CHAPTER 6:
COORDINATING MANAGEMENT IN FEDERAL WATERS

Federal waters provide vast opportunities to build the nation's economy, enhance our quality of life, and increase knowledge about the workings of nature. Converging economic, technological, demographic, and other factors make federal waters an increasingly attractive place for new enterprises seeking to tap the ocean's resources, as well as for the continuation and expansion of traditional uses. The challenge for policy makers will be to unlock the ocean's potential while minimizing conflicts among users, safeguarding human and marine health and cultural resources, and fulfilling the federal government's obligation to manage public resources for the maximum long-term benefit of the entire nation.

While legal, policy, and institutional frameworks exist for managing some ocean uses, there remain increasingly unacceptable gaps. The nation needs a coordinated offshore management regime that encompasses traditional and emerging uses and is adaptable enough to incorporate uses not yet clearly foreseen.

MEETING GROWING NEEDS

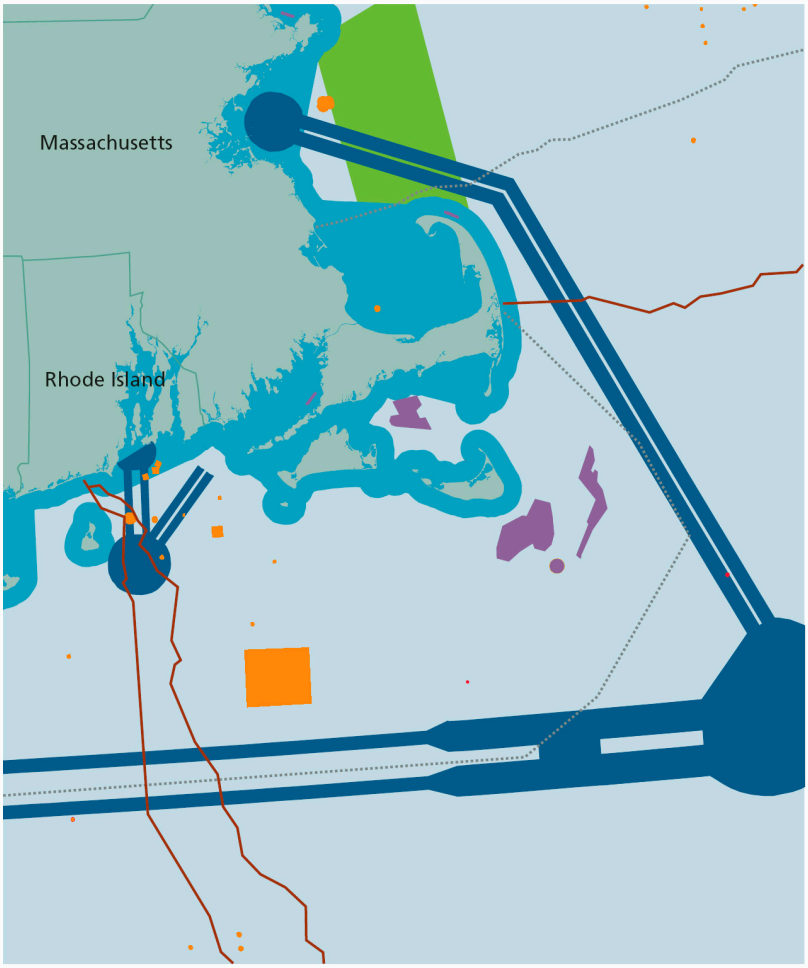
An important task for the new National Ocean Policy Framework is to improve the ability of the federal government to manage the growing number of activities taking place or being proposed in federal waters. This area, which extends from 3 to 200 nautical miles offshore, contains an enormous diversity of resources, many of which are used or affected by human activities. Within federal waters, the United States has sovereign rights for the purpose of exploring, exploiting, conserving, and managing the living and nonliving natural resources of the seabed and subsoil and the surface and subsurface of the waters. The federal government also has jurisdiction over the establishment and use of artificial structures, islands, and installations that have economic purposes, and the protection and preservation of the ocean environment. Associated with these authorities is the federal government's responsibility to ensure that ocean activities are managed for the benefit of the public.

