

SAON Governance Review
Workshop #1 – ROADS Advisory Panel
July 30th, 2020

Part A – Background and Context

– SAON Governance Review

The Sustaining Arctic Observing Network (SAON) is a joint initiative of the Arctic Council and the International Arctic Science Committee (IASC) that was created to strengthen multinational engagement in and coordination of pan-Arctic observing. In recognition of the complex dimensions of Arctic observing activities, and the equally complex organizational patchwork of observing activities and infrastructures, SAON's intent is to unite Arctic and non-Arctic countries, Indigenous Peoples, academia, industry and other key stakeholders in support of a systematic network through structured facilitation. SAON's vision is to bring these parties into a connected, collaborative, and comprehensive long-term pan-Arctic Observing and Data System that serves societal needs.

As SAON moves forward, there are an increasing number of global and regional efforts that could have an impact on how SAON will evolve over the coming years. It was determined by the SAON Board that it would be valuable to organize a series of virtual workshops to discuss various options and recommendations surrounding SAON governance.

- The Roadmap for Arctic Observing and Data Systems and Advisory Panel

In its 2018 – 2028 Strategic Plan¹, SAON identified the need for a Roadmap for Arctic Observing and Data Systems (ROADS) and set forth a bold vision to develop a ROADS process. ROADS marks a transition in SAON's focus from community-building and partnership development towards a more active vision for the systematic design and implementation of the Arctic Observing System. The lack of a consistent and holistic mechanism to assess observing system priorities and link independently funded efforts across the Arctic can be viewed as a systematic short-coming that has hindered adaptation strategies and limited funding responses for an expanded and improved observing system. ROADS seeks to address this short-coming through generating a systems-level view of observing requirements and implementation strategies. ROADS is both a holistic concept, building from the systematic approach of the International Arctic Observing Assessment Framework², and one that can proceed step-wise so that the most

¹ SAON Strategic Plan, https://www.arcticobserving.org/images/pdf/Strategy_and_Implementation/SAON_Strategy_version_2018-2028.pdf

² International Arctic Observing Assessment Framework, <https://www.arcticobserving.org/news/268-international-arctic-observations-assessment-framework-released>

imperative Arctic observing elements can be rapidly improved. ROADS is envisioned as a process that will proceed in close collaboration with the Arctic Observing Summit.

To initiate ROADS, the SAON Board created the Road Map Task Force³ (RMTF) to set forth definitions and guidelines for the community in order to mobilize expertise towards the strategic expansion of the Arctic Observing System. One aspect for consideration by the RMTF is the governance surrounding the ROADS process. Under the SAON Board's direction to organize a series of virtual workshops to discuss various options and recommendations surrounding SAON governance, the first such workshop was tasked to examine the mandate and composition of the proposed ROADS Advisory Panel.

³ <https://www.arcticobserving.org/governance/road-map-task-force-rmtf>

Part B - Highlights from Workshop Discussions on Proposed ROADS Advisory Panel

This first virtual workshop was organized under two broad objectives. The first objective was to provide a high-level overview of the governance considerations surrounding existing observing initiatives so as to “set the stage” for discussions for both this workshop as well as the upcoming workshops on SAON governance review. The second objective focussed on the development of a draft mandate and composition of the proposed ROADS Advisory Panel (see Annex 1 Agenda). This virtual workshop had excellent engagement from 16 participants from across the breadth of SAON participants (Annex 2 Participant Listing).

B.1 Presentations on the Existing Landscape: Review of Governance Considerations around SAON, ROADS and Observing Initiatives

In this setting-the-stage portion of the workshop, an overview of governance considerations and reporting structures of existing observation initiatives was provided by three presenters. These presentations allowed participants to become familiarized with the landscape of existing initiatives and to set the stage for the series of SAON governance review workshops.

