



Defining a Collective Mission and Vision: Sustaining Arctic Observing Networks (SAON)



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NSF's Arctic Observing Network (AON) program encompasses physical, biological, and human observations--including Indigenous knowledge--of the land, ocean and atmosphere.



ArcticGR

ARCTIC GREAT RIVERS OBSERVATORY



Providing essential data about the biogeochemistry and discharge of the largest Arctic rivers



Exchange for Local Observations and Knowledge of the Arctic

ELOKA fosters collaboration between resident Arctic experts and visiting researchers to facilitate the collection, preservation, exchange, and use of local observations and Indigenous knowledge of the Arctic



The International Tundra Experiment (ITEX) collects data on phenology, plant growth, community composition, and ecosystem properties to study environmental change



Detecting, locating, and characterizing glacial earthquakes, and contributing to our understanding of Ice Sheet dynamics

The **United States Arctic Observing Network (U.S. AON)** is an initiative to promote sustained and well-defined networks of Arctic observations among Federal and International partners.





Sustaining Arctic Observing Networks (SAON) Mission & Vision

- SAON is a connected, collaborative, and comprehensive, long-term, pan-Arctic observing initiative that serves societal needs.
- SAON facilitates, coordinates, and advocates for international Arctic observations and mobilizes the support needed to sustain them.



A background image of an Arctic landscape featuring a vast expanse of broken ice floes in the foreground and snow-capped mountains in the distance under a clear sky.

Sustaining Arctic Observing Networks (SAON) Goals:

1. Create a roadmap to a well-integrated Arctic Observing System;
2. Promote free and ethically open access to all Arctic observational data; and
3. Ensure sustainability of Arctic Observing.

Institutionalizing Team Science

- Research driven by a specific and compelling challenge.
- Deep integration across disciplines.

Photo from The Engineer, 2018





Sustaining Collaboration

- Continual and ongoing encouragement.
- Measurement and Evidence.

