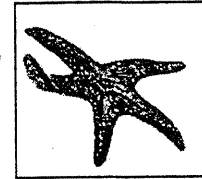


Ocean Policy Advisory Council Draft Proposed Recommendation to the Governor Marine Reserves in Oregon



Approved April 26, 2002 for public discussion at Open Houses

Origins of This Recommendation

In July 2000, the Governor's Office requested the Ocean Policy Advisory Council (OPAC) to review the topic of marine protected areas, engage the public, fisheries industry, conservationists, and others in the review, and provide a recommendation to the Governor on state policies on marine reserves and marine protected areas. The Governor turned to the OPAC because it was created by the 1991 Oregon legislature to provide ocean policy advice to the Governor and to be a forum for ensuring that all affected and interested parties participate in ocean policy deliberations.

Terminology is critical. This report and proposed recommendation focuses on "marine reserves," a kind of marine protected area. The OPAC has agreed that under Oregon's state ocean planning law, the state's Territorial Sea is already regulated for multiple uses as a "marine protected area." These terms are further explained in Appendix I of this report.

This proposal is based on study and discussions by a special Marine Protected Areas Working Group of OPAC members who met with many others over the past year in public meetings. A MPA Working Group website (<http://oregonocean.org>) has provided convenient public access to meeting notices, meeting summaries, staff papers, and other information about the Working Group and the topic of marine protected areas.

The OPAC intends that this draft report and recommendation be reviewed and discussed widely. Comments to improve it are encouraged. Comments may be submitted via e-mail to bob.bailey@state.or.us or via U.S. Mail to Ocean Policy Advisory Council, 800 NE Oregon St., Box 18, Portland, Oregon 97232.

Reasons to Assess Marine Reserves

Governor's Request

The Governor's Office requested that the OPAC's review the issue of marine protected areas and marine reserves because of developments nationwide and in the region and the potential importance of this issue to Oregon. Among the developments cited were:

- A Presidential Executive Order in May, 2000, that directed federal agencies to strengthen marine protection and to create a national network of marine protected areas;
- A decision by the Pacific Fishery Management Council to include no-fishing reserves in a West Coast Groundfish Strategic Plan as a potential technique to rebuild depleted fish stocks;
- A Marine Protected Areas Action Plan for North America being developed by the Commission for Environmental Cooperation (CEC), part of the North America Free Trade Agreement (NAFTA);
- Preparation of a science-based theory of marine reserves by a nationwide group of marine scientists;
- Proposals by major environmental organizations for marine protected areas to address concerns about the integrity of marine ecosystems and sustainability of fisheries harvests;

Further Developments

Additional developments related to marine reserves have added to the stream of real-world issues addressed by the OPAC:

- California's state law requiring a network of marine reserves in state waters has potential to displace fishers and affect fisheries along the Oregon coast. This process is mired in controversy surrounding implementation, due principally lack of involvement in fishing communities.
- The Washington Fish and Wildlife Commission approved new marine reserves in Puget Sound and has adopted a policy supporting use of marine reserves for fishery management.
- Continuing support of the Executive Order on marine protected areas by the Bush Administration, and establishment of a National Marine Protected Areas Center to coordinate and assist federal agency and state programs related to the Executive Order and act as a clearinghouse for information and research. It is not empowered to establish any ocean protection areas in either state waters or federal waters.
- Interest by the National Commission on Ocean Policy, established by the Congress and appointed by the President in 2001, in the potential use of marine protected areas as part of a revamped national ocean governance and policy system.

Background for Recommendations

Study Process

The OPAC and the Working Group heard presentations from fishermen, scientists, and others, and reviewed written reports. A major study by the National Academy of Sciences published in 2001 provided information about the function and performance of marine reserves worldwide. A key task for the OPAC was to understand what is known and what is not known about the marine environment off Oregon. To do so, the OPAC held a two-day dialogue with Marine Experts with a panel of Local Experts (fishermen, recreational users, port and community experts, and others) on the first day and a panel of Scientific Experts (biologists, oceanographers, fisheries scientists, sociologists, economists, etc) on the second day.

