

**Minutes**  
**19th Meeting of the Ocean Exploration Advisory Board**  
**8-9 April 2021, Virtual**

**Notification and Availability of Meeting Materials**

The 19th meeting of the Ocean Exploration Advisory Board (OEAB) was announced to the public through the *Federal Register* and on the [OEAB website](#). Background materials and presentations prepared for this meeting are posted on the OEAB website.

**Ocean Exploration Advisory Board Members in Attendance**

Ambassador Cameron Hume, Consultant (Chair)  
Amanda Demopoulos, U.S. Geological Survey  
Vicki Ferrini, Columbia University  
Christopher R. German, Woods Hole Oceanographic Institution  
Eric King, Schmidt Ocean Institute  
Justin Manley, Just Innovation Inc.  
David Millar, Fugro USA  
Dominique Rissolo, University of California at San Diego  
Clara Smart, Johns Hopkins University Applied Physics Laboratory

**Designated Federal Officer for the OEAB**

David McKinnie, NOAA Office of Ocean Exploration and Research

**NOAA Ocean Exploration Staff in Attendance**

Alan Leonardi, Director  
Gene Fisher, Deputy Director  
Frank Cantelas  
Rachel Medley  
Kristen Crossett  
Christa Rabenold  
Amanda Netburn

**Invited Speakers**

Rebecca Hermanowicz, General Counsel, Department of Commerce  
Karen Hyun, NOAA Chief of Staff  
Jane Lubchenco, Deputy Director for Climate and the Environment, OSTP  
Alexis Rudd, Senate Committee on Commerce, Science, and Transportation  
Lauren Linsmayer, House Committee on Science, Space, and Technology  
Craig McLean, Assistant Administrator, Office of Oceanic and Atmospheric Research  
John Kreider, chair, OEAB Blue Economy Subcommittee (BES)  
Mike Olsen, BES  
Shally Shanker, BES  
Jerry Schubel, BES

## Observers

A number of individuals from NOAA and other organizations observed the meeting at various points.<sup>1</sup>

- 1. Meeting Opening.** Designated Federal Officer (DFO) David McKinnie opened the meeting on April 7, 2021. This meeting was held virtually given the COVID-19 pandemic. He provided an update on the status of new OEAB members and noted that Ambassador Hume had been named permanent chair since the last OEAB meeting.
- 2. Chair Opening Remarks.** Chair Ambassador Cameron Hume reviewed the [meeting agenda](#). He observed that with increased support for ocean exploration and the NOAA program over the past two years, there is an opportunity to forge ahead and solidify past gains as we look to the future. He also stressed the importance of the Blue Economy and the value of communicating how ocean exploration supports the Blue Economy.
- 3. Approval of Minutes.** Justin Manley made a motion to approve the [OEAB meeting 18 minutes](#), held virtually on 10 December 2020. Clara Smart seconded, and the board approved the minutes.
- 4. Annual Ethics Briefing.** Rebecca Hermanowicz, Department of Commerce General Counsel, conducted the annual ethics briefing for OEAB members, as required by law. She noted that there is a new system for submitting annual ethics disclosures online and invited OEAB members to consult with her should questions about conflict of interest arise.
- 5. Annual Certification of the Office of Ocean Exploration and Research Grants Process.** Frank Cantelas, NOAA Ocean Exploration's Science and Technology Division chief, briefed the OEAB on the grants program process and grant-funded activities. OEAB members asked about the office's experience working with developers of new technology and the degree to which the private sector has been successful competing for grants. Cantelas noted that technology proposals are submitted each year. Members also asked if given the success of the program to date, whether it could be expanded with more resources and new partners. The OEAB suggested that NOAA Ocean Exploration maintain records of proposals that would have been funded had resources been available. The OEAB completed its annual review of the grants program process as required by law and endorsed it. OEAB members proposed recommendations for improvement, which will be included in a letter to the NOAA administrator. [[Presentation](#)] [[Grant Activities from 2016-2020](#)]
- 6. NOAA Ocean Exploration Update.** Alan Leonardi, NOAA Ocean Exploration's director, provided a short overview of the office's activities since the last OEAB meeting. He described how ocean exploration and key initiatives such as the National Strategy for Mapping, Exploring, and Characterizing the United States Exclusive Economic Zone and implementation plan appear to remain priorities in the new administration and for Congress. Leonardi provided an overview of upcoming NOAA Ocean Exploration and Ocean Exploration Cooperative Institute expeditions and activities as well as highlights from the office's Education and Outreach and Science and Technology

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<sup>1</sup> Given the nature of the virtual meeting, it was difficult to tell who was participating and when. Thus, this list may not be complete. About 73 individuals total participated or observed the virtual meeting over the two days.

divisions. He closed with comments on NOAA Ocean Exploration's 20<sup>th</sup> anniversary before noting that this OEAB meeting was his last as director of NOAA Ocean Exploration. [[Presentation](#)]

Following Leonardi's presentation, OEAB members expressed their appreciation for his leadership over the past six years.

