

U.S. Commission on Ocean Policy  
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Washington, DC 20036

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Dear Commissioners,

The Estuarine Research Federation (ERF) is a scientific organization committed to excellence in estuarine and coastal marine research and the communication of scientific knowledge. Our more than 1500 members represent a cross-section of the research, education, and management communities within academic institutions, government, and the private sector. Our interest in understanding and advancing the well-being of estuaries and contiguous coastal systems is consistent with that of the U.S. Commission on Ocean Policy. We are grateful for the opportunity to provide input into the process that you have undertaken to develop recommendations for a coordinated and comprehensive national ocean policy for the President and Congress.

Since our initial statement at the first regional meeting in January 2002 at Charleston, SC, the Governing Board of the Estuarine Research Federation has followed the Commission's activities with interest. As the Commission nears the end of its public input phase, we appreciate the opportunity to provide you with this synthesis of our thoughts about the status and future of ocean policy. We are not able to provide specific recommendations for changing the structure of federal agencies or modifying federal laws, but we are hopeful that by identifying those issues of greatest concern and indicating actions that will likely lead to improvement, we will be making a useful contribution.

In your recently published Mid-term Report, you conclude that our coasts, ocean, and marine resources are in trouble and that development of a comprehensive National Ocean Policy is of utmost importance. We concur and recognize an essential need to make some fundamental changes in the current fragmented approach to managing and studying our coastal and ocean systems. Better coordination and efficiency within and among federal agencies and programs are necessary, and we favor the creation of a national ocean policy council to facilitate progress on many fronts. We envision such a council working with the National Academy of Sciences to develop much needed national strategies for environmental research, monitoring, and education.

Given the increasing growth of our population, economy, and stress on our estuaries and oceans, we believe that the nation has not made sufficient investments in acquiring the scientific information necessary to support the level of decision-making that we are facing today. There is much to discover and understand about coastal systems in order to achieve a long-term balance between often conflicting needs. There are many signs that natural systems are strained or failing. Until sufficient science is available to support decisions that potentially affect the health of our coastal systems, we recommend the precautionary approach to management.

In developing this input, our goal was to identify issues and problems of particular concern and suggest actions that may be used to address them. We recognized that several basic procedural changes need to be considered in defining a new national coastal and ocean policy.

- Policy and management must be based on ecological - hydrological units rather than on political boundaries.
- More emphasis must be placed on linking land-use and the management of aquatic systems. Future policy must integrate information and activities from the watershed to the ocean.
- Coastal and ocean management must make better use of existing scientific knowledge. Access to and translation of technical information must be improved.
- The link between science and management can be facilitated by establishing peer review as a standard procedure prior to the approval and implementation of major management initiatives or programs.
- Coastal and ocean education must be improved at all levels; a better-informed citizenry is a key element to the success of a national policy on the oceans.

In the sections that follow, we offer more specific observations and recommendations. These are organized according to the topical categories used in your document entitled “Towards a National Ocean Policy”. In the interest of brevity, we present these as statements without supporting rationale or discussion. We would be pleased to address any questions you may have about these statements.

**Living marine resources:**

A national strategy must be established for the protection of wetlands, seagrasses, reefs, and other coastal and ocean habitats.

Future management of fisheries species and stocks must be based on assessments of impacts on communities, habitats, and ecosystems as well as on individual populations.

Fisheries stock assessments and related scientific information must be supported at a level that enables the development of more reliable predictive models and sustainable management strategies.

Goals must be set to reduce overharvesting and the destruction of habitat and non-targeted species; all participants in the process must be accountable for meeting those milestones.

Marine protected areas (MPA's) should be evaluated as additional management strategies for reducing the overharvesting of populations, protecting habitat, and rebuilding fisheries stocks.

Increased research and regulatory oversight are necessary to reduce environmental impacts of aquaculture and introduced species in aquatic systems.

### **Pollution and Water Quality**

A national strategy for reducing eutrophication in our coastal and ocean systems is essential; it should be based on the need to reduce loads and directed by realistic standards and timetables for achieving specific goals.

New engineering and technological solutions must be developed to supplement traditional activity-based management efforts to reduce nutrient, contaminant, and sediment inputs to rivers and estuaries.

Economic incentives for implementing Best Management Practices in agriculture, industry, municipal and other land-based operations that discharge water and materials to coastal waters and the atmosphere may be necessary for making substantial improvements in water and habitat quality.

Management decisions regarding freshwater inflow to estuaries must include thorough assessments of ecological and economic impacts on rivers, estuaries, and coastal ocean systems.

### **Research, Exploration, and Monitoring:**

Increases in funding for basic and applied research in the following areas will yield information needed to address critical management needs:

- Understanding the natural and human dimensions of biocomplexity and the effects of climate change and variability.
- Investigating cumulative impacts of disturbances and the mechanisms by which changes in environmental conditions occur.

- Developing better indicators of stress in coastal systems.

Environmental monitoring programs must be more fully supported to increase our understanding of both natural changes and the consequences of management decisions in coastal systems.

More programs that foster collaborations between scientists representing different disciplines, engineers, and social scientists will be necessary to address broad and complex questions about our coastal and ocean systems.

The establishment of more research centers that facilitate interactions among academic, federal, and state scientists and managers of coastal systems and resources is likely to accelerate progress toward achieving balances between conflicting interests.

Significant investments must be made in the development of new research infrastructure and the maintenance of existing coastal and marine research laboratories.

Support for programs that train new scientists and provide more opportunities for career development for young professionals is critical to the future of our coastal and ocean systems.

#### **Education:**

Efforts to synthesize, translate, and disseminate scientific knowledge for use by decision makers, educators, and the general public must be increased.

The scope, content, and effectiveness of coastal and ocean education in schools must be improved; support for programs that increase ocean and coastal science literacy represent critical investments in our future.

Next generation scientists must be provided with sufficient training in the social sciences and economics to more effectively address complex issues and assist with policy development.

#### **Technology and Marine Operations:**

Expansion of the national network of coastal and ocean observing systems that integrate information from the uplands to the seas is central to the success of a new national coastal and ocean policy; observing systems must be coordinated at all levels, effective in predicting events, and responsive to management needs.

In this contribution, the Estuarine Research Federation has attempted to focus attention on a subset of issues and possible actions for improving coastal and ocean science, management, education, and the interactions between them. They represent our priorities,

and we hope that some of these suggestions will be incorporated and reinforced in the final report you will be developing in the coming months. We greatly appreciate the complexity and significance of your task, and we wish you success. We are grateful for the opportunity to participate in this process, and are eager and willing to assist you.

With best wishes,

The Governing Board of the Estuarine Research Federation

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