MPA Network Is Proposed for SE Australia; Will Be Integrated With National Program to Reduce Fishing Effort

The Australian government released a proposal in December 2005 for a MPA network covering 171,000 km² of Commonwealth waters in the southeast marine region of Australia. The Minister for the Environment and Heritage, Senator Ian Campbell, called the proposed network “the first representative network of deepwater MPAs in the world.” As proposed, it would account for 14% of Commonwealth waters in the region—the first to undergo a region-by-region process of establishing a national representative network of MPAs by 2012. The southeast region includes Tasmania, Victoria, eastern South Australia, and far southern New South Wales.

The government has worked with key stakeholder groups over the past three years to develop the southeast network in 11 broad geographic areas of interest, using agreed criteria and best available scientific information (MPA News 5:11, “Mixing Oil and Water, Part II: The Offshore Oil & Gas Industry and MPA Planning”). Each of the 11 geographic areas is represented in the network, now subject to further public consultation. The government plans to have the final MPA boundaries settled by the end of March 2006 and formally designated under the nation’s Environment Protection and Biodiversity Conservation Act by the end of 2006.

Of the proposed network, 40% of the total area will be strictly no-take and an additional 40% will be off-limits to commercial fishing (recreational and charter fishing will be prohibited in only the strict no-take area). Maps and descriptions of the candidate sites, as well as the proposal and a related fact sheet, are available online at http://www.deh.gov.au/coasts/mpa/southeast/index.html.

Integrated with license buyout program
In addition to the size of the proposed network, which would make it one of the largest representative MPA networks in the world, the proposal is noteworthy for its integration with a new Commonwealth-wide structural adjustment package that seeks to reduce fishing effort in several Australian fisheries. The AU$220-million (US$163-million) Securing Our Fishing Future package, announced by the Australian government in November 2005, aims to address overfishing by downsizing the commercial industry to a more ecologically sustainable scale, namely with buyouts of fishing licenses. Through integration with the southeast MPA process, the adjustment package—which includes other types of aid besides buyouts—will also cover Commonwealth and state licensed fishermen impacted by the creation of MPAs in the region, as well as fishery-related businesses and communities.

The intent of this integration is to give commercial fishermen a fuller picture of their future operating environment, says Leanne Wilks, assistant director of the Marine Protected Areas Taskforce for the Australian Department of the Environment and Heritage (DEH). “In the southeast region, many of the fisheries targeted for reform would also be impacted by implementation of the MPAs,” she says. “The government decided to include MPAs in this package as it did not want the industry facing ongoing uncertainty as first the fisheries management changes were implemented and then the MPA network was finalized at a later date. By running a single adjustment process, fishermen are able to consider the full impact of the MPAs and fisheries reforms in making a decision on whether to remain in or exit the industry and take advantage of the license buyout.”

Wilks says the commercial catch that occurs in the proposed MPAs actually represents a “very small percentage” of the total annual commercial catch of the region, and the displaced effort is likely to be minimal. (In other words, the great majority of the region’s annual commercial catch occurs in waters outside the proposed network and in the 20% of the network scheduled to remain open to commercial fishing.) “Fisheries in the southeast are facing much larger reductions in catch and effort under the fisheries management reforms,” she says. The current public consultation process may identify opportunities to further reduce MPA-related impacts on the fishing industry, she adds.

As the region-by-region process to establish a national MPA network continues in coming years, it is likely that additional buyout programs will be offered in conjunction with them. “Although there is no constitutional or legal requirement for the Australian government to provide compensation to commercial fishermen impacted by MPAs, it does have a policy that

continued on next page
Public comment sought regarding Australia's protected areas

The Australian Senate has announced an inquiry into the funding and resources available to meet the needs of the Commonwealth's protected areas, including MPAs, and has asked for public comment. Submissions must be made by 1 March 2006, and can come from outside Australia. The terms of reference are available at http://www.aph.gov.au/senate/committee/ecita_ctte/nationalparks/tor.htm

Displaced Effort, License Buyouts, and the Great Barrier Reef Marine Park: Interview with Stephen Oxley

When no-take marine reserves are designated, fishing effort that formerly occurred within those areas must move elsewhere. The displaced fishing effort can lead to increased pressure on non-protected areas, and ecological degradation can result in some cases — an unsatisfactory result for managers and fishermen alike. A solution to the problem of displaced effort is to reduce fishing effort in conjunction with designating reserves. The reduction in effort — achieved through buyouts of fishing boats or licenses — can counteract the movement of fishing activity outside the new reserves.

