Interagency Ocean Observation Committee

STRATEGIC PLAN

2024-2029

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Call to Action

For more than a decade, the Interagency Ocean Observation Committee (IOOC) has been at the forefront of coordinating and overseeing the federally supported ocean, coasts, and Great Lakes observing enterprise. Dramatic changes in these aquatic environments; leading to dynamic economic opportunities, and challenges; and the rapid maturation of ocean observing technology, science, and need for ocean knowledge motivate the Interagency to usher in a new era of ocean observing. This new era will address critical challenges and advance our understanding of the ocean to benefit present and future generations.

This inaugural IOOC Strategic Plan outlines three high-level goals to improve the IOOC's effectiveness, coordination, and leadership of ocean observation activities across its 12 member Federal Agencies. Through this agency participation in IOOC activities, the IOOC seeks to:

1) Facilitate the evolution of a state-of-the-art integrated and interoperable ocean observation system responsive to societal needs, agency missions, and national and international priorities;

2) Collaborate with diverse partners to expand awareness, grow contributions, and improve access to and usage of ocean data and information; and

3) Sustain the ocean observation system through shared leadership, joint planning, and results-driven implementation.

This IOOC Strategic Plan will engender increased coordination among the IOOC agencies and additional strategic partners; advance joint planning of a more responsive and sustainable ocean observing system for the nation; and improve access to, and utilization of, ocean, coasts, and Great Lakes observational knowledge for the benefit of the many communities, businesses, and others whose lives touch the ocean.

