California Passes Law to Network Its MPAs, Create No-Take Reserves

The state of California (USA) will redesign and streamline its fragmented system of MPAs and establish no-take reserves as an essential component of the state’s marine conservation plan, according to legislation passed by the state in October.

Named the Marine Life Protection Act, the new law calls for an overhaul of California’s MPA system, which had been criticized by environmentalists and state officials as “confusing” and “falling far short of its potential.” The law requires an evaluation of the effectiveness of California’s MPAs in protecting marine life, and calls for creation of new MPA-siting guidelines.

It also suggests that the number of no-take reserves in California waters should be increased. Reportedly 0.2% of MPAs in California waters are currently designated as no-take reserves.

The Marine Life Protection Act represents one of the world’s first regulatory attempts to network an MPA system of California’s size, which features more than 100 sites.

More No-Take Reserves

Environmentalists who helped steer the law through the state legislature had two goals with the legislation: to increase the state’s number of no-take reserves and to make California’s MPA system more coherent, in terms of both science and management.

“We wanted to increase the level of protection,” said Rod Fujita of the Environmental Defense Fund, a major supporter of the bill. He sees no-take reserves — referred to in the law as “marine life reserves” — as essential to restoring populations of overfished stocks off California. “The declines in populations of rockfish, abalone, and other species [in California waters] are well-documented,” said Fujita, “and fishing has had a significant impact on these species.” He said that new no-take reserves would serve as reference sites for the study of the effects of commercial and sport fishing.

Earlier versions of the proposed legislation had required a science team to establish goals for what percentage of the coast should be set aside as no-take reserves; such percentage-based mandates were removed in negotiations with fishing industry representatives. In its final version, the law calls for an “improved” no-take reserve component. Nonetheless, it establishes guidelines that, if followed, will almost certainly expand the area encompassed by such reserves. Fishermen who supported the law in its final form said they realized it would lead to more no-take areas in the future. “We just wanted to soften the prejudicial conclusion that there had to be a certain percentage of waters devoted to no-takes,” said Vern Goehring, a policy consultant for the Sea Urchin Harvesters’ Association of California (SUHAC).

Said Karen Garrison of the Natural Resources Defense Council, “To the fishermen, it was important to let science play out in terms of deciding how big to make the reserves. We’re inclined to support them on that; we want a process with broad buy-in.”

Table of Contents

<table>
<thead>
<tr>
<th>Table of Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Passes Law to Network Its MPAs, Create No-Take Reserves</td>
</tr>
<tr>
<td>More North American Efforts to Network MPAs</td>
</tr>
<tr>
<td>Special Focus on Consensus-Based Planning:</td>
</tr>
<tr>
<td>When Are Consensus Processes Appropriate for MPA Management?</td>
</tr>
<tr>
<td>Apo Island, Philippines: MPA Success Story in Midst of Management Reform</td>
</tr>
</tbody>
</table>
Networking Current and Future MPAs

The law requires the California Fish and Game Commission to create a master plan to steer the design of current and future MPAs. Ensuring that each of the state’s MPAs has “clearly defined objectives, effective management measures, and adequate enforcement, and [is] based on sound scientific guidelines,” the master plan will guide decisions on siting new MPAs and modifying existing ones. Under the law, some MPAs could theoretically be abolished if found to be unproductive and unnecessary.

A team composed primarily of scientists will draft the master plan for the Fish and Game Commission, with input from fisheries representatives, conservationists, regulators, and local communities. The plan will include “recommended alternative networks of MPAs”, as required by the law, to achieve protection of habitat, a species, or a group of species. The law calls for redundancy and representativeness in site selection.

While at least eight separate state agencies wield responsibilities related to California MPAs, Fish and Game will coordinate the overall MPA system, with advice from the other agencies. The new law makes the protection of ecosystems and biodiversity a clear and central responsibility of the state’s Fish and Game officials.

The law echoes in many respects the findings of a draft report released in August by the Resources Agency of California (a regulatory agency), which found that the state’s 50-year-old system of MPAs was confusing and in need of revision. With 18 classifications of MPAs created through a mix of legislation and regulations, the state’s MPA system had come under fire from regulators and environmental groups.

The agency report found that there was no overall mission or goal to guide the development of a “logical and unified organizational system” of MPAs in California. The lack of purpose was blamed on inconsistent terminology and site selection, a lack of standardized criteria for designation and evaluation, and an inability to evaluate system effectiveness. Individual sites within the same classification (e.g., “ecological reserve”) sometimes had substantially different levels of protection and management, and some existing MPAs lacked enforcement plans. Data on monitoring and research were not easily accessible and lacked consistency.

Replicable Elsewhere?