In decades past, nearshore areas held certain inherent advantages for human activities—the waters tend to be shallower, logistics simpler, and costs lower. Increasingly, however, these advantages are shrinking. Nearshore waters are now crowded with competing users whose ranks are steadily augmented by surging coastal populations. There is also considerable public opposition to certain activities when conducted close to shore, such as those that involve the use of heavy equipment or disrupt scenic views. In addition, technological advances and an evolving scientific understanding of the ocean have made activities in offshore areas more feasible and economical than in the past.

For these reasons, interest in the use of federal waters is growing and activities farther offshore are expected to multiply (Figure 6.1). In many instances, these activities are mutually compatible and can take place in the same approximate area without problems. In other instances, uses conflict with and can disrupt one another. Later chapters discuss many specific offshore activities, including fisheries (Chapter 19), aquaculture (Chapter 22), bioprospecting (Chapter 23), and development of offshore energy and mineral resources (Chapter 24). The chapters in Part V discuss the various responsibilities related to protecting the oceans from the impacts of pollution. The focus of this chapter, however, is the overarching offshore management regime that will be needed to coordinate all these activities and more—an important part of moving toward an ecosystem-based management approach.

An offshore management regime should encompass robust coordination for all ocean activities, while recognizing the particular needs and challenges associated with each individual use. It must be able to address the needs of the ecosystem—including human needs—by prioritizing activities, minimizing conflicts, protecting resources, and ensuring that uses are compatible. It is also important to strike a balance between long-term and short-term strategies. For example, a legislative remedy may be warranted to address immediate concerns about one ocean activity, but the legislation should leave room to incorporate the activity within a broader, developing regime.

Figure 6.1 Coordination Is Essential in Busy Offshore Waters



Like many offshore areas of the nation, the waters off a small portion of the New England coast are home to a number of existing and proposed activities. In addition to the uses shown above, many offshore areas also contain dredging projects, marine protected areas, fishery closures, recreational activities, artificial reefs, and in certain coastal regions, oil and gas development. User conflicts can and do arise when incompatible activities take place in the same area. A comprehensive offshore management regime is needed for the balanced coordination of all offshore uses.

Source: Minerals Management Service, Washington, DC.

Any new offshore management regime should be grounded in the guiding principles set forth by the Commission in Chapter 3. For example, the nation should not wait until technologies are fully developed or scientific information is complete to establish mechanisms for managing new ocean uses. Instead, policy makers should proceed judiciously and responsibly to prepare for new uses, and to establish proactive means for identifying and remedying any negative impacts. Creating a coherent and coordinated management regime will make it easier for governments at all levels to protect the public interest and for private interests to make informed decisions.

One of the biggest obstacles to improving management of offshore resources is inadequate scientific understanding of how ecosystems function and how to evaluate the cumulative impacts of activities over time. Regional ecosystem assessments, as recommended in Chapter 5, provide a vehicle to comprehensively and periodically analyze the status of an ocean region, establish baselines for ocean ecosystem health, and describe existing or potential impacts from human activities. These assessments, coupled with a strong commitment to furthering scientific understanding of ecosystems and their components, would dramatically enhance the effectiveness of offshore management.

CLARIFYING OFFSHORE RESPONSIBILITIES

The management of offshore activities by federal agencies is a mixed picture. Some, such as fishing or offshore oil and gas development, are governed according to well-developed regulatory regimes established in accordance with specific legislative mandates while others, such as marine bioprospecting, are essentially unmanaged in federal waters. Other new and emerging ocean uses, such as offshore aquaculture or wind energy, are subject to regulation by a number of authorities executing varying responsibilities, but are not managed by any comprehensive federal law.