- ***Global observing initiatives*** – Peter Pulsifer provided a presentation entitled “SAON Data Systems Considerations”. He spoke from his perspective of expertise in global Arctic data and referred to the larger Arctic data system – with cooperation from the local to the global. He reinforced the FAIR principles on data that stipulates that data must be Findable, Accessible, Interoperable and Reusable. In regards to Indigenous knowledge and information systems, Peter stated that while there are efforts to actively work to share indigenous knowledge that more progress is needed. The CARE principles for Indigenous data governance were presented and noted as being people and purpose-oriented principles, reflecting the crucial role of data in advancing Indigenous innovation and self-determination. CARE principles complement the FAIR principles and represent Collective benefit, Authority to Control, Responsibility, and Ethics.

From a social and organization perspective, he described the system complexity of mapping the polar data ecosystem. Peter also presented highlights from a recent paper “Information Ecology to Map the Arctic Ecosystem⁴” whose abstract states that effective governance requires the best available sources of data and information. The paper notes that the Arctic region, society and research community are complex and operates

⁴ Pulsifer, P.L. Kontar, Y., Berkman, P.A., Taylor, D.R.F. (2019). Chapter 12. Information Ecology to Map the Arctic Information Landscape. In Sustainability of Shared Marine Regions. Volume 1. Governing Arctic Seas: Regional Lessons from the Bering Strait and Barents Sea, edited by Oran R.Young, P.A. Berkman, P.A. and Alexander N. Vylegzhanin. Springer

at multiple scales. As a result, information about the Arctic exists and flows within a complex Arctic Information System.

Take away messages from Peter's presentation were that linear processes have typically been used by organizations as a classical development approach; however, in operating in an environment where there are emergent and dynamic systems (such as within the observing environment) these linear processes are not as well suited. He noted that observing and data systems are more "interwoven" and need to be considered together. This is a similar message as to that presented by Sandy Starkweather in her presentation and the references to "polycentric governance" and its applicability to the SAON and ROADS processes.

- **Connecting with community observing initiatives** - Eva Krummel provided a presentation that highlighted a description of Indigenous knowledge and some issues of importance for true cooperation with Indigenous and Arctic communities. She flagged the Atlas of Community-based Monitoring (arcticcbm.org) as an example of tracking and presenting this knowledge. Eva observed that during this global pandemic, researchers from the south are not able to travel to the Arctic and that Indigenous communities are there and are able to conduct many observing efforts.

Eva concluded with the following thoughts on the ROADS process. She reinforced the need to make use of existing structures for Indigenous engagement, and the need to involve the Permanent Participants of Arctic Council, as well as other Indigenous organizations and groups such as the Arctic Observing Summit's Food Security Working Group. She also noted that many Arctic regions and/or communities have existing guidelines on research ethics which need to be followed. There is a need to ensure funding for equitable engagement of Indigenous Peoples in the ROADS process. This could possibly be done through setting up of national structures. The funding needs to be sufficient to cover not only travel, but also per diem rates as necessary. Eva also noted that having one Indigenous representative on a committee was not sufficient. Different Indigenous people and communities have different perspectives and knowledge and a diversity of input is needed.

- **Regional and national observing initiatives** - Sandy Starkweather provided a presentation on SAON governance considerations from a regional and national context. Sandy opened her presentation with a brief description of three types of power – i) use of power by design where there are solid supporting policies), ii) use of pragmatic power interpreting roles and implementation; and iii) use of framing power⁵. This latter type of power can be used to frame problems, influence discourse and interactions across many centres of authority and is therefore most applicable to the ROADS process.

⁵ Framework for Ocean Observing, societal drivers for the next decade (Lindstrom et al, 2012)

Two key pieces have been generated by SAON that have helped to support this framing power by integrating the diffuse centres of authority – these documents are the International Arctic Observing Assessment Framework and the ROADS process itself. Sandy emphasized that true authority requires a combination of power as well as legitimacy. The mandate and composition of the ROADS Advisory Panel will be key to achieving this legitimacy.

In operating within a framing power context, Sandy highlighted the political science term “polycentric governance” that is applicable when working and interacting with many centres of authority so as to work with a range of partners. Polycentric governance was also described as a resilient web of governance. The ROADS process is aspiring to provide the framing power to serve the many observing communities and to thereby become an authoritative process. The ROADS process will hopefully be seen as a legitimate, helpful and authoritative process that will be supported by national and local bodies.

