

October 28, 2002

Admiral James D. Watkins
U.S. Commission on Ocean Policy
1120 20th St., NW
Suite 200 North
Washington, DC 20036

Dear Admiral Watkins,

I am pleased to present the U.S. Commission on Ocean Policy with The Ocean Conservancy's recommendations for developing a national ocean policy. The attached papers address key issues in four broad areas: living marine resources, ocean governance and funding, pollution and coastal management, and education. I hope that the Commission and your staff will seriously consider our recommendations.

The Ocean Conservancy looks forward to continuing our dialogue during the Commission's deliberations. Please don't hesitate to contact me, or members of my staff, if you have questions or would like additional assistance.

Sincerely,

Roger T. Rufe, Jr.
President

EDUCATION

BACKGROUND

Although, people care about the health of the oceans, but surveys show that in general they have a poor grasp of the issues. For example, 92 percent of Americans consider the oceans essential for human survival, yet only 14 percent recognize that people are the greatest source of ocean pollution. In a national survey carried out in 1999, nearly half of those surveyed (45 percent) agreed with the statement: “What I do in my lifetime doesn’t impact ocean health at all.”¹

Few know that more oil reaches the oceans through runoff from streets and highways than from leaking oil tankers or drilling platforms. Few understand that the fertilizer used on lawns, gardens, and farm fields contributes to the growing “dead zones” found in our most productive ocean areas, such as the Chesapeake Bay and the Gulf of Mexico. Few recognize that overfishing – and not pollution – is the chief cause of ecological extinction in our coastal ecosystems. Few understand that the choices they make at the market or in restaurants contribute to the overfishing that not only threatens many valuable fish stocks, but also is changing the balance and character of ocean ecosystems. Few know that many important food fish, including species of salmon, Pacific cod and rockfish, and grouper are presently vulnerable to extinction. And few Americans are aware that the oceans remain largely unprotected.

This knowledge gap is critical: people will not act to solve a problem that they don’t know exists.

CURRENT ISSUES

- The vast majority of Americans know little about the health of our oceans, their importance to our daily lives, and how poorly they are currently managed. This lack of knowledge has contributed to the steady decline of our oceans and has hampered efforts to correct existing problems.
- While the public recognizes the need to protect our sensitive lands, a similar oceans ethic is lacking. The value of our oceans is not taught in our school classrooms and is not understood by the average American. As a result, most Americans view the oceans as limitless and resilient, and their impact on them as “a drop in the ocean.”
- Our scientific understanding of how ocean ecosystems function is light years behind our understanding of terrestrial systems. Limited funding is available for research, monitoring and public education. The vast majority of school children aren’t even required to take a marine ecology or oceanography class in high school.
- In a society increasingly out of touch with its natural heritage, students have fewer and fewer opportunities for field learning that provides “true” nature experiences. Such experiential learning is especially important for the marine sciences, and can be a transforming experience for young students.

¹ Beldon, Russonello & Stewart Research and Communications and The Ocean Project, *Results of National Survey Executive Summary*, November 1999. Survey conducted among 1,500 adults living in the U.S.

- Increasingly, minority groups are especially disconnected from the natural environment and environmental learning experiences. It is not uncommon, for example, to find young people living within a mile of the coast who have never ventured to the shoreline.

RECOMMENDATIONS

- Congress should pass legislation establishing a National Oceans Awareness Week to help bring ocean issues to the forefront of the national agenda.² An annual week of education outreach and events should be planned to help make the oceans matter to children, students and adults. The week would include educational activities and public events and opportunities that generate extensive media coverage, as well as volunteer opportunities for the general public and speaking events for elected officials, including the president.
- The Coast Guard should promulgate regulations requiring all new boat owners to take a boating safety and ocean stewardship class.
- The Congress and the Administration should significantly increase funding for research, monitoring and public education. For example, NOAA should more fully support, and potentially elevate, its Office of Coastal and Resource Management’s outreach and education efforts to better inform the public about what they can do to help protect the coasts.
- The Administration should promote existing – and create new volunteer – opportunities that connect people with the oceans, such as the International Coastal Cleanup.
- The Department of Education should promote the integration of interdisciplinary ocean studies (including the liberal arts, and social and hard sciences) and conservation into our K-12 curriculum nationwide and require at least one on-the-water educational experience during grades K-12.
- The Department of Education – in partnership with all universities in this country – should also create a comprehensive initiative to train K-12 teachers and educators in ocean studies.
- The Department of Education should require that ocean science become a component of the national science assessment program for grades K-12 that will begin in 2004 as part of the president’s “No Child Left Behind Act.”
- In all of the above programs, a special effort must be made to reach and engage minority students throughout the country – through both in-school and after-school programs – in partnership with local schools, civic and nonprofit organizations.

CONCLUSION

Ocean literacy requires vision, leadership, and commitment on a national scale. We must agree, as a nation, that the oceans are a national priority, and we must look to leaders from government, business and industry, education, and private organizations to ensure that it remains in the forefront of the national consciousness.

² See House Resolution 415 in the 106th Congress.

We must work harder to connect people to the oceans and the oceans to people, regardless of where they live. By protecting, exploring, and sharing knowledge about our nation's unique ocean areas, we can bring about an ocean conservation ethic as strong as the land ethic fostered by our national park system and national wilderness areas.

In making laws and appropriating funds for government programs, the United States Congress has many opportunities to educate the public. For example, the BEACH Act mandates both regular testing of beach water quality and reporting to the public on the causes behind closures. More research and more information on fisheries, on marine wildlife, and on the way in which ocean ecosystems function would further educate and empower the American public.

Experiential education is one of the most effective tools that we have to influence children—and adults. If 53 percent of us live in coastal areas, why can't the same proportion expect to have at least one on-the-water experience during the course of their education? In general, to further increase ocean literacy, we must also advance ocean curricula in our schools nationwide to elevate the importance of ocean study and demonstrate its relation to other disciplines. In short, we as a nation should commit to preparing the next generation of ocean stewards.

People want to do the right thing when it comes to the oceans. In 1986, The Ocean Conservancy held its first annual International Coastal Cleanup (ICC), which provides the public an opportunity to help clean up our coastal areas and inland waterways. By the year 2000, it had grown to the largest volunteer cleanup event in the world: more than 850,000 participants of all ages combed over 20,000 miles of beaches, rivers, and lakes, and hauled in over 13.5 million pounds of trash. If a single organization can engage over 800,000 people on a single day, imagine what an entire nation committed to educating its people about the oceans can do.

