

SESS report 2024: Instructions for authors

Below you will find instructions to authors contributing to the State of Environmental Science in Svalbard (SESS) report published by the Svalbard Integrated Arctic Earth Observing System (SIOS).

All previous SESS reports can be found here: <https://sios-svalbard.org/SESSreport>.

Editorial Procedure

- Each SESS report has an Editorial Board appointed by the SIOS Board of Directors (BoD). The Science Optimisation Advisory Group (SOAG) and other SIOS working groups function as advisers.
- The final decision on manuscript acceptance rests with the Editorial Board.
- Manuscripts will be screened by the Editorial Board and sent out for peer-review. In addition to an external review there will be an internal review process with focus on the contribution to the aims of SIOS and the optimisation of the observing system.
- The authors will be asked to revise their manuscript when called for.
- After acceptance, manuscripts will be copy edited.
- The SESS report will be published as online pdf document and some few printed copies. In addition, a summary for stakeholders containing the popular science summaries for each chapter will be published (printed and as online pdf document). Chapters will be separately entered in the Zenodo database and will have a DOI number.

How to organise your SESS contribution

Your contribution to the SESS report should include three parts: (1) The scientific chapter, (2) a popular science summary and (3) a contribution to a FAQ on environmental and climate science in Svalbard (voluntarily for update chapters).

(1) Scientific chapter

The scientific chapter must be in the form of one of the following three types:

- **Review article**

A description of the state of knowledge in a field of ESS or connections between different fields (typically not included in previous SESS reports), including a review of existing work and gaps in knowledge for Svalbard.

Page limit: 15 pages, incl. figures and tables, excl. references.

- **Analysis of trends and processes**

An analysis of data on a specific topic in ESS in Svalbard focusing on trends, changes, and processes.

Page limit: 12 pages, incl. figures, tables, and references.

- **Update of a previous chapter**

A brief update of a chapter published in a previous SESS report, which

- updates previously described data, i.e. presents unpublished data that contribute to [SIOS core data](#) and/or complement earlier SESS reports;
- updates information about the state of specific research fields described in previous SESS chapters, i.e. present new interpretations of data, new insights and/or new developments in the field;
- merges and refines previous recommendations in the light of new data, interpretation of data, new insights, or the implementation of previous recommendations.

Page limit: 8 pages, incl. figures, tables, and references.

Templates for the three report types may be found on https://sios-svalbard.org/SESS_Issue7. The authors must follow the appropriate template, the guidance contained therein, and adhere to the page limit for each template.

All chapters must include

- a section on **contributions to interdisciplinarity** where authors are highly encouraged to explain how their work contributes to other spheres and where it could benefit from other disciplines/spheres.
 - A section on **unanswered questions**
 - A section on up to 5 concrete and realistic **recommendations** on how SIOS can contribute to fill these gaps, i.e. how the observing system can be improved. E.g., which specific observations, instruments, and research infrastructure should be newly established, which existing observations or research infrastructure should be modified or should be ensured to continue.
- Update chapters: Please revisit the recommendations from your previous

SESS contribution(s); delete those that have been resolved or are now obsolete; refine those that are still valid according to the advancements made since the previous chapter, and add new ones that result from the advancements.

- **A table of the datasets used** and information of how to access the data. For details on data sharing refer to section 'Data sharing and data description in the report' of this document.
- **Acknowledgements** - If the report receives funding from SIOS, please add following sentence to the acknowledgement section: "This work was supported by the Research Council of Norway, project number 322387, Svalbard Integrated Arctic Earth Observing System – Knowledge Centre, operational phase 2022."

The target audience is researchers and others working in an Arctic Earth System Science related field. Please bear in mind they may not be an expert on your specific topic.

(2) Summary for stakeholders

A short popular science version of the manuscript that is visually appealing and can be read independently of the main essay. The summary includes

- **Highlights** - the most important messages to convey to the audience (max. 300 characters)
- **Summary text, incl. a list of the main recommendations** described in the scientific report (max. 2300 characters). In the summary you must also describe the larger implications and societal relevance of your work.
- **3-5 photos and popular science graphs (if applicable)**. The choice of which photos/graphs will be used in the summary lies with the editorial board.

The target audience is the general public, policy makers and stakeholders. The summaries will be printed in a booklet and distributed to stakeholders, policy makers and the public. It is thus an important tool to communicate the state and needs of environmental science in Svalbard.

