

*Moving Ahead on*

# OCEAN GOVERNANCE

*Summaries of Papers*

*The Ocean Governance Study Group*



Analyses for Improved, Integrated  
Governance of Oceans and Coasts

*University of Delaware  
Lewes, Delaware  
April 9-13*

**1994**

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**OCEAN GOVERNANCE**

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SUMMARIES OF PAPERS FROM THE 1994 OCEAN GOVERNANCE STUDY GROUP  
CONFERENCE HELD AT THE  
UNIVERSITY OF DELAWARE, LEWES, DELAWARE, APRIL 9-13, 1994

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## INTRODUCTION

### *The Ocean Governance Study Group*

The Ocean Governance Study Group (OGSG) was founded in 1991 by some thirty ocean policy experts from throughout the United States, dedicated to linking scholarly and policy-oriented studies to the task of developing a new vision of ocean governance in this critical period of environmental and developmental challenges. Although a broad range of scholarly and policy viewpoints is represented in the Group, there is a common commitment among us to the view that if the United States is to achieve the full benefits for its public from its ocean zone – and if the interests and choices of future generations are to be adequately protected – we need to look at ocean and coastal problems as a whole, not only in fragments, and that a new vision of governance is needed. Not since the Stratton Commission Report of 1969 has there been a major effort to undertake a full and comprehensive examination of U.S. ocean policy and national interests; the need for such vision today seems urgent indeed to members of the Study Group.

The group is assisted in its work by a group of some thirty Policy Advisors drawn from Congress, the Administration, state governments, regional organizations, and national interest groups representing industry and environmental concerns; and a five-member group of International Advisors specializing in ocean management. Other interested individuals and organizations have also participated in OGSG conferences and provided valuable commentary on OGSG members'

working papers and formal presentations. The Center for the Study of Marine Policy at the Graduate College of Marine Studies, University of Delaware has served as the Secretariat of the Ocean Governance Study Group since its inception.

Summaries of the first set of papers from the OGSG appeared in the volume *Ocean Governance: A New Vision*, Biliانا Cicin-Sain, Editor, published in 1992 (and available from the Center for the Study of Marine Policy, Graduate College of Marine Studies, University of Delaware, Newark, Delaware, 19716, Phone (302) 831-8086, Fax (302) 831-3668). The contributions in that volume, reporting on discussions at the first workshop of the group at the University of Hawaii in 1992, made the case for a fundamental re-evaluation of U.S. ocean policy, and a broad agenda for research on the problem of ocean governance was sketched out. In addition, some papers provided an evaluation of specific sectoral and institutional problems.

The second volume containing contributions on the debate concerning what kind of governance regime that ought to prevail in the vast and important ocean areas controlled by the United States, *Issues and Challenges in Ocean Governance*, David D. Caron, Chris Carr and Harry N. Scheiber, Editors (1993) contains summaries of materials presented at the second Ocean Governance Study Group conference, held in January 1993 at the Boalt Hall School of Law, University of California, Berkeley. Full-length versions of a number of the papers in the 1993 volume will appear in late 1993 and early 1994 in symposium issues of three leading journals in marine policy: *Coastal Management*, *Ocean and Coastal Management*, and *Ocean*

### *Development and International Law*.

### *1994 Lewes Symposium Volumes*

The present volume contains summaries of some thirty papers presented at the third annual symposium of the Ocean Governance Study Group held at the University of Delaware, Lewes, Delaware, April 9 to 13, 1994. In addition to the present volume containing summaries of papers presented at the symposium, a companion volume entitled "Roundtable Discussions" will be published after the conference and will report on the presentations and discussions made at three Roundtables at the Lewes meeting: on ways of redressing current policy stalemates in offshore oil and gas development, on potential addition of an ocean dimension to the Coastal Zone Management Act, and on determining next steps in the crafting of a national strategy for sustainable development of the U.S. ocean. In addition, as has become customary in the work of the Study Group, a number of the full-length papers emanating from the 1994 symposium will be considered for publication as special issues in the major journals in the field—the three mentioned above plus also the British-based journal *Marine Policy*.

### *Overview of this Report*

The first set of papers addresses the need for and methods to craft a national strategy for sustainable development of the U.S. ocean. Biliانا Cicin-Sain first sets forth a set of policy options for achieving a national strategy for ocean governance. Molly Olson and John Bullard discuss the Clinton Administration's perspectives on sustainable development from their vantage points, respectively, in the

President's Council for Sustainable Development and the NOAA Office for Sustainable Development. The Marine Board's Executive Director, Charles Bookman, follows with a discussion of a National Research Council initiative to undertake two major studies leading up to the creation of a national ocean strategy. Mary Barber provides information on the recently-established National Ocean Coalition which is bringing together national agencies, educational institutions, and national interest groups around common concerns with improving ocean governance. Robert Knecht poses the question "How do we know when we have a national ocean strategy" and delineates a number of practical steps which can be taken in support of such a strategy.

The second set of papers address international factors affecting ocean and coastal governance, such as the coming into force of the Law of the Sea Convention, efforts to implement the Earth Summit agreements, and international trade issues. Boyce Thorne-Miller provides a discussion of a major principle emerging in international law: the precautionary principle. David Caron discusses the dangers of what he calls "covert greening" of international institutions. Discussing the forthcoming entry into force of the Law of the Sea Treaty, Jon Jacobson notes that actions by U.S. coastal states, whether or not valid domestically, can, if violative of international law rules, incur U.S. responsibility under international law. Richard McLaughlin addresses the thorny issue of the use of economic sanctions by the U.S. to protect sea turtles, whales, and dolphins. McLaughlin concludes that such sanctions violate several substantive provisions of the Law of the Sea Convention; thus, if the U.S.

becomes a party to the Convention, it may well be prevented from continued use of such economic sanctions.

Ocean state governance initiatives are addressed in the next set of papers, focusing, in particular, on what difference these initiatives have made and on future desirable roles for both the states and federal agencies in ocean planning and management. Bailey reviews five factors essential to the structure and function of Oregon's pioneering ocean program, the first in the nation to prepare a comprehensive plan for the state's offshore areas. Brian Baird reports on the progress of the on-going effort in California to prepare a plan for the many uses of the state's ocean while Michael Orbach reviews and assesses the history of ocean planning and management efforts in North Carolina. Richard Poirier and Jerry Norris address the special management issues present in the American Flag Pacific Islands. Richard Poirier traces state initiatives in Hawaii from the late 1960s to the recent implementation of the Hawaii Ocean Resources Management Plan. Jerry Norris describes recent work by the Pacific Basin Development Council in addressing issues related to the management of 200-mile zones in the American Flag Pacific Islands and, in a companion piece, discusses the role of the Pacific Island states (both independent and not-independent) in what he calls "The New Economic World Order." Through a comparative approach, Marc Hershman compares and assesses the ocean policy actions taken by the ocean "activist" states. Hershman concludes that a downward shift in power has taken place in recent years, with the states assuming a greater decision-making role in such areas as coastal management, oil pollution, outer

continental shelf development, marine sanctuaries, and fisheries.

Issues related to the reauthorization of three major laws dealing with living marine resources—the Magnuson Fishery Conservation and Management Act (Magnuson Act), the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA)—are addressed next, with special attention on the inter-relationships among these laws, options for reform in the current fisheries management regime, and political and economic factors in the administration of these laws. Harry N. Scheiber and Chris Carr provide a historical perspective on the evolution of the Magnuson Act, focusing on the complex inter-relationship of politics, biology, and economics that have characterized the passage and implementation of the Act. M. Casey Jarman and Richard Hildreth examine the inter-relationships among the Magnuson Act, the MMPA, the ESA, and the Migratory Bird Treaty Act and assess current and proposed regimes for the incidental taking of marine mammals in commercial fisheries. Tim Eichenberg reviews and assesses recent criticisms of the Endangered Species Act by the so-called "wise-use" movement which has invoked the issue of compensation to property owners whenever ESA restrictions deprive property of an economically viable use. Lauriston R. King examines the implications of the changing political context for fisheries management, marked by the emergence of new forces (mainly increased participation by environmental groups) which has expanded the traditional small and rather exclusive fisheries policy network. Reporting on one of the most important recent trends in fisheries management—privatization of the resource—



Bonnie McCay compares the effects of two such schemes for privatization, one from the U.S. and one from Canada.

The next set of papers address approaches, methods, and experiences in achieving multiple-use management and greater inter-agency and inter-governmental cooperation. Walter F. Clark reports on an innovative study on coastal waters in North Carolina which applies land-use planning and zoning techniques to the analysis and delimitation of a water-use classification to manage coastal waters. Richard Burroughs discusses the difficult intergovernmental problems that are raised by efforts to control nonpoint source pollution—i.e., the need to integrate land management (mainly a local issue) with coastal water quality management (largely a federal issue). Virginia K. Tippie and Norman T. Edwards describe the work of Coastal America, a federal inter-agency initiative involving nine federal agencies, working with state and local agencies and non-governmental organizations on specific projects to restore and protect coastal environments. According to the authors, the fact that Coastal America is a network and not a program, has allowed the effort to minimize bureaucracy while leveraging governmental and non-governmental resources to produce results. Mark T. Imperial and Timothy M. Hennessey explore the conceptual and practical challenges of managing nonpoint sources of pollution and of implementation of section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990 which, according to the authors represents the most comprehensive national effort at integrated coastal watershed management ever undertaken in the United States. The authors raise

a series of questions regarding the way this problem has been defined and solutions implemented.

Of all the U.S. programs dealing with the coastal ocean, the Outer Continental Shelf Program (OCS) has perhaps been the most controversial. It is also a program which can be characterized as in a state of "policy stalemate," in a kind of "stand-off" situation which has pitted developers, environmentalists, government interests, and citizens in adversarial positions. As part of a Roundtable Discussion on this topic (reported in the companion volume "Roundtable Discussions"), Charles A. Lester reviews the root causes of conflicts over the implementation of this program and calls for rediscovering the public interest in the OCS lands. Lester's paper considers five frameworks for thinking about the public interest, distilling five principles of policy reform for achieving the public interest. These principles are applied to the structure and implementation of the existing OCS program and arguments are made for four OCS policy changes: decentralization of development decisions to the four OCS regions, establishment of regional decision-making bodies, allocation of the costs and benefits of OCS development to the regional decision-making bodies, and institutionalization of a public mechanism for OCS exploration.

The final set of papers in this volume examine major experiences underway and proposed in managing large areas of the ocean as marine protected areas, with a major focus on exploring the linkages between marine protected areas and other forms of ocean governance in areas of national jurisdiction as well as in the high seas. James W. Rote examines the development of a comprehensive

water quality protection plan for the Monterey Bay area, part of the Monterey Bay National Marine Sanctuary (the second largest marine protected area in the world, after Australia's Great Barrier Reef). Rote examines the features of this effort which he views as a good prototype for inter-agency cooperation. Maxine McCloskey makes the case for extending the practice of protected area designation to high seas areas, and calls for development of criteria and planning for designation and protective regulation of significant ecosystems and critical areas in the high seas. Daniel Suman turns to the experience with the Florida Keys National Marine Sanctuary (the second largest in the United States, after the Monterey Bay sanctuary), and describes the many mechanisms for intergovernmental cooperation that have been set up under this program. Although it is too early to evaluate the outcome of these efforts, Suman finds that the planning process has produced encouraging results. Finally, Jack Sobel reviews the role of marine protected areas in providing an overall strategy for saving, studying, and sustainably using marine biological diversity. Sobel discusses the relationship between marine protected areas and broader systems of ocean governance, stressing their complementarity—with smaller, highly protected reserves being nested as zones within multiple-use management regimes.

*Biliana Cicin-Sain*  
*April 1994*

## A FRAMEWORK FOR A NATIONAL OCEAN GOVERNANCE STRATEGY

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### **Introduction**

In a recent paper, "A Framework for Multiple-Use Ocean Governance for the United States,"<sup>1</sup> I summarized problematic features of the U.S. system for governing its ocean: e.g., single uses managed separately; different regimes in state waters and federal waters; no overall national guidance on use of the 200 mile zone; stewardship responsibilities not well defined; low capacity for conflict resolution; reactive, rather than anticipatory planning; and low levels of inter-agency and intergovernmental integration. I contrasted this situation to a more "ideal" multiple use ocean management framework (involving, among other factors) an area-wide approach and capacity for proactive planning and conflict resolution), and then suggested some steps the U.S. could take to move toward a more multiple use framework. The steps suggested in that paper were modest and largely of an analytical nature, in full recognition of the fact that an extensive body of ocean law and policy is already in place, and that, although laws may be amended and refined, that the basic complex nature of the U.S. ocean governance system must realistically be accepted as a given.

In a companion article, "A National Ocean Governance Strategy for the United States is

Needed Now," I put forward the reasons why a national ocean governance strategy is needed; defined terms,<sup>2</sup> set forth the main goal of a national ocean governance strategy as achieving sustainable development of the U.S. ocean,<sup>3</sup> set forth, in broad terms, the critical elements of a national ocean governance strategy; reviewed steps involved in the creation of the strategy (analytical work to evaluate the current system and develop options, consensus building around various options, legislative and executive action); and reviewed options for beginning the needed analytical work to develop the National Ocean Governance Strategy (e.g., through a congressionally-created national commission, through a high-level group in the Administration, through an inter-agency effort, through the National Research Council, or through a group of ocean policy experts).

My aim in this paper is to carry this thinking a step further and attempt to delineate with more specificity some policy options for ocean governance improvements. These options are developed only in outline form at present, in an effort to be provocative and in the spirit of creating a "strawman" to elicit discussion and debate.

### **Categories for Discussion of Governance Improvements**

Borrowing from my earlier paper,<sup>4</sup> the following categories of options for governance improvements are used:

1. **Structural basis of the governance system**—moving to more multiple-use, area-based management—considering area-wide impacts. Moving away from a largely single-purpose perspective to a consideration of multiple effects, resources, and uses in a wider region.
2. **Providing overall guiding policy principles**—this includes: 1) broad principles such as those recently agreed to by all nations at the Earth Summit and other principles embodied in both national and international law and practice; and 2) agreed-to policy standards and procedures (such as, for example, implementation of ocean programs through state and local governments).
3. **Providing national guidance**—while cognizant of regional variations, development of national policy that establishes goals, objectives, priorities, and lays down basic principles and criteria.
4. **Enhancing capacity for conflict resolution**—developing more systematic, anticipatory and

proactive approaches to conflict resolution, rather than ad hoc and reactive approaches.

5. **Enhancing planning capacity**—developing planning approaches that are proactive, take into account the relevant interests and the affected areas.
6. **Improving intra-agency and inter-agency integration**—at the same level of government. This includes improvements in the internal operation of agencies (for example, relations between Headquarters and regional offices) as well as among agencies at the same level of government (e.g., federal).
7. **Improving inter-governmental integration**—improvements in the coordination among agencies at different levels of government (federal, state, local).
8. **Improving efficiency and effectiveness in government operations**—this includes money issues, time limits, research needs.

## *Discussion of Possible Governance Improvements*

### *Structural basis*

The structural basis of the present system of U.S. ocean governance is largely single-sector oriented, with the exception of three programs: coastal zone management, national estuary program, and the marine sanctuaries program, all of which are oriented toward area management. The major advantages of an area-based approach over a single-sector approach are that an area-based approach allows governing authorities to better address the effects of one ocean use or resource on other uses, resources, and the environment. To move toward a more

multiple purpose and area-based regime, the U.S. should consider: 1) developing better methods of linking the existing sectoral programs to one another and to the area-based programs, 2) developing good connections among the area-based programs, 3) building any additional increments to the existing governance scheme around the area-based programs.

### *Guiding principles*

Each of the major ocean laws currently in effect is guided by a set of principles. The Magnuson Act, for example, calls for fisheries to be managed "throughout their range" and "using the best scientific data available." Such principles, however, while providing a good measuring stick for evaluating the particular law in question [e.g., the Magnuson Act], offer little guide for wise management of the entire ocean area under the jurisdiction of the U.S. nor for the management of ocean activities which are not yet governed by federal law (e.g., marine aquaculture).

A code of stewardship ethics needs to be developed for the U.S. ocean to provide guidance to government officials, above and beyond the guidance offered in specific statutes. The code of stewardship ethics must build, of course, on recent international advances in this area—as reflected in both the Law of the Sea Convention and by the Earth Summit agreements (especially Agenda 21 and the Rio Declaration of Principles). A first cut at such principles for the U.S. ocean has been offered by Van Dyke<sup>5</sup> who lists nine such principles, e.g.: precautionary principle; conduct of environmental assessments; protection of rare and fragile ecosystems and endangered and threatened species; priority given to living, over non-living

marine resources, in cases of conflicts; use of the public trust doctrine to protect the interests of the whole community and the interests of intergenerational equity; utilization of ocean resources in a sustainable development mode; governance in partnership with states, territories and commonwealths; special attention paid to the historically-based claims of indigenous peoples to ocean space and ocean resources; and responsibilities of developed countries in assisting developing countries to undertake the responsibilities outlined in these principles.

Other principles worthy of consideration include: use and orderly development of the ocean zone to benefit the American public; use and orderly development of the ocean zone to benefit U.S. businesses, to create and maintain jobs, and enhance U.S. economic competitiveness; insuring a good return to the public from the use of commonly-held ocean and coastal resources; and efficiency and effectiveness in government operations (reduction of duplication and overlap).

No doubt there will be much discussion and debate over the "right" mix of principles to adopt. The list should be exhaustive and yet parsimonious and address all relevant aspects of ocean governance: stewardship toward ocean resources and space, U.S. publics, the international community, and future generations.

Adoption of such a code of stewardship ethics for the U.S. ocean will require legislative action which could be done in conjunction with suggested legislative action on other governance improvements discussed on the following page.

## *National guidance*

All the existing ocean laws have some set of explicit goals and guiding statements of intent, for example, achieving "optimum yield" of fisheries under the Magnuson Act. The problem with the amalgam of goals from existing federal ocean programs is that they often don't aggregate well together, since they were originally crafted separately and without regard for other existing policy goals [e.g. maximizing fisheries in one area may be impossible to accomplish at the same time as maximizing oil development in the same area]. In other existing programs (for example, marine sanctuaries), national goals have not yet been fully articulated. In other, emerging areas of ocean use activity, such as marine aquaculture, minerals exploitation, there has been little articulation of national goals and targets. And, no mechanism exists for looking into the future and anticipating and encouraging new uses through such means as research, technology development, industry incentives.

In short, development of national goals, objectives, and priorities, with specific targets and timetables is needed to: harmonize existing policy goals and articulate compatible goals for uses where little policy guidance exists and/or for emerging uses.

Development of national guidance and evaluation of progress toward national goals must be done in conjunction with subnational levels of government, states and localities, given the great diversity in regional circumstances that characterizes different coastal ocean regions of the United States. Too, this must be a process that continually adapts and changes over time, in response to changing

national and international developments.

How can such national guidance be developed? It is difficult to think that this task could be accomplished by any one of the component units of our existing system of federal ocean governance [given the absence of explicit mandates on this question] or through an inter-agency effort. While important in achieving exchange of information and sometimes in resolving conflicts and in adapting agency goals to one another, inter-agency committees [of agencies at similar hierarchical levels], generally lack the capacity to take a broad perspective and to assess goals and objectives across the federal government and into the future. Advisory committees, such as the former NACOA (National Advisory Committee for Oceans and Atmosphere) could logically be thought of to play a national guidance role, but such committees are often limited in what they can accomplish because they only have advisory powers and are most often attached to one agency only.

While reluctant to recommend adding a new institution in a situation already characterized by great institutional complexity, I think that consideration should be given to the creation, through legislative action, of some kind of a national ocean governance commission. Akin to the Marine Mammal Commission, such an entity would be independent and have broad powers of review and oversight. Ideally, it would be connected to the highest levels of government, as the Marine Science Council of the late 1960s was connected to the Vice-President's office. If the President's Council on Sustainable Development were to achieve continual oversight responsibilities, it could be part of such an entity.

Among the functions to be performed by such an entity [these are discussed further in the sections below]:

- ◆ provide broad national guidance on overall goals for the nation's oceans and coasts, through consultation with relevant publics and national and subnational entities
- ◆ review and assess the progress of individual programs in achieving the national goals
- ◆ convene and staff the work of an inter-agency council of ocean agencies
- ◆ conduct analytical studies on the implications for ocean use and protection of new national and international trends and developments
- ◆ assist states and localities, through an advisory role, in resolving specific conflicts over ocean uses and activities
- ◆ encourage the provision of incentives for the development of new ocean uses and industries (such as minerals, aquaculture)
- ◆ oversee, in conjunction with the relevant federal agencies, the administration of matching grants to individual states or groups of states to create ocean plans for particular coastal ocean regions in partnership with the federal government
- ◆ encourage the application of knowledge from the ocean sciences (natural sciences, social sciences) to ocean decisions at federal, state, and local levels, and work to maintain and enhance the nation's capacity in marine technology, marine natural sciences, marine social sciences, and marine management

- ◆ periodically report to Congress on the achievement of the nation's ocean goals, including problems and opportunities

Given the important oversight responsibilities of such an entity, it would need to be operated in a "transparent" way, with procedures for participation by nongovernmental organizations, and subnational levels of government.

### *Building better capacity for conflict resolution and for planning*

The efforts to provide national guidance outlined above would go a long way toward enhancing capacity for conflict resolution and for planning at the federal level, because the national guidance activities are aimed precisely at these questions—reconciling conflicts among federal laws, proactive planning for possible new uses, identification of problems and opportunities.

It is at the local level, however, where the ocean resources are found and the actual uses and conflicts occur; it is at this level that the most urgent needs exist for ocean use planning and conflict resolution. As Bailey cogently puts it elsewhere in this volume, "Ocean planning and management, like all politics, is local. Overall policies and management programs must eventually work in rock-by-rock, cove-by-cove, reef-by-reef situations where the abstract world of policies and planning meets the real world of birds, fish, SCUBA divers, fishermen, tourists and local residents." At the local level of real-life interactions among stakeholders and agencies, it is the state and local governments who must (and generally do) take a leading role in problem resolution and in proactive planning for state waters, and in conjunction with the federal government, for federal waters.

Much could be done, however, to better assist the states and the localities in these endeavors and to develop better state/federal partnerships in both state and federal waters. These options are discussed later, in the section on inter-governmental integration.

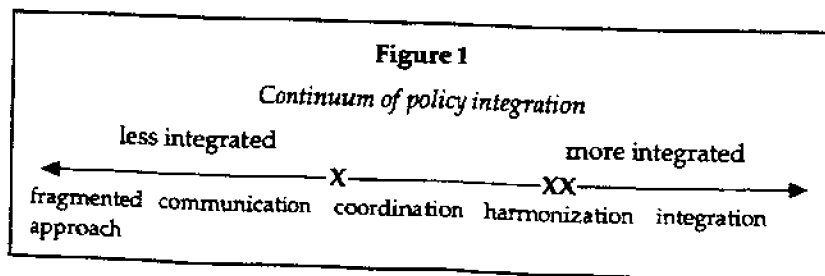
### *Achieving inter-agency integration*

There are currently no regularized mechanisms for periodically bringing the representatives of federal ocean programs together. The Department of State does periodically convene an inter-agency group but this effort is mainly oriented toward coordinating the national position on internationally-driven ocean developments. Inter-agency efforts on specialized ocean use issues (e.g. dredging) do exist, but to my knowledge, no inter-agency effort currently exists that cuts across the broad range of national ocean issues.

Following the Earth Summit, there has been much discussion of "integrated coastal management" (encompassing land, nearshore areas, and Exclusive Economic Zones).<sup>6</sup> In a recent article, I attempted to explain the meaning of integrated management, and noted that this concept should be thought of in a continuum, rather than in absolute terms.<sup>7</sup> The following figure illustrates this concept:

to oceans and coasts at the "x" point marked on the continuum—we have a fragmented situation with individual government entities pursuing their largely single purpose mandates, with coordination efforts occurring mainly in the context of decisions about specific development projects [e.g., through the environmental impact assessment process, the federal consistency review process, the endangered species consultation process, etc.]. The challenge for the federal agencies, in my view, is to move a few steps along the integration continuum, probably to the "harmonization" point of the continuum [marked by a double "x"]; "harmonization" means that independent entities continue to operate their own programs but coordinate their actions and synchronize them, guided by a set of national policies and criteria (these policies and criteria are generally established at a higher bureaucratic level or by the legislative branch). "Moving toward integrated management," thus, does not necessarily imply full integration (in the sense of government reorganization and creation of a larger entity), but can mean any number of a range of measures agencies can take to better mesh their actions with one another.

A regularized mechanism for inter-agency coordination and



I would tentatively place the current U.S. situation with regards

hopefully also harmonization is needed, in my view. This can take place, through administrative

action, in the creation of a council of ocean agencies. One could envision such a council operating at two levels: 1) a high political level whereby agency heads would meet periodically (such as twice a year) to set overall goals and policies, and 2) a working group level which would bring together, on a more frequent basis, staff from the different federal agencies to work out implementation details. Such a council of ocean agencies could also establish special task forces to address "problem clusters" of ocean issues which have proven to be particularly problematic or conflictual. Possible examples of such "problem clusters" include: marine mammal/fisheries conflicts, conflicts related to the outer continental shelf program, conflicts associated with port dredging.

To make such an effort work, considerable care will need to be exercised in the initial establishment of the inter-agency council—regarding its charge and scope of activities, how it is staffed and operated and under whose guidance. Agencies, too, must be given positive incentives for collaboration with other agencies, such as, for example, possibilities for funding from special sources aimed at achieving inter-agency cooperative activity.

As mentioned above, such a council could be created through relatively simple administrative action. Alternatively, such a council could be created as part of legislation setting forth national ocean principles and establishing a national ocean governance commission alluded to earlier. As is well known, while an administrative approach is generally easier to obtain than new legislation, the longevity of a process as the inter-agency ocean council can best be assured through legislative action.

### *Inter-governmental integration*

While a clear delimitation of state and federal jurisdictions in the ocean exists in federal statutes, in practice, these distinctions have been somewhat blurred in recent years. Through the national marine sanctuaries program, for example, the federal government has designated protected areas in state waters. The states, as Hershman points out elsewhere in this volume, have moved to fill ocean policy voids, for example, through the crafting of ocean plans which include federal waters.

In a number of cases (e.g., Oregon, Hawaii), states have developed comprehensive plans to guide ocean use activities, to resolve conflicts, and to anticipate new uses. In a number of cases, too, states have come together in regional groupings to begin to provide a regional perspective on ocean use and protection issues. Among the regions that are the furthest along this route are the Gulf of Maine region (with the Gulf of Maine Council, a state-initiated regional grouping involving three U.S. states and two Canadian provinces); the Pacific Coast states (through the regional-level work of the Western Governors' Association and the Western Legislative Conference); the Pacific islands region (through the Pacific Basin Development Council); and the Gulf of Mexico region (through the federally-initiated Gulf of Mexico Program and possible other regional institutions now being considered by the Congress).

Such activities are taking place, in both individual states and in groupings of states, sometimes with the full support and blessing of federal agencies, sometimes not. It should be noted, too, that interest in and capacity for ocean governance is not evenly spread out among the

nation's states and regions. In some states and regions, there is little interest in ocean governance questions, reflecting varying physical conditions, resource base, political culture, and other such factors.

Given the significant level of activity on ocean governance that is already taking place in a number of states and regions, the role of the federal government, in my view, should be to encourage and facilitate such efforts, while insuring that these are consistent with federal interests and policies and are properly coordinated with the federal ocean programs.

A possible formula for achieving well-functioning intergovernmental integration might be as follows: 1) provide federal grants (with state match) for the development of ocean plans to be crafted by individual states or by regional groupings; 2) foster an ocean plan development process that incorporates a partnership between state and federal levels; 3) work to achieve proper integration between these efforts and the area-based federal ocean programs (coastal zone management, estuary planning and management, marine sanctuaries) as well as with the single-sector programs (e.g., fisheries, oil and gas development); 4) provide encouragement for these ocean plans to have legal standing by means of implementation through the coastal management process, thus invoking the powers of federal consistency review [some adjustments to the state coastal management process would have to be made if it is regional entities that are carrying out the ocean use planning effort].

It would be best, in my view, to test the approach described above on a voluntary and pilot basis, allowing states and regions with

particular interests and capacity to participate in such a program upon petition and on a pilot basis.

*Attaining efficiency and effectiveness in government operations vis-a-vis the ocean*

Most of the options discussed above should work to achieve greater efficiency in government operation and less duplication and overlap among government programs. Some of the options outlined, however, will require new expenditures of funds, particularly the proposal for the creation of a national ocean governance commission and the federal grants to states/regions for ocean use planning. In tight budgetary times, it is always difficult to finance new ventures, yet the expected benefits in terms of more efficient government operation and in the encouragement of appropriate economic development (of both existing and emerging industries) in our 200-mile zone should outweigh these costs. Possible sources of funding to finance ocean governance improvements might include the following: revenue sharing from leasing and operation of oil and gas development on the outer continental shelf, higher fees for ocean users (including the recreational groups which traditionally resist such fees), harbor maintenance funds.

**Summary**

Moving ahead on ocean governance toward more multiple-use and area-based management will be difficult to accomplish and will be politically challenging, but it is not impossible. Much can be done without wholesale change and government reorganization. A number of possible measures have been presented in this paper to begin the debate on the merits of alternative options. The suggested measures requiring administrative

change would probably be easier to accomplish than those requiring legislative initiative. However, even for those aspects requiring legislative approval, it may be possible to use reauthorization of existing laws as an opportunity to make governance improvements. One such alternative is to take advantage of the forthcoming reauthorization of the Coastal Zone Management Act and to add an ocean title to the Act which would: 1) delineate a code of stewardship ethics for governance of the U.S. ocean zone, 2) create a national ocean governance commission as an oversight body, 3) create a council of ocean agencies for coordination/harmonization purposes, and 4) provide matching grants to states and/or regional groupings for ocean use planning and implementation purposes.

**Acknowledgments**

The funding support of the Delaware Sea Grant College Program on a project on multiple-use ocean management on which I rely, in part, for this summary, is gratefully acknowledged.

**Endnotes**

1. Biliana Cicin-Sain, "A Framework for Multiple-Use Ocean Governance for the United States," in David D. Caron et al, eds., Issues and Challenges in Ocean Governance, Ocean Governance Study Group, 1993.
2. This paper was first presented at the Marine Board Forum on The Future of the Exclusive Economic Zone, April 28, 1993 and then revised for publication in Coastal Management (forthcoming, 1994).
3. In my view, "sustainable development" involves three major emphases:

1. *Economic development to improve the quality of life of people*—"Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature" (Principle 1, Rio Declaration of Principles).
2. *Environmentally appropriate development*—development that is environmentally sensitive and makes appropriate use (and sometimes non-use) of natural resources; development that protects essential ecological processes, life support systems, and biological diversity.
3. *Equitable development*—equity in the distribution of benefits from development:
  - *intrasocietal equity* (e.g., among groups in society, respecting the special rights of indigenous peoples, etc.)
  - *intergenerational equity* (not foreclosing the options of future generations)
  - *international equity* (fulfilling obligations to other nations and to the international community, given global interdependence)
4. See note 1.
5. Jon M. Van Dyke, "Substantive Principles for a Constitution of the U.S. Oceans," in Biliana Cicin-Sain, ed., Ocean Governance: A New Vision, Ocean Governance Study Group, 1992, p. 22.

6. See, for example, special triple issue on Integrated Coastal Management, Ocean and Coastal Management, Vol. 21, Nos. 1-3, 1993.
7. Biliana Cicin-Sain, "Sustainable Development and Integrated Coastal Management," Ocean and Coastal Management, Vol. 21, Nos. 1-3, 1993, pp. 11-43.



## THE CLINTON ADMINISTRATION'S VIEW OF SUSTAINABLE DEVELOPMENT

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(Editors' Note: As background to her presentation, Ms. Olson has provided the following information on the creation of the President's Council on Sustainable Development for this volume).

### ON EARTH SUMMIT ANNIVERSARY PRESIDENT CREATES COUNCIL ON SUSTAINABLE DEVELOPMENT For Economic Growth, Job Creation, Environmental Protection (June 14, 1993)

On the anniversary of the Earth Summit and, as the United Nations Commission on Sustainable Development gathered for its first meeting, President Clinton named the President's Council on Sustainable Development to help craft U.S. policies that will encourage economic growth, job creation, and environmental protection.