Sandy continued to present an overview of various regional and national observing initiatives including the Arctic Council and Working Groups, the International Arctic Science Committee, the Arctic Observing Summit and the five 2020 Summit Working Groups, as well as a list of regional/national/multi-national programs where SAON is a key partner. The Terms of Reference for the SAON Board and SAON Executive Committee were reviewed as context for the upcoming ROADS Advisory Panel discussion later in the workshop. In conclusion, Sandy noted that SAON sits at the cross-roads of a complex of mid-scale activities, where its influence is moderated by many considerations. SAON’s ROADS process provides framing power for sustained observing activities to build-upon and unite a diversity of interests. Finally, she reinforced that the ROADS Advisory Panel provides a mechanism to mediate and unite this diversity of interest but that the legitimacy of the Advisory Panel to guide framing across activities (and to be in an authoritative position of power) it will be contingent on the Panel’s composition and mandate.

B.2 Discussion surrounding the Existing Landscape: Review of Governance Considerations around SAON, ROADS and Observing Initiatives

Following these overview presentations, there was an opportunity for participants to discuss the challenges that are presented to SAON in general; and those that are particularly relevant to the ROADS process and proposed Advisory Panel. Questions to stimulate discussion included: What are the challenges to the ROADS process and to the general SAON landscape? What mechanisms exist to address these challenges? How do these challenges impede ROADS work? Could the challenges be considered as opportunities? Where and how can the SAON leadership be generated?

There was discussion surrounding the process of the current EU Horizon2020 call LC-CLA-20-2020 to establish an Arctic Global Earth Observation System of Systems (Arctic GEOSS) and how this call could help address SAON needs. Partnership with SAON is a critical success factor in this call and the proposals will include direct or indirect support for the SAON Secretariat to execute its advising and coordinating role, as well as funding for partnership with Indigenous Peoples. Individuals from the three competing proposals, Jeremy Wilkinson, Michael Karcher and Tuukka Petaja, all participated in this discussion to provide clarification on the process and described the advantages and disadvantages of a competitive process that has three different projects and consortia involved. It was observed that whichever of the consortia is successful that talented individuals from across the Arctic will be engaged and active.

Sarah Kalhok-Bourque, Canada, reminded the participants of the External Review of SAON⁶ that had been conducted and that it had referenced governance which should be revisited. In particular, there had been references to the need to strengthen governance and provide sound governance internationally as well as at the national structure level. The aspects of power, authority and leadership are closely linked and the polycentric governance approach that has been discussed must be effective at engaging and interacting with many different networks. She also spoke of the implementation of ROADS and moving forward and asked if the range of observations (from satellite based earth observations to community-based observations) and the need to observe, to know, and to connect across this range might be too broad. In order to build success, she asked if perhaps there is a need to focus and to build success. Sarah also noted that the Arctic Science Ministerial, scheduled for May 2021 is an important opportunity for SAON both in terms of what inputs go into the ASM but also the outputs from the meeting. This is a big opportunity for SAON to demonstrate authority.

⁶ SAON External Review https://www.arcticobserving.org/images/pdf/Review/SAON-External-Review-Final-Report_August-29-2016.pdf

Margareta Johansson, Sweden, observed that an important factor in SAON and ROADS becoming an authority will be to have people working full-time on the initiative. She stated that the results from the EU Call for Arctic GEOSS will be very important as it will enable full-time staff to be assigned.

Yuji Kodama, Japan, spoke about the importance of having solid National Committees in member countries as a foundation for SAON and ROADS. In reference to Sandy's presentation on how to develop authority, he felt that strong National Committees are needed to assert this authority. He also stated that he is on the organizing committee of the upcoming 2021 Arctic Science Ministerial (ASM-3) and this was seen as a possible advantage to SAON. SAON's goal for its Roadmap was presented to and supported by the Second Arctic Science Ministerial (ASM2, 2018); continuing multinational coordination through SAON was endorsed in their Joint Statement with an emphasis on: "moving from the design to the deployment phase of an integrated Arctic observing system". He reported that the organization of the ASM-3 meeting has been particularly challenging during the COVID-19 pandemic.