IOOC Co-Chairs

David Legler
David Legler, National Oceanic and Atmospheric Administration

Deerin Babb-Brott
Deerin Babb-Brott, Office of Science and Technology Policy

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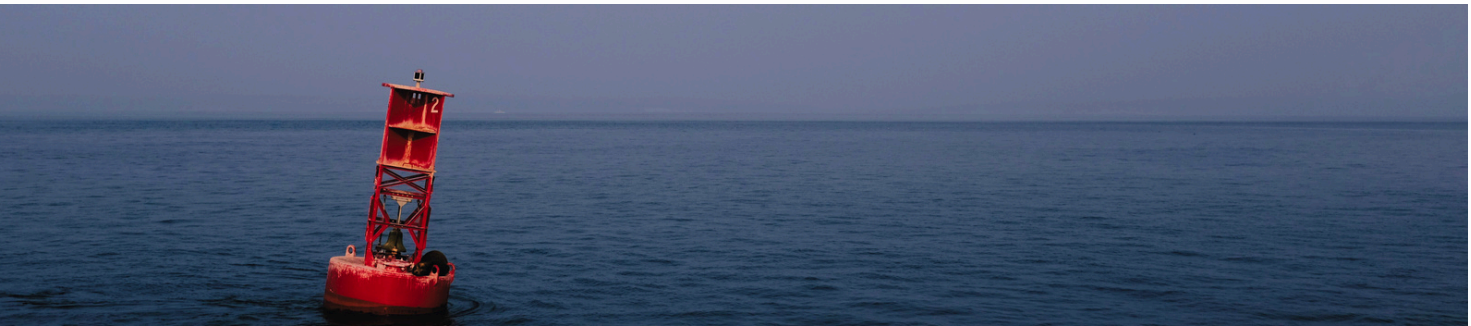
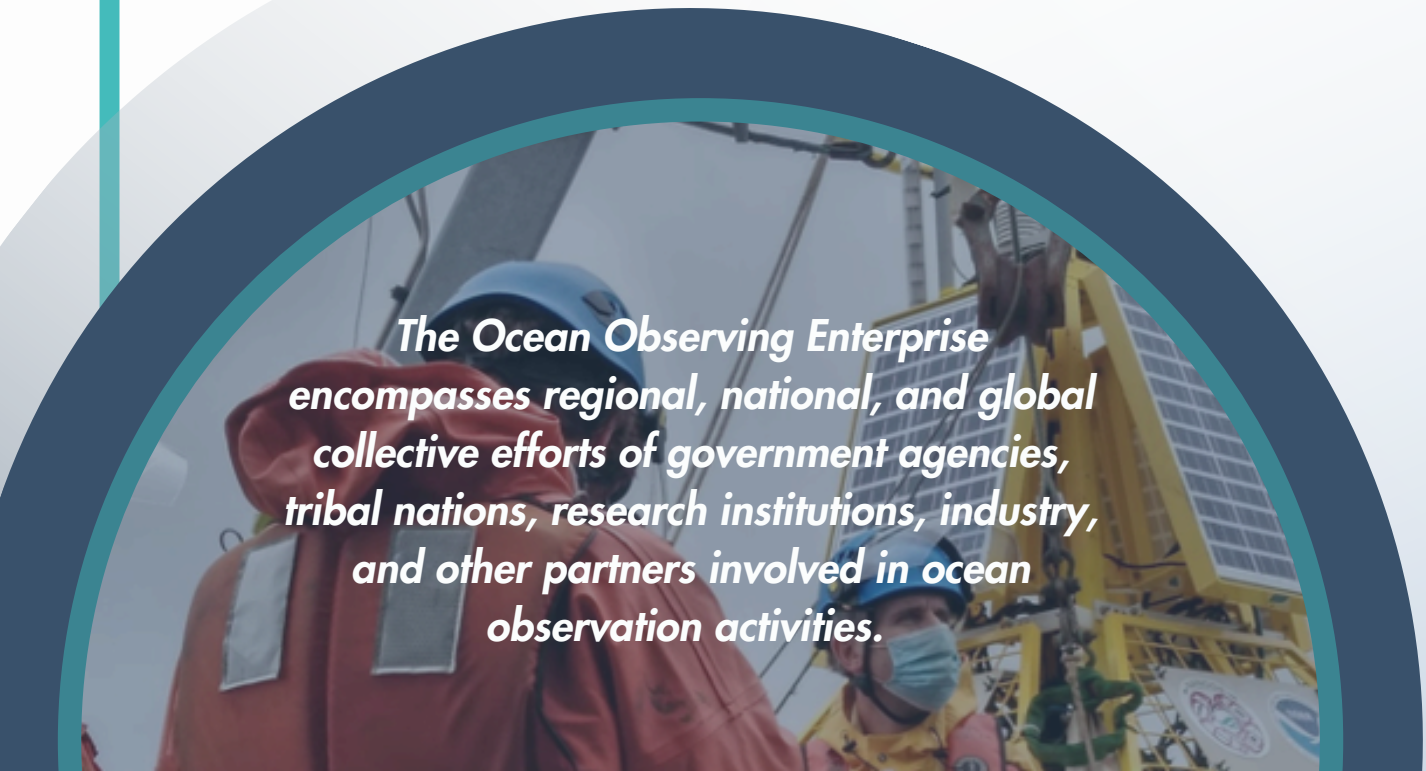


Introduction

Ocean observations are fundamental for unraveling the complexities of our planet's seas and oceans. They make significant contributions to society by improving forecasts of planetary systems, from weather to fisheries, and by predicting the outcomes of current and potential human manipulations of the ocean environment. The systematic collection of data on the physical, chemical, biological, and geological characteristics of ocean environments provides critical insights into ocean circulation patterns, climate variability (both climate of the atmosphere and climate of the ocean), marine biodiversity, coastal processes including inundation and erosion, and the overall health of marine ecosystems. The Interagency Ocean Observation Committee (IOOC) operates at the forefront of coordination to advance ocean observation efforts across federal agencies and partners, playing a pivotal role in driving innovation, collaboration, and engagement.

Established under the Integrated Coastal and Ocean Observing System Act of 2009 (reauthorized in 2020) and chartered by the National Science and Technology Council (NSTC) Subcommittee on Ocean Science and Technology (SOST), the IOOC is tasked with coordinating federal ocean observation activities and driving strategic initiatives to address ocean observation challenges and priorities. The committee collaborates with many federal agencies, leveraging expertise and resources to advance the ocean observing enterprise and the U.S. Integrated Ocean Observing System (U.S. IOOS).



