OCEAN ACTION AGENDA

SUPPORTING REGIONAL OCEAN ECONOMIES AND ECOSYSTEMS

OCEAN PRIORITIES FOR THE TRUMP ADMINISTRATION AND CONGRESS

MARCH 2017

JOINT OCEAN COMMISSION INITIATIVE

> When deciding how to address the complex issues facing our oceans, coasts, and Great Lakes, our nation's leaders have two choices: they can govern by crisis or by leadership.
>
> Let's choose leadership.
>
> — The Honorable Leon E. Panetta

JOINT OCEAN COMMISSION INITIATIVE

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About this Report

This report was developed by the Joint Ocean Commission Initiative (Joint Initiative), a bipartisan group of senior leaders from industry, academia, and civil society, as well as former senior government officials, who represent diverse ocean and coastal interests.

In this report, also available online, the Joint Initiative recommends actions the Trump Administration and Congress should implement to effectively manage America's vast ocean, Great Lakes, and coastal resources to ensure a vibrant and healthy future. Development of these actions was informed by a series of Regional Ocean Leadership Roundtables in the U.S. Arctic and East, West, and Gulf Coasts. At these roundtables, the Joint Initiative brought together local, state, tribal, and national leaders representing diverse industry, government, and nonprofit interests to identify creative solutions to critical ocean and coastal issues. Click here to learn more about the outcomes from each roundtable.

About the Joint Ocean Commission Initiative

The Joint Ocean Commission Initiative (Joint Initiative) is a bipartisan, collaborative group of senior leaders who come together to call for concerted ocean policy action at the local, state, regional, and national level. Among groups working on ocean and coastal policy issues, the Joint Initiative is unique in its ability to provide high level, credible, bipartisan leadership and engagement. Since 2005, the Joint Initiative has served as a trusted advisor to Republican and Democratic administrations and members of Congress, brought together all sectors of the ocean community to identify urgent priorities, communicated recommended actions to decision makers, and educated and cultivated ocean champions. Over its tenure, it has established itself as a preeminent American voice for thoughtful ocean policy reform.

The Joint Initiative is guided by a 23-member Leadership Council that is co-chaired by the Honorable Norman Y. Mineta, former Secretary of Transportation and Secretary of Commerce, and the Honorable Christine Todd Whitman, former U.S. EPA Administrator and Governor of New Jersey. The Leadership Council includes former members of the U.S. Commission on Ocean Policy (2000-2004) and the Pew Oceans Commission (2000-2003) and additional leaders with experience in industry and commerce, government, academia, civil society, and scientific research at the local, state, regional, and national levels.

Meridian Institute serves as the secretariat for the Joint Initiative. Meridian is a nonprofit that specializes in helping diverse parties find collaborative solutions to the world's most pressing problems.

JOINT OCEAN COMMISSION INITIATIVE

Meridian Institute
Connecting People to Solve Problems

Joint Initiative Leadership Council Co-Chairs

Norman Y. Mineta – President and Chief Executive Officer, Mineta & Associates, LLC; former Secretary of Transportation (2001-2006); former Secretary of Commerce (2000-2001); Member of Congress (1975-1995)

Christine Todd Whitman – Founder and President, The Whitman Strategy Group; former Administrator, U.S. Environmental Protection Agency (2001-2003); former Governor, State of New Jersey (1994-2001)

Joint Initiative Leadership Council

Frances Beinecke – Senior fellow and former President, Natural Resources Defense Council

Donald Boesch – Professor of Marine Science and President, University of Maryland Center for Environmental Science

Lillian Borrone – Former Assistant Executive Director, Port Authority of New York and New Jersey; Member, U.S. Commission on Ocean Policy

Norm Dicks – Senior Policy Advisor, Van Ness Feldman; former Member of Congress (1977-2013)

Quenton Dokken – President and Chief Executive Officer, Gulf of Mexico Foundation, Inc.

Vice Admiral Paul Gaffney, U.S. Navy (Ret.) – President Emeritus, Monmouth University; Member, U.S. Commission on Ocean Policy

Robert Gagosian – President Emeritus, Consortium for Ocean Leadership

Sherri Goodman – Public Policy Fellow, Woodrow Wilson International Center for Scholars

Scott Gudes – Vice President of Government Affairs, American Sportfishing Association; former Deputy Under Secretary of Commerce for Oceans and Atmosphere (1998-2003)

Vice Admiral Conrad Lautenbacher – Chief Executive Officer and Director, GeoOptics, Inc.; former Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator (2001-2008)

Margaret Leinen – Director, Scripps Institution of Oceanography; Vice Chancellor for Marine Sciences and Dean, School of Marine Sciences, University of California, San Diego; U.S. Science Envoy for the Ocean

Christopher Lischewski – President and Chief Executive Officer, Bumble Bee Foods

Jane Lubchenco – Distinguished University Professor and Advisor in Marine Studies, Oregon State University; former U.S. Science Envoy for the Ocean; former Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator (2009-2013); Member, Pew Oceans Commission

Julie Packard – Executive Director, Monterey Bay Aquarium; Member, Pew Oceans Commission

Leon E. Panetta – Co-founder, The Panetta Institute for Public Policy; Former Secretary, U.S. Department of Defense (2011-2013); former Director of U.S. Central Intelligence Agency (2009-2011); former White House Chief of Staff (1994-1997); Chair, Pew Oceans Commission

John Pappalardo – Chief Executive Officer, Cape Cod Commercial Fishermen's Alliance; former Chair, New England Fishery Management Council (2006-2011)

Pietro Parravano – President, Institute for Fisheries Resources; Member, Pew Oceans Commission

Randy Repass – Founder and former Chairman of the Board, West Marine, Inc.

Andrew Rosenberg – Director of the Center for Science and Democracy, Union of Concerned Scientists; Member, U.S. Commission on Ocean Policy

William D. Ruckelshaus – Strategic Director, Madrona Venture Group; former Administrator, U.S. Environmental Protection Agency (1970-1973, 1983-1985); Member, U.S. Commission on Ocean Policy

Paul Sandifer – Research Associate and Director, Center for Coastal Environmental and Human Health, College of Charleston; former Senior Science Advisor to the NOAA Administrator; Member, U.S. Commission on Ocean Policy

Executive Summary

America's oceans and Great Lakes are the lifeblood of communities from the Arctic to the Gulf of Mexico. They provide services and resources that all Americans rely on for jobs, food, health, and recreation. Today, our oceans face unprecedented changes that create opportunities and pose challenges.

To better understand these changes and their impacts on coastal communities, the Joint Ocean Commission Initiative convened dozens of nonprofit, industry, military, and tribal leaders, as well as representatives from every level of government, in a series of Regional Ocean Leadership Roundtables in the U.S. Arctic and East, West, and Gulf Coasts. These leaders noted dramatic changes occurring along their coasts and off their shores. Some of these changes, like the widening of the Panama Canal and the opening of the Northwest Passage, create economic opportunities. However, coastal areas face increasing threats to infrastructure and natural systems. For example, Alaska is in the process of moving entire villages inland due to serious erosion, severe storms, and sea level rise. Coastal communities in the Gulf of Mexico and elsewhere are experiencing 100-year floods and storm surges regularly. To keep pace with these changes, the United States needs to renew its commitment to sound ocean policies and good governance, informed by science and research.