"Every nation faces a challenge to identify and implement policies that will meet the needs of the present without compromising the future. America will meet that challenge with the help of this Council and the ideas and experience its members bring to this important task," President Clinton said.

Vice President Gore, who joined President Clinton in announcing the Council, said, "This Council will help us forge a new partnership among representatives of industry, labor, government, environmental organizations, and civil rights organizations. That partnership is vital to our success in addressing the global environmental issues facing every nation."

The Council, which has 25 members, will explore and develop

policies that encourage economic growth, job creation, and effective use of our natural and cultural resources. Sustainable development is development that meets the needs of the present without compromising the future.

The Council's primary goals are:

- ◆ Develop specific policy recommendations for a national strategy for sustainable development that can be implemented by public and private sectors;
- ◆ Respond to the recommendation in Agenda 21, the comprehensive international policy declaration nations of the world agreed to as a pledge to global environmental action, and contribute to the U.S. plan to be submitted to the United Nations Commission on Sustainable Development, the international commission created at the Earth Summit to help ensure implementation of Agenda 21;
- ◆ Sponsor projects that demonstrate and test the viability of the Council's recommendations

and that encourage comprehensive approaches;

- ◆ Establish links with other non-governmental organizations within and outside the United States;
- ◆ Recognize outstanding sustainable development achievements through an annual Presidential award; and,
- ◆ Educate the public about the far-reaching opportunities in sustainable development.

The Council will divide into issue-specific committees to develop strategies in particular areas such as sustainable agriculture and land use, efficient energy and transportation systems, environmental justice, eco-efficient manufacturing, environmental education, and setting environmental priorities.

The Council will meet quarterly over an initial two-year term that may be renewed for another two years. The Council's first formal meeting will be in September. In December, the Council will recommend a broad strategy for how the U.S. might achieve sustainable development goals in some of the

critical areas identified in Agenda 21. In June, 1994, the Council will identify specific actions that should be taken to pursue the national sustainable development strategy.

The Council includes members of the President's cabinet (the Secretaries of Agriculture, Commerce, Energy, Interior, and the Administrator of the Environmental Protection Agency), and representatives of industry, environmental organizations, and the academic community.

President Clinton named as co-chairs of the Council: Jonathan Lash, President of the World Resources Institute, and David T. Buzzelli, Vice President and Corporate Director of Environment, Health, and Safety and Public Affairs at The Dow Chemical Company.

"The Council's membership and mandate reflect the belief that is growing among business and environmental leaders that good economic policy protects the environment and good environmental policy strengthens the economy. The Council is the right group at the right time to define broad policy goals and strategies that integrate government programs to strengthen the economy and protect the environment," Lash said.

Lash, a distinguished leader in international law, joined WRI in January, 1993 from the Environmental Law Center at the Vermont Law School where he directed one of the nation's outstanding environmental law programs. He is the former Vermont Secretary of Natural Resources and has served as senior staff attorney for the Natural Resources Defense Council. WRI, based in Washington, D.C., is a nonpartisan policy research center

on global environmental, economic, and development issues.

"To ensure a sustainable environment and economy, we must improve the decision-making process and establish priorities that target and resolve the most crucial issues first. This Council has the potential to contribute substantially to that goal," said Buzzelli.

Buzzelli, who has worked for Dow for 28 years, is a member of the company's Board of Directors and is responsible for guiding Dow's approach to environment, health and safety related issues. For many years, he has actively promoted sustainable development. The Dow Chemical Company manufactures and supplies more than 2,000 products and services. It operates 178 manufacturing sites in 33 countries and employs more than 60,000 people.

## NOAA'S OFFICE OF SUSTAINABLE DEVELOPMENT AND INTERGOVERNMENTAL AFFAIRS

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(Editors' Note: As background to his presentation, Mr. Bullard has provided the following information on the creation of the NOAA Office of Sustainable Development and Intergovernmental Affairs for this volume).

The Clinton Administration established the Office of Sustainable Development and Intergovernmental Affairs (SDI) last year as part of the National Atmospheric and Oceanic Administration (NOAA). One major function of the Office is to advise NOAA and Department of Commerce executives on matters related to sustainable development, a relatively new concept that recognizes the long-term importance of linking economic and environmental goals.

The Office is small—a staff of ten persons—and has no authority to make grants or loans for sustainable development projects. But it is expected to play a major role in developing policies that will influence future funding priorities.

Specific projects are currently being identified where coordinated actions—by Federal, state and/or local government, nongovernment institutions, and/or private sector groups—could demonstrate in a practical way the value of sustainability both in creating or preserving jobs and in promoting environmental stewardship.

SDI's first undertaking is to develop a comprehensive regional economic assistance plan for Northeast fishing ports from Maine to New Jersey. Designed to help communities facing serious hardship caused by unsustainable levels of fishing, this initiative will include public and private funds from a variety of sources. In the coming months, SDI will become

involved in additional projects in other parts of the United States.

In a related activity, SDI provides staff support to Secretary of Commerce Ronald Brown and NOAA Administrator D. James Baker in their roles as members of the President's Council on Sustainable Development (PCSD). It also coordinates the work of several PCSD task forces, including the Sustainable Communities Task Force which is co-chaired by Secretary Brown. President Clinton has asked the PCSD to recommend Federal policies that will promote the long-term complementary goals of economic development and environmental protection.

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## FORMULATION OF A NATIONAL OCEAN STRATEGY FOR THE UNITED STATES\*

*(Prepared by and for Marine Board Members)*

### A Proposal for an Initiative by the National Research Council: Formulation of a National Ocean Strategy for the United States

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#### **Introduction**

National interest in the ocean, the need for its protection, and opportunities to utilize its resources make it timely to develop a coherent strategy to address the nation's ocean activities and objectives. New challenges arise from changes both in national priorities and in the international economic system. These changes include:

- ◆ the recognition that good environmental policies make economic sense and vice versa,
- ◆ the globalization of markets and opportunities,
- ◆ new willingness for the government to be a catalyst for technology development and economic growth, and
- ◆ new and intensifying demands on the coastal marine environment that have caused several states unilaterally to extend the concept of coastal management to the adjacent federal ocean area.

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This paper is not an official report of the National Academy of Sciences. The views expressed are those of its authors and do not necessarily reflect those of the National Research Council, or any of its constituent units, including the Marine Board.

A long-range national plan and strategy have been suggested by many to ensure that renewable resources and ecosystems of the nation's ocean regions are protected, while at the same time appropriate development of resources is encouraged. Existing and potential conflicts among different users of the ocean need to be anticipated and addressed through policies aimed at fair and equitable arbitration and management of disputes.

A national ocean strategy is needed to define the nation's long-term interests in both environmental preservation and in resource development, thereby providing (1) predictability for those planning for future use or looking for assurance for attainment of conservation goals and (2) the basis for mediating conflicts among competing uses and interests in the ocean and ocean resources.

The National Research Council is an appropriate forum for documenting and describing the need for a national strategy for the ocean and examining the most feasible options for its form and content. The NRC offers an independent and objective setting, and can draw on the authoritative and representa-

tive experts who serve on its boards and committees.

This paper provides background on the issues and answers three questions:

1. Why is a U.S. national ocean strategy needed now?
2. Why is the National Research Council uniquely positioned to help in this process?
3. What course of action should be followed if the NRC decides to undertake this effort?

#### **Background**

In 1982, a new international convention on the law of the sea was adopted that, in effect, gave nations the rights to resources and economic uses in the ocean out to a distance of 200 miles from their coastlines. The United States was quick to seize the opportunity with President Reagan declaring a 200-mile zone (formally an Exclusive Economic Zone) in March 1983. Indeed, the U.S. 200-mile zone is larger than the U.S. land area in size and the richest, both in fishery resources and hydrocarbons, of any in the world. However, no subsequent policy and/or regulatory framework to guide or govern activities in this vast region has yet been adopted.

In 1988, again taking advantage of the provisions of the 1982 Law of the Sea Convention, President Reagan issued a second proclamation, this time broadening the territorial sea of the United States from 3 miles to the 12-mile width allowed by the new convention. This action quadrupled the ocean area over which the United States has virtually total jurisdiction and control. The only significant right that other nations have in the territorial sea is that of "innocent passage" of ships and overflight of aircraft.

These two actions brought significant new ocean resources under U.S. control at a time when new ocean technologies were also being perfected. Great strides were being made, for example, in side-scan sonar and other techniques for detailed mapping of sea floor characteristics. Similarly, remote visual and TV exploration techniques such as those used by Robert Ballard of the Woods Hole Oceanographic Institution to discover the *Titanic* now offer a vastly improved capability to study and evaluate sea floor resources. Work also progressed during this period on refining ocean thermal energy conversion (OTEC) and in demonstrating the economic value of the other products of the OTEC process. Yet, the benefits from these new prospects remain largely unrealized.

The United States is simply not organized in a way to take advantage of these new assets. Our present ocean governance arrangements, fragmented among various state and federal agencies with little or no coordination, are not well suited to the growing demands being placed upon them. The capacity of the present arrangements to deal with the increasing number of conflicts due to compet-

ing uses is minimal at best. Indeed, such conflicts have brought the federal offshore oil and gas leasing program to a virtual standstill in many regions of the country.

At present, the United States governs its oceans primarily on a sector-by-sector basis. One law, one agency, and one set of regulations govern offshore oil and gas; a different law, agency, and regulations apply to fisheries; still different single purpose regimes apply to water quality, navigation, marine protected areas, endangered species and marine mammals. Except for the modest, but important marine sanctuaries program, no capability exists to plan and manage ocean regions on an area-wide, multi-purpose basis and no way exists to make trade-offs between various uses.

The findings from the Marine Board's examinations of issues associated with the Exclusive Economic Zone<sup>1</sup> indicate that the lack of a national plan or strategy for managing marine resources and uses of ocean space has created a situation of economic stagnation and political gridlock in many areas of marine activities. Single-purpose ocean laws neglect the effects of one resource or use on other resources and the environment, fail to assess cumulative impacts, and, therefore, cannot provide a basis for conflict resolution. Conflicts between those seeking to utilize ocean resources and space for economic objectives and those concerned with environmental preservation have, in the lack of an overarching policy, relied on litigation as the primary mechanism for establishing priorities for ocean utilization. Significant societal and economic costs are incurred through case-by-case adjudication and associated delay.

This lack of capacity to manage ocean activities on a more coherent

basis is also reflected in the relations between federal ocean agencies. No continuing mechanism exists in the national government to coordinate or harmonize the activities of the dozen or more agencies that have important ocean programs or to make ocean policy on behalf of the nation as a whole. The nation's ocean strategy at any one time is simply the sum of the ocean activities of all of the relevant federal agencies. Congress has great difficulty doing any better given the policy and program fragmentation that the proliferation of its subcommittees has brought about.

Pressures are increasing to respond more coherently to ocean issues as a result of actions being taken both at the state level and at the international level. At the state level, states such as Oregon, Hawaii and California are moving on a unilateral basis to formulate policies for the ocean areas off their shores even though most of the area concerned is under federal jurisdiction. They see no indication that the federal government has either the capacity or the desire to undertake such efforts.

At the international level, the U.S. government finds itself involved in an increasing number of agreements, multilateral conventions, declarations, and action programs some of which have implications for domestic ocean activities and programs. Yet, the only existing device for attempting to harmonize or better focus agency actions or to reconcile international actions with domestic activities appears to be the *ad hoc* interagency working group.

In June 1992, at the historic "Earth Summit" conference [formally the United Nations Conference on Environment and Development (UNCED)], the United States

and other coastal nations committed themselves to "integrated management and sustainable development of coastal areas and the marine environment under their national jurisdiction" (paragraph 17.5 of the Agenda 21 action program). Laying out a path to integrated management and sustainable development of the nation's coastal and ocean resources would be a major goal of a national ocean strategy.

In summary, it can be said that the nation:

- ◆ has no over-arching national policy or strategy with respect to the conservation and sustainable use of its oceans;
- ◆ has no on-going capacity to coordinate and harmonize federal ocean activities or to develop and implement national ocean policy;
- ◆ has no national strategy with regard to the encouragement of promising new ocean technologies;
- ◆ has no overall strategy or plan to support the development of new ocean resources;
- ◆ has no strategy regarding the manner in which coastal states should be involved in ocean planning and management.

**Marine Board Forum on the Future of the Exclusive Economic Zone**—On April 28, 1993, the Marine Board of the Commission on Engineering and Technical Systems conducted a one-day Forum on the Exclusive Economic Zone on the occasion of the tenth anniversary of the proclamation establishing the 200-mile zone. A group of about 70 people representing the full range of ocean interests attended. The overwhelming consensus of the Forum was that the nation needs a national strategy with respect to the

oceans and it urgently needs it now. All participants agreed that the status quo was unacceptable because the lack of a coherent national strategy incurs costs for every stakeholder. Responses to the three questions that follow were compiled from the discussion at the forum and represent, therefore, the thinking of the representatives of a broad range of ocean interests—from large oil companies interested in developing offshore hydrocarbon resources to leaders of national environmental organizations and including scientists and engineers interested in developing and marketing promising ocean technologies.

### *Question 1: Why Is a National Ocean Strategy Needed Now?*

The kind of off-again, on-again, *ad hoc* ocean policy that the United States has followed up to this point is increasingly inappropriate for the challenges now being faced. U.S. ocean policy oscillates between thrusts of unmitigated development followed by the adoption of rigid preservationist approaches—an either/or view of environment versus development prevents the United States from attaining a balanced management of its ocean resources. The present situation leads to actions that are reactive and untimely, lacking the capability of adjusting to new scientific and technological findings or of encouraging appropriate development of ocean resources. Also, this lack of consistent policy makes difficult the planning of ocean economic activities such as the exploitation of oil and gas or hard minerals by the private sector.

Symptomatic of this inconsistent policy, U.S. marine industries are generally not faring well in contrast to those in other countries. Examples are decline in the national effort to explore for and develop

offshore oil and gas reserves, trade deficits in fishery products, increases in imports of oil, the failure of marine aquaculture industry to achieve economic viability and declines in the U.S. merchant marine.

The lack of a coherent, forward-looking ocean strategy is adversely affecting a number of vital interests of the United States.

- ◆ **A balance of payments**—Imports of crude oil and fisheries products are two of the largest items in the negative balance of payments of the United States. These imbalances would be addressed in a national ocean strategy.
- ◆ **Competitiveness**—The edge that the United States possessed in the development and marketing of new ocean technologies is rapidly disappearing. This can be reversed but only as a part of a larger coherent national ocean strategy.
- ◆ **Sustainable development and use of renewable resources**—Fishery stocks of major economic and recreational significance are in a serious decline. Successful efforts to rebuild and maintain these stocks will require a comprehensive strategy—one that includes habitat restoration, improved water quality, as well as substantial (but hopefully temporary) reductions in fishing effort.
- ◆ **Development of domestic oil and gas supplies**—Restoring the offshore oil and gas program to an appropriate level can only be achieved by means of a broad strategy that includes the positive cooperation of the relevant coastal states, adjustments to the offshore regulatory regime, and a well de-

signed and comprehensive environmental studies program in place and operating well in advance of leasing and production.

- ◆ **Stewardship duties**—Intergenerational equity is an emerging international norm. However, the United States has not yet begun to define its stewardship responsibilities over the ocean and coastal resources now under its jurisdiction.

Beyond these concerns, the nation is beginning to pay a heavy price for its single-sector approach to the governance of ocean resources. Competition between marine mammals and commercial fishermen for the same fishery resources is reaching crisis levels. Conflicts between harbor and navigation channel dredging and groups concerned with the environmental impact of both the dredging process and of the disposal of the dredged material continue to impinge upon intermodal commerce and threaten the viability of some of the nation's largest ports. Similarly, the benefits of ocean aquaculture for stock enhancement and for commerce are slow in being realized, again partly because of the lack of a national ocean strategy that explicitly allows for (indeed, encourages) new developments of this kind.

Finally, with the required 60 ratifications now achieved, the 1982 Law of the Sea (LOS) Convention will enter into force in 1994. Special negotiations now being conducted by the Secretary-General of the United Nations are expected to find a way around the troublesome seabed provisions and permit the United States and other industrialized nations to adhere to the agreement. Understanding the full implications of the 1982 LOS

Convention on the United States is a critical step in the formulation of a U.S. national ocean strategy.

The last comprehensive effort to develop a U.S. ocean strategy was undertaken by the so-called Stratton Commission between 1967-1969. Since that time, three major developments have occurred, each of which has major impacts on the U.S. use of its oceans—the environmental movement of the early 1970s; the energy “crisis” beginning in 1973; and, as mentioned above, the great changes in the international law of the sea formulated between 1973 and 1982. Clearly, it is now time to integrate current considerations with regard to these three issues—environment, energy and law of the sea—into an up-dated and forward-looking ocean strategy for the nation.

### *Question 2: Why Is the National Research Council Uniquely Positioned to Help in this Effort?*

The National Research Council has special advantages to bring to bear on these important national issues. The NRC has access through its commissions and boards to a multidisciplinary array of scientific and technical expertise, as well as to economic and policy analytic capabilities. In addition, the Academies can draw on the perspective of senior members of the industrial, scientific and policy communities with relevant experience.

Assessing national interests in the uses of the ocean is central to the Marine Board's mission. Numerous assessments of the Marine Board have had as their objective the development of strategies for protecting and utilizing ocean space and resources. While the Marine Board and members of the Academies who have been associated with the Marine Board are likely to

provide the institutional focus and support for the proposed effort, numerous other NRC activities including, for example, the Board on Science, Technology and Economic Policy (STEP—global economic interests), Board on Environmental Studies and Toxicology (BEST—natural resources and environmental management), Ocean Studies Board (OSB—ocean sciences), and Transportation Research Board (TRB—intermodal commerce) should be invited to participate.

Together, the NRC boards have the expertise and experience to develop a detailed technical program and to recommend appropriate members for such committees as will be needed for the national ocean strategy study.

No federal agency is in a position to undertake the required stage-setting work. The scope of a national ocean strategy exceeds the mission of any single ocean agency, even that of the National Oceanic and Atmospheric Administration. Furthermore, an individual agency would find it virtually impossible to obtain the full cooperation of sister ocean agencies, short of presidential direction. An effort organized and supervised from the White House level would get the attention and cooperation of individual agencies but such a development seems improbable given the lack of resident expertise and familiarity with this set of issues.

### *Question 3: What Course of Action Should Be Followed if the NRC Decides to Undertake This Effort?*

Two kinds of activities are needed in connection with the project. The first is a fact-finding study to clearly set out the need for a national ocean strategy including an assessment of the economic

potential of ocean development and a critical appraisal of ocean-related activities and initiatives in other countries, such as Japan, France, the United Kingdom, and Norway. The second study builds upon the first and would involve the formulation of the main elements of the national ocean strategy itself, including recommendations concerning goals, policies, new national initiatives, and new institutional mechanisms. The NRC is well equipped to staff and oversee the two committees that would be appointed to undertake these tasks.

An NRC study can document and describe the need for a national strategy for the ocean and examine the most feasible options for its form and content. The first phase of such a study would provide the background information to support the second phase. This would include a review of the problems arising from the lack of a national ocean strategy framework, and might include an economic assessment of the value of ocean resources, goods, and services to the economy—actual and potential. It would also be worthwhile to examine other nations' plans and policies for their ocean areas and industries to serve as potential models for U.S. ocean strategy.

The second phase would analyze the information provided, convene workshops and other meetings with the various communities with an interest in ocean activities, and prepare a model national plan or strategy for managing ocean resources and space.

Tasks relevant to the first phase of the study include the following:

- ◆ Review findings of commissions, agencies, and other bodies on national ocean policy needs over the past 25 years.
- ◆ Conduct an inventory of economic opportunities in the ocean that includes a realistic basis for assessing the environmental risks associated with these activities.
- ◆ Develop criteria for assessing the national interest in the U.S. ocean and coastal regions—both in terms of economic value and environmental and biological conservation objectives.
- ◆ Examine and document the problems arising from the lack of a comprehensive national ocean strategy through consultations with appropriate state and regional agencies, review of reports and/or research on these issues by other organizations, and analysis of information available in federal agencies with jurisdiction over marine activities.
- ◆ Review other (non-marine) multiple use management and regulatory regimes—both at the federal and state and regional levels—for comparison with analogous situations in the marine sphere.
- ◆ Examine other nations' approaches to management and regulation of their ocean space and resources for comparative purposes.

In the second phase of the study, a committee with appropriate expertise and representation of a cross-section of ocean interests would develop a model national strategy or plan to guide ocean activities that provides guidance on the two major elements of such a plan: (1) the definition of national goals and objectives and (2) the delineation of alternative governance mechanisms and processes for achieving these goals and objectives, including processes

establishing partnerships among federal, state, and regional governing bodies. Tasks before this committee will include the following:

- ◆ definition of the long-term national interest in environmental preservation and economic development of the ocean and ocean resources in the public interest;
- ◆ creation of mechanisms for the resolution of conflicts among users based on a comprehensive national plan;
- ◆ development of guidelines that achieve consistency in rules and regulations among agencies with regulatory and management jurisdiction;
- ◆ design of a management and governance framework that achieves full partnership among all stakeholders (federal, state, local government, academia, industry, public interest groups);
- ◆ creation of processes for encouraging appropriate economic utilization of ocean resources and space.

The findings and recommendations of the study would go to the Congress and the Administration for formal consideration and implementation.

## Summary

In the more than 20 years since the Stratton Commission's comprehensive look at national ocean policy (*Our Nation and the Sea*, 1969), interest in marine affairs has waxed and waned and the promise of a coordinated national effort in this sphere has proven to be elusive.

Several new challenges concerning the ocean, its resources, and



uses have risen to prominence.

Problems and conflicts arise from changes both in national priorities and in the international economic system. Broad issues that need to be addressed in the light of these changes include:

- ◆ the need to reconcile development of ocean resources with protection of the marine environment through agreed-upon social and political priorities,
- ◆ the inadequacy of processes and institutions for mediating among various and potentially conflicting uses of the ocean and its resources, and
- ◆ the emergence of an increasingly international ocean economic market.

It is appropriate and timely that the NRC marshal its unique resources and capabilities to provide the nation with an assessment of the scope of these problems and an approach to addressing them.

*<sup>1</sup>Our Seabed Frontier: Challenges and Choices (NRC, 1989); Working Together in the EEZ (1992); Proceedings of a Forum on the Future of the U.S. Exclusive Economic Zone, (unpublished Marine Board background paper, 1993).*

## THE FORMATION OF A NATIONAL OCEAN COALITION

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(Editors' Note: As background to her presentation, Ms. Barber has provided the following information on The Ocean Coalition for this volume).

The Ocean Coalition has been formed to bring national attention to the opportunities our ocean and coastal waters provide. Public understanding and government recognition of the importance of the oceans to daily citizen needs must be increased. The Coalition represents a coming together of the broad ocean community. Coalition members share a common view that the U.S. has strong national interest in the oceans which merits increased emphasis and coherent policy. The members of the coalition seek to increase the visibility of the importance of ocean and coastal areas in all sectors of the economy and for the public good. They share a commitment to comity in the exchange and comparison of viewpoints and in working toward consensus.

### Goal

*Achieve the greatest overall benefit to the Nation from the prudent use and conservation of oceans and coasts.*

### Members

Members include individuals and organizations that represent ocean or coastal activities or concerns:

- ◆ government agencies and offices
- ◆ public interest groups
- ◆ industry groups
- ◆ educational organizations
- ◆ professional societies
- ◆ interested persons

### Objectives

- ◆ Provide a forum for Coalition members and others to come together to share information, exchange views, build consensus on issues of common interest, and, where opportunity arises, promote the resolution of conflicts.
- ◆ Educate policy and decision makers on the value of our nation's ocean and coastal resources, and their contribution to long-term economic growth, environmental security and public safety.
- ◆ Provide a focal point for dissemination of information and materials about the myriad ocean activities and their interrelationship and importance to the economy, the environment and the public well being.
- ◆ Articulate a unifying set of strategies on ocean and coastal matters to support national policy making regarding stewardship and development.

## A CONSENSUAL APPROACH TO A NATIONAL OCEAN STRATEGY: HOW FAR CAN IT GO?

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Can something as visionary as a national ocean strategy actually be achieved within a national system best characterized as a series of autonomous operating units whose only common direction is an occasional presidential executive order and the annual savings bond and United Way campaigns? Is it worth spending time on a concept which congress after congress and administration after administration have steadfastly ignored? In short, is the quest for a coherent national ocean policy a fool's errand?

Indeed, it has been nearly 30 years since the first (and last) federal legislation that dealt with the national interest in the coasts and oceans in any sort of a comprehensive way. During those three decades, especially between 1970 and 1980, we have seen lots of legislation enacted dealing with coasts and oceans but virtually all of it is on a piecemeal basis because the politics of the days are piecemeal—single interest client groups dealing with a plethora of narrow-interest congressional subcommittees and their specialized executive agency counterparts.

Recognizing that this situation is a structural reality of the day and that fundamental changes to the existing fragmentation will come slowly and painfully and will probably only be triggered by a calamity, crisis or disaster of some magnitude, I ask in this paper how

far can we go toward achieving a more coherent national ocean strategy within the present set of arrangements? Can some progress be made on a consensual basis thereby creating the momentum necessary for more politically challenging change?

In a practical sense, what do we mean by a national ocean strategy? To me it means having essentially all of the countless actions of the national government supportive of an agreed set of principles and goals regarding our oceans and coasts. Now, many of these "countless actions of the national government" will, in turn, influence the actions of other levels of government and private behavior as well. Hence, a national ocean strategy should be more than a federal ocean strategy—it should reach all significant actions affecting the oceans and coasts regardless of where they originate.

Is this overly ambitious and unrealistic? If little or no consensus exists in this country about what our ocean goals should be, then clearly achieving a coherent national ocean policy, even using the legislative route, is not a near-term prospect. If however, some measure of agreement does exist—and I will argue that it does—then some progress can be made.

How is ocean and coastal decision-making done now? How

are the countless actions of the national government made? Based on several decades of watching (and making) these kinds of decisions, I believe that individual decision-makers are guided by some or all of the following:

1. Their vision of what they want to accomplish during their time in the position;
2. Their view of what the policy leaders in their organization want them to accomplish with their programs;
3. Their view of what their "clients" want;
4. Their view of what the Congress wants, that is, their legislative mandate.

Some will argue that my list is inverted and that legislative mandates are controlling in most cases. While it may be true in some cases that the relevant legislation is tightly and inflexibly drawn, in the main, this is not the case. A fair amount of discretion usually exists to those administering these programs. Of course, it is perfectly possible to eliminate this discretion in the regulation writing process. It is also true that lawsuits constraining the use of such discretion can occur unless the relevant interest groups are also on board with regard to the overall goals being sought.

My point is that, in general, those making the countless national decisions have a significant amount of flexibility in what they do. A few examples are given below:

- ◆ NOAA staffers (actually OCRM) can decide just how much effort they want to put into assisting and facilitating the production of ocean resource management plans by the states;
- ◆ the regional fishery management councils can decide how much of their limited time and effort to put into rebuilding depleted stocks versus preparing new management plans for other species;
- ◆ the MMS can decide what kind of new "partnership" arrangements to seek with the coastal states;
- ◆ supervisors of the federal endangered species program can decide how much effort to put into rebuilding endangered species versus how much into the work related to new listings.

Of course, there will be limits on such flexibility but some freedom of action will almost always be present. My thesis is that this freedom of action, in the aggregate, amounts to a considerable "resource" and if used to further an agreed set of goals, could make an important start in the direction of a more coherent ocean and coastal strategy.

This thinking leads to the view that many of the goals of a national ocean strategy can be obtained by convincing national ocean decision-makers to incorporate the agreed goals into their decision criteria. Success in doing this will depend upon the extent to which decision-

makers believe that such an approach will:

- ◆ increase the "leverage" of their programs in achieving their established goals;
- ◆ help them achieve their personal goals;
- ◆ be consistent with their legislative mandates;
- ◆ have the support of their "clients";
- ◆ have the support of their policy leaders.

Thus, a consensual approach to the development and implementation of a national ocean strategy might follow these steps:

1. The careful formulation of a national set of goals, aspirations, and vision for the future of the nation's coasts and oceans on the basis of consensus.
2. The formulation of a tailored set of goals to apply specifically to each of the major decision-making processes that now constitute the countless national ocean/coastal decisions now being made.
3. The creation of a representative body at the national level to oversee the operation of the "strategy," evaluate its impact, and to pinpoint areas in need of possible legislation either because of irreconcilable conflict or for other reasons.

It seems likely that certain interfaces (between marine mammals and commercial fishermen, for example) will require legislative attention. Also, additional resources (funding) might well be needed to capitalize on some opportunities such as those involving new ocean technologies. It may

be, as well, that some benefits will be seen in giving the agreed ocean goals and aspirations a legislative basis. In any event, however, a much stronger case will be able to be mounted for such legislation if clear evidence is available that the consensual approach was being pushed as far as possible.

Clearly, accomplishing these tasks is a tall order. All three of the tasks set out above call for some innovative thinking and breaking new ground. One way to proceed would be to begin the process slowly by addressing two or three issue areas at a time. For example, a schedule such as the one below might be developed by an informal "ocean and coastal coordinating council" for the initial two years:

#### *Calendar year 1994*

- ◆ port and harbor maintenance dredging
- ◆ OCS oil and gas program
- ◆ coastal hazards management

#### *Calendar year 1995*

- ◆ ocean resources management
- ◆ estuarine planning and management
- ◆ wetlands protection and mitigation

The Maritime Administration working with an interagency committee already has a version of such a process underway and hopes to have recommendations for improvements ready by late summer. At the least, the MARAD process should produce some useful learning about this approach.

I would like to close by offering an example of just one of the goals that might make up a national ocean strategy as illustrative as to what I feel is needed and by suggesting a possible first step to

begin exploration of the feasibility of this approach.

"The national ocean and coastal strategy of the nation seeks to achieve the following goal:

- ◆ The quality of the nation's coastal waters will be maintained at a level that will sustain full production from shellfish beds and coastal fishery stocks. The closing of productive shellfish beds for decade after decade will no longer be acceptable. Similarly, plans will be developed and implemented to rebuild deleted fishery stocks to former levels of abundance in a time certain. Economic assistance will be available to communities and individuals suffering adverse impacts as a result of this strategy."

Of course, the consensus process very likely would produce a different goal than the one I have set out above but, in my judgement, to be useful in a strategy that ultimately will make a difference, the goal should be clearly and unambiguously set out, should effectively address the main problem, and should be susceptible to later evaluation.

Finally, a possible first step, I believe, is to confirm that consensus exists on many (most?) of the goals and guiding principles of a national ocean and coastal strategy. The leadership to initiate a process to answer this question could come from any of several quarters - a coalition of ocean users - a federal agency or group of agencies provided that the process was immediately and effectively opened up all affected interests - perhaps a group of academics like this one (the OGSG) if they could manage a fully representative process - or a group of coastal states, again with the

same caveats. As will be clear from the paper of Charles Bookman in this volume, the Marine Board of the National Academy of Engineering is also well positioned, because of its earlier work, to play a lead role in undertaking such a program. The main point is that all of the affected interests would have to be a party to the discussions and to the consensus itself.

In my judgement, the ideas presented here are consistent with those presented elsewhere in this volume by Charles Bookman, Mary Barber, and Biliara Cicin-Sain.

## THE PRECAUTIONARY PRINCIPLE/APPROACH IN INTERNATIONAL AGREEMENTS ON THE MARINE ENVIRONMENT

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### **Introduction**

During the 1980's international policy makers began to reevaluate marine environmental policy which had been largely based upon the assimilative capacity approach. This approach assumes that the ocean is able to assimilate a definable amount of harmful material before actual harmful effects occur. It further assumes, rather naively, that it is scientifically possible to accurately determine how much of any substance can harmlessly enter the marine environment. This assumption led to the notion that there had to be proof that harm would occur before substances could be prohibited from the marine environment. Since such proof was difficult or impossible to attain, the assimilative capacity approach was in effect very permissive. It had become apparent by the late 1970's that, due to the biological and chemical complexity of marine ecosystems and to the chemical complexity of waste streams entering the marine environment, regulations based upon assimilative capacity were failing to protect the marine environment from serious degradation.

In response to these failings, in the mid-1980's, there arose the Precautionary Principle, which emphasizes pollution prevention and places the burden of proof on the prospective polluter to demonstrate the absence of any legitimate concern regarding potential harm

to the environment or human health. The implementation of the precautionary principle is based upon a commitment to clean technologies and clean production methods—i.e. reduction of pollution at its source.

