

**Statement of Richard F. Delaney
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**US Commission on Ocean Policy
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I am Richard F. Delaney, Director of the Urban Harbors Institute at the University of Massachusetts Boston. I am pleased to have this opportunity to offer the following comments and recommendations for your consideration as the Commission conducts its review of US ocean and coastal programs and activities and develops a comprehensive ocean policy.

Introduction: I have served as founding Director of the Urban Harbors Institute since 1989 and previously served as the Assistant Secretary in the Executive Office of Environmental Affairs in Massachusetts and the Director of the Massachusetts Coastal Zone Management Program from 1980 to 1989. During much of that period, I also served as National Chair of the Coastal States Organization representing the Governors of the 35 coastal and Great Lake states and US territories regarding legislative and budgetary matters before the Congress.

Utilizing policy, scientific, planning and management expertise, the Urban Harbors Institute (UHI) assists government agencies, coastal communities and the private sector in tackling the problems and issues associated with harbors and their adjacent land and water resources. UHI conducts public policy research, provides technical assistance, offers public information and education activities and provides linkages among the faculty and resources of the University and the rest of the community.

With regard to marine research, science education, and public outreach, the University of Massachusetts is the Commonwealth's trailblazer. Over twenty years ago, the University of Massachusetts Boston recognized that one of the most promising frontiers for advancing science and education would occur at the interfaces of disciplines, and established its first graduate program in Environmental, Coastal, and Ocean Sciences (ECOS). The ECOS Department is unique in that it brings together faculty with expertise in biology, chemistry, physics, geology, economics, management, planning, law, and policy into a single academic department to effectively address environmental, coastal and ocean science issues, solve management problems, and advance scientific understanding, education and public outreach.

The success of the UMassBoston's educational program was exemplified in 1999, when two ECOS graduate students received the Congressionally authorized Walter B. Jones Memorial Awards from NOAA for excellence in coastal and marine graduate study. Only eight of these awards were given nationally.

During the past year, the University of Massachusetts system adopted the ECOS model and established its first inter-campus school, the University of Massachusetts Intercampus Graduate School of Marine Science and Technology (IGS). The IGS supports the marine research and educational activities of 79 professors at 22 facilities spanning the Amherst, Boston, Dartmouth, and Lowell campuses.

Summary of recommendations: The following recommendations are organized to correspond with section 2 “ purposes and objectives” of the Oceans Act of 2000. Further context is provided later in the statement and the Institute would be happy to provide additional, more specific information on any issue as requested.

1. The National Flood Insurance Program is the classic example of contradictory federal policies and should be reformed to eliminate the costly subsidization of development in coastal hazard prone areas. The funding saved should augment a new very substantial land acquisition program dedicated to the protection of coastal critical habitats, open space and public access.
2. A new ocean policy should include a national system of marine protected areas that would provide the framework for comprehensive management of critical areas and a forum for agency coordination as well as opportunities for the application of stewardship principles while balancing the increasing number of competing uses of ocean resources.
3. Marine water pollution emanating from land based activities must be addressed at all levels of government as an integral part of ocean policy and include the full enforcement of the Clean Water Act including final promulgation of nutrient standards and storm water management practices and support for local and state initiatives to implement smart growth land-use and planning strategies.
4. United States port and harbors will face some of the most challenging management issues in the next decades as world shipping doubles, competing uses of waterfront intensifies, and water quality is recognized as economically valuable. The use of Comprehensive Harbor Management Plans should be utilized to reach consensus on water quality restoration plans, dredging strategies, maritime economic development activities and public waterfront uses.
5. Enhanced research and education capabilities and expanded public information and outreach efforts need to be supported as a basis for improving decision-making about ocean resources and encouraging a broad based ocean constituency as keys to successful long term US ocean policy.
6. US energy policy is inextricably linked to a successful ocean policy. To assure the long-term health of ocean systems, any new ocean policy initiative must be accompanied by a progressive energy policy that emphasizes conservation and renewable energy including an assessment of ocean and Great Lakes based renewable energy sources.

7. Institutional, budgetary and governance aspects of coastal and ocean resources must be elevated as a national priority and implemented through an integrated approach led at the federal level by a new, independent Ocean Agency with a Congressional mandate to ensure the protection and sustainable use of coastal and ocean resources.