Based on the input from the regional roundtables, this *Ocean Action Agenda* includes specific actions that the Trump Administration and the Congress should take to effectively manage America's ocean and coastal resources. These recommended actions will help ensure a vibrant and healthy future for our country, an ocean and Great Lakes nation. The online report, available at oceanactionagenda.org, also features more than thirty stories from across the United States that highlight the importance of the oceans and Great Lakes to the lives of all Americans and underscore the dramatic impacts change is having on our oceans and coasts.

Our oceans are held in the public trust as a resource for all Americans, but they are facing unprecedented challenges. The Trump Administration and Congress must invest in coastal communities, incentivize and capitalize on a rapidly growing and evolving ocean economy, and protect and restore critical resources and ecosystems. Strong action by our nation's leaders will ensure the massive social, economic, and environmental contributions of America's oceans to our country are sustained and continue to grow. The recommend actions that are outlined below are essential to securing a future for our oceans and the health and wealth of our nation.

TO MAINTAIN THE ECOLOGICAL AND ECONOMIC PRODUCTIVITY OF OUR OCEANS, COASTS, AND GREAT LAKES, THE TRUMP ADMINISTRATION AND CONGRESS SHOULD:

Promote healthy and safe ocean, coastal, and Great Lakes communities and economies

- Make infrastructure investments that protect coastal communities
- Provide support for states and coastal communities to upgrade critical coastal infrastructure
- Significantly increase investments in port infrastructure
- Boost funding and support for cost-effective restoration and protection of critical coastal features
- Restore critical ecosystems in the Gulf of Mexico
- Provide states and coastal communities with tools and information about risks

Promote and support regional ocean collaboration

- Direct federal agencies to strongly support and closely coordinate with regional initiatives

Sustain leadership on international ocean issues

- Continue to demonstrate strong leadership by highlighting ocean issues in international forums
- Provide advice and consent to the Convention on the Law of the Sea

Close critical gaps in ocean science to spur economic growth

- Make substantial investments in ocean science infrastructure, research, monitoring, observation, and exploration programs
- Improve the collection, management, use, and accessibility of environmental and socioeconomic data to support public and private sector decision making
- Provide increased support for ocean education programs

Demonstrate leadership in the Arctic

- Invest in sustainable economic development to support Arctic communities
- Engage tribes and native communities and include indigenous knowledge in policy development
- Invest in critically needed environmentally sound infrastructure in the Arctic
- Implement a coordinated scientific research program in the Arctic with diverse partners
- Increase funding for federal agencies operating in the region, including the U.S. Coast Guard, NOAA, the National Science Foundation, and the U.S. Department of Defense
- Engage in multilateral efforts to address Arctic challenges and enhance international cooperation in the region

Sustain a healthy economy by supporting healthy ecosystems

- Invest in ocean acidification and hypoxia science and research and support multi-sectoral collaborative efforts to address the problem
- Continue progress in protecting ecologically and culturally significant ocean and coastal areas to improve fish stocks, food security, and resilience
- Use existing authority to fund and implement measures to improve water quality

Promote sustainable fisheries that support healthy ecosystems and coastal economies

- Maintain the U.S. government commitment to healthy and sustainable fisheries by effectively implementing the primary law governing U.S. fisheries
- Improve fisheries data collection and management by the National Marine Fisheries Service (NMFS)
- Prioritize combatting illegal fishing and improving seafood traceability
- Support the sustainable growth of the offshore aquaculture industry

Encourage sustainable approaches to offshore energy development

- Stimulate the production of offshore renewable energy through technology development, deployment, and regulatory consistency
- Implement the recommendations of the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling
- Encourage responsible collaboration between federal regulators and the oil and gas industry, specifically around information and data sharing

Provide consistent financial support for ocean and coastal priorities

- Capitalize a dedicated ocean investment fund to support sustained ocean research, management, and innovation.

Promote healthy and safe ocean, coastal, and Great Lakes communities and economies

Coastal communities need to be able to anticipate risk, limit impact from extreme weather events, rapidly recover, and adapt to dramatically changing conditions. Proper investments can help protect coastal communities and grow their economies.

In the United States, more than 40 percent of the population lives in coastal counties, which generate almost half of U.S. gross domestic product. Unfortunately, millions reside in areas at risk for coastal flooding, putting homes, families, and critical economic resources in harm's way. Increasing coastal flooding and more intense coastal storms threaten the lives and safety of coastal residents, the integrity of public and private infrastructure, and key industries. According to one study, if recent weather trends and the population growth of coastal counties continue, the damage caused by hurricanes and coastal storms could double every ten years, or faster. With so many people and valuable assets on the line, we must do more to help coastal communities prepare.

Make infrastructure investments that protect coastal communities

Any national infrastructure initiative should prioritize funding for projects that boost coastal resilience. This funding could be administered through a national infrastructure bank or other financing structure. In addition, new coastal infrastructure projects should build resilience into all aspects of design and engineering. This is critical for projects such as ports, roads, bridges, power grids, and wastewater treatment plants, among others. **The Trump Administration and Congress should prioritize financing for coastal resilience in any new national infrastructure initiative as a way to protect American communities, stimulate the economy, and create jobs.**

Provide support for states and coastal communities to upgrade critical coastal infrastructure

The population of coastal counties continues to grow alongside rapidly changing coastal conditions. Exacerbating these challenges, critical built infrastructure in coastal areas—including harbors and ports; roads, bridges, and tunnels; and wastewater treatment systems; among others—is outdated and overtaxed in many places. This poses significant risks to human health and safety, ecosystem health, and the economic vitality of coastal communities.

The Trump Administration and Congress should increase investment and support for critical coastal infrastructure so that coastal states and local communities can become more resilient to the impacts of coastal hazards, including extreme weather events, sea level rise, and other changes along the coast. The Multihazard Mitigation Council estimates that every dollar invested in mitigating the effects of storm surge on coastal communities saves the U.S. taxpayer four dollars in losses.

The deteriorated state of storm water and wastewater infrastructure is particularly pressing. In many places, it jeopardizes the safety of coastal communities' drinking water sources, local economies, and coastal and marine ecosystem health. **The Trump Administration and Congress**

should invest in upgrades to potable and wastewater facilities and fully fund safe drinking water and wastewater treatment programs under the Safe Drinking Water Act and the Clean Water Act.

