

Science in IODP³ is driven by community-generated proposals for drilling/coring and SPARC expeditions targeting the vision outlined in the 2050 Science Framework.

IODP³ proposal evaluation is the key process involved in transforming the most exciting science ideas into successful expeditions.

IODP³ Proposal Evaluation Overview



**INTERNATIONAL
OCEAN DRILLING
PROGRAMME**

IODP³ Proposal Evaluation Overview

1. General Purpose of the IODP³ Science Evaluation Panel (SEP)

The Science Evaluation Panel (SEP) is responsible for scientific peer review and evaluation of offshore drilling/coring and SPARC proposals submitted by the international scientific ocean drilling research community.

Assessment of drilling/coring proposals will include an assessment of the viability and relative scientific value of alternative drilling/coring plans, and the appropriateness and quality of site survey data related to planned primary and alternate drill sites. Additionally, site survey data will be evaluated for safety and environmental protection purposes (in liaison with the SEA Group).

Assessment of SPARC proposals involves evaluating their relevance to the *2050 Science Framework*, the suitability of the legacy assets for addressing the proposed scientific objectives, and whether the achievement of those objectives would likely result in scientific advances.

2. SEP Review Procedures for Scientific Ocean Drilling/Coring Proposals (including Land-to-Sea Proposals)

2.1. Evaluation Questions

Science questions:

- Are the scientific questions/hypotheses being addressed exciting and of sufficiently wide interest to justify the requested resources?
- Will the proposal significantly advance the goals and ambitions of the 2050 Science Framework?
- Would the proposal encourage new communities or other science programmes to engage with IODP³?

Site questions:

- Based on the data that are presented, can we be reasonably assured that the proponents can achieve their objectives?
- Given the data, are the proposed drill sites in the right locations and to the right depth to achieve the scientific objectives?

Drilling Plan questions:

- Can the scientific objectives be achieved by drilling fewer sites? Is the proposed drilling realistic in time?
- Are the drill sites in the right location and to the optimum depth to achieve the objectives?
- Is the coring and logging (and/or other downhole measurements, monitoring) plan appropriate?
- Are there sufficient alternate sites (at least one per primary site)?

2.2. Proposal Grading

The SEP grades scientific drilling proposals according to the criteria described as follows:

- **Transformative Proposal:** The proposal addresses science that is likely to transform our understanding of globally-significant processes, help to define new approaches to scientific ocean drilling science, and/or is likely to lead to a step-change in resolving scientific problems or controversies, especially those of high societal relevance. The proposal has the highest potential for new discoveries and breakthroughs and/or for opening or defining exciting new avenues of research. It should be implemented if feasible to do so.
- **Excellent Proposal:** The proposal addresses science considered of very wide importance. It tackles new and exciting scientific problems, or it will take novel approaches to existing problems that remain unresolved/controversial. The proposal has strong potential for new discoveries and breakthroughs and most likely will open new avenues of research. It should be implemented if feasible to do so.
- **Very Good Proposal:** The proposal addresses science considered of probable wide importance. It will significantly advance understanding of existing scientific problems. Compared to ‘Excellent’ proposals, ‘Very Good’ proposals have reduced potential for major new discoveries but will produce datasets to address globally important scientific problems. It should be implemented if feasible to do so.
- **Good Proposal:** The proposal has potential for producing good scientific results. The scientific problems to be addressed are important, but potentially more regional in nature. Compared to ‘Excellent’ and ‘Very Good’ proposals, ‘Good’ proposals address more mature scientific problems with limited potential for major new discoveries, but they are still likely to produce important datasets and result in important refinements of existing scientific concepts. It should be seriously considered for implementation if it can be incorporated into long-term efforts and platform schedules.
- **Fair Proposal:** The proposal falls behind in terms of excitement and potential for discovery. The research may still be able to provide important, complementary data sets that can help fill specific niches, but is unlikely to move the field of research significantly forward, or to lead to new avenues of research. Nevertheless, the proposal may contain elements that, if fit into other proposals or other planned drilling activities (e.g., regional proximity), could provide a solid scientific return for a limited programme investment, and therefore might be considered for (partial) implementation at some point.

3. SEP Review Procedures for “Scientific Projects using Ocean Drilling Archives” (SPARCs)

3.1. Evaluation Questions

- Will the proposal produce science that significantly advances one or more ambitions of the *2050 Science Framework*?
- How well-qualified is the proponent team to lead and engage in the proposed activity?
- Does the proponent team have appropriate diversity in terms of scientific expertise, affiliation, IODP³ member nations, gender and career stages?
- Does the proposal adopt a multidisciplinary approach to addressing the scientific objectives that is novel, well-reasoned/organised, and based on a sound rationale?
- Is the suite of targeted legacy resources (cores, samples, and/or data) identified in the proposal suitable for effectively addressing the objectives of the SPARC and has use of these resources been appropriately justified?

- How effective is the combination of analytical techniques planned to be used in the SPARC likely to be in achieving the scientific aims of the project, and are plans to access associated research facilities realistic?
- Have the proponents presented a realistic set of outcomes and deliverables, with appropriate milestones and success criteria, that will facilitate completion of the work in a timely manner?

3.2. SPARC Proposal Decisions

Following SEP evaluation, proponents will receive a written summary of the SEP review, which will include one of the following two decisions:

- **Endorsed:** If the SEP endorses the proposal, it will be forwarded to the MSP-FB, along with SEP nominations for two SPARC Co-Chief Scientists drawn from the proponent team.
- **Declined:** If the proposal is declined by SEP, it will not be forwarded to the MSP-FB and will no longer be active in the system. Proponents may consider the SEP comments and re-enter the system through the submission of a new SPARC proposal to a future annual round.

Reasons that a proposal might be declined include:

- The proponent team is insufficiently diverse regarding scientific expertise, affiliation, nationalities, gender, and career stage
- The science outlined in the proposal does not meet the scope and ambition of the SPARC initiative, and/or could readily be achieved via one or more standard sample requests.
- The science objectives are not described well or are not compelling.
- The strategy for using legacy assets does not adequately support the science questions.
- The project is not feasible because the necessary legacy assets are not available or because the research approaches are unlikely to be successful.
- The proposal has scientific objectives that conform poorly with the overall ambitions of the *2050 Science Framework* or that do not bring sufficient added value to warrant support.