8. The United States has numerous opportunities to regain its leadership position in the international arena beginning with the ratification of the United Nations Law of the Sea Convention and the Kyoto Treaty and supporting the ocean and water quality provisions that are to be presented at the World Summit on Sustainable Development in Johannesburg, SA in August 2002.

1. Protection of life and property against natural and manmade hazards

The prime example of contradictory federal policies is the National Flood Insurance Program that continues to subsidize insurance policies for development in often hazard prone coastal areas in direct conflict with other federal and state initiatives to reduce the degree of risk in these areas as such Coastal Barriers Resource Act. The examples of repeated claims and rebuilding homes, seawalls and other structures are all too numerous. In addition to the extensive environmental costs caused by this inappropriate development, the NFIP represents one of the largest potential liabilities against the US budget. This situation is only going to be exacerbated in a twin pincer movement of people moving to the coast while the rate of sea level rise accelerates and causes more erosion and flooding in these same areas.

The elimination of the Nation Flood Insurance Program or, at a minimum, drastic reforms so that it does not continue to subsidize development in these areas would be one of the most effective means for both growth management and potentially very significant cost savings for the federal government. Further, rather than federal funds being spent to maintain private residences and structures along the coast, they should be re-directed to augment a new major dedicated acquisition program to preserve critical habitats and public open space.

2. New ocean policy should include the use of marine protected areas as a means of achieving responsible stewardship.

A new ocean policy should include a national system of marine protected areas that would provide the framework for comprehensive management of critical areas and a forum for agency coordination as well as opportunities for the application of stewardship principles while balancing the increasing number of competing uses of ocean resources.

All ocean resources management issues, including the complicated and controversial issue of fisheries management, should incorporate the precautionary principle when uncertainty prevails; avoid destructive practices that fundamentally destroy the basic ecosystem resources or reduce it biodiversity; and strive to base all management decisions on the best available scientific data.

3. Land based activities and development patterns continue to represent very significant sources of marine pollution and a threat to the health of coastal waters.

Coastal and ocean water pollution problems are largely the result of our population's demographic march to the coast accompanied by irrational sprawling development patterns that encourage among a host of other impacts. It is not just that the raw numbers of people in coastal areas is increasing; it is that they are consuming more land, producing more waste and using more fossil fuel energy by driving many more miles with less fuel efficient automobiles. The cumulative impact of the coastal ecosystems has been severe and will continue to escalate unless managed in a more sustainable manner.

Existing Clean Water Act provisions should be fully enforced and quickly complemented with the implementation of storm water regulations and the addition of regulations to control nutrient loading of coastal waters and estuaries. Nutrient pollution and nitrogen in particular with its range of negative impacts on the health of coastal waters via land runoff and atmospheric deposition may be the single most important pollutant to address today.

In addition to regulations, US ocean policy should include increased federal commitments to assist and support local communities and states to proactively implement sustainable growth strategies with more sustainable transportation, energy and fiscal policies.

4. The use of Comprehensive Harbor Management Plans should be utilized to reach consensus on water quality restoration plans, dredging strategies, maritime economic development activities and public waterfront uses.

Coastal harbors provide the conduit or nexus between the myriad of land based activities and coastal and ocean resources as well as a microcosm of the complex overlay of agencies, regulations and competing economic, social and political interest that come into play with most management issues. In Boston Harbor, CZM Harbor Management Plans, National Estuary Program, and City Maritime Economic Development plans all contributed to consensus building, agency coordination and ultimately the successes that now accrue in the harbor. Some of the lessons learned may be instructive for the Commission's deliberations.

- Institutional capacity: a new, independent authority, which had sufficient financial autonomy and technical capacity to implement the remedial action plan ultimately, proved necessary. An Ocean Agency to provide the similar leadership and coordination of US coastal and ocean programs and activities should be considered.

