

SAON Roadmap for Arctic Observing and Data Systems (ROADS) Process at the 2020 Arctic Observing Summit

SAON, ROADS, and the AOS: Sustaining Arctic Observing Networks (SAON) is a joint initiative of the Arctic Council and the International Arctic Science Committee (IASC), created to strengthen multinational engagement and coordination of pan-Arctic observing. The Arctic Observing Summit (AOS) is a SAON activity meant to incorporate community guidance into this process.

SAON's vision is for a connected, collaborative, and comprehensive long-term pan-Arctic Observing System that serves societal needs. This vision requires a way for the existing patchwork of observing activities to work jointly towards more coordinated observations. The organizational framework that is meant to move such collaboration forward is referred to as the Roadmap for Arctic Observing and Data Systems (ROADS). The 2020 Arctic Observing Summit is the first opportunity for community input into the development of ROADS.

Current status of ROADS: SAON has identified three key principles for the ROADS process:

- ROADS should complement and integrate the current planning approaches used by existing observing networks (regional to global), activities and projects;
- ROADS should support step-wise development through a flexible, collaborative, and evolving structure that allows "bottom-up" identification of themes and focus regions;
- Indigenous Peoples' equitable partnership and funding for their active participation are critical to ROADS from its inception through its implementation.

The plan for ROADS is centered around the identification of Essential Arctic Variables (EAVs) that serve societal benefits and that can provide guidance as to how and what observations should be made. Clustering observations by EAV would then facilitate both the sharing of best practices and optimizing the use of resources within an observational community that spans disciplines, applications, and national funding systems. Coordinating observations within and between these EAV clusters could then facilitate the information infrastructure and data products to make observations as useful as possible for the communities they benefit.

ROADS at AOS 2020: In order to move this process forward, a draft ROADS process will be evaluated at AOS 2020. Working groups will discuss an EAV (for example, sea ice concentration), the potential societal benefits and applications of data on that variable, and what observations would be necessary to achieve those social benefits. This discussion process is meant to serve several parallel purposes: identify benefit areas and applications that should be considered in the ROADS process,

explore what observational requirements different parts of the community consider necessary for these variables, and to gather information to begin testing the ROADS process. Feedback on this process will also go into shaping how ROADS is implemented. Repeating this process for different EAVs will eventually show which variables have the widest impacts on the communities who use them, and what new observations can help fill the most gaps in the system. The AOS Working Group on Food Security and Indigenous Needs (WG 3) will provide a thematic focus to help AOS participants explore observations in support of observations and information products that support Indigenous and coastal communities as well as the scientific research community.

