Title: Integrated multidisciplinary observing system coordinated by engaging international partners – the SIOS perspective

Abstract:
The Svalbard Integrated Arctic Earth Observing System (SIOS) has been developed using the well-established and regionally distributed cluster of world-class international research infrastructures in and around Svalbard. Presently, members include three out of eight Arctic nations, four European non-Arctic nations and two Asian non-Arctic nations. We believe that the overall engagement of both Arctic and non-Arctic nations in SIOS is profoundly motivated by (1) the national and common interest, (2) the concept of SIOS for its contribution to collaboration, (3) easy access and good logistical possibilities in Svalbard, and (4) scientific belief in long-term tangible benefits (sharing data, knowledge, expertise, best practices, resources) of such observing system in Arctic research. Besides, the possibility of achieving the scientific excellence in Arctic research by easy access in Svalbard, shared infrastructures, knowledge, data, and services (infrastructure optimization, logistics, remote sensing, and data management) significantly attract the engagement of various international institutes in the observing system. SIOS also provides a platform for a common funding application among member institutes to fulfill long term objectives. Attracting common funding is also a motivation for non-Arctic nations. For example, non-Arctic nations involved in Arctic research may get higher opportunities in funding applications such as bilateral funding proposals between Norway and Poland, Indo-Norwegian funding proposals, EU funding calls and many more. On top of all the benefits of observing the system, collaborative monitoring system also attracts a long-term friendship and cooperation in various domains of research.