Over the past decade, several international agreements have incorporated the precautionary principle or precautionary approach with respect to pollution in general or marine pollution in particular. And some, the Rio Declaration (UNCED) in particular, have recommended the precautionary approach to all activities potentially having an adverse impact on the environment. Working found in three of these agreements—The London Convention, OSPAR, and the Rio Declaration—is presented in the Appendix.

### **In The Wake of UNCED**

With the Rio Declaration providing an impetus, several international environmental forums are attempting to incorporate and further define the precautionary approach in terms of their specific goals. For example, the Marine Environmental Protection Committee of the IMO is establishing a working group on the implementation of the Rio Declaration and this group is likely to address the precautionary approach and what it might mean for the shipping industry. In addition, the ongoing U.N. Conference on Straddling and

Highly Migratory Fishery Stocks and the upcoming U.N. Conference on Land Based Sources of Pollution are grappling with the precautionary approach within the context of each of those areas of concern.

Unfortunately, in the scramble for governments to protect the interests of national and multinational industries, they have lost sight of the reasons the precautionary approach was embraced in the first place. Having seen the diplomatic value and public popularity of the precautionary principle, some governments and international governmental organizations have decided that the best approach is to try to undermine it while ostensibly endorsing it. The most effective way of accomplishing those seemingly divergent goals is to redefine precaution to include whatever you are already doing.

For example, the U.S. State Department has taken the position that we are already acting in a precautionary manner simply by considering the environmental effects of proposed activities. Risk analysis, done exactly as it has been done within the context of the assimilative capacity approach, is now proposed as the standard for the precautionary approach. As for reversing the burden of proof or demonstration, that is to be accomplished by making the proponents of an activity responsible for identifying potential risks and doing the prescribed risk analysis

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— a self serving responsibility at best. The U.S. is not alone in its regressive interpretation of the precautionary approach. Among others, Canada has a similar position, as does FAO in its definition of precautionary fisheries.

This concerted effort to disable the precautionary principle suggests that it is time to re-examine why it came about and what are the fundamental elements of precautionary action. In addition, what are the main criticisms and are they legitimate? And finally, is it possible to implement the precautionary approach in the real world?

### *Fundamentals of Precaution and the Relation to Science*

The precautionary principle (or approach) is grounded in science and is not an ill defined concept with an arbitrary definition. There is sometimes a perceived lack of scientific integrity in the precautionary principle and critics site an absence of objectivity and a political nature that lies outside the bounds of good science. However, such criticism is based on a poor understanding of the purpose of the precautionary principle, which is to provide a holistic decision making process and not to pretend to provide a scientific "answer."

Science is not rejected, and the need for as much sound scientific information as possible is recognized. In fact, the precautionary approach to environmental protection begins with science, but it also takes into account the limitations of that science and provides guidance for making decisions on the basis of both what is and what is not known, and what are the desired long-term results (environmental, human health, economic and social) of those decisions. In contrast, the assimilative capacity approach

begins and ends with science. On the basis of incomplete data, a risk is calculated and weighed against standards of acceptable risk and acceptable cost of risk reduction. The uncertainties in the risk analysis are not weighed.

The precautionary approach is chiefly anticipatory in its goal to prevent environmental damage by adopting technologies and management regimes that will eliminate likely sources of harm. However, it also necessarily has a reactive mode which requires immediate action when environmental damage has already occurred. Finally, when a proposed activity is associated with reasonable concern that environmental damage may result, it is incumbent upon the proponents of that activity to demonstrate that such damage is unlikely.

The important elements of the precautionary approach as applied to marine pollution are as follows:

- (1) An emphasis on prevention of contaminants entering the marine environment.
- (2) Prohibition of further contamination without waiting for conclusive scientific proof of the cause and effect relationship between the contaminants and the observed ecosystem damage.
- (3) Shift in the burden of "proof" onto the proponents of the polluting activity to demonstrate that the activity is not likely to damage the environment. (The "absence of harm" standard must be interpreted as requiring, to the extent scientifically possible, that there is no legitimate concern about the harmful nature of the input — absolute proof is not possible.)
- (4) Implementation through clean production technologies and

through identification of substances to target for phase-out.

### *Precaution – Is It Possible?*

Another common criticism of the precautionary principle is that if carried to the extreme, nothing would be allowed and industry would be shut down. Perhaps a very literal interpretation of the precepts outside the context in which the principle was developed would lead to that conclusion. However, the precautionary principle was not developed to try to turn back the pages of human history but to attempt to deal with the world as we have altered it and to avoid the ultimate destruction of our environment and ourselves. It should therefore be viewed as defining a process of change, where new goals are established and a progressive set of actions is put in place to move us toward those goals.

In the case of marine pollution, the actions are clear — the most important categories of pollutants (e.g. organochlorines) should be targeted for phase-out, available clean technologies should replace polluting technologies, and research and development of new clean technologies should be given top priority. All opportunities to reduce or eliminate pollution at its source should be identified and implemented. Scientific risk assessments should no longer be used to define how much pollution to allow, but instead to determine which substances and activities should be "cleaned up" first. This will not happen over night, but with careful and deliberate planning it can happen soon enough to make a difference. And that difference need not be economically debilitating.

This is all within our reach if

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governments do not refuse to restructure their approach environmental protection. As the precautionary approach is implemented in the context of the numerous regional and global agreements that have or will adopt it, it will hopefully not become the victim of redefinition that reduces it to nothing more than "old wine in new bottles".

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## Appendix 1

### *The Precautionary Approach in Three International Agreements*

#### *The London Convention, 1972 (LC72): Resolution LDC 44(14).*

The fourteenth Consultative Meeting ....

1. Agrees that in implementing the London Dumping Convention the Contracting Parties shall be guided by a precautionary approach to environmental protection whereby appropriate preventative measures are taken when there is reason to believe that substances or energy introduced in the marine environment are likely to cause harm even when there is no conclusive evidence to prove a causal relation between inputs and their effects;
2. Agrees further that Contracting Parties shall take all necessary steps to ensure the effective implementation of the precautionary approach to environmental protection and to this end they shall:
  - encourage prevention of pollution at the source, by the application of clean production methods, including raw materi-

als selection, product substitution and clean production technologies, and processes and waste minimization throughout society;

evaluate the environmental and economic consequences of alternative methods of waste management, including long-term consequences;

encourage and use as fully as possible scientific and socio-economic research in order to achieve and improved understanding on which to base long-range policy options;

endeavour to reduce risk and scientific uncertainty relating to proposed disposal operations; and

continue to take measures to ensure that potential adverse impacts of any dumping are minimized, and that adequate monitoring is provided for early detection and mitigation of these impacts.

### *Convention for the Protection of the Marine Environment of the Northeast Atlantic (OSLO and Paris Commission-1992)*

Article 2: General Obligations.

- 1a The Contracting Parties shall, in accordance with the provisions of the Convention, take all possible steps to prevent and eliminate pollution and shall take the necessary measures to protect the marine area against the adverse effects of human activities so as to safeguard human health and to conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected.
- 2a The Contracting Parties shall apply the precautionary



principle, by virtue of which preventive measures are to be taken when there are reasonable grounds for concern that substances or energy introduced, directly or indirectly into the marine environment may bring about hazards to human health, harm living resources and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea, even when there is no conclusive evidence of a causal relationship between the inputs and the effects.

***The Rio Declaration (The United Nations Conference on Environment and Development, 1992)***

***Principle 15.***

In order to protect the environment, the precautionary approach shall be widely applied by states according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

**Chapter 17.** [The application of the precautionary approach specifically to marine environmental issues is elaborated upon in this chapter as follows]

A precautionary and anticipatory rather than a reactive approach is necessary to prevent the degradation of the marine environment. This requires, *inter alia*, the adoption of precautionary measures, environmental impact assessments, clean production techniques, recycling, waste audits and minimization, construction and/or improvement of sewage treatment facilities, quality management criteria for the proper handling of hazardous substances, and a

comprehensive approach to damaging impacts from air, land and water.

## THE INTERNATIONAL WHALING COMMISSION (IWC) AND THE NORTH ATLANTIC MARINE MAMMAL CONTROL ORGANIZATION (NAMMCO): THE INSTITUTIONAL RISKS OF COERCED "GREENING" IN A CONSENSUAL WORLD

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This paper is concerned with promise and limits of the phenomenon of collective legitimation as an instrument of international governance. Over the past several years, I have sought to understand more fully the questions occasionally raised regarding the legitimacy of the Security Council's use of its collective authority.<sup>1</sup> I found my research and conversations with colleagues on the topic continuously returning to basic questions regarding what it means to speak of an organization's use of its authority as illegitimate. I also found this inquiry raising basic issues applicable to many international organizations and fundamental to understanding the possible roles of law in world order. Elsewhere I have offered seven preliminary observations concerning the process of collective legitimation which takes place in international organizations.<sup>2</sup> The institutional risks of efforts at "collective legitimation" that are opposed by a significant element of the membership of an organization can be seen in the recent developments in the International Whaling Commission ("IWC").

I use the phrase "collective legitimation" to describe the capacity of an international organization to take decisions that influence the collective image of (1) the legitimacy of a government, (2) the actions of a government or (3) the ideas of a group. The capacity for

collective legitimation is directly related to the perceived legitimacy of the organization involved. "Legitimacy" in turn is referred to here in political and social terms and is best understood as the belief of those governed in the organization. The perception of the "legitimacy" of a process or organization is a difficult quality to describe because the perception is a subjective conclusion, perhaps based on often unarticulated notions about what is fair and just or perhaps more consciously based on a utilitarian assessment of what the organization means for oneself.

For Inis Claude, "the crucial question is not *what* principle is acknowledged but *who* is accepted as the authoritative interpreter of the principle or, to put it in institutional terms, *how* the process of legitimization works."<sup>3</sup> This view correctly emphasizes that a complete account of collective legitimation would require an examination of the process contextually, that is, an examination of the processes of each particular organization. Before turning to the IWC, I offer seven general hypotheses to be considered as we work toward a general account of the process of collective legitimation.

*First, legitimation potentially augments the capabilities of an organization.* When an international organization is created, its powers are carefully delineated by the

contracting states. The capacity for collective legitimation is difficult to contain, however, and for this reason that capacity may increase the formal range of powers possessed by the organization.

*Second, legitimation can serve as a weak substitute for stronger action.* Even if legitimation potentially augments the capabilities of an organization, it also may be used because the member states of the organization are not willing to use the formal, perhaps stronger, powers of the organization.

*Third, in considering legitimation, one must consider carefully who is using whom.* Detailed examination of a given process of legitimation often will reveal that the act of "collective" legitimation in fact may be the product of only a nonrepresentative portion of the organization's membership.

*Fourth, collective legitimation is often, but not necessarily, employed effectively by the relatively powerful.* Although collective legitimation often is a tool of the powerful, it is not necessarily so. My work suggests that collective legitimation may be invoked by whoever dominates the organizational decision-making process involved, but that the organizational power to gain a decision of collective legitimation without the power outside the organization to make use of the decision of legitimation very often is not enough.

Fifth, the preceding observations suggest that we need to be realistic about the 'power,' and hence wisdom, of collective legitimation. There have been numerous collective acts of legitimation and delegitimation regarding events in Haiti, Bosnia and Angola, but these acts in and of themselves do not bring about change. Rather they may bring about change, perhaps in the incidents described have yielded some change, and perhaps may aid the community in bringing about change.

Sixth, deep divisions over the legitimacy of an organization's use of its collective authority not only undermines its ability to legitimate, but ultimately raises institutional consequences. I have noted that the capacity for collective legitimation of an international organization may not so much represent the collective preference of the membership as the preference of a subgroup which is able to dominate the process by which decisions of collective legitimation are made. If this is the case we might also expect two other consequences: (1) the dominated group might come to question the legitimacy of the organization generally and (2) the organization membership will be fractured in the value various segments of the membership ascribe to the organization. Indeed, the organization may simply divide up to reflect the communities within it.

Seventh and last, it is important to note that the process of enmeshment and power of legitimation reaches beyond our normal ideas of consent as the basis of international law. Implicit in collective legitimation is the capacity to influence images of legitimacy despite the absence of the consent of those most affected by the legitimation decision.

An instructive example as to all these aspects of collective legitimation can be seen in the transition in mission of the IWC over its almost fifty year history, the dynamics of its efforts to collectively delegitimize whaling of any kind, and the fractures in the membership of the organization which have resulted.

Indeed, the perceived legitimacy of the organization is so low for a significant element of the membership, that it has resulted in the creation by Norway of an alternative organization, the North Atlantic Marine Mammal Control Organization (NAMMCO) to take over control of commercial whaling from the IWC.

Collective legitimation is a subtle and occasionally significant aspect of international organization and governance. It may be misused and, unfortunately, it may be the organization and the international community that pays the price of such misuse. We will ask much of international organization over the coming decades, it is a challenge that will test their credibility greatly. It will be relatively easy to employ collective legitimation when there is a strong consensus, but often that won't be the case. Members will have different preferences as to what the organization should do. The issue thus will become whether we can construct institutions which we regard as legitimate despite different preferences and norms.

1. David D. Caron, *The Legitimacy of the Collective Authority of the Security Council*, 87 American Journal of International Law 552 (1993).
  2. David D. Caron, *Governance and Collective Legitimation in the New World Order*, forthcoming Hague Yearbook of International Law (1994).
  3. Inis Claude, Jr., *Collective Legitimation as a Political Function of the United Nations*, 20 International Organization 367, 369-70 (1965).
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## IMPLICATIONS FOR U.S. COASTAL STATES OF POTENTIAL U.S. ACCESSION TO THE 1982 U.N. CONVENTION ON THE LAW OF THE SEA

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### ***U.S. States and International Law***

Under the Supremacy Clause, self-executing U.S. treaties, like congressional enactments, are federal law superior to state law. Customary international law is probably also federal law and, where not inconsistent with current congressional legislation, treaties, or other positive federal law, is binding on the states.

### ***The U.S. Constitution and International Relations***

Under the Constitution, as interpreted by the Supreme Court, states not only have no direct role in the conduct of U.S. foreign policy, but must be careful in regulating local affairs not to interfere unduly with the federal government's conduct of international relations. Thus, state actions inconsistent with federal laws and policies that are part of the central government's pursuance of foreign affairs are invalid due to federal preemption. In addition, "dormant" constitutional powers of the federal government, under the foreign commerce clause and the foreign affairs power, restrict state actions even in the absence of inconsistent federal laws or policies. Where a state action is directed at U.S. international relations or indirectly affects them, a balancing test might be applied to determine the validity of the state action.

### ***U.S. International Responsibility for Actions of U.S. States***

Actions by state governments are attributable under international law to the United States. Thus, state acts, whether or not valid domestically, can, if violative of international law rules, incur U.S. responsibility under international law.

### ***The United States and the 1982 Law of the Sea Convention***

The United States has so far refused to sign or accede to the 1982 Convention on the Law of the Sea but, in accord with a widely held view, considers the treaty, with the exception of the deep seabed mining regime, to be generally reflective of customary international law.

The 1982 Convention will come into force, as treaty law, for the original 60 (or more) ratifiers in November 1994. The Clinton administration is currently considering accession to the treaty, assuming modification of some of its deep seabed provisions.

### ***Implications for U.S. States of U.S. Accession to the 1982 Convention***

#### ***State Roles in U.S. Ocean Governance***

Coastal U.S. states have occasionally taken actions, sometimes

constitutionally invalid, that purport to govern offshore ocean activities, even activities conducted by foreign vessels and nationals. Moreover, Congress has authorized roles for states in some aspects of offshore ocean governance—for example, under the Magnuson Act and the Coastal Zone Management Act. Because of coastal state demands for more influence in U.S. ocean governance and the responsiveness of Congress to local interests, the states might well receive additional ocean governance roles, probably in "partnership" relationships with the federal government, in the future.

#### ***The Obligation of U.S. Coastal States to Comply with the International Law of the Sea***

U.S. states have a duty to comply with international law, including the law of the sea, as a part of U.S. law. This obligation, however, is somewhat confused. What is the law of the sea that is part of U.S. law? The United States remains a party to all four of the 1958 Geneva Conventions on the Law of the Sea, although the consensus of authority, in this country and elsewhere, is that substantial aspects of the Geneva Conventions have been modified by subsequent developments in customary international law. As noted, the current U.S. position is that customary law of the sea, binding on the United States and

others alike, is reflected in the non-deep seabed parts of the 1982 Law of the Sea Convention. The place of customary international law, as an aspect of U.S. state law, remains more clouded than conventional international law.

Some relevant duties imposed on the United States, including its constituent states, by the international law of the sea are the obligations to allow freedom of navigation in the U.S. exclusive economic zone and to refrain from interference with innocent passage of foreign vessels in the U.S. territorial sea, the duties to conserve and optimally utilize the EEZ's living resources, and the duty to protect the marine environment from pollution, including pollution from run-offs and land-based sources.

### *U.S. Accession to the 1982 Law of the Sea Convention*

Accession to the 1982 Convention by the United States could have the following effects for U.S. coastal states: The parts of the treaty that will self-execute will become superior federal law under the Supremacy Clause, superseding prior inconsistent U.S. law and imposing on states an immediate constitutional obligation to comply. Other parts of the Convention will need congressional implementation before they become U.S. law; in the meantime, the federal "law of the sea"—a mix of prior treaty law, congressional statutes, and other federal law—will remain somewhat confused for the states. Additionally, the United States will have bound itself to the 1982 Convention as a matter of international law and relations, even for the parts of the treaty that will not self-execute as domestic law. Therefore, even contemplated state governmental actions that would be in compliance with U.S. law should be weighed against the possibility that they

might cause the United States to violate international law.

### *Encouraging Compliance by U.S. Coastal States*

Richard Bilder has stated in an analogous context that,

as a practical matter, state and local governments themselves must take principal responsibility for ensuring that their activities stay within constitutionally permissible and appropriate bounds. Absent flagrant abuse or clear need, it is unlikely for a variety of reasons that Congress, the Executive or the courts will intervene to this end. Consequently, state and local governments should be aware of, and sensitive to, the important constitutional issues and foreign relations concerns involved, and act responsibly.<sup>1</sup>

In the design of the American Federation, U.S. states are expected to be more concerned with local affairs than they are with the international relations of the United States. Nevertheless, states have a responsibility to make themselves aware of the potential impact of their governmental actions on foreign affairs. Coastal states of the U.S. should be particularly conscious of the complex mix of domestic and international law that exists in the seas off U.S. shores and avoid actions that are invalid under the Supremacy Clause or, even if valid, might tend to interfere with the federal government's conduct of foreign relations.

One recommendation proposed here is that contemplated state legislation or other actions relating to offshore activities or the condition of the offshore marine environ-

ment be undertaken only after the preparation of an "IRIS": an International Relations Impact Statement.

<sup>1</sup>Bilder, *The Role of States and Cities in Foreign Relations*, 83 AM. J. INT'L L. 821, 827 (1989).

## DISPUTE RESOLUTION IN UNCLOS AND THE LOSS OF U.S. TRADE SANCTIONS TO PROTECT DOLPHINS, WHALES, SEA TURTLES, AND OTHER MARINE LIVING RESOURCES

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### **Introduction**

With the United Nations Law of the Sea Convention (UNCLOS) scheduled to enter into force on November 16, 1994, the Clinton Administration has come under increasing pressure to negotiate an acceptable compromise on the deep seabed mining provisions so that the United States can accede to the Convention. It is my contention that U.S. unilateral economic sanctions imposed against foreign nations as a method of protecting dolphins, whales, sea turtles, and other marine living resources violate several substantive provisions of UNCLOS. Consequently, if the United States becomes a State Party, the Convention's compulsory and binding dispute settlement provisions may prevent the United States from using economic coercive measures for environmental purposes as has been its practice for over two decades. This will have profound implications on the political dynamics of the debate over the Convention in the United States and could play a role in defeating U.S. ratification.

### **Unilateral Sanctions in Domestic Legislation**

Unilateral trade sanctions have been an important component of U.S. fisheries legislation for many years. The Pelly Amendment, enacted in 1971, was the first statute to authorize an embargo of fisheries

products against nations that diminished the effectiveness of international fishery conservation agreements. This was followed by several other laws such as the Marine Mammal Protection Act (MMPA), Section 205 of the Magnuson Fisheries Conservation and Management Act (MFCMA), and the Packwood-Magnuson Amendment, which use trade-related provisions to protect dolphins and whales.

Although trade restrictions have been incorporated in U.S. domestic fisheries legislation for over two decades, in the past five years there has been an avalanche of new embargo legislation. Since 1987, no fewer than seven pieces of domestic legislation have been enacted that provide for embargoes against the fisheries products of foreign nations that fail to comply with U.S. mandated fisheries management and conservation policies.

Moreover, in recent years the U.S. is enforcing these statutes much more aggressively than in the past. This, in turn, has caused some nations targeted by embargoes to begin to challenge the legality of U.S. actions. The best known example is the successful challenge brought by Mexico against the United States in GATT. In 1991 a dispute resolution panel ruled that the United States violated GATT by

placing an embargo against Mexican yellowfin tuna after it failed to comply adequately with the dolphin protection provisions of the MMPA. The European Community has brought a similar GATT challenge and a decision is pending.

Despite its rebuke in GATT, the United States has in no fashion altered its trade sanction policies. The reason that economic coercive measures have become so entrenched in domestic fisheries laws is because a powerful political coalition made up of environmental organizations, commercial fishing interests, animal rights and consumer protection groups, organized labor, and an assortment of other groups have come to believe that the threat of unilateral trade sanctions is the most effective method of forcing other nations to adopt stricter environmental standards. Members of this coalition have not been hesitant in communicating their support of trade sanctions to Congress. For example, shortly after the GATT Tuna/Dolphin decision was handed down, one hundred members of the House of Representatives, and sixty-four Senators signed letters to then President Bush calling for a rejection of the GATT ruling and supporting the continued use of unilateral sanctions in domestic environmental legislation.

## ***UNCLOS Dispute Settlement Provisions***

This sets the stage for what may happen in the future if the United States accedes to UNCLOS. The Convention unquestionably contains the most detailed and sophisticated set of dispute settlement provisions of any international agreement in history. These provisions are very complicated and for purposes of this summary I can only point out a few of the most important features.

First, parties to a dispute are required to enter into negotiations prior to bringing a formal dispute settlement claim under the Convention. If settlement has not been reached by negotiation or non-binding conciliation then a party can request that "any dispute concerning the interpretation or application of this convention" be submitted for compulsory and binding settlement by one of several forums including the International Court of Justice, several kinds of arbitral tribunals, or the new International Tribunal for the Law of the Sea. There are a few activities that are exempted from binding settlement, but none would prevent a nation targeted by U.S. trade sanctions from challenging that policy under the Convention.

The most crucial features of the UNCLOS dispute settlement system are first, that there is a mandatory obligation that the parties to any dispute submit to the procedures; and second, that any decision rendered by the tribunal with jurisdiction is binding and final.

## ***U.S. Actions Violate Substantive Provisions of UNCLOS***

One obvious requirement is that the party bringing the dispute settlement challenge have some actionable claim based upon a violation of a substantive provision of the Convention. The purpose of U.S. trade embargo legislation is to force foreign nations to alter their fisheries conservation and management practices so that they comply with standards deemed adequate by the United States. Some U.S. statutes require embargoes to be imposed regardless of whether the non-complying practice occurs on the high seas, in a coastal state's EEZ, in the territorial sea, or in internal waters. Moreover, U.S. trade sanctions may be triggered even if a foreign nation's activities are fully consistent with its domestic laws, applicable international agreements, and existing customary international law.

Space restrictions allow for only a few general observations regarding these provisions. First, in areas of the high seas, mandatory cooperation among states is perhaps the most important and unifying feature of the Convention's legal regime dealing with the management of living resources beyond the EEZ. The clear purpose of article 116 and its references to articles 63-67, as well as of article 118, is to require international agreement before conservation measures can be prescribed for the high seas. Consequently, the United States lacks authority under the Convention to unilaterally prescribe conservation measures for distant high seas living resources.

UNCLOS grants coastal states almost unlimited authority to conserve and manage living resources within the EEZ, territorial

sea, and inland waters. Although coastal state discretion over living resources in the EEZ is qualified by certain basic obligations of conservation, rational management and optimum utilization, significant safeguards have been included in the Convention to protect coastal states from losing their authority to manage their living resources as they choose. As a general rule, coastal states may impose whatever regulations they choose regarding the conservation and management of living resources within these zones consistent with the Convention and absent any contrary international agreement or customary law.

## ***U.S. Defenses***

The United States will argue that its use of economic coercive measures is a legitimate method of regulating its foreign trade which is a fundamental right of national sovereignty. In fact, it is not dictating how coastal states must conserve or manage their marine living resources, but merely enacting domestic trade controls to prevent its citizens from purchasing fisheries products from nations that do not apply acceptable environmental standards. Nothing prevents a targeted coastal state from continuing its existing practices as long as it is willing to find markets for its products elsewhere.

In response to this defense, I argue that there probably is no prohibition under customary international law that prevents the United States from imposing embargoes or other coercive measures for political purposes. However, this does not mean that unilateral measures cannot be prohibited by treaty. There is considerable agreement among international legal scholars that if a nation is a party to a treaty which

provides a dispute settlement mechanism, that the nation cannot resort to self-help. This is especially true when the dispute settlement provisions provide for interim protective measures during the pendency of the action as is provided under UNCLOS.

Clearly it is not credible for the United States to impose an embargo that is intended to coerce another state into relinquishing certain rights granted to it under the Convention and then to argue that the affected state cannot invoke the Convention's dispute settlement provisions because the embargo is simply a domestic trade issue having nothing to do with the Convention.

### *Political Implications*

The potential loss of trade sanction weapon may have profound political implications. First, those groups such as the environmental community, animal rights advocates, commercial fishing interests, and others that have traditionally supported U.S. membership in UNCLOS may begin to rethink their positions. As mentioned earlier, many people in the United States feel that unilateral trade sanctions are the only viable method that the nation has to force other nations to adopt stricter environmental standards. These groups will be very reluctant to risk the loss of the trade embargo weapon as a result of U.S. accession of UNCLOS.

Second, other groups such as organized labor, consumer protection advocates, and certain domestic industrial associations strongly support the use of U.S. trade restrictions primarily for international competitiveness and health and safety reasons. While these groups have traditionally had little direct interest or influence in the

development of the law of the sea, they were very critical of the GATT Tuna/Dolphin decision and may not want the United States to enter into another international agreement which may find sanctions illegal. Whether this concern will translate into formal opposition to UNCLOS remains to be seen.

Third, the Senate will be acutely aware of the political fallout if it ratifies a treaty that prohibits the United States from enforcing very popular domestic environmental legislation such as the Marine Mammal Protection Act and the Endangered Species Act. Sixty-four Senators are already on record supporting the rejection of the GATT Tuna/Dolphin decision and reaffirming the authority of the U.S. to impose trade sanctions for environmental purposes.

Fourth, it is common knowledge that the executive branch strongly resents being constrained by mandatory trade sanction legislation. The State and Commerce Departments may be more forceful in its support of U.S. accession of UNCLOS if this slows down the trend toward passage of more and more fisheries statutes with trade sanction components.

Finally, in the foreign arena, some uncommitted nations, especially those that have either been targets of U.S. sanctions in the past or view themselves as future targets, may go ahead and become parties to the Convention in order to gain access to the dispute settlement provisions for protective purposes.

### *Conclusion*

If the United States accedes to UNCLOS, the days will be over in which it can embargo the fisheries products of other State Parties confident in the fact that the other nation will comply because they have no effective judicial remedy. This, in turn, will significantly affect the political dynamics of the domestic debate over the Convention and may derail U.S. ratification.



## NOTES FROM THE FIELD: IMPLICATIONS OF OREGON'S OCEAN PROGRAM

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### **Introduction**

Oregon is completing work on the initial management plan for a 1000-square mile state Marine Protected Area that encompasses all of Oregon's territorial sea and ocean shore. The management plan is being prepared by the Oregon Ocean Policy Advisory Council, a 23-member body in the Office of the Governor created by the 1991 Oregon Legislature. When completed, the plan will be added to the state's Coastal Management Program.

Oregon's ocean planning and management program has had to balance several scales of management resolution. At one end are "big picture" policy relationships with other states and federal agencies; at the other end are real-world site-specific problems that are driven by individuals and communities. Oregon's ocean planning experience suggests that a framework for planning and managing ocean areas could use existing federal programs and provide perspectives about what it will take to get the job done regardless of the framework.

### **Essential Program Ingredients**

Five factors have been essential to the structure and function of Oregon's program.

- ◆ The Oregon Legislature established the program in law through comprehensive legislation.

- ◆ The Ocean Policy Advisory Council, the planning body, was placed in the Office of the Governor which ensures Executive attention.
- ◆ The ocean program was connected to the existing coastal management program rather than created as a new entity.
- ◆ Public involvement was required.
- ◆ Federal agencies were asked to participate with a specific goal of a state-federal partnership.

These five factors will likely have analogues in any national program.

### **Geographic Scope of Management Interests**

Oregon's experience reveals how state and federal ocean management interests are geographically related across the coastal zone in five rough bands of management interest parallel to the coastline: 1) the watershed portion of Oregon's Coastal Management Zone (from the crest of coastal mountains to the ocean shore); 2) the state territorial sea (Oregon's "Marine Protected Area") from shore seaward three geographic miles, within which there are federal "in-holdings"; 3) the area seaward of state waters on the continental margin (the area of federal authority where Oregon has asserted management interests in

an "Ocean Stewardship Area"); 4) the area seaward of the continental margin (beyond the "Stewardship Area"), within the 200-mile U.S. Exclusive Economic Zone; and 5) the international area seaward of the U.S. EEZ. These zones show how state and federal interests interact in ways that transcend political boundaries.

Completion and adoption of the management plan for the Oregon Marine Protected Area will mean that two of these zones, the watershed and the territorial sea, will be managed within the framework of the federal Coastal Zone Management Act as it is carried out in Oregon. Any coastal state could achieve the same results under existing federal programs.

Questions remain, however, for Oregon and other states about the management of the balance of the "Stewardship Area," the area under federal authority where there are clear state interests but for which there is no overall plan or policy. While large-scale legislative changes in the Nation's ocean governance structure may be required through Congressional action, it appears to Oregon that modification of existing federal programs could provide a reasonable near-term framework for Oregon and other states to address ocean management issues in a state-federal partnership both within and beyond state jurisdiction.

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## *A National Marine Protected Area Program*

Two agencies, both housed in NOAA's Office of Ocean and Coastal Resources Management (OCRM), could be brought closer together to provide this ocean management framework. These are the National Marine Sanctuaries Program, the nominal federal ocean management program and the national Coastal Zone Management Program. Each has broad policy and management mandates for coastal and ocean resources. Other federal acts, such as the Outer Continental Shelf Lands Act or Magnuson Marine Fisheries Conservation Act, appear to be inappropriate as an overall governance framework.

We suggest that the National Marine Sanctuary Program, already a program of increasingly large, multiple-use management areas, could be renamed (e.g. the National Marine Protected Areas Program) and more closely linked to the federal Coastal Zone Management Program, which could take a more proactive, flexible role in assisting state's to develop and carry out ocean planning and management functions. Other NOAA programs and resources could be connected to this program to provide technical assistance and resources that states simply do not have. This would achieve a single policy, management, and technical support framework for complex multiple-use management of the Nation's ocean waters.

It is clear that the time has come to bring these programs together. Recent sanctuaries have been designated without concurrent assistance to states for building ocean management capability. Despite all the cheering that can accompany a NMS designation,

coastal states often view a sanctuary as a headache and not effective in helping the state to address real ocean management problems. It appears that much of this change could be accomplished by internal NOAA initiatives rather than by legislation. However, just as legislation proved necessary in Oregon, clear Congressional policy direction and support may be a prerequisite to participation by other federal agencies and adequate funding.

### **Observations**

Regardless of the specific framework for ocean planning and management, Oregon's experience offers lessons for undertaking ocean policy development and management programs.

