

Scientific Merit Panelist Terms of Reference

The SCoPEX Advisory Committee has established an expert Panel to support its scientific review of the proposed SCoPEX experiment. The Panel's responsibilities would include:

- supporting the selection of peer reviewers;
- evaluating the reviews;
- providing a summary report to the Advisory Committee about the scientific merit of the experiment based on that evaluation; and
- meeting with the Advisory Committee to communicate the findings of the summary report.

The Panel's summary report to be submitted to the Advisory Committee should include (but is not limited to) the answers to the following questions:

1. Will the proposed study make an important scientific contribution? If so, what is that expected contribution?
 - a. How likely is it that the experiment will yield new relevant knowledge that has not already been gained from numerical modeling, laboratory studies, or other approaches?
 - b. Can the questions outlined in the proposal be answered in another way? If so, what are the benefits and limitations of this approach versus others?
2. Can the experiment as designed, achieve its objectives by the methodology proposed in the experiment plan?
 - a. Is the methodology described sufficiently?
 - b. Is there a substantial/reasonable chance/probability that the methodology will enable achieve the stated goal?

The Panel should ensure the quality of reviews (depth and breadth), clearance of potential biases (and the potential need for an additional review(s)), and prepare the summary report.

Please note that the Advisory Committee is conducting other types of reviews, including a societal review, and that the task of the Panel is the review of scientific merits only. You are, however, welcome to include any additional thoughts on the proposed experiment.

To ensure the integrity and impartiality of the entire review process, the Panel members should not have any conflict of interests with the proposed experiment or any members of the core research team (Frank Keutsch, David Keith, and/or John Dykema) as described below:

- Any professional benefit from the project proceeding or not proceeding.
- Current or previous employment or association at Harvard University as a professor, adjunct professor, visiting professor, consulting or advisory arrangement in the past 5 years.
- Previous employment or association within Harvard University in the last 5 years.
- Received an award or grant from Harvard University in the past 5 years.
- Past or present association with any members of the research team as a thesis or dissertation advisor/mentee in the last 5 years.
- Collaboration on a project or on a book, article, report, or paper with any members of the research team in the last 5 years
- Co-editing of a journal, compendium, or conference proceedings with any member of the research team listed in the foundational document within the last 5 years.
- Have past or present grant proposals with any members of the research team in the past 5 years.