- Understanding Boston Harbor within the dynamics of the larger ecosystems of Massachusetts Bay and the landside watersheds was another important factor in several of the management decisions. The existence of a Massachusetts Coastal Zone Management Program and a National Estuary Program provided a more comprehensive policy framework and perspective beyond the harbor to the watersheds and ocean. Both are predicated on intergovernmental coordination and designed to provide mechanisms for multi-agency cooperation and information exchange.
- Using sound science to support rational decision-making is best illustrated by the debate about siting the 9-mile sewage outfall pipe. Responding to some public skepticism about its long-term impacts, an independent group of scientists including UMass Boston faculty designed a comprehensive outfall monitoring program and its implementation was assigned to Battelle, an independent research firm. Any violations of standards are reported to all interested parties via a public website and trigger certain contingency actions. This use of credible, independent scientific expertise has provided the confidence and public support to move the project forward.
- It is now clear that clean water, even in a harbor with port facilities, can add economic value. Restored Boston Harbor waters have been a catalyst for waterfront development, increased recreational activities, reopened fisheries, an innovative Boston Harbors National Park and generated other economic benefits for the City of Boston. At the same time, this prosperity has created a number of user conflicts along the waterfront; however, utilizing a CZM harbor management and planning program, the various stakeholders have had worked toward a common vision and development plan for the waterfronts.

At the same time port authorities and operators are increasingly adopting comprehensive environmental techniques and working in partnership with other harbor stakeholders to contribute to healthy harbors. Our recent study, *Green Ports: Environmental Management and Technology at US Ports* identifies 32 of the more innovative and successful projects undertaken by port operators.

5. Expand research and education capabilities and public information and outreach, as a basis for improving decision-making about ocean resources and encouraging broad based ocean constituencies are keys to successful long term US ocean policy.

Our research and laboratory capacity must be greatly enhanced so that we can better measure and assess the interactions between the natural environment and the human health. We need to understand empirically how man-made changes to the natural environment effect people. The next round of impacts on the oceans is already underway with the introduction of more pharmaceuticals and endocrine disruptors into our waste stream and ultimately coastal waters. The cumulative impacts of these substances on water quality and marine resources may initially be far more subtle and difficult to detect, yet possibly producing serious ecosystem effects.

The National Council for Science and the Environment has released a report from its national conference entitled “*Recommendations for Improving the Scientific Basis for Environmental Decision-Making.*” I endorse and recommend to the Commission many of the report’s recommendations especially the calls to: emphasize interdisciplinary approaches, increase investment in environmental science and engineering, conduct period knowledge assessments (state of the science), focus on the interface or translations between scientists and policymakers, adopt science based education at every level of education; and integrate environmental knowledge, assessments, research information and communication. The oceans are in need of an informed and effective constituency if they are to remain healthy and productive.

The Council’s report validates UMass Boston’s fundamental approach to education, which embraces the concept that solutions to environmental problems must be based on economic realities, societal acceptability, and legal authorizations, as well as on high quality research and education in the natural sciences. Graduate students at UMass Boston are not only trained with an expertise in a specific discipline but also with the interdisciplinary skills needed to work in teams to address environmental issues, and to pursue career paths in government, regional, national and international organizations, and the private sector, as well as academia.

6. Ocean policy is inextricably linked to US energy policy, which must be shifted away from fossil fuels to more renewable sources and conservation technologies and practices.

Essentially, every issue discussed above relates to energy. The Commission should provide every possible incentive and encouragement for the Congress and the Administration to forcefully address the global climate change issue. The impacts of climate change on coastal areas are wide spread and will continue to offset and possibly outpace all of the benefits that a new and improved ocean policy could produce. Continuing to increase US emissions of greenhouse gases, as the recent studies announced by the administration predict, will only accelerate the rate of sea level rise, increase atmospheric deposition of nitrogen into the nation’s estuaries speeding up eutrophication and impacting fisheries and on and on. Much of US ocean policy has been driven by the search for oil and gas reserves. It is time to shift to renewable energy and conservation for the ocean’s sake as well as security reasons.

A sound ocean policy must depend on a progressive energy policy that emphasizes conservation and renewable energy including an assessment of ocean and Great Lakes based renewable energy. A comprehensive planning, assessment, and site identification process to help locate offshore facilities (wind farms, wave generators, tidal power) is needed to address resource impact issues and minimize user conflicts. Some of the huge federal subsidies and tax incentives that continue to support the production and burning of fossil fuels should be shifted to support the development of renewable energy as a central element of new, more sustainable ocean policy.