Systems of MPAs as disjointed as California’s exist elsewhere throughout the world. Garrison and Fujita said that other regions could replicate some aspects of California’s effort.

“Each area will address this challenge in a way tailored to their needs, but I think that the summary of goals and guidelines, and the provision that a science team should review these guidelines and create a master plan, could be done elsewhere,” said Garrison. Fujita suggested that California’s plan might work best in industrialized countries, where regulators rely heavily on scientific assessments.

In 20 years, they agreed, they would like to see a substantial increase in the number and size of marine life reserves as a result of the new law, as well as more fish, greater biodiversity, and sustainable fisheries.

Goehring said he hoped to see such things, too, but was skeptical. “This bill, in terms of protecting the entire marine environment, is a small step of what needs to be done,” he said, noting that on this point he was speaking for himself and not on behalf of SUHAC. “Until we get a comprehensive mandate to protect the marine ecosystem from all human disturbances — not just fishing, but upstream pollution, too — then I think this bill’s effect may be limited.”

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More North American Efforts to Network MPAs

California’s move to build a network of marine protected areas is the latest in a spate of North American efforts to design coherent MPA systems. Each of these projects is juggling the challenges of coordinating both the science and management of protected marine habitats. Below are profiles of three such efforts:

**Baja to the Bering Sea:** This new project aims to develop a network of MPAs along the 20,000 kilometer coastline from Mexico’s Baja Peninsula to Alaska’s Bering Sea. Spearheaded by the Canadian Parks and Wilderness Society (CPAWS), the tri-national effort is intended to provide a forum for information sharing, development of new conservation methods, and expansion of existing protected area networks (such as California’s). The ultimate goal, according to Sabine Jessen of CPAWS, is to maintain and restore biodiversity along the Pacific Coast of North America.

Jessen said the project was initially inspired by the terrestrial “Yellowstone-to-Yukon” initiative in North America, which is establishing connecting corridors between the western US and northwestern Canada for the migration of protected species. “Baja to the Bering Sea” will explore the potential of applying the connecting corridors concept to the marine environment. “A larger, cooperative network will build on the strengths of existing initiatives and explore new conservation opportunities on the Pacific Coast as a whole,” said Jessen. A project steering committee with representatives from Mexico, the US, and Canada is planning a founding workshop to be held in Spring 2000.

**Hague Line International Peace Park:** First proposed in 1994, this park would protect a suite of habitats representative of the Gulf of Maine along the eastern marine boundary of the United States and Canada (the “Hague Line” boundary). Unlike “Baja to the Bering Sea,” this concept would focus on just one MPA, but would nonetheless involve the networking of US and Canadian management regimes to create and manage the park. The park, potentially 3000 km² in size, would provide a scientific control site to study fishing impacts in the Gulf, while protecting an important source of scallop larvae for the greater ecosystem. In addition, it would provide a buffer zone along the international boundary that designates where scallopers from each nation are allowed to fish.

Again, the concept for this networking plan came from a terrestrial example: in this case, the inspiration was the “Crown of the Continent Peace Park” linking the US’ Glacier National Park and Canada’s Waterton Lakes National Park. Martin Willison of Dalhousie University (Nova Scotia, Canada) was one of the first to propose the idea of the Hague Line park. “In the case of the Gulf of Maine,” he said, “Canada can establish a marine protected area under the Oceans Act on its side, and the US can use [the National Oceanic and Atmospheric Administration’s] marine sanctuary designation. We can always adjust our managerial regimes to fit needs — all we need are humans who can see straight enough.” The idea of the Hague Line International Peace Park has been taken up by NGOs on both sides of the border; the Canadian Department of Fisheries and Oceans is considering the establishment of a pilot MPA on Georges Bank in the Gulf of Maine.

**The Nature Conservancy’s Caribbean efforts:** The international programs of The Nature Conservancy (TNC), a non-governmental organization, focus on providing technical and scientific assistance to local conservation groups. In the Caribbean, TNC is working with scientists to determine the key biological sources and sinks for marine life throughout the sea, then moving to help protect these areas. John Tschirky, TNC’s marine protected area specialist for the Caribbean, said that oftentimes important areas are protected on paper, but lack the funds, information, and expertise to provide real conservation. “We have no illusions that we will turn these into perfect parks in nine to ten years, but we can take them from being ‘paper parks,’” he said.

Tschirky listed the challenges involved in such networking, including the relative newness of the science involved, the shortage of money to do all TNC would like to do, and the lack of managerial capacity in some of the regions in which TNC works. “We’re always looking for ways to leverage what we are doing at one site to influence other parks,” he said. One way has been to team up with other organizations doing similar work in the region, such as the United Nations Environment Programme and the US Department of the Interior. Education is essential: TNC is working to document and disseminate lessons from everything that it does in the Caribbean (through books, workshops, and other methods), so that each site can learn from others’ experiences. Along that line the organization, which established its reputation in terrestrial conservation, will hold its first-ever in-house meeting to exclusively discuss marine issues this December. TNC marine experts from around the world will gather to meet one another and share information.

