

**STATEMENT FOR THE U.S. COMMISSION ON OCEAN POLICY
BY THE
NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND-GRANT
COLLEGES
JUNE 25, 2002**

INTRODUCTION

The National Association of State Universities and Land-Grant Colleges (NASULGC)-- the nation's oldest higher education association--is pleased to provide input to the U.S. Commission on Ocean Policy (= The Commission).

Our overarching recommendation to the Commission is that the principles guiding development of a national ocean policy (consistent with the Commission's mandate) be based on the best available science, the free and open exchange of knowledge, and strengthened partnerships between government and the nation's research universities. We suggest means of accomplishing this in the following sections, relating to (1) the structure and organization of government; (2) the ability to monitor, assess, and respond to environmental and social change; and (3) mechanisms supporting discovery.

THE STRUCTURE AND ORGANIZATION OF GOVERNMENT

We urge the Commission to examine where realignment and consolidation of ocean-related government functions is attainable in a way that provides greater effectiveness and accountability. The current Federal structure for managing marine systems is in many ways dysfunctional, resulting in the best research, scientific, and technological assets being wasted, and the problems with ocean resources persisting.

Several models for reorganization are under discussion in the policy arena. One of these promotes: (a) development of a broad environmental and resource management arm built on a comprehensive approach to earth systems and ecosystems (combining parts of NOAA, the Department of Interior, the EPA, and the Coast Guard); and (b) development of a research arm combining NASA and NSF, with the research components of NOAA, the Department of the Interior, and other related agencies.

In choosing a new governing system, NASULGC recommends that the Commission adopt the following guiding principles:

- *Keep the research and regulatory arms separate while ensuring that the best available research results guide regulatory decision-making.* Mission agencies are driven by immediate needs, making it difficult to maintain long-range research activities. Thus, management decisions are more often motivated by political expediency than they are by an interest in sustained productivity and functioning ecosystems. The credibility of research suffers when such political agendas guide science. Science programs function more effectively when located separately from management and regulation.

- *Develop an efficient and integrative system of information exchange and coordination among federal agencies.*
- *Enhance State and local capacity.* Capacity — resources, funding, institutional structure, and expertise— at state and local levels is critical. The reality is that this is where most of the coastal resource challenges exist, and where the capacity to address these is the least. Federal resources must be invested to strengthen state and local capabilities.
- *Outreach & Extension* - Land-Grant, Sea Grant, and Space Grant have proven effective models for transferring knowledge to the local user. By being integrated with campus research and educational functions, these outreach entities have been the primary means of transferring new knowledge directly to users. We believe that marine/ocean outreach capability would be improved if NOAA would create a new Office of Outreach, Education and Public Engagement. The office would be at the Deputy Assistant Secretary level and would include at least three functional elements: (a) the National Sea Grant College Program, (b) a Division of Internal and External Liaison, and (c) a Division of Educational Affairs.**

THE ABILITY TO MONITOR, ASSESS, AND RESPOND TO CHANGE

Our continued ability to manage our coastal and ocean resources depends in large measure on our ability to monitor, assess, and respond to change in both natural and social systems.

- *We urge the Commission to foster some mechanism for encouraging interdisciplinary collaboration among institutions that monitor and assess environmental change, social change, and the interaction of the two.* For some 40 years, there has been a significant imbalance in the amount and quality of data available on the marine environment, compared to that available on the social and economic dimensions of the populated coast. Yet, where they meet is where most of the environmental impact occurs. Thus, high priority must be placed on determining with some degree of precision the contribution made to national wealth by coastal economies, and what it costs the nation in terms of environmental degradation of habitat, water quality, and living and other natural marine resources. New information so derived and when applicable should be immediately incorporated into management, necessitating that adaptive management strategies be adopted to incorporate new information.
- *We urge the Commission to develop global oceanic and, atmospheric observatories with support for effective data management and assessment.* The technology exists to develop a large-scale ocean observation and monitoring system with the potential to improve ocean,

** See "A Mandate to Engage Coastal Users", A Review of the National Sea Grant College Program, November 2000, National Sea Grant Extension Review Panel.

weather, and climate prediction. Improved predictions are critical to protecting life and property, ensuring consistent transportation, and providing for the development of sound public policy. However, any ocean observing system must be designed in the context of its application to social, economic, managerial, and engineering systems. The diverse disciplines represented at our universities can make major contributions to the design and implementation of such systems, including data management support.