The Ocean Observing Enterprise encompasses regional, national, and global collective efforts of government agencies, tribal nations, research institutions, industry, and other partners involved in ocean observation activities.

The Ocean Observing Enterprise encompasses regional, national, and global collective efforts of government agencies, tribal nations, research institutions, industry, and other partners involved in ocean observation activities. This enterprise is dedicated to advancing our understanding of the ocean and its interactions with the Earth system, promoting collaboration and data sharing, and translating scientific knowledge into actionable insights for societal benefit. Empowered by legislation and its charter, the IOOC coordinates interagency efforts for integrating data and systems, developing standards, facilitating external partnerships, and communicating findings and recommendations.

Through these concerted efforts, the IOOC strives to accomplish its overarching mission of championing federal ocean observation activities to advance ocean knowledge, stewardship, and societal benefit in synergistic and transformative ways.

The companion U.S. IOOS Strategic Plan, which provides guidance to the U.S. IOOS Enterprise and Program Office, outlines the societal benefits supported by ocean observations. The benefits span seven key areas that include improving weather and climate predictions, enhancing maritime safety and efficiency, mitigating the impacts of natural hazards, ensuring public safety and national security, reducing public health risks, protecting, and restoring coastal ecosystems, and enabling the sustainable use of ocean and coastal resources

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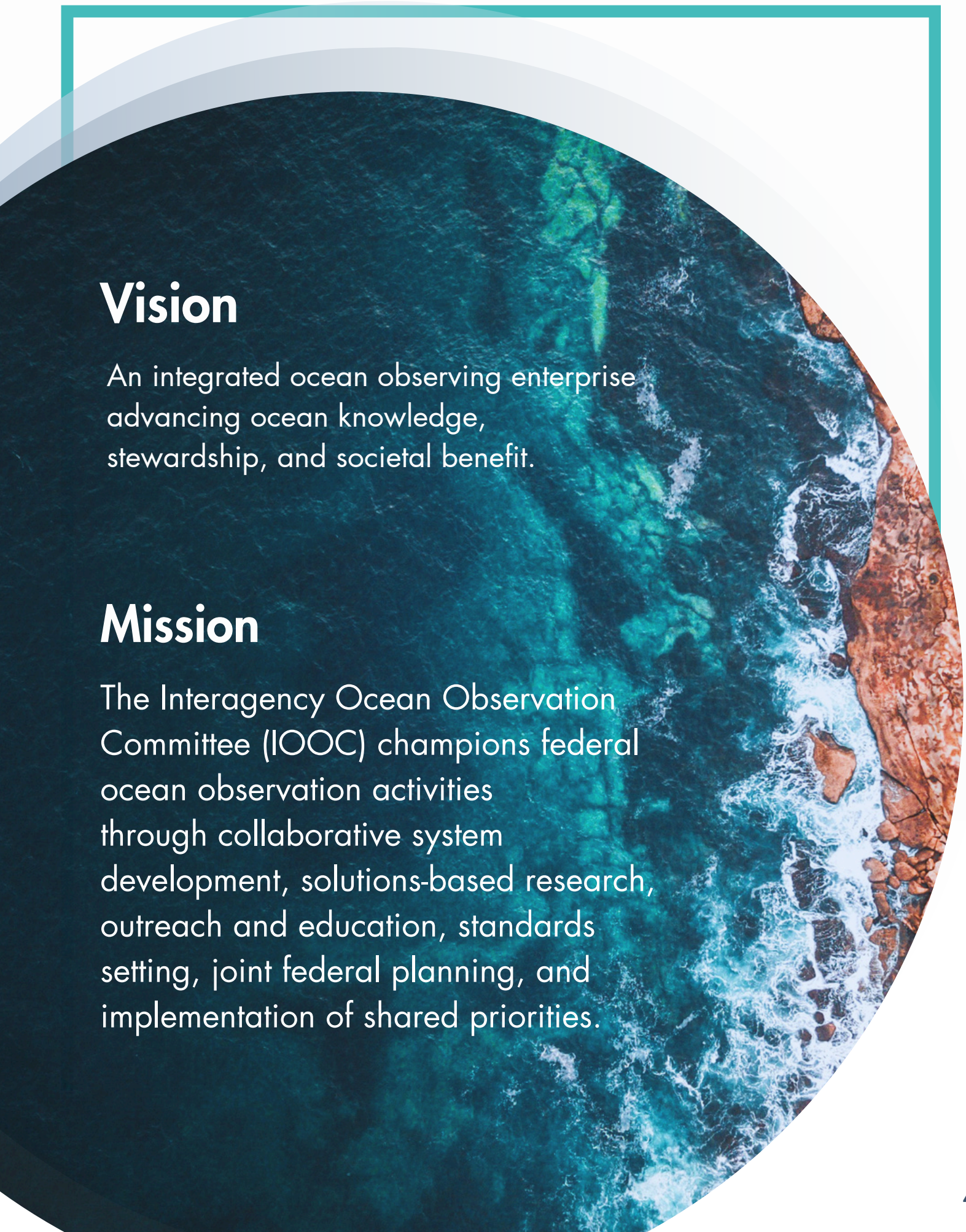


