

**Terms of Reference**

**Study of Environmental Arctic Change (SEARCH)**

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**I. SCIENCE STEERING COMMITTEE**

**1. Mandate of Group**

The Study of Environmental Arctic Change (SEARCH) Science Steering Committee (SSC) is a committee that has been convened under their own authority to govern the SEARCH effort as described in the National Science Foundation-funded award “Collaborative Research: Research, Synthesis, and Knowledge Transfer in a Changing Arctic: Science Support for the Study of Environmental Arctic Change (SEARCH)”, PLR-1331083 (to the Arctic Research Consortium of the U.S.) and PLR**-**1331100 (to the International Arctic Research Center/U. of Alaska Fairbanks).

**2. Objective and Duties**

The primary objective of the SEARCH SSC is to ensure that the SEARCH program achieves its vision of “scientific understanding of Arctic environmental change to help society understand and respond to a rapidly changing Arctic.” To achieve this, the SSC will:

* Guide overall directions, priorities, and major activities.
* Monitor progress toward the SEARCH program’s five-year science goals and adjust the trajectory of program activities to ensure these goals are achieved.
* Promote and communicate SEARCH activities and plans with the scientific community, federal agencies, relevant organizations, and stakeholders.
* Establish productive linkages and partnerships to other programs and efforts.
* Work with the SEARCH Executive Director to develop annual program plans articulating clear milestones; monitor activities; and make adjustments to program plans as needed.
* Set priorities for the SEARCH Executive Director.
* Attend and be active participants in SEARCH SSC teleconferences and in-person meetings.
* Review the SEARCH program structure and Terms of Reference on an annual or as-needed basis.
* Represent the interests of the broader Arctic research community.
* Work with the scientific community to develop the next set of five-year goals and lead development of any related science or implementation plans.

**3. Committee Membership**

Membership in the SEARCH SSC is open to individuals of all academic disciplines, research backgrounds and geographic locations. However, no more than two members of the SEARCH SSC may be based at institutions outside the United States at any given time.

**a. Selecting New Committee Members**

Membership diversity is encouraged. The SSC should include members from a variety of perspectives, research backgrounds, disciplines, and institutions (including academic and government agencies) who are capable of broad and cross-disciplinary thinking, possess good communication and consensus-building skills and demonstrate a strong commitment to the SEARCH vision. Committee member composition should remain flexible and responsive to evolving SEARCH program needs.

**b. Nomination & Selection Process**

In advance of committee member rotations, an open call for nominations is encouraged. Upon review of the nominations, the SEARCH SSC will approve final candidate selections through a majority vote. An informal review of SEARCH SSC nominees with the NSF Program Officer assigned to manage the SEARCH program grant is encouraged. However, approval from NSF is not a requirement of the nominee selection process.

**c. Committee Size and Offices**

The size of the SEARCH SSC should be 12-14 members. At a minimum, the SEARCH SSC shall consist of a Chair, a Vice-Chair and 10-12 ordinary members. A Past-Chair role is also permitted if designated by the SEARCH SSC. No officer of the SSC shall hold more than one office at a time. The SEARCH SSC may add new roles, offices, or sub-committees to their composition with a majority vote.

* *SEARCH SSC Chair*

This committee Chair is responsible for the overall leadership of the SEARCH SSC. In addition, the SSC Chair will be responsible for convening SEARCH SSC meetings, setting meeting agendas and conducting meetings in an orderly fashion. The SEARCH SSC Chair will serve as a public representative of, and spokesperson for, the SEARCH SSC and SEARCH program at external meetings and events. The SSC Chair will also oversee the production of SEARCH’s annual work plans and annual reports, and serve as a regular point of contact for the SEARCH Executive Director. Fulfilling these duties would require a higher level of involvement with SEARCH than that of a regular committee member.

* *SEARCH SSC Vice-Chair*

The committee Vice-Chair is subordinate to the SSC Chair and may serve as a temporary chairperson either in the SSC Chair’s absence or during any committee motions or votes that pertain directly to the Chair. In addition to the Chair, the Vice-Chair will represent SEARCH at external meetings and teleconferences and would be available to serve as a point of contact for the SEARCH Executive Director. It is assumed that fulfilling these duties would require a higher level of involvement with SEARCH than that of a regular committee member.

* *SEARCH SSC Past-Chair*

The SEARCH SSC Past-Chair is not a required position but is allowable if designated by the SEARCH SSC. The primary duty of this committee officer would be to assist in the continuity of program activities. The SSC Past-Chair would advise and assist the SSC Chair and/or Vice-Chair, as requested by the Chair.

**d. Term Length**

SEARCH SSC Members serve three-year terms, with a maximum of two consecutive terms. The SSC Chair and vice-chair positions are limited to one term, except with a majority vote of the SSC.

**e. Ex-officio Member and Non-member Committee Participation**

At present, there are no ex-officio members of the SEARCH SSC. The committee may, however, elect to add ex-officio members in the future if it is believed to be necessary to meet program needs. Individuals who are not a part of the SSC (such as Action Team leaders and staff) may also be invited to participate in SSC meetings and calls if appropriate. However, executive sessions of SEARCH SSC meetings may exclude non-member participation.

**4. Formation of SSC Sub-committees and Working Groups**

The SEARCH SSC may both convene and dissolve standing sub-committees and *ad hoc* working groups to focus on specific tasks. The terms and goals of these groups should be approved by the SEARCH SSC.

**5. Rules of Procedure**

**a. Meeting Frequency**

The SEARCH SSC will meet at least annually in person and may convene additional in-person meetings of opportunity. The committee will also conduct regular teleconference or webconferences as needed to achieve committee goals.

