

Read Ahead: New Blue Economy and NOAA's/IOOC's Equities

*U.S. IOOS Advisory Committee Spring 2022 Public Meeting
May 11, 2022 New Blue Economy: 1:30–2:15 P.M. EDT*

New Blue Economy

There are expanding and emerging markets for value-added ocean, coastal, and Great Lakes¹ services and a surge of resources, investors, start-ups, innovators, and blue tech clusters to provide them. The New Blue Economy (NBE) seeks to optimize the recent, rapid and ongoing advances in science and technology—and the vast quantities of data they are generating—to foster and build sustainable and equitable economic opportunities and solutions to pressing societal needs. The underlying premise is that this data has value – including economic value. The NBE is a knowledge-based economy, looking to the sea not just for extraction of material goods, but for data and information to address challenges and inspire solutions, including sustaining and restoring the health of ocean and coastal ecosystems. Now, as never before, we have the know-how and technology to honor the ocean's fragile, finite resources while simultaneously spurring economic growth, new revenue streams, and jobs.

The NBE comprises the value chain connecting the means to conduct ocean observations and measurements to the use of ocean data, information and knowledge in delivering economic and societal benefits. This value chain comprises three key components:

- Providers of the technologies that enable ocean and coastal observation, measurement and surveying. This provision encompasses research, development, manufacture and sale of technologies enabling ocean observation measurement and survey;
- Producers of ocean observations, measurements and surveys. The public and private organizations making use of ocean observation, measurement and survey technologies to capture ocean data; and
- Intermediaries who add value to ocean data and information delivering ocean information services supporting societal and economic benefits.

NOAA's Role in the New Blue Economy

NOAA is working to stimulate U.S. NBE innovation, ingenuity, and invention through actions to promote, foster and grow this high-tech, data-driven activity in support of safety, security, prosperity, and a healthy and sustainable marine environment. NOAA is seeking to build partnerships that promote and expand domestic and global opportunities for U.S. technology providers, producers and intermediaries, improving the ability to assess risks, opportunities and consequences across all NBE sectors and levels of government. NOAA places a priority on preparing a diverse workforce to meet growing NBE needs, ensuring equitable access to services, and addressing pressing societal needs. These needs include increasing the efficiency of marine operations, reducing externalities of ocean and coastal economic activities, improving the conservation of marine ecosystems and resources, mitigating and adapting to climate change and improving the health and resilience of communities, economies and ecosystems.

As a leading provider and trusted source of environmental data and services, NOAA is well positioned to connect and engage with other Federal, state, and tribal government agencies, the private sector, academia, NGOs, and blue tech clusters to spur innovation and growth of the NBE. NOAA will–

- Conduct outreach and engage across the Department of Commerce and with interagency and commercial partners;

¹ Rather than repeat “ocean, coasts and Great Lakes”, the use of the term “ocean” throughout this document includes “ocean, coasts and Great Lakes”.

- Continually engage with the entire set of NBE stakeholders, including tribal authorities and historically underserved communities;
- Identify and fill observing and data gaps, and evaluate and promote the use of data collected by external partners to meet these needs where appropriate;
- Improve the accuracy, consistency, accessibility and delivery of its ocean, coastal and Great Lakes data and services;
- Conduct and support research, development, acquisition, and application of new technologies; and
- Promote and develop a diverse and ready NBE workforce.

NOAA/IOOC Ocean Observing Equities

Data is at the heart of the NBE. The agencies of the Interagency Ocean Observation Committee including the Department of Commerce and its NOAA U.S. IOOS Office are key enablers of the NBE, providing authoritative data and information for the ocean, coasts and Great Lakes, often through partnerships with the IOOS Regional Associations. In order to continue fostering prosperity, the blue economy must integrate ocean and climate data along with increased prioritization of environmental stewardship to achieve a resilient ocean.

Options

The IOOS Office has identified the following areas where it believes the engagement of this Committee would be most helpful.

1. Given the recommendations laid out in Priority Area 2 (“Creating and Sustaining Strategic Partnerships”) of the June 2021 IOOS Advisory Committee recommendations to NOAA, it is critical that IOOS and NOAA communicate with New Blue Economy stakeholders and partners to understand their unique concerns and needs for data and information. What recommendations does the Committee have about a strategy for engagement with these partners?
2. In alignment with recommendation 1.2.2, IOOS and NOAA support the movement of technologies and capabilities from research to operations, and that the IOOS Office uses the NOPP process for MBON and ATN projects and the OTT program to infuse new technology into the IOOS RA networks and IOOC agency projects and programs. How does the Committee recommend adding or adjusting these approaches to encourage and support innovative ocean start-ups and the expansion of Blue Tech clusters?
3. The IOOS Enterprise’s observing systems produce a wealth of information about the oceans and coasts. Following recommendation 1.2.3, IOOS actively engages developer communities through activities like the IOOS Code Sprint and Google Summer of Code, with the goals of facilitating the best use of the data, the creation of effective tools, and the education of a workforce that supports the NBE. How does the Committee recommend that IOOS connect with other organizations to further support the innovative use of IOOS data and services, and to continue developing STEM expertise in the community?
4. In order to support the sustained operation and growth of the IOOS Enterprise’s observing systems, it is important to understand the socioeconomic benefits they deliver. Responding to recommendation 1.1.3, IOOS completed the Ocean Enterprise studies (revised every 5 years with new data), and is working on a Benefits of Ocean Observing Catalog (BOOC) to create a GIS-based repository of case studies describing the societal and economic benefits derived from ocean data. Does the Committee have any recommendations for other activities that will further the understanding of the economic value of ocean observations?

Feedback on this document is welcomed, together with any suggestions for other beneficial opportunities for engagement between the IOOS Office and the Committee.