Vision

An integrated ocean observing enterprise advancing ocean knowledge, stewardship, and societal benefit.

Mission

The Interagency Ocean Observation Committee (IOOC) champions federal ocean observation activities through collaborative system development, solutions-based research, outreach and education, standards setting, joint federal planning, and implementation of shared priorities.

Strategic Goals

Goal 1: Ocean Observing System Development

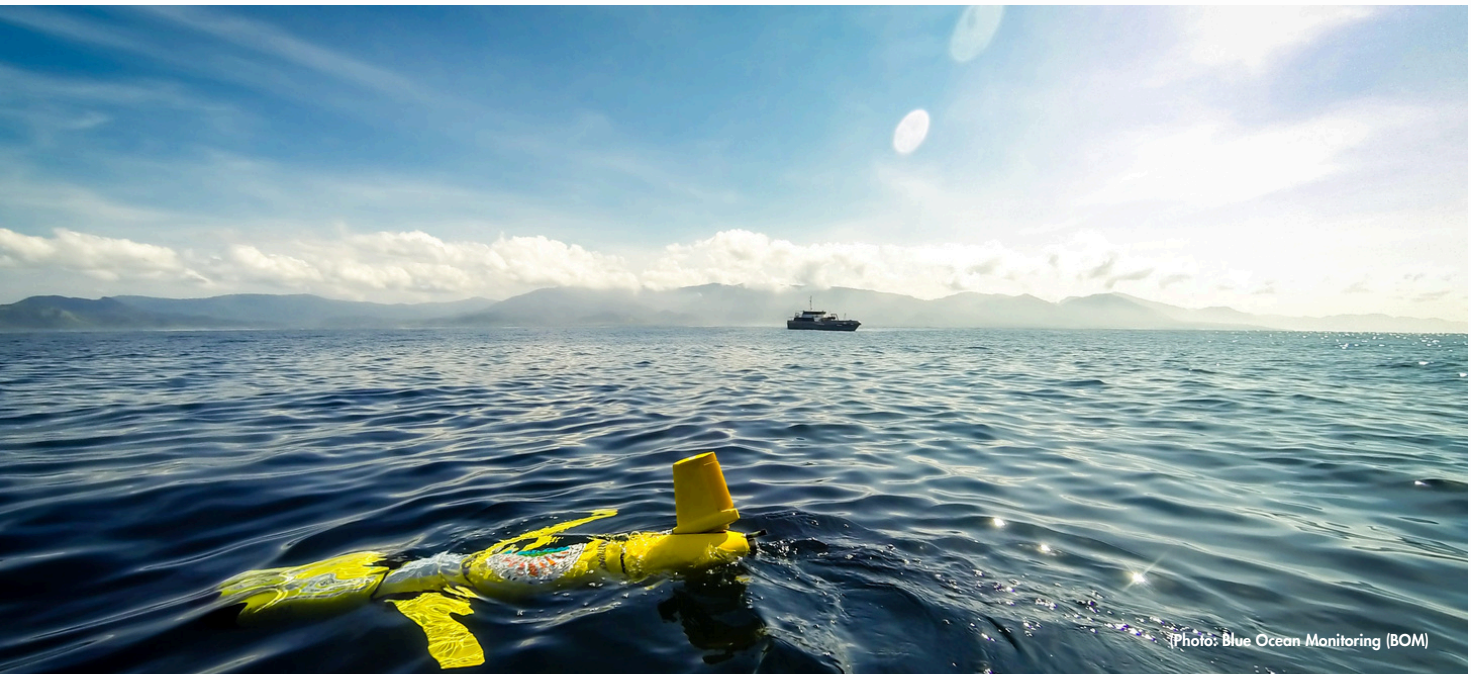
Facilitate the evolution of a state-of-the-art integrated and interoperable ocean observation system responsive to societal needs, agency missions, and national and international priorities.

