Meeting Report of the
U.S. Advisory Committee for Scientific Ocean Drilling (USAC)

26-29 January 2021

Virtual Meeting

U.S. Advisory Committee for
Scientific Ocean Drilling (USAC) Meeting
January 26-29, 2021
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Meeting Roster

Committee Members

Marta Torres (Chair)	Oregon State University
Stephanie Carr	Hartwick College
Peter Clift	Louisiana State University
Justin Dodd	Northern Illinois University
Michael Gurnis	California Institute of Technology
Don Haas	Paleontological Research Institution
Kathie Marsaglia	California State University Northridge
Cecilia McHugh	Queens College/SUNY
Suzanne O'Connell	Wesleyan University
Rebecca Robinson	University of Rhode Island
Mitch Schulte	NASA Headquarters
Geoff Wheat	University of Alaska Fairbanks

Liaisons, Observers & Guests

Jamie Allan	NSF
Carl Brenner	USSSP – LDEO
Brad Clement	JRSO
Gail Christeson	SEP
Carol Cotterill	USSSP – LDEO
Sharon Cooper	USSSP – LDEO
Steve Hovan	NSF
Kevin Johnson	NSF
Clive Neal	JRFB
Angela Slagle	USSSP – LDEO
Debbie Smith	NSF
James Spencer	USSSP – LDEO

Consensus Statements and Action Items:
USAC Winter Meeting 2021 (Virtual)

Consensus Statement 2021.01-1: USAC thanks USSSP for organizing the IODP Town Hall meeting, *Scientific Ocean Drilling: The Next Phase*, at the virtual Fall AGU meeting; and Clive Neal, Gabriele Uenzelmann-Neben, Nobukazu Seama, Dick Kroon, and Leanne Armand for proposing and chairing the AGU session, *The Science Behind the Framework for Scientific Ocean Drilling Through 2050*.

Consensus Statement 2021.01-2: USAC strongly endorses the practices highlighted in the IODP Code of Conduct/Anti-Harassment Policy and the JRSO Code of Conduct.

Consensus Statement 2021.01-3: USAC supports the statement of tasks given to the JRFB Working Group, especially the development of metrics for proposal success, consideration of risk assessment/management for an expedition, and the integration of science communication into proposal development and evaluation phases.

Consensus Statement 2021.01-4: USAC supports the rebranding of the USSSP Education and Outreach effort as "Science Communication." Science Communication is seen as encompassing education and outreach while also including relationships with policymakers, industry and foundations (amongst others).

Consensus Statement 2021.01-5: USAC strongly feels that incorporating the science communication plan for any expedition into the scientific prospectus for that expedition would help raise the profile and importance of science communication as an integral part of any expedition. This in turn will indicate that science communication is viewed as a natural part of the scientific process and that participation in expeditions comes with a responsibility to support science outreach for broader impact across multiple audiences.

Consensus Statement 2021.01-6: USAC strongly feels that science communication is essential to the continuation of scientific ocean drilling. In light of this, we strongly support sailing at least one Onboard Outreach Officer even on expeditions that are staffed at reduced levels (i.e., as a result of the COVID pandemic). Given our simultaneous need to expand the diversity of our community, this is especially important when the Onboard Outreach Officer is from a group that is underrepresented in the ocean drilling community.

Consensus Statement 2021.01-7: USAC applauds the efforts of USSSP in reaching out to minority-serving institutions and encourages USSSP to continue promoting partnerships and contacts that can serve as a basis for enhancing participation of underrepresented groups in the various aspects of scientific ocean drilling.

Consensus Statement 2021.01.-8: USAC applauds the efforts of JRSO in migrating the current databases to Zenodo, which is based on FAIR principles, as a means of guaranteeing the secure and searchable archival of IODP data. We also endorse the idea of requesting future contributors of IODP Data Reports to upload their data into this platform.

Action Item 2021.01.1: USAC requests that USSSP incorporate a statement that expresses expected behavioral standards (e.g., the IODP Code of Conduct) in all USSSP-funded activities, such as workshops and science communication efforts. Grantees and participants in all USSSP/USAC programs are expected to comply with these standards.

Action Item 2021.01-2: USAC requests that JRSO develop mechanisms to compile demographic information, if possible, on researchers, their students, and their institutions (specifically, whether they are minority-serving institutions) in the context of sample requests, as this will help document diversity of the community involved in post-cruise research.

Action Item 2021.01-3: USAC applauds the language supporting a commitment to diversity, inclusion, and safety in the latest call for applications to sail, and requests that USSSP modify its application process so as to disclose an intention to share demographic data with reviewers and operators in order to facilitate shipboard diversity.

Action Item 2021.01-4: USAC requests that USSSP solicit volunteers and coordinate informal mentoring services for expedition science party and Schlanger Fellowship applicants. Mentors should be encouraged to have prior experience in mentorship and implicit bias training.

Action Item 2021.01-5: USAC requests that USSSP incorporate language in the call for workshop proposals that clearly indicates efforts to address Diversity, Equity, and Inclusion (DEI). DEI goals and a plan to assess the success of DEI efforts are to be specifically detailed in workshop proposals.

Action Item 2021.01-6: USAC endorses the USSSP initiative for novel project proposals that can be submitted for funding through USSSP, and requests that USSSP develop the online solicitation page to be reviewed by USAC before going live in Spring of 2021.

Action Item 2021.01-7: USAC requests that USSSP collect and report available statistics on the demographics of past and future participants in various ongoing science communication efforts, such as School of Rock and the JR Academy, so as to assess and more systematically track future efforts involving enhancing diversity and broadening participation in scientific ocean drilling.