When authorities and responsibilities remain dispersed, ill defined, or virtually non-existent, obviously the decision making process is unclear. The resulting confusion can create roadblocks to public participation, discourage private investment, cause harmful delays, and generate unnecessary costs. Further, serious gaps in the protection of the public interest could result. Without an understandable, streamlined, and broadly accepted method for reviewing, authorizing and managing offshore activities, reactive, ad hoc approaches will continue, perpetuating uncertainty and raising questions about the comprehensiveness and legitimacy of decisions.

Recommendation 6–1. The National Ocean Council should ensure that each current and emerging activity in federal waters is administered by a lead federal agency and make recommendations for Congressional action where needed. The lead agency should coordinate with other applicable authorities and should ensure full consideration of the public interest.

ESTABLISHING A COORDINATED OFFSHORE MANAGEMENT REGIME

There are two main categories of ocean uses: those that are confined to a specific location, typically linked to an offshore structure such as an oil rig, a wind turbine, an aquaculture pen, or a sunken vessel, and those, such as fishing or recreation, that are more diffuse, taking place within broad, flexible areas. Some activities combine these characteristics and could be managed according to either scenario. As an example, bioprospecting could be treated as a site-specific use by granting exclusive rights to explore for organisms in a particular area, or as a moveable activity by granting permits to collect certain organisms regardless of their location. To move toward an ecosystem-based management approach, the federal government needs to develop a better understanding of offshore areas and resources, prioritize uses, and ensure that activities in a given area are compatible.

Box 6.1 Swimming through Hoops: Establishing an Offshore Aquaculture Facility

The growing interest in offshore aquaculture offers an excellent example of how confusing and overlapping agency responsibilities create difficulties. As more entrepreneurs pursue this enterprise, they find they must cross several bureaucratic hurdles at the federal and state levels, often with little guidance from the agencies on what is needed, from whom, and when.

At the federal level, at least five agencies must be consulted or grant permits before an aquaculture facility can proceed:

- The Rivers and Harbors Act authorizes the U.S. Army Corps of Engineers to require permits for any device attached to the seafloor that poses a threat to navigation.
- The U.S. Coast Guard is responsible for marking potential obstructions to safe navigation.
- The Clean Water Act authorizes the U.S. Environmental Protection Agency (EPA) to require a National Pollutant Discharge Elimination System permit for any facility that discharges a pollutant into U.S. navigable waters or exclusive economic zone (EEZ).
- Although the Magnuson–Stevens Fishery Conservation and Management Act may not have been intended as a mechanism for managing marine aquaculture, NOAA asserts that the harvest of aquaculture species falls under the Act. Therefore, the Regional Fishery Management Councils (RFMCs) may develop management measures for aquaculture in offshore waters and the National Marine Fisheries Service (NMFS) may regulate aquaculture harvest based on RFMC recommendations. In addition, NMFS, under the Endangered Species Act, must review aquaculture applications for any potential impacts on endangered species or marine mammals.
- In certain circumstances, the U.S. Fish and Wildlife Service may also review aquaculture applications for their impacts on endangered species or marine mammals, or other activities under its jurisdiction.

At the state level, each jurisdiction has its own procedures, with no uniformity among states. In fact, continuity is sometimes lacking even within a single state—one applicant may start the process with the state environmental protection office, another may begin with the state marine fisheries agency, and a third may initiate activities with the state agricultural office.

Each of the federal and state offices may require a separate application, although much of the information required is exactly the same. Rarely do these offices coordinate with each other, and the application may be stopped at any stage. A more coordinated and consistent regime is needed to provide greater protection for the ocean environment, as well as to lessen unnecessary bureaucratic burdens on applicants.

Where a proposed activity will occupy a certain space to the exclusion of other uses, it is the federal government's responsibility to determine where the activity can take place, by whom, in what manner, and for what length of time. But wise decisions cannot be made in isolation: the agency administering the siting of aquaculture facilities, for example, must be aware of actions taken by another agency permitting offshore power generation facilities.

