

Ocean Research Advisory Panel

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Ocean Data Subgroup

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ORAP Original Task:

Informed through briefings by subject matter experts, research reviews, and outreach, provide the larger committee with a landscape assessment and horizon scan of current ocean data management programs, priorities, and services in the United States including:

- Current federal and non-federal ocean data management programs
- Key federal data centers and repositories
- Existing partnerships and opportunities to leverage, expand, and consolidate data services through new partnerships.
- Regulatory, economic, programmatic, and technical barriers to progress
- Key identified hurdles and challenges
- Key identified potential solutions and recommendations for discussion
- Define “What is success” for this effort?

ORAP Modified Task:

Highlight Ocean Data areas that need immediate attention and highlight existing partnerships and opportunities to leverage, expand, and consolidate data services.

These include:

1. Fostering data sharing from federal and non-federal partners and incentivize industry/academic "derivative" products
2. Increasing the transparency of ocean data
3. Exploring new technologies and innovation pathways to increase Ocean Data Accessibility and Usability
4. Including social science data needed to facilitate incorporation of the human dimension in ocean activities
5. Acknowledging data sovereignty for Indigenous Peoples and Tribal Nations

Main focus of this report will be on:

Developing a National Ocean Data Strategy (NODS) that includes data management practices, standards, and an evaluation of quality through uncertainty quantification and validation practices

The Report will include:

1. **Executive Summary:** Building the case of why a NODS is needed
2. **Assessment of the work U.S Agencies have been doing to move the Federal Government towards a National Ocean Data Strategy:** Recognizing the work that several agencies are already doing towards building a NODS
3. **Challenges and Barriers**
4. **Existing partnerships and opportunities** to leverage, expand, and consolidate data services through new partnerships
5. **ORAP Recommendations**
6. **Closing Summary**

Why a NODS is needed ...

- The oceans are a critical resource to the United States and provide unique opportunities for generating solutions to the diverse problems facing society today and into the future.
- These solutions require an ocean data strategy that encompasses data collection, access, management, and governance across a diverse range of scientific research, information, and socioeconomic arenas and requires a framework for implementing findable, accessible, interoperable, and reusable (FAIR) data that adheres to collective benefit, authority to control, responsibility, and ethics (CARE) data principles.
- The existing Federal Data Strategy lacks sufficient focus and scope to address the historical, current, and exponential expansion of ocean data knowledge beyond the federal sphere. There is no consensus across the wide range of stakeholders regarding data standards, quality control, management, and best practices for sharing, acquisition, and use.
- **A National Ocean Data Strategy (NODS)** is therefore needed to not only make Federal sources of ocean data more accessible, but to also take advantage of the increasing opportunities for ocean data sharing and acquisition that fosters new scientific, federal and local government, industry, philanthropic, and community-driven research programs and facilitates public-private partnerships.

Initial Assessment: Work U.S Agencies have been doing to move the Federal Government towards a NODS

Recommendations and actions to address data and information improvements for advancing national ocean and coastal science, management, and policy goals is not a new concept for the federal government.

- The U.S. Commission on Ocean Policy, a body that was established when Congress passed the Oceans Act of 2000, not only recommended a comprehensive ocean policy, establishment of a National Ocean Council currently operating as the White House Ocean Policy Committee, but the report also made key recommendations on the advancement of ocean and coastal data.
- While progress has been made related to ocean and coastal data, significant federal effort is still needed to support a holistic strategy for the federal government that also allows for local, state, and regional government, private, philanthropic, and other partners to effectively collaborate and coordinate activities to advance our understanding of the nation's ocean and coasts.

Initial Assessment: Challenges and Barriers

As described in Trice et al (2021), government agencies currently have limits to their abilities to efficiently process and incorporate ocean data from new sources, including new technologies, into the decision-making process. In some cases, the data management infrastructure has not kept pace with the nearly exponential increase in data that the public and private sectors are now collecting.

Examples of existing partnerships and opportunities to leverage, expand, and consolidate data services

Regional Ocean Partnerships (ROPs) are regional organizations voluntarily convened by governors to address ocean and coastal issues of common concern among states and in collaboration with federal agencies, Tribes, academic institutions, and ocean stakeholders. Data found on these platforms come from a variety of sources including federal agency data sources (like the [Marine Cadastre](#)), individual agencies, states, industry, IOOS Regional Associations, universities and non-governmental entities.

Examples of those platforms are:

- [Northeast Ocean Data Portal](#)
- [Mid-Atlantic Ocean Data Portal](#)
- [Gulf of Mexico Open Data Platform](#)
- [West Coast Ocean Data Portal](#)

Other Partnerships and Opportunities:

- [Marine Biodiversity Observation Network](#)
- [Ocean Biodiversity Information System \(OBIS\)](#)
- [Regional Wildlife Science Collaborative for Offshore Wind](#)
- [International Quiet Ocean Experiment \(IQOE\)](#)

Open for Discussion