The following is a letter we sent to attendees of the various generations of IODP Early Career Workshops. We are writing to encourage your virtual participation at the upcoming Decadal Survey of Ocean Sciences meeting August 2–3. This meeting is specifically focused on the future of scientific ocean drilling in the United States, and the Decadal Survey committee will make a preliminary recommendation to NSF by the end of this year on what course of action to take. Strong engagement is important to demonstrate to the Decadal Survey committee how important scientific ocean drilling is to our community. Even if you can only attend for part of the meeting or keep the video on in the background while doing other work, your participation is important. Please register if you're available; you can do so at this link. The agenda is here. More information is below.

Your voice matters! Apparently, the members of the Decadal Survey who attended the recent IODP Town Hall were impressed by the turnout of 400+ participants from our large science community. It is important to continue to show that the U.S. scientific ocean drilling community is large and engaged.

MORE INFORMATION Wait, what's happening?

You are probably aware that NSF has decided to end support for the *JOIDES Resolution* after 2024. Concurrently, plans for a new ship, which were begun at the NEXT meeting in 2019 and advanced with the Science Mission Requirements in 2022, have also been put on hold. The stated reason for this is that it's time for another Decadal Survey of the Ocean Sciences, which is carried out externally by the National Academies of the Sciences (NAS) and which NSF uses to set research and funding priorities. The NAS Decadal Survey provides an opportunity for a 3rd party to make recommendations regarding the future of IODP, which may actually restart plans for a new ship and, critically, will help shape NSF's plans for the years before a new ship is built. Will the U.S. carry out MSP (mission-specific platform)-style drilling on leased vessels? Will NSF support U.S. scientists' participation in ECORD/JAMSTEC cruises? How will NSF support early career scientists whose careers are impacted by the loss of the JR? The Decadal Survey appears to be the best opportunity to provide input to these questions.

The main IODP-related goals of the Decadal Survey are below (from their website):

The committee will produce an interim report to provide advice to NSF OCE on the resources and infrastructure available to address high priority research questions requiring scientific ocean drilling. The interim report will cover the following:

- 1. Based on previous reports, assess progress on addressing high priority science questions that require scientific ocean drilling and identify new, if any, equally compelling science questions that would also require scientific ocean drilling.
- 2. Of the unanswered scientific questions, which could be addressed through the use of existing scientific drilling assets including sediment or rock core archives and existing platforms, and which questions would require new infrastructure or sampling investments?

So, what's going on at this meeting?

The Decadal Survey committee is composed of people from across the ocean sciences, some of whom have specialties way outside scientific ocean drilling and are not familiar with the program (but they are learning and listening!). The committee is meeting with representatives of the U.S. scientific ocean drilling community (including you! All you have to do is sign up!) to address the following topics:

- 1. Discuss progress made towards high priority science that requires ocean drilling.
- 2. Hear from experts to help determine if there are equally compelling science priority areas that require scientific drilling.
- 3. Discuss what questions can be addressed using existing scientific drilling assets as well as which high priority science questions require new infrastructure or sampling investments.

What are we asking for at this meeting?

There have been lots of discussions among many different U.S.-affiliated IODP groups about what we'd like the NAS committee to recommend. These discussions have coalesced around the points below. It may be helpful if you participate in the workshop and/or provide comment via the NAS website to voice your support for the following:

- 1. A new U.S.-operated, globally-ranging riserless drilling vessel to maintain U.S. leadership in scientific ocean drilling science.
- 2. A continued drilling program while the new ship is being built, including maintaining USAC and USSSP with their support for the robust U.S. science community, and logistical and technical support for MSP-style drilling (following an ECORD model).
- 3. Continued support and increased involvement of early career scientists in all aspects of scientific ocean drilling (e.g., opportunities to sail, funding for fellowships and grants through USSSP, development of workshops and other training opportunities, etc.) to bridge the knowledge gap created by the retirement of the JR without a riserless drilling platform for the next 10–15 years.

How can I make my voice heard?

Attend the meeting virtually! (Register here). Even if you can only make part of it, attending is the best thing you can do. Additionally, or if you are unable to attend, you can submit comments to the committee via this form.

Where can I learn more about the Decadal Survey?

We're so glad you asked. <u>Here's a link</u> to a video summarizing their charge. <u>Here's a link</u> to the webpage for the survey. Here's a link to the report from the last Decadal Survey in 2015.

We have also collated these videos, related documents (e.g., the White House Ocean Climate Action Plan, Cross-Cutting Themes for U.S. Contributions to the UN Ocean Decade), and other important resources related to scientific ocean drilling (the 2050 Science Framework and the Science Mission Requirements report). Here is the link to a Google Drive folder where these documents can be found.

Lastly, we ask that you forward this message to early career scientists and/or anyone else who is involved with scientific ocean drilling. The resources themselves, linked in this email, will be immensely helpful for those just beginning within scientific ocean drilling and/or for

those who would like to learn more about the various ocean sciences programs and major objectives.

Sincerely,

Chris Lowery & Adriane Lam University of Texas & Binghamton University