



State of Florida's Ocean

Living on the Edge

Florida faces intense pressures because of increased development and the concomitant demand on ocean and coastal resources. We must develop policies and programs supporting efforts that include an ecosystem approach, focused research, increased public/private partnerships, and committed effort to educate Floridians about the ocean's importance.

Since 1999, the Florida Ocean Alliance (FOA) has advanced an awareness of the economic, social, and environmental importance of Florida's ocean and coastal resources to the state, the nation, and the world. It is a nonpartisan organization dedicated to bringing together government, academic, and private sectors in Florida to protect and enhance Florida's ocean and coastal resources for continued social, economic, and environmental benefits.

Florida is a peninsula of sand and limestone with over 1,300 miles of coastline wrapping around it. It has beaches, islands, swamps, urban tourist destinations and natural coastal areas. Florida's appealing climate and abundant natural resources have always attracted newcomers. Almost everyone, it seems, wants to be near the coast. Today, the state is populated by more than 15 million people, with 78 percent of them living in coastal counties. Growth is expected to continue unabated, with projections showing a population of 17 million people by 2010. In addition, tourism is a cornerstone of the state's economy, with upwards of 50 million people visiting each year. As these numbers climb, the impacts of both tourism and increased land development threaten the very qualities that attract people to Florida.

Now is a particularly relevant time for an examination of ocean and coastal issues by Florida government. Currently, the U. S. Commission on Ocean Policy is examining national ocean policy and developing recommendations to President Bush and the Congress about how to improve ocean resource management in this country. The following discussion outlines some of the more pressing ocean and coastal resource issues facing Florida today. It also includes recommendations for updating Florida's ocean and coastal resource management programs.

Setting the Milestones for Success

The uses of land and freshwater resources directly affect the health of near shore ocean environments, making it imperative that decisions regarding natural resources and human uses be integrated across terrestrial, freshwater, estuarine, and marine environments. The degree of relationship between land and freshwater uses and the marine environment is evident when looking at the decades of changes to the Florida Everglades. Because of extensive changes to the waters of the Everglades and the magnitude of their effects on contiguous marine watersheds, Congress recently passed the Comprehensive Everglades Restoration Plan and allocated record-breaking amounts to restoration efforts.

There is an increasing need for the state to develop a comprehensive strategic plan regarding ocean-based activities such as oil and gas exploration and production, mineral extraction, and recreational opportunities. Other economic development activities such as those involving port development, commerce and trade, navigation, boating, beach use and development, aquaculture, artificial reef development, recreational and commercial fishing, tourism, mineral development, military activities, and the space industry all have the potential to profoundly affect marine resources.

For all of these activities, coordination among local, state, and federal agencies, as well as with other states and nations in the region, is needed to ensure that Florida's economic base is maintained while minimizing the impact of development on ocean and coastal natural systems. There is also a need for partnerships that include government, private enterprise, and universities. Through public/private partnerships, the state can address a number of issues, including non-indigenous species introduction, vessel anchorages, dredging, offshore sand resources, and the protection of submerged natural and cultural resources.



Actions that would address issues described above include the following:

- ◆ Develop partnerships to allow the public and private sectors to work together for effective decision-making regarding ocean resource management. An example is the agreement to improve the regulation of hazardous waste disposal from cruise ships. On December 6, 2001, Florida, under the leadership of Florida Department of Environmental Protection Secretary David Struhs, entered into an agreement with the cruise ship industry, the U.S. Environmental Protection Agency, and nine other states. Instead of ships dealing with different hazardous waste reporting procedures at each port at which they stop, under the new agreement, ships must eliminate sewage discharges in state coastal waters and report the waste that is taken off ships at ports. This agreement is an excellent model to follow in forging public-private partnerships.
- ◆ Recognize that the ocean generates value to the Florida economy. Several industries and organizations, including ports, commercial fishing, and tourism, calculate the value contributed by their particular activity or interest. There is, however, no consistent, coherent view of the total value of ocean and coastal resources to Florida. An economic baseline of ocean and coastal assets is critical for making well-reasoned decisions about how to protect and sustain the health of the ocean and coastal environments and the state's economy.
- ◆ Collaborate among all levels of government to allow for shared decision-making about ocean activities that affect the interests of citizens of coastal states and communities. All levels of government should work together to reach decisions, and in so doing should include an equitable division of the costs and benefits associated with the impact of development of ocean resources.
- ◆ Pursue ocean management based on the best scientific understanding of ecosystem functioning and dynamics. The ocean's resources, including its species, watersheds, and ecosystems, form a foundation for the quality of life on earth—important for healthy human life, a healthy environment, and a healthy economy.
- ◆ Support national efforts such as the proposed Conservation and Restoration Act of 2000 (CARA) and the Coastal and Estuarine Land Acquisition Program created in the FY 2002 Appropriations Act. By matching scarce state funds for land acquisition and restoration programs, the legislation represents significant opportunity for reinvestment to preserve remaining ecologically sensitive coastal areas. In addition, Forever Florida and other land acquisition programs should make coastal areas priorities for acquisition and be used to match federal funds and further the protection of fragile coastal areas.

Stewardship

Continued health and vitality of ocean resources depend on achieving and sustaining diverse marine ecosystems that are capable of supporting multiple uses. Current pressures for land conversion and development continue to cause the loss and degradation of important habitat—including wetlands, estuaries, mangrove forests, coral reefs, and seagrass beds. Marine mammals, sea turtles, and seabirds are threatened by increased human interaction, pollution, and disruption of the ecosystems that provide their habitat.