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When Are Consensus Processes Appropriate for MPA Management?

The use of consensus-based decision-making to manage MPAs has grown in popularity over the last several years. With the goal of achieving increased “buy-in” from community stakeholders, MPA planners and managers are increasingly sharing some of their traditional decision-making powers and responsibilities with the community at large.

However, consensus processes are still a relatively new tool in MPA management. As with any new tool, the challenge now facing managers is to improve the tool’s effectiveness, and to recognize when it is most useful. Experts on consensus-based decision-making caution that such processes may not always be appropriate for MPA management, and that planners and managers need to recognize when it is best to use them.

Criteria for Consensus

Clare Ryan, a former policy analyst with the US Environmental Protection Agency and now a professor of natural resource policy at the University of Washington (USA), cautions managers against jumping into consensus processes.

“[Managers] should first ask whether the issue is important enough for their organizations to spend the time and resources necessary for the process,” she said. As evident from any number of recent examples, including the Tortugas 2000 process in which a multistakeholder group spent a year deciding on a proposed no-harvest area in the Florida Keys National Marine Sanctuary (MPA News 1[1]), consensus processes can be a time-consuming endeavor. In addition, said Ryan, in the interest of ensuring good faith, there must be a public commitment from all sides to finding a joint resolution, and this commitment must come prior to entering the consensus process.

The field of environmental conflict resolution has developed several criteria useful to MPA managers in deciding whether or not to enter a consensus process. Christopher W. Moore suggested in his 1996 book *The Mediation Process* (paraphrased below) that a conflict was “ripe” for negotiation when the involved parties were:

- Reliant on the cooperation of one another;
- Able to influence one another, positively or negatively;
- Pressured by deadlines;
- Aware that alternatives to a negotiated settlement might not appear as viable as a joint decision;
- Able to identify and involve the primary parties in the problem-solving process;
- Able to agree on the issues in the dispute;
- In a situation in which their interests were not entirely incompatible; and
- Influenced by external constraints, such as the unpredictability of a judicial decision.

Need for Managerial Foresight

Julia Gardner of Dovetail Consulting (British Columbia, Canada) has mediated several consensus processes on natural resource issues, including MPAs, and said that collaborative decision-making “has become the norm” for resource planning in British Columbia. Gardner expressed concern with the fact that when used inappropriately, consensus processes can water down conservation objectives.

The strength of consensus processes, she said, comes in securing community buy-in to a management plan. Since buy-in is often most difficult to achieve in the initial step of creating a protected area — when traditional uses of the area are at greatest risk of being affected by the MPA — this step can benefit the most from consensus. “Ethically, a greater range of stakeholders have a right to be involved at this stage,” she said. Nonetheless, she noted, there exists somewhat of a paradox: Consensus processes at this early stage may also whittle down protection goals, as clear boundaries for allowed activities may not yet have been adopted.

“It is disconcerting that there’s such a need for consensus because of this need for community buy-in,” said Gardner. “You can run the risk of having no protection at all.”

She said that consensus planning was often prompted by a conflict caused by a proposal for a new extractive resource use in a protected area. “By entering into a [community] consensus process on this proposal, you — the resource manager — put the extractor on an equal footing with resource protectors,” she said. “Some projects that may be essentially antithetical to the conservation objective are given a foothold.” In initiating this consensus process, the resource manager is treating all interests as legitimate stakeholders, even those who might seek to degrade what the MPA was designed to protect.

The manager’s best defense against this is planning, said Gardner. “Managers need foresight to clarify the boundaries of allowed and forbidden activities prior to an extractor’s approach,” she said. Proactive, rather than reactive, management is the key to long-term protection.

“Well Worth the Effort”

The Florida Keys example of this past year, in which managers viewed community buy-in as essential to their creation of a no-take “ecological reserve” in the Florida
SPECIAL FOCUS ON CONSENSUS-BASED PLANNING (cont’d.)

Keys National Marine Sanctuary (FKNMS), indicates the potential that consensus processes hold for protecting marine areas. Joanne Delaney, research interpreter for FKNMS, said that the size, scope, and remoteness of the proposed reserve made its success dependent on broad-based public understanding and support.

“The facilitated, consensus-building process in developing criteria and proposed boundaries for the reserve [was] well worth the time and effort required,” wrote Delaney in a synopsis of the process. She said the process assured that the final product would be one that the Florida Keys community could support for years to come.