Significantly increase investments in port infrastructure

American seaport activity accounts for more than 25 percent of the national economy. According to NOAA, approximately 95 percent of the nation's international trade travels through U.S. seaports. This activity fuels the economic engine not only of coastal states, but also well into the heartland. To support economic growth, a series of infrastructure investments need to be made. In 2013, the American Society of Civil Engineers gave U.S. port infrastructure a C rating, primarily because of poor connections to road and rail, and insufficient investment in dredging. These needs are particularly urgent in light of the recent Panama Canal expansion, which is changing patterns of global shipping and bringing larger vessels to East Coast ports. Our nation's large and small ports, particularly on the East Coast, will need dredging and additional infrastructure investments to remain viable and adequately support economic growth.

The Trump Administration and Congress should significantly increase investments in port infrastructure. Specifically, they should:

- Support the creation of a National Maritime Policy, coupled with the existing National Freight Policy, to fully realize the benefits of trade and the central role that American ports play in economic growth.
- Fully fund navigation safety efforts, including supporting maintenance of the NOAA PORTS® program.
- Fully fund navigation channel maintenance and development, including the beneficial use of dredged materials.
- Expand the capacity of U.S. ports to move cargo more efficiently by investing in infrastructure needed by larger vessels and in data and analysis on changing shipping patterns.
- Secure U.S. ports and waterside borders by providing U.S. Customs and Border Protection adequate staff to meet trade needs and the latest technology to ensure cargo is safe.
- Build port resilience and protect the environment by connecting ports to the electric grid, and helping them predict, plan, and adopt mitigation strategies for coastal erosion and sea level rise.

Boost funding and support for cost-effective restoration and protection of critical coastal features

Many natural features along the coastline provide important services for local communities. They serve to buffer against storm surges, purify water, provide habitat for important species, and offer recreational and tourism opportunities that are the foundation for many local economies. Such natural features include wetlands, dunes, mangroves, salt marshes, seagrass beds, and coral reefs. Protecting and restoring these areas are cost-effective ways to reduce the impacts of coastal hazards, such as storm surges, tsunamis, and coastal inundation exacerbated by sea level rise. The hands-on work required during restoration projects also creates jobs and provides a significant return on

investment for coastal economies. In fact, studies demonstrate that habitat restoration can produce economic benefits that are significantly greater than the initial dollars invested. A 2012 study found that NOAA's restoration projects created an average of 17 jobs, and as many as 33 jobs, for every $1 million invested—a much higher rate of job creation than in other sectors. **The Trump Administration and Congress should restore critical natural features of America's coasts to support local economies and protect our communities from hazards.**

Federal programs with proven records of success in protecting and restoring these important natural coastal features need ongoing support. Specific programs that require continued investment include NOAA's Coastal and Estuarine Land Conservation Program, NOAA Restoration Center's Community-based Restoration Program, the National Park Service's Land and Water Conservation Fund, the U.S. Coral Reef Task Force, and the National Estuary Program.

Restore critical ecosystems in the Gulf of Mexico

A major experiment is underway to see whether, with extensive resources and coordination, decades of environmental degradation can be reversed in the Gulf of Mexico. Settlement funds and criminal and civil penalties related to the 2010 Deepwater Horizon oil spill are providing the region with unprecedented resources for restoration. With these resources, the Gulf Coast has a unique opportunity to build a more sustainable and resilient future. However, the challenges facing the region are immense and long-term. Success will require continued leadership and attention from federal, state, and local officials to ensure that restoration efforts are conducted in a coordinated manner, use science-based planning and assessment, and are completed in a timely manner.

The Trump Administration and Congress should support collaborative restoration efforts, such as the Gulf Coast Ecosystem Restoration Council and the Deepwater Horizon Natural Resource Damage Assessment Trustee Council, to effectively and sustainably restore coastal economies and ecosystems in the Gulf of Mexico.

Provide states and coastal communities with tools and information about risks

States and coastal communities need more accurate information about the true magnitude of coastal risks, better tools to address them, and stronger incentives for action to reduce those risks. **The Trump Administration and Congress should support state and coastal community efforts to understand and address coastal risks.** Specifically, they should:

- Update flood maps and other decision support tools so that risks to the coasts are more transparent to coastal communities and residents, elected officials, and the private sector.
- Support the development and implementation of state and local plans that increase resilience. Recovery plans should assess the efficacy of rebuilding both natural and built structures, account for sea level rise and changing coastal landscapes, and update zoning laws and building codes.
- Reform the National Flood Insurance Program to better account for increasing flood risks, reduce incentives for building in flood-prone areas, and reduce repeat claims, while respecting homeowner investment and the cultural heritage of coastal communities.

- Provide incentives for action to reduce risks, such as building/rebuilding with appropriate setbacks, adopting resilient building codes, and/or implementing safeguards to withstand future storms. These actions may include choosing to not build/rebuild in areas identified as extremely vulnerable and providing appropriate support for displaced residents.

Promote and support regional ocean collaboration

Ocean ecosystems, including the marine species and ocean currents that help define their boundaries, span political jurisdictions, as do shipping lanes, fishing grounds, and other human uses. Accordingly, to be effective, ocean and coastal planning and management activities must be multi-jurisdictional and involve the full suite of government agencies and stakeholders that can bring resources, information, and expertise to the table. Improving ocean governance requires proactive coordination and collaboration in solving complex problems, advancing everyday management objectives, and reacting to crises, such as hurricanes or oil spills. More than a decade ago, the U.S. Commission on Ocean Policy and the Pew Oceans Commission strongly recommended a regional approach to managing America's oceans, coasts, and Great Lakes. They argued that regional collaboration is the best approach to improving ocean governance and managing marine resources. This is still needed today.

Direct federal agencies to strongly support and closely coordinate with regional initiatives

Regional scale, multi-sectoral collaborative approaches to ocean management are gaining momentum in the United States. The Northeast and Mid-Atlantic regions have led the way in developing and implementing the nation's first regional ocean plans by collaborating across federal, state, and tribal jurisdictions and engaging diverse stakeholders and the public. These plans outline a series of best practices and specific collaborative actions that federal agencies, states, tribes, and regional fishery management councils are implementing together to improve ocean management. Unique to regional ocean planning, federally recognized tribes that choose to participate in the process have a seat at the table and can be actively involved in sharing information, developing best practices for early coordination, and collaborating on specific management issues.

Regional ocean plans address traditional (e.g., fishing, recreation) ocean activities and emerging ocean uses (e.g., offshore wind power, offshore aquaculture) with the goal of protecting ecosystems and human health, fostering sustainable ocean uses, and improving the compatibility of ocean management, protection, and uses. These plans inform and improve decision making under existing authorities and support open, transparent dialogue among those who manage competing uses in the ocean. Because government funding is limited, regional collaboration helps federal, state, and tribal agencies leverage the resources they do have to magnify and enhance their ability to meet shared objectives. To leverage resources, regional leaders should:

- Identify and support common research needs.
- Improve information available for environmental and regulatory reviews.
- Increase collaboration and transparency across agencies and institutions.
- Inform and improve management decisions.

The Trump Administration and Congress should support implementation of current regional planning efforts and the development of additional regional efforts to coordinate ocean activities. Ongoing federal leadership and support for implementation will be vital to the success of these efforts. This support should include coordinating federal agency data and information sharing, ensuring efficient decision making across jurisdictions, championing stakeholder engagement on regional scales, and continuing support for the collaborative processes that underpin the progress being made.