- 7. Remarks from the NOAA Chief of Staff.** Karen Hyun, NOAA chief of staff, explained that the Biden administration priorities relevant to NOAA are climate change, conservation, and racial equity. She said that ocean issues are part of the climate solution, and that it is important to make fisheries and protected species more resilient. It is important, she said, that NOAA science guides decision making for major initiatives such as the plan to produce 30 gigawatts of energy from offshore wind energy by 2030 and for the 30 by 30 plan to preserve 30% of America's land and water by 2030. She emphasized the importance of scientific integrity. Hyun said that it was critical that NOAA serve *all* Americans. In response to questions from OEAB members, she also noted the importance of the Blue Economy as an emerging priority for Department of Commerce Secretary Gina Raimondo.
- 8. Remarks from the White House Office of Science and Technology Policy.** Jane Lubchenco, Deputy Director for Climate and the Environment, Office of Science and Technology Policy opened her remarks by thanking Alan Leonardi for his service to NOAA and expressing appreciation to the OEAB for their advice to NOAA. Referring to prepared remarks, she noted significant progress in ocean exploration and advancements in technology, partnerships, alliances, and revitalized interagency collaboration through the National Oceanographic Partnership Program. She affirmed the critical role the ocean plays in Biden administration priority areas and the value of the National Strategy for Mapping, Exploring, and Characterizing the United States Exclusive Economic Zone in meeting national priorities for understanding the ocean. She observed that ocean exploration helps to promote a sustainable Blue Economy for all Americans, and drives efforts to understand and adapt to climate change. She closed by saying that the administration supports ocean exploration domestically and internationally. [[Prepared Remarks](#)]
- 9. Remarks from House and Senate Committee Staff on Ocean Exploration Legislation.** Alexis Rudd of the Senate Committee on Commerce, Science, and Transportation, said that the relevant House and Senate committees are working on ocean exploration legislation and considering similar approaches. Points of interest include the interagency coordination role NOAA Ocean Exploration plays as well as coordination with the private sector and academia. Rudd stated that once the Senate subcommittee finishes its work it will send the draft legislation to the House to reconcile differences.

Lauren Linsmayer of the House Committee on Science and Technology welcomed input on the latest draft House legislation as part of the process for gathering input from all sectors invested in ocean exploration. She said the draft legislation included provisions for a new interagency working group under the Ocean Policy Council, measures that would allow for more effective and efficient partnerships in ocean exploration, formation of a new ocean exploration center, and other provisions related to outreach and education, data management, stewardship, and access.

- 10. Remarks from OAR Assistant Administrator.** Craig McLean, Office of Oceanic and Atmospheric Research, made brief remarks. Having thanked Alan Leonardi for his leadership, he asked for OEAB help in recruiting a new director for NOAA Ocean Exploration. He said that the appointment of Secretary Gina Raimondo creates great potential to bind Department of Commerce and NOAA

together on the Blue Economy and that taking advantage of this opportunity is a matter of urgency. He highlighted progress on the United Nations Decade for Ocean Science for Sustainable Development and the opportunities the Decade offers for multinational cooperation to execute ocean exploration campaigns and to promote STEM education and careers.

**11. Panel Discussion on the OEAB Blue Economy Subcommittee Recommendations.** John Kreider, chair of the OEAB's Blue Economy Subcommittee, and subcommittee members Mike Olsen (Equinor), Shally Shanker (AIIM Partners), and Jerry Schubel (Aquarium of the Pacific) discussed the subcommittee recommendations of a year ago in the current political and economic context. Olsen described offshore wind as a signature opportunity for renewable energy, job creation, and economic development. He noted that President Biden's 30 gigawatt goal is ambitious, and that the road ahead will not be smooth given the need to co-exist with other uses, permitting complexity, and other challenges. He said that NOAA played an important role in facilitating offshore wind development by convening stakeholders.

John Kreider provided background on the Blue Economy Subcommittee and described the current context given climate change and Blue Economy priorities. He said that the Department of Commerce has a responsibility to find common ground with the "pro-business" and "anti-business" camps within the Blue Economy sector and to create discussion opportunities and mediate conflicts. Kreider stressed that it is critical to gain useful knowledge about the ocean because it is critical to our future, that NOAA must develop a culture of outward focus and active engagement, and that NOAA and the department must confront issues and conflicts in the ocean and find common ground. He challenged the ocean sciences community with the question of "what are we going to do differently to make things happen?"

Shally Shanker focused on the need to build global alliances to spur innovation by creating a pathway to bring innovation to market. Venture capital, philanthropic organizations, and other organizations need to work together to provide capital and incentives to develop new ideas. A new Advanced Research Projects Agency for the Ocean (ARPA-O) is needed to accelerate the commercialization of nascent technologies and to serve as a focal point for fostering innovation and commercialization). And, an investment landscape for ocean-based innovation is needed to promote emerging sectors like offshore wind, data/artificial intelligence for climate and oceans, and geospatial/climate/weather/ocean analysis to generate insights for better decision-making from hyper-local to international. She also noted that there is a need to invest in existing sectors for post-COVID recovery, initiatives such as Smart Ports, and in other areas to build a sustainable Blue Economy.

Jerry Schubel described how the ocean is changing as a result of climate change and human activities. Land-based agriculture is responsible for approximately 10% of greenhouse gases and consumes more than 70% of the earth's fresh water. He said that the Blue Economy can and should help to mitigate climate change, benefit the ocean, and create economic opportunity while conserving marine ecosystems. Schubel stated that some land-based agriculture can be shifted to the oceans to address climate change and reduce environmental harm. Offshore aquaculture can address climate change concerns while increasing food security and promoting economic development. He went on to describe ways that NOAA can encourage sustainable offshore aquaculture, including establishing aquaculture opportunity areas, establishing a "high bar" for environmental compliance, streamlining permitting, and effective monitoring.

**12. Public Comment Period.** The OEAB received one written comment, from “Jean Q Public” objecting to ocean exploration as a destructive force. Katie Fillingham from the Consortium for Ocean Leadership provided an update on planning for the next National Ocean Exploration Forum, scheduled for November 2021.

**13. Next Meeting.** The OEAB agreed that the next meeting, also virtual, should be held before the end of June 2021.

**14. Meeting Close.** The DFO closed the meeting at approximately 4:55 PM on April 8, 2021.