OCEAN GOVERNANCE AND INVESTMENT

BACKGROUND

For centuries, humanity has viewed the oceans as a vast and resilient realm. We have used the oceans for transportation, for recreation, for extracting fish and mineral resources, and for dumping our garbage and sewage. Because of this focus on utilization over conservation, our oceans show unmistakable signs of abuse and neglect. Overfishing, coastal development, agriculture, aquaculture, mining, shipping, and oil and gas activities threaten ocean habitats and pollute and deplete the seas.

Our oceans are also under increasing pressure to contribute not only to food supplies, energy, international trade, tourism, and recreation, but also to advances in medicine, science, and technology. An estimated one out of every six jobs is marine-related, and one third of our gross national product is produced in ocean and coastal areas.

In the 32 years since the Stratton Commission produced its report, “Our Nation and the Sea,” a lot has changed. A number of new laws govern how our oceans are managed, such as the Coastal Zone Management Act and the Magnuson-Stevens Fisheries Conservation and Management Act. In some cases, federal agencies that did not even exist when the Stratton Commission completed its work now administer these laws.

Ocean Governance

Numerous federal agencies now have jurisdiction over our ocean resources, with different—and at times, conflicting—mandates. This has led to jurisdictional battles within and among agencies over how those resources should be managed, has fostered poor management decisions, and appears to be one of the root causes of many other problems in the U.S. management system.

In 1969, the Stratton Commission advised the creation of an independent agency to coordinate marine-related activities. While the National Oceanic and Atmospheric Administration (NOAA) was created in 1972 and housed within the Department of Commerce, it oversees only a small portion of activities within our ocean waters. Moreover, within the Department of Commerce, NOAA is overshadowed by higher profile agencies, such as the International Trade Administration.

Ecosystem Approach

Despite the fact that the EEZ is a public resource, held in trust for the U.S. population, our oceans continue to be mismanaged. This is due in part to our crisis-by-crisis management approach and incongruent governance structure. It also reflects our historical focus on short-term exploitation of individual species, often at the expense of the long-term health of those species and the ecosystems of which they are a part. The need for a new approach, with fundamentally new goals, has been well documented for years. In a report to Congress in 1998, the Ecosystem Principles Advisory Committee recommended, “We must develop governance systems which have ecosystem health and sustainability, rather than short-term gain, as their primary goals.”

Interagency Council

Following the National Oceans Conference in 1998 and the agencies’ report to the vice president, “Turning to the Sea: America’s Ocean Future,” an Oceans Report Task Force was assembled by the Administration. Composed of agency undersecretaries, the task force was charged with implementing the report’s 148 recommendations for “a comprehensive federal policy to explore,

protect, and sustain our oceans in the new millennium.” While the task force did not live up to its potential to fundamentally change how federal agencies manage our marine environment, it represented an unprecedented effort by the Executive Branch to coordinate and enhance existing marine management efforts and to develop new proposals and programs. This task force was disbanded at the end of the Clinton Administration and has yet to be reestablished.

Investment

In the meantime, the cost of mismanaging the nation’s ocean resources continues to soar. A presidential campaign issue in 1988 election, the cleanup of Boston Harbor cost nearly \$6 billion. The replumbing of the Florida Everglades will cost an estimated \$8 billion. Fisheries disasters seem to be an annual event, differing only in location and severity. The most recent bailout, from the New England groundfish disaster cost U.S. taxpayers \$16 million.¹ Delays in improving our ocean governance management system are almost certain to prove more costly to the country in the future.

In order to avoid such dire problems, we must commit to increasing federal expenditures on key marine conservation programs. It should be no surprise that federal expenditures on the oceans are minute when compared with expenditures on similar land-based activities, many of which themselves are under-funded. Nonetheless, the discrepancy in resource allocation is shocking and appalling. Compare the following levels from the federal government’s fiscal year 2002 appropriations acts:

- The budget for the National Park Service was \$2.32 billion; the budget for the National Wildlife Refuge Program was \$320 million. The combined total of \$2.64 billion was *53 times* the \$49 million budget of the National Marine Sanctuaries Program during the same period.²
- NOAA’s Office of Ocean Exploration received \$14 million in fiscal year 2002. NASA received an amount larger by *three orders of magnitude* --\$14.8 billion³--for space exploration and related activities.
- Under the BEACH Act, EPA spent \$10 million in fiscal year 2002 to test the quality of water at beaches around the country for human safety. The Department of Agriculture, by contrast, expended *more than seven times* that amount, over \$77 million, to control the boll weevil during the same period.⁴

CURRENT ISSUES

Governance

- The country’s existing ocean governance structure has proven inadequate to cope with the crises facing our oceans, let alone to implement an ecosystem-based management approach.
- As the Commission has highlighted in its mid-term report, “It is clear that the development of policies for marine resources has been piecemeal and single-issue oriented, and the sentiment that this approach has resulted in uncoordinated and often conflicting mandates is overwhelming.”

¹ Public Law 107-206. Sec 210-211.

² Public Laws 107-63 and 107-77.

³ Public Laws 107-77 and 107-73. \$14.8 billion represents the National Aeronautics and Space Administration’s entire budget for fiscal year 2002.

⁴ Public Laws 107-73 and 107-76.

- For decades, the United States has lacked the means to effectively resolve emerging and persistent ocean policy needs, including interagency disputes and conflicts resulting from single-purpose legislation. This has perpetuated a pattern of management neglect, deterioration of public resources, and decreasing U.S. influence abroad.

Ecosystem Approach

- The current Administration is considering a radically misguided policy proposal that seeks to exempt many activities in the EEZ from the requirements of the National Environmental Policy Act (NEPA). Limiting opportunities for concerned citizens, coastal states and local governments to participate in decisions about federal projects that affect ocean resources undermines government accountability and civic involvement. Moreover, such a move would represent an egregious rollback of environmental policy for our imperiled oceans.
- By failing to adopt an ecosystem-based management approach, resource managers have failed to protect critical ocean habitats and biodiversity, which has led to an increasing number of fishery and ecological collapses.

Interagency Council

- The Oceans Report Task Force, charged with implementing the recommendations from the 1998 National Ocean Conference, was disbanded by the current Administration, short-circuiting efforts to improve agency coordination and management of marine resources.
- No permanent cabinet-level council, akin to the National Security Council, exists to resolve interagency disputes and develop forward-thinking policies relative to our oceans.