Federal leadership is also needed to help new regions seize the opportunity for collaborative planning. Given that human activities, marine life, and other key components of the marine system span regional boundaries, federal leadership is needed to ensure that regions coordinate with one another.

Ultimately, efforts to better understand complex ocean resource challenges, share data and information, and coordinate decision making on a regional scale have enormous potential to produce tangible economic benefits for ocean and coastal ecosystems and the industries, ocean users, and coastal communities that depend on them.

Sustain leadership on international ocean issues

The problems facing America's oceans are global in their severity and scope and, thus, require global solutions. The United States has the world's largest Exclusive Economic Zone, one that touches the Arctic, Pacific, and Atlantic Oceans, the Gulf of Mexico, and the Caribbean; the world's largest navy; and the strongest marine science enterprise. As a result, the United States is uniquely positioned to lead the world on ocean issues, thereby strengthening our economy and national security. The United States has been a global leader on oceans, for example, by serving as Chair of the Arctic Council, promoting innovative solutions to international fishing issues, and convening the first Our Ocean Conference in 2014, as well as the third conference in 2016, which brought unprecedented attention to ocean issues and increased global commitments to responsible ocean management. Yet, there remain opportunities for improvement. For example, U.S. diplomats have not included ocean and marine issues in international climate discussions and negotiations despite their fundamental role in the global climate system. Nor has the U.S. Senate ratified the Convention on the Law of the Sea, an essential treaty on global ocean governance. As we confront a changing ocean, increased international coordination and collaboration is vital to the U.S. national interest.

Continue to demonstrate strong leadership by highlighting ocean issues in international forums

In recent years, the nations of the world made significant progress on marine debris, ocean conservation, and sustainable fisheries, in large part due to U.S. leadership. The Our Ocean Conference was first convened by the United States in 2014, by Chile in 2015, and by the United States again in 2016. The European Union, Indonesia, and Norway have committed to hosting the next three conferences, respectively. These conferences bring together senior leaders of governments, the private sector, NGOs, and philanthropic organizations to commit to action on pressing ocean and coastal issues. The previous three conferences have resulted in almost $10 billion in financial commitments to address ocean issues, including support for international actions to combat illegal, unreported, and unregulated fishing and protect ecologically significant areas. This is an important arena where U.S. leadership is spurring other countries to invest in the future of the world's oceans. For this reason, **the United States should continue to support, participate in, and host international dialogues regarding actions that benefit the nation and result in measurable progress on our most pressing global ocean issues**.

Our planet's climate is undergoing massive changes that are impacting people around the world. The ocean, which covers 71 percent of the planet's surface, is experiencing rapid and potentially devastating change. It has absorbed half of all fossil-based carbon released into the atmosphere since the beginning of the Industrial Revolution. The consequences of this include ocean acidification, sea level rise, species migration, and other measurable impacts. For this reason, **the United States should prioritize inclusion of ocean issues in future international climate discussions.**

Provide advice and consent to the Convention on the Law of the Sea

The Convention on the Law of the Sea is a comprehensive international accord to which 155 nations and the European Union belong. It establishes overarching common sense rules about the world's oceans and resources, including the Arctic. As the only industrialized nation not party to the Convention, the United States remains sidelined in ongoing dialogues about access to and management of Arctic resources, and limited in its ability to address escalating tensions in the South China Sea. By participating in the Convention, the United States would secure sovereign rights over extensive marine areas, promote international commerce, protect America's national security interests, and further the conservation of ocean resources. A broad, diverse, and bipartisan range of interests overwhelmingly supports U.S. accession to the Convention. All major U.S. ocean industries, including offshore energy, maritime transportation and commerce, fishing, and shipbuilding support accession, as does the U.S. Chamber of Commerce. Environmental, research, and faith-based organizations also strongly support the Convention. **The U.S. Senate should ratify the Convention on the Law of the Sea as soon as possible in the new Congress.**

Close critical gaps in ocean science to spur economic growth

In recent years, China, Japan, and the European Union have made significant investments in ocean science and now have capabilities roughly equal to those of the United States. Meanwhile, the U.S. continues to face a serious shortage of fiscal support for ocean science, research, education, exploration, monitoring, and observation. Investments in ocean science, research, and improved data management spur innovation and economic growth, address domestic and global challenges, inform responsible resource management, support private sector decision making, save lives, and protect property.

Make substantial investments in ocean science infrastructure, research, monitoring, observation, and exploration programs

Our planet's oceans are closely linked to its land and climate, interacting in dynamic ways that we do not fully understand. These interactions have significant impacts on American communities, our economy, and the health and productivity of marine ecosystems. Our existing ocean and coastal science infrastructure is limited in its ability to understand and predict natural variability and human impacts on physical, ecological, and biogeochemical processes. The infrastructure necessary to provide adequate data and forecasts to guide public and private decisions also needs improvement.

Previous investments in ocean science and research technologies have reaped important benefits. They have generated innovation, addressed important national and global challenges, created new economic sectors and associated jobs, and developed technologies that save lives and protect property. For example, information collected using high-frequency radar about the speed and direction of ocean currents has improved the accuracy of Coast Guard search and rescue operations.

Increased investment should include support for developing and maintaining a comprehensive ocean and coastal observing system as a key component of the current Earth observing system. It should also include modernization of NOAA's research vessel fleet to support a variety of important research, monitoring, and exploration programs.

The continued shortage of fiscal support for ocean science, research, monitoring, observation, and exploration is shortsighted. Federal investment is needed to take advantage of new technologies for the benefit of the American people, the economy, and our ocean ecosystems. **The Trump Administration and Congress should increase investments in ocean science, research, monitoring, observation, and exploration to support informed public and private sector decision making that is essential to our economy and environment.**

Improve the collection, management, use, and accessibility of environmental and socioeconomic data to support public and private sector decision making

America's data infrastructure is crucial to decision making on a host of activities related to our oceans, coasts, and Great Lakes, including setting fishery catch limits, siting activities such as oil and gas drilling, and replenishing beaches, to name just a few. Improving data infrastructure is not as simple as collecting more data; too often data are either inaccessible or not applicable to the question at hand. Innovative open data projects, such as the Mid-Atlantic and Northeast regional ocean data portals or the Marine Cadastre, are able to combine multiple types of data from federal agencies, state governments, tribes, and nongovernmental and private sector scientists. These collaborations make the latest quality data available for practical use by a wide range of stakeholders. This offers benefits for the public and private sectors alike, as proponents of offshore economic activities and resource managers can better understand the range of existing activities and resources that must be taken into account early in decision making. **To improve the information available for public and private decision making, the Trump Administration and Congress should**:

- Declassify appropriate federal government datasets and combine them with existing publicly available information.
- Support the collection of socioeconomic information to help resource managers and private industry better understand the many ways that Americans use and rely on our oceans and Great Lakes.
- Amass relevant economic data to better characterize ocean industries, including updating the North American Industry Classification System (NAICS), which classifies business activities.

