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Title: *Establishing the Svalbard Integrated Earth Observing System (SIOS); Contribution to Arctic System Science*

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SIOS (Svalbard Integrated Earth Observing System) is a large scale research infrastructure project of global relevance which is identified on the European Roadmap for Research Infrastructure (ESFRI roadmap). A large consortium with representatives from 19 countries is currently involved in developing its Preparatory Phase project funded by the European Commission. The aim is to establish a new coordinating research infrastructure organisation which will provide a world leading observing system, by integrating and jointly developing existing and new research infrastructure, and by promoting more openness, better access, data sharing and knowledge management services for the international research community in Svalbard. SIOS will enhance the scientific environment in Svalbard by providing a core measurement program and the special expertise of a Knowledge Center.

Svalbard is a region that is influenced by the surrounding areas but also influences its surroundings. Earth system science observations must be able to separate the regional influences from those influences from afar. To do this we need knowledge about the most important processes that influence the observations. By bringing many types of observations together and asking questions about how these are influenced by each other we can gain new insights about the Svalbard region's role in the Earth system. Globally relevant Earth system science questions are complex and solving them requires collective efforts. A systematic approach is essential in this collective effort to yield insights in a cost effective way. SIOS will supply added value to all participants well beyond what their separate investments would provide by themselves.

The SIOS Knowledge Center will use the observations and knowledge to continuously develop the core measurement program as well as continuously offering best practice services and access to the extensive research infrastructure in Svalbard. The presentation will give updated information of the main results achieved so far under the Preparatory Phase, including the main aspects of the data and access policies, the organisation and governance of the joint Knowledge Center, as well as the content of the research infrastructure strategy plan being developed.