

## Sea Shepherd, an International NGO, Participates in Enforcement at Two MPAs

Managers of two world-renowned marine protected areas have enlisted the enforcement assistance of an NGO that has made a name for itself in direct-action efforts against illegal whalers and driftnetters.

In recent months, the Galápagos Marine Reserve (Ecuador) and the Cocos Island National Park (Costa Rica) have each teamed up with the Sea Shepherd Conservation Society for help in patrolling their waters against illegal fishers. Sea Shepherd, a US-based NGO with operations around the world, is perhaps best known for its ramming and sinking of various whaling vessels in the past two decades.

In the Galápagos and Cocos Island, Sea Shepherd is providing a patrol vessel and crew to transport arresting officials in pursuit of illegal fishers. Sea Shepherd is providing its service free of charge to the MPAs; the NGO funds its efforts through public donations.

Cocos Island is recognized as a UNESCO World Heritage Site. The Galápagos Marine Reserve is slated to receive the same designation in December 2001.

### Assisting the Galápagos

Sea Shepherd describes itself as involved with the enforcement of international laws, regulations, and treaties “when there is no enforcement by national governments or international regulatory organizations due to absence of jurisdiction or lack of political will.” Paul Watson, who founded it in 1977, said the organization has long recognized the growing problem of illegal fishing in Galápagos waters – particularly by the mainland Ecuadorian longline fleet – and has wanted to help. Industrial fishing within the 140,000 sq. km marine reserve is banned by Ecuadorian law.

Initial contact between the park management and Sea Shepherd occurred in 1997. “We offered the national park and the Ecuadorian government the use of our best patrol boat: the 95-foot (29-meter) *Sirenian*, a former US Coast Guard cutter,” said Watson. Negotiations accelerated late last year, coinciding with Sea Shepherd’s assistance to the park on other matters (see box, right). In March 2001, the NGO and the park agreed to a five-year pact to patrol the park’s waters together.

Under the agreement, the NGO provides its Canadian-registered *Sirenian* and a small crew, and transports two park rangers and an Ecuadorian naval officer in pursuit of offending vessels. Only the naval officer has the power to arrest. The mission marks the first time a foreign-registered vessel has been allowed to patrol the islands as part of an enforcement effort.

So far, this joint effort aboard the *Sirenian* has seized seven commercial fishing vessels, primarily from the Ecuadorian mainland or Costa Rica. Since Sea Shepherd started patrolling, the Ecuadorian navy has also stepped up patrols of Galápagos waters with its own craft – including a helicopter – and has seized three poachers.

### Management pleased

Park management is pleased with the arrangement. The official Galápagos National Park newsletter has advertised the park’s pact with Sea Shepherd in articles following each arrest, and remarked on Sea Shepherd’s hope to “cultivate respect for nature in future generations of galapagueños”. The newsletter has also warned locals not to forget that their “home, shelter, [and] source of life and income” depend on protection of the resources that Sea Shepherd and the park are working to safeguard.

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### Paving way for partnership

Prior to its enforcement pact with the Galápagos National Park, Sea Shepherd provided other assistance to the park’s management in response to two major events in late 2000/early 2001: riots by local fishers over allowed lobster-fishing quotas (MPA News 2:6) and an ensuing oil spill (MPA 2:7). Following the riots, Sea Shepherd delivered donated computers, cameras, and other equipment to replace units lost by management during the violence. The organization then helped rescue oiled birds and iguanas during the spill response.

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## Sea Shepherd

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The *Sirenian* patrols have arrested no local galapagueño fishers to this point. Although "artisanal fishing" by locals is allowed in much of the reserve, a network of no-take areas has been established (MPA 1:7), and is off-limits to everyone. Sean O'Hearn Gimenez, Sea Shepherd's marine liaison to the Galápagos, anticipates that eventually the NGO will pursue local offenders as part of its involvement in all enforcement-related issues in the reserve.

O'Hearn Gimenez says that for compliance by all fishers to increase significantly, the punishment for illegal fishing will need to be increased, too. The maximum fine for illegal fishing in the Galápagos is US \$4,000, which is relatively minimal compared to the money to be made from some fisheries – particularly the shark-fin trade, which has been growing in the islands. The fins reportedly sell for US \$30/pound on the Asian market.