The OPAC and the Working Group heard, discussed, and weighed many factors and points of view. Some relate to the complicated topic of reserves for marine fisheries management, while others relate to reserves to help conserve marine resources in general, provide protection of threatened or endangered species, and enable recovery degraded habitats. The OPAC learned that the social and economic importance of marine resources to coastal communities must be accounted for in any proposal regarding marine reserves. Pervading the entire review was the need for better scientific information about the marine environment, its resources and habitats, uses of it resources, and economic and social values to coastal communities.

Rationale for the Proposed Recommendation

The OPAC's proposed recommendation is framed by principal findings:

1. Marine fisheries, both commercial and recreational, are very important to the economy and culture of Oregon's coastal communities, especially where ports are centered on fisheries activities. These fisheries vary by gear type, by season, and by area, and are often rely on specific habitats that are unevenly distributed along the coast.
2. Oregon's commercial marine fisheries and several coastal communities are under a high level of stress due to severe reductions and uncertainties in groundfish harvest caused by federal regulations.
3. New fisheries in Oregon's nearshore waters are changing due to restructuring of the groundfish industry, innovations in harvest techniques, and development of specialty, high-value markets.
4. The abundance of most marine fish stocks off Oregon is not well documented with respect to either effects of harvest or effects of natural variability in the marine environment.
5. Numerous studies around the world show that the abundance and size of marine organisms increases within highly protected reserves, but few such studies have been conducted within Oregon waters. Some studies may be applicable to Oregon while others may not be because of differences in biologic or physical conditions.

6. Studies elsewhere have examined the effects of marine reserves and marine protected areas on marine life, principally fish, outside of reserve boundaries but no such studies have been conducted in Oregon.
7. Few "undisturbed" baseline study areas have been designated on the Oregon coast for long-term monitoring or evaluating changes in the marine environment that are a consequence of either variability in natural conditions or human activities.
8. Designation of large-scale reserves for fisheries management in Oregon ocean waters cannot be justified at this time because necessary scientific biological and socio-economic analyses have not been performed due, in part, to lack of information and lack of funding to conduct needed research and perform these analyses.
9. A study by the National Academy of Sciences concluded that marine protected areas, including restrictive reserves, can be effective in conserving and protecting marine ecosystems, especially if used in conjunction with other regulations and incentives and if they are designed to meet clear goals and objectives;

Summary of Rationale

Oregon has a strong sense of the many values of the ocean and its resources and has as a state-wide planning goal "to conserve marine resources and ecological functions for the long-term ecological, economic, and social values and benefits to the community." Oregon's unique state-level ocean management program provides a comprehensive framework for conserving and protecting marine resources and uses in state waters and for asserting state interests in marine resources in federal waters.

During its review, the OPAC has learned about significant work underway to map the ocean bottom and understand the ecology, complex ocean conditions, and marine life off the Oregon and Pacific Northwest coast. OPAC also learned that more information is needed about both nearshore and offshore waters and about potential management techniques that could help to sustain the long-term health of coastal resources and the economies that depend on them. Several reports, including the National Academy of Sciences study, provided information about the function and performance of marine reserves in other parts of the country and the world.

While the OPAC concludes that there is insufficient information or rationale at the present time for Oregon to designate marine reserves to manage ocean fisheries, the OPAC believes that a limited system of marine reserves would help Oregon to achieve overall state ocean conservation goals and to obtain valuable information that cannot be obtained otherwise. Oregon could obtain three kinds of information from such a course of action.

First, such marine reserves would serve as long-term "control sites" in which to monitor fish stocks, habitats, and ecosystem conditions. Such information would help to distinguish natural variability in the marine environment from changes caused by human activities, and would help to evaluate the effects of management actions on fisheries and other activities. At present, no such control sites exist.

Second, a limited system of reserves as envisioned by the OPAC would enable Oregon to test the effectiveness of reserves in providing "spill over" of adult fish into other nearby areas and increasing the reproductive output of eggs, larvae, and juvenile organisms to "seed" other areas. The potentials and constraints on these benefits are untested in Oregon's marine environment.

