

Optimising and integrating Arctic observations

- The State of Environmental Science in Svalbard (SESS) report



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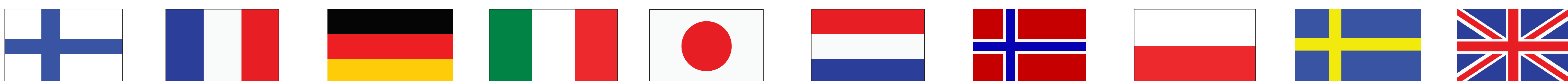


The **Svalbard Integrated Arctic Earth Observing System (SIOS)** is an distributed international research infrastructure for Arctic Earth System Science, coordinating a regional observing system for long-term measurements in and around Svalbard.

The **annual SESS report** summarises the current state of Earth System Science in Svalbard, highlights research needs, and recommends future investments in the Observing System.



SIOS is a consortium of institutions with research infrastructure in and around Svalbard, building bridges across disciplines and national borders.



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Core objectives:

- Interdisciplinary studies
- Harmonised observations
- Interoperable data
- Joint scientific priorities
- Optimised research infrastructure

Empowering the user community:

- Recommendations in the SESS report develop the observing system
- Authors actively influence research priorities

Identifying key unknowns and proposing solutions:

- New or adjusted data sets
- New research infrastructure
- New collaborations

The first report will be released in January 2019 during the SIOS Polar Night Week.



The content includes chapters on permafrost, oceanography, atmosphere, microbiology and snow.

Advancing infrastructure through:

- Rolling review of scientific needs
- Building on existing long-term observations
- Setting priorities for future calls for access of research infrastructure

The SESS report leads to:

- Increased scientific impact
- Efficient use of resources
- Increased international cooperation
- Increased access to funding

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Global relevance of the SESS report:

- Summarises long-term monitoring to understand Arctic and global changes
- Showcases Svalbard as ideal location for monitoring gradients and fluxes

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