As the pressure for offshore uses grows, and before serious conflicts arise, coordination should be immediately improved among single-activity management programs that regulate location-dependent activities. The National Ocean Council will be well-positioned to review single-purpose ocean programs that regulate offshore activities with the goal of determining how such programs may be better coordinated. In addition, coordination of the management of *all* offshore activities is necessary—including those that are not tied to a specific geographic location. Any new offshore management regime will need to make sure that disputes are resolved and decisions made through an open process that involves the participation of all parties.

Building a coordinated offshore management regime will take time. It will not be easy. No regime for governing ocean activities will eliminate all conflicts, given the complexity of the problems and the diverse perspectives of competing interests. However, the National Ocean Council, President's Council of Advisors on Ocean Policy, regional ocean councils, and states provide the basis for more coordinated, participatory management of ocean activities. This new decision-making framework provides the opportunity—perhaps long overdue—for a broad dialogue among stakeholders at the national, regional, and state levels on a more coordinated and deliberate approach to managing activities in offshore areas. (The interests and roles of state and territorial governments in activities that take place in federal waters is discussed in Chapter 9.)

Box 6.2 Sunken Treasure: Our Underwater Cultural Heritage

As technology has improved, so has the ability to locate objects of historical, cultural, and financial interest on the seafloor. At least 50,000 shipwrecks are scattered about the territorial waters and exclusive economic zone of the United States. Other sites harbor the physical evidence of past cultures, preserved in inundated human communities. Many of these sites hold considerable archeological value, providing a tangible and unique link to our past. They are also attractive for recreational enjoyment and financial returns through salvage. Whatever their origin or value, all submerged objects are highly susceptible to burial, decay, and destruction.

Considerable controversy surrounds the complicated set of local, state, federal, foreign, and international laws related to the management of shipwreck sites. Commercial salvors rely on traditional admiralty law to support their right to locate, recover, and remove objects of value from shipwrecks. However, many archeologists argue that historic shipwrecks and other submerged sites, as well as the material recovered from them, are part of the world's collective heritage, and that the sale of artifacts deprives the public of important historical, cultural, and educational assets.

The lack of a comprehensive national strategy has exacerbated this debate. At least a dozen federal laws contain provisions relating or applied to historic shipwreck sites. Some apply in all U.S. waters, while others apply only in some zones, and still others apply only to certain agencies, or to specific types of sunken vessels, such as warships. There are also international agreements that apply to state-owned vessels submerged in the waters of another nation. However, there are currently no federal laws that assert ownership of cultural resources outside of state waters, or that claim jurisdiction over such resources outside specifically designated marine protected areas.

The new coordinated offshore management regime should incorporate a comprehensive policy on submerged cultural resources, including shipwreck sites. The offshore regime will need to balance the historical importance of certain sites with their potential recreational and economic value, preserving the most significant sites for future generations while leaving room for the recreational use and salvage of others. The establishment of a comprehensive national policy will also help in promoting an international regime for the use and protection of submerged cultural resources.

A Fair Return for the Use of Offshore Resources

The management of public resources generally includes issues of public compensation. Specifically, economists refer to the economic value derived from a natural resource as *resource rent*. In the ocean, a natural resource may be an area, a space, or a living or nonliving commodity. When a publicly-owned resource is made available to the private sector, fairness and efficiency argue for a return to the public of some portion of the rent received from the use of that resource. This principle has been clearly established on land, where the government collects rents from ranchers through grazing fees and from timber and mining companies through royalties. The government also collects revenues from outer Continental Shelf oil and natural gas

operations in the form of bonuses and royalties. In keeping with this concept, it is appropriate for the public to receive some return when private entities are allowed to benefit from ocean space and resources.