Florida's waters contain a rich biological diversity, and its living marine resources provide significant economic, environmental, aesthetic, and cultural benefits. Fishing, one of the most important examples, brings substantial economic advantages to the state. Commercial and recreational fishing, seafood processing and wholesale facilities, and the aquaculture industry represent billions of dollars in economic impact.



But with the economic benefits come increasing challenges to protecting the health and vitality of the resources. The balance of delicate and complicated marine ecosystems is threatened by human encroachment, including pollution, ecosystem disruption, overfishing, and bycatch.

As our ocean and coastal areas become more threatened by pollution, habitat disruption, and overexploitation, the need for special designations — or marine protected areas — becomes more apparent. Florida continues to be a leader in marine protected areas. The Florida Keys National Marine Sanctuary is one of the country's the most successful efforts to balance resource protection with recreational, commercial, scientific, cultural, and educational uses.

In addition, a number of Florida estuaries are part of either the National Estuary Program or the National Estuarine Research Reserve System. Both of these programs use an ecosystem approach to balance resource protection and use and succeed due to partnerships at all levels.

Tools that address threats to living marine resources and the marine ecosystem in Florida include the following:

- ◆ Determine the adequacy of and, if appropriate, develop refinements to current water quality standards for bays, estuaries, and near shore waters.
- ◆ Establish innovative techniques for habitat protection, restoration, and enhancement. Include concepts related to marine protected area management, such as limited use areas, seasonal harvests, and no-take/no-fishing marine reserves on ocean and coastal resources and resource users.
- ◆ Establish or improve programs to address threats to marine ecosystem health by the introduction of non-indigenous species. Programs should include monitoring and tracking information, protocols for mitigation of effects, and the reduction of opportunities for the introduction of non-indigenous species into Florida waters.
- ◆ Work for more effective international management of highly migratory species, marine mammals, sea turtles, and sea birds.



forum for scientists to integrate their knowledge. Effort is needed to leverage existing capabilities and eliminate duplication of effort.

Finally, education regarding the importance of ocean and coastal resources is essential to their long-term health and sustainability. In Florida there are many individuals who are committed to our ocean and coastal resources and who volunteer untold hours toward activities such as cleaning up coastal areas, caring for injured marine mammals, or educating others about the value of marine resources. If this spirit of stewardship were to grow to include all citizens, the state could go far in preventing careless disregard for the conservation of the state's remarkable marine resources.

Research and Education

Scientists and researchers have learned much about marine resources, and that is particularly true in Florida. Florida has a large number of marine educational institutions and programs, aquaria, and research facilities. A number of environmental programs are offered by schools, private organizations, and state agencies. Many of the state's sixteen marine research laboratories are of world renown and include public and private universities, agencies, and institutions.

Nevertheless, there remains a great need for both natural and social science data, particularly in deep water and on a systems level. Significant gaps exist in our understanding of the quantity, quality, and value of ocean resources. Furthermore, although there is widespread recognition that many of the threats facing marine areas are the result of human encroachment upon the resources, there is still a need for significant improvement of our awareness of the impacts of human actions upon the ocean.

While Florida's ability to conduct marine research is significant, there is no comprehensive repository or guide to coastal and marine research data, and no consistent

The following strategies would address these issues:

- ◆ Implement a long-term, comprehensive inventory, monitoring, and assessment program to establish a baseline that would facilitate the analysis of resource change. This would also create an information base to allow managers to understand whether their strategies were effective in meeting their goals.
- ◆ Develop protocols for data management that encourages integration and exchange through use of Web-based technology and other means.
- ◆ Coordinate efforts to educate all citizens about the economic, environmental, and cultural importance of ocean resources, and support and encourage—through a sense of stewardship and volunteerism—greater public participation in the protection and conservation of ocean resources.
- ◆ Invest in Florida's internationally recognized public and private marine research institutes. Maintain and add new research vessels.



Time for Action

Currently, the National Commission on Ocean Policy is examining U.S. ocean policy and developing recommendations to President Bush and the Congress, making this an especially appropriate time for the Florida Legislature to address ocean policy for the state. The Florida Ocean Alliance urges Governor Bush and the Florida Legislature to consider the environmental and economic assets ocean resources provide the state. Further, the Alliance asks it to act boldly and take the necessary steps to improve ocean resource management so the state cannot only protect but also enhance the health of Florida's ocean resources and their strength as environmental and economic assets.

Florida is blessed with a rich abundance of ocean resources, as well as a wealth of ocean dependent

educational and business enterprises. There are, however, a number of challenges that make it difficult to maintain and even improve these ecological and economic assets. The Florida Ocean Alliance encourages Florida government to authorize a strategic vision for Florida's ocean and coasts.

Dr. Sylvia Earle, world-renowned scholar and explorer of the deep, is a daughter of Florida. She is a tireless advocate for the oceans and is passionately committed to raising the awareness of healthy and sustainable oceans to life on this planet.

When asked why she pursues her missions of discovery and advocacy with such zeal, she replies. "I care about our future. I have children. I have grandchildren. But even if I didn't, I would be very selfishly concerned about the future of our species. If we don't take care of the systems that take care of us, then our future is really in trouble."



111 E. Las Olas Blvd., AT 709
Fort Lauderdale, Florida 33301
www.floridaoceanalliance.org
Phone: 954-762-5255
E-mail: lalpert@fau.edu