International News and Analysis on Marine Protected Areas

Private-Sector Ownership of MPAs: Cases Illustrate Challenges and Opportunities

Nations generally hold their coastal waters and submerged lands to be the property of the state, kept in the public trust. As a result, the great majority of marine protected areas around the globe are publicly operated, with government oversight of planning and management. However, there are examples worldwide of MPAs that exist under the ownership of (or long-term lease to) private organizations, and other MPAs are managed through close partnership arrangements between private and public entities. There are also cases in which private entities such as coastal resorts — dependent on revenue related to healthy waters — have developed a sort of "quasi-tenure" over nearby marine resources, unrecognized by formal law but nonetheless enforced by these private parties.

Private-sector ownership and/or operation of MPAs poses a unique set of challenges and opportunities for planning and management. This month, MPA News examines four cases and how these arrangements impact resource protection.

MPAs wholly owned by an NGO: The National Trust (UK)

The National Trust, an NGO, owns more than 524 km² of coastal lands in England, Wales, and Northern Ireland. To put this in perspective: Of the entire UK coastline (excluding Scotland), nearly one kilometer in every five is protected by the Trust. The NGO spends an average of £3 million (US \$4.8 million) annually to purchase coastal land, in addition to the property it receives via bequests and gifts. It also leases 180 km of intertidal lands and seabed from the UK government.

Founded in 1895 by three British philanthropists, the Trust remains completely independent of government. Concerned about the impact of uncontrolled development and industrialization, the Trust's founders set up the organization to act as guardian for the nation in acquiring and protecting threatened coastline, countryside and buildings. Most of the property it now owns (2480 km² in all, including non-coastal lands) is held in perpetuity — protected forever — and is open to visitors with various regulations.

Although the UK has a national parks system that serves to conserve many of the same sorts of land the Trust holds, the NGO holds an advantage over the government system, says Richard Offen, manager of the Trust's Neptune Coastline Campaign. "Being totally independent of government and not reliant upon it for funding, the organization is not subject to political whim, which can easily change or remove designations from land to suit economic or political needs," he said.

However, the Trust — and the more than 40 other organizations worldwide that share the National Trust model for private conservation — encounter their share of challenges as well, he said. A major one is to raise sufficient funds from donors to achieve the acquisition objectives. In 1965, the Trust launched what became its Neptune Coastline Campaign: a "fighting fund" that enables the organization to purchase outstanding natural or historic coastal land as soon as it comes up for sale. It has raised over £36 million (US\$58 million) to date.

Submerged lands play an important role in the Trust's conservation effort, hence its leasing of intertidal lands and seabed from the government. "Central to our philosophy is the need to recognize the coastal zone as a single unit of different habitats and landscape formations that extend from below the low-water mark and include the coastal hinterland," said Offen. The Trust has developed general management guidelines for its coastal land that are adapted to each site, based in part on survey work of coastal resources. More than 90 wardens manage the coastal properties.

The Trust aims to reconcile the often conflicting demands made of its coastal land, both above and below sea level. The demands come from those who live or work there as tenants, those who seek access for recreation, and the Trust's own efforts to prevent what it judges to be detrimental change to landscape, wildlife, and archeological qualities — namely from pollution, inappropriate development, or tourist pressure. For the Trust, public access to the coast is considered paramount, but must be balanced with the needs of conservation and safety.

Chumbe Island, private MPA

Although not mentioned in this article, one of the best-known examples of a privately run MPA is the Chumbe Island Coral Park, in Zanzibar, Tanzania. Featured in MPA News in March 2001 (2:8) and April 2002 (3:9), the operation aims to create a model of sustainable management where ecotourism supports conservation and education. To visit the park website, go to http://www.chumbeisland.com.

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Decisions on property management are largely made by Trust staff, although the organization solicits opinions from local resource users, businesses, national and local authorities, NGOs, and tourism organizations, among other entities. The Trust views its main role in local communities as being the facilitator and protector of recreational opportunities; it also involves local volunteers in day-to-day work on site and, to a lesser extent, employs local people as wardens.

