

JOINT OCEAN COMMISSION INITIATIVE U.S. OCEAN POLICY REPORT CARD

Attached is a report card assessing the status of the nation's efforts to implement the recommendations made in recent reports by the U.S. Commission on Ocean Policy and the Pew Oceans Commission. The report card is being issued by the **Joint Ocean Commission Initiative**, a collaborative effort of the two Commissions to catalyze ocean policy reform and address their common finding: our oceans are in trouble and significant steps must be taken immediately to avoid substantial and perhaps irreversible degradation to these valuable and essential natural resources.

The primary objective of the Joint Ocean Commission Initiative is to accelerate the pace of change resulting in meaningful ocean policy reform and to realize that goal by tapping into and working closely with networks of people involved in local, state, regional, and national ocean issues, thereby facilitating progress at all levels while building durable support for significant ocean policy reform at the national level. The Joint Initiative is guided by a ten-member Task Force, five from each Commission, and led by Admiral James D. Watkins (Ret.) and the Honorable Leon E. Panetta, chairs of the U.S. Commission and Pew Commission, respectively.

The purpose of this report card is to assess the nation's collective progress toward implementing a coordinated, comprehensive, and coherent national ocean policy that is consistent with the recommendations of the two Commissions. The information enclosed highlights where progress has been made in 2005, and outlines where additional efforts by Congress, the Administration, states, and nongovernmental stakeholders are necessary and where opportunities for improvements exist.

This document consists of several parts. Following this introduction is the Joint Ocean Commission Initiative's U.S. Ocean Policy Report Card, which assigns grades in the areas of:

- national ocean governance reform
- regional and state ocean governance reform
- international leadership
- research, science, and education
- fisheries management reform
- new funding for ocean policy and programs

The report card is accompanied by one page supplements for each subject graded; these supplements provide further detail as to why the subject is important to ocean policy reform, why the given grade has been assigned by the Joint Initiative, and importantly, what can be done to improve the grade.

Highlighting opportunities for improvement is the primary focus for this report card, and the Joint Ocean Commission Initiative is committed to providing constructive assistance to leaders at all levels of government, as well as the nongovernmental, academic, and private sectors, to help move our nation toward a coordinated and comprehensive national ocean policy.

For more information about the Joint Ocean Commission Initiative or to see further detail contained in the recommendations of the two Commissions, visit www.jointoceancommission.org.

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JOINT OCEAN COMMISSION INITIATIVE
U.S. OCEAN POLICY REPORT CARD

2004

Subject	Grade	Comments (see full comments attached)
Initial Response To Commission Reports	A-	The President, Congress, and the Governors publicly embraced the major recommendations of the U.S. Commission on Ocean Policy and the Pew Oceans Commission. The President issued the U.S. Ocean Action Plan and established the Committee on Ocean Policy. Congress held hearings and introduced ocean-related legislation. Several Governors initiated regional and state strategies for coordinating ocean and coastal science and policy. These actions set high expectations for significant progress toward ocean policy reform.