- *We urge that the outreach models, both university-based and non-university, serve as the vehicle for disseminating information simultaneously among jurisdictions (from local, to regional, and national levels) about those natural (e.g. hurricane) or human-induced (e.g. eutrophication) events that may be locally derived but ultimately affect the entire nation.*
- *We urge the Commission to embrace an ecosystems-based approach to management for all of the nation's marine resource activities, including environmental and human dimensions as well as mechanisms for adaptive management.* The advent of new technologies has made ecosystem modeling not only technically feasible but also scientifically compelling. Ever-improving computer capacity and observational capabilities have allowed resource managers to integrate large-scale physical and biological models over long-term time frames. To be sure, progress will depend on additional technological advances, improved insights into the complex interactions of human beings with the rest of the ecosystem, increased monitoring and assessment, and broader dialogue among diverse parties—including those who use marine resources, those who benefit from their use, and those interested in sustaining those resources for future generations.

Implicit in developing an ecosystem-based approach is the concept of spatially explicit management tools. Thus, we support the development of a comprehensive plan of marine zoning from the shoreline throughout the Exclusive Economic zone that encompasses all coastal and marine-related activities. Zoning in the coastal and ocean realm could help solve many of the interjurisdictional and allocation problems associated with managing natural resources, and could incorporate aspects for the protection of biodiversity and ecosystem structure and function.

MECHANISMS OF DISCOVERY

Discovery in this sense of the word is intended to include scientific discovery as well as communication of findings to the broader scientific and lay communities interested in using marine resources, benefiting from their use, or preserving ecosystem integrity.

We urge the Commission to promote mechanisms for sustaining a strong, comprehensive program of research on all dimensions of the natural and social systems of the oceans through a consortium of university- and agency-based cooperative agreements and joint centers. This requires a diverse support base ensuring close collaboration in basic, applied, and technological research. This program would be structured in such a way that it has a built in mechanism for sharing new findings with the broader scientific community (internationally, as well as nationally) and lay community through outreach and education.

International Information Exchange

- *We urge the creation of a World Ocean Organization under the auspices of the United Nations to spearhead international cooperation on technical issues related to ocean management, including ocean and climate forecasting, hazard prediction, living resource management, and other issues.* This body could be modeled after the highly successful World Meteorological Organization, which has played a major role in global improvements to weather forecasting capabilities, data accuracy, and the timeliness of information exchange, as well as training of personnel.

National Personnel Training

- *We urge holding a major White House Conference and the establishment of an office or designated staff person in the National Economic Council to develop a long-term national strategy addressing declining workforces in Federal agencies that deal with ocean issues.* Over half of the Federal scientific workforce will be eligible for retirement over the next decade. Yet retirees are not being replaced at a comparable rate with new talent. While our universities educate and train students in the core scientific disciplines necessary for replacement, the Federal government is incapable of competing successfully with the private sector to attract graduates. Some areas—such as resource economics—are already experiencing personnel shortages. A White House conference would elevate this issue, reveal its urgency, and allow government agencies, industry, and universities to define workforce needs and educational opportunities.
- *We urge the creation of a National Graduate Fellowship Partnership between Federal Agencies and Universities.* New talent needed to fortify the declining workforce could be attracted through federal investments in (1) new, innovative graduate programs in marine-related areas that emphasize an interdisciplinary approach; (2) a National Graduate Fellowship Program, with fellowships awarded competitively to students in the natural, physical, and social sciences; and (3) internship programs that bring students into the ocean governance system at all levels.

CONCLUDING REMARKS

The work of the Oceans Commission is vital for the future of the global ocean and life on this planet. Some critical objectives may be immediately addressed, while others will take much longer. Some goals will not be easy to achieve, but they should be enunciated in order to stimulate thought and energy for the long term.

We believe that the Commission's report should be a beginning of a process, and not an end. It should establish a framework for an ongoing national and international dialogue that unfolds in the coming decade. We appreciate the opportunity to assist the Commission through the presentation of this testimony. We would be glad to discuss these issues in greater detail as the Commission continues its deliberations. For further elaboration on any issue contained in this report, please contact us.