Funding

- Ocean conservation programs and activities continue to be short changed. Everything from protecting our precious coral reefs, establishing marine mammal take reduction teams, exploring our oceans, to constructing new public visitor centers for our marine sanctuaries lags far behind their terrestrial and celestial counterparts.
- Despite the fact that in the year 2000 Congress passed a bill authorizing \$3 billion in new appropriations over six years for NOAA's conservation programs⁵, key programs continue to be underfunded. Moreover, NOAA's Conservation Spending Category is a low priority within the current Administration and is set to expire at the end of fiscal year 2006.

RECOMMENDATIONS

Change the Ocean Governance Structure

- The United States Government should consolidate and better coordinate the responsibilities now splintered among different federal agencies. Potential candidates for consolidation include NOAA, the Coast Guard, the Fish and Wildlife Service's marine mammal and sea turtle programs, EPA's ocean water quality programs, and other federal agencies, or parts of agencies, as appropriate. These responsibilities should be housed within a department of the oceans or an independent oceans agency that has direct reporting authority to the president and the Office of Management and Budget.

⁵ Public Law 106-291.

Apply Ecosystem Principles to Ocean Management

- The U.S. should adopt a management approach that seeks to manage ecosystems and that protects all the species and resources they contain.
- The National Environmental Policy Act should continue to be applied to all federal decisions and activities in the Exclusive Economic Zone.

Reestablish a National Ocean Council

- The President should reestablish the National Ocean Council. It should be permanent and consist of the Secretaries of Commerce, Defense, State, Homeland Security, and Interior; the Attorney General; the Administrator of the Environmental Protection Agency; the Administrator of the National Aeronautics and Space Administration; the Director of the National Science Foundation; the Director of the Office of Science and Technology Policy; the Chairman of the Council on Environmental Quality; the Chairman of the National Economic Council; the Director of the Office of Management and Budget; and other federal officials the president considers appropriate. This body should be charged with coordinating and forwarding national policies and frameworks to promote a more proactive, coordinated approach to managing the oceans under U.S. jurisdiction.

Improve Funding for Ocean Conservation

- The new Department of the Oceans or an independent oceans agency should be given the same budget authority and congressional oversight as other cabinet-level departments in the executive branch.
- Congress should devote significantly more federal resources to conserving and managing our oceans. This could be accomplished by making NOAA's Conservation Spending Category permanent, and by appropriating additional funding for research and education to improve our basic understanding of marine ecosystems, and for monitoring, enforcement, management, and restoration of coastal and ocean resources.

CONCLUSION

The United States' ocean governance structure is in desperate need of reform. Our marine resources, both living and non-living, are held in the public's trust and need and deserve the federal government's commitment to better management. This commission can help chart a new course for the future of our oceans by consolidating and better coordinating management responsibilities now splintered among various agencies, adapting an ecosystem based management approach, reestablishing a National Ocean Council, and significantly increasing current funding for ocean conservation programs.

LIVING MARINE RESOURCES

RECOVERING AND PROTECTING ENDANGERED MARINE WILDLIFE

BACKGROUND

Marine mammals and sea turtles are among America's most charismatic and vulnerable marine resources. Human activity represents the greatest threat to marine wildlife. Coastal development and pollution destroy habitat, and global warming has the potential to fundamentally alter the marine environment in the years to come. But the most immediate threat to already threatened and endangered mammals and sea turtles result from the far-reaching impacts of fishing. Our nation must enforce existing laws and treaties that protect wildlife, bolster such measures where they need improvement, and establish new commitments to conservation as needs arise.

Marine Mammals

In U.S. waters, 38 marine mammals—including manatees, whales, seals, sea lions, and otters—are either listed as depleted under the Marine Mammal Protection Act (MMPA), as threatened or endangered under the Endangered Species Act (ESA), or have unsustainable mortality rates. For 10 of these species, accidental death rates from human activities are so high that the stock may not grow or recover. Yet the most significant threat to their continued existence—death by entanglement in fishing gear—is largely preventable with proper implementation and enforcement of laws such as the MMPA and ESA.

Whaling

The International Whaling Commission (IWC) was created in 1946 when whale populations had declined precipitously throughout the world. The IWC reviews and revises the measures that govern the conduct of whaling, set forth in the International Convention for the Regulation of Whaling (ICRW). In the 1970s, it became evident that only a moratorium on whaling would save the numerous whale species that were in decline. The IWC established a moratorium on whaling in 1982 and has maintained it intact over the past 20 years.

But whaling nations annually pressure the IWC to lift the international moratorium on whaling. Moreover, the Convention affords no protection to the smaller cetaceans, such as dolphins and porpoises, and loopholes allow for the “scientific” killing of more than 600 whales each year—including endangered species—by Japan. In February 2002, Japan announced its plans to increase its “scientific” whaling program. The country will not only double its whale catch in the northwest Pacific, it will begin hunting a type of whale it has not hunted since the moratorium began: the endangered sei whale.

Sea Turtles

Sea turtles were abundant only several hundred years ago, but now they are in serious trouble. Sea turtles are long-lived, late-maturing, and highly migratory; thus, they are particularly vulnerable to the impacts of human exploitation and habitat loss. Illegal trade in some species, such as hawksbills, seriously threatens wild populations. Six of the world's seven species of sea turtles are found in U.S. waters, all of which are listed as endangered or threatened under the Endangered Species Act. All seven species have been included in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which prohibits international trade. While no reliable measures of worldwide sea turtle deaths in fishing gear exist, scientists estimate that

hundreds of thousands of sea turtles die each year as a result of bycatch and entanglement.¹ Some populations are on the brink of extinction.