2005

Subject	Grade	Comments (see full comments attached)
National Ocean Governance Reform	D+	Development of the U.S. Ocean Action Plan and establishment of the Committee on Ocean Policy are significant actions, but to date the tangible results have been limited given the scope of the challenges facing our nation. Despite pending legislation and efforts of the Committee, legislative and administrative reforms addressing organizational deficiencies in NOAA and mandatory interagency coordination and integration of ocean-related programs have been inadequate. Moreover, the steps taken to date do not embody the governance reform principles put forth by the Joint Ocean Commission Initiative.
Regional and State Ocean Governance Reform	B-	Promising ocean governance efforts are underway in a number of regions and states. The Joint Initiative encourages more regional collaboration and calls on additional states to demonstrate a commitment to ocean governance reform. The federal government should do more to facilitate and support ocean governance reform efforts in regions and states and should strive for better coordination among federal agencies at the regional level.
International Leadership	F	While some positive steps have been taken regarding international leadership on ocean issues, our continued failure to become a party to the United Nations Convention on the Law of the Sea hampers our ability to enhance and protect our national security interests and to demonstrate international leadership. Despite overwhelming support from a diverse array of interests, the Senate has yet to schedule the convention for a floor vote, and more vigorous support from the Administration is needed.
Research, Science, and Education	D	Doubling the ocean research budget and significantly increasing the support for ocean science and education are fundamental to improving our understanding and management of the oceans and coasts. The lack of an integrated ocean observing system capable of providing decision makers with important information compromises our nation's capacity to manage the oceans. The absence of an ocean and coastal stewardship ethic and a sluggish effort to coordinate the public education and outreach activities needed to enhance such an ethic hamper support for reform and funding.
Fisheries Management Reform	C+	Broad bipartisan support has been garnered for a Senate bill to reauthorize the Magnuson-Stevens Fishery Conservation and Management Act, and the Joint Initiative applauds the effort to reach out to Commissioners and other stakeholders during the development of the bill. The Joint Initiative appreciates the Administration's thoughtful consideration of fisheries management reform in its bill and subsequent input to the Senate bill. The House should build on and strengthen the Senate bill to reflect the full suite of fisheries management principles articulated by the Joint Initiative and work with the Senate to make reauthorization of the Magnuson-Stevens Act a reality this year.
New Funding for Ocean Policy and Programs	F	Funding for essential ocean programs, outlined above, remains woefully insufficient and is far outpaced by current and future challenges. Failure to provide even the modest funding increases recommended by the Commissions, compounded by funding rescissions in important ocean programs, jeopardizes the economic and ecological benefits our nation receives from its oceans and coasts. New investment must be made so that we can address ocean and coastal issues effectively.

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National Ocean Governance Reform

2005

Grade: **D+**

Why is national ocean governance reform important? Many of the reasons for declining ocean and coastal ecosystem health are due to failures in our governance approaches and structures, including fragmented laws, confusing and overlapping jurisdictions, and lack of a clear national ocean policy. We must unify our nation with a common goal of protecting and restoring our ocean and coastal ecosystems so that they will continue to be healthy and resilient and able to provide the goods and services that people want and need. Furthermore, the Joint Ocean Commission Initiative believes that sound ocean policy requires protecting our oceans and coasts while also understanding the relationships among social, cultural, economic, and ecological factors.

Why this grade? The Joint Initiative is encouraged to see some recognition of the need to improve federal coordination on ocean policy issues through the President's creation of the interagency Committee on Ocean Policy and the implementation of the U.S. Ocean Action Plan. In addition, it is promising to see the introduction of bills in Congress to codify the National Oceanic and Atmospheric Administration (NOAA), as well as some administrative efforts to address organizational deficiencies in NOAA and other agencies with ocean-related responsibilities. These actions, however, are insufficient to realize the governance improvements recommended by both Commissions and advocated by the Joint Initiative.

What could be done to improve the grade? The Joint Initiative encourages Congress and the Administration to improve decision making, promote more effective coordination and integration of ocean programs, and enable implementation of an ecosystem-based management approach. Improved national ocean governance reform contemplates not only improved leadership at the national level, but also a strong role for regional, state, and local decision makers. Principles for national ocean governance reform include:

- ***A National Ocean Policy.*** A national ocean policy is needed to acknowledge the importance of oceans to the nation's economic and ecological health and to protect, maintain, and restore marine ecosystems so that they remain healthy and resilient and able to deliver the services humans want and need.
- ***Management Decisions Grounded in an Ecosystem-based Approach.*** In carrying out a national ocean policy, we need to implement an ecosystem-based management approach that examines the links among living and nonliving resources. Instead of managing one issue or resource in isolation, we need to move toward a management approach that considers human activities, their benefits, and their potential impacts within the broader context of interconnected social, economic, and ecological factors.
- ***A Stronger NOAA Capable of Implementing an Ecosystem-based Management Approach.*** NOAA should be codified through passage of an organic act for the agency, and that act should establish NOAA as the lead ocean agency and articulate a core mission of: assessment,

prediction, and operations; ecosystem-based management; and science, research, and education. An organic act should also call for reorganization of the agency to better equip it to carry out its core mission and to remain science-based, but with its management programs better connected to make use of that science in decision making.

