

# Close critical gaps in ocean science to spur economic growth

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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.