- (1) Ocean planning and management require a program, not just a plan. A program means that agencies have internal expertise and long-term commitment to a continuing process of planning, action, and refinement.
- (2) Ocean planning and management takes time. Research and field work in uncertain ocean conditions often takes longer than expected. Meetings and coordination with all interested parties requires lead times that eat schedules. It takes time for the process and the substance of the program to percolate into the public consciousness. Issues need time to ripen and solutions time to gel. It takes time for new programs to be accepted and incorporated into a legislative context and into the daily fabric of agency programs.
- (3) Ocean planning and management takes technical resources, money and expertise but these

need not be prohibitive. Creative and cooperative use of even modest funding can be instrumental in acquiring significant information crucial to management solutions that actually work and establish credibility. Information and technical assistance works best when integrated into the technical infrastructure of the various state and federal agencies so that they have the capability and incentive to be involved.

- (4) Ocean planning and management takes participation of all affected agencies. However, it is unrealistic to expect agencies to voluntarily accommodate significant new program loads and take on potential political liabilities without incentives. Three kinds appear appropriate and necessary:
  - ◆ Money to provide agencies with the ability to hire staff, add to program loads, obtain information, and acquire technical capability. Money means keeping or adding programs the agency may otherwise not have.
  - ◆ Mandates to require participation through a formal structure (e.g. "a seat at the table").
  - ◆ Outcomes of clear expectations and rewards (the "federal consistency" provision of the 1972 Coastal Zone Management Act was a clear "reward" to states).
- (5) Ocean management programs must respect and accommodate the differences in authority, responsibility, and political conditions between state and

federal governments. Unlike more insulated federal programs, state programs can be extremely sensitive to local politics. A traditional authority-based "top-down" approach that mandates certain results will be inappropriate and ineffective. Any program for ocean management must empower states to participate and provide flexibility to meet state-level responsibilities in ways consistent with the state's political culture, administrative structure, and public expectations.

- (6) Ocean planning and management, like all politics, is local. Overall policies and management programs must eventually work in rock-by-rock, cove-by-cove, reef-by-reef situations where the abstract world of policies and planning meets the real world of birds, fish, SCUBA divers, fishermen, tourists and local residents.
- (7) A final word: ocean management is here to stay. These problems and issues are real, complex, and often intractable. New issues arise continually. States and federal agencies cannot afford to neglect these issues or delay in their solutions if there is any hope of conserving these valuable resources.

## CALIFORNIA'S EXPERIENCE WITH THE CALIFORNIA OCEAN RESOURCES MANAGEMENT ACT

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### **Introduction**

This paper provides a brief overview of California's re-activated ocean planning process. It highlights the importance of establishing how ocean management efforts can make a difference through the development of State goals, objectives, and an ongoing system of ocean governance that will ensure that these issues continue to be addressed in the future. The first draft of the Ocean Resources Management Plan will not be completed for at least three months from the time of this writing, so the description in this paper is oriented to the process of the plan development.

Despite its naturally rich and economically diverse 1,100 mile coastline, California has no comprehensive strategy to manage its marine resources. The California Resources Agency is currently preparing such a strategy through the development of an Ocean Resources Management Plan. This most recent effort, which began in January 1993, has initially focused on the examination of 14 ocean management issue areas that face the State. This "issue-based approach" has allowed the agency to examine real world ocean management challenges that affect the health of California's precious ocean resources, as well as the recreation and economic interests that depend upon the sustainability of those resources.

In September of 1993, the Resources Agency released a detailed "Summary of Issues" with draft policy options to solicit comments regarding the development of a comprehensive strategy. Testimony has been received at six coastal workshops, a legislative oversight hearing, and through extensive written comments received from federal, state, and local agencies, industry, and the public. The comments address a wide variety of ocean management issues that range from very specific (need for new launch ramps, offshore moorings, or fishing license sales) to long-range concerns (non-point source water pollution, offshore oil and gas leasing, or new approaches to port maintenance operations). Much of the testimony and written comments recommend the development of a set of comprehensive goals to address both short- and long-term management of California's ocean resources.

### **Background**

Pro-active ocean planning efforts have taken place sporadically over the years in California. During the 1960s and 1970s the State established interagency ocean advisory committees and commissions, and planning efforts such as the California Comprehensive Ocean Area Plan were completed. After the passage of Proposition 20 in 1972, which created the California Coastal Zone Conservation

Commission (predecessor to the California Coastal Commission), the specific focus on ocean or "wet" issues was dropped. In 1989 Assembly Bill 2000 (Farr) required the Environmental Affairs Agency to prepare a report and recommendations to implement ocean management strategies. An administrative re-organization temporarily placed the effort in the newly created California Environmental Protection Agency, but no funding was made available to continue the effort. Then in 1991, the California Ocean Resources Management Act (Farr) required the State to develop an ocean resources management plan and transferred the responsibility to the California Resources Agency. The effort began again in January 1993, after funding had been appropriated and staff hired to begin the renewed effort.

### **Planning Challenges**

The "stop-and-go" nature of ocean planning in California over the last five years has created substantial challenges in efforts to implement the Ocean Resources Management Act. Ocean planning is frequently perceived to be an amorphous issue that can always be put off to another day, particularly in light of severe budget crises, natural disasters, and pressing political issues such as education and law enforcement. This perception was reflected in a minimal budget allocation, skeletal staffing, and nearly impossible time frame to

complete the task. Therefore, the completion and implementation of this planning effort is dependent on the clear identification of the reasons why this form of management will make a difference for the State. The effort is destined to fail unless the anticipated product can be expected to help improve the efficiency and effectiveness of the way we manage our ocean resources offshore California. Some key points in defining this mission include establishing that:

- ◆ Ocean management addresses critical issues such as public health, energy production, global transportation of goods and services, and food production that impact California and the Nation;
- ◆ California's economy is substantially enhanced by ocean dependent industry and appropriate management efforts can help maintain and enhance this economic base;
- ◆ Degradation of California's ocean ecosystem will impact not only natural resources, but the economy and the public as a whole.

## **Identify Ocean Management Issues**

To identify potential results of this effort the Resources Agency prepared a summary of issues and a list of "policy options" of potential actions that the State or other entities could implement to address specific ocean management issues. This approach provided the basis for the initial investigation, because it transformed the effort from "one more government study" into a series of possible government or private sector actions that could impact fisheries, water quality, port development, desalination, oil and gas development, tourism, research

priorities, or technology development. The summary document and policy options helped draw participants into the process because they felt the need to respond either positively or negatively to these potential policy directions.

## **Quantify Ocean Dependent Industry**

Surprisingly, the economics of ocean dependent industries has not been well quantified in California. Therefore, the planning effort includes a study being conducted by the California Research Bureau to quantify the economic contribution of a select group of ocean dependent industries that require access to the ocean to function. This quantification will help demonstrate the importance of the ocean to the State's economy, as well as provide some relative information regarding the contribution of individual ocean dependent industries to the State. The plan will attempt to establish the importance of ocean management to protect ocean resources, while helping to maintain ocean dependent industries that support California's fragile economy.

## **Need for Comprehensive Management**

In the past year the program has focused on analysis of major ocean management issues. The intent of this approach was to evaluate the component parts of California's ocean management regime, and then assemble these parts to address the big picture. As anticipated, these issues began to fit into categories that could be addressed by comprehensive goals and strategies in the plan. These goals and strategies were driven by the ocean management issues that the State is currently addressing or must address in the future. The draft goals address the need for:

- ◆ **Ocean Stewardship** - To assess, conserve, and manage California's ocean resources and the ecosystems that support those resources.
- ◆ **Economic Sustainability** - To encourage ocean development and other ocean activities in a manner which is environmentally sound, sustainable, and economically beneficial.
- ◆ **Ocean Research and Technology** - To advance ocean research, technology development, and education programs to meet future needs and uses of the ocean.
- ◆ **Ocean Governance** - To improve the efficiency and effectiveness of Government ocean management and planning efforts.
- ◆ **Ocean Jurisdiction and Ownership** - To maximize the State's environmental protection and economic interests in State Tidelands, the Territorial Sea, and the Exclusive Economic Zone.
- ◆ **Ocean Management and Implementation** - To develop a high level ocean management system, such as an ocean council, designed to help integrate the needs, requirements, and expertise of relevant government, private, and public sector interests.

## **Conclusion**

The success or failure of this effort will depend on whether it results in the formation of a long-term ocean management structure in California State government. This will not occur unless the plan clearly links its management objectives to tangible results that will benefit the State and the Nation. Ocean management can

benefit society by helping to maintain and enhance our marine resources so they will be available for future generations, while maximizing the economic benefits that these resources support. This is the message that we intend to convey in the coming months. Hopefully, the title of our paper at next year's conference will be, "California Ocean Resources Management Plan - Challenges of Plan Implementation."

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## NORTH CAROLINA'S OCEAN AND COASTAL PROGRAM: A STUDY IN STATE-FEDERAL DYNAMICS

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### **Introduction**

This paper will provide an overview of the events and trends in coastal and ocean policy in the state of North Carolina from 1985 to the present. Data on legislative, administrative, political, economic and cultural factors will be combined to describe the general trends towards a focus on, and the integration of, the coastal and ocean policy arenas in both the public and private sectors in the state.

### **Highlights of North Carolina's Ocean Policy History**

In a paper published in 1990<sup>1</sup> the authors described the history of ocean policy initiatives in North Carolina, focusing on the history of the North Carolina Marine Science Council, the creation of the Outer Continental Shelf Office in the state Department of Administration, and the initiation of the North Carolina Ocean Phosphates Task Force co-chaired by the Secretary of the Department of Natural Resources and Community Development. That analysis concluded that the state had taken a variety of significant initiatives in the area of ocean policy, but that those initiatives had been somewhat disparate in principle and practice from one another. A number of common factors were cited, however, in the processes and events related to

these ocean policy initiatives. First, coastal and marine environments and events were perceived as prominent in the culture and political economy of the state. Second, a wide range of technical expertise in the social, natural and policy sciences existed in the state which were available to the public policy sector. Third, the administrative sector contained a number of strong policy and management programs. Fourth, a number of prominent individuals in both the public and private sectors held strong personal interests in the coastal and marine environmental issues. Fifth, that the existence of syncretic, umbrella organizations such as the Marine Science Council with broad, flexible mandates had been important in the creation of ocean policy initiatives. And finally, the role of precipitating events—some serendipitous—had been prominent in the course of events in the state.

### **Recent Events in North Carolina Coastal and Ocean Policy**

A number of significant changes have occurred in coastal and ocean policy in North Carolina since the 1990 paper. Since producing the feasibility study on ocean phosphate mining in 1988 and making recommendations for further study, the North Carolina Ocean Phosphates Task Force (joint

with the Minerals Management Service) has remained dormant. The 28-member Marine Science Council, which had been the principal advisory body to the Governor on marine policy in addition to providing policy oversight for the state aquarium system, was legislatively abolished on the Council's own initiative in 1991. In its place, also on the initiative of the Council leadership, the North Carolina Ocean Affairs Council was created by the General Assembly, also in 1991. This new body was more compact, with 16 members, and all members held designated seats with half appointed by the Governor and the other half appointed by the General Assembly with the Chair appointed by and serving at the pleasure of the Governor. Then, in 1993, as part of a general reorganization by a new administration, the Ocean Affairs Council and the Outer Continental Shelf Office were abolished as part of a transfer of the Office of Marine Affairs from the Department of Administration to the Department of Environment, Health and Natural Resources (DEHNR), and their functions picked up by the latter agency. Further events associated with the Mobil Oil Consortium proposal to drill for natural gas offshore North Carolina contributed to this chain of events.

A further significant development has been the completion of the Albemarle-Pamlico Estuarine Study, a program created under the National Estuary Program administered by the Environmental Protection Agency. The product of this five-year program, the Comprehensive Conservation and Management Plan for the 30-county watershed area of the Albemarle, Pamlico and related bays, rivers and sounds, has in itself stimulated movement towards the integration of coastal and ocean planning.

Prior to its legislative demise the Ocean Affairs Council had created an ocean planning committee which evolved into the Ocean Resources Task Force, a group which is still in existence and whose activities are funded by a Section 309 CZMA grant administered through the Coastal Management Division of DEHNR. And, in 1993, the new Governor created a blue-ribbon Coastal Futures Committee to assess the need for policy and management of the coastal area of North Carolina into the 21st century.

## *Discussion*

These events signify both a changing focus on coastal and ocean issues and a move towards the integration of the policy and management of these two sectors. All of the factors alluded to in the 1990 paper remain important. The relationship among the Albemarle-Pamlico Program, the Ocean Resources Task Force, the Coastal Futures Committee, and the existing line agencies – federal, state and local – with authority or responsibility for coastal and ocean issues is in considerable flux. The full paper will describe these processes in depth.

## *Endnotes*

1. Orbach, M. and W. Queen, 1990. *Ocean Policy Initiatives in Coastal States: North Carolina's Experience*. *Coastal Management*, v. 18, pp-267-81.



## OCEAN RESOURCES MANAGEMENT IN HAWAII: AN UPDATE

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Rising resident and visitor populations, increasing affluence, and changes in consumption patterns have intensified the demands on Hawaii's ocean resources. New kinds of recreation water sports, food, energy production, and waterborne transportation are being conducted with increasing intensity in areas previously occupied by more traditional uses such as swimming, surfing, and fishing. In addition, rapidly developing marine technologies look promising for tapping new resources and using traditional ones more efficiently. These new

and expanded opportunities and high levels of use have led to increased competition and user conflicts. In addressing these concerns over the years, a complex ocean resources management system has evolved in Hawaii.

This paper traces State initiatives in ocean management beginning in the late 1960s when the Governor's Task Force on Oceanography undertook a comprehensive examination of Hawaii's marine affairs and published *Hawaii and the Sea — A Plan for State Action*. It ends with the publication of the

Hawaii Ocean Resources Management Plan in the late 1980s and its on-going implementation under the auspices of the recently-established Coastal and Ocean Management Policy Advisory Group. The paper concludes with a discussion of the problems, issues, and opportunities associated with Hawaii's attempt to fashion a Federal-State partnership—primarily in State waters—through the conceptualization and implementation of the congressionally-mandated Hawaiian Islands Humpback Whale National Marine Sanctuary.

## THE PACIFIC BASIN DEVELOPMENT COUNCIL: WORK ON 200-MILE/OCEAN MANAGEMENT ISSUES IN THE AMERICAN FLAG PACIFIC ISLANDS

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(Editors' Note: As background to his presentation, Mr. Norris has provided the following information on the activities of the Pacific Basin Development Council)

In October of 1980 the Governors of the U.S. Territories of American Samoa and Guam, the Commonwealth of the Northern Mariana Islands and the State of Hawaii established the Pacific Basin Development Council (PBDC). PBDC is a non-profit, public organization and addresses and articulates, through its Board of Directors, the economic and social development concerns of the Pacific Islands. PBDC has been sponsoring and/or cosponsoring annual meetings of the Coastal Zone Management (CZM) Managers since 1980 and has an established PBDC CZM Working Group.

As a result of a March 10, 1983 Presidential Proclamation, the U.S. Flag Islands have expanded their resource base ten-fold, or about one million square miles. Of the total U.S. Exclusive Economic Zone (EEZ) area of 3.9 billion acres, the non-contiguous states and territories account for more than 50% of this ocean expanse. With this expansion, the Islands must adopt new responsibilities in monitoring, managing, and utilizing this new resource. These new responsibilities have been given with little legal or financial support. The American Flag Pacific Islands (AFPI), are either surrounded by or share

boundaries with independent Island nations that are parties to the United Nations Law of the Sea Treaty (the U.S. is not a signatory). In working with the CZM work group members, it was felt that the EEZ issue was of priority importance, especially in the areas of technology transfer. A conference/workshop to focus on the problems, issues, and opportunities facing Federal, state, and Territorial representatives in the management and use of the coastal and ocean (living and non-living) resources. The major objectives of the conference were:

1. To address existing and future roles in the management and use of coastal and ocean resources;
2. To attract appropriate expertise and to facilitate the sharing of ideas and information on these management responsibilities;
3. To publish conference proceedings and workshop recommendations on future Pacific Basin initiatives;
4. To develop a framework for future EEZ projects, including a strategy for financial and program support.

The Board approved this proposal and the submission of an application for Section 309. (CZM) funding at its June 1986 meeting. On September 11, 1986, the Office of Coastal Resources Management of the U.S. Department of Commerce awarded PBDC a grant for a workshop on the EEZ issue. The conference was held on July 8-10, 1987. The regional EEZ conference was well-attended; a proceedings volume was published in 1988. In September 1987, PBDC was awarded another grant by the U.S. Office of Coastal Resources Management to continue work on the EEZ issue; tasks completed under this award were: (1) Evaluation of existing Federal and PBDC member governments ocean-related laws and regulations relative to their intent, effectiveness, and mechanics of implementation; (2) Determination of overlaps as well as gaps in existing ocean-related Federal and local laws and regulations; (3) Analysis of Federal-local government relationships with respect to administering, coordinating, monitoring, and enforcing existing ocean-related programs and activities.

Field work on the EEZ grant project for American Samoa was

completed in August 1988, with Guam and Northern Marianas visits completed in September 1988. The field work was coordinated by the respective CZM Work Group members. At the 1989 Winter Meeting, the Board accepted the final EEZ project report. The substantive and structural recommendations centered around the establishment of an AFPI exclusive economic zone Coordinating Council and directed staff to pursue implementation of this concept. Also approved was a grant application for the implementation of the EEZ center to the U.S. Office of Coastal Resources Management, which was subsequently approved. In implementing the PBDC Board decision to establish a regional EEZ coordinating council, staff evaluated several options. Extensive discussions with member governments indicated that coordination of ocean and coastal zone activities should be a high priority for the respective governments as well as PBDC staff. At the 1990 Annual Meeting, a series of organizational alternatives were presented; the Governors decided to establish a formal regional ocean, coastal zone, and EEZ management program (ROCEMP) within PBDC, with the option to establish a separate organization in the future. The ROCEMP (activity) options presented and approved at the 1991 Winter Meeting included:

1. A project on increasing oil spill management capacity;
2. Development of a university-based research program to meet the regional oil spill management needs, through authorized and appropriated funding;
3. Development of a regional tuna policy initiative in cooperation with the Western Regional

Fishery Management Council (WesPac);

4. Defining the marine mineral potential in areas that have received little past attention;
5. Refining methods for integrating regional ocean and coastal resource management planning; and
6. Establishing a mechanism to resolve EEZ jurisdictional disputes between the Island and the Federal government.

#### OIL SPILL MANAGEMENT.

At the 1990 Winter Meeting, the Board directed staff to develop a project on oil spill management planning, which would build upon the U.S. regional oil spill response team system and increase local government response capacities. A grant proposal was submitted to the U.S. Office of Coastal Resources Management (OCRM) for funding of this project and a grant award received in FY 1990. With OCRM funding, a regional oil spill management project was initiated. Information on the current oil spill threat and management capacity was gathered by PBDC staff. A close working relationship with U.S. Coast Guard and U.S. Environmental Protection Agency has been established. Completion of this project has been delayed by the rulemaking process that resulted from the Oil Spill Pollution Act of 1990. These rules are essential in identification of shortfalls in oil spill management capacity in the Pacific.

At the invitation of the University of Hawaii, the PBDC Executive Director participated in a workshop on legal and policy issues created by the extension of the U.S. Territorial Sea from 3 to 12 miles. PBDC staff coordinated presentations by several member government staff

and provided materials to the conference. The general consensus of the policy maker, academic, and Federal officials attendees was that the Pacific Islands did have special circumstances that needed evaluation, not simply with regards to jurisdiction but the U.S. 200-mile EEZ as well.

PBDC, in cooperation with the Island governments, and the Oceania Regional (Oil Spill) Response Team completed a regional management planning project, funded by the Office of Ocean and Coastal Resources Management (OCRM). The project assessed oil spill risks for the Islands, existing and anticipated oil spill management capacity, and included a workshop on the Oil Pollution Act of 1990 (OPA '90) that drew Island staff, Federal officials, and representatives from oil suppliers. The analysis indicates that the implementation of OPA '90 in the Islands could have serious economic and energy ramifications; there has been a significant increase in oil spill management capacity in the region; and there is a need to maintain dialogue with petroleum suppliers and to monitor OPA '90 regulations as well as a need to amend the law to defer certain rules that may have a negative effect until an impact analysis has been completed by the U.S. Departments of Transportation, Commerce, and Interior. Preliminary project results were reported at the 1992 Winter Meeting. The Board sent letters to cognizant Secretaries and Congressional oversight committees indicating the serious economic and energy security implications of OPA '90 for the Islands. Follow-up discussions have been held with Congressional staff.

A concept paper for evaluating options for increased involvement in fisheries, seabed minerals, and

environmental resources management was developed by PBDC staff. The proposed effort would focus on Federal laws changes that are scheduled for 1993 or 1994 reauthorization, including the Fishery Conservation and Management Act, the Endangered Species Act, the Clean Water Act, the Marine Mammal Protection Act, the Submerged Lands Act, and the Coastal Zone Management Act.

### *Relevant Documents:*

E. Kyle Datta; Pacific Basin Development Council.

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Regional Ocean, Coastal Zone, and Exclusive Economic Zone Management Program: Final Report to the Office of Ocean and Coastal Resource Management. Honolulu: Pacific Basin Development Council, 1991.

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Increasing Oil Spill Management Capacity in the American Flag Pacific Islands. Honolulu: Pacific Basin Development Council, April 1992.

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## THE NEW ECONOMIC WORLD ORDER: PACIFIC PERSPECTIVES

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The Union of Soviet Socialist Republics has disintegrated...the Cold War is over. A feared, hated and distrusted enemy is no more. Nuclear threat is a thing of the past. Current and past political leaders on all sides are given (and take) credit for the unbelievable. Prayers and sermons abound from pulpits around the world.

In anticipation of a marketable item, a well known American shirt company in an enterprising move (and in preparation for calendar year 1993), printed tens of thousands of red "The Russians Aren't Coming" tee shirts for sale at a cost of \$12.95 each. Less than ten months later the same company was advertising an end-of-year clearance of the Russian tee shirt at a cost of \$6.50. So much for smart marketing and the world's excitement regarding the close of the Cold War.

While many of us in the Pacific were excited at the fall of the Berlin Wall and the end of the Cold War, few of us expected a decrease in U.S. interest in the Pacific. In fact, many felt that the closure of the U.S. bases in the Philippines would increase U.S. interests in keeping the sea routes open, resulting in a stronger U.S. presence in the Pacific. This is clearly not to be the case.

The early 1960's saw the movement toward independence in the Pacific Islands starting with

Western Samoa in 1962 and culminating with the recent approval of the Compact of Free Association by the Republic of Palau in November of 1993. Only the United States and the French continue to have major territories/possessions in the Pacific. However, it is important to remember that terms like independence, sovereignty and self-government are very new terms to these island nations. Independence in Africa, South America, and South East Asia came to countries in their regions earlier than in the Pacific and in the rest of the world independence and self-government came hundreds of years earlier.

In the mid 1970's the Russians showed an interest in establishing relations with several South Pacific independent countries as well as providing funding and support for minerals exploration. The so-called Metropolitan countries of the region shuttered at the idea and officials in Canberra, Wellington, London, Paris and Washington, D.C. acted quickly to head off the "crisis". The U.S. response was to establish a small, but highly visible AID program. Washington decided that the U.S., a somewhat latecomer to the Pacific donor community, was not going to compete, on a dollar-to-dollar basis with other metropolitan countries who had already established foreign assistance programs for the islands. The U.S. AID program was small but

highly visible. Nevertheless it had some successes.

The U.S. government recently announced that the AID mission in Suva would be closed in 1994. Many Americans would agree with the recommendations in Vice President Al Gore's Report of the National Performance Review - Creating a Government That Works Better & Costs Less that some AID missions should be closed and/or consolidated...especially in those countries that are experiencing dynamic growth. However the countries in the South Pacific, with very few exceptions are as much in need of foreign assistance as they were when the U.S. AID program was initiated.

Sometime in the late 1970's the term "New World Order" was coined. Oftentimes the term had less than positive connotations with discussions in back rooms of world, and economic leaders conspiring to rule the roost with devious controls of monetary systems and political leaders. In the late 1980's the term "New World Order" took on a series of new connotations, many driven by **ECONOMICS** due in part to worldwide events over which no one individual had control.

The Berlin Wall was dismantled and the two Germanies were united;

Serious discussions on a trade agreement with Canada and later

with the Republic of Mexico took place resulting in the recent North American Free Trade Agreement (NAFTA);

The Europe Community (EC) began to finalize an agreement on economic integration of trade and monetary relations that would establish a large trading community;

The former Union of Soviet Socialist Republics disintegrated resulting in the end of the cold war, and within inter-ethnic fighting between and with the Republics;

South Africa recently ratified its Constitution thereby abolishing Apartheid and opening the possibility for increased trade and investment opportunities within Africa;

On October 8, 1993 the U.S./ Pacific Islands Nations Joint Commercial Commission (JCC) held its Inaugural Meeting in Washington, D.C. The JCC brings together thirteen South Pacific Independent Countries to explore cooperative efforts to increase trade and related activity with the islands and the United States;

On November 9, in the eighth plebiscite, the Republic of Palau voted to join the other Freely Associated States (FAS) in a Compact of Free Association with the United States. The last U.N. trusteeship appears to be a thing of the past.

In 1989 the concept of the Asia-Pacific Economic Cooperation (APEC) was fostered to better manage the growing interdependence of regional economics. While cautiously viewed by members of the Association of Southeast Asian Nations (ASEAN), the "cooperation" effort resulted in a history-setting "ministerial" meeting in Seattle in November of 1993. One

of the little known outcomes of the APEC Seattle meeting was an appeal by Taiwan to China to set aside political disputes and focus on resolving day-to-day problems resulting from their blossoming unofficial ties. Chairman of the Taiwan Mainland Affairs Council stated that "Since we cannot reach a consensus" on who represents China, "the best way is to set aside our disputes for now. We should instead concentrate on resolving problems...to help guide our relations to a good outcome".

Over the past 25 years there has been much speculation that changes in global security relationships that would have significant impact on the Pacific Basin. Former Navy Secretary James H. Webb, Jr. made a statement in the early 1970's that under the Nixon Doctrine, "...it is quite conceivable that in ten to twenty years the entire U.S. Pacific presence will be centered on a Guam-Tinian axis." Webb, who spent the Summer of 1974 working as a consultant to the Government of Guam, also felt that the Compact of Free Association was driven, in part, by the need of the U.S. Government to keep the Pacific open and free for shipping related defense and security needs. Strangely, the death of the Cold War has resulted in Guam and Micronesia becoming less important to the New World ECONOMIC Order.

This was somewhat borne out when Pacific Basin Development Council staff were asked to meet with the Commander-in-Chief Pacific (CINCPAC) J5 (Planning) staff earlier this year. The meeting centered on their request to assist in identifying the economic, political, social, cultural and defense needs with the Pacific (emphasis added).

As noted earlier, sovereignty, self-government, and independence

are all relatively new terms to the people of the Pacific Islands. Because their efforts to chart identify their own political self-determination have been undertaken so recently, they are sensitive to and protective of their sovereignty as they explore options for a better place in the New World ECONOMIC Order.

Less than ten years ago, island governments decided that the South Pacific Regional Environmental Program (SPREP) should become an autonomous intergovernmental organization and to separate from the South Pacific Commission (SPC). The new organizational structure was to be established by treaty. The U.S. Territories of American Samoa and Guam and the Commonwealth of the Northern Mariana Islands were founding members of SPREP and did not understand why they could not continue full and complete membership in the new organization. The U.S. State Department officially determined that while they could participate in SPREP activities, they could only do so as members of the U.S. delegation to SPREP.

While the State Department's argument may have been technically correct, many felt that there were sensible alternatives that would allow the U.S. Territories full membership including participation in the decision-making of SPREP's governing body. Many observers also felt that in areas like environmental protection and management, there should be no political and/or geographic boundaries...that oil spills, hurricanes, typhoons or tsunamis need to be addressed on a regional basis without regard to political affiliation or status.

It is clear that the United States Department of State did not want

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the U.S. Pacific Territories or the Commonwealth to take positions opposing those of the U.S. Nuclear dumping, the passage of Japanese plutonium through Pacific waters, expanded use of Johnston Island and other issues of critical importance to the cultures, economic livelihood and development of Pacific islanders are examples of points of possible disagreement. In the "New World ECONOMIC Order", economics of the environment should not be strangled by political status and other restraints.

In reviewing a number of the activities discussed above, it becomes clear that the New World Order is really the "New World ECONOMIC Order". Around the world, governments are coming together in new organizational arrangements for economic reasons. It becomes difficult to determine if foreign policy is driving economic policy or economic policy is driving foreign policy. Perhaps they have become so intertwined that it is impossible (and impractical) to separate the two.

These new intergovernmental relationships are being fostered without regard to political status or the loss of sovereignty, self-government or independence. As China, Taiwan and Hong Kong have demonstrated the aperture of the world community is being opened to look beyond traditional political, geographic and sovereignty boundaries. This re-focus of the world community on economic concerns is not an irreversible movement and traditional diplomatic world views need to be expanded to accommodate them.

It is time that the islands of the Pacific...be they Melanesian, Micronesian or Polynesian...be they independent, state, territorial, commonwealth, freely associated or self-governing...work with the

members of the NEW WORLD ECONOMIC ORDER in determining their role, function and status and how they best fit into the increasing numbers of regional organizations. In a recent interview with Ms. Leslie Turner, Assistant Secretary of the Office of Territorial and International Affairs (OTIA), U.S. Department of Interior, a question came up regarding the end of the Cold War and the impact on the islands. Ms. Turner stated that "The end of the Cold War may have had an impact on the different attitude that exists in the [Clinton] administration". When asked about the matter of territories participating in regional organizations she qualified her answer as being a personal opinion and stated "Here is Guam, the Commonwealth of the Northern Mariana Islands, Palau. They are out there in the Pacific Rim area. The relationship with the Asian-Pacific market is very significant for them. There is a need to address what has been raised for a long, long time, about wanting to have some substantive role in those organizations."

APEC, especially at the Working Group level, would be an excellent place to start, and the membership and involvement of all of the American Flag Pacific Islands in SPREP should be revisited. The U.S. government must recognize that there are very few territories/possessions remaining in the New World ECONOMIC Order. While not wanting to debate the issue of the perceived "colonial status" of the U.S. territories and commonwealths, International law is relevant to this discussion since the international community prohibits the maintenance of colonies. This presents an interesting dilemma in that the U.S. position is that the Constitution prohibits territories and commonwealths (read colonies) and states from participating

in international organizations unless they are on the formally recognized delegation and yet the United Nations forbids colonies.

It is interesting to note that in 1947, during the original General Agreement on Tariffs and Trade (GATT) negotiations the international community (including the U.S.) exempted all colonies (read territories and commonwealths) from the provision of the Agreement. In 1992 when the Governors of the American Flag Pacific Islands (who serve as the Board of Directors of the Pacific Basin Development Council (PBDC) at their Winter Meeting) queried high level officials of the U.S. Departments of State, Commerce and the U.S. Trade Representatives Office, as to which portions of GATT would apply to the U.S. Territories and Commonwealths, they were unable to supply an answer. The international community had not addressed the issue because the number of "colonies" remaining in the New World ECONOMIC Order" can be counted on one hand.

The U.S. must review its position on the status of the three U.S. territories and two commonwealths, as that status relates to both the United States of America and the international community. There are basic economic issues that should not and cannot be constrained by traditional diplomatic and legal standards if Pacific Islanders are to have any say in their future. Foreign policy and economic policy are so intertwined that they are impossible to separate. New rules and roles must be developed throughout the entire Pacific and Caribbean regions with special emphasis on the U.S. non-contiguous islands as the U.S. and the rest of the world attempt to shape the New World ECONOMIC Order.

## OCEAN MANAGEMENT POLICIES AND THE SHIFT OF POWER TO SUBNATIONAL UNITS: EXAMPLES FROM THE UNITED STATES<sup>1</sup>

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### **Introduction**

This paper discusses the role that subnational units of government play in ocean policy and ocean management. It has been just over 10 years since the United States declared the Exclusive Economic Zone in 1983. Since then we have seen a great deal of activity in ocean use and ocean management. How has ocean policy and management changed in the past decade? I will address this question using three categories. First, has power shifted in any way within the United States? Second, has capacity to manage changed? And third, in what directions has policy moved? My conclusions are briefly as follows. The locus of power is moving away from the national level and down to the regional or state level of government and subnational entities are gaining more influence over ocean management issues. In the category of capacity to manage, we also see a trend of decentralization, a major reduction of capacity at the federal level and an increasing capacity to manage at state, local, and regional levels. And finally, in policy, we see in the United States Exclusive Economic Zone a shift toward zoning as a preferred form of management and away from resource allocation and management.

