CHAPTER 5: ADVANCING A REGIONAL APPROACH

The nation's ocean and coastal resources are affected by the cumulative impacts of human activities that span cities, counties, states, and sometimes nations. To move toward an ecosystem-based management approach, federal, state, territorial, tribal, and local governments should be able to respond to ocean and coastal issues in a coordinated fashion across jurisdictional boundaries. The voluntary establishment of regional ocean councils, developed through a process supported by the National Ocean Council, would facilitate the development of regional goals and priorities, improve responses to regional issues, and enhance coordination of federal and state planning and management activities on a regional basis. In addition, to meet the information needs of decision makers, regional ocean information programs are needed to develop and disseminate regionally significant research and information.

ADDRESSING ISSUES CROSSING JURISDICTIONAL LINES

Even though many pressing ocean and coastal issues take place on a regional scale, today's governance system is not designed to cross traditional political boundaries. Governments rarely consider impacts outside their immediate jurisdiction, although these borders seldom correspond with ecosystem boundaries. In addition, individual agency mandates are often too narrow in scope, sector-based, and poorly coordinated to address regional issues. Finally, broadly accepted regional goals—whether social, economic, or environmental—are not available to measure progress.

Despite these challenges, there are many instances where concern for the health of a particular ecosystem has motivated a wide range of participants to create new structures for addressing regional concerns. For example, the declining health of the Chesapeake Bay triggered a significant initiative by federal agencies, state and local governments, nongovernmental organizations, and other stakeholders to address the region's water quality and living resource problems. In the Pacific Northwest, a similar mix of governmental and nongovernmental entities have come together to reverse the decline in endangered salmon stocks. Efforts to address the growing hypoxic zone in the Gulf of Mexico have brought together several Gulf states, as well as states throughout the Mississippi River Basin. Likewise, U.S. island states and territories are collaborating to develop strategies to protect and preserve coral reef ecosystems. As these examples illustrate, regional efforts are usually initiated at the grassroots level in response to pressing, shared concerns.

However, there is a growing awareness that such regional approaches can benefit the health and productivity of all the nation's ocean and coastal regions. Focusing efforts within ecosystems, rather than political boundaries provides an opportunity for decision makers at all levels to coordinate their activities, reduce duplication of efforts, minimize conflicts, and maximize limited resources. It also promotes a sense of stewardship among government, private interests, and the public by encouraging a sense of connection with a specific area.

FACILITATING REGIONAL ORGANIZATION

Chapter 4 discussed the need for federal agencies to improve their coordination at both national and regional levels. Although this is important, the federal government is only one actor—and often not the most important actor—at regional, state, and local levels. As a result, one element of the U.S. Commission on Ocean Policy's proposed National Ocean Policy Framework is the development of improved mechanisms to encourage a wide range of participants (including state, territorial, tribal, and local leaders, and leaders from the private sector, nongovernmental organizations, and academia) to join forces in addressing issues of regional concern, realizing regional opportunities, and identifying regional goals. Such regional bodies would also provide a visible point of contact for federal agencies to communicate and coordinate with state and local decision makers.

A Flexible Process

Although regional processes should be initiated by those involved, rather than mandated at the federal level, broad national guidelines can facilitate the process and ensure consistency across regions. As discussed in Recommendation 4-10, the development of a flexible process to guide the voluntary creation of regional ocean councils will be a key function of the National Ocean Council, working with a wide range of other participants. A flexible approach will be necessary to meet the needs of the different regions, which vary dramatically in their environmental, political, social, and economic characteristics.

Recommendation 5-1. State, territorial, tribal, and local governments and nongovernmental participants should use the broad, flexible process developed through the National Ocean Council to begin the establishment of regional ocean councils.

The creation of regional ocean councils will be a complex and challenging endeavor. It should begin as soon as possible in those regions where readiness and support for a regional approach is already strong. The first councils can then serve as pilot projects, allowing everyone to learn what works and building support for broader implementation of regional ocean councils. Once established, regional ocean councils will most likely evolve, as participants identify the structure and functions that best suit their needs.