A private/public partnership: Palmyra Atoll (US)

The world's largest organization built upon the National Trust model is The Nature Conservancy (TNC), based in the US. Founded in 1951, TNC has protected more than 400,000 km² of lands and waters worldwide, largely through outright purchases by the organization. Although TNC has traditionally focused on acquisition of terrestrial properties, the organization has launched a major marine initiative for the purpose of linking land and sea conservation. The initiative aims to improve the long-term survival and resilience of critical coastal and marine habitats from Indonesia through the Pacific islands, along the Pacific coast of North America, and along the Atlantic coast of North and South America, including the Caribbean Sea. Among its tactics is the establishment of MPAs to face the threats of pollution, overexploitation by fishing, and global climate change.

Perhaps the most remarkable marine effort so far of TNC has been its purchase three years ago of Palmyra Atoll, located 1000 nautical miles south of Hawaii. The US\$30-million acquisition, consisting of 2.8 km² of emergent lands, was part of a partnership arrangement that TNC and the US Fish and Wildlife Service (FWS, a federal agency) developed to protect this coral-laden ecosystem. Following TNC acquisition of the lands, the federal government designated the surrounding waters — out to 12 nautical miles — as a national wildlife refuge under FWS management, making the area offlimits to commercial fishing and some recreational fishing. In March 2003, as originally planned by the partners, TNC sold a portion of the emergent lands to FWS for US\$9 million to help retire the debt it had incurred on its original purchase of the site. (TNC has retired all but US\$2 million of the original acquisition debt.)

"This project was always envisioned as a private/public effort to protect the entire atoll ecosystem, and the cost-sharing arrangement was made clear to, and agreed upon, by Congress, the Department of the Interior [which oversees FWS], and TNC senior management as early as 1999," said Chuck Cook, director of the Palmyra Atoll Project for TNC. In fact, discussions between TNC and FWS of a potential partnership for Palmyra began in 1991. The discussions were followed by resource surveys through the 1990s conducted by scientists from both organizations, and fundraising by TNC.

In theory, the federal government could have designated a national wildlife refuge in Palmyra's waters prior to the TNC purchase, when the emergent lands were instead owned by a family. However, the landowners had not been inclined to deal with the federal government due to negative interactions over time between the family and the US military, which had refused to vacate the atoll after World War II. (A lengthy court battle had found in favor of the family.) If FWS had attempted to designate a refuge around Palmyra, the agency would likely have had to manage it without access to the emergent lands, a difficult arrangement. "It is FWS policy to acquire lands only from willing sellers," said Beth Flint, an FWS wildlife biologist for the Palmyra refuge. The family was willing to sell the land to TNC.

TNC and FWS wanted to protect the atoll from a range of environmental threats. Among these were speculative plans to employ the atoll as a storage site for radioactive waste, and use of the reef for shark fishing and live reef fishing. With the refuge now in place, shark fishing and live reef fishing are illegal, and the abundance and diversity of sharks and reef fish is impressive, says Cook. "Because of the year-round presence of TNC and FWS staffers, surveillance and enforcement actions are in place and poachers can usually be spotted visually or heard via radio transmissions," he said.

"One of the great advantages of a private/public partnership is the broadened range of organizational strengths that we can muster," said Flint of FWS. "The flexibility and quickness of the private sector, coupled with the authorities and stability of the federal sector, provide an atmosphere that allows a wide range of management options and implementation strategies."

Although TNC and FWS have not yet finalized a cooperative management plan, they have coordinated on a variety of projects, including habitat management; establishment of sportfishing regulations; management of visiting yachts, divers and snorkelers; setting of permanent moorings; data collection; and enforcement. "The commonality of the missions of our two organizations makes cooperative management very easy," said Flint.

TNC and FWS believe that one of the best future uses for Palmyra is as a venue for scientific research that focuses on climate change and applied coral reef ecology. By utilizing the atoll for applied scientific research, said Cook, "We will be able to leverage our conservation investment, resulting in 'knowledge dividends' for the NGO conservation community, natural resource managers, decisionmakers, and ocean-resource users." To help support the cost of research, TNC brings donors to Palmyra to fish for bonefish in the refuge, using catch-and-release methods. TNC and FWS are exploring other small-scale ecotourism opportunities as well to generate revenue to offset management costs. Such costs include rat eradication, coral monitoring, and lagoon restoration.