What could have the biggest effect on illegal fishing, however, is whether the park is allowed to confiscate offending vessels. At press time, the highest court in Ecuador was considering an appeal by the owners of one longline vessel caught by the *Sirenian*; the park has pursued confiscation of the longliner, found with more than 1000 shark fins on board. Three lower courts have supported the park's attempt to confiscate. If the high court agrees, it would mark the first time the park has confiscated a vessel for illegal fishing.

Sea Shepherd anticipates creating opportunities for volunteers to help in patrolling. "We're looking at bringing Ecuadorian university students to participate in protecting their own marine reserve," said O'Hearn Gimenez. "Thanks to our contract with the national park, we are able to offer this and other environmental education opportunities." When Sea Shepherd's five-year agreement with the park comes up in 2006, he'd like to see it renewed.

### Assisting Cocos Island

The nature of Sea Shepherd's association with Cocos Island, in Costa Rica, is somewhat different from the Galápagos case. Rather than maintain a regular presence in this reserve, the Sea Shepherd flagship *Ocean Warrior* has visited Cocos Island while on supply runs from the US to the Galápagos-stationed *Sirenian*. On a visit in August, the *Ocean Warrior* seized a large Ecuadorian vessel and seven support boats. Later, in September, the ship captured a longliner. (Fishing within 12 miles of Cocos Island is prohibited under Costa Rican law.)

William Muñoz Quiros, director of the Friends of Cocos Island Foundation, says park management accepted Sea Shepherd's offer of help because the park's current patrol boats are ineffective against poachers. "The rangers do not have a vessel that inspires respect and authority," said Quiros, whose organization generates technical and financial resources to the park. Sea Shepherd, he said, has experience in intimidating wrongdoers. Incidentally, Sea Shepherd vessels are painted all-black and fly the "pirate" flag of a skull and crossed bones.

When Sea Shepherd visits Cocos Island, the *Ocean Warrior* carries park rangers aboard to make the arrests. The rangers work for the Costa Rican environment ministry, which oversees the park.

Sea Shepherd's Watson says the NGO's long-term goal in Cocos Island is to help the managers to help themselves. The organization is raising funds to set up a radar installation in the park to monitor all vessels, and to purchase additional computer and policing equipment for the ranger staff, including two high-speed Zodiac boats. Until the park has this new equipment, Watson says he anticipates Sea Shepherd will continue to visit Cocos Island a few times each year.

Quiros says that Sea Shepherd is providing invaluable training to the rangers. "We need the experience and knowledge that Sea Shepherd has obtained in its 25 years of service for marine conservation," he said. Just as important for the long term, he said, is something that is out of Sea Shepherd's hands: stronger national legislation to punish illegal fishers with jail time and seizure of vessels. The national congress is expected to consider such a law in the coming year. 

### Other NGOs assist with enforcement

Sea Shepherd is relatively unique among international NGOs for its direct action in MPA site enforcement. While other NGOs may stop short of that approach, some are providing other enforcement-related assistance to MPA managers around the world, namely through capacity-building and community education.

WWF, as just one example, is providing a broad array of training and informational services to resource managers and stakeholders in the Philippines and Indonesia. In some cases the organization has provided MPAs with patrol boats and radios. But its main focus has been on educating communities on the importance of resource protection, and training local staffers to patrol. In the Philippines, the NGO has also trained fishers in enforcement of local MPA and fisheries regulations, so that they may be deputized as patrol officers.

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# Australia to Assess 11 Potential MPA Sites

Australian Environment Minister Robert Hill announced plans in late September to assess the conservation value of 11 marine areas in Australian waters – the first step toward potential designation of these sites as marine protected areas. The sites include shoals, plateaus, and canyons, as well as a blue whale aggregation site.

The main purpose of the conservation assessments will be to advise the government on whether to proceed with designating each of the sites as an MPA. Hill did not specify the likelihood that each of the 11 sites targeted for assessment would eventually receive formal MPA designation.

As required under Australia's oceans policy, the government is working to establish a national representative system of MPAs. Since launch of that policy in 1998, the government has identified five areas for designation as MPAs, with reserves already established at Macquarie Island (MPA News 1:1), Lord Howe Island (MPA News 1:7), Cartier Island, and the Tasmanian Seamounts. A fifth effort to designate a reserve in the region of Heard Island and McDonald Islands is nearing completion.

