

U.S. Subcommittee on Ocean Science and Technology

OPPORTUNITIES AND ACTIONS ROUNDTABLE

Executive Summary

Event Overview

On Tuesday, July 19, 2022, the National Science and Technology Council (NSTC) and Ocean Policy Committee (OPC) Subcommittee on Ocean Science and Technology (SOST) hosted a public Opportunities and Actions in Ocean Science and Technology Roundtable. The virtual event convened over 350 representatives from the ocean science and technology (S&T) community to discuss ideas for advancing Federal Ocean S&T priorities. As the lead interagency entity for Federal coordination on Ocean S&T, the SOST welcomed the broad community to engage in active small-group discussions with the 30 Federal Departments and Agencies represented on the SOST during the event.

The Roundtable featured 20 lightning talks on three SOST priority areas: Climate Change, Resilient Ocean Science and Technology Infrastructure, and a Diverse and Inclusive Blue Workforce, in addition to the overarching connections to racial justice and equity across all priority areas. The Roundtable themes were drawn from the SOST Opportunities and Actions in Ocean Science and Technology (2022-2028) Report.[1] Speakers represented sectors from academia, industry, philanthropy, NGOs, State government, Indigenous communities, regional ocean partnerships, and education organizations. The speakers were selected from responses to an open call issued by the SOST in Spring 2022 for innovative and novel ideas relevant to Federal Ocean S&T priorities. All publicly accessible responses and a recording of the lightning talks can be found on the SOST website.[2] This summary focuses on the group discussions during the July Roundtable event.

Key Themes and Priority Focus Areas

Intersecting themes from the Roundtable presentations and discussions on SOST priority areas focused on partnership development, ocean-based climate solutions, advancing diversity, equity, inclusion, justice, and accessibility (DEIJA) and environmental justice, engagement with Tribal Nations and Indigenous communities, and ocean data.

There was a heavy emphasis on building and effectively leveraging multi-sectoral, public-private **partnerships** to facilitate technological innovation and advancement with the U.S. Federal government (USG) playing a role in supporting and promoting experimental testbed and pilot projects. Participants were particularly interested in the development of technologies to advance ocean mapping, exploration, and monitoring, including the use of autonomous systems, smart cables, inexpensive sensors, and remote sensing technologies.

Ocean-based climate solutions, including technologies and strategies, were also discussed as a priority area. Participants recognized the urgency to combat the climate crisis using a diverse toolkit that includes solutions such as offshore wind energy, and marine carbon dioxide removal and sequestration, including nature-based carbon removal and ocean alkalinity enhancement. The discussion included the importance of leveraging Earth system models to better understand and predict the outcomes and cascading impacts of these solutions.

There was wide recognition of the USG's role in advancing **DEIJA** and **environmental justice** and the potential for SOST to lead their incorporation and implementation across the U.S. Ocean S&T enterprise. Ideas and initiatives proposed throughout the Roundtable included increased funding for early career researchers, especially those from historically underrepresented and underserved communities in Ocean S&T, supporting well-paying internships, and expanding the availability of remote opportunities to increase access and broaden participation in Ocean S&T.

[1] www.whitehouse.gov/wp-content/uploads/2022/04/03-2022-SOST-Opportunities-and-Actions-for-Ocean-Science-and-Technology-2022-2028-1.pdf

[2] www.noaa.gov/ocean-science-and-technology-subcommittee/ost-activities-and-products/2022-sost-opportunities-and-actions-roundtable#roundtable-submissions

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Key Themes and Priority Focus Areas continued

Participants also discussed the importance of inclusivity and cultural sensitivity in technology development and emphasized the need for inclusion of and engagement with **Tribal Nations and Indigenous communities and perspectives**. Another focus area was advancing interdisciplinary science, especially integrating human dimensions and social and behavioral sciences more holistically with other Ocean S&T fields. Participants also shared perspectives on the importance of citizen science initiatives that are open to all and provide data to support coastal communities, including tackling climate change by improving climate predictions for diverse coastal environments and providing guidance on addressing environmental justice and equity issues in and beyond coastal areas.

Ocean data topics included big data, artificial intelligence, machine learning, and the use of these data tools to inform decision-making, including spatial planning. The discussions also included the importance of different data sources, including ocean observations and environmental DNA, as critical tools to support conservation, resource management, and climate mitigation and adaptation efforts. Moreover, participants emphasized the need for open access data (e.g., not behind a paywall) that can be readily accessible by all.

Moving Forward

As a maritime Nation, the United States relies heavily on healthy and resilient ocean, coastal, and Great Lakes ecosystems. The Roundtable participants strongly recognized the ocean's role in serving as an economic engine for the Nation, encompassing focal regions for growth and equitable development, and providing resources for national and global security. Many Federal agencies conduct and/or support Ocean S&T based on their perspectives, missions, and authorized responsibilities. SOST's sister subcommittee under the OPC, the Ocean Resource Management (ORM) Subcommittee, is an additional body pursuing some of the work relevant to Ocean S&T, which includes data needs of the community, resource management considerations (e.g., aquaculture), ocean-climate solutions, and sustainable development of an ocean economy. Interagency coordination enables a whole-of-government approach that leverages the unique capabilities of each Federal agency to ensure that Ocean S&T research, services, and products are useful, usable, and used.

Through the inspired ideas and connections made at the Roundtable, the SOST and broader Ocean S&T community will work to embrace the national and international attention on the ocean to combat the climate crisis, build modernized and resilient Ocean S&T infrastructure, and ensure the Ocean S&T community empowers a diverse and inclusive blue workforce, all while enhancing racial justice and equity. Both governmental and non-governmental participants expressed an interest in future events to continue discussion and engagement on broad Ocean S&T topics and the SOST is exploring this as a potential avenue for public engagement. The SOST is encouraging agencies to connect with roundtable participants and represented sectors to pursue partnership opportunities to meet mutual goals. The SOST will discuss implementing the specific ideas and recommendations from speakers and the Roundtable discussions at future subcommittee meetings.

Resources and Ways to Get Involved

To be added to the SOST email list for occasional updates, including future events, please email ocean@ostp.eop.gov

OPC Website
(including its 2 subcommittees):
a. **Ocean Science and Technology**
Subcommittee
b. **Ocean Resource Management**
Subcommittee

Recorded
Roundtable
presentations

All publicly
available
Roundtable
abstracts

What is SOST?

The Subcommittee on Ocean Science and Technology (SOST) is the lead interagency entity for Federal coordination on ocean science and technology (S&T). The SOST works to expand knowledge, provide advice, and offer recommendations regarding the advancement of ocean S&T across the Federal government and with the broader ocean community.

The SOST includes 30 members from various Departments and Agencies:



This year, the SOST released a new report: *Opportunities and Actions for Ocean Science and Technology (2022-2028)*. This report aims to help decision-makers better incorporate the Federal Government's key priority topics into ocean S&T decision-making and implementation.

Each of the goals identified in the report relies on, and contributes to, three cross-cutting themes, all of which include connections to racial justice and equity:

1. Climate Change
2. Resilient Ocean Science and Technology Infrastructure
3. A Diverse and Inclusive Blue Workforce

For more information, please visit the [SOST website](#) and read the full [Opportunities and Actions Report](#)

SOST Website: www.noaa.gov/ocean-science-and-technology-subcommittee

Report: www.whitehouse.gov/wp-content/uploads/2022/04/03-2022-SOST-Opportunities-and-Actions-for-Ocean-Science-and-Technology-2022-2028.pdf