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INVENTING INSTITUTIONS FOR THE OCEANS

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INTRODUCTION

Both the Pew Ocean Commission (2003) and the U.S. Commission on Ocean Policy (2004) do an excellent job documenting the cumulative picture of loss and decline in America's ocean and coastal resources. Taken together, their recommendations for a comprehensive policy framework pursued through strengthened federal responsibilities follow reasonably from their inventories. However, the inchoate, fragmented nature of marine interests in the United States does not auger well for promulgation of a coherent national ocean policy. The one constant in marine policy, however, has been a commitment to research. This discussion suggests that the best opportunity for realizing the nation's ocean policy interests is through a significantly expanded research commitment pursued through a new institution, an independent National Institute for Coastal, Ocean, and Atmospheric Research (NICOAR).

BACKGROUND

Recommendations for reform and innovation at local, regional, state, national, and international levels are prominent features of the Pew Ocean Commission and U.S. Commission on Ocean Policy reports. Many of these proposals seek to rationalize and streamline the fragmented cluster of laws, policies, and institutional arrangements that members of both commissions and academic ocean policy experts argue undermine the effectiveness of the nation's ocean policy. (Cicin-Sain and Knecht, 2000) These policies target specific problems (fisheries management, water quality, habitat loss, beach erosion) or geographic locations (estuaries, water sheds, the coast, beaches).

Although they have the ocean in common, the ocean as a generalized entity does not inspire collective action. Unlike the fairly stable cluster of participants, organized interests, and key agencies that comprise most effective policy networks, those involved in ocean issues are limited and generally committed to specific issues. Moreover, the issue networks that might link them are weak and poorly developed . Ocean issues claim a miniscule part of the federal budget, are largely out of public view, tend to be broken down into compartmentalized policy units, or are subsumed under more expansive policy umbrellas such as transportation, commerce, national security, and energy. Simply put, there is no coherent ocean policy because despite the diversity of ocean interests "there is no closely related or coherent bundle of issues to which most [ocean] people respond and around which they might be organized. Thus, there is no natural constituency around which to form a broad-based, [ocean] coalition." (Bonnen, 1992, p. 198; See also, Mann, 1991; May, Jones, *et.al*., 2005)* The most telling confirmation of this profile is the

absence of a national organization that speaks and acts politically on behalf of a broad-based ocean coalition.

The quest for a coherent ocean policy is destined to fail. The diffuse nature of ocean issues, the number of federal, state, and local agencies involved, the absence of large, politically savvy interest groups, and the lack of a unifying objective all militate against it. Invocation of the "coast" or "oceans" as rallying points for group action are simply too diffuse to rally the sustained attention of a well-organized coalition driven by explicit political interests. There is, however, one dimension of the ocean policy arena where there has been consistent interest group advocacy, continuity of support, and a strong rationale for a sustained public investment: research.

THE ARGUMENT

Although research is the one stable feature of the ocean policy arena, it has not been adequately supported to meet needs addressed by the two ocean commissions and more specific expert assessments. Research is a short-hand for a broader term, mechanisms of discovery, which embrace the institutions of knowledge production, the social systems of science, the infrastructure for the advance of knowledge, the practice of basic and applied research, and the means for distributing the results of these inquiries. Like all of ocean policy, marine research is scattered throughout the federal structure, and, with the possible exception of the National Science Foundation (NSF), focused mainly on problems of the mission agencies that support the work. The existing structure of federal research support for marine-related university research (where most advanced research takes place) is fragmented, limited in the range of disciplines and topics that are eligible for funding, and restricted by agency mission requirements. Under this regime, the opportunities for long-term, sustained investment in innovative lines of marine-related research will continue to be severely limited. The nation requires invention of a new institution to provide the research foundation for future ocean uses, not just incremental changes to existing organizations.

SOCIAL INVENTION AND A NEW INSTITUTION

Social inventions, like their counterparts in technology draw on the past. They borrow, mix, and recombine often familiar ingredients – ideas, practices, relations between groups and individuals – so that something new and different emerges. For example, in the case of the National Sea Grant College Program the designers drew on the land grant model of applied research, application, and outreach, expanded the scope to embrace the full range of disciplines required to advance uses of the sea, achieved state support through a matching funding requirement, and developed operating procedures based on the experience of the National Science Foundation and the Office of Naval Research. None of these parts was especially novel by itself. Once they came together, however, they produced a pattern of government and university relations quite different from those already in place to support marine research, one that proved flexible and productive for pursuing the nation's coastal interests. (King, 1985)