Action Item 2021.01-8: USAC requests that JRSO and USSSP compile resources, including a short video, highlighting aspects of life at sea that can be used as reference material by those seeking to apply for various shipboard roles (seagoing technician positions, shipboard scientist positions, School of Rock participation, etc.)

Action Item 2021.01-9: USAC recommends the constitution of a Facility Business Plan Working Group to explore new and innovative financial models for potentially operating a globally ranging U.S. scientific ocean drilling vessel. The WG should focus on planning a workshop for the last quarter of calendar year 2021, to which various potential stakeholders would be invited along with the scientific ocean drilling community to discuss and formulate options on the basis of data presented. The Statement of Task for this WG is given on page 4.

Action item 2021.01-10: USAC recommends the constitution of a Science Framework Communications Working Group to compile informational materials focused on the vision of scientific ocean drilling as described in the 2050 Science Framework. These materials may include a 2-page document, short YouTube-style videos, and/or instructional material for delivering a unified message, along with a pathway of potential activities that will have the greatest impact on the long-term success of scientific ocean drilling. This WG will be led by Geoff Wheat, Becky Robinson, and Carol Cotterill, who are encouraged to reach out to other members of the community to assist in this effort. These materials will be presented at the next USAC meeting.

Action Item 2021.01-11: USAC recognizes and applauds the efforts of the E&O Workshop Steering Committee (formed in response to USAC Winter 2020 and Summer 2020 meeting action items/consensus statements) in planning and organizing a workshop that emphasizes increasing interest in ocean drilling science, especially among diverse groups, in the context of providing a blueprint for implementation of Science Communication strategies aligned with the 2050 Science Framework. Using the workshop report, USSSP and the USAC E&O Subcommittee, will write a synthesis white paper addressing the specific DEI action item from the summer 2020 meeting. USAC requests that the USAC E&O Subcommittee present an interim report at the next USAC (Summer) meeting and deliver a final report on the synthesis white paper at the 2022 USAC winter meeting. The Statement of Task for this Steering Committee is given on page 5.

Action Item 2021-01-12: USAC recommends the constitution of a Legacy Data Working Group to generate potential strategies for using available legacy cores and other data to advance scientific research questions. USAC requests that an interim report on these efforts be presented at the next USAC (Summer) meeting and a final report be delivered to USAC at the 2022 winter USAC meeting. The Statement of Task for this WG is given on page 6.

Facility Business Plan Working Group
Statement of Task

USAC, in consultation with the JRFB Chair, is constituting a Facility Business Plan Working Group to explore new and innovative financial models for potentially operating a globally ranging U.S. scientific ocean drilling vessel. The WG will be led by Clive Neal and Geoff Wheat, who are tasked with assembling a steering committee to address this task. This activity can be fostered by convening an in-person workshop that would include presentations on how other large facilities are managed and operated (public, private, and public-private partnerships) and exploring potential models for scientific ocean drilling. The WG should focus on, but is not limited to, other models for operating large facilities, such as:

- Other research vessel operating models (e.g., Schmidt Ocean Institute, WHOI, LDEO)
- Large telescopes (e.g., Mauna Kea site, University of Hawaii)
- Particle accelerators (e.g., Argonne National Lab Advanced Photon Source, Brookhaven National Lab)

The WG should also consider different types of business models that include, but are not limited to:

- Wholly government funded and operated
- Public-private partnerships (including both corporate and non-profit organizations)
- Leasing of a privately owned facility

The WG should plan a workshop for the last quarter of calendar 2021 to which various potential stakeholders would be invited along with the scientific ocean drilling community to discuss and formulate options on the basis of data presented. The goal of this workshop is to develop several models with potential to ensure sufficient resources and continued U.S. leadership in scientific ocean drilling through 2050.

E&O Workshop Steering Committee
Statement of Task

The E&O Workshop Steering Committee is tasked to work with the community to consider:

- Strategies aimed at reaching out to minority serving institutions with the objective of establishing clear points of contact (scientific ocean drilling ambassadors and role models) who can be used to recruit and maintain diverse participation in the various aspects of ocean drilling.
- Exploring avenues that can be implemented to create a nurturing environment for scientific ocean drilling participation from a broader community, more representative of the US population.
- Exploring the advantages/needs of generating materials to reach diverse audiences, for example the use of other languages (e.g., Spanish) and including closed captioning of all educational materials for hearing impaired.
- Guidance notes/best practices that can be used by proponents (science proposals/workshop proposals) to address broader participation.
- Compiling best practices and novel approaches based on the ideas/resources/lessons learned in the current IODP for a successful implementation of the 2050 Science Framework Enabling Element 1 (Broader Impacts and Outreach).

Legacy Data Working Group
Statement of Task

USAC is constituting a Legacy Data Working Group to generate potential strategies and models for using available legacy cores and other data to advance scientific research questions, through large-scale, integrated, multi-disciplinary research projects ("integrated legacy expeditions"). This WG will be led by Justin Dodd, Cecilia McHugh, and Angela Slagle, who are encouraged to reach out to other members of the community with relevant expertise (e.g., modeling, artificial intelligence, machine learning) to assist in this effort. Avenues for this WG to pursue could include:

- Summarizing the status of current databases, to facilitate access and utilization of existing IODP data in future projects.
- Assessing the potential for developing projects that involve synthesis and expansion of results from past and/or scheduled expeditions that are focused on a specific region or scientific topic.
- Considering the potential role(s) of novel big data and artificial intelligence (machine learning) approaches in mining and analyzing available data.
- Considering novel definitions for what constitutes a "science party" for integrated legacy expeditions, as well as potential project management strategies, funding sources, unique science communications opportunities, and outcomes for these projects.
- Generating strategies whereby integrated legacy expeditions can be used to increase or enhance diversity in participation.
- Generating a set of recommendations that could inform implementation of the 2050 Framework.