As the establishment of regional ocean councils gets underway, critical regional issues may arise that require immediate attention. In the absence of a regional ocean council, the National Ocean Council may convene ad hoc regional committees to make recommendations for addressing these issues. Once established, regional ocean councils will benefit from ongoing guidance, support, and interaction with the National Ocean Council.

Regional ocean councils, when voluntarily established under the process set forth by the National Ocean Council, may perform some or all of the following functions:

- designating ad hoc subcommittees to examine issues of regional concern.
- mediating and resolving disputes among entities within the region.
- developing more formal mechanisms for implementing decisions, such as interagency agreements, interstate compacts, or limited waivers of regulatory requirements.
- monitoring and evaluating the state of the region and the effectiveness of management efforts.
- building public awareness about regional ocean and coastal issues.
- facilitating required government approvals or permitting processes that involve several federal, state, and local government agencies within the region.

Regional ocean councils are not intended to supplant the functions or authority of any existing regional entity, such as regional fishery management councils. Rather, they will complement and enhance the effectiveness of current initiatives and provide guidance and support for future ones. Regional ocean councils will help ensure that issue-specific initiatives (such as regional dredging teams) and subregional initiatives (such as the Chesapeake Bay Program, the Florida Everglades restoration effort, or the CALFED Bay-Delta program) are carried out in harmony with one another and in a way that achieves larger regional goals.

Regional ocean councils will also have a role in helping ensure that offshore activities are planned and managed in an ecosystem-based context. Regional ocean councils should provide input to Congress during development of a coordinated offshore management regime. In particular, the councils will be important for engaging stakeholders in the design and implementation of marine protected areas. (Management of offshore uses, including the role of marine protected areas, is discussed in greater detail in Chapter 6.) Regional ocean councils will need to work with upstream decision makers outside their region on issues such as nonpoint source pollution. And in certain regions, including the Great Lakes, New England, the Pacific Northwest, and U.S. island territories, regional ocean councils may also need to work closely with other nations.

Regional Boundaries

Regional ocean councils should encompass relatively large areas with similar ecosystem features. Membership should include the many entities that participate in the management of activities within these areas. At a minimum, the boundaries of each regional ocean council should encompass the area from the inland extent of coastal watersheds to the offshore boundary of the nation's exclusive economic zone. The boundaries of the Regional Fishery Management Councils (RFMCs) may be used as a starting point in the process of developing each council, although these regions may not always be suitable. For example, more than one regional ocean council may be necessary along the Pacific Coast where there is only one RFMC. A regional ocean council for the Great Lakes region is also desirable.

ENHANCING REGIONAL RESEARCH AND INFORMATION

Decision makers at all levels need the best available science, information, tools, and technology on which to base ocean and coastal management decisions. However, research targeted at regional concerns, such as the origins and impacts of nonpoint source pollution or the practical application of ecosystem-based management, is severely limited. Furthermore, the data that do exist are rarely translated into products that will be useful to managers.

A 2002 National Research Council report concluded that there is insufficient support for regional research, due primarily to a mismatch between the size and complexity of marine ecosystems and the fragmented authority for coastal research.[1] New programs are needed to fill these gaps and provide support for regional management by federal agencies and by the state, territorial, tribal, and local participants in the regional ocean council process.

Recommendation 5-2. Congress should establish regional ocean information programs to improve coordination and set regional priorities for research, data collection, science-based information products, and outreach activities in support of improved ocean and coastal management. Program priorities should be carried out primarily through a grants process.