Nonetheless, the pairing of buyout programs and reserve designations has rarely occurred. The integration of the proposed MPA network for Australia’s southeast marine region with a national license buyout program (see p.1) is among the few examples.

Another example is the Great Barrier Reef Marine Park Structural Adjustment Program, which has disbursed more than AU$50 million (US$37 million) to assist fishermen and fishery-related businesses impacted by rezoning of the 344,000-km² Great Barrier Reef Marine Park (MPA News 7:6). The rezoning increased the no-take percentage of the park to 33% of the total area, in part to protect against overfishing. This month, MPA News talks about the structural adjustment program with Stephen Oxley, assistant secretary of the Marine Branch of the Department of the Environment and Heritage (Australia), the agency in charge of developing the program.

**MPA News:** Please explain the role of the license buyout in the Great Barrier Reef Marine Park Structural Adjustment Package (GBRMP SAP).

**Oxley:** There are three major components to the GBRMP SAP:

- A license buyout;
- Business restructuring assistance for both fishing businesses and fishery-related businesses; and
- Business exit assistance for fishery-related businesses, fishing-license lessees, and license-holders in fisheries not covered by the license buyout.

The license buyout was the first major part of the package to be implemented, through an open tender and offer process. This involved fishing-license holders offering their entire license, all authorities to fish in different fisheries, and all effort units or quota holdings for a price of their choosing. The Department of Environment and Heritage chose, through a selection process, the set of licenses that met its effort-reduction targets across all fisheries for the lowest price.

Approximately 580 licenses were offered, of which the Australian government purchased approximately 120. The key step in this process was determining how much effort among five affected fisheries should be removed through the tender process. This was determined by the Department of Environment and Heritage in conjunction with a technical advisory committee that included officers from the management agency for the fisheries (the Department of Primary Industries and Fisheries) and the Queensland Seafood Industry Association (representing fishers). By purchasing both licenses and effort units or quota where applicable, the government has sought to ensure that effort is permanently removed from the affected fisheries. The government spent approximately AU$33 million (US$24 million) to purchase the above licenses, and the average cost of each license was close to market value.

**MPA News:** With the structural adjustment package consisting of other types of aid besides just buyouts, could some of the available financial assistance be spent by fishermen to increase their fishing efficiency — and fishing pressure — in areas of the park that are still open to fishing?

**Oxley:** Fishermen that remain in the fishery and are impacted by the rezoning are able to apply for assistance. There are two levels of assistance: a simplified assistance component, with a maximum payout of AU$50,000 (averaging $21,800), and full restructuring assistance component with a maximum payout of $500,000 (averaging $145,000). In the case of full restructuring assistance, an evaluation is made of the least-cost option to help businesses manage the impacts of the rezoning. The cheapest option for most fishermen has proven to be reducing their costs of operation by repaying part or all of their debt. The government looks favorably on this option as it does not lead to an increase in fishing effort. The second most popular option is for the government to purchase quota or effort units in the effort-limited fisheries. Again, this does not lead to an increase in effort.
There have been a few instances where new vessels or motors have been purchased, generally where there were no other options to assist a fisherman. The department looks very closely at proposals to install new motors to ensure that reducing the cost of operation is the primary outcome. This measure has been designed to help fishing businesses adjust to their changed operating environment, which for many means having to fish in areas unfamiliar to them, and which may, for example, necessitate traveling further from their home port.

**MPA News:** What has the government learned from implementing the GBRMP SAP that could help in implementing other structural adjustment programs, including for the proposed MPAs in Australia’s southeast region?

**Oxley:** The Government has learned much. The primary lessons have been how to better structure packages to deal with the major issues that generally will be unique to each fishery, and the need to find methods for costing structural adjustment packages in a realistic manner. This involves recognizing that the impacts of MPA establishment have economic costs and social costs, with the latter being difficult to quantify.