For readings on when situations are ripe for negotiation — as well as when the use of a third party might be appropriate — see Christopher W. Moore’s The Mediation Process (1996, Jossey-Bass Publishers, San Francisco, California), or Gerald Cormick’s classic article “The ‘Theory’ and Practice of Environmental Mediation,” published in 1980 in The Environmental Professional (Vol. 2, pp. 24-33).

Tips for Better Negotiations

MPA managers or planners pursuing a consensus process with stakeholders may benefit from following the advice of expert mediators who conducted a workshop at the Coastal Zone ’99 Conference in San Diego, California, USA, attended by MPA News:

Follow through: Be sure that you are clear with stakeholders on what you intend to do once agreement is reached. Are you prepared to follow the consensus decision? If not, you risk alienating stakeholders.

Group size: Keep the size of the consensus group reasonable. A group of 12-20 negotiators is manageable; more than 20 may be unwieldy.

Voting: Absence of a negotiator from a decision-making meeting can hinder the voting process. In order to thwart the use of absence as a stalling tactic, make an absence equivalent to a non-dissenting vote. This virtually guarantees that all negotiators or their representatives show up.

Apo Island in the central Philippines has become nearly synonymous with the promise that MPAs seem to hold for improved fisheries management. Since the declaration in 1985 of a community-run, no-take marine sanctuary on a portion of the small island’s coral reef, researchers have documented increased fish abundance inside and outside of the sanctuary’s boundaries.

Remarkable for its fisheries-management success, Apo is in the news again, but this time for the makeover of its management system. An example since its inception of how community-based management could effectively protect marine resources, the marine sanctuary’s management is now in the process of being turned over to a board with national, as well as local, government representatives. While local citizens will still have a say in the marine sanctuary’s management, federal officials will play an increasingly important role.

Apo Island, Philippines: MPA Success Story in Midst of Management Reform

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Different Management Style

The success of Apo’s fish protection has been well-documented, particularly in studies by Garry Russ of James Cook University (Queensland, Australia) and Angel Alcala of the Philippines’ Department of Environment and Natural Resources. Apo’s value as a successful MPA was a factor in the Filipino government’s proclamation of the island in 1994 as a nationally recognized “protected seascape”.

One effect of the proclamation was that it placed Apo Island within the National Integrated Protected Areas System (NIPAS). The Philippines’ NIPAS Act mandates the establishment of a board of stakeholders for each protected seascape to decide matters related to planning, peripheral protection, and general administration. In 1996,
An interim eight-member Protected Area Management Board (PAMB) for Apo was created, including spots for three Apo Islanders. There is just one seat on the board for a federal representative (from the Department of Environment and Natural Resources), although the federal government reserves the final say on management decisions. The board’s other four members are provincial, regional and academic representatives.

Already, the PAMB has demonstrated a different management style from the previous, community-run system. The board has drafted a resolution that would hand down fines of up to 500,000 pesos (roughly US $10,000) or imprisonment of up to six years for any of several prohibited acts in the sanctuary, including disturbing wildlife and littering. Formerly, the community-run system relied more on strong local support of the marine sanctuary to impart preemptive peer pressure on anyone inclined to violate the MPA.

**Different Management for Different Time?**

The PAMB’s stronger enforcement regime, which could include federal policing of the sanctuary, comes as Apo’s status as a tourist destination is growing. According to Roy de Leon, an assistant professor at Silliman University, the region around Apo has experienced the development of several tourist resorts in the last few years, attracted in part by snorkeling opportunities in the sanctuary.

While the increase in tourism has brought increased revenue to the island, tourists have caused some harm to the reef through trampling of corals or even graffiti. More development appears to be coming, as some locals have continued to sell their property to developers. So far, though, fish abundance at the sanctuary continues to be high; in fact, last year’s count was higher than at any point in the past, according to Alan White of the USAID-supported Coastal Resources Management Project in Cebu.

The change in management from a “bottom-up” regime to a collaborative system between locals and the federal government has unsettled residents who had become used to managing their own environment. De Leon and White report that residents have expressed concern that the federal government might not always consider the ecosystem’s health, and that officials might allow the development of mega-resorts nearby that could over-run the sanctuary’s reef. De Leon wonders what effect the management change will have on community involvement and support for the sanctuary, which has traditionally been the sanctuary’s keystone.

“The big question is whether [the change] will make the community more active, or less active, in the sanctuary,” he said.

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**Coming up in MPA News...**

What exactly is a "marine protected area"? For that matter, what is a "marine sanctuary", "marine reserve", "marine life reserve", or "ecological reserve"? We'll examine the growing thicket of MPA nomenclature and search for trends.... Plus, stay tuned for a report on capacity-building in MPA management, and more news and analysis from around the world.