Support open data projects related to coastal and marine management to increase transparency and accountability and facilitate better public and private sector decision making.

Provide increased support for ocean education programs

Informed citizens are foundational to good governance and the health of America's oceans. From the application of excess fertilizers, pesticides, and herbicides on residential lawns, to the litter that washes into rivers and coastal waters, to the choices recreational boaters and fishermen make while enjoying their free time, daily behaviors affect the quality of our marine environment. An informed and educated population can support stewardship of our shared resources, sustained investment in sound science and management, and appropriate policy changes when needed. Ocean education can take place in a variety of forums, including public aquariums, which are visited by millions of families every year, providing a unique opportunity to inform people about the importance of America's oceans and coasts.

In 2007, Congress passed the America COMPETES Act to address the shortage of funding for science and research education and prepare workers for high quality jobs. Among other things, the Act provided support for ocean-related education. **Congress and the Administration should build on America COMPETES, increasing support for ocean education programs and reinstating aquarium education grants** that provide educational experiences to aquarium visitors on a variety of important topics.

Demonstrate leadership in the Arctic

The Arctic region—which includes the Bering, Beaufort, and Chukchi seas and the Arctic Ocean—is vital to U.S. interests, the global economy, and national security. The Arctic is also an environmental bellwether for the rest of the world and is changing faster than anywhere else on Earth. Such rapid change has broad implications for America's economy, environment, and security. Economic opportunities as well as social and environmental challenges must be anticipated and managed effectively to maximize gains and minimize losses. Changes already affecting human communities include reduced food security (due to the loss of whaling, sealing, and other native harvesting practices), more severe storm damage, and increased local environmental threats from new activities. In some cases these compound stressors and the threat of mounting impacts from climate change necessitate the planned relocation of entire communities. Nonetheless, job creation and improved coastal economic prosperity are on the horizon in the Arctic. To realize these gains, however, more attention and investment are needed to create a sustained economic development program, repair and upgrade critical infrastructure, and conduct more scientific research. These actions need to be carried out in close coordination and consultation with Alaska Natives. Given the strategic importance of the Arctic, the United States must make the region a priority.

Invest in sustainable economic development to support Arctic communities

As melting sea ice opens up new passages in the Arctic Ocean and surrounding seas, the region is preparing for the expansion of shipping, naval activities, commercial fishing, tourism, possible oil and gas development, and other activities. Rapidly increasing activity raises numerous questions about how to best manage the region's oceans and coasts to support local people and the environment, and to advance national interests. Given the possibility of oil and gas development, increased tourism, and other economic activities in the Arctic, improved infrastructure and better emergency preparedness procedures are essential. This includes having robust response and recovery strategies in place for potential oil spills and other disasters as well as equipment that is tailored to extreme Arctic conditions.

Fortunately, tremendous work has already been done by federal, state, local, and tribal entities to start preparing for changing conditions in the Arctic. **The Trump Administration and Congress should build on progress to date and take immediate action to support sustainable economic development in the Arctic**. Specifically, they should:

- Implement and build upon existing expert recommendations in the *National Strategy for the Arctic Region*, the Alaska Arctic Policy Commission report, and the U.S. Coast Guard's Port Access Route Studies.
- Implement the International Maritime Organization's Polar Code.
- Designate maritime economic zones and marine protected areas.

Given the magnitude of changes in the Arctic, policymakers need to work proactively to create a sustainable future that provides economic opportunities for the region.

Engage tribes and native communities and include indigenous knowledge in policy development

Alaska Native communities have lived for millennia in one of the most challenging environments on Earth, and yet are among the most vulnerable to the impacts of a changing climate. A combination of warming temperatures, retreating sea ice, and sea level rise are fundamentally altering the way of life for Arctic coastal residents. Diminished sea ice has disrupted whale, walrus, and seal harvesting, reducing food security and impairing longstanding cultural traditions. The changing environment also threatens to undermine critical infrastructure, such as wastewater treatment systems, telecommunications, roads, and the availability of potable water.

At the same time, many of these communities will have economic opportunities that did not exist before. For example, the retreat of sea ice also creates opportunities for commercial fishing and shipping in the Arctic. For Alaska Natives, it is essential to link discussions about economic growth to community survival, resilience, and success. Alaska Native voices and traditional knowledge must be featured prominently in policy decisions to protect subsistence economies and native traditions, using both formal and informal consultation mechanisms. **The Trump Administration and Congress should actively engage tribes and native communities in the Arctic in strategies to address a dramatically changing Arctic**.

Invest in critically needed environmentally sound infrastructure in the Arctic

While the opening of the Arctic due to melting sea ice presents many opportunities for commerce, it also highlights the urgent need for critical infrastructure investments. Specifically, **the Trump Administration and Congress should invest in Arctic infrastructure** including: a permanent Coast Guard presence and enhanced search and rescue capacity, port improvements, modern water and sewer systems, telecommunications, access to new energy resources, oil and chemical spill prevention and response, and coastal erosion and storm surge protection. This infrastructure will help boost local economies, protect the environment, and protect human life and property. This is particularly important because rising temperatures and melting permafrost are fundamentally changing coastal and inland landscapes, affecting the availability of stable land for construction, transportation, and human habitation.

Implement a coordinated scientific research program in the Arctic with diverse partners

Monitoring efforts and scientific research are needed to understand the changing Arctic, including migrating fish stocks and trends in weather and climate patterns that could have significant economic, environmental, and human health impacts. Building this knowledge base will require significant investments in research infrastructure and monitoring programs. **The Trump Administration and Congress should enhance our scientific understanding of Arctic marine ecosystems with an Arctic research program** that includes:

- Baseline assessments of environmental conditions and basic charting and mapping.

- Increased understanding and incorporation of socioeconomic information and traditional knowledge sources in decision making.
- Enhanced ecological monitoring, including ocean observing systems.
- Comprehensive predictive modeling to inform proactive policy responses appropriate to future conditions.
- Risk assessments and scenario planning for various activities.
- Establishing an international Arctic forecasting center to improve weather and ocean forecasting.
- Establishing a national center for Arctic oil spill research.

Given declining federal budgets, more needs to be done to avoid duplicating efforts, coordinate research activities, and pursue public/private partnerships and joint funding opportunities. For instance, the Trump Administration should work with a diverse range of potential partners, including the oil and gas industry and other commercial interests, nongovernmental organizations, state government, coastal and tribal communities, other nations, and other interested stakeholders to assess challenges, identify research priorities, and develop coordinated solutions. It should build on the *Interagency Arctic Research Plan: FY2017-2021*, and on the US Arctic Research Commission's *Report on the Goals and Objective for Arctic Research 2017-2018*, which provide a strong foundation to guide public and private investment in Arctic science. Greater support must also be provided to implement the Arctic observation network to improve management of human activities in this sensitive ecosystem before environmental and cultural damages occur.