---

**Notes & News**

**New Zealand announces new MPA policy**

The New Zealand government has released a new policy and implementation plan for marine protected areas, aimed at improving the coordination and transparency of national efforts to build a comprehensive and representative network of MPAs. Components of the policy include:

- A consistent approach to classifying marine habitats and ecosystems based on best available science;
- Mechanisms to coordinate a range of management tools, including a multi-agency approach to planning;
- An inventory to identify where MPAs are required; and
- A nationally consistent basis for planning and designating new MPAs, including stakeholder involvement.

The policy sets out several principles to guide the network design and planning processes. “In the past, the approach to marine protection has been fragmented,” write Conservation Minister Chris Carter and Fisheries Minister Jim Anderton in the policy’s foreword. “The MPA Policy does much better. It provides an integrated process, including regional consultation, for establishing a network of marine protected areas around New Zealand.” The new *Marine Protected Areas Policy and Implementation Plan* is available at [http://www.biodiversity.govt.nz/seas/biodiversity/protected/mpa_policy.html](http://www.biodiversity.govt.nz/seas/biodiversity/protected/mpa_policy.html).

**US governor proposes MPA for state’s coastline**

The governor of the state of Oregon, on the Pacific coast of the US, has proposed that all waters of the state’s 476-km coastline, and extending seaward to the base of the continental slope, be designated a national marine sanctuary, with joint oversight by federal and state agencies. The base of the continental slope in these waters is 25-65 km offshore. Governor Ted Kulongoski announced the proposal in December 2005 in a letter to Oregon’s congressional delegation, available online at [http://governor.oregon.gov/Gov/p2005/press_121505a.shtml](http://governor.oregon.gov/Gov/p2005/press_121505a.shtml).

The proposed boundaries of the MPA are consistent with the Oregon Ocean Stewardship Area, identified by the state in 1994 as an area worthy of protection and management. “The governor’s vision of a national marine sanctuary encompassing the stewardship area is as much about the importance of fulfilling this responsibility [of protection and management] as it is about the merits of an national marine sanctuary,” says Mike Carrier, Oregon’s natural resource policy director. Carrier says the governor does not presume that the entire area mentioned will ultimately be designated as a national marine sanctuary. The governor has instructed the state’s multistakeholder Ocean Policy Advisory Council (OPAC) to obtain public input and recommend boundaries for the MPA, which could end up being smaller than initially proposed.

Kulongoski has indicated he wants the sanctuary to include a ban on oil and gas drilling. Aside from that, he says, state and federal agencies would work collaboratively with indigenous tribes, ocean users, and the public to plan and manage all other uses and resources.

Robin Hartmann, ocean program director for Oregon Shores (an NGO) and a member of OPAC, welcomes the governor’s leadership on this issue but says other protection efforts are also needed. “The governor’s effort to gain national marine sanctuary status will likely require years of work to develop and adopt site-specific management plans,” she says. “In the meantime, Oregon must take steps to use what we know to protect key ecosystems now.”

**Correction**

Due to an editorial error, the lead article of the December 2005/January 2006 edition of *MPA News* (“Sacred MPAs: Where Protected Areas Hold Spiritual Value for Stakeholders, and How This Affects Management”) contained inaccuracies about the Gwaii Haanas National Park Reserve and Haida Heritage Site. A corrected version of the article was posted on the *MPA News* website on 20 December. Among the corrections: the name “Gwaii Haanas” refers to the southern portion of the Haida Gwaii (Queen Charlotte Islands) archipelago on Canada’s Pacific coast, not to the entire archipelago. *MPA News* sincerely apologizes for the errors.