Third, such system would help all parties learn about potential benefits and detriments to fishermen and coastal communities from the placement and operation of reserves. The marine environment off Oregon is not uniform or homogenous; placement of reserves will be highly sensitive to many factors that are best considered at a local level. The OPAC envisions a community-based, participatory process to design, site, and monitor reserves to provide state agencies, local communities, and the public with valuable information and experience in meeting the economic and social needs of coastal communities as well as state marine conservation goals.

The OPAC foresees that such information will enable the state, ocean users, coastal communities, and the public to make better decisions in the future about the need for, design of, applicability, and limitations of reserves to meet objectives such as fishery management or protection of sensitive species.

The Proposed Recommendations

The proposed recommendation to the Governor is composed of two parts: one is policy; the other is process. Both are essential and must be considered together.

The Ocean Policy Advisory Council acknowledges that several key issues remain to be clarified, that not all details are now filled in, and that substantial additional public and scientific processes are needed. For now, however, the OPAC agrees that public review and discussion is essential prior to completing the report and recommendation to the Governor in August 2002.

Recommended Policies

The OPAC recommends that a limited system of reserves be established to test the effectiveness of marine reserves to achieve state marine conservation goals and policies and to provide baseline information on marine environmental conditions and species.

The OPAC recommends that consideration of marine reserves to achieve conservation goals associated with fisheries management, if warranted, should be left to state and federal fishery management agencies.

The OPAC has not specified the size, number, or location of sites in a "limited system" but intends that such a limited system:

- be based on clear goals and criteria for reserve design, monitoring, and performance, including criteria for future "abandonment" of the reserve;
- consider flexibility in designations, e.g. time-limits and movable or "rolling" reserves;
- minimize or avoid economic effects on existing fisheries, other users, and coastal communities;
- account for the entire continental margin, not just state waters;
- be based on biologic, oceanographic, economic, and social science;
- promote scientific research to test the effectiveness of reserves in achieving state marine ecosystem and conservation goals; and
- consider enforcement as a principal need.

Recommended Process

The OPAC recommends that the limited system of marine reserves be designed through a two-step collaborative, community-based process involving all affected and interested parties such as fishermen, other ocean users, coastal tribes, marine scientists, state and federal resource managers, interest groups, local communities and the public. Such a process addresses the "process principles" for marine reserves adopted by the Oregon Coastal Zone Management Association in early 2002. While not all details can be known at present, the OPAC envisions the following process:

Step One: Coast-wide System Framework "Design" (estimated 1-2 years):

The OPAC would provide oversight and coordination, set overall system goals/objectives, approve a coastwide system design (perhaps choose among alternatives), and, during the second step, approve the location of specific sites, probably via amendments to the Territorial Sea Plan.

A Reserve Oversight Committee (ROC) would be appointed to develop the overall system design. The ROC would have broad representation from scientists, commercial and recreational fishermen, resource managers, port officials, interest groups, and others with information and technical expertise. The ROC would design the overall reserve system, including objectives, siting criteria, etc:

The OPAC would adopt the coastwide framework design, objectives, criteria, etc., for state waters and would work with the Governor to recommend appropriate parts of system, policies, areas, criteria, etc., to the Pacific Fisheries Management Council and other federal entities for implementation in federal waters.

Step Two: Local Level Site Selection and Implementation (est. 2-3 years):

The OPAC recommends that actual site selection and implementation in state waters, based on coastwide design criteria and objectives, be carried out through community-based processes and partnerships,

perhaps with local port districts, community groups, Oregon Coastal Zone Management Association, Oregon Sea Grant, non-profit foundations, and others to enable all stakeholders and interested parties to utilize local knowledge in siting, design, implementation, and monitoring. Local processes would be encouraged to create incentives for fishermen to participate at all levels.

During the design implementation process, Oregon and federal agencies should fund and conduct baseline inventory, research, and monitoring to obtain information needed to address uncertainties associated with the application and function of marine reserves in Oregon's marine environment.

