



Strategic Plan & Implementation Approach

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IOOS Advisory Committee
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IOOS Strategic Plan Refresh

Core Writing Team:

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- Melissa Zweng, *DMAC Program Coordinator*



IOOS

Integrated Ocean
Observing System

U.S. IOOS ENTERPRISE STRATEGIC PLAN 2018-2022

Big Idea

IOOS will now have a Strategic Plan with a three-year window that is refreshed annually.

The intent behind this is for IOOS to regularly revisit the Strategic Plan as part of an iterative, agile, and predictive approach that is responsive to the current events.

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STRATEGIC PLAN 2022–2025

Last updated July 31, 2022

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Criteria for Major Refresh

Significant events would trigger a major review and overhaul of the plan, such as:

- New IOOS Director
- New Administration
- Significant Budget Changes (+/- 20%)
- Major Legislative Changes
- Other?

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IOOS 2017-2022 Summary



IOOS Over the Years

[Last updated January 3, 2022]

A Look Behind and A Look Ahead

Since the [IOOS Strategic Plan](#) was released in 2018, the need to respond to the climate crisis has become even more urgent: The number and cost of extreme events is increasing and the acceleration of rising sea levels, ocean acidification, and marine heatwaves is resulting in chronic consequences for many coastal communities. Government is responding by increasing funding for science agencies that will in turn increase efforts to help the Nation avoid the most catastrophic impacts of the climate crisis. The information below provides a look back over the last four years at those efforts that touch on IOOS's mission as well as a look ahead at what is currently envisioned in 2022.

IOOS Budget History

IOOS' enacted budget has steadily increased over the past twelve years, from \$21 million in 2010, to \$37.5 million in 2017, and to \$45.9 million in 2021.

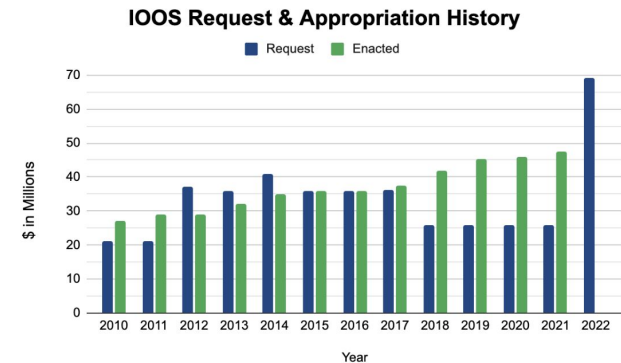


Figure 1. NOS IOOS request and appropriation history, not including backbone and global funding. These numbers include a total amount for the U.S. IOOS Office and Regional IOOS Observations.

- IOOS's Budget History
- Federal legislation
- Executive Orders
- Biden Administration Priorities
- NOAA Cross-Line Office Efforts
- NOAA's Science Advisory Board Publications and Recommendations
- National Academies Publications and Recommendations
- Data, science, and technology accomplishments
- International efforts

IOOS Enterprise Interviews & Briefings

The Core Writing Team held over 30 individual interviews and briefings with:

- IOOS Program Office Staff
- Regional Association Directors
- IOOS Association Executive Director
- DMAC group
- IOOS Business Team
- Interagency Ocean Observation Committee (IOOC)
- IOOS Advisory Committee

Interview Feedback

- **Fresh, Relevant** // Interviewees agreed that the goals and objectives outlined in the plan continue to reflect the IOOS Enterprise and are always relevant.
- **Annual-ish update** // Interviewees supported this idea, noting that:
 - A frequent change in priorities would be disruptive to program's planning efforts;
 - Someone in the Office needs to be accountable for refreshing the plan;
 - An annual-ish refresh should not be an onerous task; and
 - There needs to be tripwire(s) for a deep review of the plan.
- **Enterprise partners** // Many RA Directors would like to see more involvement, coordination, and collaboration from non-NOAA Federal Enterprise partners.

Goal 1. Sustain long-term, high-quality observations of ocean, coastal, and Great Lakes environments to address local, regional, and national needs.

Goal 1 Driver. Ocean and coastal observations are difficult to sustain, operate, and maintain over long timeframes. Public support is often directed to new, emerging marine initiatives and technologies. To sustain the Enterprise, IOOS must balance the maintenance and operation of the mature observing system while expanding the system to tackle emerging societal issues.

Objective 1.1. Leverage investment to improve system efficiencies, identify synergies, and provide common platforms to execute various missions.

Objective 1.2. Sustain and operate a national network of regional observing systems composed of multidisciplinary observations from a variety of technologies.

Objective 1.3. Fill critical gaps in the nation's observing networks to address high priority national and regional needs and improve coverage of regional coastal observing systems.

Objective 1.4. Incorporate sustainable and innovative technologies to address existing and emerging needs and transition Proven technologies to operational use or other applications.

Goal 2. Deliver standardized, reliable, and accessible data.

Goal 2 Driver. Ocean, coastal, and Great Lakes data come from a variety of platforms and sensors, in many formats, and are available through a number of web-based sites. IOOS strives to simplify and streamline integrated data access and discovery by providing data sources at regional and national scales.

Objective 2.1. Promote standardization, automation, discovery, and access of data.

Objective 2.2. Strengthen data stewardship to improve data quality, access, attribution, exchange, delivery, and storage across Federal agencies and regional partners.

