Arctic Observing Summit 2020 (AOS)

DRAFT (v3) Conference Statement and Call to Action

[Note: This draft Conference Statement and Call to Action is one of several products emerging out of the AOS 2020, along with a more detail report that summarizes the full depth and scope of Working Group activities, and a brief summary for policy-makers as input to the Third Arctic Science Ministerial, the latter building on this document. Please provide comments and suggested edits – referencing specific line numbers – via e-mail to aos@arcticobserving.com by Tuesday, 14 April 2020.]

Arctic environmental change is continuing unabated and at a rapid pace. Sustained observations that track, understand, and project change are essential in guiding adaptation and mitigation responses from the local to the global scale. The Arctic Observing Summit (AOS) is a biennial, bottom-up effort to guide the design, coordination, and long-term operation of an international network of observing systems that improve understanding and response to Arctic change. Given the circumstances introduced by the Coronavirus pandemic (COVID-19), the 2020 AOS (30 March - April 2) set to take place in Akureyri, Iceland, was transformed into an online forum under the theme “Observing for Action”, drawing over 350 participants from 28 countries, including more than 40 Indigenous experts and representatives of Indigenous Peoples’ organizations. This document summarizes main conclusions and a Call to Action from AOS 2020 participants, with more detailed information and expanded recommendations found online [LINK].

Responding to the Coronavirus Pandemic

The COVID-19 shock and its impacts on all aspects of daily life now experienced across the globe may well amplify hardships in Arctic communities, including food insecurity and threats to health and well-being. Our nations are rightfully concerned about the impacts of Coronavirus on Arctic Indigenous communities. Rural communities and Arctic researchers recognize that travel to the Arctic presents a real threat of carrying the contagion to highly vulnerable populations in regions with very limited health care facilities. Scientific researchers have an obligation to help communities understand and anticipate impacts to their health, economy, environment, and overall well-being. At the same time, AOS participants acknowledge that tracking the course of the present crisis and exploring effective responses are critical in developing options that increase preparedness and resilience of Arctic communities in the face of future disruptions and transformative change.

The COVID-19 crisis threatens to interrupt critical observations and time series in the Arctic, requiring immediate action to minimize loss of vital data sets and the information derived from them. The crisis also offers an opportunity to rethink the role of Indigenous communities in sustaining Arctic observing activities and the role of critical research infrastructure in Arctic
communities and remote locations. Now is the time to develop and strengthen partnerships among these groups and the broader Arctic Observing System, building upon and expanding ongoing efforts within Indigenous and remote communities that already share similar approaches, either through Indigenous-led data collection efforts or Indigenous and local knowledge projects.

In response to the COVID-19 crisis, we call for an international effort that advances and supports the development of such partnerships and allows Arctic Indigenous communities to draw on their strengths to sustain observing efforts. The combination of observations that address local community priorities and operational needs, with those helping maintain critical research time series deserve particular attention. Here, the Forum of Arctic Research Operators (FARO) can serve as an important partner and will in turn benefit from increasing research infrastructure capacity in support of remote Arctic communities.

We call for existing research infrastructure (e.g., research stations and/or vessels) to be equipped and utilized so that they may function as critical responders, sharing skills and expertise, distributing information widely, maintaining observing programs even in times of crisis and, where needed, supporting local communities by responding to their needs in times of difficulty.

Identifying, and where necessary, creating new funding opportunities is an appropriate role for the Arctic Funders Forum, possibly with additional guidance from private foundations.

The Sustaining Arctic Observing Networks (SAON) initiative shall serve in a coordinating role: 1) through swift implementation of key elements of SAON’s Roadmap for Arctic Observations and Data Systems (ROADS) such as establishing an Expert Panel on Health and Well-being composed of Indigenous scholars, community members, Indigenous youth, health, social and natural scientists, and global observing network organizations (e.g., World Meteorological Organization, WMO, Global Ocean Observing System, GOOS), and others; and 2) by fostering relationship building and exploratory shifts in data collection and partnership structures, with subsequent assessment and evaluation to guide future co-design and co-management approaches in implementing the Arctic observing system.

In light of the challenges posed by what may be a greatly curtailed research field season, funding agencies and individual researchers should evaluate alternate processes that advance collaboration through community-driven efforts and through capacity building within Indigenous and remote Arctic communities. This can include forging relationships with communities, learning about Indigenous knowledge, cultures, languages, worldviews, governance processes and histories, and taking stock of and analyzing current and past observing and data collections projects in order to gain a better understanding of the social-environments systems within which their research is positioned.
Broader Conclusions and Call to Action

(1) We recognize the value and experience of global observing organizations (i.e., GOOS, WMO). Where possible, and with a match of essential variables, global observing systems should expand more forcefully into the Arctic, at least with a subset of their parameters. The Arctic observing community can add particular value to global efforts, through the ROADS process, by sharing requirements, resources, and information across sectors and disciplines. We recommend that in identifying Essential Arctic Variables (EAV) they be prioritized as Shared Arctic Variables (SAVs), identified by their importance to multiple information user groups and applications. Expert panels, comprising observation data providers and users, Indigenous and Arctic communities prominent among these, and coordinated through SAON would be called on to define these variables. Panels would use processes established by global observing systems for identifying and defining EAVs and SAVs wherever possible and should be broadly inclusive and draw on rounds of user community input to best reflect a range of perspectives. Arctic Indigenous community and Indigenous organizations collaboration throughout the process is critical for success. This process should be established as soon as possible. International networks are invited to develop formal engagement mechanisms or to help lead the process where appropriate.