Partnership between a family and NGO: And Atoll (Micronesia)

And Atoll in the Pacific state of Pohnpei, within the Federated States of Micronesia, consists of a 74-km² lagoon surrounded by a thin ring of exposed coral reef. An indigenous family from a nearby island has owned the atoll since the 1800s, and historically there was only limited fishing within and around it, owing in part to influence exerted by a former head of the family upon traditional and government leaders. But upon his death in the 1970s, management of the area fell to his son and nephews, who have not wielded the same level of influence. As a result, significant fishing has occurred. Tyler McAdam, a volunteer for the Conservation Society of Pohnpei (CSP), an NGO, says the increased fishing has had negative consequences for the resources, including coral damage and fewer fish.

In the interest of protecting the lagoon, which remains the most biologically diverse in Pohnpei, CSP approached the family with a proposal to establish an MPA there. The family was open to the idea and willing to forego the fishing income it generated from the lagoon. However, in return, the family asked CSP to help it develop alternative and sustainable income by constructing an ecotourism hostel on the atoll. The hostel, to be powered by solar energy, would house visiting students and government staff to monitor and enforce the reserve. CSP agreed and secured funds for the project from Seacology (a US-based NGO) and the David and Lucile Packard Foundation.

CSP is now surveying resources in the lagoon — e.g., spawning aggregation sites, turtle nesting areas — to inform decisions on zoning the MPA. The entire lagoon will be protected, with certain areas designated as no-take zones. "Fishing will be allowed outside the notake zones," said McAdam, although such fishing will likely be limited, such as on a seasonal basis. He estimates the MPA will be designated by the Pohnpei legislature within the next six months. Construction of the hostel will start after the designation and could last a year.

And Atoll is not the only MPA on which CSP has worked in Pohnpei. On Lenger Island, the NGO has worked with local stakeholders to establish a community-based MPA. Asked how planning an MPA with a family has been different from working with a community, McAdam said CSP's approach to each has been similar. "Like the Lenger MPA, there are multiple owners for And [the son and three nephews] and differences of opinion on what the MPA should entail," he said.

The main difference between the two processes, said McAdam, is in how the two MPAs may be viewed by fishermen and lawmakers. "While Lenger is seen as a community-based MPA that will benefit a whole community, the And project could be seen as a way for the family to chase everyone out and continue to fish

the area," he said. Because the family is one of the wealthiest on Pohnpei (and the largest landowner), it has been difficult for community members to believe that the family has the community's interest at heart with this plan, said McAdam. This could make securing legislation to support the MPA more difficult, and could also encourage poaching by angry fishermen, he said.

TNC encourages leasing submerged lands for conservation

The Nature Conservancy (TNC) released a report in 2002 suggesting that leasing or acquiring submerged lands may be a valuable tool for coastal and marine conservation, particularly when paired with shellfish restoration (MPA News 4:5). The 32-page report Leasing and Restoration of Submerged Lands: Strategies for Community-Based, Watershed-Scale Conservation is available on the TNC website at http://nature.org/files/lease_sub_lands.pdf.

"The one thing that And has going for it is that even with little community support, the MPA can be managed because there is only one suitable access to the lagoon," said McAdam. "It will be easy to enforce and monitor activities in there." CSP has recommended that a full-time marine conservation officer, under government authority, be placed on And to patrol and keep visitors in compliance with regulations.

The business plan for the hostel suggests the facility could generate up to US\$10,400 annually, although an amount half that size is more likely, due to the inaccessibility of the atoll during trade wind season and other factors, said McAdam. The family will also generate revenue from landing fees charged to boats visiting the atoll throughout the year.

Involvement of private sector in community-based MPAs: Balayan Bay (Philippines)

Although the eastern and western portions of Balayan Bay, in the province of Batangas, Philippines, have similar reef systems to one another, they exhibit different trends in reef health. The eastern part is improving while the western part is deteriorating, according to Ed Tongson, assistant vice president of WWF Philippines, an NGO. Why the difference? The eastern section, with three community-based no-take zones, is dotted with diving-oriented resorts, some of which have unilaterally exercised an unofficial tenure over the zones, warding off illegal fishermen. The western side, in contrast, is open-access and "bombed out", said Tongson. "This is how important the private sector is," he said.