### **The Power to Decide**

The downward shift in power can be observed in five categories of management: coastal management, oil pollution, outer continental shelf development, marine sanctuaries and fisheries.

Coastal zone management in the United States was established in 1972 with the passage of the Coastal Zone Management Act. Under that law, state governments were permitted to develop programs for controlling land and water uses on the shoreland area and out to three miles. One of the powers given to the states was called the "federal consistency" power, which gave the state government level, the subnational level, more control over activities of the national level of government. States now can review any activity which affects land, water, or natural resources, even if it occurs well outside of the state's coastal zone. And although the President can overrule the state in particular instances, there is a requirement that a judicial ruling be made that consistency is not possible before the President can override. States now have an unprecedented amount of control over federal activities in the ocean, well beyond their three-mile boundary.

The second example of a downward shift in power comes

from the oil pollution law experience in the United States. By 1978 there were four major U.S. laws establishing oil pollution control clean-up, liability, and compensation. But the key issue was whether or not the new general rules should preempt or take over the activities of the states, and because that issue was so hotly debated within Congress, it was not resolved for many years. Then the Exxon Valdez oil spill occurred in 1989, and this forced Congress to act. The result was the Oil Pollution Act (OPA) 1990 law, which preserved the states' laws. This leaves the federal government establishing a minimum standard with many states establishing their own specific standards that exceed those of the federal government. Many states imposed additional requirements for liability, removal activities, penalties and fines, damage assessment, and trust funds. Some states have set-up "mini-Coast Guard" offices.

The third area which very aptly illustrates this downward shift in power is in the area of outer continental shelf exploration, leasing and development. Over the last decade we have had what might be called "the ten years' war" between the states and the federal government over outer continental shelf oil and gas development, at least in the lower forty-eight states

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<sup>1</sup>An earlier version of this paper was presented at the Law of the Sea Institute Annual Meeting, Seoul, Korea, July 14, 1993.

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of the United States. Much of the proposed lease activity was highly controversial and adamantly opposed. And ultimately state interests won out over the federal government. This occurred through a variety of mechanisms that undermined the power of the Minerals Management Service, such as Congressional moratoria or special requirements added to the appropriation bills, special study requirements, particular procedures for doing environmental impact statements, and others.

The fourth category that illustrates this downward shift in power relates to the national marine sanctuary program. Although the national marine sanctuary program is a national program, we can see that the states, with assistance from members of Congress, have co-opted the national marine sanctuary program. Sanctuaries have been used to solve particularly local problems, such as conflicts with oil and gas development, shipping, dredged material disposal, and Naval activities. Local interests primarily are served in these sanctuaries rather than national interests.

The fifth and final category is fisheries. In 1976 the Fishery Conservation and Management Act (FCMA) was passed. It was the first major marine policy law that established a decentralized management structure, which consists of eight regional fisheries management councils. The regional councils include federal and state officials, and experts who have been nominated by the Governors of the states encompassed by each council. The FCMA system has been criticized for failing to achieve conservation and for being subject to political pressure, mainly because council members are usually directly tied to either the commer-

cial or sport fishing industries. Reauthorization hearings and debates are currently underway for the FCMA. It is likely that the council structure will be strengthened. In the future, councils may be able to join together to manage fish stocks that cross council jurisdictions. If the reauthorization introduces a fee structure, Councils may gain more funds that will allow them to act independently, and to direct National Marine Fisheries Service research and analysis efforts.

### *Shifts in Capacity to Manage State Level Initiatives*

There are certain states that might be called "activist" states because they have initiated measures in the past ten years to improve their capacities for ocean management and to define a greater role for themselves in national decision-making about ocean resources. These states are managing ocean issues by elaborating on previously established programs such as the CZM program or by initiating new efforts. Figure 1 on the following page describes some of these efforts in ten states.

### *Policy Trends*

Environmental protection has ascended as a primary policy goal. Resource use for non-living resources extraction, waste disposal, navigation and research are only permitted within very tight environmental protection standards. These standards sometimes approach the "no-risk" approach and "impact assessment" has become the mode of thinking, rather than benefit-cost analysis.

Fisheries has been given protected status thus far, but this trend could change. States are afraid to face the fishing constituencies and are often lulled by the

concept of fisheries as a renewable resource. There is also an assumption that the current regional fisheries council system is an appropriate forum for necessary resource management. But, in 1990, California passed a fish-sanctuary law that set four small harbor areas aside. States are also responding to recreational fisheries interests, which could put new pressures on the commercial sector.

Recreational and tourist use of the coast is increasing. Policies are shifting towards protection of most forms of recreation: boating, sailing, diving on reefs, cruising, etc., although there have been some reactions against "thrill" craft in marine sanctuaries. A constituency has arisen that is calling for exclusion of hard, commercial uses of the shoreline and marine waters. Recreational users may also eventually push commercial fisheries farther offshore.

Zoning is replacing resource allocation and management as a management model. The underlying concept behind zoning is that particular areas have a "highest and best" use and that "lower" uses should then be excluded from those areas. This idea grew out of the urban land use experience, which was used to protect residential areas from "incompatible" uses. Resource allocation and management is an entirely different way of thinking that involves "asset management" to create wealth through use, central control to prevent waste and preserve use for future generations, scientific management using information and models for analysis and prediction, and the flexibility to change and adapt as conditions change. Because zoning and resource management are such different concepts, a clash is inevitable.

## Implications for the Future

Ocean management will become more complex. A wider range of governmental jurisdictions and public interest groups will be involved. It will take longer to reach agreement on goals and/or to resolve controversies. A diverse array of solutions will arise that are suited to particular areas.

Accounting of benefits and costs of ocean use will shift to subnational areas. Tangible and immediate

benefits will be demanded by coastal populations adjacent to areas of concern. In return, more cost sharing will be expected of U.S. states.

Greater integration of coastal shoreland and adjacent ocean use and management will occur. Jurisdictional boundaries will become less meaningful. Shoreland interests will dominate because of the political interests of the resident population.

In international ocean affairs, subnational units of government will deal directly with one another more frequently. There will be less reliance on official diplomatic channels.

Public awareness of ocean issues will broaden. This will result in greater understanding of natural system needs, and better stewardship of those systems. Traditional resource use will most likely decline.

**Figure 1: State Ocean Policy Initiatives: Progress Towards Capacity for Ocean Management**

	Major Issues facing the state	Defining the Problem	Official Adoption of Policy	Council/New Organization	Implementation	Seaward Extension of Coastal Zone Management	Selective Ocean Management Activities
<b>Alaska</b>	OCS development Fisheries Tanker Traffic				Issue-specific approach to ocean management.	Permit Review Process as the primary vehicle for OCS planning.	
<b>California</b>	OCS development (Southern CA) Marine Sanctuaries Ocean Dumping	CORMA (1990) To inventory current ocean regulations throughout various agencies				Coastal Commission responsible for permit consistency reviews.	National Marine Sanctuary Management
<b>Florida</b>	Recreation/Tourism Fisheries, OCS development, and Marine Sanctuaries	Report: <i>Florida's Ocean Future: Toward a State Ocean Policy</i> (1989)			Executive Orders. Appropriations to Coastal Protection Fund	CZM focus on land-based issues. Approach to ocean issues fragmented	National Marine Sanctuary
<b>Hawaii</b>	Recreation/Tourism OCS Ocean Mining (1984-1990)	Ocean Resources Management Plan (1988)	Ocean Resources Management Plan to be implemented by COMPAG	COMPAG: Coastal and Ocean Management Policy Advisory Group (1992)	Administrative Implementation of ORMP	Not a significant actor in ocean policies; instead Ocean Resources Branch	Recreation and Tourism: Hawaii Ocean Recreation Management Plan National Humpback Whale Sanctuary
<b>Maine</b>	OCS development Fisheries Tanker Traffic	Report: <i>Policy Options for Maine's Marine Waters</i> (1992)				Networked arrangement: significant actor in ocean policies	Regional Effort: Gulf of Maine Council (1989)
<b>Massachusetts</b>	OCS development Fisheries				Issue-specific implementation governed by CZM policy	Networked arrangement: significant actor in ocean policies	National Marine Sanctuary Management
<b>Mississippi</b>	OCS development Fisheries	Report: <i>Mississippi Ocean Policy Study</i> (1991)					
<b>North Carolina</b>	OCS development Recreation/Tourism	Report: <i>North Carolina and the Sea</i> (1984). To be updated in 1993		Marine Science Council; later reorganized into the Ocean Affairs Council (1991)		CZM separate from Ocean Affairs which is housed in the Office of Marine Affairs	National Marine Sanctuary Management
<b>Oregon</b>	OCS development fisheries	Oregon Territorial Sea Management Study (1987)	Ocean Resources Management Act (1987)	Ocean Policy Advisory Council to formulate plans	Ocean Plan adopted by LCDC, Territorial Sea Plan (1994)	CZM directive for ocean issues: Policy #19	
<b>Washington</b>	OCS development Fisheries Tanker Traffic	WA. DOE Report (1987) Legislative Report (1989) ORAP Reports	Ocean Resources Management Act (1989)		State guidelines promulgated: Coastal County Master Programs revised	Ocean Resources Staff in CZM	Two National Marine Sanctuaries to be designated

Source: Thompson, Tara and Marc Hershman, 1993. "Ocean Management: Initiatives at the State Level in the United States." Unpublished paper prepared for the 27th Annual Law of the Sea Institutional Conference, Seoul, Korea, July 13-16, 1994.

## THE MAGNUSON ACT: PERSPECTIVES ON HISTORICAL ORIGINS, PERMUTATIONS, AND PROSPECTS (1974-94)

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### ***The Fisheries Problem and the FCMAS's History***

Nearly two decades have passed since the Magnuson Act for the conservation and management of American offshore fisheries became law, following a protracted period of political debate that involved the many and diverse dimensions of marine fisheries policy. Its enactment represented a comprehensive departure in natural resources policy for the nation—so sweeping in its scope and its implications for policy in an important resource sector that it is no exaggeration to bracket it with such historic measures as the Homestead Act, the Carey Act, the Wilderness Act, and the basic legislation that has governed mineral leasing and range-land use in the public domain.

With the current congressional consideration of Magnuson Act (FCMA) reauthorization—now manifestly developing into an intensive and fullscale review, going to the basics of the fisheries policy—we are at a juncture where historical perspective on the act as to original intention (if one can be teased from the record), the contours (and causes) of the subse-

quent course of policy change, and, finally, the current prospects viewed in the light of the past, can perhaps be useful to legislators, policy officials and scholars. Our paper for this conference attempts this rather daunting task in brief compass, and provides a summary of principal findings from our study in progress—comprehensive monograph on the FCMA's history.

Like earlier episodes in fisheries management by governments in the United States, mainly by the states but certainly including the historic federal role in Alaska waters, the Magnuson Act story is one that involves a complex relationship of politics, biology, and economics. Intertwined in the record are debates, both autonomous and interrelated, concerning the principles and applications of scientific management; the perception, calculation, and pursuit of economic interests; the articulation of regional and community aspirations (and fears), in counterpoint with a quest for a workable definition of the public interest; and the historic structural and institutional baggage represented in the ingrained traditions of corporativism, the unique character of the fishery industries within the framework of

interest-group and party politics, and, pervading the whole process, the perplexities and complexities of American federalism in a period when environmentalism and other movements put key elements of the political system under new pressures. As we shall argue in this paper, moreover, the process has gone forward and been shaped domestically in two rapidly changing and influential contexts: that of the international community of nations and its efforts, especially in forwarding the Law of the Sea Convention enterprise, to frame the rules of marine resources exploitation; and that of the changing physical environment in the world's oceans, including the waters under exclusive U.S. control in the 200 Mile Zone. Especially significant has been the declining health of the globe's fish stocks as new technologies, rising capitalization of fleets and fishing effort, and the impacts of pollution associated with both development and lack of care, all have taken their toll.

Indeed, one hopes that the research underlying the present paper and the larger debate in 1993-94 of what national leaders and the public have (at long last) come to recognize as a serious natural-

resource crisis, will not prove to be the documentation of an ecological catastrophe and a policy process that is a monument to failure of imagination and political will.

### *Summary of Findings*

The origins of the Act must be seen in light of basic long-term trends in the history of fisheries management in American waters. Among the key variables that explain the particular configuration of FCMA in its initial form and through later amendments are the history of the post-1931 corporatist approach to which fisheries scientists as well as industry and political leaders were committed; and a continuing tension between approaches to management that depended upon international norms and specific treaty arrangements. Also relevant were choices as between federal and state dominance of policy; and a debate within the field of fisheries management as to scientific and economic principles for the assertion of management goals and structuring of programs. In the immediate context of the 1972-75 debate, the other converging themes and interplay of historic factors were largely overwhelmed by the immediacy of a crisis in the domestic industry occasioned by the virtual explosion of foreign fishing off the U.S. shore. Policy was constrained and driven, as in different ways it had been since the Cold War's beginnings, by the objectives of diplomacy—and by congressional resistance to have its policy authority trumped by the imperatives of Law of the Sea diplomacy.

In the first fifteen years of administration of the FCMA, the channeling and shaping of domestic debate by diplomatic considerations gave way significantly to

forces that were dominated by the more entrenched configuration of historic domestic policy process. In this long phase, the "Americanization" of the offshore fisheries, well-documented in scholarly writings by others, took place. How the interest-group forces driving this phenomenon overwhelmed the new Regional Fishery Management Councils and placed new strains on federal-state and scientific/bureaucratic relationships, is a major element of this part of the record. Whether the new structure of regional management became, in its operation, subversive of original intent or instead was faithful to a manifest decentralizing mandate, is a matter of contention that will be considered on the historical record that we explore. The articulation of coastal-community interests, including the claims of indigenous groups, has also entered into the applications of FCMA principles. Finally, the analysis also embraces the U.S. government's resort on several occasions, continuing to the present day with regard to tuna and dolphin takes, to unilateral sanctions as part of a larger global fisheries policy.

In terms of prospects for the reauthorization of FCMA and the future of fisheries management, the authors seek to define the elements of the current regime—and of the probable new designs to be considered for the future regime—that derive from this historical complex and, by contrast, those elements which are either most susceptible to reform and revision or else ought to be reconsidered in light of failures in the past.

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## INCIDENTAL TAKE AND COMMERCIAL FISHERIES: LEGISLATIVE AND REGULATORY INTERACTION

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### Introduction

Three key federal ocean resource bills are up for reauthorization - the Magnuson Fishery Conservation and Management Act (MMPA), Marine Mammal Protection Act (MMPA), and Endangered Species Act (ESA). This coincidence of timing provides advocates of a more holistic approach to the problem of resource management a window of opportunity to influence Congress to move away from its piece-meal approach of legislating decision-making. Presented with this window of opportunity, the authors in this paper examine the current and proposed regimes for the incidental taking of marine animals in commercial fisheries and make recommendations that require Congress to consider the statutes in concert rather than separately. The authors include in their discussion a fourth federal statute not currently up for reauthorization, the Migratory Bird Treaty Act (MBTA), as large numbers of migratory marine birds are incidentally taken in the course of certain commercial fishing operations.

This paper explains the complex network of incidental take provisions of the MMPA, ESA, and MBTA and shows where and how they interact. It then reviews and

critiques the NMFS and MMPA Negotiating Group's proposals for amending the incidental take provisions and discusses current real world interactions that managers are struggling with. The paper ends by concluding that a more holistic approach to protection and management of marine resources is needed but unlikely to be successfully implemented given the mobility of the marine species of concern, the fluid nature of their environment, the mixed track record of the federal agencies charged with their protection and management, and Congressional inability to legislate in other than a piecemeal fashion. Achieving the original vision of a healthy and diverse ocean ecosystem that can provide a steady food source and economic opportunities remains problematic.

### *The Marine Mammal Protection Act*

The MMPA incidental take provisions are in transition. In 1988, Congress amended the MMPA by lifting the moratorium on incidental take (other than in the yellowfin tuna purse seine fishery in the Eastern Tropical Pacific) until October, 1993. Congress instead required NMFS to authorize

incidental takes from any species or stock, including a population stock designated as depleted. Intentional lethal taking of Stellar sea lions, cetaceans or population stocks designated as depleted (e.g. the Hawaiian monk sea) are prohibited. This exemption replaces an incidental take permit regime and a small take waiver program. Congress has since extended the effect of the 1988 amendment until April 1, 1994.

### *The Endangered Species Act*

The ESA incidental take provision was not similarly amended by Congress. A complicated procedure, which includes the preparation of a conservation plan, must be followed to obtain an ESA incidental take permit. This permit is not user-friendly to the commercial fishing industry and was conceived in response to land-based development rather than ocean resource conflict problems. Nonetheless, it is required of fishers who want to ensure their incidental takes of endangered marine species are legal.

A new issue in the MFCMA-ESA interaction is emerging with the recent ESA listings of certain Snake and Sacramento River salmon species, and the possible listings of coastal coho salmon

A new issue in the MFCMA-ESA interaction is emerging with the recent ESA listings of certain Snake and Sacramento River salmon species, and the possible listings of coastal coho salmon species. With these commercially and recreationally valuable salmon species listed as endangered or threatened, and the problems created by the intermingling of unlisted wild and hatchery salmon with the listed wild species, a broad spectrum of harvest and incidental take activities are being scrutinized under the ESA.

## **THE MIGRATORY BIRD TREATY ACT**

Although the U.S. Fish and Wildlife Service (USFWS) has authority under the MBTA to issue incidental take permits by regulation, to date it has not done so. Therefore, a commercial fisher who incidentally takes migratory marine birds - whether endangered or not - can be criminally prosecuted. Not surprisingly, USFWS does not consider enforcement of the MBTA against commercial fishers a priority, so it poses no realistic threat to commercial fisheries operations.

## **Bycatch As Incidental Take and Food Chain Interactions**

Incidental takes also occur in the form of bycatch of non-targeted fish. The turtle excluder device (TED), developed to reduce the incidental take of threatened marine turtles in the shrimp fishery, is an excellent example of the imposition of technology requirements on a segment of the fishing industry to reduce the bycatch of non-targeted fish species. Under MFCMA §304(g), a three-year shrimp bycatch study report is due soon from the Secretary of Commerce that should draw conclusions

regarding the effectiveness of the TED regulatory strategy.

The "food chain interaction" issue creates unique problems of "incidental take". For example, the threatened Steller sea lion feeds on the commercially valuable pollock fish. Steller sea lion populations in the north Pacific have declined dramatically, raising the questions of whether the commercial harvest of pollock is a contributing cause to this population decline. And if it is, how this conflict should be resolved poses a controversial and complex legal and policy dilemma.

## **Current Regulatory Regime**

The chart on the following page graphically illustrates the incidental take regulatory regime.

## **Proposed Regimes**

At least two proposals have been submitted to Congress to amend the MMPA following expiration of the incidental take exemption. A proposal by the National Marine Fisheries Service (NMFS) would significantly weaken the protections given to marine animals in order to accommodate existing commercial fishing practices. Representatives of certain fishing community groups and conservation organizations jointly have proposed a more balanced approach, but their recommendations have their own set of problems. For example, they propose strict, and for the most part, unrealistic schedules for regulatory action that ignore political realities and are based on an erroneous assumption that consensus exists regarding the quality of data and the means of adequately analyzing and drawing conclusions from such data. Their decision-matrix for determining status of marine mammal stocks for purposes of determining regulatory

take levels ignores problems of small populations. As a result, take allocations could significantly retard recovery and even contribute to the decline of some species.

## **Conclusion**

Congress first passed these ocean resource laws (except the MBTA) during the late 1960s through the late 1970s. They were the "ocean" part of an emerging national vision based on the realization that we were abusing the natural resources upon which our prosperity was based and a belief that benign federal intervention could slow most of the needless and wasteful resource destruction. The vision was of a world where overfishing would cease, marine mammal populations would recover, plant and non-human animal species would be returned from the brink of extinction, habitat destruction would be curtailed, and pollution would be reduced to "safe" levels.

In retrospect, missing from the vision was the recognition that natural resources, including those in the ocean, cannot be sufficiently protected or successfully managed in isolation from one another. Fish, marine mammals, sea turtles, marine birds, corals, and other marine organisms exist as parts of complex ecosystems. Each law was passed with scant notice of the impact it would have on the others. Recent experience has proven the weakness in this vision. The Marine Mammal Commission's **1992 Report to Congress** documents the extensive problems that marine mammals continue to face, even with protection afforded by the Endangered Species Act and Marine Mammal Protection Act. Thus the issues discussed in this paper involve concrete attempts to work out conflicting uses of ocean

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space and resources. We recommend more extensive use of multi-species fishery management plans that include marine mammals, the preparation of ecosystem plans by some of the more capable fishery management councils, and a greater

integration by NMFS of its roles under the MMPA and ESA. But given the mixed record of federal agencies charged with marine animal protection and management, congressional inability to legislate in other than a piecemeal

fashion, the fluid nature of the marine environment and the mobility of marine species, significant obstacles stand in the way of true holistic ecosystem management.

Statutes and Regulations	Marine Mammals E/T	Marine Mammals not E/T but Depleted	Marine Mammals not E/T/D	Non-marine Non-bird E/T	Migratory Bird E/T	Migratory Bird not E/T
ESA § 1539	X			X	X	
* MMPA § 1371(a)(2)	X	X	X			
* MMPA § 1371(a)(4)			X			
MMPA § 1383(a) (until 9/30/93)	X	X	X			
MBTA § 704					X	X
50 CFR part 13	X			X	X	
50 CFR part 17	X			X	X	
50 CFR part 18 E/T FWS	X		X			
50 CFR part 21					X	
50 CFR part 216	X					
50 CFR part 222 E/T NMFS	X					
50 CFR 229 Interim Exception	X	X	X			
*These two provisions have been superseded by MMPA § 1383(a) until 9/30/93.						

## THE ENDANGERED SPECIES ACT AND "TAKINGS"

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During its first 20 years, the Endangered Species Act of 1973 has enjoyed some notable successes. The populations of some 238 species have been stabilized. Nesting pairs of bald eagles have increased nearly four-fold in the lower 48 states since 1974, and recovery efforts exposed the devastating effects on humans of allowing toxic compounds, in particular DDT, to accumulate in the environment. The grey whale, hunted almost to extinction, has recovered so well in recent decades that steps are being taken to completely delist the species. The preservation of ancient forests led to the discovery that the Pacific yew - once considered a trash tree - contains taxol, identified as one of the most promising treatments for ovarian and breast cancer.

But recently, the Act has been subjected to unparalleled criticism. The spotted owl has been portrayed as the chief villain in the demise of timber-related jobs in the Pacific Northwest; the sea turtle has been blamed for everything from suicides to bankruptcies in the Southeast and Gulf of Mexico shrimp fisheries; and over 200 at-risk Pacific salmon species are being characterized as potential "train wrecks" that threaten many Pacific Northwest industries dependent upon cheap hydropower and water.

It was therefore with great optimism that the environmental community greeted the new democratic Administration in 1992.

It was hoped that with the 20th Anniversary of the Endangered Species Act would come great legislative achievements in the 103rd Congress long deferred during the Reagan/Bush Administrations. Although it was generally believed that President Clinton and Vice President Gore would make the removal of obstacles to ESA reauthorization a major priority, it now appears that reauthorization is further away in 1994 than it was in 1992.

The reasons for this change in the political climate were as unpredictable to the environmental community, as they were surprising to anti-conservation advocates. Indeed, few people anticipated that the reauthorization of a law intended to save species from mass extinctions not seen since the ice age, would be jeopardized by the issue of private property rights.

The surprise stems from the fact that the ESA as written poses few restrictions on the use of private property. Its chief focus is simple and straightforward. First it provides for a science-based inquiry into the status of species. Those species found to be in imminent danger of extinction throughout a significant portion of its range are listed as "endangered;" those likely to become endangered in the foreseeable future are listed as "threatened." These inquiries are conducted by the U.S. Fish and Wildlife Service (FWS) for terrestrial species, and the National

Marine Fisheries Service (NMFS) for marine species.

Second, the Act requires all federal agencies to "conserve" species listed as threatened and endangered, and refrain from any activity that places listed species in "jeopardy." In addition, federal agencies may not destroy or adversely modify critical habitat designated for any listed species, and must implement recovery plans for the conservation and survival of listed species.

Third, the ESA prohibits anyone from "taking" species listed as endangered; taking threatened species is only prohibited if special regulations are adopted by the FWS and NMFS. A "taking" is defined as harassing, harming, hunting, capturing or killing species. In a few cases, property owners may be restrained from certain activities on their property that alter habitat in such a manner as to injure or harm listed species.

Mindful of the potential conflicts with private property, Congressman Gerry Studds introduced legislation in the 103rd Congress reauthorizing the ESA (H.R. 2043) and providing financial incentives and technical assistance to private property owners to undertake actions to aid in species recovery, and to prepare habitat conservation plans in cases where species are taken incidentally to otherwise lawful activities. By encouraging voluntary public-



private partnerships, H.R. 2043 seeks to provide effective ways to assist landowners as well as protect listed species on private lands.

The bastion of private property in U.S. jurisprudence is the 5th Amendment of the U.S. Constitution, which guarantees that private property will not be "taken" for public purposes without just compensation. The 5th Amendment is normally invoked to protect private property from government use or condemnation for public purposes without providing compensation to the property owner; for example, where a highway is constructed across private property, or where dam construction inundates private property. Although the government may take private property in such cases, the Constitution requires that owners be justly compensated for the physical appropriation of their property.

The U.S. Supreme Court has, in limited cases, also applied the takings clause to situations where private property is not physically appropriated for a public use, but is rendered essentially useless or permitted to be physically invaded by regulation deemed excessive. These "regulatory takings" cases are few and far between and, in fact, no court has ever ruled that the ESA has "taken" private property; few if any cases are even pending that challenge the ESA under the 5th Amendment takings provisions.

Regulatory takings confront the well established rule that private property rights are not absolute. Persons may not use their property in a manner that harms other citizens, their property or public resources. The 5th Amendment has never supported a blanket requirement that public taxpayers compensate property owners whenever

environmental, public health and safety, or zoning laws protect the public and public resources (such as clean water and endangered species) from activities on private property.

Nevertheless, opponents of the ESA have seized upon the 5th amendment takings doctrine as a means to block the reauthorization of the ESA, and nearly every other environmental law being considered by the 103rd Congress. The so-called "wise-use" lobby - well-financed by timber, real estate, oil and gas, mining, and ranching interests - has launched a massive campaign against any government regulation that affects private property, even if only peripherally.

The wise-use lobby supports legislation in the 103rd Congress introduced by Congressman Billy Tauzin's bill to hamstring the ESA (H.R. 1490) by requiring compensation to property owners whenever ESA restrictions deprive property of an economically viable use. This standard goes far beyond current takings law as interpreted by the U.S. Supreme Court over the past 100 years, which requires that takings claims be addressed on a fact-specific basis to examine the economic impact and character of the regulation, and the investment-backed expectations of the claimant. That it is a thinly veiled attempt to prevent enforcement of the ESA on private property by making it cost prohibitive, is revealed by its numerous other provisions that would tie implementation of the Act in knots.

Other takings-related actions supported in the 103rd Congress by the wise-use lobby include an effort to gut the National Biological Survey (H.R. 1845), a non-regulatory agency that would provide independent, scientific information

on our nation's biological resources. Bills introduced by Senator Dole (S.177) and Congressman Condit (H.R. 561) would make permanent the 1988 Executive Order 12630 issued by President Ronald Reagan and require "takings" assessments of all proposed rules and regulations. It would also overturn Supreme Court 5th Amendment interpretations of what kinds of activities result in "takings." An effort on the House floor was at least partially successful in withdrawing a bill to elevate the EPA to cabinet level to avoid a bloody floor fight on excessive rulemaking requirements based upon onerous and redundant risk assessment analyses.

The "wise use" movement is also promoting takings legislation at the state level. So-called "private property" bills have been introduced in 39 states over the last two years to impose elaborate new bureaucratic requirements on government agencies, and mandate compensation whenever government action has a certain impacts on the value of property.

These state and federal takings laws could severely hamper public land and water resource management by creating new private rights to public offshore oil and gas, fishing, and range-land resources, and to take endangered species. They could also require taxpayers to pay polluters not to pollute, and to implement essential health and safety regulations. Although these takings laws are opposed by the environmental community, health and human service organizations, labor unions, local government associations, and the National Governors Association, the wise-use movement continues to use the takings issue as an effective weapon to promote its anti-regulation agenda. If these efforts prove

successful, environmental bills before the 103rd Congress will be encumbered with cost-prohibitive compensation requirements consuming taxpayer dollars and scarce government resources, and the reauthorization of the ESA will be transformed into an effort to speed species along the road to extinction.

## THE CHANGING POLITICAL ENVIRONMENT FOR FISHERIES: OPTIONS FOR REFORM OF THE MAGNUSON ACT

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### **Introduction**

As Congress grapples with the most recent round of adjustments to the Magnuson Fisheries Conservation and Management Act (MFCMA), it confronts conditions far different than those which compelled passage of the act in 1976. The new fisheries conservation zone removed the foreign fleets only to replace them with aggressive and successful American fishermen. It did not, however, reverse the prospect of continued resource decline. The reasons are cumulative and familiar: overfishing; too much money invested in boats and gear; pollution; habitat destruction and loss; and flaws in policies (including the MFCMA) designed to protect the fisheries. Two simple and related questions emerge: Are the fisheries any better off now than they were before passage of the MFCMA, and do the proposed changes offer a realistic basis for reversing these conditions? This paper will focus on the second part of the question by reviewing the key features of the original act, identifying several changes in the political context for fisheries policy, and concluding with an assessment of some of the proposed alternations in the current fisheries management scheme.

### **Confronting Decline: The Magnuson Act**

The Magnuson Act was a big departure from the feeble interna-

tional and local management efforts that preceded it. Indeed, the scope of its objectives and its innovative efforts to build industry participation into the regional council planning mechanisms ensure its place as the pivotal law governing marine fisheries management in the United States. From the outset the bill sought to harmonize the potentially conflicting interests represented by commercial and recreational groups and a broader national interest in conservation. (Young, 1982; Warner, 1983; Hennessey, 1982) The expressed intent of the act is to "promote domestic and recreational fishing", an objective that clearly reflects the group interests mobilized around passage of the bill. At the same time, however, the bill spells out a strong conservation stance reflected in the complex regional council-federal agency management scheme charged with realizing conservation and management standards that prohibit overfishing; require the use of the best scientific information available; discourage duplication; and require that fisheries managers take long-term man-made and natural changes in stocks into account in their planning.

The standards are important because they "codify principles of sustained yield management of marine fisheries for the first time, forcing government decision-makers to take into account new

biological, economic and social issues" (Warner, 1983, pp. 98-99). The issue then becomes the extent to which managers have been inclined and able to address these mandates for resource conservation in the face of industry pressures.

### **The Changing Political Context**

Three main themes now define the political context for fisheries management. First, an increasing body of data indicates that worldwide, fisheries harvests are leveling off, perhaps as a precursor to decline. (*World Resources*, 1992, pp. 175-180; Brown, Kane and Ayres, 1993, pp. 32-33) Catch has increased in some areas, declined in others, but the historical trend of increased catches may soon be over. Trends in the status of U.S. fisheries are a bit murky, but the overall pattern seems to reflect those emerging at the global level. Specifically, long-term potential yield is some 50 percent higher than recent annual yields. To exploit these potential harvests, however, it will be necessary to reverse overuse of 28 percent of the resource; maintain 28 percent at current levels, and increase use of the remaining 12 percent. (Sissenwine and Rosenberg, 1993) Economic distress is clearly apparent in specific sectors of the industry, thus lending credence to reports of declining fisheries vitality, and stirring expressions of concern by attentive publics. (Egan, 1994)

Second, the recent involvement of environmental groups in fisheries issues represents an expansion of the small and rather exclusive fisheries policy network to include those whose primary interest is in conservation and not production and short-term economic return. These groups argue for a broadened notion of stewardship that will be increasingly in conflict with more traditional commercial and recreational interests. For examples, targets of concern for the Center for Marine Conservation's Fisheries Conservation Program are notably silent on issues of development. Instead the focus is on contentious issues such as overfishing, bycatch, overcapitalization, and habitat loss and degradation. (Wise, 1991) These issues have also provided the bond that has united the Center for Marine Conservation, Greenpeace, the National Audubon Society, the National Coalition for Marine Conservation, and the World Wildlife Fund in the Marine Fish Conservation Network.