**For more information**

**Mike Carrier**, Natural Resource Office, Public Service Building, 255 Capitol Street NE, Room 126, Salem, OR 97301, USA. Tel: +1 503 986 6525; E-mail: Michael.Carrier@state.or.us

**Robin Hartmann**, Oregon Shores, P.O. Box 1344, Depoe Bay, OR 97341, USA. Tel: +1 541 672 3694; E-mail: robin@oregonshores.org
Editor's note

Elliott A. Norse is president of Marine Conservation Biology Institute in Bellevue, Washington, USA, and a Pew Fellow in Marine Conservation. He and Larry B. Crowder are editors of Marine Conservation Biology: The Science of Maintaining the Sea’s Biodiversity (Island Press 2005), which features a chapter by them, Kristina Gjerde, David Hyrenbach, Callum Roberts, Carl Safina and Michael E. Soulé on protected areas for pelagic megafauna. The following essay by Norse is based on a presentation he gave at the First International Marine Protected Areas Congress in October 2005 in Geelong, Victoria, Australia.

MPA Perspective  Protecting the Least-Protected Places on Earth: The Open Oceans

By Elliott A. Norse

The movement to protect places from human impacts has expanded since countries began designating terrestrial national parks in the 19th century, and protecting nearshore marine areas in the 20th century. The obvious next step in this 21st century is protecting places in the open oceans, both the seafloor and the overlying pelagic realm.

This idea of pelagic protected areas may seem strange: open oceans are often likened to deserts because their average primary productivity and abundance of large animals is low. The water column, averaging nearly 4,000 meters deep, seems a vast undifferentiated expanse. But modern tools, especially oceanographic measurements taken from satellites, have shown that the oceanic pelagic realm is both highly heterogeneous and dynamic. In deserts, key biological hotspots occur near permanent or ephemeral water sources. In the open sea, the underlying topography and discontinuities caused by currents create permanent and ephemeral hotspots whose boundaries can shift kilometers in a day.

In ways that scientists are only coming to understand, big animals (megafauna) including tunas, billfishes, cetaceans and seabirds cross this vastness to congregate at pelagic hotspots where they feed or breed. Once, whaling captains noted where they saw great whales so they could later return and fill their tuns. Today’s oceanic fishermen are much more sophisticated about finding hotspots and migratory pathways. They subscribe to faxes or e-mails sent several times weekly showing the best places to fish, based on interpretations of satellite oceanography (for example, http://www.roffs.com/commercial/about.htm). Until recent decades, pelagic wildlife could elude humans in the oceans’ depths, but oceanic fishing is now more like shooting fish in a barrel. Longlining and (mostly illegal) driftnetting are eliminating large predators. Julia Baum and Ransom Myers of Dalhousie University recently reported that oceanic whitetip sharks — probably the most abundant large animals on Earth until the 1950s — had declined in the Gulf of Mexico by 99.7% since tuna longlining began there. Other oceanic pelagic megafauna are also in deep trouble. White marlin are now so rare they are being considered for listing under the US Endangered Species Act. Pacific leatherback turtles, caught by swordfish and tuna longliners, are likely to be extinct within the one to three decades. Historic data from longlining operations are giving scientists a clear and chilling picture of their steep population declines.

Oceanic wildlife sought by fishermen or killed incidentally to fishing operations have not fared well either within nations’ waters nor in areas under international jurisdiction (the high seas), which constitute 64% of the marine realm. Existing fishery management measures have proven woefully inadequate. The obvious question is whether protected areas are a useful alternative.

Some respected marine scientists and managers are doubtful. They believe that protected areas would work only for relatively sedentary species. But the experience of terrestrial managers suggests otherwise. In the Prairie Provinces of Canada, pothole wetlands where millions of ducks nest are protected, thus ensuring ample populations of these highly migratory animals for both birdwatchers and hunters. There is no reason why protected areas and more traditional tools, such as limits on fishing effort, could not be used in conjunction for highly migratory large pelagic species. There is already some precedent for this: the Pelagos Sanctuary for cetaceans in the Ligurian Sea, most of which is in international waters, and several large areas in international waters that are closed to finfishing under the Convention on the Conservation of Antarctic Marine Living Resources.

To avert extinction of some of the world’s most remarkable animals and collapse of oceanic fisheries, nations, regional fishery management organizations and UN agencies could apply satellite oceanography to understand hotspot dynamics, as fishermen do, and correlate these with information on wildlife movements from satellite tagging. Hotspots and key migratory pathways could be designated as temporary fishery closures or fully protected marine reserves where pelagic species could feed and breed without being killed off.

Vessel monitoring systems and satellites scanning the ocean surface could monitor fishing boats in the blue vastness.