- ***Federal Agency Coordination and Leadership.*** Eleven cabinet-level departments and four independent agencies have responsibilities for ocean and coastal policy and management. High-level attention to carry out a national ocean policy and improved coordination and communication among ocean agencies would greatly enhance the effectiveness of our management of ocean and coastal resources.
- ***Improved Federal Agency Structures.*** A stronger NOAA and more effective federal agency coordination are essential to improving our national ocean governance. However, to truly recognize the connections among the sea, land, air, and all living creatures, the current federal structure should be reconsidered to further strengthen, through reorganizing and consolidating programs where appropriate, the federal government's ability to carry out a national ocean policy.
- ***Coordinated Management of Offshore Waters.*** A coordinated offshore management regime is needed to improve governance of federal waters, avoid and minimize conflicts among users, safeguard human and marine health, and manage our offshore waters for maximum long-term benefit of the nation and all its citizens.
- ***A Fair Return for Use of Offshore Resources.*** Our offshore waters are held in the public trust for the benefit of the entire nation. As such, when these publicly owned resources are used by the private sector for private gain, it is appropriate and fair for the public to receive some return for that benefit. Revenue collected from private use of ocean space and resources should be put toward the management and understanding of our oceans.
- ***Regional Approaches and Strong State and Local Role Supported by a National Framework.*** A national framework is needed to support and guide the development and implementation of regional plans and processes that involve federal, state, tribal, and local governments.

Regional and State Ocean Governance Reform

2005

Grade: **B-**

Why is regional and state ocean governance reform important? Regional governance mechanisms can facilitate more coordinated and collaborative approaches to realizing opportunities and addressing concerns in the region. By developing compatible and coordinated plans and processes, governments at all levels can work together to develop regional goals and priorities, improve responses to regional needs, and develop and disseminate regionally significant research and information. A strong regional voice is also important for enhancing communication of regional needs at the national level and better addressing issues of national importance in the regions. Addressing the problems facing our marine ecosystems must take place at the local level, and there is much that states and regions can do on their own. However, to truly grapple with the most pressing problems, additional tools and support that the federal government can provide are needed.

Why this grade? Ocean governance activities are developing in a number of regions, including the Great Lakes, Gulf of Maine, Gulf of Mexico, Northeast, and Puget Sound. Likewise, state-driven initiatives are emerging in Alaska, California, Florida, Hawaii, Massachusetts, New Jersey, New York, and Washington. This is a promising start, but more is needed, particularly with regard to a purposeful and coordinated federal role in facilitating and supporting such activities.

What could be done to improve the grade? More regions and states should develop and implement ocean governance mechanisms, and the federal government should develop a national framework to support regional approaches and collaboration. It is positive that states and regions are organizing from the “bottom up,” but to fully address critical issues facing our marine ecosystems, adequate support from the federal government is also necessary. The Joint Ocean Commission Initiative encourages leaders at all levels to develop governance approaches that are consistent with the following principles:

- ***Collaborative and Coordinated Approaches through Regional Governance Mechanisms.*** Provide support for coordinated, integrated ecosystem-based management that builds on current regional and ecosystem-based efforts and enhances those efforts to enable all ocean and coastal areas to be managed in a way that supports healthy, productive, and resilient marine ecosystems that will benefit current and future generations.
- ***Regional Plans and Processes with Several Elements.***
 - Goals that conserve ecosystem services that support human well-being.
 - Prioritized and coordinated management of activities within a management area.
 - Permitted uses that are compatible in order to minimize conflicts.
 - Consideration of all aspects of an ecosystem—natural, social, and economic—and how these aspects interact with and affect the ecosystem as a whole.