Third, despite the scope of the MFCMA and its efforts to foster conservation through the principles of wise management, there is a growing disenchantment among both environmental interests and professional fisheries managers with the capacity of these mechanisms to deal effectively with the conservation mandate. For example, the kinds of incremental decision-making that characterizes the council process, and the constant end runs around the federal chain of command indicates that the current MFCMA regime lacks the insulation from special interests and sufficient authority to manage the nation's fisheries according to the avowed conservation requirements of the act.

## Some Policy Proposals

The emergence of new, well-organized and technically informed groups seeking to expand the traditional fisheries policy network brings with it proposals for reform. At the least these proposals expand the range of possibilities open to Congress and professional managers; at the most, they could dramatically restructure the style of fisheries management as it has been practiced under the MFCMA since 1977. Specifically, these include provisions to eliminate overfishing and rebuild depleted fish populations; prescriptions for a precautionary, risk-averse approach to fisheries management; reduced conflicts of interest on the management councils; improved conservation of large pelagic fisheries; reduced bycatch; habitat protection; enhanced monitoring and enforcement; and adequate funding for fisheries research and enforcement. These proposals, which will be compared to those offered by industry and the government, are significant because they pose daunting challenges for implementation, shift the historical bias in fisheries decision-making from harvest to conservation, and mix implementation needs (enforcement, monitoring, habitat protection, stock restoration) with process issues (conflict of interests on the councils), with fundamental philosophical shifts (cautionary approach, a realistic definition of overfishing) in the context for management. The task is to examine a number of the most prominent reform proposals (American Fisheries Society, 1993; Foster, 1993; Marine Fish Conservation Network, 1993), for the extent of departure from the current regime, their political and administrative feasibility, their implications for the

redistribution of power and influence within the fisheries policy network, and their prospects for actually correcting the deficiencies most often implicated as responsible for the threat to the resource.

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## PRIVATIZATION IN FISHERIES: LESSONS FROM EXPERIENCES IN THE U.S. AND CANADA

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### **Introduction**

Based on research on two Individual Transferable Quota (ITQ) systems in early stages of development:<sup>1</sup>

1. Surf Clam and Ocean Quahog ITQs in the U.S. EEZ, 1990- (noted as "U.S. case" below)
2. Under 65' Mobile Gear (Dragger) Fleet Cod/Haddock/Pollock ITQs in the Scotia-Fundy region of Eastern Canada, 1990- (noted as "Canada case" below)

### **Similarities and Differences in Factors Leading to Decision to go to ITQs:**

Both moved to ITQs from a period of limited access licensing and quota control; both were heavily influenced by efficiency arguments of economists;

Otherwise very different, by criteria such as these:

Number of firms at outset (61 in the U.S. case versus more than 450 in the Canadian case)

Number of landing places (few [e.g. Pt. Pleasant, Atlantic City, Cape May/Wildwood, Ocean City, Oyster, a few New England ports] versus many in Nova Scotia, New Brunswick)

Number and type of buyers (few, all processors; versus many,

some fresh fish market, some processors)

Economic heterogeneity versus homogeneity of firms (size of fleets, amount of capital invested, whether harvester or part of vertically-integrated fleet)

More concentrated versus more decentralized industry power (power of large firms, buyers versus small firms and/or harvesters)

Social heterogeneity versus homogeneity of communities (within class-stratified, economically diversified or tourist-dependent communities, versus relatively egalitarian, fisheries-dependent communities)

Precipitating problem and response process:

#### **U.S. Case:**

Rising resource abundance within strict quota and other limits, leading to restricted fishing time, making a limited access fleet an overcapitalized fleet (on top of prior overcapitalization in open-access conditions). Response process was one of high level of "co-management," or industry involvement in decision-making, although on mixed terms with the regional fishery management council and the federal agency.

#### **Canadian Case:**

Resource decline, in context of limited licensing, quota management, resulting in early season closures; in context of rapid development of fleet in optimistic years of the 1980s and competition between mobile gear and fixed gear fleets in inshore fisheries, and between inshore and offshore sectors. Response process was one of very vocal industry involvement but relatively little accepted role of industry in decision-making.

Common sense and an appreciation of transactions costs<sup>2</sup> would lead one to predict that making the decision to accept major changes in property rights would be far easier in the U.S. case than in the Canadian case (fewer firms, fewer landing places, fewer market outlets, etc.)

Time between industry and fishery management community acceptance of the general idea of privatizing quotas and implementation was over 10 years in the U.S. case and 0 in the Canadian case.

#### **Reasons:**

1. In the U.S. case, establishment of the ITQ system was delayed by socio-economic heterogeneity, expressed as "big guys versus little guys," and by concern about relative position

in the initial allocation of rights.<sup>3</sup>

2. In the Canadian case, action was hastened by extraordinary powers plenipotentiary of the Canadian Minister of Fisheries; although a democratic process was promised in the context of a 1989 crisis precipitated by early closure of the fishery, it was overrun by a ministerial decision to create ITQs. Question of initial allocation was set aside, Minister and DFO staff set up "Individual Quota Group" to let industry and DFO staff work on questions such as the framework for "co-management."

### Consequences of ITQs:

Introductory Note: the Canadian system began with IQs, not ITQs; the co-management group decided to make the individual quotas fully transferable beginning in 1993-4. In the interim, only temporary (within fishing year) transfers could be made. The U.S. case began with ITQs, although only a short while before the decision was made, most industry members thought they were dealing with "vessel allocations," or boat quotas.<sup>4</sup> It is also important to note that in the U.S. case after beginning there was no cap on the amount any one firm or person could hold, under the argument that the U.S. anti-trust laws could be invoked to constrain would-be monopsonists and monopolists. There is also no proscription on non-fisherman holding shares. In contrast, and as might be expected given the higher level of dependency of the communities of the Scotia-Fundy region on fisheries, the Canadian case required both that ITQ holders be bona-fide fisherman (which in fact included a sizeable number of processors who

were also fisherman) and that no person could hold more than 2% of the ITQ for a species.

Consequences (data for the Canadian case are limited; research in process):

Both systems experienced a very rapid decline in the numbers of vessels actually involved in the fishery, showing the effectiveness of the ITQ systems in reducing this aspect of overcapitalization.

U.S. case: 73 vessels in 1992, 53% of number fishing in 1990

Canadian case: accurate figures are not yet available but the decline is within a similar range, from about 450 to less than 250.

Decline in labor and employment is also expected. We have estimated a 1/3rd decline in labor in the U.S. case in the period 1990-1992<sup>5</sup>. Comparable estimates are not yet available for the Canadian case but are expected to be larger because the dragger fishery of Nova Scotia (and to a larger extent neighboring New Brunswick) had not gone through a period of rotating labor among boats comparable to what had been done in the U.S. case when fishing times declined as catch per unit effort (CPUE) increased with limited quotas and rising abundance of clams<sup>6</sup>.

Increased efficiency is found among the vessels in the U.S. case, in terms of amount of effort per vessel<sup>7</sup> and for firm (endnote 6). Comparable data are not yet available for the vessels in the Canadian case.

Structural changes in the fishing industry have been observed for both fisheries, in the direction of concentration of ownership of this new capital, ITQs, with complex, and still unfolding, implications, for buyers and sellers

in the market. In the U.S. case, it is clearer that there is a strong trend to build upon the pre-existing structure of dominance by a few firms. In the Canadian case, such a trend is reputed to exist but is less apparent in the data.

### Lessons Learned:

Other consequences are noted in the paper. Here are some of the lessons learned:

Lesson #1: It is very difficult to predict whether or not and when ITQs will be accepted; two critical factors are:

- a) political culture (i.e. the locus of power and expectations about power; expectations about the democratic process) and;
- b) the extent of potentially divisive heterogeneity in fishing power and wealth, making it difficult to come to cooperative solutions.

Lesson #2: Cooperative management can work as a way to come to acceptable and feasible decisions about allocation of property rights and other matters (in the Canadian case, including caps on ITQ ownership and related matters).

i.e., cooperative management and ITQs are not necessarily alternative ways to deal with fisheries management problems; co-management is one way to handle ITQs. "Top-down" or "expert-run" management is another; the two cases at hand actually had mixtures of both, with an evolving rhetoric in favor of "co-management."

Lesson #3: The benefits of ITQs come at the cost of the many ramifications of fewer boats in the fishery (fewer hired captains, fewer

crew-members, fewer jobs for welders and suppliers); different conditions of work, including expanded working hours and changing relations of production in the fishery (restructured share systems; new, more speculative relationships between holders of shares and participants in the fishery, akin to "sharecropping" in agriculture; and a dramatically changed set of expectations about the future.

Lesson #4: "Ownership" should promote stewardship. However, the two cases suggest limits to this conclusion:

- a) ITQs establish incentives for various forms of "cheating," including misreporting and at-sea culling to get rid of lesser value fish sizes or species;
- b) ITQs of themselves, at least as presently and recently designed, do very little to protect the resource; the government retains responsibility for resource management and is dependent on a science that must deal with very difficult bio-oceanographic phenomena. There is not yet a new year-class of surf clams or ocean quahogs after 1978-1979; recruitment is an erratic, apparently rare, and unpredictable event; and the fate of the groundfish of the Scotia-Fundy reason is anyone's guess after a period of drastic decline in the context of environmental change and embarrassing errors in stock assessment.

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## WATER-USE PLANNING AND ZONING FOR THE COASTAL OCEAN

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### **Introduction**

Plans abound in the arena of coastal and ocean governance. Despite the federal anti-planning rhetoric of the 1980s, the 1990s dawned to both old and new planning initiatives directed toward the long-term stewardship of living and nonliving coastal and marine resources. Many of these initiatives are the result of directives established two decades ago - initiatives begun with the passage of the federal Coastal Zone Management Act, the Clean Water Act and the Magnuson Fishery Conservation and Management Act. There are also initiatives resulting from new legislation or from the re-thinking of old legislation mandated by the re-authorization process.

Despite the number of planning initiatives, this author believes that ocean and coastal planning is in a state of disarray. The primary reason is that planning initiatives (and regulatory actions independent of plans) are often in response to management crises. Responses are usually single-purpose attempts to address problems only at the level of government (or within the particular jurisdiction) in which they occur. Attempts at holistic multijurisdictional management are few. Until we develop some innovative processes (models) for "getting out in front" of potential crises and doing so in a

multijurisdictional and coordinated fashion, the problem will only worsen.

This paper presents a planning process (model) that was developed for a portion of North Carolina's coastal public trust waters. It's a model that incorporates some of the lessons learned in our 70 years of urban land-use management. These were lessons learned from intense land-use conflicts and the planning techniques developed to anticipate and ameliorate future conflict. Though these lessons were usually learned through land-use conflicts associated with private property, they are valuable when applied to the public lands and waters of our coastal and marine waters.

### ***Where the "Bottom-Up" meets the "Top-Down" Approach to Ocean Governance***

At the 1993 meeting of the Ocean Governance Study Group, Charles Lester stated that one challenge in managing our oceans is finding structures and processes that allow diverse interests to be articulated and heard and that promote consensus building among these interests. He further stated that we need fora that do a better job of: (1) accommodating the participation of multiple authorities, (2) decreasing institutional complexity and (3) providing incentives for consensus and efficient governance.

Developing these processes or fora can be difficult in an ocean governance setting that appears to be evolving along a path of single-purpose, single-jurisdictional crisis management. Separate plans are being developed at different levels of government for fisheries management, coastal water quality enhancement and coastal land-use management, all without much thought to how they might fit together. A brief look at the planning and management efforts in and adjacent to North Carolina's coastal and marine waters provides several examples. At the local (county) level, state mandated planning is attempting to control land-use patterns around coastal wetlands, rivers and sounds. At the state level, river basin management planning is attempting to address coastal water quality issues. At the interstate level, the Atlantic States Marine Fisheries Commission continues to develop coastal fishery management plans (CFMP) - an endeavor that has recently taken on greater importance with the passage of the Atlantic Coastal Fisheries Cooperative Management Act. That act gives the commission new power to force states to implement CFMPs. And, at the federal level, the South Atlantic Fishery Management Council continues developing fishery management plans. Even though efforts at coordinating these processes have been minimal, they

can provide examples of how (or how not to) proceed with holistic multijurisdictional management.

One of these efforts is found in the N.C. Coastal Area Management Act (CAMA). The CAMA requires local and state governments to jointly plan for and manage the state's coastal lands and waters. This requirement was the impetus for the subject of this paper - a 1990 project entitled "A Pilot Study for Managing Multiple Use in North Carolina's Public Trust Waters." The project, funded through the Albemarle-Pamlico Estuarine Study, focuses on applying old strategies (land-use planning and zoning) to a new arena (coastal and ocean waters).

Because of its legal requirement for interjurisdictional cooperation, the act provides some hope for building a planning process or model that can accommodate some of the multiple authorities in the state's coastal and marine waters. The act's "bottom-up" strategy that requires local planning and its "top-down" strategy that insists local plans be consistent with state guidelines create a meeting ground where diverse interests can be articulated and heard and where consensus building can be promoted.

### *A Pilot Study for Managing Multiple Use in North Carolina's Coastal Public Trust Waters*

The goal of the study was to use the CAMA requirement of local and state cooperation to develop a model water-use plan (with accompanying use policies) for a portion of the state's coastal public trust waters. Below are the specific tasks used in developing the plan. Most were traditional land-use planning strategies. They included:

- ◆ selecting a geographical area that reflected a diversity of uses and user conflicts;
- ◆ establishing a water-use planning board that represented users and managers of the area's waters and adjacent lands;
- ◆ holding a public hearing to elicit input regarding resources, uses and conflicts;
- ◆ identifying existing legal authorities (local, state, interstate and federal);
- ◆ conducting a variety of inventories and mapping the results with a Geographic Information System (GIS). These included:
  - (1) an inventory of aquatic resources (submerged vegetation beds, primary nursery areas, productive shellfish beds, etc.);
  - (2) an inventory of aquatic resource uses (navigation channels, marina sites, military restricted areas, crab pot areas, etc.);
  - (3) a water quality inventory (point source discharges, areas traditionally closed to harvesting shellfish, water quality classifications, etc.); and
  - (4) an inventory of land uses adjacent to the coastal waters of the study area;
- ◆ developing water-use classifications using a methodology, produced in collaboration with North Carolina's Center for Geographic Information and Analysis, that uses GIS technology to overlay several data layers. The data layers were obtained from the inventories, and the overlay process was used to classify the area's

waters as suitable for either preservation, conservation or development; and finally

- ◆ writing policies to protect resources in the area's public trust waters. The water use classifications are to be used as a vehicle for policy implementation.

Currently, CAMA planning stops at the water's edge. It is unlikely that planning efforts will be extended into adjacent public waters until funds are made available to local governments to cover additional expenses. Despite this, there is a growing interest in the process outlined above.

State planners and managers see an opportunity to bring together the multiple authorities governing coastal and marine waters. At the state level, these authorities include several commissions, agencies and local governments. In North Carolina the boundaries of local government include all the coastal rivers, sounds and, to a limited degree, the Atlantic Ocean. Interstate and federal authorities also need to be considered - particularly in the arena of fisheries management. Many see this process as a meeting ground where state (and perhaps federal) authority can merge with the desires of local government.

Local planners and managers see an opportunity to become involved in a familiar process (planning and zoning) that involves a geographical area traditionally reserved for state and/or federal management.

## NON-POINT SOURCE POLLUTION: TOP DOWN OR BOTTOM UP CONTROLS?

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### **Introduction**

Coastal water quality enhancement has traditionally focused on control of point sources or pipe discharges. Recently, however, nonpoint sources that include farm fields, septic systems, lawns, and other sources of nutrients, toxins, and sediments have gained prominence in the water quality debate. The diffuse land-use activities that are responsible for the flows of contaminants have been presumed to generate, in some estimates, nearly half of the impairment of United States estuaries. Consequently, a variety of initiatives are underway or being contemplated to address this problem. Among the complexities associated with nonpoint source pollution controls is the need to integrate land management into considerations of coastal water quality management. The former was predominantly a local issue while the latter was commonly a federal initiative. Because the technical dimensions of the problem require a merger of the two, they raise difficult intergovernmental problems.

The purpose of this analysis is to contrast technical and social problem definitions and the solutions that flow from them. First, I define nonpoint source pollution as a technical problem similar to point source pollution. Ultimate regulatory control of point sources has been top-down imposition of treatment technologies to fix the problem. Second, I consider

nonpoint sources as a social problem and examine pathways to solutions in that context. Social problems require behavioral change which is more effectively generated from the bottom-up. Third, I consider the extent to which implementation strategies implicitly adopt elements of these two approaches.

### **Nonpoint Source Pollution as a Technical Problem**

A technical problem statement of nonpoint source pollution emphasizes the inputs, fates, and effects of the diverse contaminants that are known or potential sources of degraded water quality. The behavior of contaminants in watersheds and coastal receiving waters is used to design technical solutions. They may be targeted at sources, such as redesign of septic systems, or they may emphasize storage or conversion prior to release. In the latter case the technical solution would include settling basins or vegetated buffers. Top-down technical solutions for point source control problems have been readily and successfully adopted in regulations as a means of addressing that problem. A technical approach to nonpoint source pollution implies that problem diagnosis, solution design, and top-down regulatory imposition of the corrective technology would result in diminishing the problem. In fact the technical dimensions of the nonpoint source problems are sufficiently different

from those of point sources so that a command and control approach is unlikely to be successful.

### **Nonpoint Source Pollution as a Social Problem**

Conversely, describing nonpoint source pollution as a social problem emphasizes different attributes of the issue and leads to alternate solutions. In particular nonpoint source pollution as a social problem emphasizes societal knowledge, mutually acceptable goals, and consensual approaches to reaching them, among other factors. The objective is to seek individual and hence collective behavioral change to ameliorate the problem. The absence of easily viable regulatory and enforcement strategies for nonpoint pollution control forces consideration of alternatives sensitive to the intergovernmental nature of the problem. Obviously such change must be informed by the technical dimensions of the problem, but solutions are not controlled through technical avenues alone. These solutions are characterized as bottom-up. These idealized contrasts between technical/top-down and social/bottom-up solutions form a background to considering federal legislative strategies.

### **Implementation Strategies**

Various initiatives have been attempted over the last two decades and another is anticipated. To date the nonpoint source problem has been legislatively "solved" several

times. In the 1972 Federal Water Pollution Control Act Amendments section 208 launched an ambitious planning activity yet few of the state plans were approved by the Environmental Protection Agency. The Rural Clean Water Program provisions of 1977 were created to address agriculturally caused problems. In the 1987 revision of the Clean Water Act section 319 mandated additional state action supported with federal matching funds. Most recently in 1990 section 6217 of the Coastal Zone Management Act Reauthorization requires program implementation to protect coastal waters or loss of federal support for other aspects of coastal management. The 1994 revision of the Clean Water Act will also address nonpoint source pollution controls.

### *Conclusion*

Top-down control of nonpoint source pollution faces a number of significant technical and intergovernmental obstacles. Regulations and enforcement of dispersed land use activities characteristic of nonpoint sources is neither politically attractive nor bureaucratically tractable as point source control. Therefore, to be successful, federal legislation will have to build upon a technical understanding but move to strategies that encourage individual and local decisions to further the federal goal.

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## COASTAL AMERICA: A PARTNERSHIP FOR ACTION

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### **Introduction**

Coastal America is a collaborative partnership initiative to restore, preserve, and protect the nation's coastal ecosystems. The Partnership includes the federal agencies with coastal stewardship responsibilities, the defense agencies, and the infrastructure agencies: Agriculture, Air Force, Army, Commerce, Environmental Protection Agency, Housing and Urban Development, Interior, Navy, and Transportation. In addition, state and local agencies and non-governmental organizations are partners in specific projects.

This innovative, action-oriented multi-agency effort was initiated in response to a growing realization that our piece-meal approach to addressing the coastal crisis has been inadequate. Although media and activity-specific laws and programs have helped protect selected resources, coastal ecosystems continue to be degraded. The Coastal America Partnership approach combines the resources, authorities and expertise of the federal agencies to provide a comprehensive response to our coastal problems. By building coalitions among federal agencies, state and local governments, the private sector and concerned citizens, the Partnership can accomplish big tasks which no agency or program could do alone.

### **National - Policy Formulation**

Coastal America is governed by a multi-agency Memorandum of Understanding which provides a national operational framework for the initiative. The management structure for this national initiative cuts horizontally across the agencies and extends vertically from the policy level to the field level (Figure 1 on the following page). National policy guidance is provided by the Principals Group which is comprised of Assistant Secretaries from the partner agencies. The Under Secretary of Commerce currently Chairs the Principals Group. A national interagency team of senior level national program managers provides program guidance. Nine regional interagency teams of senior level regional managers coordinate activities, develop regional strategies and implement projects. The national partnership is facilitated by a Coastal America office which is staffed by employees from the Partnership agencies. The organizational structure enables early identification of policy issues and conflicts at the local, regional and national level and encourages timely resolution of these issues by senior level policy-makers.

Since the purpose of the Partnership is to encourage collaborative action to restore and protect coastal environments, policy and program directives that prevent or inhibit collaborative projects are

identified by the Regional Teams and elevated to the national level for resolution. For example, a policy preventing the beneficial use of dredged material for wetland restoration was noted by a Regional Implementation Team and quickly resolved by the National Implementation Team and Principals. The resolution of this issue not only enabled the project to move forward but encouraged the development of a legislative solution for the broader national problem.

### **Regional - Planning Process**

Planning occurs at the regional level, where interagency Regional Implementation Teams (RITs) develop strategies to address specific regional problems. These strategies provide a region specific framework for program implementation and project selection. This collaborative planning approach encourages the incorporation of environmental objectives in major development plans such as the reuse of military bases targeted for closure, water resources projects and transportation system improvements. The process of comparing and evaluating specific agency plans also encourages the early identification of collaborative opportunities to restore the environment while moving forward with vital economic development.

For example, the Northeast strategy focuses on restoration of

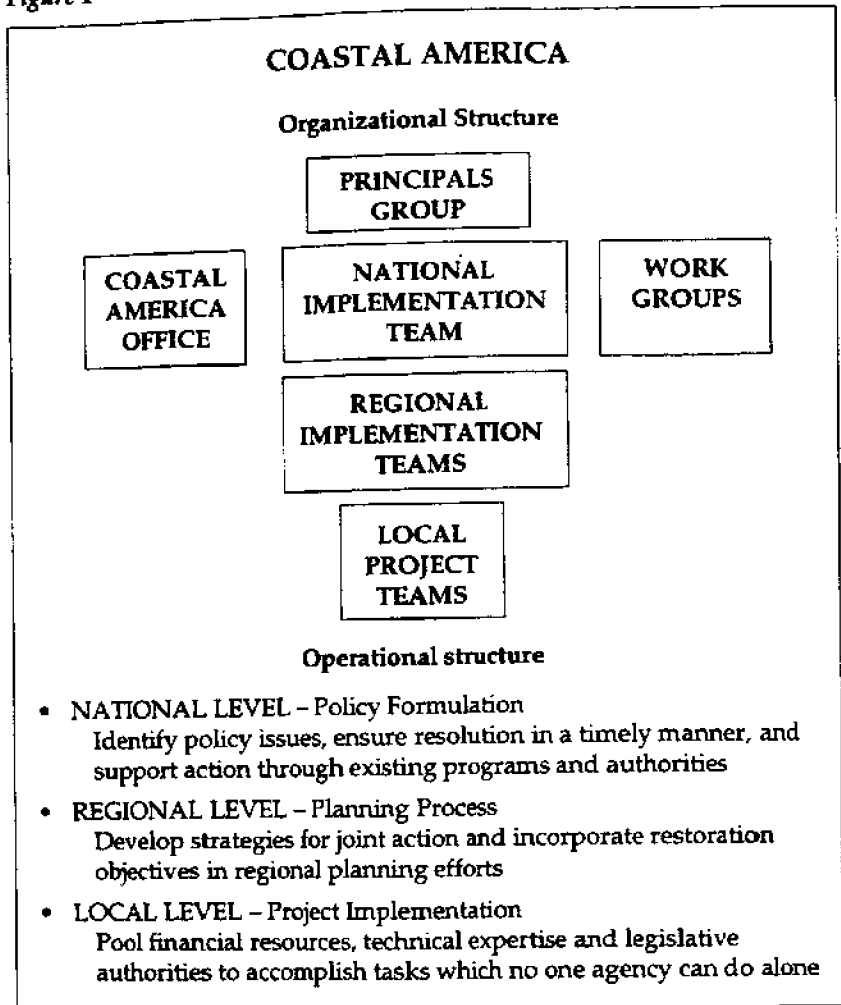
coastal habitat affected by infrastructure development and specifically identifies opportunities for restoration of coastal marshes constricted by rail and road systems. Sources of funding for this restoration strategy include the Intermodal Surface Transportation Efficiency Act of 1991. Resolutions to commit resources to accomplish the restoration efforts have already been signed among the Coastal America federal partners and the states of Connecticut and Rhode Island and an agreement is pending with Massachusetts.

### Local - Project Implementation

Project implementation occurs at the local level. Within each region site-specific coastal problems are identified and a working list of priority projects which include federal, state, local, private, and public participants is maintained. True interagency collaboration by the partners has encouraged the pooling of resources and fostered numerous administrative efficiencies that allow the expeditious implementation of projects. The teams have often been able to identify an agency which can provide federal resources most efficiently where they are needed. In addition, the permit process is expedited because the active participation by all affected federal and nonfederal stakeholders in project design encourages the early resolution of potential issues.

Although the Partnership is still in its "infancy" it has already proven to be a very cost-effective way of assuring action at the local level. In its first year, 1992, it generated 24 partnership projects in 15 states valued at over \$12 million, with over half of the funds contributed by non-federal partners. In 1993, the Partnership initiated an additional 46 projects in 17 states,

Figure 1



valued at over \$17 million. Over 20 federal agencies and over 150 non-federal organizations participated in project efforts which will result in the restoration of thousands of acres of wetlands, the re-establishment of hundreds of miles of spawning stream, and the protection of critical habitat for endangered coastal birds, anadromous fish and marine mammals.

### Summary

Coastal America provides a nationally coordinated multi-agency partnership with a regional collaborative approach and a local

action-oriented project focus. It represents a new approach to addressing complex environmental problems in a time of limited resources - a new way of doing business that goes beyond conventional roles and demonstrates innovative aggressive action at all levels. The value of the process is that it provides:

- ◆ a collaborative approach that encourages innovative and cost-effective solutions to specific problems
- ◆ a partnership network that enables development of a broad consensus for action

- ◆ a management structure that facilitates communication and coordination

The Partnership encourages collaboration versus confrontation by bringing agencies to the table as equal partners empowered to contribute to a collective creative effort. Because Coastal America is a network and not a program, it has also been able to minimize bureaucracy while streamlining the solution-implementation process. Individual partner agencies maintain total control of their programs and resources, but they recognize that they can better accomplish their agency objectives by supporting and expediting partnership efforts. Lastly, the committee/team management structure of the Partnership builds trust among the partners, facilitates working relationships and encourages conflict-resolution. Since the Partnership includes the infrastructure, defense, and resource agencies, it also provides an invaluable forum to discuss sustainable development issues and an effective mechanism to implement related goals and objectives.

In summary, Coastal America provides an action-oriented forum for collaborative problem-solving which better serves the public and environment by leveraging governmental and non-governmental resources to produce results.

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## INTEGRATION AND IMPLEMENTATION: AN ASSESSMENT OF §6217 OF THE 1990 COASTAL ZONE ACT REAUTHORIZATION AMENDMENTS

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### Introduction

This paper explores the conceptual and practical challenges associated with managing nonpoint sources of pollution. In particular, it focuses on assessing federal and state efforts to develop and implement Coastal Nonpoint Pollution Control Programs (CNPCPs) pursuant to Section 6217 of the Coastal Zone Act Reauthorization Amendments (CZARA) of 1990. Section 6217 requires each coastal state with a federally approved coastal management program to develop a Coastal Nonpoint Pollution Control Program (CNPCP) to be approved jointly by the Environmental Protection Agency (EPA) and the National Oceanic and Atmospheric Administration (NOAA) by July 1995. Failure to do so results in fiscal penalties for the Clean Water Act Section 319 nonpoint program and the state coastal zone management (CZM) program. The programmatic requirements associated with §6217 arguably represent the most comprehensive, and perhaps most challenging, national effort at integrated coastal watershed management ever undertaken in the United States.

Our examination of the §6217 program focuses on the conceptual approaches to nonpoint pollution control and the requirements associated with developing state CNPCPs. After examining the program's key elements, we introduce a theoretical framework for evaluating the implementation of intergovernmental programs. This framework consists of several components. In particular, it focuses on: 1) the definition of problems; 2) the policy formation process; 3) the implementation

process; and, 4) the characteristics which influence the nature of the outputs and outcomes of the implementation process. The paper then examines challenges associated with evaluating the outputs and outcomes of such a program.

### Assessing the §6217 Program

#### Problem Definition

The first component of the evaluative framework examines the problem definition phase of the policy (or program) development process. This is arguably the most

**Table 1**  
*Summary of Water Quality Data in the United States*

	Rivers (miles)	Lakes (acres)	Estuaries (sq. miles)
Total Waters	1,216,219	26,962,427	35,624
Assessed Waters	647,066	18,488,636	26,692
% Assessed	53%	69%	75%
Impaired Waters*	171,088	3,511,242	5,897
% of All Waters Impaired	14%	13%	17%
Impaired-Point	19%	13%	36%
Impaired-Nonpoint	81%	87%	64%
% of Assessed-Fishable	80%	70%	77%
% of Assessed-Swimmable	75%	83%	88%

\*Waters partially or failing to meet designated uses

important stage of the policy process since a poorly defined problem may lead to implementation problems and not result in the desired outputs or outcomes.

Accordingly, the paper examines the nature of the problem as well as the extent to which coastal water quality is impacted from nonpoint pollution (Tables 1 and 2) based on the *National Water Quality Inventory: 1990 Report to Congress* prepared by the EPA. It is clear from this report that nonpoint source pollution is a major water quality concern in some localized areas. It is less clear whether nonpoint source pollution is a national problem since the vast majority of surface water support their uses and meet the fishable and swimmable goals. It is also unclear as to why §6217 focuses on coastal waters since rivers and lakes are impacted to a greater extent.

### Policy Formation

The second component of evaluative framework examines the nature of the policies developed. Based on the literature, it appears that addressing the nonpoint source problem requires a set of integrated policies. It appears that the §6217 program satisfies many of the requirements of an integrated policy. For example, many of the issues the program addresses are interrelated and the relevant agencies are involved. However, there are notable exceptions. The geographic scope of the program is defined in terms of the coastal watershed boundary when perhaps it should be defined by jurisdictional boundaries. There is also reason to question the causal relationships upon which some policies are based. For example, many of the management measures are not directly related to improvements in coastal water quality but rather surface water quality in general. Thus, the technology

**Table 2**  
*Leading Causes and Sources of Water Quality Impairment (EPA, 1992a)*

	Rivers	Lakes	Estuaries
Leading Causes of Impairment	Siltation, Nutrients, Organic Enrichment, Pathogens, Metals	Metals, Nutrients, Nutrients, Organic, Suspended Solids	Nutrients, Organic Enrichment, Pathogens, Priority Organics, Suspended Solids
Leading Sources of Impairment-Nonpoint	Agriculture, Hydrologic Modification, Resource Extraction, Stormwater/Runoff	Agriculture, Hydrologic Modification, Stormwater/Runoff, Land Disposal	Stormwater/Runoff, Land Disposal, Agriculture, Construction
Leading Sources of Impairment-Point	Sewage Treatment Plants, Industrial Discharges	Sewage Treatment Plants, Industrial Discharges	Sewage Treatment Plants, Industrial Discharges, CSOs

based approach works equally well within and outside the coastal watershed.

### Nature of the Implementation Process: Programmed vs. Adaptive

The third component of the evaluative framework examines the implementation process used. Based on the characteristics of nonpoint source pollution, the nature of the §6217 program, and the implementation setting it is argued that an "adaptive approach" to program implementation is most appropriate. However, a "programmed approach" is being utilized to implement the §6217 requirements. This could cause problems during the development of state CNPCPs due to the high level of uncertainty in the overall implementation environment. It is argued that an adaptive approach would likely be more successful since it stresses experimentation and creates a greater organizational learning capacity.