Raychelle Daniel referenced the earlier discussion on how to develop authority and power, and the need to consider a polycentric governance approach within the ROADS process. She reinforced that the Indigenous knowledge holders must be included in the evolving framework as their knowledge and information also holds authority. Raychelle noted that there are many different scales of Indigenous knowledge holders that need to be considered, ranging from Indigenous scholars and researchers, participants from the Arctic Observing Summit's Food Security Working Group, communities, as well as organizations and entities, like the Permanent Participants. She cited the Alaska Food Security project as an example that has successfully scaled knowledge holders down to the community level. She reinforced the value of Indigenous knowledge within all decision making frameworks. Raychelle reflected on the presentation by Eva Krummel stating that it was very important to have more than one Indigenous representative on a single committee. This is important as different Indigenous people and communities have different perspectives and knowledge and a diversity of input is needed.

Nikoosh Carlo spoke of the need for funding for Indigenous peoples participation and that funds are the base of building capacity. The inclusion of Indigenous people at all levels of governance structures is also based on the need for adequate financial support to enable this.

Sten Lund, Greenland, reinforced earlier comments stating that more involvement from Indigenous people is needed in Arctic observing and in the emerging governance surrounding ROADS process. He noted that there are national challenges across the Arctic countries that means that Indigenous participation varies from country to country in their active efforts in science.

B.3 Mandate and Composition of the Proposed ROADS Advisory Panel

Mandate of the proposed ROADS Advisory Panel:

The ROADS Task Force is drafting a document, *SAON Roadmap for Arctic Observing and Data Systems* that has put forward some excellent thinking on the ROADS governance including the ROADS Advisory Panel. This draft material was presented at the workshop as a departure point to build upon. This portion of the workshop also built upon earlier discussions that noted that authoritative power needed by the ROADS process means that the Advisory Panel must have legitimacy and power. The discussions started with a quick definition that mandate means an official order or commission to do something; the authority to carry out a policy or course of action.

Sandy Starkweather reminded participants of the ROADS principles that will guide the overall ROADS process including the proposed Advisory Panel. Hajo Eicken stated that the mandate for the ROADS Advisory Panel should ensure that the Panel is aware of the efforts of other panels (and vice versa). This means that good communication is important. It is also important that the Panel is well connected and knowledgeable of other efforts so as to make valuable connections. Jan Rene Larsen stated that the Advisory Panel should work closely with existing observing efforts (e.g. WMO) that are identifying and implementing essential variables. There are likely opportunities to create synergies and avoid duplication of efforts.

Margareta Johansson responded to this discussion recommending the need to mobilize international participation and collaboration with global networks. She added that the most impact of ROADS will likely be in its implementation and that focus should be placed here; possibly advocating for a “ROADS Year” to focus efforts. Sandy Starkweather continued with this concept and suggested that the ROADS Advisory Panel needs to have a communication role with the Expert Panel implementation strategies. In addition, a reporting-back function to the SAON constituency would be important. Raychelle Daniel commented that the proposed Mandate components extracted from the *SAON Roadmap for Arctic Observing and Data Systems* looked appropriate. She reminded others that the implementation of these proposed mandate components is the challenging part and we need to be conscious of this as we move forward. Eva Krummel reflected on earlier discussions and reinforced that the Advisory Panel mandate needs to state that connections need to be made; and in her opinion these connections are best made at the national level. This idea reinforces the need for solid National SAON Committees where countries can make the connection, can make sure that there is funding for different groups to be engaged and really see who needs to be engaged. Jan Rene Larsen responded saying that some countries have strong National Committees and agreed that using the National Committees when we have outcomes from the ROADS Advisory Panels sounded reasonable.