Recommendation 6–2. Congress, working with the National Ocean Council (NOC) and regional ocean councils, should establish a balanced, ecosystem-based offshore management regime that sets forth guiding principles for the coordination of offshore activities, including a policy that requires a reasonable portion of the resource rent derived from such activities to be returned to the public.

In developing an offshore management regime, Congress, the NOC, and regional ocean councils should:

- *adopt as guiding principles those set forth by the Commission.*
- *recognize the need, where appropriate, for comprehensive, single-purpose ocean governance structures, which would be based on the guiding principles of the new regime and integrated with other uses.*
- *include a process for addressing new and emerging activities.*

EMPLOYING MARINE PROTECTED AREAS AS A MANAGEMENT TOOL

Marine protected areas are one type of management tool the federal government can employ for locations and resources in estuarine, nearshore, and offshore areas in need of protection. A broad umbrella term, marine protected areas are created for many different reasons, including conserving living marine resources and habitat, protecting endangered or threatened species, maintaining biological diversity, and preserving historically or culturally important resources. These areas have also been recognized for their scientific, recreational, and educational values.

Marine protected areas can vary from restricting all activities to limiting only some uses. Examples of activities that might be restricted include oil and gas exploration and production, dredging, dumping, certain types of vessel traffic, fishing, and placing structures on the seabed. Marine protected areas can be set aside permanently or temporarily and can be implemented either seasonally or year-round. Even within a marine protected area, a particular activity may be allowed in one part of the area but not in others. Marine protected areas can be established and managed by a variety of agencies at the federal, state, territorial, tribal, and local levels, pursuant to a number of authorities.

Federal Efforts

The National Oceanic and Atmospheric Administration (NOAA) is authorized to develop and implement marine protected areas through several programs. NOAA's National Marine Sanctuary Program has had over thirty years of experience in area-based management. The thirteen marine sanctuaries included in the program cover over 18,000 square miles of ocean and coastal area—much of it in federal waters. Although the primary purpose of the sanctuary program is to ensure long-term protection of natural and cultural resources, the sanctuaries incorporate a number of interests and plan for a variety of uses while pursuing management, research, and public education activities. The program coordinates with local, state, territorial, tribal, and federal interests, and has experimented with a wide range of management techniques.
NOAA also administers the National Estuarine Research Reserve System, which is made up of a network of twenty-six protected estuarine areas, and manages a variety of fishery zones and area closures to protect critical habitat for selected species.

The U.S. Department of the Interior (DOI), through the National Park Service (NPS) and the U.S. Fish and Wildlife Service (USFWS), is also authorized to create and manage marine protected areas. NPS manages the National Park System, which includes national parks, monuments, and preserves in ocean areas, as well as ten areas designated as national seashores on the Atlantic, Gulf, and Pacific coasts, and four national lakeshores along the Great Lakes coastline. USFWS manages the National Wildlife Refuge System, which includes more than 500 wildlife refuges, many of which are located in ocean and coastal areas.

In 2000, an executive order on Marine Protected Areas directed NOAA and DOI to establish a Marine Protected Area Center. The Center is charged with developing a framework for a national system of marine protected areas and providing federal, state, territorial, tribal, and local governments with information, tools, and strategies for effectively designing and managing such areas. The Center has made progress in improving coordination and working to establish a national system of marine protected areas; however, further consolidation of the many related federal programs may be needed. Simplifying the multiplicity of marine protected area management regimes can lessen confusion, foster stewardship, and enhance enforcement. (Federal marine protected area programs are summarized in Appendix D.)

The Role of Marine Protected Areas

Marine protected areas are important tools for ecosystem-based management, although they will not in and of themselves deliver long-term sustainable use of the oceans. Other pressing problems will continue to require attention, including resource use outside protected areas, point and nonpoint source pollution, and intensive coastal development. For this reason, marine protected areas are most effective when they are designed within the broader context of regional ecosystem planning and adaptive management, and when they are employed in conjunction with other management tools.