WWF Philippines is seeking greater involvement by the private sector in MPAs, namely through participation by dive resorts in coastal resource management planning around Balayan Bay. "Marine conservation, just like any other environmental management endeavor, is everybody's concern," said Riki Sandalo, conservation officer with WWF Philippines. "The dive resorts have thrived, and will continue to thrive, on well-protected

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and well-managed coral reefs. Without these reefs, there will be no tourism in the area. It is only reasonable that the private sector will have to be greatly involved."

Because all land and waters of the Philippines are owned by the state unless otherwise legislated, resorts cannot claim the waters in Balayan Bay to be legally theirs. The fact that some resorts have taken to enforcing the nofishing rules themselves and asserting control over what were considered to be "community-owned" protected areas has caused some frustration among other stakeholders, particularly fishermen.

Tongson and Sandalo affirm that marine tenure by resorts is illegal. They are working to rebuild trust among stakeholders while strengthening each group's conservation role. WWF Philippines helped to organize the Friends of Balayan Bay (FOBB), an organization of

resort owners, while providing capacity-building support to the local association of fishers to help it participate in multistakeholder fora and initiatives. A coastal resource management (CRM) plan for the community, on which negotiations will begin soon, will further serve to clarify roles among stakeholders and provide a venue for cooperation, said Sandalo. The CRM planning board of government officials and local stakeholders — including resorts, dive boat operators, and fishers — will be formalized this month.

The local government unit recently instituted a divers' fee in the bay to help fund CRM-related activities, particularly marine resource protection. The CRM board will recommend how the collected funds should be utilized, and the dive resorts will share responsibility for collecting the fee.

Notes & News

International effort launched to protect park rangers

IUCN and the International Ranger Federation (IRF) have co-launched an initiative to address physical threats and violence faced by rangers in protected areas around the world. The "Protect the Protectors" initiative seeks to draw international attention to the increasing dangers faced by rangers — including assaults by poachers, smugglers and other criminal elements — and to enhance ranger safety.

"This initiative grew out of concerns expressed by our member associations regarding the increasing loss of lives among rangers, particularly in the developing world," said Gordon Miller, IRF executive director. "There is a need for rangers to be better trained and equipped to meet threats. These threats occur in all habitats, including marine." IUCN and the IRF are working to raise the issue at the upcoming Fifth World Parks Congress (8-17 September 2003) in Durban, South Africa. The congress is expected to seek solutions for the root causes of violence and conflict affecting protected areas. Miller says the initiative will encourage governments and ranger-employing agencies to improve training and equipment where it is perceived to be deficient. For more information: Gordon Miller, International Ranger Federation, Fold Head Cottage, Grindsbrook Booth, Edale, Hope Valley, Derbyshire, S33 7ZD, United Kingdom. Tel: +44 1433 670210; Email: GmillerEco@compuserve.com; Web: www.int-ranger.net.

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the world.

Effort underway to advance marine reserves throughout Caribbean

Seeking to promote the creation and effective management of a network of marine reserves in the Caribbean Sea, the IUCN World Commission on Protected Areas-Marine and the (US) National Oceanic and Atmo-

spheric Administration have commissioned the development of a plan to be delivered in September 2003. To include regional activities related to research, monitoring, training, management, and communication, the plan will explore reserves as a tool for biodiversity conservation and fisheries-resource management. It will also feature a set of proposals for promotion to potential funders.

The Nature Conservancy, a US-based international NGO, is coordinating the expert consultation process to elaborate the plan. A workshop this June in Miami (Florida, USA) will convene approximately 25 marine reserve experts to review a draft plan and select project proposals to address its needs. For more information: Georgina Bustamante, Marine Science and Policy Advisor, External Affairs Division, The Nature Conservancy, South Florida Office, 2455 East Sunrise Blvd., Penthouse South, Fort Lauderdale, FL 33304, USA. Tel: +1 954 564 6144; E-mail: gbustamante@tnc.org.

Intensive course available on Caribbean MPAs

Graduate students, practitioners and others interested in MPAs in the Caribbean region are invited to enroll in an international course to be held 7-13 July 2003 at the Marine Station of Puerto Morelos, Quintana Roo, Mexico. Co-led by researchers from the National University of Mexico and the University of Miami (US), the seven-day "Marine Protected Areas in the Mesoamerican Region" course will examine social and biological aspects of MPAs and feature field trips to three protected areas. Tuition is US\$200/person. For more information: e-mail Ligia Collado-Vides at lcv@hp.fciencias.unam.mx, or Daniel Suman at dsuman@rsmas.miami.edu.

