

Minutes
14th Meeting of the Ocean Exploration Advisory Board
Consortium for Ocean Leadership, Washington, DC
December 3-4, 2019

Notification and Availability of Meeting Materials

The fourteenth meeting of the Ocean Exploration Advisory Board (OEAB) was announced to the public by Federal Register Notification, and on the OEAB website at www.oaab.noaa.gov. Background material and presentations prepared for this meeting are posted on the OEAB website.

Ocean Exploration Advisory Board Members in Attendance

Mr. John Kreider, Consultant (Chair)
Ambassador Cameron Hume, Consultant (Vice Chair)

Dr. Amanda Demopoulos, U.S. Geological Survey
Dr. Jacqueline Dixon, University of South Florida
Mr. David Lang, Sofar Ocean Technologies
Dr. Dominique Rissolo, University of California at San Diego
Dr. Richard Rikoski, Hadal, Inc.
Mr. Lance Towers, Boeing, Inc.

Mr. David McKinnie, Designated Federal Officer for the OEAB

Office of Ocean Exploration and Research

Dr. Alan Leonardi, Director, OER
Mr. Frank Cantelas, Deputy Director, (Acting), OER²
Dr. Jamie Austin, OER
Ms. Rachel Medley, Expeditions Division Lead, OER
Dr. Adrienne Copeland, OER³
Mr. Matthew King
Ms. Rachel Gulbraa

Invited Speakers

RDML Timothy Gallaudet, USN (ret)
Craig McLean, NOAA Research Assistant Administrator
RADM Jon White, USN (ret), CEO and President, Consortium for Ocean Leadership
RADM Michael Silah, Director NOAA Corps and Office of Marine and Aviation Operations (OMAO)
Dr. Ed Kearns, NOAA Chief Data Officer
Dr. Lauren Linsmayer, House Science Committee Staff
Michelle Tamez, Natural Resource Specialist, United States Forest Service (USFS)

¹Mr. Cantelas participated on the second day

²Dr. Copeland participated on the first day

Observers

A number of individuals from the Consortium for Ocean Leadership, NOAA, and other organizations observed the meeting at various points during the meeting.

Meeting Summary

- 1. Meeting Opening.** The Designated Federal Officer (DFO), David McKinnie, opened the meeting on December 3, 2019 at the Consortium for Ocean Leadership.
- 2. Chair Opening Remarks.** Chairman John Kreider reviewed the [agenda](#) for the meeting. The Chair opened by referencing the recent White House Summit on Partnerships in Ocean Science, inviting the board to consider which entity they imagined leading a national program of ocean exploration, and whether OER and/or NOAA had the resources, talent, and strategy to do so. Discussion centered on the need to continue to improve partnership building, with particular attention to private partners, and small and transdisciplinary organizations.
- 3. Consortium for Ocean Leadership.** RADM Jon White, President of the Consortium for Ocean Leadership (COL), welcomed the OEAB to COL, and gave a preliminary briefing on the recent [White House report](#) on the Summit on Partnerships in Ocean Science and Technology, the [Presidential Memorandum](#) on Ocean Mapping of the United States Exclusive Economic Zone and the Shoreline and Nearshore of Alaska, and the importance of curating partnerships and maintaining momentum to catalyze a national effort on ocean exploration. The National Oceanographic Partnership Program (NOPP) was discussed as a mechanism to do so.
- 4. Approval of Minutes.** Dr. Jacqueline Dixon made a motion to approve the minutes from the 13th OEAB meeting, held in Washington, DC. Dr. Dominique Rissolo seconded, and the Board approved the minutes (see the [OEAB website](#) for Meeting 13 minutes).
- 5. OEAB Membership and Blue Economy Subcommittee.** In continuation of discussions from the previous meeting, the DFO noted the need for the replacement of 5-6 members of the OEAB by June 2020 due to term limitations. A Federal Register Notice has been drafted to solicit applications, with final decisions to be made by the NOAA Administrator. The DFO also noted the creation of a new Blue Economy Subcommittee to meet for the first time in early February 2020; 11 individuals have thus far accepted the invitation to join the committee.
- 6. OER End-of-Year Overview.** Dr. Alan Leonardi provided the OEAB with an update on OER activities since the last meeting, as well as a holistic overview of OER activities during the previous calendar year. Major highlights included updates on the successful completion of field work for the collaborative, NOPP-funded DEEP SEARCH program to document sensitive habitats off the US Atlantic Coast, and the creation of the new Ocean Exploration Cooperative Institute (OECI) based out of University of Rhode Island. OER's upcoming field season pursuing scientific inquiry in the Mid Atlantic Ridge aboard NOAA Ship *Okeanos Explorer*, and the planned USGS-BOEM-NOAA 2020 Critical Minerals Expedition, a response to Executive Order 13817 (Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals) were also discussed. [Presentation]
- 7. NOAA Fleet Plan and Unmanned Systems.** RADM Michael Silah of NOAA Corps and Office of Marine and Aviation Operations (OMAO) joined the OEAB for a discussion on the state of the NOAA fleet plan and opportunities for unmanned systems. He stated that 2020 will be a pivotal year in this domain, and reiterated OMAO's role in supporting ocean exploration. He gave an overview of the recapitalization plan and detailed funding for three new vessels, but also noted the uncertain time gap between current fleet retirement and new acquisitions. Potential solutions such as fly-away technology, vessel leasing, and extension of current fleet life were discussed. Silah noted the value of a vessel devoted to ocean exploration, akin to present-day *Okeanos Explorer*, regardless of other additional options pursued.