Objective 2.3. Provide data infrastructure at the regional level through trusted, certified regional data centers to increase the availability, interoperability, and use of high quality data.

Objective 2.4. Support ongoing maintenance and operation of data management systems to sustain long-term data stewardship.

Objective 2.5. Create, maintain, and expand the capacity of functional data assembly centers as go-to data sources through collaboration with IOOS, National Data Buoy Center, National Centers for Environmental Information, and other partners.

Goal 3. Support model predictions that address a wide range of user requirements.

Goal 3 Driver. Data from observations alone do not go far enough to address stakeholder needs for actionable information. Numerical modeling bridges the divide between data and information by extracting relevant information for end-users, informing modelers on tool accuracy, and allowing resource managers to design optimal observing systems. IOOS supports a vibrant modeling community devoted to innovating models to link coastal to global phenomena.

Objective 3.1. Continually develop and sustain research and community models and model-based products to provide state-of-the-art information needed by regional stakeholders.

Objective 3.2. Transition select IOOS partner models from research to operations through the COMT and/or RAs as demonstration environments and proving grounds.

Objective 3.3. Assess model skill and advance data assimilation through data delivery, technical advancement, and regionally led research to improve model accuracy.

Objective 3.4. Advance modeling approaches to inform decisions on the design and implementation of optimal observing systems and maximize the use of regional observations.

Goal 4. Provide integrated, user-driven products, and tools.

Goal 4 Driver. The translation of observations into meaningful information products requires the integration of variable and complex data with models and a focus on stakeholder requirements. Users with regionally or topically specific needs often require focused integrated, user-friendly decision support tools.

Objective 4.1. Develop regionally relevant, user-driven analysis, decision-support, and visualization products and tools to address historic and emerging stakeholder requirements.

Objective 4.2. Generate and disseminate pan-regional products and tools to respond to environmental issues and seasonal hazards that span larger areas and ecosystems.

Objective 4.3. Create national products that incorporate cross-disciplinary data to provide a single, user-friendly access point to integrated information.

Objective 4.4. Promote IOOS products on international and cross-institutional scales to optimize usage and relevance.

Objective 4.5. Understand the economic value of IOOS data and information to enable communication of the benefits of the observing systems and tools.

Goal 5. Increase the reach and effectiveness of IOOS through partnerships, stakeholder engagement, and investment in Enterprise excellence.

Goal 5 Driver. IOOS partners are distributed across Federal and state agencies, non-governmental organizations, and private industries around the country. Coordination and communication are essential for success. IOOS relies on balanced and robust partnerships built on trust and a shared mission. We work closely with the national network of RAs to develop and nurture these relationships on a regional and national level. Underserved communities must be engaged in the co-design of observing systems and tailored products to ensure that all have access to information and tools needed to fully prepare for and respond to coastal change. As stakeholder needs evolve over time, IOOS partnerships must remain nimble and transparent through effective communications and engagement to remain a cohesive and effective Enterprise.

Objective 5.1. Engage in continuous dialog with stakeholders, including historically underrepresented communities, to gather feedback and refine requirements for IOOS products and services.

Objective 5.2. Increase the operational efficacy of Federal, state, and other partner investments to support regional, national, and global activities and innovative research.

Goal 5 (cont'd). Increase the reach and effectiveness of IOOS through partnerships, stakeholder engagement, and investment in Enterprise excellence.

Objective 5.3. Expand and strengthen the network of partnerships with new and existing stakeholders, especially industry and Federal partners, to innovate ocean observations and information products.

Objective 5.4. Empower communities of practice to expand observing capabilities and expand expertise.

Objective 5.5. Foster the next generation of science, technology, engineering, and math specialists through targeted education, training, and research opportunities.

Objective 5.6. Elevate outreach and engage new audiences to convey the societal and economic value of sustained ocean, coastal, and Great Lakes observing systems.

Major Updates to the Strategic Plan

- **Biden, NOAA, and NOS Priorities** // The refreshed IOOS Strategic Plan includes updated language around diversity and inclusion, climate change, the New Blue Economy, the Infrastructure Investment and Jobs Act, the America the Beautiful Initiative, and the NOAA Service Delivery Framework.
- **New Blue Economy** // A new objective was added to Goal 4: Provide integrated, user-driven products, and tools:
 - Objective 4.5: Understand the economic value of IOOS data and information to enable communication of the benefits of the observing systems and tools.
- **Core Variables** // The 33 core variables were moved to Appendix A.
- **Revised Letter from the Director** // A revised Letter from the Director is included in the refreshed IOOS Strategic Plan.
- **IOOS Enterprise Partners** // In response to comments from the IOOC member, a page listing the IOOS Enterprise partners and their associated logos is included in an Acknowledgements section.

Looking Ahead: 2023 Refresh

NOAA and NOS are each expected to release their respective Strategic Plans over the next year. NOAA is also planning to release an Artificial Intelligence Strategy, making data AI-ready data. The writing team will review these for the 2023 “light refresh”

The IOOS Program Office is working with Regional Association staff and the IOOS Association’s Diversity, Equity, Inclusion, and Accessibility Fellow, Ashley Peiffer, to develop a new guiding principle around DEI&A, which will be included in the 2023 refresh.

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Discussion

- What do members think about moving to a more agile Strategic Plan and IOOS' commitment to an annual refresh?
- Do the updates capture the current state of our Nation's oceans, coasts, and Great Lakes?

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QUESTIONS?