Regional ocean information programs:

- *should be developed immediately, independent from the voluntary and potentially more complicated process of establishing regional ocean councils.*
- *may be subsumed within the regional ocean council structure, where regional ocean councils are established.*

Functions of the Regional Ocean Information Programs

Research

The regional nature of ecosystem processes calls for improved regional-scale research programs. Regional phenomena such as the transport of nutrients, toxic chemicals, and pathogens through coastal watersheds, the cumulative impacts of development on coastal habitat and water quality, socioeconomic trends in coastal areas, and the potential for new beneficial uses are poorly understood, often due to institutional barriers in undertaking comprehensive research efforts. A report prepared by state-level coastal resource managers found that scientific information is required over spatial scales beyond state jurisdiction, at a level of effort beyond the ability of states to support, and over time scales longer than state governments generally act.[2] The regional ocean information programs will help fill the gaps in current research to increase the understanding of ocean and coastal ecosystems.

Data Collection and Observations

Substantial efforts have been focused on the design and implementation of a nationwide network of regional ocean observing systems. These regional ocean observing systems will form the backbone of the national Integrated Ocean Observing System (IOOS), which will provide routine and timely information about the ocean and coastal environments to multiple users. The regional ocean information programs should oversee operation of the regional ocean observing systems, ensuring that the design of these systems is based on the needs of user groups while adhering to national standards. Input from the users will be essential in determining which variables should be included as priorities in the development of the IOOS. See Chapter 26 for more information on the IOOS and on the role of regional ocean information programs in coordinating the development of the regional components of the IOOS.

A water quality monitoring network, discussed in Chapter 15, will also be linked to the IOOS to help produce assessments and forecasts of ocean and coastal conditions, as well as conditions farther up the watershed. Together, these observing systems will help determine cause-and-effect relationships between stressors and impacts, facilitate more informed ocean and coastal management decisions, and gauge the effectiveness of these decisions.

Information for Practical Applications

To be useful, data and scientific results must be presented in a manner that is easily understood and applied by decision makers. Such information products are currently developed by a number of entities including the National Oceanic and Atmospheric Administration's (NOAA's) Coastal Services Center, whose purpose is to bring information, services, and technology directly to coastal resource managers. Regional ocean information programs will help translate ongoing regional research and data collection into usable products through partnerships with experts in this area, including the NOAA Coastal Services Center and a proposed new joint NOAA–Navy information program discussed in Chapters 26 and 28.

Outreach and Education for Decision Makers

Notwithstanding the availability of research and data products, decision makers may need education and training to effectively use this information and take full advantage of technological innovations. Since its establishment in 1966, the National Sea Grant College Program has been at the forefront of partnering with academia, government, and the private sector in this type of outreach effort. Sea Grant's well-established extension and communications programs, familiar to many resource managers and others in coastal communities, should be the primary mechanisms for delivering and interpreting information products developed through the regional ocean information programs. Participation by other education and training programs, such as NOAA's Coastal Training Program, will also be important to accomplish the mission of the regional ocean information programs.

Regional Ecosystem Assessments

Assessments of the natural, cultural, and economic attributes of each region, including an inventory of the region's environmental resources and demographic characteristics, would be extremely valuable to decision makers. These assessments could also be used to establish baselines for ocean and coastal ecosystem health, allowing decision makers to analyze the impacts of human activities and management actions. The regional ocean information programs will be ideally suited to undertake such assessments by integrating existing assessments and inventories, identifying additional information needs, and sponsoring research and data collection efforts.

In addition to enhancing decision-making, regional ecosystem assessments would improve the process mandated under the National Environmental Policy Act (NEPA) which requires federal agencies to prepare Environmental Impact Statements (EISs) for proposed major activities. Currently, each agency must conduct an individual assessment of the state of the environment to determine the impact of a proposed activity or related set of activities. The development of a single, scientifically-based regional ecosystem assessment would reduce this duplication of effort and help ensure that every EIS is based on similar, comprehensive, and timely information about the region.

Assessments are also important to evaluate the cumulative impacts over time of many proposed activities. Although guidelines developed by the Council on Environmental Quality (the office responsible for overseeing NEPA implementation) require federal agencies to prepare cumulative impact evaluations for proposed activities, challenges in developing a consistent approach have made it difficult for federal agencies to meet this requirement. A comprehensive and periodically updated regional ecosystem assessment that analyzes the status of the affected region, establishes baselines of ocean and coastal ecosystem health, and describes existing and potential impacts from a range of human activities will enhance decision makers' ability to analyze cumulative impacts.