Implementation

In state waters inside three nautical miles, state agencies such as Oregon Department of Fish and Wildlife, Oregon Parks and Recreation Department, Division of State Lands, Oregon Natural Heritage Advisory Committee, Department of Environmental Quality, Oregon State Police Fish and Game Division, State Marine Board could implement reserve designations through regulations and programs. Local advisory groups or processes would be encouraged to provide oversight, carry out cooperative research, provide enforcement, conduct monitoring, etc.

For federal waters, Oregon would recommend that federal agencies carry out similar process with state and local involvement or participate in local processes established under the OPAC. The OPAC believes its recommended approach should be adopted for areas across the continental margin.

Evaluation

It is essential that ecosystem conditions inside potential reserves sites be inventoried and evaluated prior to establishing a reserve. Performance criteria would be used on a regular basis (e.g. annual, decadal, etc) to assess performance and to expand, contract, adjust, or terminate sites as appropriate;

Mitigation

The ROC would identify potential measures to mitigate for effects on fishermen, coastal communities, and other ocean users from establishing reserves (e.g. contracts for research, monitoring, enforcement). Local site processes would be encouraged to avoid or minimize effects on local fishermen, other ocean users, and coastal communities, and use these mitigation measures when necessary.

Funding

Funding of research, monitoring, enforcement, baseline studies, etc., for marine reserves is a fundamental concern of the Ocean Policy Advisory Council. The OPAC agrees that full funding of all anticipated activities associated with marine reserves prior to their designation is a desirable objective but one that it is not possible. The OPAC believes that its proposed process and objectives for marine reserves on the Oregon coast will be instrumental in helping the state to acquire new funds for reserve-related activities.

The OPAC recommends that the State of Oregon fund basic elements of the reserve process and not rely solely on federal or other funds. Such funding support would enable the state to aggressively seek a variety of funding partners to support necessary research, monitoring, and enforcement.

The OPAC recommends that, at a minimum, Oregon should prepare a long-term marine reserve management plan that would include a research and monitoring strategy from which to develop funding proposals as opportunities arise.

Further Policy Questions

The OPAC is interested in comments and suggestions regarding these additional questions, such as:

WHAT IS THE SCOPE OF A "LIMITED SYSTEM? The OPAC has not determined what "limited system" means, but has heard advice that such a system should:

- have a sound "experimental" design to meet information and other objectives;
- minimize adverse effects on fishers and local communities; and
- maximize benefits to involve fishers and local communities.

SHOULD THERE BE A "CAP" ON TOTAL AREA? The OPAC discussed but did not establish an upper limit on the total area to be designated in the limited system of marine reserves. While the OPAC understands that such a limit may provide a frame of reference and alleviate concerns about the expansiveness of such a system, the OPAC prefers that the Reserves Oversight Committee provide alternative system designs to meet the goals and objectives of the limited system.

SHOULD THERE BE TIME LIMITS? The OPAC agreed that the Reserves Oversight Committee should develop criteria for performance "milestones" by which to evaluate effectiveness and to determine whether to abandon a reserve, move it, or otherwise modify it. The OPAC also understands that testing the effectiveness of marine reserves is likely to require significant periods of time but that performance analyses at discrete intervals such as 10 years should be required.

APPENDIX 1: DEFINITIONS

The Ocean Policy Advisory Council has adapted the following definitions from the report by the National Research Council Ocean Studies Board (2000).

1. Marine Protected Area (MPA):

An ocean or estuarine area designated to conserve marine resources through an integrated management plan that includes broad regulations for some uses (e.g. waste discharge, fisheries) and greater regulations of other uses (e.g. oil or gas drilling), and may include sub-areas that are highly-regulated for specific purposes (e.g. fishery management, ecological protection, baseline research).

Generally, an MPA is a larger-sized area managed for multiple uses or purposes. This term therefore applies to the Oregon Territorial Sea.

2. Marine Reserve

A sub-category of Marine Protected Areas; a marine reserve is an area that is designated to meet specific goals and is highly-regulated to protect resources or uses from activities that may conflict with these goals.