As a starting point for this effort, we recommend launching regional studies to build out this model and draw on the local and regional context as a guide to identification of SAVs. Regions such as the Bering Sea, the Beaufort/Mackenzie Delta area, Baffin Bay and surrounding coasts, and the Barents Sea, with strong regional networks of Indigenous observers, broadly international scientific activity, large-scale commercial fisheries, and major impacts from rapid environmental change are particular suited as locales for regional efforts.

The engagement of Arctic Council Working Groups in the ROADS process is essential and is expected to enhance outcomes from the activities outlined in this document.

(2) Improved understanding of system components, essential variables and processes supports our ability to project the longer-term trajectory of the system and plan for the future. We recognize that improving data and information flow on short time scales is also necessary. Near real-time data is vital to decision-makers and informs adaptation and mitigation. This is currently exemplified by the John Hopkins Coronavirus Resource Center interactive near real-time data visualization of the distribution of coronavirus cases globally. Easily understood graphical data drawn from multiple observing/monitoring programs, networks, and systems provides the necessary information to help to minimize risk and inform planning and adaptation to a crisis situation.

Planning for, adapting to, and mitigating change in the Arctic, as elsewhere, requires the sustained and iterative design and implementation of a pan-Arctic, internationally supported network of observing systems. Many elements of the system are already in place but there are gaps to be identified and filled to maximize benefits. We recommend the continued coordination
of people and the ongoing development of interoperable technologies and data systems that will ensure that information is available, accessible and usable. Arctic observing informs decision making across time, space, people and organizations. It supports the development of policy, real-world solutions to existing and emerging problems, and the implementation of adaptation initiatives and mitigation efforts.

(3) Never before has the importance of working together been amplified as in the current Coronavirus pandemic. We acknowledge the value of a paradigm shift at multiple levels to advance observing for action. Indigenous Peoples, specifically youth, need to drive, determine, and act on research priorities. Direct funding is imperative for local to regional level efforts and to strengthen community-driven observations for action, physical and technological infrastructure, and development of best practices, protocols and critical observing needs. Therefore, ROADS mapping efforts should be expanded to reflect holistic Indigenous worldviews and a food security lens to improve decision-making and links among monitoring programs and management systems. ‘Health and Wellbeing/ness’ is critical to our lands and waters, families, villages, and nations, and should be a central theme at AOS 2022 with invited leadership from Indigenous Peoples. We need immediate, strong, unified messaging from all leadership levels for capacity building (people, infrastructure, and systems) at regional and local levels, to grow active participation in observing for action (e.g., Bering Sea). This includes substantial funding for many Indigenous experts, knowledge holders, and youth to engage across scaled activities (local to international), establish regional expert panels to engage at relevant organizations and forums (e.g. Arctic Council, IASC, SAON/ROADS, etc.), and a more immediate effort to include them as part of official delegations to the Third Arctic Science Ministerial.

(4) Advancing several years of community building, AOS participants discussed data in the context of the broader Arctic observing system, while recognizing the broader, rapid evolution of data technologies and methods. Maximizing the benefit of these advancements requires that the Arctic data community work closely with the global community and the Arctic observing community to address focused, real-world problems that are important to Arctic residents, and Indigenous peoples of the Arctic in particular. Specifically, this should include the recognition of the right of Indigenous Peoples and nations to govern collection, ownership, and application of their own data, and the broad adherence of emerging principles and protocols such as the CARE (Collective benefit; Authority to Control; Responsibility; and Ethics) principles. We need to continue to work towards a broadly networked, collaborative, interoperable Arctic digital system based on a co-production model that includes much-needed mutual education and training. We recognize the need for the necessary resources to adequately support all actors participating in the co-production model. Achieving this vision will improve access to, and reuse of, invaluable Arctic data for the benefit of all users.

Over the coming year members of the Arctic data community will work together with Indigenous organizations and people, other Arctic stakeholders, and the SAON ROADS process to realize a co-production model. To continue functioning well as a community, we will enhance, extend, and formalize the SAON Arctic Data Committee and its pivotal role in driving collaboration. Building on existing efforts we will focus on establishing a distributed, co-owned, sustainable
and coherent map of digital resources which all partners can co-develop and leverage for their needs.