### Factors Influencing Program Outputs and Outcomes

Finally, the evaluative framework identifies three sets of factors which influence the outputs and outcomes of a program's implementation: Consistency; Organizational Capacity; and Ecologic Capacity. Consistency refers to: 1) the degree of horizontal and vertical consistency in policy and program objectives; 2) the degree to which institutional mechanisms ensure policy implementation; 3) the adequacy of decision rules; 4) the accountability of agencies responsible for implementation; and, 5) the accuracy with which policies are communicated. Based on the examination of these factors, it appears that there may be some problems with the implementation of §6217. Primarily these problems relate to the duplication and overlap of federal and state programs to control nonpoint sources of pollution.

Organizational capacity is characterized in terms of: 1) the staff's expertise; 2) the disposition

of implementors; 3) the consistency of the policy with the organizations goals; 4) the adequacy of financial resources; and, 5) the transaction/transformation costs associated with program implementation and administration. These criteria also raise questions about the implementation of §6217. Perhaps the biggest uncertainties are the high transaction and transformation costs which may be associated with program development and implementation and the corresponding lack of any substantive federal funds for program development.

Ecologic capacity is characterized in terms of the political, economic, and socio-cultural constraints of the implementation environment as well as the state's situational capacity and the equity of the policies being implemented. These criteria also raise questions about the implementation of §6217. There may be serious economic and political constraints associated with implementing some of the programmatic requirements. In addition, some states lack the capacity to implement all of the measures within the prescribed time period due to a variety of constraints. Finally, aspects of the §6217 requirements raise serious questions regarding the equity of the policies being implemented.

### *Conclusions*

The paper draws several conclusions related to the §6217 program and the integration of existing nonpoint source pollution control programs. It also questions why the approach taken to implement the §6217 requirements contradicts the approach used to develop and implement state CZM programs. Finally, the paper raises questions regarding the evaluation of §6217 program outputs and outcomes. In a sense, §6217 is an

opportunity to conduct a large scale experimentation in coastal watershed management. The 56 management measures each represent an independent variable for testing selected hypotheses concerning nonpoint pollution control strategies. Unfortunately, programmatic output and outcome measures are not clearly specified and the present water quality monitoring data is insufficient. In addition, considering that only 50-75 % of the rivers, lakes and estuaries are presently assessed, it is unlikely that states will have the financial resources necessary to accurately monitor the effectiveness of a management measure's implementation. This paper suggests that selected states use the EPA's Environmental Monitoring and Assessment Program (EMAP) to identify and measure dependent variables and the impact of the (g) measures implementation. Using the EMAP's sets of interrelated indicators, it may be possible to link management measure implementation to specific outcomes. This may provide a measure of cost-effectiveness and provide an accurate basis for developing future management measures to control nonpoint sources of pollution. It would also provide the information necessary for managers to learn and adjust during the implementation process.

## REDISCOVERING THE PUBLIC INTEREST IN THE OUTER CONTINENTAL SHELF LANDS

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### **Introduction**

The 1978 amendments to the Outer Continental Shelf Lands Act were designed to promote the expeditious yet environmentally-sound development of frontier OCS oil resources. The amended OCS program has failed to achieve its goal, however, and environmental, development, and government interests have reached a stalemate. There is now widespread agreement that the OCS program requires fundamental change in order to move beyond the contentious and debilitating conflict of the past 15 years.

This paper frames the OCS development dilemma as a problem of "rediscovering the public interest in the OCS lands." Section Two considers five frameworks for thinking about the public interest: republicanism, civic environmentalism, bioregionalism, ecosystem management, and reinventing government. Five principles of policy reform for achieving the public interest are then distilled from these frameworks. Section Three applies these principles to the structure and past implementation of the existing OCS program and argues for four OCS policy changes: (1) decentralization of development decisions to the four OCS regions; (2) establishment of regional decision-making bodies consisting of all of the major stakeholders in

OCS decisions; (3) allocation of the costs and benefits of OCS development to the regional decision-making bodies; and (4) institutionalization of a public mechanism for OCS exploration. These reforms are intended to establish and affirm the public character of OCS resource decision-making by enhancing public discourse and by placing control of key resource allocations within regional political and community settings.

### **Discovering The Public Interest**

Defining "the Public Interest" is difficult and controversial. Nonetheless, this section considers five frameworks for discussing the public interest in relation to themes of governance and environmental management.

#### **Republicanism and Public Discourse**

In contrast to Madisonian democracy, which emphasizes controlling the negative effects of factions, Republican or Jeffersonian theories of democracy emphasize strong public participation and engagement in the policy-making process in order to reach common definitions and solutions to public problems. Whereas the checks and balances approach of the Madisonian vision promotes "veto-politics", republicanism promotes public discourse and processes for consensus-building. Citizenship,

decentralized face-to-face problem-solving, and a belief that common citizens can rise above self-interest to discover the public interest are hallmarks of republicanism.

#### **Civic Environmentalism**

In his book *Civic Environmentalism*, DeWitt John proposes an alternative to the federal command and control "gorilla in the closet" model of environmental management.<sup>1</sup> Some of the primary characteristics of "civic environmentalism" are bottom-up public participation and formulation of environmental policy; integration of existing fragmented governmental authorities; and experimentation and adjustment of policies in response to scientific uncertainty. It stresses the importance of the "civic" dimension of public policy in order to more effectively balance environmental and economic values.

#### **Bioregionalism**

Bioregionalism is concerned with integrating the ecological aspects of a region with its economy, culture, education, and governance. It postulates the importance of regional ecologies and cultures, as well as the development of sustainable regional economies, material flows, etc. Like Civic Environmentalism, it believes bottom-up, decentralized structures of governance are critical to devel-

oping the public interest. It also believes that a sense of "place" is essential to our understandings of the public interest.

## *Ecosystem Management*

Ecosystem management is quickly emerging as the preferred method for protecting ecosystems and/or more effectively balancing multiple interests within ecosystems. Although there are many different approaches to ecosystem management, the Clinton Administration's policy articulates some of its general principles: (1) to manage along ecological rather than political or administrative boundaries; (2) to ensure coordination among Federal agencies, and increased collaboration with State, local, and tribal governments, the public, and Congress; (3) to use monitoring, assessment, and the best science available; and (4) to consider all natural and human components and their interactions.<sup>2</sup> The recent Department of Interior initiative for promoting decentralized ecosystem management of public grazing lands provides a potential institutional framework for translation to the OCS development arena.

## *Reinventing Government*

In *Reinventing Government*, Osborne and Gaebler set out ten principles for transforming the public sector and in particular, for responding to problems associated with centralized, bureaucratic organizations.<sup>3</sup> The Clinton/Gore administration has embraced several of these in its own "reinventing government" initiative. Some that are most relevant to discovering the public interest are decentralization and participation, empowering communities, mission-driven as opposed to rules-driven government, and anticipatory as opposed to reactive government.

## *Conclusion*

Together, the five perspectives on governance suggest five principles for better discovering the public interest: (1) establishment of decentralized, bottom-up decision-making; (2) promotion of public dialogue and consensus-building; (3) pursuit of flexible problem-solving at the regional and local level; (4) integration of fragmented federal, state, and local interests; (5) integration of regional political, economic, and environmental dimensions of social interaction.

## *The Public Interest and the OCS Program*

Over the last 15 years, the federal OCS program has not been implemented consistent with the principles developed above. In particular, implementation of the OCS leasing program has been (1) highly centralized (2) lacking in meaningful public participation; (3) bureaucratic at the federal and regional level; (4) undermined by institutional fragmentation and the incentives for conflict; (5) haunted by the asymmetric allocation of the costs and benefits; and (6) unable to deal with uncertainty effectively.<sup>4</sup> Rather than promoting problem-solving and consensus-building, the program has been characterized by veto-politics and deadlock. What concrete reforms might follow from the principles developed in Section II?

First, authority for OCS development decisions should be devolved to regional and/or subregional decision-making bodies. The proper scope of these bodies should flow from an ecological understanding of the coastal and marine environment. As discussed by the OCS Policy Committee's Subcommittee on Legislation, regional decisions should be binding on the federal Department of Interior. In

addition, regional bodies should comprise all of the significant stakeholders within the region or subregion. Finally, scientific studies and problem-solving should be well integrated into the planning and development decisions of these regional bodies. The mission of reaching consensus and well-conceived strategies of decision, not rigid, pre-defined timetables, should establish timelines for implementation.

Second, efforts should be made to regionally integrate the costs and benefits of OCS development. At a minimum this would entail radical revenue-sharing on the benefits side. It is already widely perceived that the costs (environmental and social) of OCS development are borne by regions. Nonetheless, there must be a legitimate effort to integrate all potential values of OCS development. This would entail answering such questions as: to what extent does each region participate in generating its own sustainable supply of energy? To what extent are environmental benefits enjoyed by extra-regional interests? etc. Eventually, such an approach would entail both the decentralization of all relevant decisions related to the development of a bioregional, ecologically-managed system of governance and the integration of these decisions across bioregional or ecosystems.

Finally, the leasing and exploration phases of OCS development should be integrated to maintain the public character of the OCS development decision regime. The outer continental shelf lands are public lands, not private. As identified by the NRC and others, once federal OCS lands are leased to and subsequently explored by private oil development interests, there is a certain momentum in favor of development if oil is

discovered. The fear of such eventuality has played a significant role in pushing opposition to OCS development back to the leasing stage. To address this, public mechanisms of OCS exploration should be considered, such as the "federal oil and gas company" (FOGCO) idea that circulated during the 1970s OSCLA amendment process. Although controversial, the publicization of the exploration phase would promote true public decision-making concerning OCS development and promote the regional integration of OCS development costs and benefits.

### Conclusion

Current thinking on governance, the public interest, and the environment suggests numerous principles for developing more effective structures of democratic governance. Applying these to the OCS development dilemma yields some controversial proposals including the radical decentralization of decision-making authority, the promotion of truly participatory decision-making fora, integration of regional costs and benefits of OCS development, and the removal of the private sector bias in exploration and development decisions. It is quite possible that such reforms would lead to just as much conflict, litigation, and Congressional interference as we have seen thus far in the OCS program. Still, we will be better for having pursued new practices of governance consistent with the ideals of republicanism, civic and ecological integrity, and reinventing government, and certainly no worse off in terms of outcomes.

### Notes

1. Dewitt, John. *Civic Environmentalism: Alternatives to Regulation in States and Communities* (Washington, D.C., Congressional Quarterly Press, 1994).
2. Clinton Administration's Proposed FY 1994 Budget.
3. Osborne, David, and Ted Gaebler. *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector* (New York, Plume, 1993).

## AN INTEGRATED PROCESS FOR DEVELOPING A WATER QUALITY PROTECTION PLAN FOR THE MONTEREY BAY AREA

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### **Introduction**

One of the great challenges we face for the remainder of this millennium, and certainly for as long as we will be around in the next one, is protecting, restoring, and enhancing the quality of our coastal areas -- regions that are under tremendous pressures of projected population growth and development. We are looking at a management challenge as complex as any we have ever faced -- scientifically, economically, socially, and politically.

At the heart of the coastal development and attendant pollution problem is simple demographics. People crowded along the water's edge are both the cause of the decline in coastal environmental quality and one of the major reasons why solving the problem is so critical -- because the health and quality of life for so many depend on it. Growing populations along coastal corridors mean more residential, commercial, and industrial development; more roads and infrastructure; and an increase in every type of environmental assault on the land, the air, and the water of the coastal zone.

Presently, over 135 million people live in coastal areas of the United States. Coastal populations along the Gulf of Mexico and

Pacific Coast have more than doubled since 1960. While the popular impression is that the United States is a sparsely populated country, along its coasts, it is among the more densely populated regions in the world. Population density in coastal counties is four times the U.S. national average.

Today, many of our most important U.S. coastal water bodies are paying the price of coastal development in the form of degraded water and habitat quality, real losses of habitat, declines in fish and shellfish populations, limitations on commercial harvests of important shellfish, and public beach closures. Of the total pollution load entering the oceans worldwide, approximately three-fourths comes from human activities on land. A recent Worldwatch Institute report reveals that 44% (by weight) of marine pollutants comes from run-off and discharges from land; 33% are airborne emissions from land; 12% from shipping and accidental spills; 10% from ocean dumping; and only 1% from offshore mining and oil and gas drilling.

### **Background**

In May of 1992, as an integral part of the Final Environmental Impact Statement/Management Plan for the Monterey Bay National

Marine Sanctuary, eight federal, state, and regional agencies signed a Memorandum of Agreement (MOA) to provide an "ecosystem-based" water quality management process for the Sanctuary. Among other things, the MOA calls for the development of a comprehensive water quality protection program for the area. This document became a key element in the final negotiations between the Governor of California, NOAA, and the Congress, leading up to Sanctuary designation in September, 1992.

The stated purpose of the MOA is "to provide an ecosystem-based water quality management process that integrates the mandates and expertise of existing coastal and ocean resource managers, and protects the nationally significant resources, qualities, and compatible uses of the Sanctuary." Signatories to the MOA include: NOAA, U.S. EPA (Region IX), CAL-EPA, State Water Resources Control Board, San Francisco and Central Coast Regional Water Quality Control Boards, California Coastal Commission, and the Association of Monterey Bay Area Governments.

The MOA states that all signatory agencies agree to work together to develop a "comprehensive" water quality protection program for the Sanctuary. The

purpose of such a water quality program shall be to:

- (A) Recommend priority corrective actions and compliance schedules addressing point and non-point sources of pollution to restore and maintain the chemical, physical, and biological integrity of the Sanctuary, including restoration and maintenance of the resources, qualities, and compatible uses of the Sanctuary; and
- (B) Assign responsibilities for the implementation of the program among the Governor, the Secretary of Commerce, and the Administrator of U.S. EPA, or their designees, in accordance with applicable federal and state laws.

## Organization and Approach

Reversing the trends of environmental degradation is very complex, costly, and difficult. In any geographic area, society must formulate a clear vision of the region's future and identify the tasks necessary to achieve that vision. That is what "Integrated Coastal Management" (ICM) is all about. The term ICM has recently come into vogue in recognition of this increasing complexity and the fragmentation of decision-making, with respect to the utilization and management of coastal and marine resources.

ICM is a process, whereby scientists, resource managers, and all groups affected by regulatory decisions (the "stakeholders") are brought together to identify problems, suggest alternatives for resolution of the problems, and select the best strategies or solutions for implementation. It is a continuous process of logical steps from issue identification to implementing action plans, which are

then followed by evaluation, monitoring, and revision, where necessary.

In the Fall of 1992, a small Core Group of resource managers in the Monterey Bay area began meeting in an attempt to coordinate activities. In the Spring of 1993, this Monterey Bay Policy Coordinating Committee expanded to include additional federal, state, and regional agencies, and began a series of meetings with NOAA officials to discuss the initiation of an Integrated Coastal Management Process for the Monterey Bay area.

This past Fall, the "Core Group" was expanded to 26 members to include all of the MOA signatory agencies, and additional "stakeholders" from industry, user groups, and non-governmental organizations. Over the past six months, the group decided to focus efforts on water quality issues, as mandated by the MOA. The planning process encompasses the concept of integrated coastal management, and uses "knowledge-based" consensus techniques to gather, encode, and synthesize information from scientists, managers, and local experts in a structured manner.

It was felt that some aspect of the consensus building process that NOAA's Office of Ocean Resources Conservation and Assessment (ORCA) used in the development of the Florida Keys National Marine Sanctuary Management Plan, was a reasonable starting point for developing a Water Quality Protection Plan for Monterey Bay. The Monterey Bay project is an example of NOAA's desire to enhance management activities on a coastal ecosystem scale, using multi-disciplinary teams representing federal, state, and local agencies, along with other organizations, to

work on a range of issues/problems that affect Sanctuary resources.

## Goals and Objectives

The primary objective of the ICM process is to develop a "knowledge-based" consensus on those actions necessary to improve and maintain water quality in the Monterey Bay Sanctuary. The actions selected should be practical, affordable, and not duplicative of existing efforts, and should serve as the starting point for a continuous management process.

A secondary objective in bringing together a large group of experts and interests in a systematic and highly participatory process is to evolve improved ways of integrating expertise and participants into more effective planning and management processes which could ultimately be used to address other regional problems and concerns.

Water quality management in the Monterey Bay Sanctuary includes consideration of the adjacent coastal watersheds. The planning and development of the water quality protection program and management process can be broken into four phases:

1. Issue Identification and Strategy Development.
2. Strategy Revision and Characterization.
3. Analysis and Prioritization of Strategies.
4. Program Plan Development.

As the first step in a two-year process to develop the water quality protection plan for the Sanctuary, a three-day interdisciplinary workshop was held in January, 1994. The workshop was attended by over 150 experts representing the management,



scientific, and user communities of the Monterey Bay area. The workshop was organized by the Core Group, with support from NOAA's Sanctuaries and Reserves Division (SRD) and Strategic Environmental Assessment (SEA) Division. Participants at the workshop were grouped by discipline, expertise, geographic representation, and user-group affiliation into a set of "working groups." The groups were part of a structured process to direct discussion, acquire and encode what is known about the various aspects of water quality problems affecting the Bay and its watersheds, and to consider potential solutions.

### *Conclusion*

Over the two year period of the Water Quality Protection Plan process, a stream of products will be generated and disseminated to keep all participants and the general public informed of progress. Products will include:

1. A workbook containing the results of the January workshop, maps, and summary information.
2. A description of the Integrated Coastal Management process and its application to the Water Quality Protection Program.
3. A Sanctuary Newsletter describing the project, with continued updates.
4. The Water Quality Protection Program Plan document.

This effort offers a unique opportunity for establishing new working relationships between government agencies and other organizations to solve regional as well as site-specific problems. If this process works for a Water Quality Protection Program, similar efforts could prove fruitful for other regional problems and concerns.

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## PROTECTED AREAS ON THE HIGH SEAS, AND THE CASE FOR MARINE WILDERNESS

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### Introduction

As we consider marine environments as potential protected areas, on the high seas and within Exclusive Economic Zones (EEZs) of coastal nations, we must be mindful of the effects of harsh human hands on the land, and take care in a timely fashion that those same wasteful and destructive practices are not imposed on the oceans. It is time to press for an international program with authority to establish a system of protected areas on the high seas. We need to develop criteria for selection and size, to define activities to be prohibited or restricted, and to establish a management and enforcement authority. The program should include wilderness.

### Marine Values

A strong case can be made for protecting vast areas of the seabed and water column for future generations to decide on human uses. Presumably their decisions would be based on better understanding of the complexities in the total marine environment than we have now.

Wilderness designation has an appropriate place in a system of marine protected areas, just as it has on land, where wilderness areas help to maintain the geophysical equilibrium, water and air quality. They serve there as nurseries and refuges for wildlife, maintain biological diversity, and have

scientific, moral, historic, aesthetic, spiritual, recreational, educational, social, and personal values. While all of these values can apply to marine environments, those dealing directly with the physical and biological attributes are the most compelling: scientific research, maintenance of ecosystem integrity, refugia for species, gene banks for diversity, and as controls against which to measure what is happening in nonwilderness areas. Those values that are related to human considerations (e.g., aesthetic, spiritual, educational, recreational, etc.) also apply to at least some of the marine habitats.

Support for establishment of protected areas on the high seas has recently come from two international sources. The first recommended establishment of such areas in a resolution that was adopted by the 5th World Wilderness Congress held in Tromsø, Norway, September, 1993.

The second occurred at the 19th General Assembly of the World Conservation Union (IUCN) held in Buenos Aires, Argentina, January, 1994. The IUCN adopted a resolution that encourages protected areas to be established in areas beyond the limits of national jurisdictions. Both of these resolutions also include a call for wilderness designation as appropriate.

Within the last five years, the IUCN Commission on Parks and Protected Areas paved the way for

these resolutions by clarifying that its classification system of protected areas includes the entire marine environment, and by adding wilderness in protected category I. The 4th World Wilderness Congress, held in Estes Park, Colorado, USA, September, 1987, advanced the concept of marine wilderness by defining it and recommending it.

### Marine Features that Merit Protection

Except for birds and surface dwelling marine mammals, sea turtles, and fields of sargassum, the exhilarating variety of life and geographic forms is masked for the wonders are below the surface of the sea. It is special areas of the seabed that must be delineated in metes and bounds for protection, with protection extending upward through the overhead water column and even into the sky above.

Here are a few examples of the kinds of marine features that merit protected status:

- |                    |                                                         |
|--------------------|---------------------------------------------------------|
| <u>Open seas</u>   | Places of vast plankton blooms or vast swarms of krill; |
| <u>and coastal</u> | Rooted sargassum beds and drifting mats;                |
|                    | Calving and feeding grounds of great whales;            |
|                    | Routes of highly migratory species;                     |

Seabed areas of unusual scientific interest, such as at current convergence, tectonic rifts, geothermal vents, mounts and canyons, and deep trenches. (The trenches could be considered the reverse of mountain peaks and ranges on land);

Seamounts that support rich biological communities;

Representative areas;

Essential habitats of threatened or endangered species;

Areas of exceptional biological diversity.

## Coastal

Nursery areas of great and small whales, other marine mammals and sea turtles;

Areas of significant endemic populations;

Nurseries for commercially valuable fish stocks;

Coral beds;

Areas of exceptional scenic values;

Areas of exceptional recreational values;

Marine areas adjacent to protected areas on land; and

Submerged aquatic vegetation (seagrass) beds.

## *Management Authority*

The problem with establishing, managing, and enforcing protected areas on the high seas is that no nation can regulate the uses of the high seas by others; it can only regulate the activities of its citizens, corporations, and flag vessels.

Two or more nations could, however, agree by treaty to regulate activities of their own nationals, corporations, and flag vessels on the high seas that they have agreed to designate for some protective status. The prohibitions on activities and enforcement would apply only to their persons.

The International Maritime Organization, which regulates many aspects of shipping and dumping from vessels, also has a program of identifying special areas and particularly sensitive sea areas. It can designate areas to be avoided for safety and/or environmental protection.

Nations have established an appropriate international body with the required authority in the United Nations Convention on the Law of the Sea (UNCLOS). This convention will come into effect at the end of 1994 since the required sixty nations have ratified it. UNCLOS contains provisions that would allow the Law of the Sea International Seabed Authority to place parts of the high seas floor off limits for minerals extraction if exploitation poses an environmental threat. The presently limited provisions of UNCLOS on protected areas could be amended to provide for a comprehensive program of marine protected areas.

## *Conclusion*

It is time to press for an international program with authority to establish a system of protected areas on the high seas and on the continental shelves. At the same time that mapping, research, inventorying, and technological developments for exploitation of marine environments go forward, there should also be development of criteria and planning for designation and protective regulation of significant ecosystems and critical areas in the oceans. Such a scheme should include wilderness on and under the seabed, in the water column, on the surface, and in the air overhead.

People of the world cannot allow the same diminution of the viability of the world's oceans, already underway, that continues to occur on land. We must rally international energies to convince nations and international agencies that the mysteries of the seas are worthy of protective status.

## THE FLORIDA KEYS NATIONAL MARINE SANCTUARY: FEDERAL AND STATE INTERACTIONS

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The Florida Keys National Marine Sanctuary (FKNMS) was created by H.R. 5909 (PL 101-605 - Florida Keys National Marine Sanctuary and Protection Act) [hereafter "Keys Sanctuary Act"] on November 16, 1990. This National Marine Sanctuary encompasses approximately 2800 nm<sup>2</sup> from just south of Miami to the Dry Tortugas, making it the second largest Sanctuary in the nation. The Comprehensive Management Plan and Environmental Impact Statement for the FKNMS will be available for public comment in the Fall 1994, and regulations could be implemented by early 1995.

The statutory mandate includes numerous provisions for federal-state interaction and coordination. Sanctuary managers appear to have demonstrated a great willingness to work with the numerous federal, state, and local agencies that exercise overlapping authority over the land and water resources of the Florida Keys and the larger South Florida ecosystem.

### ***Sanctuary Advisory Council***

The Keys Sanctuary Act (sec. 9) requires that the National Oceanographic and Atmospheric Administration (NOAA) establish a Sanctuary Advisory Council in consultation with the Governor of the State of Florida and the Board of County Commissioners of Monroe County. The function of the Advisory

Council is to assist NOAA in the development and implementation of the management plan. The Keys Sanctuary Act suggests that members of the Advisory Council include Sanctuary managers, members of government agencies with management authority in the Keys marine environment, and representatives of conservation groups, recreational and commercial user groups, and the scientific community. The 22 member Advisory Council includes representatives from the Florida Governor's Office of Environmental Affairs and the Monroe County Commission.

### ***Comprehensive Management Plan***

The Keys Act requires that NOAA prepare a comprehensive management plan in consultation with appropriate federal, state, and local authorities and with the Sanctuary Advisory Council. [Keys Sanctuary Act sec. 7(a)] One of the mandates of the plan is to "ensure coordination and cooperation between Sanctuary managers and other Federal, State, and local authorities with jurisdiction within or adjacent to the Sanctuary." [Keys Sanctuary Act sec. 7(a)(6)]

### ***Water Quality Protection Program for the FKNMS***

Congress directed the Environmental Protection Agency (EPA)

and the State of Florida, through the Department of Environmental Regulation (DER) [In 1993, DER's existing legal authorities and actions were transferred to the Department of Environmental Protection (DEP).], to develop a Water Quality Protection Program [hereafter "Program"] for the Sanctuary. [Keys Sanctuary Act sec. 2(9), sec. 8] This is the first time that a National Marine Sanctuary has embarked on a water quality protection program. The recommendations for the Program will be included in the comprehensive management plan that NOAA is preparing for the FKNMS.

The mandate of the Program is to "recommend priority corrective actions and compliance schedules addressing point and nonpoint sources of pollution to restore and maintain the chemical, physical, and biological integrity of the Sanctuary, including the restoration and maintenance of a balanced, indigenous population of corals, shellfish and wildlife, and recreational activities in and on the water". [Keys Sanctuary Act sec. 8(a)(A)] The actions may include adoption and revision of applicable federal and state water quality standards, as well as the adoption of federal and state pollution control measures. The Program also includes a water quality monitoring component to determine pollution sources and evalua-

tion of the effectiveness of pollution control efforts. The original Program options were used to create a NOAA strategy that also includes specific implementation mechanisms, such as responsible agencies, schedules, and costs.

EPA and Florida DEP will implement the recommendations for monitoring and research. NOAA will implement the educational activities in the Sanctuary with the assistance of EPA and the DEP. Numerous federal, state, and local agencies will implement the initial recommendations for corrective action, in areas such as Florida Bay freshwater flow, domestic wastewater, stormwater, marinas and live-aboards, mosquito spraying, and canals.

The National Marine Sanctuaries Program Amendments Act of 1992 (H.R. 5617) established a Steering Committee and a Technical Advisory Committee for the Program. The Governor of Florida and the Regional EPA Administrator select the Steering Committee from representatives from federal and state agencies. Similarly, scientists from both federal and state agencies participate on the Technical Advisory Committee. This legislation also authorized appropriation of \$3 million to EPA for FY 1994 and \$4 million for FY 1995 for implementation of the Program.

Even though the Water Quality Protection Program, as part of the FKNMS Comprehensive Management Plan, has yet to be approved, it has generated momentum in this area, especially regarding land-based activities. The multi-year development of the FKNMS comprehensive management plan has aided the recognition that water quality protection cannot stop at the border of the FKNMS but must take a larger ecosystem perspective.

Recently, federal, regional, and state authorities have revisited the drainage system of the Central/South Florida Flood Control Project. By the Fall 1994, the Army Corps of Engineers will present a plan to restructure the South Florida drainage system. Interior Secretary Babbitt's Task Force is developing an action plan for restoration of the Everglades and the Florida Bay ecosystem. The Florida Bay Inter-agency Work Group, led by the National Park Service, is commenting on the NPS research program for restoration of Florida Bay. Undoubtedly, the Steering Committee for the Water Quality Protection Program will take a leading role in working to restore historical freshwater flow to Florida Bay.

Many of the Program's strategies involve modifications of existing programs of one of the agencies with authority in the Florida Keys. Monroe County, the State of Florida, and EPA are already implementing corrective actions that do not require promulgation of regulations. For example, the County is cooperating with the Florida Department of Health and Rehabilitative Services (HRS) on a Cesspool Elimination Plan. Monroe County and the State have taken the lead regarding the live-aboards and have begun to site 16 pumpout sites in the Florida Keys. The HRS is heading a Sewage Treatment Pilot Program that will experiment with three or four sewage treatment alternatives (On-Site Disposal System Demonstration Project).

Although the Water Quality Protection Program does appear to have generated momentum, interest, and opened interagency channels of coordination that were previously non-existent, major obstacles may surface. Funding remains a serious obstacle to the implementation of the Program.

Although proposed legislation (H.R. 5617) would have targeted \$3 million for the Program in FY 94 and \$4 million in FY 95, Congress only gave EPA a \$195,000 add-on for FY 94. EPA officials are optimistic that they will be able to obtain additional funds of up to \$1 million for the monitoring and research, but this is still much less than the skeleton FY 94 budget of \$2,250,000. EPA plans to address the budget short-fall by scaling back all program components, rather than eliminating certain components.

Difficulties will appear in addition to funding limitations. Despite the formation of the Steering Committee, coordination of the agendas of eight federal agencies, six State of Florida agencies and two regional authorities, in addition to the Monroe County government and municipalities, will be a monumental task. The Program's interest in Florida Bay and South Florida water management as "upstream" impacts that affect FKNMS water quality, at best, may play a critical role in the successful resolution of this complex political issue. On the other hand, perhaps limited resources would be better spent on amelioration of water quality problems that have a Monroe County source.

### *Fishing Regulations*

The purpose of the FKNMS is to protect the marine resources of the Sanctuary. (Keys Act sec. 3(b)) The Marine Protection, Research, and Sanctuaries Act (MPRSA) defines "sanctuary resource" to be any "living or nonliving resource] . . . that contributes to the conservation, recreational, ecological, . . . or aesthetic value of the sanctuary". 16 U.S.C. sec. 1432(8). This includes fishery resources of the FKNMS,

although NOAA lacks authority to establish fishery regulations in the FKNMS.

Florida state waters comprise 65% of the waters of the FKNMS, and the remaining 35% are federal EEZ waters. The Florida Marine Fisheries Commission (FMFC) exercises authority over marine resources in state waters, while the South Atlantic Fisheries Management Council and the Gulf of Mexico Fisheries Management Council share the management of federal waters in the FKNMS.

In 1992, these three fisheries councils developed a Protocol for Cooperative Fishery Management in the FKNMS that attempts to eliminate inconsistent regulations that may lead to public confusion, overfishing, and ineffective marine resource management. The objectives of the Protocol include development of a single set of regulations for the entire FKNMS that will facilitate flexible and unified response to new scientific information regarding resource abundance and encourage public compliance. Ideally, the most strict regulations of one management council will bind the other two councils.

The Protocol designates the FMFC as the lead agency for initiating, developing, and implementing marine fishery regulations for the FKNMS. The federal councils may also initiate regulatory action through cooperation with the FMFC. The FMFC develops a record of supporting information and analyses with cooperation from the federal councils. The proposed fishery rule then undergoes state and federal public review. The federal parties and the Florida governor and cabinet must approve the final regulations.

The agreement stipulates that regulations that are developed under the Protocol be consistent with the Sanctuary comprehensive management plan, the MPRSA, and other applicable federal law. It is possible that the councils' interpretations of the Magnuson Act and Florida enabling legislation could conflict with the Sanctuary comprehensive management plan. For example, NOAA's internal working comprehensive management plan did not include the Protocol, specific concurrent fishing regulations, nor regulations regarding the replenishment reserves. The federal councils and the National Marine Fisheries Service hold that the plan should include these items before the plan is made public. This internal NOAA dispute has delayed public availability of the draft management plan from March to August 1994. There is no assurance that the three fisheries management councils will actually approve concurrent regulations or that they will not face future irreconcilable differences.

### Conclusion

Although still in its infancy, the FKNMS offers an unique example of coordination among federal, state, and local agencies in the management of marine and terrestrial ecosystems in South Florida. The Sanctuary Advisory Council met for over 18 months with active participation of authorities of all three levels of government and representatives of local user groups. The most ambitious proposals calling for close coordination among federal, state, and local agencies are the Water Quality Protection Program and the development of a single set of fishing regulations. Although it is still too early to evaluate the outcome of these efforts, the planning process

in these two areas is encouraging. Funding limitations present the most significant obstacle to effective implementation.