- Relevant scientific information that is continuously improved and fully utilized.
- Enhanced public education that is delivered through formal and informal means.
- ***Regional Research and Information.*** Decision makers at all levels, but particularly at the local level, need accurate and timely information about ocean and coastal ecosystems, including how human activities impact those ecosystems.
- ***Regional Ecosystem Assessments.*** Assessments of the natural, cultural, social, and economic attributes in a region would help guide management decisions and improve the process mandated under the National Environmental Policy Act by providing a single science-based regional assessment that can be the basis for individual Environmental Impact Statements.
- ***Enhance Regional Governance Capacity by Improving Federal Coordination in Regions.*** Our governmental institutions need to be recalibrated to enable government at all levels to work together more effectively at the regional level. One step toward improved regional coordination is for federal agencies to identify opportunities and further coordinate existing programs and activities to assist and support more effective implementation of regional approaches.

International Leadership

2005

Grade: **F**

Why is international leadership important? The declining health of the world's oceans is a global concern. Oceans and the activities that occur on them, both our own and those of other nations, are vital to our national economy and security. By virtue of having the largest Exclusive Economic Zone of any country, our interests are readily affected by the actions of other nations, and U.S. actions have a significant impact on the world's oceans. Our nation must be a strong leader in international ocean dialogues on all fronts if we are to assert the moral authority necessary to ensure greater protection of marine resources—and our national economic and security interests—by others.

Why this grade? Some positive steps have been taken by the United States, such as improvements in the way the world's coral reefs are managed and protected and the management of ballast water to prevent the introduction of invasive species into marine ecosystems. The United States is supportive of the Global Earth Observing System of Systems, of which the Integrated Ocean Observing System is a critical component. Yet these positive steps pale when compared to our continued failure to accede to the United Nations Convention on the Law of the Sea. Despite overwhelming support from a diverse array of national leaders, the Senate has yet to schedule the convention for a floor vote. The convention has been thoroughly reviewed in Senate hearings and public forums, and U.S. accession is supported by a broad coalition from a variety of perspectives. The Navy and Coast Guard have testified that joining the convention will strengthen our ability to defend freedoms of navigation and overflight essential to military mobility and our homeland security efforts. All major U.S. industries, including offshore energy, maritime transportation and commerce, and shipbuilding support U.S. accession to the convention because its provisions help protect vital U.S. economic interests and provide the certainty and stability crucial for investment in global maritime enterprises. Environmental organizations also strongly support the convention. As the lone industrialized nation not part of the convention, we jeopardize our role as a world leader by failing to join.

What could be done to improve the grade? The Joint Ocean Commission Initiative urges the Senate to expeditiously provide advice and consent for U.S. accession to the convention. The Joint Initiative agrees with the President that accession supports vital U.S. national security, economic, and international leadership interests and that rapid Senate approval is needed. As a party, the United States would be in the best position to lead future applications of this framework for regional and international cooperation in protecting and preserving the marine environment. U.S. accession to the convention would send a clear message in support of our efforts to foster international approaches while significantly furthering our own national interests.

In addition, the Joint Initiative encourages our nation's leaders to pursue the U.S. role in the international community consistent with the following principles:

- ***Living Marine Resources.*** Promote adoption and observance of international standards for the sustainable harvest of coral reef and other living marine resources.
- ***International Trade.*** Negotiate and work with other nations to establish provisions in international trade agreements that are consistent with the recommendations of the U.S. Commission on Ocean Policy and the Pew Oceans Commission.
- ***Implementation and Enforcement.*** Provide adequate funding for full implementation and enforcement of those international conventions and agreements that the U.S. has ratified.

Research, Science, and Education

2005

Grade: **D**

Why are research, science, and education important? Ocean and coastal waters under the jurisdiction of the United States are larger than the nation's total land mass, providing a vast expanse for commerce and trade and a buffer for security. Unfortunately, there is not a coherent regime for studying or managing the increasing activities occurring on, under, and adjacent to our oceans, coasts, and Great Lakes.

The U.S. Commission on Ocean Policy and the Pew Oceans Commission reports call for an integrated and coordinated framework of governmental and nongovernmental partners contributing to the transition toward ecosystem-based management. Realizing such a vision will require an enhanced understanding of ocean-related processes in the context of the interconnections among land, ocean, atmosphere, and human communities, and thus a greater commitment to basic and applied research, monitoring, modeling, and the translation of this information into timely information that can be used by policy makers and managers.