In regard to progress in unmanned systems, the need for clearer regulations, guidance, and partnerships was stressed, as well as a budget beyond the current continuing resolution. Silah stated that he foresees unmanned systems augmenting, but not replacing, NOAA ships, as they fulfill different niches. The need for a culture of embracing failure as a part of the learning process in unmanned system development was discussed, as well as challenges in government systems to doing so.

The OEAB discussed the importance of a mix of platforms and systems and endorsed the view that surface ships and autonomous systems were not an “either/or” proposition, but rather a “both/and” need.

- 8. Diversity Opportunities.** During the previous OEAB meeting, a letter spearheaded by Amanda Demopoulos and Dominique Rissolo, intended to inspire diversity and inclusion efforts as a part of a national ocean exploration program, was tabled for further discussion. While it was acknowledged that the OEAB is not equipped to tackle all relevant issues, a letter expressing support, sharing guidance, and affirming the positive benefits constituent to increased diversity and inclusion was determined to be important to share. Chair recommendations moving forward included the drafting of a position statement, expanding diversity within the OEAB itself, and forming a working group. The DFO also discussed the opportunity to leverage Ocean Exploration Trust investments and the new OEI for diversity and inclusion efforts.
- 9. OER Program Review.** Ed Kearns, OER Program Review Chair, gave a preliminary overview on the results of the OER program review. Members were encouraged to read each of the reviews individually for greater nuance, but common elements among the majority of the reviews included: commendation of program growth, and encouragement for the Board to: 1) be bold in their vision for the future, 2) take a system-wide approach, 3) move beyond data production into data consumption, 4) firmly establish data governance, 5) advance video and telepresence, and 6) to fully engage with the new OEI.
- 10. Ocean Exploration Reauthorization.** Dr. Lauren Linsmayer of the House Science Committee joined the OEAB for updates on committee activity since June’s hearing on ocean exploration, stakeholder engagement, and legislation drafting. She was hopeful for a bill by early 2020, for which she noted there appears to be bipartisan interest and support. Private and academic partnerships, stronger interagency relationships, and a broader national effort were highlighted as issues that will likely be important to the bill. She added that the Blue Globe Act has helped catalyze momentum in ocean issues, and that OEAB recommendations from the March meeting have been helpful in informing the process.
- 11. Q&A with NOAA Leadership**
Dr. Craig McLean, and later RDML Tim Gallaudet, joined to provide a NOAA leadership perspective. Gallaudet opened by stating that the way forward for ocean exploration was clear, having been defined by the Presidential Memo. He asked the Board about priority areas as seen through the lenses of national security, conservation, and the economy. Subsequent discussions included national security in the Indo-Pacific, resource use and management, including medicinals, aquaculture, and the seafood trade, and the near-shore/coastline of Alaska. RDML Gallaudet also mentioned that food security and robotics were topics at the White House Summit, and that all four NOAA draft strategies to come out of the Summit related to ocean exploration. The Board will provide comment on these strategies. Ambassador Hume noted that OER has the opportunity to help move these strategies forward, and RDML Gallaudet agreed that they provide a mechanism for crossline collaboration and institutional support. Another issue of discussion included the value of data collection verses data buys. RDML Gallaudet expressed support for both as a way to leverage across different scales, as well as the need to overcome any constraints to doing so.
- 12. The Use of Citizen Science in a Federal Agency.** The Board was joined by Michelle Tamez of the USFS Citizen Science Program. She discussed the Forest Service’s evolving approach to citizen science, as well as barriers (resources, funding, longevity), and case studies involving Traditional Ecological Knowledge (TEK), volunteer motivation, and the use of technology (iNaturalist). The Board has long expressed support for the use of citizen science in their work, but articulated the desire for action. This presentation marked the beginning of proactive steps in that direction. [Presentation]
- 13. Meeting Close.** The DFO closed the meeting at approximately 1710 on December 4, 2019.