Arctic Observing Summit - Observing System Implementation and Optimization Working Meeting

Sunday, December 9, 2018, 1.00-5.00pm

Co-Chairs: Hajo Eicken (AOS), Sandy Starkweather (SAON)

Objective

Members of the Arctic Observing Summit – Working Group on Implementation and Optimization (AOS-WIO) met in person before the American Geophysical Union Fall Meeting in Washington DC to continue work on items identified in the AOS Call to Action, building upon insights and recommendations from the Davos AOS meeting. These included lessons from explorations of observing system frameworks used by other communities (e.g. GOOS) and demonstrations linking Arctic observing activities to the Arctic Societal Benefit Areas. AOS-WG2 seeks to build upon the momentum of their efforts and to formalize them under the Sustaining Arctic Observing Network - Committee on Networks (SAON-CON). This effort is further motivated by the outcomes of the 2nd Arctic Science Ministerial (ASM2), where Ministers and national delegations encouraged SAON to "move from planning to implementation." SAON-CON invited AOS-WG2 to propose a scope of work for a task team, considering the following objectives from the SAON Strategy:

Objective 1.2: Complete an assessment of adequacy of the Arctic observational capacity in support of Arctic Societal Benefit Areas (SBAs)

Objective 1.3: Provide recommendations for a roadmap for future Arctic observational capacities

The specific purpose of the meeting at AGU was to gather input for a draft Task Team Scope of Work (2Yr) supporting the SAON-CON objectives. A secondary purpose was to engage a broader group of potential contributors beyond those who attended AOS in Davos. In consideration of the potential breadth of foci for this AOS-WG2 task team, the organizers anticipated that topical foci might be a pragmatic way to proceed under the task. These were explored along with other organizational considerations during the meeting.

Meeting Organization

The open meeting was supported through the Arctic Research Consortium of the United States (ARCUS) and the International Arctic Science Committee (IASC). More than 20 attendees from five countries contributed. After a series of context-setting presentations, each of the 20+ participants were invited to suggest a breakout group focus.

The group identified four different areas to explore that were more conceptual and less oriented toward specific science topics. These were:

1. How should a Roadmap be defined?
2. What considerations will best support Indigenous community needs and a co-production of knowledge?
3. What existing tools and efforts should be considered in defining a Roadmap? Thinking in dimensions of space as well as time.
4. What could a Roadmap do to support interdisciplinary science?

Task Scope Recommendations from the Break-Outs

An overarching recommendation concerned the multiple potential definitions for a "Roadmap" and the need for SAON (Board, Goal 3 Task Force) to engage in an active, international dialog about what is meant by a Roadmap and what it is intended to accomplish. As a Roadmap will likely be used by funding organizations, it was viewed as critical that funders contribute to the discussion. It was further recognized that while the CON had invited the task team proposal, such work would need the full engagement of the Arctic Data Committee (ADC) and SAON's Funding Task Force (G3). It was pointed out that to date, SAON strategies have been capabilities-based (i.e. driving collaboration across existing efforts) rather than requirements-based, the latter having greater strengths for sustainability.

Also recommended was that Indigenous communities and the practices of a co-production of knowledge be integral to a Roadmap for observing, with Indigenous perspectives equitably engaged in the Roadmapping process. It was also noted that from the standpoint of capacity, a "Boundary Organization" fostering collaboration and exchange between Indigenous communities and scientists would be beneficial for this activity and beyond. In the examples discussed, these were primarily Indigenous organizations. There was also a strong need to further educate and inform researchers about what Indigenous knowledge was.

From a technological standpoint, it was recognized that several large projects are engaged in a form of "Roadmapping" (e.g. INTAROS, EU PolarNet) or broad information discovery efforts (e.g., US Arctic Observing Viewer). The value of creating a shared assessment system, building upon the Arctic Societal Benefit Areas, that availed itself of these existing inventories was clearly recognized. Also recognized was the need to be engaged with modelling communities, especially concerning findings from Observing System Experiments that could establish the value of a "pulse of activity" (e.g. MOSAIC). This was one example of how a Roadmap could and should include strong spatial content.

The need for a spatially "aware" Roadmap was also viewed as essential for interdisciplinary work. In addition, it was recognized that a Roadmap for observing would need to include a strong knowledge-based element to support data and information discovery across disciplines (again building on the need to include ADC). The societal benefit structure was viewed as supportive for both this and the community-related needs from a Roadmap.

The group recognized that specific scientific or SBA foci would likely be necessary for the Task Team to accomplish something concrete, but such foci would require more time to emerge. This topic of identifying specific foci is a desire shared by the ADC and emerging Arctic GEOSS effort under SAON.

Draft Task Statement – AOS WIO – 2 Yr (3/2019-3/2021)

- Develop a definition for the SAON Roadmap that will serve to generate strong international investments in Arctic observing and promote synergies and interoperability amongst observing efforts
- Define how Arctic Societal Benefit Areas or other objectives should be used to shape the Roadmap

- Identify a family of scientific foci with high maturity and relevance to demonstrate the utility of the Roadmap for planning, coordination and engagement
- Assemble and align the relevant existing inventories and efforts under these foci

Next Steps

- Review and add to summary/draft task statement, including input from those not at Davos and AGU
- Present back to the SAON Board (Sandy/Hajo)
- Empanel a task team by March to begin work