CURRENT ISSUES

- Fisheries interactions, particularly bycatch and entanglement in fishing gear, are pushing some populations of threatened and endangered marine mammals and sea turtles closer to extinction. Closing areas could prevent many of these deaths through modifications to fishing gear or fishing practices, or to fishing at critical times of the year. Inadequate funding hinders implementation of the MMPA, which has become an international model for effectively conserving and protecting marine mammals.
- The Convention for the Regulation of Whaling is outdated and in desperate need of reform. It has no true enforcement capacity to ensure that regulations are being followed, no international sanctions for countries that do not comply, and loopholes that permit nations to exempt themselves from conservation and management decisions. Despite its international moratorium on whaling, loopholes -- including exceptions and “scientific” programs -- permit the killing of more than 2000 whales annually. Moreover, the moratorium comes under pressure to be lifted every year.
- Because sea turtles migrate far beyond U.S. borders, activities outside the U.S. are critical to their recovery. While years of work have helped increase sea turtle populations in some areas, funding continues to be limited, hampering international recovery efforts. The Convention on International Trade in Endangered Species (CITES) provides some protection for sea turtles by prohibiting the trade in sea turtle products such as green turtle soup and hawksbill tortoiseshell, but some countries, including Japan and Cuba, support reopening international trade.
- The National Marine Fisheries Service (NMFS) estimates that more than 4,000 large loggerhead, green, and leatherback sea turtles are unable to escape shrimp trawls in U.S. waters each year. Many of these animals drown or die after release due to the effects of forced submergence. In April 2000, NMFS notified the public that it would propose changes to the 1990 regulations for Turtle Excluder Devices (TEDs) in the Gulf of Mexico and southeast Atlantic. The TED regulations require shrimp trawlers to use inserts (excluders) that enable turtles to escape trawl nets. Yet NMFS still has not published a final rule requiring larger TED openings.
- The Department of Defense has proposed that Congress amend the MMPA’s definition of harassment to significantly raise the threshold at which a party must secure a permit to conduct activities that have the potential to harass marine mammals. This proposal would undermine the precautionary nature of the Act, lead to increased injuries and deaths of marine mammals, require the agency or the party requesting the authorization to make difficult, if not impossible, scientific judgments about whether a given activity is subject to the Act’s permitting and mitigation requirements, and impair enforcement of the Act.

¹ C. Oravetz, “Reducing incidental catch in fisheries,” in *Research and Management Techniques for the Conservation of Sea Turtles*, eds. K.L. Eckert, K. A. Bjorndal, F.A. Abreu-Grobois, and M. Donnelly. (IUCN/SSC Marine Turtle Specialist Group Publication No. 4., 1999).

- Man-made noise in the ocean is a growing threat to marine wildlife, particularly to marine mammals that use low-frequency sound to communicate and to sense their environments, such as whales and dolphins. Sound travels greater distances under water and five times faster than in air. Because of their nature, location, intensity, or duration, some sounds are likely to have biologically significant effects on marine mammals. Therefore, there is a great need for increased research focused on the impacts of sound on marine wildlife. There is also a pressing need to develop and implement appropriate controls on activities that produce potentially harmful sounds.

RECOMMENDATIONS

- NMFS should seek, and Congress should provide, more funding for marine mammal take reduction teams to increase observer coverage, better estimate bycatch, and improve population abundance estimates.
- The United States should oppose re-opening international trade in whales and sea turtles and work with other countries to renegotiate the International Convention for the Regulation of Whaling to include protections for smaller cetaceans, such as dolphins and porpoises, close the loopholes that allow continued hunting of whales, provide for enforcement, and become more consistent with other treaties, such as the United Nations Convention on the Law of the Sea and the United Nations Straddling Stocks Agreement.
- The United States should support, and assist other countries in implementing, the Inter-American Convention for the Protection and Conservation of Sea Turtles, the Specially Protected Areas and Wildlife (SPA) Protocol of the Cartagena Convention, and the “Memorandum of Understanding on the Conservation and Management of Sea Turtles and Their Habitats of the Indian Ocean and South-East Asia.” The U.S. should also promote international agreements to reduce fishing impacts on sea turtles throughout the oceans.
- NMFS should expeditiously complete work on the new turtle excluder device (TED) rule and implement final regulations to better protect sea turtles. Moreover, NMFS should make a concerted effort to export this technology overseas. NMFS should also develop and implement a comprehensive strategy to reduce sea turtle mortality in fisheries that does not come at the expense of other species, like sea birds.
- Congress should continue to reject efforts by the Department of Defense to weaken the definition of harassment under the MMPA.
- In consultation with conservation groups, industry, academic experts, the Department of Defense, the Department of Commerce, the Marine Mammal Commission, and the National Academy of Sciences, the Administration should develop a national policy and action plan to address the impacts of noise on marine mammals.

CONSERVING AND RESTORING FISH POPULATIONS

BACKGROUND

Humankind has traditionally viewed the oceans as an inexhaustible resource to be fished without limit. Yet, as we have increased our capacity to fish, we have begun systematically decimating fish populations. In recent years, fishery disasters have been declared in New England, the Pacific, and the North Pacific. The National Marine Fisheries Service (NMFS) has assessed only about one-third of U.S. fish stocks, and of those, approximately half are overfished. This vast lack of knowledge regarding fish stocks may mask even more serious declines in fish populations.

Overfishing

Instead of learning from the lessons of the past, we continue to fish beyond the capacity of the ocean to replenish what is removed. It is incumbent upon us to ensure that there are viable fish stocks for the future in order to sustain the global food supply, local fishing-based economies, and the overall health of ocean ecosystems.

It is not only fish populations that are shrinking; the size and reproductive capacity of fish are shrinking, too, increasing the risk of extinction. While fishing gear may catch all sizes of fish, it is the largest fish that are usually targeted and are the first to disappear. Moreover, persistent overfishing leads to the elimination of the largest and oldest individuals from an ecosystem—those that produce the most offspring. Overfished populations are characterized by smaller and smaller fish, with less reproductive capacity.

Ecosystem Alteration

In addition to its effect on fish populations and their habitat, overfishing disrupts ocean ecosystems. The serial depletion of fish—fishing one stock to depletion and then gearing up to fish another one to depletion—simplifies marine ecosystems and contributes to their collapse. Changes in marine food webs as a result of overfishing have far-reaching impacts. The precipitous decline in the number of Steller sea lions in Alaska—from 140,000 in 1972 to 40,000 today—has been linked in part to humans' overfishing of the Stellers' main food sources: pollock, cod, and mackerel.

Habitat impacts

Some fishing methods and gear types damage ocean habitat. Such operations are ultimately self-defeating, because habitat destruction reduces the productivity of marine fish populations. Less harmful alternatives already exist for many types of destructive fishing methods, and their use would make fishing operations more sustainable.

Bycatch

Worldwide, it is estimated that bycatch amounts to one-quarter of the annual global fish catch of 84 million tons.² Bycatch contributes to the decline of fish populations of all kinds. Gear is frequently indiscriminate—some gear types catch virtually everything in their path: all types and sizes of fish, as well as mammals, sea turtles, and even sea birds. Even if unwanted animals are released, they often do not survive the harsh process of capture, onboard sorting, and eventual return to the ocean.

