

New 2050 Science Science Framework open for community comment through 15 March

Dear IODP Community Members,

We are arriving at an important benchmark in our planning for future scientific ocean drilling. With this letter we present the first version of the **2050 Science Framework**, entitled ***Exploring Earth Through Scientific Ocean Drilling***, now ready for your examination and peer review.

This new *2050 Science Framework* has a 25-year outlook to 2050, inspiring state-of-the-art approaches for scientific ocean drilling far into the mid-21st century. Foundational Earth science research is described in seven *Strategic Objectives* and five *Flagship Initiatives* that encourage innovation and new discoveries. The major objective of scientific ocean drilling is to advance our understanding of Earth as an interconnected system through multi-disciplinary and societally-relevant collaborative research endeavors.

As the structure and roadmap to produce this framework were previously reviewed via online community postings on IODP.org in August 2019 and endorsed by the IODP Forum in September 2019, we are at this stage primarily seeking input from the international science community on the framework's scientific merit, accuracy, and completeness, so that each chapter strongly conveys the aspirations for future scientific ocean drilling through 2050.

The scientific scope of the *2050 Science Framework* was developed as a result of community discussions across six international workshops in 2019 that focused on the future of scientific ocean drilling. A key outcome that resonated across all workshops was that we should avoid the “siloes themes” of previous ODP and IODP science plans and focus on understanding Earth as an interconnected system with its myriad cross-cutting pathways, feedbacks, and processes.

Key aspects of the new science framework are:

1. A strong emphasis on interdisciplinary science at the crosslinks in the interconnected Earth system;
2. Enabling the next generation in scientific ocean drilling through a science plan that extends to 2050;
3. Seven open-ended *Strategic Objectives* that form the core of the science framework;
4. Five long-term, interdisciplinary *Flagship Initiatives* that address critical societal challenges;
5. Programmatic reviews at 5-year intervals that allow for intermediate adjustments or additions.

In your review we ask you to pay special attention to the following:

1. Are all *Strategic Objectives* and *Flagship Initiatives* sufficiently multi-disciplinary, capturing all the relevant Earth system interconnections?
2. Are there any important scientific areas, or new science frontiers, that were highlighted in the six international meetings that are not captured here?
3. Are all *Strategic Objectives* of a broad nature while being aspirational, allowing for all current and future (still undefined) scientific ocean drilling goals to be achieved?
4. Does each *Flagship Initiative* focus on a compelling endeavor that is of interest to society and require a coordinated multi-decadal drilling effort?
5. Are the science concepts well-represented and does this document provide a clear vision of how future scientific ocean drilling will uniquely allow us to advance new multi-disciplinary understanding of the Earth, ocean, and life systems?
6. Finally, we want to know your overall impression of the *2050 Science Framework*, including which parts are particularly exciting to you. We encourage all reviews; positive opinions and constructive critiques are equally valuable, both in moving forward with revisions and to gauge community support for this framework!

Comments can be provided via Disqus or emailed to sod2050@iodp.org. You can access the **2050 Science Framework** document and comments area at <http://iodp.org/2050-science-framework-survey>. Here you can provide general input on the document and/or provide specific comments using the line numbers in the document. Furthermore, in Disqus you have the opportunity to upvote or reply to other people's comments.

In addition, once you have finished your review, please complete the [Google Form survey](#), the link for which can be found on the same page! This will allow us to collate all of your general opinions in one place and produce metrics that will help us during the revision stage.

Please respond before **15 March 23:00 PST**.

Thank you so much for your continued support and energy in providing scientific ocean drilling with a bright future!

Anthony Koppers and Roz Coggon, Co-lead Editors

2050 Science Framework Writing Team
Exploring Earth by Scientific Ocean Drilling