

Guidance for scientific reviewers

Purpose of the SIOS Access Call

The Svalbard Integrated Arctic Earth Observing System (SIOS) is a regional observing system for long-term measurements in and around Svalbard, addressing Earth System Science (ESS) questions related to Global Change. The observing system builds on the extensive and diverse world class research infrastructure already established in Svalbard by institutions from many nations. This includes a substantial capability for utilising remote sensing resources to complement ground-based observations. From this foundation, SIOS works towards a systematic development of new methods and experimental design for the implementation of observational networks in Arctic environments.

SIOS offers funded access to research infrastructure owned by SIOS members for the purposes of conducting Earth System Science research and monitoring.

Evaluation criteria

The call for access to RI is open to researchers from any institution, provided they meet the criteria outlined in the call text. Scientific reviewers are asked to assess how well a proposal meets the evaluation criteria below.

Evaluation criteria

Submitted proposals will be evaluated according to the following criteria:

- Scientific quality, innovation, and technical and logistical feasibility.
- Relevance of the project to the vision and mission of SIOS (https://www.sios-svalbard.org/system/files/common/Documents/SIOS_Strategy2026.pdf)

Evaluation procedure

Each reviewer will be assigned one or more proposals that they are asked to review. For each of their assigned proposals they are asked to complete an online form.

➤ **Part 1: Project details**

In the first part of the form the reviewer is asked to write the project number of the proposal that is being reviewed and their own name. They should also declare if they have any conflicts of interest.

➤ **Part 2: Scientific evaluation**

In the second part of the form the reviewer is asked to complete a table, where the project is given a score¹ from 1-7 on the following criteria:

- Scientific excellence
- Innovation
- Technical feasibility
- Relevance of the project to the vision and mission of SIOS

Scores will be allocated according to the following definitions:

7 = Exceptional	The proposal addresses all relevant aspects of the criterion exceptionally well. Shortcomings are not present or are only very minor.
6 = Excellent	The proposal successfully addresses all relevant aspects of the criterion. Only minor shortcomings are present.
5 = Very Good	The proposal addresses the criterion very well. A small number of shortcomings are present.
4 = Good	The proposal addresses the criterion well. A number of shortcomings are present.
3 = Fair	The proposal broadly addresses the criterion, but there are a number of significant weaknesses.
2 = Weak	The criterion is inadequately addressed, or there are serious inherent weaknesses.
1 = Poor	The proposal fails to address the criterion or cannot be assessed due to missing or incomplete information.

The reviewers should consider the following questions when making their evaluation:

Scientific excellence

- Is the proposal of a high standard?
- Are the scientific questions described relevant within the field and internationally?
- Is the proposal scientifically feasible, i.e., do the proposed methods have a realistic chance of answering the questions posed?
- Will the results of the proposed project be of high relevance to the SIOS / Arctic Earth System Science community?

Innovation:

- To what extent does the project represent something new?

Technical feasibility

- Are the proposed methods technically feasible?
- Is the timeframe proposed feasible with respect to obtaining permission to do the proposed work?

Relevance of the project to the vision and mission of SIOS

- To what extent does the project meet the requirements and guidelines set out in the call for proposals?
- To what extent is the proposal relevant to supporting the development of an observing system for Earth System Science in Svalbard, in line with the goals of SIOS? See <https://sios-svalbard.org/ObservingSystem> for information about the scientific priorities of SIOS.
- To what extent will this improve the availability of SIOS Core Data

¹This scale is from the Research Council of Norway.

➤ **Part 3: Assessment summary and overall score**

In the final part of the form, the reviewers are asked to give a summary of their overall assessment of the proposal. They are also required to give an overall score for the proposal, rating it between 1 and 7 using the same criteria as in part 2.

If the reviewer wishes to provide anonymous feedback to the applicant, they may do so in the final box of the form.