**b. Voting**

Voting is allowed through the best means available to committee members, and may include email, electronic/online polling, and via teleconference. A simple majority vote by SEARCH SSC members is required under the following circumstances:

* + To approve the selection of new SEARCH SSC committee members
  + To approve the selection of a new SSC Chair, a new SSC Vice-Chair and other Executive Committee members.
  + To approve the addition of any new ex-officio SEARCH SSC members.
  + To revise the SEARCH SSC Terms of Reference.
  + To add or eliminate an Action Team from the organizational structure of the SEARCH program.
  + To appoint Action Team chairs and co-chairs.
  + To approve the Action Team Chair/Co-Chair nominations of new Action Team members.
  + To approve annual work plans.

Formal voting is not required to add any SSC- or Action Team-originated *ad hoc* working groups.

**II. ACTION TEAMS**

The current SEARCH organizational structure provides for multi-disciplinary Action Teams that support the SEARCH SSC in achieving SEARCH program goals. The SEARCH SSC is responsible for convening any new Action Teams, for selecting Action Team Chairs/Co-Chairs, and for ensuring Action Team activities support the SEARCH vision and goals.

**1. Action Team Size**

Action Teams should have a minimum of six members and a maximum of twelve members. With SEARCH SSC approval, however, exceptions may be made to an Action Team’s size if a compelling case can be made that doing so will support the attainment of Action Team and SEARCH program goals.

**2. Selecting Action Team Members**

Like the SEARCH SSC, Action Team members need not belong to any specific discipline or research background and membership diversity—including agency personnel, stakeholders, physical/natural/social scientists—is encouraged. Unlike the SEARCH SSC, there is no limit to the number of non-U.S. based individuals who may serve on an Action Team at any given time. Membership for Action Teams will be dependent on the goals and evolving needs of each Action Team and SEARCH as a whole. Action Team Chairs/Co-Chairs will re responsible for nominating new Action Team members, then nominees must be approved by the SSC via a majority vote.

**3. SSC Liaison**

One SEARCH SSC member should be designated to each Action Team to serve as an ex-officio Action Team member. This individual will be charged with facilitating two-way communications between Action Teams and the SEARCH SSC. SSC members may only serve as liaison to one Action Team at a time. SSC liaisons are expected to participate in Action Team activities and attend Action Team meetings, as available.

**4. Action Team *Ad-hoc* Working Groups**

Action Team leads may convene small ad-hoc working groups to focus on specific tasks. The formation of these small temporary groups is not subject to SEARCH SSC approval. The SEARCH SSC is not required to approve the membership slate of a working group.

**5. Action Team Reporting**

Action Teams are responsible for providing both regular and as-needed reports to the SEARCH SSC on Action Team activities. The SEARCH SSC is responsible for determining the frequency, length, format and content of these reports. Consistency with NSF reporting requirements is encouraged.

**III. OBSERVING CHANGE PANEL**

With the recent changing landscape of federal Arctic Observing activities and priorities, the SEARCH SSC will need to re-evaluate the best way to represent and build the capacity of the Arctic research community vis-à-vis coordinated Arctic observing efforts, and the corresponding role of any SEARCH Observing group or committee. Until the requirements of this new group are determined, the current SEARCH Observing Change Panel (OCP) will continue to support the SEARCH SSC for Arctic Observing activities.

**IV. EXECUTIVE DIRECTOR**

Reporting to the SEARCH SSC, the SEARCH Executive Director (ED) is responsible for implementing SEARCH and overseeing the program’s day-to-day activities. The SEARCH SSC Chair and SEARCH SSC Vice-Chair will serve as the SEARCH SSC’s primary points of contact for the SEARCH ED. The SEARCH SSC will:

* Constitute the majority of members on any SEARCH ED hiring committee.
* Review and sign off on the ED’s annual workplan.
* Carry out an annual performance evaluation of the ED.

The administrative process and details of ED performance review should be determined between the SSC Chair and the ED’s home institution.

**V. PROJECT OFFICE**

The Project Office (ARCUS) roles include strategic planning, project management, meeting plan­ning, web development, organizational support for Action Teams and the SSC, and communications and outreach. The Project Office is also responsible for ensuring open exchange of information between all SEARCH components and to the science and stakeholder communities and working with the SEARCH Executive Director and SSC on annual program plans and reports.

**VI. PARTNERSHIPS**

SEARCH actively collaborates with relevant other programs to pursue joint goals. The SEARCH SSC is encouraged to formalize collaborations with Memorandums of Understanding/Agreement (MOUs/MOAs).

**VII. FEDERAL AGENCY GOVERNANCE ROLE**

In the past, the SEARCH program structure included a federal SEARCH Interagency Program Management Committee (IPMC). Recently, however, the Interagency Arctic Research Policy Committee (IARPC) has been elevated to the White House Office of Science and Technology Policy and the U.S. National Strategy for the Arctic Region has been developed. In this invigorated IARPC, activity has increased dramatically in a number of inter-agency collaboration teams. Additionally, SEARCH has moved from a planning to an implementation phase with greatly increased activity and is actively interacting with the IARPC groups. Given that, the IARPC decided that its SEARCH Interagency Program Management Committee (IPMC) had completed its task and has dissolved it. The interagency coordination aspect of SEARCH will now occur through communications among the SEARCH SSC, SEARCH Action Teams, and the IARPC Collaboration Teams and IARPC Secretariat. Neil Swanberg at NSF acts as the liaison between SEARCH and IARPC.

**VIII. REVIEW OF TERMS OF REFERENCE**

The SSC is encouraged to review the Terms of Reference document on an annual or as-needed basis, and update the Terms if needed to ensure the SEARCH structure and operations successfully supports the program’s goals.