Marine Reserves are specific kinds of marine managed areas, smaller in size and located within an MPA. They are usually designated and managed for tightly-defined purposes or uses. There are many possible kinds of, and names for, marine reserves, although they are usually associated exclusively with fisheries management. The goal or purpose of the MR is critical to its designation, function, and success. Some examples of different kinds of marine reserves identified by the National Academy of Sciences are:

- Ecological Reserve: *an area with special or significant ecological values or functions (e.g. important or representative habitats);*
- Research Reserve: *an area for baseline research or monitoring (e.g. to improve management of marine resources and uses);*
- Educational Reserve: *an area with high public education value or opportunity;*
- Fishery Management Reserve: *an area highly regulated to meet fishery management objectives (e.g. species recovery areas or spawning areas); and*
- Recreational Reserve: *an area for public recreational use (e.g. diving, surfing, etc).*

Purposes for Marine Reserves need not be exclusive; they may be created to meet multiple purposes or objectives. The Ocean Policy Advisory Council agrees that it is important that the principal purpose or objective of any Marine Reserve be reflected in its name designation.

APPENDIX 2: STATEWIDE PLANNING GOAL 19

The principal ocean policy for Oregon is Statewide Planning Goal 19, Ocean Resources. Goal 19 was originally adopted by the Land Conservation and Development Commission in 1977 and updated in 2000,

based on the work of the OPAC. Goal 19 governs Oregon's ocean resource management programs and activities and is the policy framework for designating special marine management areas.

The overall goal of State-wide Planning Goal 19, Ocean Resources, is:

"To conserve marine resources and ecological functions for the purpose of providing long-term ecological, economic, and social value and benefits to future generations."

"To carry out this goal, all actions by local, state, and federal agencies that are likely to affect the ocean resources and uses of Oregon's territorial sea shall be developed and conducted to conserve marine resources and ecological functions for the purpose of providing long-term ecological, economic, and social values and benefits and to give higher priority to the protection of renewable marine resources--i.e., living marine organisms--than to the development of non-renewable ocean resources."

Goal 19 mandatory policies are:

- a. *"maintain and, where appropriate, restore the long-term benefits derived from renewable marine resources;*
- b. *protect renewable marine resources-- i.e., living marine organisms--from adverse effects of development of non-renewable resources, uses of the ocean floor, or other actions;*
- c. *protect the biological diversity of marine life and the functional integrity of the marine ecosystem;*
- d. *protect important marine habitat, including estuarine habitat, that are:*
 - *important to the biological viability of commercially or recreationally caught species; or*
 - *needed to assure the survival of threatened or endangered species; or*
 - *ecologically significant to ecosystem, and biological productivity and diversity; or*
 - *essential to the life-history or behaviors of marine organisms; or*
 - *vulnerable because of size, composition, or location in relation to pollutants, noise, physical disturbance, alteration, or harvest; or*
 - *unique or of limited range within the state; and*
- e. *protect areas important to fisheries, which are:*
 - *areas of high catch (e.g., high total pounds landed and high value of landed catch); or*
 - *areas where highly valued fish are caught even if in low abundance or by few fishers; or*
 - *areas that are important on a seasonal basis; or*
 - *areas important to commercial or recreational fishing activities, including those of individual ports or particular fleets; or*
 - *habitat areas that support food or prey species important to commercially and recreationally caught fish and shellfish species.*

Ocean Stewardship Area

Goal 19 asserts an Ocean Stewardship Area, an area within which Oregon has clear economic and ecological interests in the conservation of ocean resources. This area includes the state's territorial sea, the continental margin seaward to the toe of the continental slope, and adjacent ocean areas. Within the Ocean Stewardship Area, the state will

- promote its interests in management and conservation of ocean resources;
- encourage scientific research on ocean conditions, resources, and uses to support management;
- work with federal agencies to make sure that ocean resources and uses are managed consistent with state policies; and
- cooperate with other states and governmental entities directly and through regional mechanisms to manage and protect ocean resources and uses.