"It is time to turn our attention to addressing remaining gaps in the national system of marine protected areas," Hill said in his announcement. The forthcoming assessments will identify ecological value, threats, and potential reserve-design considerations for each site. The assessment process will take from 6 to 24 months to complete, based on the availability of biological information and the feasibility of undertaking new biological surveys.

Some of the 11 sites are described in the box, above right. Hill said his agency based its choice of sites on expert scientific advice and information from representatives of the commercial fishing, petroleum industry, and conservation sectors. The assessment process will also include consultation with these parties, he said.

## Tasmania releases state MPA strategy

Meanwhile, the Australian state government of Tasmania has released its state-level strategy for establishing a system of MPAs in Tasmanian waters. The document – *Tasmanian Marine Protected Areas Strategy* – features a 12-step process for identifying and selecting new MPAs. Released in August, the strategy is online at <http://www.dpiwe.tas.gov.au/mpa/mpastrategy.html>. Tasmania currently has five marine reserves.

Following release of the strategy, the state government announced it would fast-track the designation of two sites in particular – Port Davey/Bathurst Harbour and the Kent Group of Islands – which have already undergone some public consultation on designation.

## Some of the sites to be assessed

Gulf of Carpentaria seagrass beds (Northern Territory/Queensland): Unique seagrass habitat; breeding area for northern prawn fishery.

Heywood Shoals (North Western Australia): Carbonate build-ups that rise steeply from 250-300 m to near sea surface; appear biologically rich.

Norfolk Seamounts (Norfolk Island region): Large seamounts, expected to support a high diversity of endemic fauna.

Eucla Canyon (Western/South Australia): steep, complex canyon system; possible deepwater upwelling that may be significant for whale feeding/calving.

Blue whale aggregation site (South Australia/Victoria): Site of a combination of unique biota, seafloor topography and oceanic processes.

Bass Strait sponge beds (Victoria/Tasmania): Large sponge "gardens"; largely unexplored but expected to be species-rich and high in endemism.

Sea Angel Bank (North Western Australia): Low-relief bank; 15 km wide and 300 km long.

Naturaliste Plateau (South Western Plateau): Discrete deepwater plateau and terraces; in pristine condition.

The government has appointed an independent umpire – the Resource Planning and Development Commission (RPDC) – to oversee identification of boundaries and no-take zones at these two sites. The RPDC is required to make its recommendations to the government on the sites by July 31, 2001. (As well, the RPDC will carry out the identification and selection process for any other MPAs under the state MPA strategy.)

The Tasmanian fishing community has responded in opposition to the fast-track plan for the two sites. The Port Davey/Bathurst Harbour area represents an important safe-anchoring site in a remote and often stormy part of the state. Industry representatives have expressed concern that anchorage in the region could be curtailed, as could be their fishing while stuck there in bad weather. The state government has replied that the establishment of an MPA there will not prevent fishing vessels from entering and anchoring, unless there are specific ecological reasons.

David Llewellyn, the Tasmanian environment minister, has said that in light of potential economic displacement effects related to the designation of MPAs, the government will provide "adjustment payments" on a case-by-case basis to individuals affected negatively by new MPAs. His office has clarified that such payments would not be compensation for loss of fishing areas or potential catches. Rather, they would be to help individuals – not necessarily fishers – who could show two things: 1) that they had experienced a direct loss due to a new MPA and 2) that they had no alternative for recouping the loss elsewhere. Adjustment money, for example, could go to a shop or motel owner who could show that his business had declined due to a new MPA. 

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## Workshop Results: Tips from Managers on Improving Science in MPA Management

Last month, MPA News published the advice of an international group of scientists on how to improve the conduct and use of science in MPA management. The advice came out of a July 2001 workshop on the topic held in Cleveland, Ohio (USA), involving scientists and managers from more than 20 countries. The workshop was directed by the US National Ocean Service.

Below, MPA News publishes an excerpt of the advice offered by managers at the workshop. Like last month's tips from scientists, the managers' input arose from a brainstorming session at the workshop's end. Managers who contributed to this advice came from 15 countries on 5 continents.