Jan Rene Larsen also reminded participants that in the context of the proposal to be awarded under EU Horizon 2020, that there will be some very concrete, operational task assignments coming up for the ROADS Advisory Panel within the next four years (e.g. in relation to

identification of Essential Arctic Variables). Michael Karcher said that it was crucial to have national representatives with strong interfaces within the country, including amongst researchers, scientists and funding agencies, as well as strong links to the Arctic Council. These interfaces are considered critical for the implementation of the ROADS process and Essential Arctic Variables. Several participants spoke up stating that SAON should formulate and communicate a unified message in this regard to the Arctic Council. Jan Rene Larsen also noted that the development of the mandate and composition of the ROADS Advisory Panel needs to take into consideration the EU Horizon 2020 call. The successful consortia from this call will have its specific mandate that will also shape the ROADS Advisory Panel.

Peter Pulsifer spoke on the need for ROADS to complement but not duplicate existing initiatives. He cited examples in the data management community where there are several activities ongoing that one needs to be aware of and to have a presence in - but perhaps not actively participate on. This is often a resourcing challenge where it is important to determine where and how to participate on other related initiatives. Another example was cited in relation to proposals that might be forthcoming under the UN Decade of Ocean Science for Sustainable Development. There are likely to be projects proposed for which SAON should be monitoring and very present so as to provide influence and direction. Sandy Starkweather summed up the idea by saying that there will be activities where ROADS can play a value-added role and where it can “assist” – rather than “own”.

Sandy Starkweather raised the point that consideration needs to be given to questions about how frequently the Advisory Panel should meet, what its workload might look like, and how to ensure that the workload is manageable and paced at a level that all Panelists can be active meaningful participants. It was agreed that this would need to be discussed at a future workshop.

The following draft mandate components reflect the combination of existing draft material from the *SAON Roadmap for Arctic Observing and Data Systems* as well as the presentations and discussions at the workshop. Building on all of this input, the following points were proposed on the mandate of the ROADS Advisory Panel.

There was general agreement on these Mandate components amongst the workshop participants.

The ROADS Advisory Panel should:

- Guide and advise on the implementation of the SAON Roadmap for Arctic Observing and Data Systems by adding value to the process; the Panel should assist, rather than own the SAON Roadmap
- Be knowledgeable of ongoing efforts from a range of possible partners (from global to regional to local) so as to communicate ROADS efforts and to encourage linkages with others

- Ensure connections are made with other Arctic observing efforts that are working to identify and implement Essential Arctic Variables
- Complement and create synergies where possible and avoid duplication of efforts with existing initiatives
- Fully engage with Permanent Participants in a meaningful manner; ensuring equitable inclusion of Indigenous expertise
- Report to a body that will support the ROADS process by providing motivation and forward drive
- Mobilize international participation and collaboration with global networks
- Consider innovative approaches to communicate and promote the implementation of ROADS – for example, development of a “ROADS Year” achieved in close collaboration with partners
- Work with relevant funding agencies and organizations to advance financial support for ROADS efforts, including the Expert Panels
- Act on specific tasks, as required, including actions under the upcoming EU Horizon 2020 Arctic GEOSS project where there will be very concrete, operational task assignments coming up within the next four years (e.g. in relation to identification of Essential Arctic Variables)
- Maintain the integrity of the overall SAON structure
- Advocate and promote SAON’s Mission and Guiding Principles in the ROADS efforts:
 - SAON Mission - SAON facilitates, coordinates and advocates for coordinated international pan-Arctic observations and mobilizes the support needed to sustain them.
 - SAON Guiding Principles – the design and operation of the Observing System will be guided by a balance between bottom-up and top-down needs and priorities; the Observing System will utilize Indigenous and local knowledge; implemented and sustained through open cooperation among/with all those committed to Arctic observations under a common SAON umbrella

With respect to the proposed ROADS Expert Panels, the ROADS Advisory Panel should:

- Support alignment between and across Expert Panels at each phase of their progress
- Support the implementation of activities, once those implementation strategies have been collectively identified by the Expert Panels
- Support the Expert Panels in communicating implementation strategies back to partners to increase awareness and understanding making sure that the people who are going to act on these implementation strategies are engaged (e.g. range of partners from EU Commission to communities)
- Provide a neutral standing body to assure that each Shared Arctic Variable is identified, defined and follows an implementation strategy that is consistent with ROADS principles