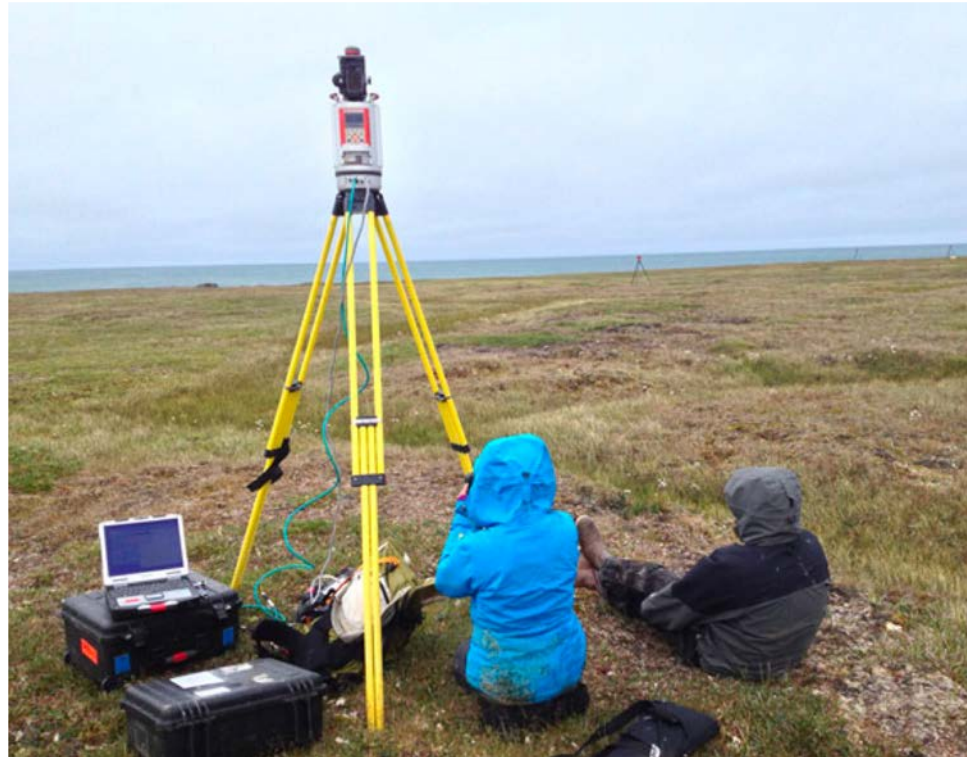


Photo from The Engineer, 2018



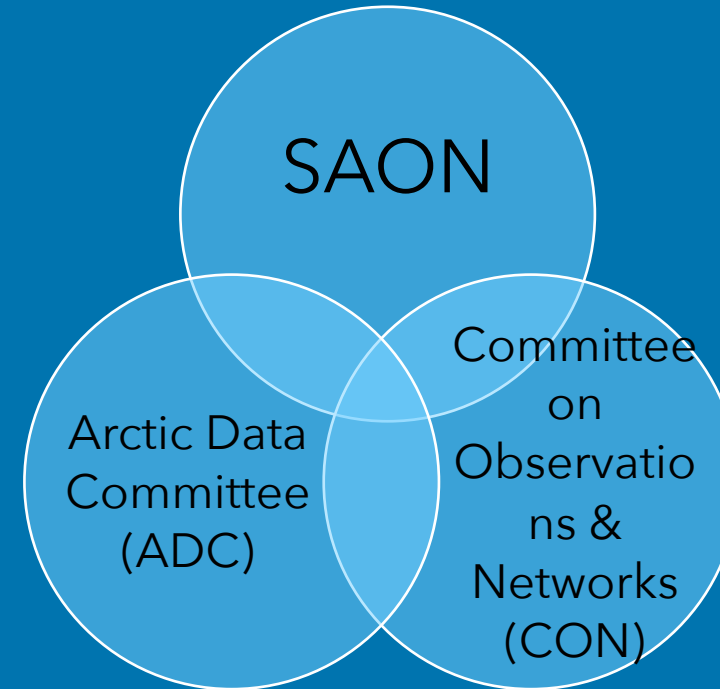


Sustaining Arctic Observing Networks (SAON) Membership

- All interested parties through national bodies
- All eight Arctic Council nations
- Non-AC countries: China, Germany, Italy, Japan, Korea, Poland, Spain, and United Kingdom
- Indigenous organizations: Aleut International Association, Inuit Circumpolar Council, and Saami Council
- Partners including World Meteorological Organization

*SAON is a joint effort of the Arctic Council (through its Arctic Monitoring and Assessment Program, AMAP, Working Group) and the International Arctic Science Committee (IASC)

Sustaining Arctic Observing Networks (SAON) Governance





Nuuk Declaration (2011)

SAON Board Terms of Reference
(2012)

SAON Implementation Plan (2014)

SAON Committees Terms of
Reference (2014)

SAON External Review (2016)



International Arctic Observations
Assessment Framework (2017)

SAON Strategy 2018-2028 (2018)

SAON Road Map Task Force (2019)

SAON Committee on Observations and Networks

- Inventory of Arctic observational assets
- Improvement of the Arctic observing networks
- Sustainability of observational platforms among nations and organizations
- Improved planning of current and future observational systems

SAON Arctic Data Committee (arcticdc.org)

- Mapping the Arctic Data Ecosystem
- Common Metadata Elements
- Data Publication and Citation
- Network Building
- Polar Data Forum, November 2019
(<https://polar-data-forum.org/>)



- The Arctic Observing Summit (AOS) is a high-level, biennial summit that provides community-driven, science-based guidance for the design, implementation, coordination, and sustained long-term operation of an international network of Arctic observing systems.
- The AOS provides a platform to address urgent and broadly recognized needs of Arctic observing across all components of the Arctic system.
- The AOS is an international forum for optimizing resource allocation through coordination and exchange among all involved or interested in long-term observing activities, while minimizing duplication and gaps.

Opportunities

Enhanced scientific understanding

More effective and efficient use of data

**Maximized societal benefit of
observation system investments**

Challenges

**How do we identify and motivate
disparate Arctic observing communities
to lead and manage networks?**

**How do we ensure sustainable
financing of critical long-term Arctic
observations in times of resource
limitations and competing priorities?**

Photo: [Jon Leithe](#)/Norwegian Polar Institute