CURRENT ISSUES

- Extinction of marine fish, once thought impossible, is now a significant threat for local populations and entire species. The disappearance of certain species of fish from ecosystems can have repercussions as far-reaching as pollution or global warming, and can have devastating impacts on coastal economies.
- Sharks and rays are exceptionally slow to recover from overexploitation due to their slow growth, late maturity and low fecundity. In the U.S. Atlantic, some species of large coastal sharks will require several decades to recover from overfishing in the 1970s through the 1990s, and two species of New England skates are considered candidates for listing under the Endangered Species Act (ESA). Most alarming is the status of smalltooth sawfish, the first marine fish in U.S. waters proposed by the federal government for ESA listing. This species, once abundant from the Gulf of Mexico to the Mid-Atlantic region, is now found only in discrete areas of Florida. Scientists estimate that the population has declined by more than 95 percent and will need more than a century to recover.
- In the North Atlantic, catches of preferred food fish have declined by half over the past 50 years, even though we have increased our fishing effort threefold.³ Since 1991, cod catches in the Gulf of Maine have declined by 75 percent—from 20 million pounds to less than five million pounds per year. In 1982, fishermen caught over nine million pounds of haddock; by 1996, the haddock catch had declined to just one million pounds, a 90 percent decrease.⁴ As a result of overfishing, Atlantic halibut has been largely absent from the U.S Northwest Atlantic ocean since the 1940s.⁵
- Just this year (2002), fishery managers were forced to close large areas of the Pacific Ocean off California, Oregon, and Washington to most types of bottom fishing. These closures may be in place for many decades if current rebuilding projections are accurate. Scientific warnings of unsustainable fishing were issued as early as 1984, but lacking ironclad proof, managers were unwilling to restrict fishing over the objections of the fishing industry.

² Marine Fish Conservation Network. www.conservefish.org/capitol_hill/bycatch.html.

³ Daniel Pauly et al., presentation at the American Association for the Advancement of Science conference, Boston, MA, February 21, 2002.

⁴ State of Maine Planning Office, "Fisheries," www.state.me.us/spo/mcp/fisheries.htm.

⁵ "Atlantic Halibut: Life History and Characteristics," NOAA Technical Memorandum NMFS-NE-125.

RECOMMENDATIONS

- Congress should overhaul the Fishery Management Council system to reduce the predominance of resource users over conservation interests, scientists, and other stakeholders. In addition, the councils should not set fishing mortality levels but should retain their role in making allocation decisions.
- NMFS and the Department of State should renew efforts to secure ratification and begin implementing key international agreements such as the United Nations Straddling Stocks Agreement, the new Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, the FAO International Plans of Action for Sharks, Seabirds and Fishing Capacity, and the FAO Code of Conduct for Responsible Fisheries.
- The Departments of Commerce and State should overhaul the U.S. National Plan of Action (NPOA) for Sharks under the FAO International Plan of Action for Sharks to include coordinated, forward-thinking strategies and timelines to implement and improve fisheries management for U.S. sharks and rays throughout their ranges. A precautionary and multi-jurisdictional approach is needed to prevent further depletion and ensure U.S. regulations are not undermined.
- Congress should fully fund and NMFS should implement stock assessments for all fisheries. Stocks particularly vulnerable to depletion or with outdated or non-existent assessments should be given top priority. Information collection efforts, such as at-sea fish surveys and cooperative research with the fishing community, should be expanded.
- Congress should provide significantly more resources for NMFS, the Coast Guard, and other cooperating agencies to improve fisheries monitoring and enforcement. These needs include at-sea observers on fishing vessels, Vessel Monitoring Systems (VMS), and at-sea enforcement of fishing and marine mammal regulations.
- The health of ocean ecosystems should become the dominant goal of fisheries management. NMFS should rebuild and protect individual species under a broader ecosystem framework. Where information is lacking, precautionary policies should be used to ensure that over-exploitation does not occur while information is being collected. NMFS should ensure timely rebuilding of fish populations and initiate a national effort to define ecosystem management and monitoring standards that include indicators of ocean ecosystem health.
- Marine protected areas are necessary to ensure that ocean ecosystems remain healthy. The development of an interconnected network of no-take marine reserves should be a central focus of this approach, to ensure that ocean ecosystem functions are maintained in at least some areas.

PROTECTING CRITICAL COASTAL AND MARINE ECOSYSTEMS

BACKGROUND

The United States has some of the most diverse marine ecosystems in the world, from the frigid waters of the North Atlantic and Arctic Oceans to the tropical reefs of the Florida Keys and the Pacific Islands. These systems are home to some of the world's most varied marine plants and animals, and provide critically important ecological services (such as protecting water quality and providing essential nutrients and habitat for a variety of marine species), outstanding recreational and economic opportunities, and potential future benefits to society. Custody of these biologically diverse marine waters entails a special responsibility to protect them. Yet, our oceans are experiencing an unprecedented series of stresses. They have been dramatically affected by fishing, pollution, and destruction or serious alteration of habitat.

Coral Reefs

Coral reefs occupy only 0.07 percent of the world's ocean bottom – an area roughly the size of Texas – yet they are among the most diverse ecosystems on earth, home to as much as one-quarter of the world's marine fish species.⁶ Coral reef systems are a spectacular collection of interdependent habitats and species. These “rain forests of the sea” support rich biological communities and are extremely valuable to humans, producing an estimated \$3 billion in benefits to the U.S. economy and \$375 billion to the worldwide economy, annually. They are also extremely fragile and face serious threats from overexploitation and pollution in the U.S. and around the world.

Marine Protected Areas and Ocean Wilderness

We have mustered the foresight and political will to conserve and protect nearly 30 percent of our most spectacular lands by establishing national monuments, national parks, national forests, and national wildlife refuges. Nearly five percent of U.S. terrestrial lands is fully protected as wilderness, and thus is protected from landscape-changing activities such as logging, drilling, and road-building. America's protected lands provide numerous ecological and economic benefits. They offer unparalleled scientific, educational and recreational opportunities, and comprise a natural legacy for future generations.

Yet progress in affording similar protections to our vast and diverse marine ecosystems has been woefully inaccurate. While some coastal and marine protected areas have been established by state and federal authorities, such as NOAA's National Marine Sanctuary Program or the marine component of the Department of the Interior's National Park System or National Wildlife Refuge System, the total marine area protected is miniscule and the protections provided are inadequate. The 13 National Marine Sanctuaries established in ocean waters protect less than 0.5% of our oceans. The few, tiny areas fully protected as wilderness together total less than 0.04% of U.S. waters.

⁶ “Coral Sea Stat: Information on coral reefs in the State of Florida,” Florida Marine Research Institute, www.floridamarine.org.