It's now time for a new invention to accelerate research bearing on the coasts, oceans and atmosphere. Such an institutional innovation would address several critical deficiencies

in the current structure of support for the marine sciences. First, with the exception of the National Science Foundation, agency research agendas have been set largely by their mission requirements. These are often short-term, specific, and subject to changing priorities of new administrations. Consequently, innovative research with potential long-term implications does not receive reliable, sustained support. Many disciplines, and mixes of disciplines, with the potential to make major strides in marine studies, lack a federal home for funding. Indeed, even in the case of NSF, research support has been directed primarily to a fairly narrow spectrum of topics defined by traditional academic oceanography. Sea Grant, despite its mandate to support a broad spectrum of disciplines, is inhibited by its emphasis on small-scale, applied projects within a woefully small budget for research. Second, mission agencies typically give priority to funding in-house laboratories at the expense of competitive external support of university investigators. Third, this fragmented, mission-oriented approach to marine research undermines the national interest in a sustained program of support to train future generations in marine and atmospheric studies. Finally, although the U.S. Commission on Ocean Policy addresses the central role of research in advancing understanding, use, and management of marine resources, it does so only within the existing agency framework and at a far too conservative level of investment. These limitations on the nation's marine research capabilities can best be tackled through the invention of a new independent ocean agency, a National Institute for Coastal, Ocean, and Atmospheric Research (NICOAR).

A NATIONAL INSTITUTE FOR COASTAL, OCEAN, AND ATMOSPHERIC RESEARCH (NICOAR)

Congress will establish the Institute with the charge to support research across the full spectrum of disciplines required to describe, understand, predict, and manage the complex natural, physical, social, and economic relationships that characterize the coastal margin, oceans, and atmosphere. In addition it will support education, training, and analytical research required to improve understanding, use, and management of marine, coastal, and atmospheric resources. The models for the Institute are the National Institutes of Health (NIH), the Office of Naval Research (ONR) and the National Science Foundation (NSF). Their record of research in the service of the national interest is extraordinary, in particular, their success in enlisting the nation's universities and research institutions in advancing all areas of science. An independent National Institute for Coastal, Ocean, and Atmospheric Research (NICOAR) would draw on the precedent of ONR, NSF, the National Endowment for the Humanities (NEH) and the National Endowment for the Arts (NEA) for its independent status, and on the historical operating experience and management styles of ONR, NIH and NSF. Key characteristics will include:

- Investigator initiated, competitive, peer-reviewed proposals;
- Strong emphasis on inter-, trans-, and multidisciplinary approaches;
- Support for the full spectrum of topics, approaches, and disciplines embraced by coastal, ocean, and atmospheric studies;

- Flexibility required to fund short-term and long-term basic and applied studies on all temporal and spatial scales appropriate to the subject under study;

- Emphasis on education through research projects and innovative educational programs at all levels;

- Ability to provide support for infrastructure development at colleges and universities to advance marine and atmospheric research and education;

- Close coordination and collaboration with other marine and atmospheric mission agencies and the National Science Foundation in the development of research, education, and training programs.

Mission agencies would continue to support both in-house and external research directly relevant to their mandated responsibilities.

Initially, the Institute will have three major divisions and one bureau: (1) a Division of Research, to be organized according to major areas of research; (2) a Division of Education and Training; (3) a Division of Technology, Infrastructure, and Support; and (4) a Bureau of Statistics and Indicators. The Bureau will fulfill the critical goal of developing, collecting, and maintaining statistics on demographic, economic, land-use, and management of coastal and ocean resources. It will combine key features of the U.S. Census, opinion surveys, and the NSF's science indicators series to provide the detailed, longitudinal data required as the basis for prudent coastal and ocean policy.

CONCLUSION

The diffuse, fragmented nature of ocean policy interests works against the establishment of a well-integrated, comprehensive national ocean policy. However, the creation of NICOAR can provide continuity, cohesion, and intellectual strength to the nation's ocean interests by ensuring steady advances in understanding, new economic uses, and a highly trained cadre of scientists and resource managers that goes far beyond the capacities of existing programs. At the same time, the responses to the proposal are predictable: there's no crisis that compels government to act; it's already being done, just give us more money; we don't need to duplicate work that's already being done; and so on. A more appropriate response asks whether society can invent new public institutions that anticipate the future in the absence of crisis; whether programs now in place are meeting current and emerging national needs; and whether it's possible for folks to imagine what our understanding of the oceans, coasts, and atmosphere might look like after three decades of an independent National Institute for Coastal, Ocean, and Atmospheric Research.

*He was writing about the lack of a coherent rural policy, but because the same could be said for the oceans, I took the liberty of inserting "ocean"for his original "rural".

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