The Commission reports also stress the importance of enhancing our commitment to formal and informal education. Building a scientifically literate workforce and a society that has a strong ocean and coastal stewardship ethic must start by incorporating oceans and coasts into the curriculum of primary and secondary schools and beyond. Given the public's fascination with our oceans and the rich opportunities for discovery, the ocean community is well positioned to contribute to the broader endeavor of increasing our nation's competitiveness and innovation through an increased focus on research and education.

Why this grade? The Commission reports identify numerous policy, scientific research, and education issues in urgent need of attention to address the degradation of the ocean environment and meet future challenges. Global warming, resource depletion, natural hazards, harmful algal blooms, invasive species, and nonpoint source runoff are just a few examples of threats to the health and vitality of our oceans. The lack of a coherent national ocean and coastal research strategy hampers the ability of agencies to compete for funding in the increasingly competitive federal budget and appropriation processes. The loss of research funding traditionally provided by the Navy, as well as decreases in extramural funding made available through the National Aeronautic and Space Administration and the National Oceanic and Atmospheric Administration (NOAA), are compromising our traditional leadership role in ocean sciences.

The ongoing efforts of the Committee on Ocean Policy and its two principle subcommittees, the Joint Subcommittee on Ocean Science and Technology and the Subcommittee on Integrated Management of Ocean Resources, legislation pending before Congress, and action at the state level offer considerable promise; however, stagnant funding support means that many plans and strategies are never implemented.

What could be done to improve the grade? The Administration and Congress should immediately begin the process of enhancing support for ocean research, including support for the social sciences, with the objective of doubling funding in the next few years. Promising efforts include the development of a national ocean research strategy, called for under the President's U.S. Ocean Action Plan, and additional funding for ocean education in the budgets of NOAA and the National Science Foundation (NSF). However, additional funding should not be delayed until a research strategy is completed.

In addition, there are a number of other major ocean science initiatives that have been under development for years that require support. For example, developing an operational Integrated Ocean Observing System, including a robust research component, is crucial to the broader national initiative to better understand our global environment. Congress should also consider re-establishing an Office of Technology Assessment, which it dismantled in the mid-1990s, to provide objective and authoritative analyses of complex scientific and technical issues.

Congress and the Administration should also establish a national ocean education office with responsibility for strengthening ocean-related education and coordinating federal education efforts. Funding for key federal agencies with ocean-related responsibilities should be increased to support programs that facilitate education partnerships, such as NSF's Centers for Ocean Science Education Excellence. Similarly, the National Sea Grant College Program should increase the proportion of its resources dedicated to ocean and coastal education and outreach.

The Joint Ocean Commission Initiative asserts the following principles to help guide the implementation of an ocean and coastal research, science, and education strategy:

- ***Best Available Science and Information.*** Ocean policy decisions should be based on the best available understanding of the natural, social, and economic processes that affect ocean and coastal environments. Decision makers should be able to obtain and understand quality science and information in a way that supports informed management of ocean and coastal resources.
- ***Ecosystem-based Management.*** U.S. ocean and coastal resources should be managed to reflect the relationships among all ecosystem components, including humans and nonhuman species and the environments in which they live. Applying this principle will require defining relevant geographic management areas based on ecosystem, rather than political, boundaries.
- ***Ocean–Land–Atmosphere Connections.*** Ocean policies should be based on the recognition that the oceans, land, and atmosphere are inextricably intertwined and that actions that affect one Earth system component are likely to affect another.
- ***Stewardship.*** The principle of stewardship applies both to the government and to every citizen. The U.S. government holds ocean and coastal resources in the public trust—a special responsibility that necessitates balancing different uses of those resources for the continued benefit of all Americans. Just as important, every member of the public should recognize the value of the oceans and coasts, supporting appropriate policies and acting responsibly while minimizing negative environmental impacts.