Goal 2: Partner Engagement

Collaborate with diverse partners to expand awareness, grow contributions, and improve access to and usage of ocean data and information.

Goal 3: Ocean Observing System Sustainability

Sustain the ocean observation system through shared leadership, joint planning, and results-driven implementation.



(Photo: Blue Ocean Monitoring (BOM)

Goal 1
Ocean Observing System Development

Facilitate the evolution of a state of the art integrated and interoperable ocean observation system responsive to societal needs, agency missions, and national and international priorities.

System Requirements

1.1 Design and implement a collaborative process to identify and prioritize gaps in geographic coverage, data types, and ocean observing technologies to guide system development.

1.2 Coordinate, prioritize, and align interagency efforts to address gaps in the ocean observing system consistent with an annual focus area[1].

Data Management and Standards

1.3 Catalyze the prioritization and development of open standards and protocols for IOOS Core Variables to increase data integration, utilization, and societal value.

[1] **Annual Focus Area Examples–** These are areas that need further attention and collaboration within ocean observing and encompass technology innovation, data management, and modeling:

- Biology, likely with an emphasis on biodiversity
- Biogeochemistry, likely with a focus on carbon
- Climate Mitigation, specifically Marine Carbon Dioxide Removal (mCDR), research as indicated in the Ocean Climate Action Plan (OCAP)

[2] **Select research and application opportunities (or areas)–**

- Resilience of vulnerable coastal communities
- Mitigation of climate change
- Mapping benthic habitats
- Characterization of cumulative impacts of stressors
- Support for contaminant cleanup
- Effective management of nutrients
- Marine energy expansion
- Marine carbon dioxide removal
- Social science inclusion
- Polar/arctic regions
- Determine Climate Change impacts on Marine Ecosystems, Fisheries, Coastal Communities, and Indigenous Populations (e.g., Alaska and New England)

Solutions-Based Research and Application[2]

1.4 Prioritize and support cross-agency solutions-based research and development to improve the observing system and its societal value.

1.5 Strengthen the ability to fully understand the use and impacts of ocean observations in modeling and prediction systems to inform future system development and better articulate the national return on investment.

Goal 2
Partner Engagement

Collaborate with diverse partners to expand awareness, grow contributions, and improve access to and usage of ocean data and information.

Agency and Interagency Engagement

2.1 Advance and promote ocean observation standards, metrics, and promising practices that connect to agency and interagency-level outreach and engagement to communities.

2.2 Improve in-reach within IOOC agencies to increase understanding of observing enterprise capabilities and utilization.

Partner Participation and Contributions

2.3 Expand collaboration and formalize partnerships to promote information and knowledge sharing between federal agencies, tribal nations, and non-sovereign indigenous communities.

Goal 2
Partner Engagement

Collaborate with diverse partners to expand awareness, grow contributions, and improve access to and usage of ocean data and information.

Partner Participation and Contributions

2.4 Expand federal agency contributions to advance cross-cutting ocean observing missions with an emphasis on leveraging all available ocean observations.