- Foster integration with other panels; and work to cultivate consensus approaches across panels
- Interact with Expert Panels following the multi-phase process proposed and described within the SAON Roadmap (e.g. Initiate; Phase 1; Phase 2; Phase 3)
- Assist with any future evaluation and assessment undertakings of the ROADS process

Composition and Membership of the proposed ROADS Advisory Panel:

The workshop discussion on the composition and membership of the ROADS Advisory Panel was curtailed as time was running short at the end of the three-hour meeting. The following points were tabled for consideration. There was discussion that the Advisory Panel should be relatively small in size (e.g. in the order of ten members) so as to be manageable and possibly more successful. The members need to be of outstanding calibre so that there is legitimacy seen in their advice and guidance. In the short discussions, Hajo Eicken asked whether the data and information users or “end users” (e.g. private sector or local decision-making governments) should be represented on the Advisory Panel or if this would be more appropriate at the Expert Panel level. Peter Pulsifer stated that this participation has also been discussed in the data management community but not yet resolved.

Advisory Panel Membership to consider representation from the following:

- IASC
- Both the Committee on Observations and Networks (CON) and the Arctic Data Committee (ADC)
- A sub-set of existing observing initiatives (as outlined in the landscape presentations) including Global, Regional/National, Community and Indigenous members
- Indigenous representation
- End users of Arctic data and information (e.g. private sector or community decision makers)
- Funding opportunities/agencies

Reporting Structure:

It was discussed that the ROADS Advisory Panel should report to a body that will not only support it but provide guidance and direction that will enable the Panel to succeed. One suggestion tabled at the workshop was to have the Advisory Panel report to the SAON Board. This was supported by others with the acknowledgement that both the Arctic Data Committee and the Committee on Observing Networks already report to the SAON Board and that the Advisory Panel would need to work closely with these other two committees. It was also felt that the SAON Board has the mandate and ability for this role. It was clarified that perhaps the SAON governing bodies – the Arctic Council and IASC should be consulted on this discussion. The question was asked, for possible future discussion, as to where the ROADS Expert Panels should report (e.g. to the Advisory Panel or the CON and ADC)?

Annex 1



SAON Governance Review
Workshop #1 – ROADS Advisory Panel
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Objectives of workshop:

- 1) *To provide a high-level overview of the governance considerations surrounding existing observing initiatives so as to “set the stage” for discussions at the upcoming workshops on SAON governance review*
- 2) *To develop a draft mandate and composition of the proposed ROADS Advisory Panel*

10:00 Introductions

10:05 Reference to the Code of Conduct <https://www.assw2020.is/code-of-conduct>

10:10 Review and confirmation of workshop objectives

Part A – Existing Landscape: Review of Governance Considerations around Observing Initiatives

10:15 Overview of the governance considerations and reporting structures of existing observation initiatives; familiarize ourselves with the landscape of existing initiatives and to set the stage for the SAON governance review workshops

- Peter Pulsifer – global observing initiatives
- Eva Krummel – connecting with community observing initiatives
- Sandy Starkweather – regional/national observing initiatives

11:00 **Discussion:** In consideration of the Existing Landscape, what are the Governance Challenges for SAON in general; and what are those particularly relevant to the ROADS process and Advisory Panel

- What are the challenges to the ROADS process and to the general SAON landscape?
- What mechanisms exist to address these challenges?
- How do these challenges impede ROADS work?
- Could the challenges be considered as opportunities?
- Where and how can the SAON leadership be generated?

11:30 Break for 10 minutes

Part B – Mandate and Composition of the Proposed ROADS Advisory Panel

11:40 Mandate for ROADS Advisory Panel

- Discussion and development of draft mandate (see Annex 1)
- Is there sufficient consensus on one option? Or is there more than one option (with pros/cons to be developed)?

12:30 Composition and Membership of the Proposed ROADS Advisory Panel

- Discussion and development of draft membership organizations (see Annex 2)
- Is there sufficient consensus on one list? Or is there more than one option (with pros/cons to be developed)?

12:55 Wrap Up and Next Steps; Reminder of future workshops

Annex 2

Participant List, Workshop #1

Name	Affiliation	Email
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