Increase funding for federal agencies operating in the region, including the U.S. Coast Guard, NOAA, the National Science Foundation, and the U.S. Department of Defense

The U.S. Coast Guard is responsible for monitoring activities in the maritime environment and responding to emergencies, including search and rescue missions and oil spill disasters. The Coast Guard it is not adequately equipped to carry out these missions in the Arctic, and currently relies on partner agencies and industry to support any sustained operations in the region. Funds are needed to maintain the aging fleet of Coast Guard aircraft and vessels, as well as to acquire new ones. In addition, infrastructure must be developed along the northern Alaskan coastline to sustain even basic shore-based operations. **The Trump Administration and Congress should increase funding for federal agency activities in the region, particularly U.S. Coast Guard operations.**

The state of the U.S. icebreaker fleet is of particular concern and has garnered national attention. The United States has just two Arctic icebreakers in service: the Coast Guard Cutter *Healy*, which is often used as a platform for scientific research, and the Coast Guard Cutter *Polar Star*, which is the only heavy icebreaker in the fleet. Compared to other countries, the United States is sorely behind. Russia, for example, has an estimated 40 active ice breaking ships with several more under construction. The United States has not added a new icebreaker to its fleet since 1999. New icebreakers are needed for safety and security applications and to support Arctic communities with life-sustaining services, such as clearing paths for tankers transporting vital supplies. Since it takes

approximately ten years to build an icebreaker, **Congress should immediately invest in the construction of new icebreakers.**

The Trump Administration should also strongly support the activities of other key federal agencies in the region. NOAA, the U.S. Department of Defense, and the National Science Foundation need to be both supported and encouraged to collaborate with state and local governments, Alaska Native governments, and industry. Such collaboration will improve the ability of commercial entities to operate safely in the region and ensure effective response and recovery in the event of a natural or human-caused disaster. Specific needs include improved communication and coordination; oil spill planning, preparedness, and response; vessel tracking; search and rescue; and investment in new icebreakers, aircraft, and shore-based infrastructure.

Engage in multilateral efforts to address Arctic challenges and enhance international cooperation in the region

In 2015, the United States assumed chairmanship of the Arctic Council, a high level intergovernmental forum to enhance cooperation, coordination, and interaction among the Arctic nations in conjunction with indigenous peoples. The United States has worked diligently throughout its chairmanship to improve economic and living conditions and safety and security in the region. The Council also provides a forum to address environmental stewardship and the impacts of climate change. In 2017, the chairmanship will pass from the United States to Finland.

Through the passing of the chairmanship and beyond, **the Trump Administration should continue America's strong and focused commitment to addressing Arctic challenges**. Through the Arctic Council and other multilateral mechanisms, there is a timely opportunity to strengthen diplomatic efforts and relationships that exist across the Arctic. In particular, the Arctic has been one area where the United States and Russia have continued to cooperate despite tensions in other contexts, a dynamic that the Trump Administration should build upon.

In particular, the United States should work in partnership with other Arctic nations to:

- Coordinate and enhance scientific research.
- Improve planning, communication, and coordination of economic activity in the region.
- Implement search and rescue and oil spill response agreements.
- Strengthen diplomatic efforts and relationships between the United States, Canada, and Russia.
- Conduct detailed risk analysis and mitigation exercises.

Sustain a healthy economy by supporting healthy ecosystems

America's oceans, coasts, and Great Lakes provide critical goods and services, including food, minerals, transportation, medicines, storm protection, tourism, and recreational opportunities. Coastal counties, which produce almost half of our GDP and one in 50 jobs, are directly dependent on the resources of the oceans and the Great Lakes. The important role that healthy oceans play in sustaining coastal communities and economies must be at the forefront of ocean policy decision making going forward. This includes the effects of multiple, compounding stressors including warming ocean temperatures, acidification, and hypoxia, which are threatening ecosystem function. Addressing these challenges and securing the vitality of our coastal economies requires investing in ocean acidification and hypoxia research, developing collaborative management approaches to tackle compound problems, protecting ecologically important areas, and land-based strategies to reduce water pollution.

Invest in ocean acidification and hypoxia science and research and support multi-sectoral collaborative efforts to address the problem

Scientific studies show the oceans are acidifying at an alarming rate with potentially massive consequences to the marine ecosystem and associated economies. For example, it is well documented that acidifying waters interfere with the growth and development of marine organisms, such as oysters, that use calcium carbonate to build their shells or skeletons. As a result, there is increasing concern that oysters, mussels, crabs, and other commercially and recreationally harvested bivalve and crustacean species are being negatively impacted by ocean acidification. Many of the species most likely to be impacted are foundational to the marine food web, and their loss could have massive ripple effects throughout marine ecosystems.

The Trump Administration and Congress should invest in ocean acidification science and research and support efforts at the state and regional level to coordinate research, help affected industries, and mitigate the causes of ocean acidification.

While the problem of ocean acidification is daunting, the Washington State Blue Ribbon Panel on Ocean Acidification offers one potential model for improving scientific understanding of ocean acidification and developing a policy response. The panel identified gaps in scientific knowledge and recommended coastal ecosystem management strategies to mitigate some immediate threats and improve the resilience of the industry. The Washington State Legislature acted upon these recommendations by supporting increased monitoring and research and creating the University of Washington's Ocean Acidification Center and the Washington Marine Resource Advisory Committee to continue to focus on science and mitigation. On a regional level along the West Coast, a similar effort is underway in the form of the West Coast Ocean Acidification and Hypoxia Science Panel.

States are also teaming up on the East Coast to monitor and address the issue, (e.g., in the Mid-Atlantic region). Several states are considering establishing panels of their own to address ocean

acidification and hypoxia, including New Hampshire, Rhode Island, Maine, and Maryland, while New York recently passed legislation creating its own ocean acidification task force. While there is still a need for additional resources to study and understand ocean acidification, it is equally important to develop ways to mitigate the impact acidification has on vulnerable marine species, and to address these issues on a regional basis.

Continue progress in protecting ecologically and culturally significant ocean and coastal areas to improve fish stocks, food security, and resilience

As the number of ocean uses expands, so does competition for limited ocean and coastal resources. This expansion offers great opportunities, but it also creates challenges for ocean users trying to do business in a crowded ocean that is undergoing profound ecological change. Protecting ecologically important ocean areas can improve fish stocks, bolster food security, build resilience, and promote marine biodiversity. It can also buffer against the impacts of rapidly changing ocean conditions by providing areas for regeneration of marine species and improve resource management by serving as benchmarks for undisturbed natural ecosystems. Meanwhile, protecting areas of cultural significance preserves America's heritage, and can bolster tourism, recreation, and quality of life for a wide range of Americans.