CURRENT ISSUES

- Our marine resource policy reflects a tendency to focus primarily on certain “valuable” species and treat them as independent commodities. This has led not only to depletions of those species, but to wholesale changes in marine ecosystems. Although it is common knowledge that all species inhabiting an ecosystem are connected, our current resource management strategies do not adequately consider these interconnections and consequently fail.
- America’s 13 National Marine Sanctuaries are all currently undergoing, or are scheduled soon to begin, management plan review. Currently, most of these sites are sanctuaries in name only, providing insufficient protection to either species or habitats. Most sanctuaries fall far short of their mandate to “maintain the natural biological communities . . . and to protect, and where appropriate, restore and enhance natural habitats, populations, and ecological processes.”⁷
- Coral reefs are threatened by a variety of human impacts, including pollution, unsustainable fishing activities, global climate change, and even boat groundings. In the Florida Keys, an alarming 37 percent of the stony coral cover was lost between 1996 and 2000.⁸ Recent reports suggest that 27 percent of the world’s coral reefs have already been lost, a figure that is expected to rise to 50 percent within the next 20 years.
- While coastal marine habitats, including wetlands and marshes, seagrass beds, mangrove stands, mudflats, and kelp forests provide a host of essential and valuable ecological services, such as nutrients and habitat for a variety of marine species, these areas continue to vanish due to increased, ill-managed coastal development.
- The oceans are no longer wild; few areas remain that haven’t been significantly altered by human activities. As our ability to exploit the ocean’s resources has increased, natural refuges have disappeared. Today, few areas of the ocean remain beyond reach, and even the most remote areas show signs of pollution and other adverse effects of human activities.

RECOMMENDATIONS

- The United States urgently needs to establish a national system of marine protected areas that is comprehensive, that represents the nation’s diverse marine and coastal habitats and biological communities, and that is large enough to contribute significantly to restoring depleted species and damaged habitats, protecting ecological processes, and restoring the health of marine ecosystems. The national marine protected areas system must include adequate no-take marine reserves that are free from the pressures of fishing, oil and gas development, and other resource extraction activities.
- The United States should adopt an ocean wilderness ethic similar to that which we have adopted on land. On land, our most treasured and wild spaces are designated as wilderness to protect them in an “untrammled” state. Our underwater treasures are equally deserving of protection,

⁷ 16 U.S.C. §1431(b)(3)

⁸ U.S. Environmental Protection Agency and Florida Keys National Marine Sanctuary Coral Reef Monitoring Project, “Executive Summary 2001,” from FKNMS Symposium: An Ecosystem Report Card, Washington, DC, December 2001.

and equally vulnerable. These places must be identified and protected to the highest standard, so that they, too, remain wild and untrammled for present and future generations to experience, explore, but leave unaltered. Consistent with our approach on land, at least five percent of U.S. waters should be protected as true ocean wilderness.

- The Administration should fully implement Executive Order 13158 on Marine Protected Areas, including establishing the Federal Marine Protected Areas Advisory Committee, completing the national marine protected areas inventory, and supporting the work of NOAA's three MPA Centers.
- NOAA should fully implement its mandate under the National Marine Sanctuaries Amendments Act of 2000 to protect, restore and enhance natural habitats, populations, and ecological processes in the national marine sanctuary system. The management review process for the sanctuary system should be fully supported by NOAA and the Administration and completed in a timely manner to ensure that all threats to the sanctuaries, including those arising from fishing, are identified and addressed.
- The Administration should fully implement Executive Order 13089 on Coral Reef Protection, strengthen the Coral Reef Task Force, and fully implement the National Action Plan. In addition, ecological reserves should be established to protect at least 20 percent of U.S. coral reefs by 2010. Finally, the Administration should take immediate steps to strengthen existing coral reef marine protected areas.
- The U.S. must lead, not hinder, efforts to address global climate change, such as the Kyoto Protocol and efforts to develop commercially viable alternative energy sources for large-scale use.

CONCLUSION

Americans can, with vision and political will, reestablish the ecological services that nature once provided unimpaired. We can do a better job of not only conserving and restoring our marine fish and wildlife species, but entire ecosystems and all they contain, from the smallest plankton to the largest blue whale. We can insist on a national system of ocean wilderness areas, just as we have done on land, that will help to restore and replenish our oceans, and that will fully and permanently protect intact ecosystems for their ecological, historical, scientific, and aesthetic value. These wilderness areas should be established within a larger, national network of marine protected areas that is comprehensive, adequate and representative of our nation's tremendous ocean diversity, and which will help to restore and protect a broad array of marine life and other resources for generations to come.

Polling consistently shows that Americans deeply value their oceans and the life within. Support for better protecting oceans, including establishing no-take reserves and areas of ocean wilderness, is strong, regardless of age, gender, or political affiliation. The recently protected Tortugas Ocean Wilderness Area, off the Florida Keys, is one tangible manifestation of this support. Made up of three complementary tracts, the Tortugas Ocean Wilderness Area protects nearly 200 square nautical miles of some of the most pristine coral reef habitats in the continental U.S. An incredible array of marine life finds sanctuary among the sea grass prairies and reefs of the reserve, including endangered green sea turtles, red-tailed triggerfish, purple-mouthed moray eels, black coral, and goliath grouper. Public

support for the Tortugas Ocean Wilderness Area remains strong, and is engendering interest in establishing similar protections for other special ocean places.

Ocean ecosystems are tremendously resilient, but not endlessly so. Whether we will choose to restore them, allow them to heal themselves, or instead continue to weaken and degrade them remains to be seen. With so much at stake, ecologically and economically, we owe it to future generations to choose conservation.

POLLUTION, WATER QUALITY, AND COASTAL ZONE MANAGEMENT

BACKGROUND

The coastal zone of the U.S. covers less than 10 percent of the nation's land area, yet supports more than half of its population. Not surprisingly, an estimated one in six U.S. jobs is marine-related, and one third of our Gross National Product is produced in ocean and coastal areas. Roughly 75 percent of all U.S. commercial and recreational fisheries depend upon biologically diverse coastal habitats, while numerous threatened and endangered species live in coastal areas.

Each year, our coastal waters face increased pressures and demands. EPA's recent *National Coastal Conditions Report* found the overall condition of our coastal waters to be only fair to poor. Many of the nation's coastal environments exhibit symptoms of pollution, including harmful algal blooms, loss of seagrass beds and coral reefs, shellfish bed contamination, and serious oxygen depletion. During 2001, there were 13,410 days of beach¹ closings and advisories across the nation due to high levels of bacteria or other pollution. Unfortunately, our current laws and policies have not effectively anticipated or mitigated the impacts of coastal development. Moreover, they have failed to control pollution carried by nonpoint sources, and they have largely ignored known pollution problems associated with ships.

