastal projects to offer potential donors and tempt back old ones, enabling them to “mix and match” projects according to donors’ personal preferences.

Sources of Funding
Almost 75% of the funds raised by the Neptune Coastline Campaign comes from individuals, and one of the key elements of Neptune’s fundraising strategy is the major donor program. Through this program, we develop long-term relationships with donors of £5,000 or more. As with approaches to all funding sources, major donors have to be carefully targeted, taking into account their real gift potential, their “warmth” toward the cause, and their needs. Each approach must also have a specific and well-argued “case for support” to persuade the potential donor to give. (We treat charitable trusts and grantmaking foundations in the same way as major donors, with careful research and cultivation going into every approach.)

Where individuals have already made major gifts, then a warm relationship needs to be maintained, ensuring that the donor feels appreciated. A successful relationship with major donors may lead to substantial legacies: roughly half of Neptune’s income comes from legacy donations, mostly from previous donors. The National Trust carries out regular legacy mailings, which concentrate on donors aged 55 years or older.

The Neptune Coastline Campaign has a good record, as well, of successful sponsorships and sales promotions with private companies. For these firms, protection of the coastline can be attractive as a promotion mechanism to:

• Create goodwill (with the community, customers, or their employees);
• Enhance sales;
• Respond to pressure from government; or
• Satisfy the company chairman, who may be personally interested in the cause.

Company gifts, be they money or gifts in kind (i.e., donation of goods or services), come with few strings attached. Sponsorships, on the other hand, generally have a legally binding contract, are for a particular time span, and require both parties to deliver specific benefits for a specific sum of money. Such sponsorship agreements are an excellent way for a company to target a precise audience with a message about its products, and can be a cost-effective alternative to more traditional advertising campaigns.

Another excellent source of corporate funding is cause-related marketing in which a proportion of the price of a product is donated to a good cause, such as protecting the coastline. Especially where well-known products are involved, such marketing campaigns can bring large amounts of money and publicity to a charity at little cost, and the company’s customers get a warm altruistic feeling. Neptune currently has an offer running with Pizza Express to promote a fish pizza, which has generated a large amount of media publicity, raised £100,000 for Neptune, and (what the company likes best) vastly increased product sales: over 400,000 pizzas in the two years the partnership with Neptune has been running.

Principles Of Fundraising
The principles underlying the Neptune Coastline Campaign’s success are simple and apply to all sectors of the fundraising market. They can be summarized as:

• You have to ask.
• The personal approach is vital:
  Asking someone face to face is better than ...  
  Telephoning someone to ask for support, which is better than ...
  Writing a personal letter to someone asking for support, which is better than ...
  Giving a presentation to a group of people, which is better than ...
  Sending a mass-produced appeal letter to lots of people.

• Understand the donor’s viewpoint and why he or she should want to give.
• Fundraising is a “people” business and requires selling.
• You must say “thank you” to everyone, however small the contribution.

With careful planning and adherence to the above principles, many worthy projects in coastal conservation can benefit from funding from individuals and the private sector. If you don’t ask, you don’t get.
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Coalition launches effort to establish West African MPA network

A coalition of environment and fisheries ministers from West African nations have agreed to establish a network of national and transboundary MPAs in the region and restore fisheries to sustainable levels, among other goals. The “Regional Strategy for Marine Protected Areas in West Africa” aims to allow the harmonization of protection efforts within five years, based on a shared vision of sustainable development and poverty reduction. It will involve the governments of Cape Verde, Gambia, Guinea, Guinea-Bissau, Mauritania, and Senegal.

“The point is that we realize our MPAs have a number of shared resources,” says Ibrahim Thiaw, West Africa regional director for IUCN. (IUCN helped spearhead planning of the strategy with WWF, Wetlands International, and the International Foundation for the Banc d’Arguin.) Such shared resources include marine animals such as sea turtles, but also human populations that migrate from one country to another, says Thiaw. Some existing marine and coastal national parks in the region are under intense pressure from artisanal and industrial fishing: Senegal, with a total population of 10 million, has 600,000 people working in the artisanal fishing sector. Coastal development and offshore oil exploration pose additional threats, he says. The strategy will address all threats to marine and coastal sustainability in the region, not just fishing. For more information: Ibrahim thiaw, IUCN Regional Office for West Africa, Ouagadougou, Burkina Faso. Tel: +226 307 047; E-mail: ibraham.thiaw@iucn.org.

Norway protects more cold water corals from bottom fishing

The Norwegian government has continued its push to protect deepwater coral reefs with an announcement that bottom trawling will be banned at two reefs off the coast of southern Norway. The restrictions, to be applied under national fisheries legislation, will protect the 1.2-km long Tisler reef and the Fjellnauen reef, whose size is not yet determined. Coordinates of both protected areas will be based upon scientific research and consultation with local fishermen. Both reefs are at depths of more than 75 m, and were discovered by researchers just last year.

Although parts of Tisler and Fjellnauen have been damaged by past shrimp trawl activity, officials say most of each reef is still healthy. The new protective measures will follow similar actions by the fisheries ministry to protect the 43-km long Røsøy reef in January 2003 and the smaller Sula and Iver reefs in recent years (MPA News 3:5). The government has protected another coral reef, Tautraryggen, under formal MPA legislation — so far, the only reef in Norway to be designated a marine reserve. In contrast to the other reefs, whose restrictions are limited to fishing, Tautraryggen is protected against all potentially damaging activities, including anchoring, dredging, laying of pipe, and coral sampling. For more information: Egil Leikven, Directorate for Fisheries, Postboks 185, 5804 Bergen, Norway. E-mail: egil.leikven@fiskeridir.dep.no.

Tourism leaders to seek more MPAs in Caribbean

Leaders in the Caribbean tourism sector have pledged to work together with government and NGOs toward designation of more protected areas throughout the Caribbean Sea, among other initiatives intended to protect regional biodiversity and strengthen the tourism industry. The agreement, devised at an April 2003 meeting in the Dominican Republic, calls on the private sector to help identify priority sites for protection through the overlap of biodiversity hotspots and tourism attractions. Convened by the US-based Center for Environmental Leadership in Business, the two-day meeting involved nearly 100 participants from throughout the Caribbean, including executive-level officers of cruise lines, airlines, and resorts. A meeting summary and event report are available online at http://www.celb.org/caribbean. For more information: Sarah Raposa, Center for Environmental Leadership in Business, Conservation International, 1919 M Street, NW, Suite 600, Washington, DC 20036, USA. Tel: +1 202 912 1000; E-mail: s.raposa@celb.org.

Letter to the Editor

Dear MPA News:

The worldwide clarion call for “no-take zones” has me worried. Have we so failed in management that we must now totally close MPAs to fishing and other uses? Controlled and balanced use of resources through management programs used to be our objective. Now we seem to be giving up on management and turning to closed areas as the solution for all our failures.

Closed areas may seem easier in execution but could be seen as a simple-minded approach compared to intelligent management of activities in MPAs, which includes exclusion in certain replenishment areas.

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Editor’s note: Clark is co-author, with Rodney Salm and Erkki Siirila, of Marine and Coastal Protected Areas: A Guide for Planners and Managers, now in its third edition (IUCN 2000).