Important ocean, coastal, and Great Lake ecosystems can be protected through a variety of mechanisms that confer varying levels of protection. These mechanisms can range from executive actions to legislation, and can be enacted at the federal, state, or local levels. Protected areas limit activities that damage ecosystem health, while providing opportunities for recreation, tourism, and other ocean uses. The vast majority of marine protection in the United States allows for multiple uses to occur. Across all national marine sanctuaries, for example, commercial fishing, recreation, tourism, and research generate about $8 billion annually in local coastal and ocean dependent economies. Accordingly, the process for creating protected areas should be flexible and include extensive stakeholder engagement to determine areas suitable for protection and the types of activities permitted therein. **The Trump Administration and Congress should protect ecologically and culturally significant ocean and coastal areas in ways that allow for multiple uses, where appropriate.**

Use existing authority to fund and implement measures to improve water quality

Nonpoint source pollution is a major cause of water quality degradation in coastal and Great Lakes watersheds. It takes many forms, including agricultural runoff, oil from both land-based and marine sources, sewage, storm water overflows from municipalities, and plastic pollution. It often travels vast distances in fluid or atmospheric forms before reaching ocean waters. Because of its diffuse nature, nonpoint source pollution poses a particular challenge for regulators and regulated communities.

The effects of this pollution include human illness due to contaminated beaches and seafood; harmful algal blooms and hypoxia; shellfish bed closures; and degraded or destroyed coral reefs and seagrass. Nonpoint source pollution may also contribute to ocean acidification. Our failure to properly manage inputs from a variety of land-based and marine activities that contribute nonpoint

source pollutants is compromising the ocean's ecological integrity, costing jobs, and threatening human health. For example, harmful algal blooms cost the economy an average of $75 million annually as a result of fisheries closures, tourism revenue losses, adverse public health impacts, and increased monitoring costs. A comprehensive, multi-jurisdictional approach to assess and address the causes of degraded quality in coastal waters will require a significant commitment of resources and the political will to enforce stricter measures and provide incentives to manage these diffuse sources of contamination. **The Trump Administration and Congress should implement and fund measures required under the Clean Water Act and the Coastal Zone Management Act to reduce nonpoint and other sources of pollution.**

Promote sustainable fisheries that support healthy ecosystems and coastal economies

Commercial and recreational fishing is big business in the United States. The commercial seafood industry, which includes a long supply chain from commercial fishermen to seafood processors to markets, supports more than one million jobs and generates about $50 billion in sales annually. Meanwhile, the recreational fishing sector accounts for approximately 46 million Americans fishing in both fresh and saltwater, making it one of the most popular outdoor activities. In addition, recreational fishing supports more than 800,000 jobs. Fishing is important to our economy and our culture, so our fish stocks must be managed sustainably to ensure that current and future Americans are able to benefit from the bounty of the oceans and Great Lakes.

Since 1976, we have seen tremendous progress toward creating and maintaining sustainable fisheries domestically and internationally. Much of this progress can be credited to the passage and implementation of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens). The U.S. model of fisheries management has become an international guidepost for sustainable fisheries practices. The United States has achieved significant gains in rebuilding domestic fisheries and ending overfishing through the commitment and tireless efforts of U.S. fishermen, regional fishery management councils and commissions, scientists, and managers. Opportunities also exist to grow domestic fish production by advancing sustainable offshore aquaculture. In addition, NOAA and other federal agencies are carrying out important initiatives to combat illegal, unreported, and unregulated fishing on a global scale. The end of chronic overfishing means healthier ocean ecosystems and a brighter future for fishermen and coastal communities here in the United States and around the world.

Maintain the U.S. government commitment to healthy and sustainable fisheries by effectively implementing the primary law governing U.S. fisheries

Congress should strengthen America's commitment to healthy, sustainable fisheries by continuing to support the implementation of the Magnuson-Stevens Act. The Act is the nation's premier fisheries management legislation; it created a framework for fisheries management that brings together the combined knowledge of fishermen, scientists, and managers to inform decisions at the regional level. The Act also set the stage for ending overfishing by requiring catch limits for all federally managed fisheries. In the last 15 years, the number of federally managed fisheries with overfished stocks dropped by two-thirds, and 39 fisheries have been rebuilt. A renewed and strengthened commitment to the Act that made this success possible is essential for ensuring healthy fisheries into the future. In addition, as countries around the world struggle with the declines of their fisheries, the United States can play a key leadership role. The United States should share the lessons we learned about effective fisheries management practices, continue to offer guidance on how to end overfishing, and lead an international strategy to combat illegal, unregulated, and unreported fishing.

To support these aims, the Magnuson-Stevens Act remains the strongest tool at our disposal to protect the health and productivity of America's fisheries. **If our nation's leaders decide to reauthorize the Magnuson-Stevens Act, Congress should maintain and strengthen the key elements that have led to measurable fisheries improvements.** Specifically, Congress should:

- Maintain the focus on preventing overfishing.
- Ensure that management decisions are based on the best available data and scientific research.
- Support the innovative policies that have led to the recovery of U.S. fish stocks.
- Facilitate the sharing of lessons and best practices from U.S. fisheries policy abroad.

Improve fisheries data collection and management by the National Marine Fisheries Service (NMFS)

Fisheries data, including data collected through vessel logbooks, catch sampling programs, and scientific surveys, are essential to sound management of U.S. fish stocks. These data are essential to fishery managers and are also used by fishermen, bankers, and civil authorities to make a wide range of economic decisions. There is significant concern among these and other stakeholders that data collected by NMFS are not accurate or complete. **The Trump Administration and Congress should improve fisheries data.** Specifically, they should:

- Encourage scientists and representatives from the public and private sectors to collaborate.
- Invest in new technologies to enhance data collection.
- Carefully evaluate data collection requirements to ensure that the data fishermen collect are useful to scientists and managers.
- Improve and modernize data collection for recreational fisheries.

Prioritize combatting illegal fishing and improving seafood traceability

Illegal, unreported, and unregulated (IUU) fishing introduces unfair competition that hurts the American fishing industry and undermines the sustainable management of our fish stocks. In addition to environmental and economic concerns, IUU fishing is linked to a series of growing national security risks, such as transnational organized crime, drug and human trafficking, terrorism, and international maritime disputes. **The Trump Administration and Congress should lead efforts to address illegal fishing** by doing the following**:**

- Fully implement the recommendations of the Presidential Task Force on Combating IUU Fishing and Seafood Fraud.
- Support the development and deployment of new technologies to monitor illegal fishing.
- Strengthen the capacity of international partners to combat illegal fishing.

Over the last several years, the Administration and Congress have made significant progress in combating IUU fishing policies. For example, the Safe Ocean Network was recently formed to combat IUU fishing by coordinating action and sharing knowledge among 46 governments and

organizations. Notably, Congress passed legislation to implement the Port State Measures Agreement. The agreement requires party nations to take a number of steps to combat IUU activity, including denying port entry and access to port services to foreign fishing and transport vessels that have harvested fish illegally. Additionally, in 2016 NOAA announced seafood traceability rules designed to address seafood fraud in the United States. While these are important milestones, many of these initiatives will need continued political and financial support to realize their full potential.

