<u>Terms of Reference for the United States Arctic Observing Network</u> (US AON)

Purpose: To provide processes for realizing US AON Vision and Goals, and mechanisms and processes for the US AON Board and related activities.

Introduction

The US Arctic Observing Network (US AON) is an effort whose goal is to improve the integrated performance of Arctic-wide observing and data management activities through fostering planning and implementation partnerships among observing networks and data systems. US AON is responsive to recommendations from a National Academies study entitled "Toward an Integrated Arctic Observing Network" (2006) and subsequent recommendations from the Study of Environmental Arctic Change (SEARCH, 2001-ongoing) program. US AON was formally established under joint mandates from the White House Arctic Science Ministerial (2016) and the Sustaining Arctic Observing Networks (SAON) initiative. Both called for improved capacities for national coordination in support of integration and improvement of Arctic observations. US AON is a recognized activity under the Interagency Arctic Research Policy Committee (IARPC).

US AON includes a collection of both federal and non-federal activities at the interface between observing technology and policy issues (Fig. 1). High-level guidance for US AON, as well as alignment with agency goals, is provided through its interagency US AON Board, composed of representatives from US federal agencies, which is a recognized sub-committee of the IARPC. US AON engages with and receives input from non-federal partners (e.g. researchers, Indigenous Peoples organizations, and local, state, industry, and non-profit representatives) through the IARPC Collaborations Arctic Observing Systems Sub-Team (AOSST), where the US AON Executive Director serves as co-chair. US AON coordinates the US committee to SAON, generating greater alignment between national and international actions. US AON activities like Community Partnerships and Task Teams develop on an *ad hoc* basis to bring greater focus to needed observing and data actions to improve key services (e.g., sea ice forecasting) or products (e.g., the Arctic Report Card). US AON also partners with other organizations and projects to generate broader impacts from observing systems and to promote good research practices. US AON is committed to facilitating the inclusion of Arctic Indigenous Peoples and non-Indigenous Arctic residents in observing activities, following guidelines like the Principles for Conducting Research in the Arctic.

Structure of the US AON:

US AON's structure includes the following bodies (Fig. 1):

- The US AON Board is responsible for providing guidance and direction on programmatic operations, including US AON activities, and is responsible for overall governance issues, including alignment of US AON strategic direction with the goals and objectives of both SAON and the IARPC.
- Through IARPC Collaborations, US AON is responsible for efforts related to sustained observing (currently the Arctic Observing Systems Sub-Team) and for linking the wider community (e.g. researchers, Indigenous Peoples, and state, industry, and non-profit representatives) around topics of relevance.
- US AON serves as the US national committee to SAON and related international efforts.
- US AON Task Teams are responsible for providing input on observing system performance and gaps on a specified topic.
- Other bodies may be added as needed.

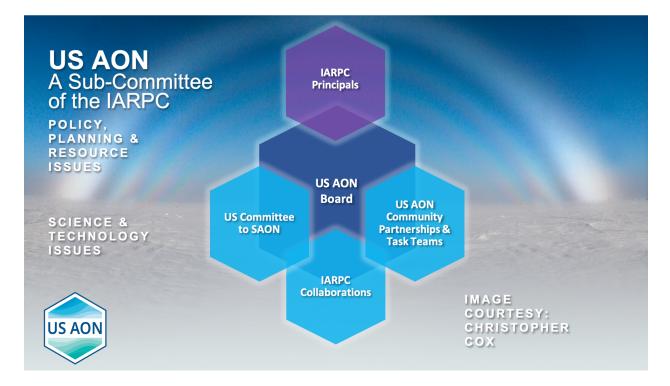


Figure 1. The US AON is an officially recognized activity of the Interagency Arctic Research Policy Committee (IARPC), of which the federal US AON Board is a sub-committee. The light and dark blue hexagons each delineate a unique organizational facet of US AON. The US AON Board (dark blue hexagon) is a federal-only body that guides the work of US AON across its participating agencies, reporting to the IARPC. Through IARPC Collaborations and other ad hoc partnerships, US AON aligns federal goals with those of non-federal partners engaged in sustained observing, nationally and internationally (light blue hexagons).

This Terms of Reference provides a set of processes for programmatic implementation and overall strategic development of US AON, including:

- Encouraging improvement and sustainment of Arctic observing and data systems;
- Reviewing and coordinating work on current US AON Tasks;
- Identifying priorities for new US AON Tasks and potential Task leaders;
- Consulting with the broad science and user communities;
- Acting as a national representative to international observing efforts, such as SAON;
- Communicating / Reporting on US AON achievements;
- Other purposes to be determined.

The US AON Board:

- The US AON Board shall be responsible for all programmatic and operational issues, including strategic planning for US AON, and reviewing and approving US AON Tasks;
- The US AON Board operates as a board of directors and manages US AON's activities;
- More details, including procedures for membership on the US AON Board are included in Appendix 1.