Fisheries Management Reform

2005

Grade: **C+**

Why is fisheries management reform important? Over the last 30 years we have witnessed the overexploitation of many fish stocks and negative consequences to fishing communities. Consequently, the fisheries industry has changed from one with seemingly boundless potential to one that is struggling. Our fisheries management regime must be improved if we are to sustain the U.S. fishing industry, maximize economic and social benefits, and sustain living marine resources held in public trust for the benefit of all U.S. citizens.

Why this grade? The Joint Ocean Commission Initiative is encouraged to see progress on fisheries management reform legislation. Senate Commerce Committee Chairman Ted Stevens (R-AK) and Co-Chair Daniel Inouye (D-HI) have shown strong bipartisan leadership in soliciting broad public input into the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2005. While progress on the act is very promising, provisions to ensure that the best available science is used to make management decisions are still needed, and the ecosystem-based management provisions included in the bill should be strengthened. The Initiative encourages the House to build on the Senate's bill and work with the Senate to get a strong Magnuson-Stevens reauthorization bill enacted in 2006.

What could be done to improve the grade? Congress must pass and the President must sign a bill to reauthorize the Magnuson-Stevens Fisheries Management Act that is consistent with the Joint Initiative's principles for fisheries management reform. These include:

- **Ecosystem-based Management.** Fisheries management should be informed and guided by long-term objectives set for both the fishery and the ecosystem, and thereby consider linkages between different living and nonliving components of the sea, land, atmosphere, and the health and vitality of human communities.
- **Base Management on Independent Science.** Strengthen the use of science in management by requiring Regional Fishery Management Councils to adhere to allowable biological limitations determined by their Science and Statistical Committee, setting catch limits at or below these limitations, and establishing consistent and independent peer review processes for the science used in decision making.
- **Fallback Provisions.** As an incentive toward timely and responsible action to address overfishing and the degradation of essential fish habitat, require fallback provisions to be implemented when management plans are not developed within a required time frame.
- **Dedicated Access Privileges.** Authorize fishery managers to use dedicated access privileges as an important tool to better manage fisheries resources. Establish national guidelines that allow for regional implementation that is consistent with those guidelines.

- ***Enforcement.*** Expand cooperative fisheries enforcement programs between federal and state enforcement entities. The programs should clarify the role of the Coast Guard and should emphasize joint training, stronger and more consistent information sharing, and increased use of enforcement technology such as Vessel Monitoring Systems.
- ***Cooperative Research.*** Direct the National Oceanic and Atmospheric Administration to create an expanded, regionally-based collaborative research program that involves the fishing community and federal, state, and academic scientists. Research should benefit from linkages to the Integrated Ocean Observing System. Funds for such cooperative research projects should be awarded on a competitive basis.
- ***Bycatch Reduction.*** Bycatch should be addressed continuously to ensure the sustainability of fisheries and ecosystem services. Fishermen should be allowed to keep fish they catch within conservation limits, rather than be forced to discard and waste one species because it is in a target fishery for another. Bycatch reduction efforts should include accounting for such resources with regard to total allowable catch.
- ***Council Membership.*** Require governors to submit a slate of candidates that represents a broad cross-section of the public as nominees to the Regional Fishery Management Councils.
- ***Training.*** Require training on a variety of topics relevant to fishery management for new Regional Fishery Management Council members and make such training available to representatives from interest groups and industry.
- ***Education.*** Foster public understanding of ocean resources, including the importance of conservation measures aimed at sustaining fisheries and the linkages between human health and the health of oceans.
- ***International Leadership.*** Promote adoption and observance of international standards for the sustainable harvest of coral reef and other living marine resources.

New Funding for Ocean Policy and Programs

2005

Grade: **F**

Why is new funding for ocean policy and programs important? The economic and ecological importance of our oceans, coasts, and Greats Lakes are poorly understood and underappreciated. This is surprising considering that they are major contributors to the U.S. economy, with half the nation's Gross Domestic Product generated in coastal watersheds. Maintaining the economic and ecological viability of our oceans and coasts requires decision makers to have access to unbiased, credible, and up-to-date information to make informed decisions. Unfortunately, chronic under-investment has left much of our ocean-related infrastructure in woefully poor condition, management programs struggling to meet the information demands of decision makers, ocean scientists competing for a smaller percentage of the federal research budget, and ocean science virtually absent from the education curriculum.