Nonpoint Source Pollution

Polluted runoff, or nonpoint source pollution, is the leading cause of water quality impairment in the United States. As rain washes over roads, parking lots, construction sites, and industrial or commercial sites, it becomes contaminated with oil and grease, heavy metals, pesticides, litter, fecal matter, and other pollutants. In rural and suburban areas, rainwater flows over farmland, roads, golf courses, and lawns into waterways. The rainwater can then become a toxic mix, carrying animal waste, fertilizers, oil, metals, and pesticides. This polluted runoff, or nonpoint source pollution, is diverted to or runs directly into local waterways, ultimately flowing into coastal waters and the ocean.

Coastal Development

A burgeoning coastal population is increasing the pressures on critical coastal wildlife habitat. Barrier islands, beaches, bays and wetlands, and near-coastal waters are being destroyed or degraded by commercial and residential development. Habitat loss and water quality impairment have been directly correlated to coastal construction and reconstruction. The explosion of coastal growth, if left unchecked, will result in the permanent loss of land and water habitats that are crucial to fish and other wildlife and essential to clean coastal water.

Invasive Species

Ships of all kinds use ballast water for stability in navigation, taking it on before sailing and discharging it at ports of call. The ballast water may contain billions of microscopic plants and animals, including eggs, cysts, larvae, plankton, and even viruses. Invasive species are becoming established in coastal areas at an alarming rate, out-competing native species, threatening biodiversity, and changing the face of entire ecosystems. According to the International Maritime

¹ This figure combines data regarding ocean, bay, Great Lakes and some freshwater beaches.

Organization (IMO), invasive species represent one of the four greatest threats to the health of the world's oceans, along with other types of pollution, overexploitation of marine resources, and destruction of marine habitat.² Invasive species are also the number two threat to endangered and threatened species nationwide, second only to habitat destruction.³

Cruise Ship Pollution

Cruise ships, often carrying upwards of 5,000 passengers, are very much like floating cities. In 1998, cruise ships carried 10 million passengers through some of the world's most beautiful and sensitive ocean areas. Daily, a typical cruise ship generates as much as 37,000 gallons of oily bilge water, 30,000 gallons of sewage (black water), 255,000 gallons of non-sewage wastewater (gray water) from showers, sinks, laundries, baths and galleys, 15 gallons of toxic chemicals from photo processing, dry cleaning and paints, seven tons of garbage and solid waste, and air pollution from diesel engines equivalent to thousands of automobiles.⁴ Because ships are not sufficiently regulated under existing federal or international law, and because enforcement of existing laws is relatively weak, much of the waste they generate finds its way into the oceans.

Marine Debris

Marine debris, found even in the most remote ocean areas of the world, poses a serious threat to wildlife and to human health and safety. Land-based debris blows, washes, or is discharged into the water from upland areas. Sources include recreational beach-goers and fishers; materials manufacturers, processors and transporters; shore-based solid waste disposal and processing facilities; sewage treatment and combined sewer overflows; inappropriate or illegal dumping; and littering. People also generate marine debris at sea. Identified contributors are merchant, military, and research vessels; fishing vessels (recreational and commercial); recreational boats and cruise ships; and offshore petroleum platforms and associated supply vessels. Debris ends up in the water due to accidental loss or system failure; waste management practices; or illegal disposal and indiscriminant littering.

Beach Water Quality

The U.S. has nearly 23,000 miles of ocean shoreline along the continental United States, more than 5,500 miles of shoreline along the Great Lakes, and 3.6 million miles of rivers and streams.⁵ Unfortunately, some 40 percent of tested waters fail to meet the standards set forth by the Clean Water Act 30 years ago and many beaches are still unsafe for swimming due to pollution. Most beach closings and advisories are based on monitoring that detects elevated levels of bacteria, indicating the presence of disease-causing organisms from human and animal wastes. These wastes typically enter coastal waters from polluted runoff and stormwater, combined sewer overflows, discharges of untreated or partially treated wastes from sewage treatment plants and sanitary sewers, and septic system failures. Contact with polluted water can cause serious health illnesses.⁶

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² See The Ocean Conservancy, "Ocean Invasion," *Blueplanet*, vol. 1, issue 2, p. 18 (Spring 2002).

³ Wilcove, David *et al.*, "Quantifying Threats to Imperiled Species in the United States," *Bioscience*, Vol. 48, No. 8, pp. 607-15 (Aug. 1998).

⁴ M. Herz and J. Davis, *Cruise Control: How Cruise Ships Affect the Marine Environment* (Washington, DC: The Ocean Conservancy, 2002).

⁵ U.S. EPA. "National Water Quality Inventory, 2000 Report." September 2002.

⁶ Natural Resources Defense Council. "Testing the Waters 2002: A Guide to Water Quality at Vacation Beaches." July 2002.

Nonpoint Source Pollution

- A serious impediment to restoring and maintaining the health of U.S. waters is the lack of an effective national program to address nonpoint source pollution. While the Clean Water Act has direct regulatory authority over the discharge of pollutants from point sources, no such authority regulates nonpoint sources. A key provision of the Clean Water Act developed to clean up polluted waters is the Total Maximum Daily Load (TMDL) program. This program requires states and the EPA to identify polluted waterways, rank them for priority attention, and then develop pollution limits for each. Currently, the TMDL program implementation is weak, and the Administration is considering changes to the TMDL program which would delay clean ups indefinitely.
- The Coastal Zone Management Act's Coastal Nonpoint Program has a poor implementation record and receives minimal funding.
- Only one in five concentrated animal feedlot operations (CAFOs) in the U.S. has applied for a National Pollution Discharge Elimination System (NPDES) permit, despite their tremendous impact on water quality. The Administration has blocked a pending CAFO rule, and has done little to support further controls to slow the flow of agricultural wastes to inland and coastal waterways.

Coastal Development

- After a nearly 30-year tenure, the CZMA has failed to adequately protect critical coastal habitat and sensitive coastal resources. The effectiveness of state programs varies widely and funding has been limited. New approaches and a new vision are needed to protect critical coastal resources and support viable fisheries and wildlife.