Recommendation 5-3. Each regional ocean information program, with guidance from the National Ocean Council, should coordinate the development of a regional ecosystem assessment, to be updated periodically.

Recommendation 5-4. The Council on Environmental Quality should revise its National Environmental Policy Act guidelines to require that environmental impact statements for proposed ocean- and coastal-related activities take into account any available regional ecosystem assessments developed under the oversight of the regional ocean information programs.

Administration of the Regional Ocean Information Programs

Oversight boards will be needed to administer the regional ocean information programs. Each regional board should be comprised of both information providers and users from federal agencies, states, nongovernmental organizations, academia, and private companies. Unlike the voluntary regional ocean councils, which will determine their own boundaries over time, fixed boundaries are needed upfront for the regional ocean information programs. The following regions indicate the spatial scale on which regional ocean information programs should be developed:

- *Alaska*
- *Insular Pacific* (Hawaii, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands)
- *Northwest* (Washington, Oregon, and California to north of Point Arena)
- *Central West Coast* (California from Point Arena to Point Conception)

- *Southern California* (California from Point Conception to the Mexican border)
- *Gulf of Mexico* (Texas, Louisiana, Mississippi, Alabama, and Florida's Gulf coast,)
- *Southeast* (Florida's Atlantic coast including the Florida Keys, Puerto Rico, the U.S. Virgin Islands, Georgia, South Carolina, and North Carolina to south of Cape Hatteras)
- *Mid-Atlantic Bight* (North Carolina from Cape Hatteras, Virginia, Maryland, Delaware, Pennsylvania, New Jersey, New York, Connecticut, Rhode Island, and Massachusetts to south of Cape Cod)
- *Gulf of Maine* (Massachusetts from Cape Cod, New Hampshire, and Maine)
- *Great Lakes* (Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin)

Each regional ocean information program should collaborate with other regions or nations as needed to investigate issues that transcend program boundaries. Representatives from all the regional programs should meet at least once a year to ensure that information is exchanged, regional observing systems share common design features and data protocols, and research results are widely disseminated.

Recommendation 5-5. Congress should establish regional boards to administer regional ocean information programs throughout the nation. Program priorities should be carried out primarily through a grants process.

Each regional board should:

- *be comprised of federal agency representatives, representatives from each state in the region, and a Sea Grant Director from at least one state in the region. Each board should also have territorial, tribal, local, and other stakeholder representation.*
- *develop a comprehensive plan for regional research, data collection, information product development, and outreach based on regional information needs and priorities, and submit the plan to the National Ocean Council for approval.*
- *solicit proposals to carry out elements of the approved regional plan, and distribute funds to government, academic, private, or other groups selected through an open and competitive process.*
- *oversee the regional ocean observing systems to fulfill the data collection requirements of regional plans while adhering to national Integrate Ocean Observing System requirements.*
- *ensure that product development, dissemination, and user feedback are integral components of the regional observing systems.*

Recommendation 5-6. The National Ocean Council (NOC) should ensure that adequate support is provided for the operation of regional ocean information programs.

Funding should come from these sources:

- *the Integrated Ocean Observing System (IOOS) budget should support the regional ocean observing systems. IOOS funds should be appropriated to the National Oceanic and Atmospheric Administration, with spending subject to approval by the NOC as discussed in Chapter 26. Because of their operational nature, regional ocean observing systems should receive long-term, multi-year funding to achieve stability.*
- *a comparable amount of support needed to carry out the other research and communication functions of the regional programs should come from coordinated contributions from federal agencies and new funds described in Chapter 30.*

[1] National Research Council. *Bridging Boundaries through Regional Marine Research*. Washington, DC: National Academy Press, 2002.
[2] Keeley, D., et al. "More Effectively Using Our Observing, Monitoring, Research, and Education Infrastructure." Paper prepared for the California and the World Ocean Conference, Santa Barbara, CA, October 2002.