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MPA Perspective: Practical Action with Marine Reserve Systems

By Bill Ballantine, Leigh Marine Laboratory

When the scientific principles governing marine reserve systems (MPA News 4:9) are accepted by the wider community of planners, marine resource managers, and the general public, the new attitudes will completely alter our approach to marine reserve science:

- 1. What is presently regarded as monitoring in marine reserves will be seen as research: important and often necessary, but relatively short-term, very detailed, difficult, and expensive.
- 2. Routine monitoring will develop. This will be:
- widespread taking in the whole region;
- permanent as with climate monitoring there will be no time limits;
- multi-aspect not confined to particular species or problems.
- 3. The focus of this monitoring will be the ecological state of the marine resources of the region, using the reserves as the controls, baselines and calibrations.
- 4. This will change the focus of interest (and the source of finance) from those in charge of the reserves to those responsible for marine resource management (fisheries, waste disposal, ports, erosion control, mining, etc.).
- 5. The scientific focus will move from details about species and particular processes to determining the current ecological states (and trends) of marine communities and ecosystems, using the reserves as the comparisons. For the first time, concepts such as ecological impact, ecosystem health and sustainability will have good data as the basis of discussion. At present, no genuinely objective comparison is possible: e.g., a fishery may be considered "sustainable" when it is merely at a very low stable state.
- 6. The focus of methodology will be multi-level mapping. Both ends of the spectrum already exist to some extent, but the new monitoring will create a seamless continuum. The broadest scales will be charts of the whole region, steadily developing from charts of topography, sediments, water masses, etc., to maps showing ecosystems and their levels of health and sustainability. The finest scales will consist of spatially explicit samples recording details of indicator species. But the main aim will be to connect these extremes in ecological terms.
- 7. With multi-scale mapping, at each scale it is only necessary to record robust and relatively easy-to-measure data and concepts. This markedly reduces effort and expense without loss of meaning and usefulness. Data and concepts that are difficult to record at one scale

(due, for example, to extreme patchiness) become much simpler at finer scales.

- 8. Approximately 10-12 map scales, each roughly onetenth of the area of the higher level, will be required. These will form a nested hierarchical design, with about the same level of effort at each scale.
- 9. Focusing aims and methods in this way allows a concentration on ecological meaning rather than some abstract idea of precision, and provides the information that resource managers need. Despite the level of scientific interest, resource managers cannot use high-precision but highly variable data. They can use information about the current state of their region (its habitats, communities and ecosystems) and information about likely trends.
- 10. It will be important to focus on:
- Biological significance to the species. For many species, variations of less than 20% or even 50% are random in space or regular in time. Such fluctuations need to be noted but not continuously monitored. The same applies to detailed processes.
- Ecological significance to the habitat or community. Many species (and processes) may present at low levels or come and go but have little effect on the state of the habitat. Such species and processes must be recorded (and occasionally checked) but do not require full monitoring.
- The regional significance of the habitats and processes. At first this is crudely expressed as the area of the habitat in the whole region. It can be developed by adding stratification for habitats (e.g., depth) and quantification for processes (e.g., productivity).
- 11. Because of the above points (especially 7 and 10), the bulk of primary data will no longer require highlevel (and expensive) professional workers, but can be conducted by technical staff, students and interested amateurs (as already occurs in climatology, ornithology and astronomy). The professionals, now guaranteed a continuous stream of primary data, will be involved with encouragement, quality control, analysis, interpretation for resource managers and the public, and research into the next phases.

All of the ideas above have already been tested (piecemeal) in at least some regions for some aspects. None of them are original and all of them have proved practical. The advent of systems of marine reserves makes it possible to adopt and apply the whole set, and makes this necessary for efficient and effective management.

Editor's note:

Bill Ballantine, author of this perspective piece, is a marine biologist at the Leigh Marine Laboratory, University of Auckland. In last month's MPA News, Ballantine outlined a set of scientific principles he described as necessary for the planning of systems of no-take marine reserves (MPA News 4:9). This month, he envisions what the future of marine reserve monitoring and management will be like if those principles are followed.