2.5 Pursue novel non-Federal partnerships to expand participation and incorporate observing system innovations to optimize ocean observing community contributions.

International Collaboration

2.6 Advance U.S. leadership in global ocean observing by collaborating with national and international partners* to promote national priorities.

***National and International Partners–**

NATIONAL:

- SOST Interagency Working Groups (IWGs)– These IWGs act as counterparts to the IOOC within SOST and will collaborate as necessary.
  - IWG-BIO, Marine Biodiversity
  - IWG-OEC, Ocean Exploration and Characterization
  - IWG-OSML, Ocean Sound and Marine Life
  - IWG-OD, Ocean Decade
  - IWG-OA, Ocean Acidification
  - IWG-OCM, Ocean & Coastal Mapping
  - IWG-NOPP, National Oceanographic Partnership Program
  - IWG-FI, Facilities & Infrastructure
  - IWG-OE, Ocean Education
  - IWG-HABHRCA, Harmful Algal Bloom and Hypoxia Research and Control Act
- National Oceanographic Partnership Program (NOPP)
- Ocean Policy Committee (Ocean Climate Action Plan (OCAP); U.S. Ocean Justice Strategy)
- Fast-Track Action Committee on Marine Carbon Dioxide Removal (mCDR)
- National Ocean Mapping, Exploration and Characterization (NOMEC) Council
- U.S. Global Change Research Program (USGCRP)

INTERNATIONAL:

- Global Ocean Observing System (GOOS)
- G7 Future Seas and Ocean Initiative

Goal 3
Ocean Observing System Sustainability

Sustain the ocean observation system through shared leadership, joint planning, and results-driven implementation.

Enterprise Alignment

3.1 Conduct joint planning activities across federal partners to support the efficient design, operation, enhancement, and integration of the ocean observing enterprise*.

3.2 Align investments to fill common gaps across agencies and advance shared priorities.

3.3 Recommend opportunities to transition proven systems, tools, and capabilities among agencies to enhance ocean observing sustainability.

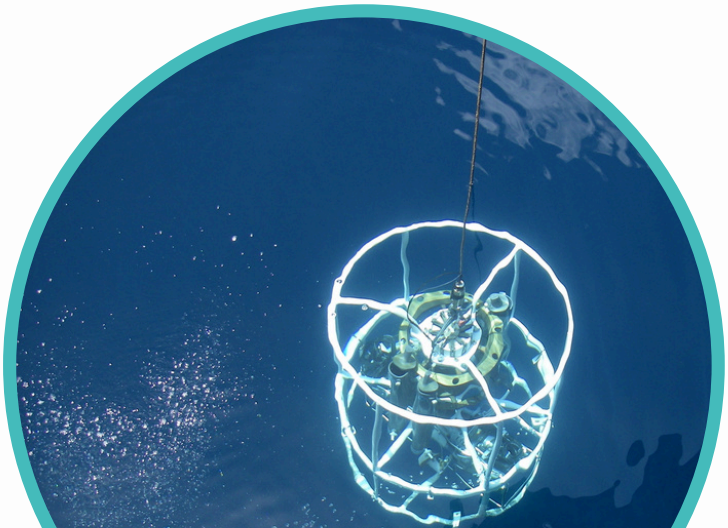
***The Ocean Observing Enterprise encompasses regional, national, and global collective efforts of government agencies, tribal nations, research institutions, industry, and other partners involved in ocean observation activities. This enterprise is dedicated to advancing our understanding of the ocean and its interactions with the Earth system, promoting collaboration and data sharing, and translating scientific knowledge into actionable insights for societal benefit.**

Integrated Implementation

3.4 Codify governance and operating protocols to ensure the long-term sustainability and success of the IOOC.

3.5 Enhance the implementation of IOOC strategic initiatives through shared leadership.

3.6 Leverage the IOOS Federal Advisory Committee to advance the IOOC Strategic Plan.



Appendix

Appendix A: IOOC Legislation

- Coordinated Ocean Observations and Research Act of 2020
- Integrated Coastal and Ocean Observation System Act of 2009