Some tips on how to write a popular science summary

- Think carefully about what the primary points are that you want to communicate (they should be in accordance with the aims of the SESS report)

- Start where you would in a scientific presentation end: With conclusions and results
- Keep it simple! Assume the reader knows nothing about your message
- Use everyday language as much as possible (no acronyms, technical terms, scientific terminology or jargon)
- Use short sentences
- Do not include references
- Use everyday analogies to communicate your message.
- "Better roughly right than precisely wrong": Something that has been written more or less right may be understood more precisely than something that has been written accurately using difficult academic language

(3) FAQ

Between 1 and 5 frequently asked questions and answers relevant to your research. This should be questions that you genuinely get asked often and can be a mix of serious and more informal questions. The FAQ should be written in popular science language and contain:

- A question (max. 200 characters)
- An answer (max. 550 characters)

The target audience is the general public. FAQs will be published in the SESS report, and social media. In addition, SIOS intends to build a catalogue of FAQs concerning the Svalbard environment.

Text Formatting

- Use standard grammatical English (U.K.).
- Use 10-point Arial for text.
- Use the automatic page numbering function to number the pages.
- Do not use field functions.
- Use tab stops or other commands for indents, not the space bar.
- Abbreviations should be defined at first mention and used consistently thereafter.
- Footnotes can be used to give additional information.

- Line numbers for text should run consecutively throughout the text, from the title page through the figure legends. Do not number lines in tables or figures.
- Please use internationally accepted signs and symbols for units, preferably SI units.
- Genus and species names should be in italics.
- References
 - Reference style: see Polar Biology – Instructions to Authors – References: [https://www.springer.com/journal/300/submission-guidelines#Instructions for Authors References](https://www.springer.com/journal/300/submission-guidelines#Instructions_for_Authors_References)
 - Please add doi-links in the format: <https://doi.org/10.2307/2285891>
 - Citation of previous SESS chapters:
 - Full report: e.g. Orr et al (eds) 2019: SESS report 2018, Longyearbyen, Svalbard Integrated Arctic Earth Observing System.
 - Citation of a chapter in report: e.g. All authors (2019) Title of chapter. In: Orr et al (eds) 2019: SESS report 2018, Longyearbyen, Svalbard Integrated Arctic Earth Observing System, Longyearbyen, pp. xx-xx. <https://doi.org/12345678>
- Figures:
 - Please add figures at the right position in the text and upload high-resolution versions separately.
 - When reusing already published figures, it is the authors responsibility to check the publisher's rules and get the necessary permissions
- As the SESS report is intended to be an online publication it is possible to include video-clips or animations. Please consult with the SIOS information officer on formats before submission.

Manuscript submission

- Manuscripts should be submitted in Word (doc, docx) or Open office (odt). If other formats are desirable, please contact the SIOS information officer prior to submission.
- Please submit your SESS contribution online using the web form(s) provided on https://sios-svalbard.org/SESS_Issue7.

- Submission deadline is 15 August 2024.

Revisions

After the review process authors will be asked to make revisions to their submitted manuscript in line with the reviewer comments. Authors must use track changes when making revisions. All remarks from reviewers must be answered in a separate document.

Data sharing and data description in the report

All chapters must contain a table with information about the datasets as shown in table 1.

Table 1: Example of table on data availability

Dataset	Parameter	Period	Location	Metadata access (URL)	Dataset provider
Biogeochemistry	– Chlorophyll a (mg/m ³) – Nutrients (mmol/m ³) – POC/PON (µg/L)	2000-present	Kongsfjorden and adjacent shelf	https://data.npolar.no/dataset/6a4eaafa-10da-40d5-9a52-0268afbed4aa	Haakon Hop (NPI) haakon.hop@npolar.no Anette Wold (NPI) anette.wold@npolar.no
Svalbard cameras	– Camera locations and ancillary information	2000–2020	Svalbard archipelago	http://iadc.cnr.it/cnr/metadata_view.php?id=113 SIOS data access portal: https://bit.ly/3fJugLZ	DOI: 10.5281/zenodo.4036510
Fuglebekken catchment	– Fractional snow cover	2014–2016	Hornsund	https://doi.pangaea.de/10.1594/PANGAEA.874387 SIOS data access portal: https://bit.ly/39rYE4	Kępski et al. (2017)

Data (incl. metadata) that have been generated using the SIOS infrastructure as well as data owned by the authors, have to be submitted to a data centre integrated with the SIOS Data Management System. You find a list of SIOS partner centres in following document: <https://sios-svalbard.org/sites/sios-svalbard.org/files/common/sdms-guidelines4providers.pdf>.

When other data are used in the SESS report, metadata and the URL to the datasets have to be provided to the SIOS Data Management System through the [metadata collection form](#). Note that using the metadata collection form does not exempt you from sharing the data in an open repository. The metadata collection form is used to make the data findable and accessible through the SIOS data access portal if the data are stored in data repositories that are not connected to the SIOS Data Management System.

Observation Facility Catalogue

We expect authors to update existing entries or add new entries in the [SIOS Observation Catalogue](#) for research infrastructure/instruments used to collect data for the SESS chapter.