Ballantine has advocated the concept of no-take marine reserves since the 1960s, and helped promote many of the 18 reserves in New Zealand waters. He was awarded a Goldman Prize in 1996 for his grassroots efforts in support of marine reserves.

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Editor's note:

Lynne Hinkey, co-author of this perspective piece, is a trainer at the Coastal Services Center of the (US) National Oceanic and Atmospheric Administration (NOAA). She has taught courses on conflict management across the US and has been involved in an array of public processes surrounding marine management issues, including MPAs. Heidi Recksiek, her co-author, coordinates MPA-related training and technical assistance services for the (US) National MPA Center, managed by NOAA.

Here they offer advice for MPA managers on how to manage conflict in planning and management efforts. The advice is based upon feedback they have received from managers and their own experiences in public processes.

MPA Perspective: Managing Conflict With and Among User Groups: Winning Strategies for MPA Managers

By Lynne Hinkey and Heidi Recksiek, (US) National Oceanic and Atmospheric Administration

MPA managers grapple with conflicts that occur during the establishment and day-to-day management of an MPA. Challenges can include making decisions in the face of competing interests among user groups (or between management and such groups) and navigating interpersonal dynamics among stakeholders. Although conflict traditionally has a negative connotation, it is a natural and sometimes desirable social process. While conflicts pose the risk of driving individuals and groups apart, they also present an opportunity to create new, better, and more creative solutions for dealing with problems. In many situations, managers are wise to face conflict with and among user groups and to work for a solution, for this can lead to resolutions that enhance management and please — or appease — varied stakeholders.

There are strategies that can help managers prepare for and effectively respond to conflict. Listed below are a number of approaches and techniques that may help managers to manage their personal response to conflicts, and to foster agency and user-group actions that will produce win-win solutions.

1. Consider the basic steps in problem-solving, and look for options.

The basic steps in problem-solving with multiple parties can be generalized as:

- a. Identify the problem;
- b. Develop a complete understanding of the issue together;
- c. Generate as many options for solutions as possible; and
- d. Select and implement the option that best meets the needs of all.

Generating several potential answers to a problem can help managers to avoid or break deadlocks that occur among parties set on conflicting resolutions. If a manager is trying to address the issue of diver impacts in a sensitive coral area, for example, the solution of simply banning divers altogether is likely to encounter significant opposition. But it may be possible to secure support for other options such as having temporary closures to allow the reef to recover; alternating days for different dive boats to visit the area; rotating separate closures; or increasing diver education and monitoring of divers.

2. Agree on something.

Often, disagreeing parties can agree on basic goals. Agreeing on something, however small, can establish a tone of cooperation and problem-solving to tackle other issues. It may be assumed that managers and users opposed to restrictive regulations both want to sustain marine resources in the long term, but actually stating this common interest can remind both parties of the importance of working together for a solution.

3. Separate the people from the problems.

Conflict should not be about personal attacks and assigning blame. Instead, it should work to fix a problem by addressing concerns and/or changing negative behaviors. A manager, for example, should not focus on criticizing the views of an individual fisherman opposed to a new area closure. Rather the manager can provide information that articulates the need for and goals of the closure, and ask fishermen to provide ideas on how to minimize negative impacts.

4. Admit to your mistakes.

Admitting mistakes, when appropriate, may be one of the most important aspects of conflict management for managers. By taking this step, managers can help move processes forward to addressing resource-management issues and solving problems. A manager who admits a particular policy has not worked as intended can gain the support of impacted stakeholder groups, thus fostering a cooperative effort to craft a better policy. For example, some stakeholders may not trust "the government" because of their perception that management agencies do not admit when a policy is not working. Acknowledging mistakes and moving to correct them can rebuild trust and encourage positive future interaction.

5. Have specific solutions.

When agreement is reached, solutions must be specific enough to be carried out. Managers need a specific course of action, and they need to know who is responsible for those actions. Without an implementation plan and specific steps, managers and user groups can find themselves having the "same" meeting again and again. For example, if it is agreed that an MPA will be established on a trial basis so that its impacts on the environment and on fishermen can be examined, there must be a specific plan for scientific monitoring of habitats and species, for socioeconomic research looking at impacts to the fishing community, and for reporting back to the concerned community.

For more information

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