Invasive Species

- Ballast water discharges from ships are a primary vector for invasive species. Invasive species threaten biodiversity by preying upon or out-competing native species, thereby reducing an ecosystem's diversity, threatening public health, and costing billions of dollars to coastal communities. Yet in the federal 2000 budget, agricultural invasive species management and research received 90 percent of the funds, whereas aquatic invasive species received only one percent.⁷
- In the San Francisco Bay estuary, over 234 non-native species are now established, and a new invasive species is discovered every 14 weeks. Ballast water from ships has accounted for 53 to 88 percent of the introductions to the Bay in the last decade.

Cruise Ship Pollution

- Every day, large cruise ships discharge hundreds of thousands of gallons of inadequately treated waste into some of the world's most sensitive marine ecosystems. Although these ships produce waste that equals that of many small cities, they are not subject to the same pollution control requirements. Moreover, the enforcement of existing laws and regulations – however weak – is inadequate.

⁷ "Aquaculture is 'Gateway for Exotic Species' Study Says," *Ocean Update*, December 2001, Sea Web.

Marine Debris

- Many people do not realize where their trash goes when it leaves their hands, homes, and boats. The simple act of releasing a balloon can have unintended consequences on marine wildlife thousands of miles away. Debris affects the water quality of aquatic habitats and can cause physical damage to coral reefs and seagrass beds, as well as to propellers, motors and other machinery of commercial and recreational boats.
- Derelict fishing gear represents the most serious threat to numerous endangered species, such as Hawaiian monk seals and North Atlantic right whales. Seabirds, sea turtles, and marine mammals can swallow other types of debris, including plastic bags and pellets, interfering with their ability to eat or digest food, breathe, or swim.
- Debris can also present a threat to human health. Children playing on a beach can be harmed by broken glass and other materials and divers can be caught in ropes and line. In 1988, medical waste, including syringes, began washing up on beaches in New York and New Jersey, alarming beachgoers.

Beach Water Quality

- In the year 2001, there were over 13,410 beach closings and advisories nationwide. In 87 percent of the cases bacteria associated with fecal contamination was to blame. Unfortunately, people remain largely uninformed about the condition of ocean and coastal waters in their own area, and therefore cannot make informed decisions about the water they use.

RECOMMENDATIONS

Nonpoint Source Pollution

- Congress should act to reduce polluted runoff by strengthening the Clean Water Act's TMDL program and should reauthorize the CZMA to include substantially increased, dedicated funding for state implementation and enforcement of Coastal Nonpoint Pollution Control Programs.
- EPA and Department of Agriculture should issue rules to control pollution from CAFOs through NPDES permits, nutrient management plans, enforcement, strong effluent limits, banning of open-air lagoons, and eliminating current regulatory loopholes.

Coastal Zone Management

- To combat unwise coastal development, the federal government should acquire and target acquisition of important coastal habitat for protection, withhold federal incentives such as those administered by the Federal Emergency Management Agency that enable or promote destructive development patterns for coastal development, institute growth measures geared toward protecting coastal habitat, and strengthen existing consistency provisions and polluted runoff controls in the CZMA.

Invasive Species

- EPA should implement the Clean Water Act's permit provisions with respect to ballast water in order to protect our ocean ecosystems from invasive species.
- The U.S. government should continue to lead the IMO toward a strong, enforceable international convention on ballast water management and implement its provisions upon ratification.

- The National Invasive Species Act should be amended to establish and strengthen treatment standards for ballast water and to better coordinate a partnership between Coast Guard's enforcement and monitoring authority under the National Invasive Species Act and EPA's existing Clean Water Act authority.

Cruise Ships

- Congress should enact national legislation to reduce and better regulate all cruise ship discharges, especially black water and gray water, to improve water quality, protect public health and safeguard sensitive marine ecosystems. The legislation should also require mandatory reporting and improved monitoring and inspection.
- EPA should develop and implement, and the Coast Guard should enforce, national effluent standards for cruise ships, remove regulatory exemptions for ballast water, reject proposals to substitute voluntary industry initiatives in place of regulations, strengthen clean air emission regulations, and regulate foreign flagged ships. EPA and Coast Guard should both increase enforcement efforts, expand the scope and frequency of inspections (including surprise inspections) and aggressively pursue enforcement cases against foreign flagged vessels.
- The Justice Department should seek higher penalties for cruise ship regulatory violations as a deterrent to future criminal conduct. The Department should also aggressively pursue enforcement cases against foreign flagged vessels.

Marine Debris

- The Administration should establish an interagency marine debris task force, chaired by EPA, charged with expanding and better coordinating national and international marine debris efforts, including removal, source identification, data sharing, monitoring, outreach and education, and enforcement.
- The Administration should support, and assist other countries in implementing, the Special Area designations under Annex V of MARPOL. The U.S should take the lead in the Wider Caribbean Region by implementing a regional solid waste management plan with other countries.
- The Administration should substantially increase funding for marine debris removal programs associated with derelict fishing gear, such as the Northwestern Hawaiian Islands Expedition. These expeditions should be run by the Department of the Oceans or independent ocean agency in cooperation with EPA, the Department of State, Coast Guard, industry and nongovernmental organizations, and international partners, and should be expanded to include other high-risk marine debris areas such as the Bering Sea and Caribbean. Additional funding should be directed nationally and abroad towards education, prevention and mitigation. The Department of State should work with the United Nations Food and Agriculture Organization and the International Maritime Organization to improve foreign participation in these and similar efforts.

Beach Water Quality

- EPA should develop stringent water quality standards to protect human health. Congress should fully fund and EPA should implement and support water quality monitoring programs, like the

Beach Act,⁸ to ensure comprehensive state and local monitoring of beachwater quality and prompt public notification when bacterial levels are exceeded.

- Controls on all sources of beachwater pollution should be tightened, especially controls on sewage overflows, polluted runoff, and urban stormwater. State and EPA controls of these discharges must be strengthened and enforced.

CONCLUSION

Thirty years ago, in response to the alarming and obvious degradation of waterways, Congress overwhelmingly passed the Clean Water Act and the Coastal Zone Management Act to restore the integrity and health of our nation's waters, and to effectively manage competing uses of the coastal zone. For the most part, the history of these laws has been one of tremendous success. However, the same history has provided us with clear insight as to where and how they have failed.

Today, some 40 percent of tested waters — including inland and coastal waters — fail to meet the mandate set forth by the Clean Water Act that all navigable waters of the United States be “fishable and swimmable.” The necessary course for protecting America's waterways and coasts is clear. We can ill afford to allow our waters to become any more polluted and must do a better job of addressing and controlling nonpoint source pollution, coastal development, the introduction and spread of invasive species, pollution from cruise ships, marine debris, and beach water quality.

⁸ Public Law 106-284.