US AON Staff:

- NOAA funds US AON's Executive Director (ED, 1 FTE), who shall be responsible for the day-to-day operations of and communications pertaining to US AON.
- NSF, through the IARPC Secretariat, funds the US AON Program Analyst (PA, 0.5 FTE), who shall report to the US AON ED and be responsible for support for US AON activities.

Relationship of the US AON to the SAON¹:

- The US AON Board will nominate and the IARPC Staff group will approve US representatives to serve on the SAON Board;
- US AON, including the Board, the IARPC Observing and Data Sub-Teams and Task Teams, acts as the US national committee to SAON, mobilizing national support for its efforts;
- US AON, in its National Committee role, adopts, applies, and provides input to the ROADS² Process as a framework for US AON Tasks.

¹ Sustaining Arctic Observing Networks (SAON) is a partnership of Arctic and non-Arctic states and organizations that promote the improvement and sustainment of Arctic observing and data systems. articobserving.org

² SAON's Roadmap for Arctic Observing and Data Systems (ROADS) is an internationally endorsed planning process in support of SAON goals.

Relationship of the US AON to IARPC:

- The IARPC Principals recognized the US AON BOARD as an official sub-committee of the IARPC in 2017, the non-Federal US AON is referred to as an IARPC activity;
- US AON Board's major documents are approved and adopted by the IARPC Principals;
- The US AON Chair and the Executive Director are responsible for reporting to the IARPC, and for reporting to the Board any information from the same;
- US AON will use IARPC Collaborations and its observing team (AOSST) as a key means of mobilizing collaboration around US AON activities and engaging participation in SAON's ROADS process.

Reporting:

To ensure the successful implementation of the US AON and to develop effective relationships with US AON partners and funding agencies, the US AON will provide a biennial report, approved by the US AON Board, to its participating agencies and IARPC Staff Group and Principals. This report will be supplemented with other informal updates not requiring Board approval, such as newsletters and webinars and the annual update on US AON funding required by NOAA's Arctic Research Report.

Review Process:

As part of NOAA's Arctic Research Program (ARP), US AON will undergo a formal review process every five years, the focus of which includes US AON's effectiveness as an interagency investment and its impact on the ARP. During the interval of the ARP review, the US AON Board will request comments and feedback from their own agencies on US AON's effectiveness as an interagency effort; they could also recommend a full interagency review of US AON at that time. The results of that review will be reported to the IARPC for comment. The US AON Board will lead the design and implementation of changes to US AON as called for in these reviews.

Appendix 1: Rules of Procedures for the US AON Board

Management of the Board:

- All US AON Board members have equal status.
- The National Oceanic and Atmospheric Administration (NOAA), National Science Foundation (NSF), and National Aeronautics and Space Administration (NASA) collectively cover the responsibilities of chairing and vice-chairing the Board, with the Chair (1) position rotating among the 3 agencies every 3 years.
- US AON Staff supports the Board and the Chair/Vice-Chairs.
- Each federal agency is entitled to one seat on the US AON Board, by appointment by the IARPC Principal of each participating agency.
- The US AON Chair and Executive Director will report to the IARPC Staff Group once per year and will invite non-participating agencies to nominate new members.
- Non-members may be invited to participate in Board meetings or activities on a short-term basis.
- The US AON Board meets regularly, with the Chair/Vice-Chairs meeting before the Board meeting to set the agenda.
- The Board may establish other subsidiary bodies as needed.

Responsibilities of Members:

- Board members are responsible for representing the agency or organization that appointed them.
- Board members are expected to evaluate proposed US AON Tasks and provide guidance on current ones.
- Board members are expected to seek champions and subject matter experts needed to undertake US AON Tasks.
- Board members are expected to encourage action(s) to implement recommendations from US AON Tasks.

Frequency and Types of Meetings:

- The Board will meet on an agreed-upon schedule (e.g.monthly) and may hold additional meetings as needed.
- The Chair/Vice-Chairs will independently meet on a similar schedule to prepare agendas.
- The IARPC Arctic Observing Systems Sub-Team will meet regularly.
- US AON Task Teams will meet as needed.
- The US national committee to SAON will meet at least bi-annually.

Decision-Making:

- The US AON Board will work to achieve general agreement (i.e., consensus) on issues. Silence on the part of any Board member will be equated with consent. If consensus cannot be achieved, the US AON Chair will order a formal vote on the outstanding issues. A simple majority of members present will be required to achieve approval of any action subject to a formal vote.
- The Rules of Procedures may be amended by unanimous agreement of the full membership of the US AON Board.
- The agenda and final version of the minutes of all Board meetings and decisions will be made available on the US AON Board share drive by the US AON Executive Director.