Why this grade? The failure to provide a substantive increase in federal funding for ocean science, management, and education in fiscal year 2005, and virtually level funding in fiscal year 2006, is disappointing, given the findings and recommendations of the U.S. Commission on Ocean Policy and the Pew Oceans Commission. Despite overwhelming evidence that the health of our oceans and coasts are poor and subject to continuing degradation, the President's request for funding for fiscal year 2005 and 2006 included limited increases for ocean-related programs. Additionally, these requests were well below funding levels eventually appropriated by Congress. In fiscal year 2006, appropriated funding for the National Oceanic and Atmospheric Administration, the nation's lead civilian ocean agency, was essentially level but resulted in losses of funding for some of the agency's core ocean programs. In addition, underfunding of ocean-related programs at the National Science Foundation, the U.S. Army Corps of Engineers, the Department of the Interior, the Environmental Protection Agency, the Navy, the National Aeronautic and Space Administration, and the Department of Agriculture further compromises the capacity of these agencies and their academic and state partners to address outstanding challenges facing our oceans, coasts, and Great Lakes.

What could be done to improve the grade? Better coordination at all levels of government, decisions based on unbiased and accurate science, and an informed and engaged citizenry are all essential components of a new comprehensive national ocean policy. To fulfill these demands, new and sustained investments will be required to: support research and exploration; provide an adequate infrastructure for data collection, science, monitoring, mapping, and management; and translate new scientific findings into useful and timely information products for managers, educators, and the public. This is especially true as we move toward an ecosystem-based management approach that requires improved understanding of physical, biological, social, and economic forces.

The U.S. Commission on Ocean Policy identified the cost associated with each of its 212 recommendations, which, if fully realized, would require new funding on the order of \$3.9 billion

per year to be shared among the states, tribes, and federal government. While these recommendations represent an ambitious proposal for improving the use and conservation of our nation's oceans and coasts, government at all levels will be unable to take on the additional responsibilities of implementing a comprehensive national ocean policy without improved tools and resources. Key funding recommendations that the federal government should support include:

- Doubling the federal ocean and coastal research budget (+\$650 million) over the next five years, including a national program on social science and economic research.
- Fully funding the Integrated Ocean Observing System, a core component of the broader Global Earth Observing System of Systems endorsed by the Administration.
- Requiring the President to submit an integrated ocean budget, making it easier to track support for and analyze the progress of departmentally isolated but highly interactive ocean and coastal programs, thus facilitating greater coordination among federal programs.
- Significantly increasing funding for ocean-related formal and informal education programs, such as the National Science Foundation's Centers for Ocean Science Education Excellence.
- Increasing support for ocean exploration and ocean and human health programs.

In addition, an Ocean Policy Trust Fund should be established within the federal government to help fund ocean-related activities. Despite pressing needs, the Joint Ocean Commission Initiative is mindful of the intense budgetary constraints that exist at both federal and state levels and is sensitive to the hardships associated with unfunded mandates. The creation of an Ocean Policy Trust Fund in the U.S. Treasury dedicated to supporting the suite of federal, state, and tribal activities identified in the Commission reports is of considerable importance.

The Joint Initiative urges our nation's leaders to approach funding of ocean and coastal programs in a manner consistent with the following principles:

- ***Provide Funding Commensurate to the Challenge.*** Current ocean and coastal funding is insufficient to address current challenges or to begin to anticipate and plan for future challenges.
- ***Share Funding with Nonfederal Partners.*** Many of the actions necessary to improve the health of ocean and coastal waters will be initiated and implemented at the regional, state, and local levels. Federal funding should be available to assist nonfederal governments, as well as the academic community, in meeting these goals.
- ***Require Payment for the Use of a Public Resource.*** The use of a publicly-owned resource by the private sector in federal waters should be contingent on a reasonable return of some portion of the revenues to taxpayers in order to support programs that will help sustain the health and vitality of our nation's oceans and coasts.