Support the sustainable growth of the offshore aquaculture industry

While immense progress has been made in rebuilding domestic wild fishing stocks, seafood consumption is expected to grow beyond what wild fish stocks can sustain. To grow a domestic aquaculture industry, the United States must develop a more streamlined and efficient regulatory framework to mitigate concerns about environmental issues and conflicts for space in an already crowded ocean. **The Trump Administration and Congress should support progress toward a thriving domestic aquaculture industry** by implementing NOAA's *Marine Aquaculture Strategic Plan* and streamlining the regulatory process.

A strong domestic offshore aquaculture industry would provide two principle benefits. First, it would provide much needed food security. The United States currently imports approximately 90 percent of the seafood consumed domestically by value. Since U.S. production falls short of domestic demand and global demand is growing, competition for wild fish stocks is increasing. Second, a well-managed domestic aquaculture industry would create thousands of jobs and contribute to the overall growth of the U.S. economy.

Encourage sustainable approaches to offshore energy development

America's oceans, coasts, and Great Lakes, with their vast reserves of oil and gas, opportunities for offshore wind generation, and prospects for other more nascent forms of renewable energy production, are a significant current and potential source of domestic energy. Offshore oil and gas production has continued to grow, furnishing a vital source of domestic energy. Meanwhile, the first offshore wind turbines in the United States are now generating power off the coast of Rhode Island, providing proof of concept for the dawn of a new industry. Several areas along the East Coast have been leased for offshore wind development, and additional planning efforts are underway in state and federal waters. Decision makers should capitalize on these opportunities to maintain and expand appropriate options for offshore energy production. In the long term, the United States needs a comprehensive national energy policy that includes a road map for how ocean-based energy resources can be developed in a safe, environmentally responsible, and economically beneficial manner.

Stimulate the production of offshore renewable energy through technology development, deployment, and regulatory consistency

Almost 80 percent of electricity demand in the United States is located in coastal states. Offshore energy sources, particularly wind power, have the potential to meet that demand. Offshore renewable energy development can provide opportunities to create innovative partnerships, streamline the regulatory process, and use integrated ecosystem management tools to effectively, safely, and efficiently advance offshore energy technologies.

In 2016, the Department of the Interior and the Department of Energy released a joint report laying out a national strategy for developing offshore wind energy. The report contains more than 30 actions that can be taken by the federal government to encourage the private sector to develop offshore wind energy, ranging from supporting the infrastructure that is needed to effectively transport, store, and use energy (e.g., power cables, grid networks, and transmission stations) to providing financial support and more efficient regulatory processes. **The Trump Administration and Congress should continue to provide strong support for developing and deploying offshore wind energy.** The United States can benefit from adding this renewable energy source to the mix and lead in an emerging global industry.

In addition to action on the federal level, many states are leading the way with innovative policy approaches to promote offshore renewable energy development. States are incentivizing the development of renewable energy in several ways, including the use of renewable portfolio standards. To inform these policy efforts, states like Massachusetts, Rhode Island, and Oregon are engaging a broad set of stakeholders in statewide planning to maximize ocean uses and avoid potential conflicts. Proactive planning and policies can assist developers and the public by providing transparency and efficiency. Federal officials have an important role to play by sharing information across jurisdictions and ensuring continuity between efforts in state and federal waters.

Implement the recommendations of the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling

In the aftermath of the 2010 BP Deepwater Horizon oil spill, the largest oil spill in U.S. history, President Obama ordered the creation of the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling to independently, thoroughly, and impartially analyze the disaster and develop recommendations to make offshore energy production safer. Yet, most of the Commission's recommendations have not been implemented. The Deepwater Horizon oil spill had devastating effects on the region's economy and the health of its ecosystems. **The Trump Administration and Congress should implement the National Commission's recommendations to ensure that future oil and gas development is conducted safely.**

Encourage responsible collaboration between federal regulators and the oil and gas industry, specifically around information and data sharing

The oil and gas industry employs thousands of people around the Gulf and supports a wide range of economic activities. In addition, it has economic impacts along a diverse supply chain, including geophysical and geotechnical surveys, a vibrant marine construction industry, and engineering firms developing cutting edge drilling technologies. Given rapid technological advancements and changing conditions, collaboration can promote effective regulations that encourage technological innovation and make production safer. **The Trump Administration and Congress should require that oil and gas companies gather and share environmental baseline data they collect as part of the exploratory process with scientists and regulators.**

Provide consistent financial support for ocean and coastal priorities

The challenges facing America's oceans, coasts, and Great Lakes are unprecedented. A dynamic ocean system is becoming increasingly complex, due to diverse human uses and a myriad of impacts from a changing climate. These growing challenges demand financial resources to generate innovative, sustainable, and successful solutions, yet overall federal spending on ocean programs has declined over the last six years. Senior leaders have repeatedly called for a dedicated fund to address urgent ocean issues. Such a fund is crucial to helping us understand and adapt to the rapid changes that are impacting the ocean and coastal communities, such as sea level rise, extreme weather, and ocean acidification.

Capitalize a dedicated ocean investment fund to support sustained ocean research, management, and innovation

Congress should allocate adequate and sustained funding for ocean and coastal programs by capitalizing an ocean investment fund. A capitalized ocean investment fund will address critical funding shortfalls that are undermining America's ability to sustain ocean and coastal systems and the ecological, social, and economic resources they provide. The funding would be available to national, regional, state, local, and private entities focused on improving ocean and coastal science, strengthening cross-jurisdictional governance and management, and supporting ocean and coastal resource conservation and restoration, including infrastructure investments.

In 2016, Congress created the National Oceans and Coastal Security Fund but failed to appropriate funding or establish a source of future funding. The Fund represents an important step toward managing and protecting our nation's valuable oceans resources. Yet, a fund without dedicated support is unable to meet today's challenges.

Given the number of ocean and coastal needs that are currently unmet or underfunded, it is critically important to identify the best sources of revenue that could be harnessed to capitalize a dedicated, permanent fund. There are a number of possibilities, such as allocating a portion of federal revenue from current offshore oil and gas leases, using penalties from activities that are detrimental to ocean and coastal health, or fees collected from recreational licenses and other sources. The U.S. Commission on Ocean Policy recommended that the fund be capitalized by a reasonable portion of offshore oil and gas revenue. This would be simple and efficient to implement because the federal government already collects payments from lease holders, but such payments should only be taken only from current leases.

Stories

The recommendations presented in the Ocean Action Agenda were informed by input from coastal communities across the country. Industries, residents, and organizations from these communities spoke in candid and urgent terms about the challenges and opportunities they face. Some described ways in which changing conditions are already impacting their daily lives, while others expressed concerns or optimism about future trends. Universally, they emphasized the importance of America's oceans, coasts, and Great Lakes to their communities.

To draw connections between local and regional voices and this report's recommendations, the online version of this report contains a series of stories about real people and places from across America. To highlight regional themes, the stories are grouped geographically into six regions: the Arctic, Atlantic, Great Lakes, Gulf of Mexico, Pacific, and Pacific Islands.

To learn more about the people and places that make up our coastal communities, visit oceanactionagenda.org/stories.