

Coastal and Ocean Acidification Stressors and Threats (COAST) Research Act

Summary

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Background:

The health of our oceans reflects the health of our planet. Environmental stressors can indicate a changing climate, and also threaten our economy and the livelihood of coastal communities. About one third of the carbon dioxide in the atmosphere dissolves into the ocean, causing water chemistry to change. As our oceans, coastal estuaries, and waterways absorb carbon dioxide, they are becoming more acidic. Coastal chemistry also changes as the combined atmospheric inputs of carbon dioxide, chemical inputs, freshwater inputs, and excess nutrient run-off from land and coastal atmospheric pollution result in processes that release carbon dioxide and acidic nitrogen and sulfur compounds as byproducts in oceans, estuaries, and other bodies of water.

Ocean and coastal acidification threaten our oceans, coastal estuaries, waterways, coastal communities, and industries. As ocean chemistry becomes more acidic, shellfish, coral, phytoplankton, and other marine organisms struggle to build their shells and skeletal structures. Changes in ocean chemistry threaten the blue economy and are felt across the country by consumers, grocery stores, and restaurants that rely on stable supplies of seafood and shellfish. They also affect fishers and shellfish farmers who depend on the oceans' resources to support their families, and tribes that have rights and deep cultural and historical connections to diminishing species. Oceans are resilient and we can help them heal, but we cannot afford to wait.

The COAST Research Act will:

- **Strengthen investments in ocean acidification and coastal acidification research and monitoring in the context of other environmental stressors.** The bill reauthorizes the Federal Ocean Acidification Research and Monitoring Act funding for NOAA and the NSF through FY23. Authorization has lapsed since FY12.
- **Recognize the effects of ocean acidification on estuaries and integrate research, monitoring, and adaptation strategies for coastal acidification throughout the bill.** The bill expands the definition of ocean acidification to include estuaries and includes a definition of coastal acidification to recognize mechanisms that cause changes in coastal chemistry.
- **Increase our understanding of the socioeconomic effects of ocean acidification and coastal acidification.** The bill expands the Interagency Working Group's strategic research plan to also address socioeconomic effects of ocean and coastal acidification and assess adaptation and mitigation strategies.
- **Establish an Advisory Board to increase coordination among stakeholders.** The Advisory Board, comprised of 21 members with a regional balance representing the shellfish and crab industry, finfish industry, seafood processors, recreational fishing, academia, nongovernmental organizations, state, local, and tribal governments, and regional coastal acidification networks, will advise the Interagency Working Group on ocean acidification and coastal acidification research and monitoring activities.
- **Designate NOAA as the lead federal agency responsible for implementing the federal response to ocean acidification and coastal acidification.** The bill directs NOAA to facilitate implantation of the Interagency Working Group's strategic research plan, coordinate monitoring and research efforts among federal agencies, manage the Ocean Acidification Information Exchange, and maintain data processing, storage and archive facilities.
- **Create data processing, storage, and archive facilities to provide for the long-term stewardship and standardization of data.** The bill directs NOAA to establish a data archive system that processes, stores, archives, and provides access to data from federally funded research and research from state and local agencies, tribes, academic scientist, citizen scientist, and industry organizations on ocean acidification and coastal acidification. The system will incorporate existing global or national data assets including the National Centers for Environmental Information and the Integrated Ocean Observing System.

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