The advice from managers:

### **On how communication between scientists and managers can be improved:**

The needs of management and the community must be communicated to the scientists, so that the latter group understands how its research will be used. Scientists and managers should participate in joint meetings, and technical advisory boards should be established.

A research translator should be instituted, using a combination of communication mechanisms to interpret research results to managers and policymakers. The translator should recognize that people assimilate information in a variety of ways.

Scientists need to understand their role, which is to serve as unbiased and informative consultants to management and policymaking processes.

### **On how traditional knowledge can be woven into science and management discussions:**

First, managers and scientists must display sensitivity to local culture, and acknowledge the importance of approaching community stakeholders in an open manner. They must also accept that traditional knowledge can be a useful tool in studying and managing marine resources.

Scientists should establish innovative approaches to data collection that include the community. One example: By questioning local women about ingredients in food they are cooking, scientists can gain data on the presence of local marine and coastal species.

Scientists should use local terminology, allowing for traditional knowledge to be incorporated more easily into research efforts.

### **On how stakeholders can play a role in MPA science:**

It is critical for managers and scientists to build trust with the local community, including through the establishment of research-based partnerships. In data-collection activities, for example, scientists should make a concerted effort to involve the local stakeholders who are most resistant to the concept of an MPA. As well, children and local learning institutions should be involved.

Scientists should make use of local resources, such as by enlisting fishers and their boats in research work.

Managers and scientists should establish a community-based monitoring scheme for the site. 

### **For more information on the international workshop:**

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Editor's note: The following perspective piece provides the viewpoint of the Fisheries Society of the British Isles (FSBI) on the applicability of marine protected areas to fisheries management on the northwestern European continental shelf, and particularly the North Sea. (The FSBI, which publishes *The Journal of Fish Biology*, supports and disseminates research on fish biology and fisheries management.) The piece has been excerpted from a briefing paper prepared for the organization by academic scientists. According to the FSBI, there is no area in UK waters where all extractive activities are prohibited for the purpose of benefiting nature conservation or fisheries.

## MPA Perspective: Marine Protected Areas in the North Sea

By the Fisheries Society of the British Isles

Concern has been widely expressed about fishery and other impacts on the North Sea, where the spawning stock biomass of most commercially important marine species has been reduced to less than 10% of its unexploited size and many fishery practices may be unsustainable. Besides being a source of mortality for both target and by-catch species, other effects of current fishing practices on stocks such as (i) alteration of the normal age structure, (ii) disruption of reproductive behavior, (iii) reduction in genetic diversity, (iv) habitat degradation and shifts in ecosystem structure, and (v) long-term economic losses are becoming progressively more apparent.

Conservation programs and action plans have been set up to tackle major threats such as habitat damage, biodiversity losses and declining populations as a result of overfishing. The successes of these initiatives have been variable, and the fact that efforts at international, national and local levels need to be increased to have any real impact on the problems has become increasingly clear. Most programs are based on a combination of general measures and specific actions, and one approach that has received much attention of late is to focus conservation on particular areas of sea: so-called protected areas.

The concept of using marine protected areas (MPAs) to conserve fisheries and the marine environment has come largely from studies of sedentary fish living on tropical reefs. Objectives of MPAs include stock maintenance or recovery, habitat restoration, protection of non-target species, development of recreational and educational activities, and promotion of scientific understanding. However, the environment and resources of the North Sea are quite different from those from which the MPA concept has been primarily derived, and therefore the application of MPAs in areas such as Northwest Europe needs careful consideration.

Relevant information is scarce, and the concept has had a mixed reception from the scientific community. The FSBI Briefing Paper from which this perspective piece

has been excerpted discusses the extent to which MPAs conserve and protect fish stock and habitat while serving industry and other concerns. It highlights the following points:

- Many valuable fishery and wildlife species are highly mobile; thus, effects of protection on their recovery are likely to take a long time and only be significant if large areas (e.g. >70 000 km<sup>2</sup>) are closed to fishing. Only in such conditions could any indirect effects on their prey or other linked species be reversed.
- Sheltered locations characterized by naturally low levels of disturbance and sensitive habitats will benefit from protection from trawling. In shallow waters and exposed locations where natural disturbance by tides and wave action is high, habitats in trawled areas are expected not to differ significantly from those protected from trawling. Thus, such sites would not be good controls for fishing effects studies.
- Small MPAs can help locally protect vulnerable wildlife such as seabirds and mammals from direct effects of exploitation. They will act as foci for diving tourism and foster educational activities.
- When appropriately designed, MPAs can act as controls of exploitation effects, but only with respect to relatively sedentary organisms (species or critical life stages) and habitats adversely affected by fishing. Monitoring of these areas at appropriate scales of time and space will help determine effects of fishing as against natural and other human impacts.
- The successful design and implementation of MPAs rely on clearly defining objectives for them, and understanding the biology and ecology of the areas concerned. Furthermore, stakeholder participation in the planning, designing and implementation process is essential.
- MPAs are only one part of a suite of fisheries management measures aimed at reducing fishing mortality, which must include reduction in fishing effort, gear modification and sustainable quotas. 

### FSBI briefing paper online

The full FSBI briefing paper, from which the adjoining perspective piece has been excerpted, is available in PDF format online at <http://www.le.ac.uk/biology/fsbi/fsbi.pdf>.

### For more information

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## Conferences in November 2001

November 4-7, 2001 – Amsterdam, The Netherlands. "6th International Conference of the Aquatic Ecosystem Health and Management Society." Conference will exchange current knowledge and strategies for assessment of aquatic ecosystem health. Web: [www.caos.nl/aehms](http://www.caos.nl/aehms)

November 5-8, 2001 – Honolulu, Hawaii, USA. "Oceans 2001." Conference will include sessions on marine habitat restoration, marine mammals, coral reefs, pelagics management, and other topics. Web: [www.oceans2001.com](http://www.oceans2001.com)

November 7-10, 2001 – Dakar, Senegal. "Pacem in Maribus 2001." Annual conference will examine potential of ocean resources to sustain mankind; organized by the International Ocean Institute. Web: [www.ioinst.org/PIM2002](http://www.ioinst.org/PIM2002)

November 16-17, 2001 – Providenciales, Turks and Caicos Islands, British West Indies. "Caribbean Marine Protected Areas: Practical Approaches to Achieve Economic and Conservation Goals." Symposium will be held in association with 54th annual meeting of Gulf and Caribbean Fisheries Institute (GCFI). Web: [www.gcfi.org/  
marine\\_protected\\_areas\\_Symposium.htm](http://www.gcfi.org/marine_protected_areas_Symposium.htm)

November 26-30, 2001 – Maputo, Mozambique. "International Coral Reef Initiative (ICRI) Regional Workshop and Coordination and Planning Committee (CPC) Meeting." Workshop and meeting will occur in conjunction with annual meeting of the CORDIO Program (research for management of coral reefs of the Indian Ocean). Web: [www.icriforum.org](http://www.icriforum.org) or [www.cordio.org](http://www.cordio.org)

November 26 - December 1, 2001. Lake Buena Vista, Florida, USA. "Second International Conference on Marine Ornamentals: Collection, Culture & Conservation." Conference will examine creation of an economically and environmentally viable future for the marine ornamentals industry. Web: [www.ifas.ufl.edu/~conferweb/MO](http://www.ifas.ufl.edu/~conferweb/MO)

Go to <http://www.mpanews.org> for MPA News's list of MPA-related conferences for the coming year.

## Paris meeting to assess state of Earth's oceans, coasts

This December, a five-day conference in Paris will examine the global progress achieved in managing oceans and coasts since the 1992 Earth Summit in Rio de Janeiro. Titled "Oceans and Coasts at Rio+10", the conference will feature several panels of potential interest to MPA practitioners, including one on the present status of, and future directions in, marine protected areas. The conference website is at <http://www.udel.edu/CMS/csmprio+10/index.html>.

The conference goal is to assess progress made in the past decade and to address associated challenges. Organizers anticipate that input from the conference will inform discussions by governments at next year's

World Summit on Sustainable Development, to be held September 2002 in Johannesburg, South Africa (<http://www.johannesburgsummit.org>).

Patrons of the Paris conference include the International Oceanographic Commission and national agencies from Canada, Japan, South Korea, and the US. Collaborators include the governments of Mozambique, Barbados, and Australia, as well as several others. 