When a marine protected area is determined to be the best approach for addressing ecosystem goals in a particular area, its design must take a number of factors into consideration. These factors include local, state, regional, and national objectives, ecosystem characteristics and threats, competing uses within the targeted area, ecological and socioeconomic impacts, and the capacity for effective implementation and enforcement of the protected area. Marine protected areas must also be designed using the best available scientific information to ensure that their establishment is likely to meet the intended objectives. Monitoring, periodic assessment, and modification are also essential to ensure the continuing effectiveness of marine protected areas and to remain accountable to affected stakeholders.

Although at times controversial, appropriately designed and implemented marine protected areas have proven useful. A 2001 report by the National Research Council concluded that marine protected areas can be effective in maintaining marine biological diversity and protecting habitats, and have the potential to provide a flexible, spatially-based management framework for addressing multiple ecological and socioeconomic objectives.[1] The report stated that, in particular, closing certain areas to fishing—temporarily, seasonally, or permanently—can advance sustainable fisheries management and provide insurance against uncertainties in fisheries science. Nevertheless, design and implementation of marine protected areas, like any other marine resource management measure, must be considered in the context of broader planning and the implementation of a coordinated regime.

National Interests

It is appropriate for marine protected areas to be designed and implemented with strong input from the regional, state, and local levels. However, because marine protected areas have the potential to affect issues of national concern, such as freedom of navigation, there will always be a need for national-level oversight. With its multiple use, ecosystem-based perspective, the National Ocean Council is the appropriate entity for overseeing the development of a uniform process to design, implement, and evaluate marine protected areas.

The design of marine protected areas should not unreasonably limit important national interests, such as international trade, national security, recreation, clean energy, economic development, and scientific research. For example, in most cases, freedom of navigation through marine protected areas should not be restricted. However, where some infringement on such national interests is deemed essential to achieving the purposes of a marine protected area, restrictions should be based on the best available scientific information, with a

plan for ongoing monitoring and modifications over time. The overall ecological and socioeconomic impacts of marine protected areas need to be assessed at the national level.

Recommendation 6–3. The National Ocean Council should develop national goals and guidelines leading to a uniform process for the effective design, implementation, and evaluation of marine protected areas.

The process should include the following:

- *marine protected area designations that are based on the best available science to ensure that an area is appropriate for its intended purpose.*
- *periodic assessment, monitoring, and modification to ensure continuing ecological and socioeconomic effectiveness of marine protected areas.*
- *design and implementation that consider issues of national importance, such as freedom of navigation, and are conducted in the context of an ecosystem-based comprehensive offshore management regime.*

Regional and Local Stakeholders

Part of the controversy surrounding marine protected areas stems from the impacts their restrictions can have on stakeholders. While some stakeholders recognize the benefits of creating such areas, others vigorously oppose the limitations on otherwise legal ocean uses. When designing and implementing a marine protected area, it is important to engage all regional and local stakeholders to build support for the proposed protected area and to ensure compliance with any restrictions it may impose.

Because marine protected areas are used to accomplish a broad range of objectives and have different meanings for different people, it is imperative that each proposed area has clearly defined goals and objectives that meet the needs of that particular area, but are also consistent with national goals and guidelines. Regional ocean councils, or other appropriate regional, state, and local entities, can provide a forum for applying the uniform process developed by the National Ocean Council to design marine protected areas. They can also facilitate stakeholder input and public discussion of the trade-offs inherent in implementing marine protected areas. Well-designed scientific studies at the design and review stages can assist in the evaluation of the potential impacts of marine protected areas on communities.

Recommendation 6–4. To create effective and enforceable marine protected areas, regional ocean councils and appropriate federal, regional, state, and local entities, should work together on marine protected area design, implementation, and evaluation. Planners should follow the process developed by the National Ocean Council, actively soliciting stakeholder input and participation.

[1] National Research Council. *Marine Protected Areas: Tools for Sustaining Ocean Ecosystems*. Washington, DC: National Academy Press, 2001.