## THE ROLE OF MARINE PROTECTED AREAS AND OCEAN GOVERNANCE IN PROTECTING BIODIVERSITY

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Simply defined, biological diversity is the diversity of life, but there are more complex definitions that recognize different levels of diversity. A better definition encompasses species diversity (variety among species), genetic diversity (variety among genes within species), and ecosystem diversity (variety among specific environments and the biological communities they contain).

Marine biodiversity, the diversity of life in the oceans is spectacular, invaluable to mankind, and likely essential to the maintenance of life on Earth. Contributing to the Earth's biodiversity are brilliantly hued coral reefs, dense mangrove communities, luxuriant sea-grass beds, lush kelp forests, thriving estuaries, rich upwelling areas, productive high-latitude waters, and the myriad of life they all support.

Oceans cover 71 percent of the Earth's surface. Moreover, considering that organisms occupy three dimensions rather than two, the oceans provide over 99 percent of Earth's living space. Terrestrial species diversity may be greater than marine species diversity (though there is still much to learn about marine species), but marine diversity is greater at higher taxonomic levels. Yet, marine management regimes designed to protect biodiversity lag far behind their terrestrial counterparts.

The United States is blessed with especially productive and diverse marine areas. Scientists believe that off the coasts of the United States, from the frigid ice-scoured waters of the Arctic Ocean to the tropical reefs of the Florida Keys, the West Indies, and the Pacific Islands, there are more kinds of marine plants and animals in more kinds of marine habitats than are found off any other country in the world. Custody of the world's most biologically diverse marine waters bears with it a special responsibility to protect them.

Conservation of marine biodiversity must be paramount in developing ocean governance regimes, if they are to maximize public benefits and protect future interests and choices. Marine protected areas (MPAs) can provide crucial tools in an overall strategy for saving, studying, and sustainably using marine biological diversity and therefore should be critical components of ocean governance. However, MPAs should not be the whole strategy and will be most effective when properly integrated with other marine and terrestrial tools.

Most threats to marine biological diversity fall into two general classes, those that involve overexploitation of living resources and those that destroy or degrade marine habitats. Over-exploitation includes both directed or intentional harvest and incidental taking

of marine life. Threats to habitat include various sources of pollution, coastal development, and other activities leading to physical alteration. Many of these threats are interrelated and have cumulative impacts. Unless improved mechanisms are developed for a comprehensive response to these threats, marine biodiversity is likely to be irretrievably lost.

Ocean governance in general and marine protected areas in particular are key to such a comprehensive response. Marine protected areas can clearly play a powerful role in protecting marine ecosystems, testing innovative new approaches, increasing public awareness and support, and providing sites for research and monitoring. Through changing public attitudes, improving scientific understanding, developing effective models that can be applied elsewhere, and by acting as catalysts for improved marine management, protected areas can extend their benefits beyond their geographic boundaries.

Marine protected areas themselves are diverse. Defined broadly, MPAs run the gamut from small highly protected reserves to large, multiple-use areas and biosphere reserves. An effective ocean governance system will require both smaller, highly protected marine reserves and larger, multiple-use management regimes in order to maintain marine

biodiversity. The two approaches are not mutually exclusive, but rather complementary.

The multiple-use approach enables management on a larger spatial scale by allowing most uses within all or parts of the protected area. Only those activities inherently incompatible with the area's sustainability are banned throughout. Other activities may be limited to portions of the protected area or otherwise restricted to ensure compatibility.

The major advantage to working on a larger geographic scale is that it enables managers to effectively protect mobile organisms and address threats such as pollution which do not respect arbitrary lines drawn on maps.

Smaller, highly protected reserves designed to maintain areas in a more natural state require stronger regulations including prohibitions on the harvesting of marine life. The primary advantage of such "no-take" or "non-consumptive" reserves is that they directly address issues related to harvest or exploitation of marine resources and related impacts. Among the benefits of this approach is the maintenance of natural areas replete with unexploited population and community structure, natural equilibrium, ecosystem balance, and a nearly full range of intact biodiversity. Such areas provide outstanding research, recreational, conservation, and educational opportunities and, if properly designed, can substantially benefit fish and fisheries.

Ideally, smaller, highly protected reserves should be nested as zones within multiple-use management regimes. The effectiveness of MPAs is greatly enhanced when boundaries are based on natural

ecological units and when an integrated management approach permits managers to address all activities affecting the area, including adjacent land-based activities. Furthermore, MPA programs must be adaptive rather than static. MPAs can be effective in addressing impacts directly, focusing other resources on a problem, and by acting as a catalyst for other competent entities. In any case, the MPA must have credible authority, support, and resources to succeed.

Australia's Great Barrier Reef Marine Park Authority (GBRMPA) approaches the idealized model summarized in the prior paragraph and has enjoyed considerable success. Even so, GBRMPA continues to struggle with ticklish problems such as overfishing, tourism and land-based impacts. This indicates that although marine protected areas can be of great value, they do not provide easy answers and should not be considered a panacea.

Although no U.S. MPA has yet approached the ideal, the large new sanctuaries currently under development in the Florida Keys and off Central California offer opportunities and show promise. The Monterey Bay and adjacent California sanctuaries are ideal for developing a model for protecting healthy marine ecosystems. In contrast, the Florida Keys sanctuary affords a challenge to demonstrate that a sanctuary can address serious problems, avert further ecosystem deterioration, and restore a depleted system.

The Florida Keys and California sanctuaries provide logical testing grounds for the development of comprehensive marine management regimes and excellent opportunities for demonstrating ocean governance principles. Primary

responsibility for these sanctuaries rests with the National Marine Sanctuary Program (NMSP), a small but growing program embedded deep within the hierarchy of its parent agency, the National Oceanic and Atmospheric Administration (NOAA). NOAA's strategic plan has identified stewardship of marine resources as a principal part of its mission and is currently developing a "coastal ecosystems initiative". Furthermore, the Clinton Administration has identified the Monterey Bay and South Florida ecosystems among the targets of a broader interagency "ecosystem initiative".

Each of these sanctuaries offers a focus around which to integrate resources scattered throughout NOAA and among other governmental and non-governmental entities and apply them to managing two of the nation's most valuable marine areas. In the Florida Keys, the development process for the sanctuary management plan has provided a good basis on which to build. However, a draft plan has not yet been released and implementation will be a challenge. Initial sanctuary management plans have been completed for the Monterey Bay and adjacent sanctuaries, but issues related to water quality and vessel traffic were left largely unresolved. Interagency processes have been initiated to resolve those that show promise.

The NMSP has considerable authority to protect the sanctuaries, but it remains to be seen whether it can acquire the support and resources to do so. Though NMSP appropriations have improved somewhat in recent years, the funding available to the program has not kept pace with increased responsibilities and its staff resources remain extremely limited. The Clinton Administration Fiscal



Year 1995 Budget Request included a significant increase for the NMSP which is promising, but a tight federal budget suggests funding limitations will continue.

The NMSP is unlikely to have the resources necessary to protect sanctuary resources on its own nor would this necessarily be desirable. To be successful, it will need to act as a catalyst, forge partnerships with other entities, and bring outside resources to bear on the sanctuaries. The program's limited resources and its low status within NOAA's hierarchy may continue to make even this approach difficult.

Despite such obstacles, these sanctuaries are among the most promising avenues available for developing comprehensive marine management regimes in the U.S. and are an important test of our capacity to do so. If such marine management models prove successful for these special areas, they can be modified for application elsewhere. The Great Barrier Reef, Florida Keys, and Monterey Bay have all been recognized as possessing special values and being worthy of comprehensive, integrated management approaches emphasizing long-term ecological sustainability. While such priority areas are logical test sites, similar (though not identical) approaches make sense for our entire Exclusive Economic Zone (EEZ). Integrated, comprehensive management aimed at long term sustainability should be a goal for the entire EEZ, though the degree of protection afforded different areas may be dependent on the values and sensitivity of their resources and the degree to which other areas are protected.

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## BIOGRAPHICAL INFORMATION ON MEMBERS OF THE OCEAN GOVERNANCE STUDY GROUP

**Robert J. Bailey** is the Ocean Program Administrator for the State of Oregon. He holds a B.Sc. in Earth Science from Portland State University, 1968 and has worked as a professional planner since 1971. He was Assistant Planning Director in Coos County, Oregon, where he directed work on the first Coos Bay Estuary Plan and initiated efforts to establish the Nation's first National Estuarine Research Reserve at South Slough. From 1976 to 1978 he served as a field representative for the new state land use planning program where he assisted local governments in five rural Eastern Oregon counties to build land use-planning programs. He worked as Senior Planner for a Portland, Oregon, architectural firm 1978-1981 where he specialized in planning and development for several college campuses. He served as Oregon's Outer Continental Shelf Program Coordinator from 1982 to 1987 and was involved in creating the Gorda Ridge Technical Task Force, the Pacific Northwest OCS Task Force, and the Placer Sands Technical Task Force, all with the U.S. Department of the Interior Minerals Management Service. In 1985 he co-authored the *Oregon Oceanbook* and, in 1987, was primary author of Oregon's Ocean Resources Management Act. Since then he has worked as Ocean Program Administrator in the Department of Land Conservation and Development to guide preparation of the Oregon Ocean Resources Management Plan, 1990, and the Territorial Sea Plan, 1994.

**Brian Baird** is the Ocean Program Manager for the State of California. As an employee of the California Resources Agency, he is in charge

of developing an Ocean Resources Management Plan for the State pursuant to Assembly Bill 205 (Farr). Mr. Baird currently serves as the chairman of the Resources Agency Sea Grant Advisory Committee and he represents the Agency on the Monterey Bay National Marine Sanctuary Advisory Council. Before working at the Resources Agency he was employed by the California Coastal Commission as the legislative liaison, and prior to that managed the Commission's environmental review of major coastal and off-shore facility proposals including liquified natural gas receiving terminals, oil and gas facilities, and coastal power plants. He also managed two comprehensive analyses of oil spill cleanup capability for the entire California coastline. He has published articles on liquified natural gas facility siting, visual analysis, archaeological resources, and oil spill contingency planning. Mr. Baird received a B.A. in Environmental Studies at the University of California at Santa Barbara.

**Charles A. Bookman** is Director of the Marine Board of the National Research Council, National Academy of Sciences. He is responsible for the Research Council's assessments of future uses of the oceans, marine and maritime safety, the technology of ships and marine systems, marine environmental protection, and ocean and coastal engineering research and technology. Mr. Bookman holds a master's degree in marine affairs from the University of Rhode Island, and a bachelor's degree from Columbia University. He is an affiliate member of the Society of Naval

Architects and Marine Engineers, and a member and past director of the Marine Technology Society.

**John K. Bullard** is Director of NOAA's newly created Office of Sustainable Development and Intergovernmental Affairs. As such he will assist Secretary Ronald H. Brown and NOAA Administrator D. James Baker with the President's Council on Sustainable Development, which advises the President on policies to encourage economic growth, job protection, and environmental protection. Prior to joining NOAA, Bullard directed the New Bedford Seafood Co-Op's newest division to organize and unify the fishing industry and to influence the development of federal fishery management plans. From 1986-1992, he was Mayor of the City of New Bedford where his commitment to the environment was reflected in the initiation of a city-wide recycling program. Bullard led New Bedford into compliance with the Clean Water Act by siting and financing a new secondary wastewater treatment plant. Before serving as Mayor, he worked as Agent for the Waterfront Historic Area League and other nonprofit groups in a joint effort with the City to revitalize the waterfront and downtown historic districts. Bullard has received numerous awards for his achievements, including honor and recognition for his public service. He received his Bachelor of Arts from Harvard University in 1969 and a Master of Architecture and a Master of City Planning in 1974 from Massachusetts Institute of Technology.

**Richard H. Burroughs** is currently Associate Professor, Department of Marine Affairs, University of Rhode Island and Adjunct Professor, School of Forestry and Environmental Studies, Yale University. He

*Biographical Information continued . . .*

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David Caron is a Professor of Law and Director of International Legal Studies at the University of California at Berkeley. Professor Caron majored in Physics and Political Science at the U.S. Coast Guard Academy. While with the Coast Guard, he among other things served as Assistant Chief of that Service's Marine Environmental Protection Program for Northern California. As a Fulbright Scholar he received an M.Sc. from the University of Wales in Marine Law and Policy. He received his J.D. from Boalt Hall in 1983 where he was Editor-in-Chief of *Ecology Law Quarterly*. He was a legal assistant to Judges Richard Mosk and Charles Brower at the Iran-United States Claims Tribunal and practiced with the San Francisco firm of Pillsbury, Madison & Sutro prior to joining the law faculty in 1987. He was an editor of and contributor to *Law of the Sea: U.S. Policy Dilemma* (1983). Among his recent publications are "When Law Makes Climate Change Worse: Rethinking the Law of Baselines in Light of a Rising Sea Level," *Ecology Law Quarterly* (1990), "The Arctic," *2 Yearbook of International Environmen-*

*tal Law* 195 (1991) (with Christopher Carr), "The Frog That Wouldn't Leap: The International Law Commission and Its Work on International Watercourses," *3 Colorado Journal of International Environmental Law and Policy* 269 (1992), and "Protection of the Stratospheric Ozone Layer and the Structure of International Environmental Law-Making," *14 Hastings International and Comparative Law Quarterly* 755 (1991).

Biliana Cicin-Sain is currently Professor of Marine Studies in the Graduate College of Marine Studies at the University of Delaware where she also holds joint appointment in the Department of Political Science and in the College of Urban Affairs and Public Policy. Professor Cicin-Sain serves as Co-Director of the Center for the Study of Marine Policy at the University of Delaware and as Editor-in-Chief of *Ocean and Coastal Management*, an international journal devoted to the analysis of all aspects of ocean and coastal management. Among her other appointments, Dr. Cicin-Sain was a professor of political science at the University of California, Santa Barbara from 1974-1989; Founder and Director of the Ocean and Coastal Policy Center, University of California, Santa Barbara, 1988-1989; Senior Fellow at the Marine Policy Center, Woods Hole Oceanographic Institution (1983-1984); Fellow, East-West Center, Honolulu (1988) Guest Scholar, Rockefeller Foundation Study Center, Bellagio, Italy (1984); Policy Analyst, National Oceanic and Atmospheric Administration, Washington, DC, (1978-79); Faculty Fellow, Department of Housing and Urban Development, Washington, DC, (1978-79); Post-Doctoral Fellow, Harvard University (1973-74). Professor Cicin-Sain is a member of the Ocean Studies Board

of the U.S. National Academy of Sciences and is currently serving on a number of Academy panels. She also serves as Co-Chair of the Marine Affairs and Policy Association. Dr. Cicin-Sain has written extensively on a range of marine policy issues, including fisheries management, marine mammal management, offshore oil development, multiple use conflicts, and international marine policy. In the past several years, her work has emphasized issues related to the achievement of integrated ocean and coastal management policies. Professor Cicin-Sain's international experience includes work on marine resources management in Colombia, Ecuador, Mexico and the South Pacific, and research on international negotiations related to the United Nations Conference on Environment and Development. Professor Cicin-Sain is fluent in Spanish, French, and Serbo-Croatian, and has some knowledge of Italian and Russian.

Walter F. Clark is an attorney with the N.C. Sea Grant College Program. In that position, he conducts research, teaches and assists local, state and federal policy-makers and citizens with coastal and ocean issues. Most recently, Mr. Clark's research has focused on developing an ocean policy plan for North Carolina, assessing issues underlying the private use of state public trust waters and developing model strategies for dealing with the growing number of user conflicts in near-shore waters and on adjacent lands. In addition to research, teaching and extension, Mr. Clark is the editor of *Legal Tides* - a newsletter that focuses on current events in North Carolina coastal law. Before coming to Sea Grant, Mr. Clark was employed by the N.C. Division of Coastal Management, where he was responsible for

*Biographical Information continued . . .*

drafting regulations, coordinating permit reviews, making consistency determinations and conducting appeal hearings. He has a master's in regional planning from the University of North Carolina at Chapel Hill and a juris doctor from Wake Forest University.

**Norman T. Edwards** is currently Deputy Director for Coastal America. Prior to joining Coastal America he was the Regional Planning Manager for the Southwestern Division Office of the U.S. Army Corps of Engineers. A biologist by training and a water resources planner by profession, he was involved with the planning and evaluation of major public works projects on the east, west and gulf coasts of the United States from 1973-91. He was a biological oceanographer with the U.S. Navy Oceanographic Office from 1967-73 where he was engaged in activities in support of the global ocean fleet.

**Tim Eichenberg** is Program Counsel for the Center for Marine Conservation in Washington, D.C. He has also served as Staff Counsel and Energy Counsel at the California Coastal Commission, Staff Counsel at the Environmental Defense Center, Marine Policy Fellow at the Woods Hole Oceanographic Institution, Research Associate at the Marine Law Institute, Lecturer in Coastal Law and the Environmental Law Clinic at the University of Maine School of Law, and Co-Editor of the *Territorial Sea Journal*. He has written extensively on ocean and coastal matters including; coastal zone management and intergovernmental regulation, offshore oil and gas, the Clean Water Act, marine sanctuaries, the National Estuary Program, and marine aquaculture. He holds a J.D. degree from Washington University, and a B.A. from Earlham College. He is a member

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**Timothy Hennessey** is professor, Department of Political Science, University of Rhode Island and director, Rhode Island Public Administration Program. Professor Hennessey graduated from Brown University and received his Ph.D. from the University of North Carolina. He has taught at the University of North Carolina, Indiana University, and Michigan State University. He has been the recipient of research grants from the National Science Foundation, the Social Science Research Council, the Ford Foundation, U.S. Agency for International Development, and the national Sea Grant Program. He is the author of two books and more than twenty referred articles. Professor Hennessey has been a senior research fellow at the Dalhousie Ocean Studies Program, the Woods Hole Oceanographic Institution and Westwater Research Centre at the University of British Columbia. He has been a consultant to the Office of Technology Assessment, the U.S. Agency for International Development, the United States Information Agency, the National Oceanographic Administration, the Environmental Protection Agency, and the State of Rhode Island Department of Environmental Management. Professor Hennessey is an associate of the International Center for Marine Resources Development and the Coastal Resources Center at the Graduate School of Oceanography. He is currently completing a six year study of "The Governance of U.S. Estuaries."

**Marc J. Hershman** is Professor of Marine Studies, adjunct Professor of Law, and Director of the School of Marine Affairs at the University of Washington. He is author and editor of books on coastal zone

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**Richard Hildreth** is co-director of the University of Oregon Ocean and Coastal Law Center. He co-authored the first law school text devoted to ocean and coastal resources management, *Ocean and Coastal Law* (Prentice-Hall 1983) (second edition is now in preparation). Hildreth serves on the editorial boards of two international journals, *Ocean Development and International Law*, and *Coastal Management*. On sabbatical leaves to Australia and New Zealand in 1984 and 1991 he completed a major comparative study of ocean resources management in those two countries and the United States and Canada which has just been published as a three-article series by the *International Journal of Estuarine and Coastal Law*. As a Fulbright scholar at the University of Stockholm in 1972-73, he researched and wrote "Coastal Land Use Control in Sweden," *Coastal Zone Management Journal* (1975).

**Mark T. Imperial** graduated from the University of Miami (FL) in 1989 with a Bachelor of Arts in Marine Science. He graduated from the University of Rhode Island in 1993 with a Master of Arts in Marine Affairs. While a graduate student, he co-authored several articles, two of which were published in the journals *Coastal*

Biographical Information continued . . .

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Mark has been working as a Marine Resource Specialist with the Rhode Island Coastal Resources Management Council (CRMC) since 1991. His responsibilities include; coordinating the development of Rhode Island's Section 6217 Coastal Nonpoint Pollution Control Program; coordinating the CRMC's Section 309 Enhancement Grants; developing new regulatory initiatives; performing federal consistency reviews; and editing the CRMC's quarterly newsletter.

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M. Casey Jarman is an associate professor of law at the William S. Richardson School of Law in Honolulu, Hawaii. She received a LL.M degree in Law and Marine

Affairs (1985) at the University of Washington, and a J.D. (1981) at the University of Mississippi. Ms. Jarman was the Director of the Marine and Coastal Law Program (1984-1987) at the University of Mississippi Law Center. She was also the founder of SeaNet (Sea Grant Legal and Policy Network) (1983). Her major areas of work include public trust doctrine, state ocean law and policy, and ocean pollution. In a forthcoming article (*Ocean and Coastal Management*, 1993), she examines the application of the federal consistency provision under the Coastal Zone Management Act.

Lauriston R. King is a Visiting Associate Professor in the Department of Political Science at Texas A&M University where he teaches in American Politics and public policy, with an emphasis on natural resources, energy and environmental policy. He was formerly Director of the Center for Energy and Mineral Resources; Deputy Director of the Office of University Research; and Deputy Director of the Sea Grant Program, all at Texas A&M University. Prior to joining Texas A&M he served as a program manager in the National Science Foundation's Office for the International Decade of Ocean Exploration. Professional activities have included consultation with the White House Office of Science and Technology Policy and Congress' Office of Technology Assessment; Past-President of The Coastal Society, and charter member of the Ocean Governance Study Group, Marine Affairs and Policy Association, the Ocean Governance Study Group, and the Environmental and Natural Resource Policy Group. He has written a number of journal articles and chapters for books in the general area of marine policy.

Robert W. Knecht is Professor of Marine Studies in the Graduate College of Marine Studies of the University of Delaware. He is also Co-Director of the Center for the Study of Marine Policy and holds joint appointments in the College of Urban Affairs and Public Policy and in the Department of Political Science. Prior to his Delaware appointment, Professor Knecht was a senior lecturer in political science and environmental studies at the University of California, Santa Barbara. Between 1981 and 1984, Mr. Knecht was a Senior Fellow in the Marine Policy Program of the Woods Hole Oceanographic Institution. Earlier in his career, Knecht served in a number of posts with the National Oceanic and Atmospheric Administration (NOAA). From 1972 to 1980, he directed the initial implementation of the federal Coastal Zone Management Program. He also served as the Director of NOAA's Office of Ocean Minerals and Energy and as a special representative of the Secretary of Commerce to the United Nations Law of the Sea negotiations. His civic posts have included Mayor of the city of Boulder, Colorado from 1965 to 1971, Chairman of the Denver Regional Council of Governments 1969-1970, and Chairman of the Committee on Environmental Quality for the National League of Cities. Among his current appointments, he serves on the Executive Committee of the Marine Board and as Vice-President of the International Coastal and Ocean Organization.

Charles Lester is an assistant professor of political science at the University of Colorado at Boulder. He received his B.A. from Columbia College and his J.D. degree from Boalt Hall School of Law of the University of California, Berkeley in

*Biographical Information continued . . .*

1989. Charles received his Ph.D. from the Jurisprudence and Social Policy Program at Berkeley in 1991. His general area of expertise is Environmental Politics, Policy, and Law, and his primary research to date has focused on offshore oil development and coastal zone management. More recently, he has been studying the problem of cumulative environmental impacts in the coastal zone and has been working in San Francisco and Santa Cruz with the California Coastal Commission.

**Maxine McCloskey** is a member of the Program Policy Committee of Defenders of Wildlife, and is Vice-Chair of the Marine Committee of the Sierra Club. She has been working on wilderness and wildlife, especially whales, for many years. She founded the Whale Center, a whale conservation organization in Oakland, California, and served seven times as a member of the US delegation to the annual meetings of the International Whaling Commission. She was chair of the Citizen Nongame Advisory Committee to the California Department of Fish and Game, and for nine years was a member of the Board of Directors of Defenders of Wildlife. Besides numerous articles on whale conservation, marine sanctuaries, and nongame wildlife, she edited two books published by the Sierra Club that were proceedings of two of the club's biennial wilderness conferences. In the last few years she has been writing and speaking on the marine environment: establishing a system of protected areas in the high seas, and extending the concept of wilderness as know on land to marine areas. She was instrumental in the World Conservation Union's (IUCN) extending the scope of its work on protected areas to include the high seas.

**Richard J. McLaughlin** is Associate Professor of Law and Director of the Mississippi-Alabama Sea Grant Legal Program at the University of Mississippi Law Center. He has written widely on ocean and coastal related topics and serves on the Board of Editors of the Territorial Sea Journal and on the Board of Directors of the Marine Affairs and Policy Association. In 1991-92, he was named a Fulbright Scholar to Japan.

Professor McLaughlin holds an A.B. degree from Humboldt State University (1978), a J.D. from Tulane University School of Law (1985), and an LL.M. from the University of Washington School of Law (1987), and is currently a J.S.D. candidate at the University of California at Berkeley School of Law (Boalt Hall).

**Jerry B. Norris** has been Executive Director of the Pacific Basin Development Council (PBDC) in Honolulu, Hawaii, since 1981. Formed to create economic development and growth in the Pacific Basin region, PBDC is a non-profit, tax-exempt educational organization directed by a Board of Directors consisting of the Governors of American Samoa, Guam, the Commonwealth of the Northern Mariana Islands and the State of Hawaii. In the period 1975-1981, Mr. Norris served as Director, Western Office of the Council of State Governments. He is a member of numerous advisory committees concerned with Pacific Basin development issues.

**Molly Harris Olson** was named Executive Director of the President's Council on Sustainable Development in October 1993. Prior to joining the Council, Ms. Olson was special assistant to the Director of the Bureau of Land Management, responsible for ecosystem management, alternative

dispute resolution and Native American affairs. She has also worked for the Australian Environment Minister, where she conducted a major national review of government funding to the environmental movement. More recently, Ms. Olson was director of the Earth Care Environmental Policy Institute, a policy group based in Australia and the U.S. She has lectured extensively on marine and wildlife conservation issues, and is the author of numerous articles and publications on these subjects. Ms. Olson earned joint bachelor of arts degrees in environmental studies and natural resource economics from the University of California at Santa Cruz, and a master of environmental policy degree from Yale University, where she was a Bates Resident Scholar.

**Michael K. Orbach** is Professor of Anthropology in the Department of Sociology and Anthropology and Senior Scientist with the Institute for Coastal and Marine Resources at East Carolina University. From 1976 to 1979 he served as social anthropologist and social science advisor to the National Oceanic and Atmospheric Administration in Washington, DC. From 1979 to 1982 he was the Associate Director of the Center for Coastal and Marine Studies at the University of California at Santa Cruz, during which time he also served as a member of the scientific and statistical committee of the Pacific Fishery Management Council. Professor Orbach has worked with coastal and marine policy issues on all coasts of the U.S., and in Alaska, the Pacific and Central America. He has published widely on marine social science topics including fisheries limited entry and effort management, Indochinese fishermen adaptation, marine mammal-fishery interactions, and state,

Biographical Information continued . . .

regional and federal fisheries and marine policy including *Hunters, Seamen and Entrepreneurs*, an ethnography of the San Diego tuna fishermen. Professor Orbach currently serves as a member of the North Carolina Marine Fisheries Commission; Chair of the North Carolina Governor's Marine Science Council; a member of the National Academy of Sciences Committee on tuna-porpoise mortality; and as a member of the Congressionally-mandated Environmental Science Review Panel appointed by the Governor of North Carolina and the Secretary of Interior to review Mobil Oil's Application to drill for oil and gas off North Carolina.

**James W. Rote** holds a Ph.D. in Biological Sciences (Marine Ecology) from Stanford University. His dissertation was titled, "Analysis of Chlorinated Hydrocarbon Pollutants in the Marine Ecosystem". He also holds a B.A. in Economics from Boston University; and he is a Masters Candidate in Oceanography at the U.S. Naval Postgraduate School, Monterey, CA.

Dr. Rote is currently Principal Consultant with the Assembly Office of Research, California State Legislature, and serves as NOAA/OCRM Scientific Advisor in Monterey Bay Area, and Adjunct Professor at the Moss Landing Marine Laboratories.

He is former Director of the Office of Habitat Protection in the National Marine Fisheries Service/NOAA (Member of the Federal Senior Executive Service), former Assistant Secretary for Resources in California State Government and a Member of the California Coastal Commission.

Legislation drafted by Dr. Rote includes; the California Biotechnology Regulatory Act; the California Aquaculture Development Act;

California Fisheries Restoration Act; and the California Ocean Resources Management Act (CORMA).

He has held academic Positions at the University of California, Santa Cruz; Moss Landing Marine Laboratories; and Hopkins Marine Station of Stanford University.

**Harry N. Scheiber** is the Stefan Riesenfeld Professor of Law and History in the Boalt Hall School of Law, University of California, Berkeley. He holds the A.B. from Columbia and M.A. and Ph.D. degrees from Cornell, and did postdoctoral work in law as a Fellow of the Center for Advanced Study in the Behavioral Sciences. His writing on history of ocean resources include works on the relationship of scientific developments to management, on fisheries, and on the policy process in domestic management in Pacific Rim cooperation and rivalries. He is author of several books, and his writings on resource use history have appeared in *Ecology Law Quarterly*, *Journal of Economic History*, *Political Science Quarterly*, *California Law Review*, and numerous other journals of law, social science, and history. He is also Marine Affairs Coordinator for California Sea Grant, and director of the Ocean Law and Policy Program at the Center for the Study of Law and Society, UC Berkeley.

**Jack A. Sobel**, Habitat Program Director for the Center for Marine Conservation, leads the Center's efforts to develop and strengthen marine protected areas, especially U.S. national marine sanctuaries. He holds a B.A. in Biological Sciences from Cornell University and an M.S. in Marine Environmental Science from the Marine Sciences Research Center at the State University of New York at Stony Brook. His thesis research con-

cerned population genetics of queen conch in Belize. From 1985 to 1987, Mr. Sobel directed a USAID Belize Conch Aquaculture and Genetics Project and was involved in the establishment of the Hol Chan Marine Reserve in Belize. He has focused on marine policy since serving as a Sea Grant Fellow with the Senate Commerce Committee in 1988.

**Daniel Suman** is Assistant Professor in the Division of Marine Affairs & Policy at the Rosenstiel School of Marine and Atmospheric Science of the University of Miami. He is also Adjunct Professor in the School of Law, University of Miami, where he teaches Coastal Law. He earned a Ph.D in oceanography from the Scripps Institution of Oceanography, University of California, San Diego, in 1983 and a J.D. from the Boalt Hall School of Law of the University of California, Berkeley, in 1991. Professor Suman has been a research fellow at the Smithsonian Tropical Research Institute in Panama and the Board on Science and Technology for International Development of the National Research Council. He has been awarded a Fulbright Senior Teaching Fellowship in 1994 at the School of Law and Political Science at the University of Panama where he will teach Public International Environmental Law. He is a member of the Marine and Coastal Ecosystems Directorate of the U.S. Man and the Biosphere Program. His research interests include legal and administrative adaptations to global climate change, legal mechanisms for coastal habitat protection, marine protected areas, regulation of marine pollution, and global biomass burning. Professor Suman is author of 20 publications in the areas of chemical oceanography, environmental law, and coastal zone management.

*Biographical Information continued . . .*

**Boyce Thorne-Miller** is Co-Director of Ocean Advocates, a national non-profit environmental organization which is dedicated to protection of the global marine environment by bringing science and law to bear upon marine policy decisions at local, national, and international levels. Prior to founding Ocean Advocates in 1992, she was on the staff of the Oceanic Society and then the Oceanic Society project of Friends of the Earth. Ms. Thorne-Miller works primarily on Marine pollution issues, and represents Friends of the Earth International on matters regarding the 1972 London Convention. She also works as a consultant to Greenpeace International on land-based sources of marine pollution and the precautionary principle. She has written two books on marine biodiversity: *The Living Ocean*, which she co-authored with John Catena, and *Ocean*. She is a marine ecologist with a M.S. in Oceanography from the University of Rhode Island, where she was a research associate.

**Virginia K. Tippie** is currently the Director of the multi-agency partnership initiative Coastal America. Prior to joining Coastal America she was the NOAA Assistant Administrator for Ocean Services and Coastal Zone Management and responsible for directing all activities of the National Ocean Service (1989-91). She has first-hand knowledge and insight of coastal and marine issues having served as Director of NOAA's Estuarine Programs Office, Director of EPA's Chesapeake Bay Program and Director of the Center for Ocean Management Studies and Coordinator of the Marine Affairs Program at the University of Rhode Island. Ms. Tippie has a Masters of Marine Affairs and a Masters in Oceanography from the University of Rhode Island.

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