Legal and scientific tools are already available, and more could be, but using them requires us to think and act differently, to see pelagic fishes as wildlife with the same values and vulnerabilities as terrestrial predators, and to envision pelagic protected areas as a powerful conservation tool. Moreover, we have to realize that the open ocean is a dynamic mosaic of places where hotspots move. The idea of protecting areas that move — protected areas with dynamic boundaries — is without precedent on land. But as we face new challenges and equip ourselves with new 21st-century tools, we can transcend the dogmas of the past and envision new solutions, including dynamic pelagic protected areas.

I thank Kristina Gjerde, Callum Roberts, and Susie Grant for valuable information and insights.
By Bill Ballantine

Marine reserves have been discussed for many years, and there are now examples in many countries. We know that they are practical and that, once established, they are generally popular and successful. We have carried out enough trials and tests. It is time to create full systems of marine reserves. To do this we need a clear policy based on principles that everyone can understand.

In 2004, experts on marine biodiversity presented a report for the UN Convention on Biological Diversity that provides the necessary principles. (The report is available in PDF format at http://www.biodiv.org/doc/publications/cbd-ts-13.pdf.) I have crafted the following manifesto to summarize these principles in plain language:

1. There are many kinds of marine life (species diversity); these occur in many different habitats and communities; and they interact in many ways. Marine life existed before people became active in the sea, and it maintained itself.

2. This natural marine life is abundant, varied and complex. It occupies 70% of our world. It carries out many processes that are important to the planet. Marine life is far more than a set of things directly useful to people, but we are only dimly aware of how the whole system operates.

3. Despite increasing rates of study, we are still very ignorant about marine life. Less than half the species have been described, few regions have had their habitats mapped, and we know only some examples of the natural processes. We do not know how much of anything is necessary to sustain the whole in a healthy state, but it is clear that the natural processes are critical to all life on the planet.

4. Many human activities in the sea (fishing, dumping, dredging, etc.) can kill or degrade marine life and its habitats. The range and intensity of human-induced damage have increased over the years; have already caused multiple and widespread changes to marine life; and now threaten its sustainability.

5. Our existing ways of planning and managing human activities in the sea are useful and necessary, but they are not sufficient to prevent or adequately control this damage. Existing management mostly tries to solve problems, but the problems (e.g., damage) have to occur and be noticed before action is taken (reactive management).

6. More positive action is also needed. Setting aside areas of the sea (marine reserves) that are protected against all direct human interference will help maintain, or allow the recovery of, the full natural biological diversity.

7. These marine reserves will have many additional benefits. They will make it easier for people to appreciate and understand natural marine life. They will help us recognize the changes our activities have caused, and distinguish these from natural variation. Marine reserves will help us measure these changes, and show how we could adjust our activities sensibly. Marine reserves are important to science, management, education, and recreation, as well as essential for conservation.

8. Marine reserves are a new, different, and additional form of management. They do not aim to solve particular problems, but rather to maintain the natural biodiversity. They do not depend on particular information (e.g., identifying damage), and all potentially disturbing activities are excluded on principle. Problem-based, data-dependent planning and management will continue in the rest of the sea.

9. Standard planning will steadily improve. The introduction of zoning is one such improvement. When spatial planning is adopted in a region, marine reserves will be included as the first and most important zone. Indeed, reserves will help lead to this form of management.

10. All these points are universal. They apply everywhere, and are independent of climate, the marine life that occurs, what people are doing to it, or who is in charge. To maintain (or recover) the full natural marine life, marine reserves are needed in all regions. In each region, the reserves must form a system that is sufficiently large and comprehensive to be self-sustaining despite human activities in the rest of the sea.

Each region requires a policy that includes the following principles:

11. The reserves are highly protected. All potentially damaging human activities are banned on principle, as far as is practical and sensible. These rules are efficiently enforced.

12. The reserves are permanent. The basic reasons for reserves are valid for the foreseeable future, and the benefits and values of reserves accumulate over time.

13. Each reserve aims for the ability to maintain itself. Single reserves cannot be totally self-sufficient unless enormous, but each should aim for a reasonable degree of ecological viability (i.e., capacity to maintain itself).