7. Institutional, budgetary and governance aspects of coastal and ocean resources must be elevated as a national priority and implemented through an integrated approach led at the federal level by a new, independent Ocean Agency with a Congressional mandate to ensure the balanced and sustainable use of coastal and ocean resources. The new framework should include the following provisions:

Support and coordinate with local initiatives: Some of the most productive and effective applications of coastal and ocean policy have occurred at the local level where a community takes responsibility for the stewardship of its natural resources. Massachusetts and many CZM programs include a provision for the simple designation of a particular area as being “environmentally special or critical” which has often served as a rallying point for local citizens to engage in numerous programs and actions to provide the corresponding level of protection and management. Just one example, the designation of Waquoit Bay on Cape Cod has been followed by the adoption of stronger zoning by-laws, the acquisition over a thousand acres of open space by the state, the siting of a National Estuarine Research Reserve and federal acquisition of adjoining upland watershed areas. The simple act of designation, a statement that Waquoit Bay is important, was the catalyst for action and full utilization and coordination of numerous existing programs and management resources.

Build on the success and experience of state CZM Programs. Any new or revised ocean polices should incorporate and build on the success coordinating mechanisms provided by the CZM Act and the 33 state programs around the US and it territories. As discussed above, many of the keys to ocean policy originate on land and in addition, many state CZM programs have already focused on ocean management schemes and plans.

When a state goes through the section 305 and 306 planning process to establish a CZM program (i.e. a comprehensive and coordinated strategy for management, balance, use etc) it must clearly describe the policy objectives /goals; the laws, regulations and programs that it will employ to achieve the goals and mechanisms for coordination of the local and state agencies that will be involved with one agency designated to lead. The same exercise has yet to be conducted by the federal government and NOAA should be empowered and financed to do just such an exercise.

Build on and fully implement existing governance and budgetary mechanisms and seek new partners. Despite three decades of calls to action, increasing coastal populations and risks to our ocean resources, the US Congress continues to respond with no significant increases in funding or bold legislative initiatives. The most definitive means of protecting the diminishing coastal habitats and sensitive ecosystems is outright acquisition. The economic benefits of healthy coastal and ocean systems are now quite evident and warrant the federal investment of funds.

The new ocean policy regime will require the active participation of new partners at the federal level. For example, public health agencies and issues need to be more closely tied to ecological health as evident in shellfish contamination, public beach closures,

aquaculture related issues and others. The Department of Defense may be the largest single landowner of coastal property and thereby well positioned to be a model steward and resource manager with its great technical expertise, substantial share of the federal budget and an executive order to adopt more environmentally sound practices.

8. Regain the role of the United States as a leader in international coastal and ocean activities.

The cause-and-effect relationships among global ocean systems are becoming better understood and require the US to be actively involved and supportive of international ocean initiatives. Recent reports identifying dust blown from the growing Sahara desert across the Atlantic carrying microbial and chemical contaminants that may contribute to coral reef degradation in the Caribbean is just one dramatic example.

More immediately, the United States has numerous opportunities to regain its leadership position in the international arena beginning with the ratification of the United Nations Law of the Sea Convention and the Kyoto Treaty and supporting the ocean and water quality recommendations that are to be presented for adoption by the world's leaders at the World Summit on Sustainable Development in Johannesburg, SA in August 2002.

Conclusion: We all appreciate your Commission's work and existence and the fact that we now as a nation have an opportunity to aggressively and boldly deal with the current and future state of our invaluable coasts and oceans. The last such opportunity clearly provided an array of tools, which have been used to varying degrees of effectiveness; yet many of the core problems that drive the issues remain and grow in intensity.

The Stratton Commission responded to red flags such as the Cuyahoga River burning, coastal estuaries being filled, and whales being hunted to near extinction. No doubt some progress has been made; yet today, your Commission must address similar and new issues and at a scale perhaps not even anticipated in the 1960's such as global climate change, the rapid growth of sprawling development along the coast and fish stocks pushed to their limits of reproduction.

This is not a simple exercise of agency coordination although it starts there. Your work and report should also be a clarion call for the fundamental changes that will lead to sustainable coastal communities and oceans and by the moral obligation that we all share to preserve for future generations the health and productivity of 71% of the earth.... its oceans.

Thank you very much.