Appendix B: IOOC Agencies

Participating Agencies:

- BOEM - Bureau of Ocean Energy Management
- DOE - Department of Energy
- EPA - Environmental Protection Agency
- MMC - Marine Mammal Commission
- NASA - National Aeronautics and Space Administration
- NAVY - United States Navy
- NOAA - National Oceanic and Atmospheric Administration
- NSF - United States National Science Foundation
- OSTP - Office of Science and Technology Policy
- USACE - United States Army Corps of Engineers
- USCG - United States Coast Guard
- USGS - United States Geological Survey

Appendix

Appendix C: IOOC Members (2024) and Plan Authors:

IOOC Members:

- David Legler, NOAA, Co-Chair[3]
- Deerin Babb-Brott, OSTP, Co-Chair[3]
- Laura Lorenzoni, NASA, Co-Chair[3]
- Lisa Clough, U.S. NSF, Co-Chair[3]
- Brian Melzian, EPA[3]
- Candace Nachman, USCG
- Carl Gouldman, NOAA[3]
- Carrie Schmaus, DOE[3]
- Erin LaBrecque, MMC[3]
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- Jennifer Hailes, NAVY
- Jonathan Blythe, BOEM[3]
- Krisa Arzayus, NOAA[3]
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- Kruti Desai, Center for Ocean Leadership (COL)
- Nick Rome, COL
- Masha Edmondson, COL
- Cassie Wilson, COL
- Andrea McCurdy, COL

Appendix D: Reference Documents

- U.S. IOOS Strategic Plan
- Global Ocean Observing System 2030 Strategy
- National Strategy for the Arctic Region (and Implementation)
- Ocean Climate Action Plan
- IOOS Foundational Reports
- U.S. IOOS Summit Report: A New Decade for the Integrated Ocean Observing System
- OceanObs'19 Community White Papers

Appendix

Appendix E: Acronyms

- **IOOC**: Interagency Ocean Observation Committee
- **NSTC**: National Science and Technology Council
- **SOST**: Subcommittee on Ocean Science and Technology
- **U.S. IOOS**: U.S. Integrated Ocean Observing System
- **mCDR**: Marine Carbon Dioxide Removal
- **NASEM**: National Academies of Sciences, Engineering, and Medicine
- **OCAP**: Ocean Climate Action Plan
- **IWGs**: Interagency Working Groups
- **IWG-BIO**: Interagency Working Group on Marine Biodiversity
- **IWG-OEC**: Interagency Working Group on Ocean Exploration and Characterization
- **IWG-OSML**: Interagency Working Group on Ocean Sound and Marine Life
- **IWG-OD**: Interagency Working Group on the Ocean Decade
- **IWG-OA**: Interagency Working Group on Ocean Acidification
- **IWG-OCM:** Interagency Working Group on Ocean & Coastal Mapping
- **IWG-NOPP**: Interagency Working Group on the National Oceanographic Partnership Program
- **IWG-FI**: Interagency Working Group on Facilities & Infrastructure
- **IWG-OE**: Interagency Working Group on Ocean Education
- **IWG-HABHRCA**: Interagency Working Group on Harmful Algal Bloom and Hypoxia Research and Control Act
- **NOPP**: National Oceanographic Partnership Program
- **NOMEC**: National Ocean Mapping, Exploration, and Characterization Council
- **USGCRP**: U.S. Global Change Research Program
- **GOOS**: Global Ocean Observing System
- **BOEM**: Bureau of Ocean Energy Management
- **DOE**: Department of Energy
- **EPA**: Environmental Protection Agency
- **MMC**: Marine Mammal Commission
- **NASA**: National Aeronautics and Space Administration
- **NAVY**: United States Navy
- **NOAA**: National Oceanic and Atmospheric Administration
- **U.S NSF**: National Science Foundation
- **OSTP**: Office of Science and Technology Policy
- **USACE**: United States Army Corps of Engineers
- **USCG**: United States Coast Guard
- **USGS**: United States Geological Survey
- **COL**: Center for Ocean Leadership