14. Examples of all major habitats are included in reserves. Different habitats have different marine life, so all must be represented.

15. There are several spatially separate examples of each habitat. This replication provides insurance against local accidents, such as cyclones or oil spills, and allows inclusion of a more natural range of variation.

continued on next page
16. The reserves are spread throughout the region (a network). There are many reasons for a network design, including encouraging the interchange of drifting eggs and larvae, and spreading benefits and any inconvenience.

17. Public interest is actively encouraged. For all reserves, active measures are taken to provide visual material (photographs, film, video, etc.) and written information (maps, articles, books, web sites, etc.). Direct public access is actively encouraged where it can be arranged with minimal damage.

18. Research and monitoring are promoted. These efforts will include surveys, original research and monitoring inside the reserves, and comparisons with the exploited areas outside. The data will be freely distributed to managers and the general public.

19. This policy will be adopted by the authorities to ensure that action occurs. But in each region, there will be many arrangements of reserves that conform to the policy and its principles. Precise decisions will include the full democratic process. Anyone interested can and should become involved at the detailed level, but no local or sectional interests will be allowed veto powers.

20. The matter is urgent. Safeguarding our children’s future requires action now. The policy and its principles provide the necessary guidelines for practical action. Using these, existing information is sufficient for action in all regions.

Reader: Do you agree with the principles of Bill Ballantine’s manifesto? E-mail us at mpanews@u.washington.edu. We will print responses in a future issue.

Notes & News

Articles available on implementation, management of MPAs

The December 2005 issue of the journal *Conservation Biology* provides a special free-content section dedicated to implementation and management strategies for MPAs, with cases drawn from sites worldwide. The special section was assembled by the Society for Conservation Biology (SCB) and the Pew Fellows Program in Marine Conservation based on a symposium on MPAs held at the 2003 SCB Annual Meeting in Duluth, Minnesota, USA. To access the articles, visit http://conbio.net/SCB/Publications/ConsBio/Search. Click on the link for the December 2005 issue (Volume 19), then scroll down to the special section.

Bottom trawling banned at three high-seas sites in Mediterranean

In January 2006, the General Fisheries Commission for the Mediterranean (GFCM), the main intergovernmental fishery management body in the region, designated three ecologically important deep-sea areas as off-limits to bottom trawling and dredges. The decision is binding on all Mediterranean states. Declared as “deep sea fisheries restricted areas”, the three sites are all on the Mediterranean high seas, outside of national jurisdictions:

- The Eratosthenes seamount south of Cyprus;
- A deepwater coral reef off Capo Santa Maria di Leuca, Italy, in the Ionian Sea; and
- An area of cold seeps and associated chemosynthetic communities (not requiring sunlight for energy) offshore from the Nile Delta.

Although considered to be in deepwater, the sites are shallower than 1000 meters in depth, and therefore were not protected under a 2005 decision by the GFCM to ban bottom trawling in Mediterranean and Black Sea waters beyond 1000 meters (*MPA News* 6:9, “Bottom Trawling Prohibited Below 1000 Meters in Mediterranean”). “Declaring protection status is an important achievement for these unique areas, and we hope that the GFCM will continue to support sustainable fisheries by declaring new protected sites in the very near future,” says Sergi Tudela of WWF, which presented the original proposal for these closures to the GFCM scientific committee in early 2005. A WWF press release on the closures is available at http://www.panda.org/about_wwf/what_we_do/marine/news/index.cfm?uNewsID=57840.

Keep MPA News Free and Available to Everyone

*MPA News* is available for free. Why? It reflects our mission to serve the global field of MPA practitioners, no matter their financial means. As a result, we now have thousands of subscribers in more than 100 countries — a worldwide network of MPA professionals learning from one another.

To provide this service costs money, which so far has been available through the generous support of a small number of foundations, government agencies, and individuals. To ensure that *MPA News* remains free of charge for the long term, we have launched a campaign to place it on a broader, more sustainable economic footing. Please consider if you or your agency could contribute financially to help *MPA News* continue to serve all who need it. For more information or to make a secure contribution online, please visit http://www.mpanews.org. Thank you.

John B. Davis, Editor-in-Chief