



# SEARCH: STUDY OF ENVIRONMENTAL ARCTIC CHANGE

## Scientific Understanding to Help Society Respond to a Rapidly Changing Arctic

Authors: Brit Myers (ARCUS) & Helen Wiggins (ARCUS) on behalf of the SEARCH Science Steering Committee

### What Is SEARCH?

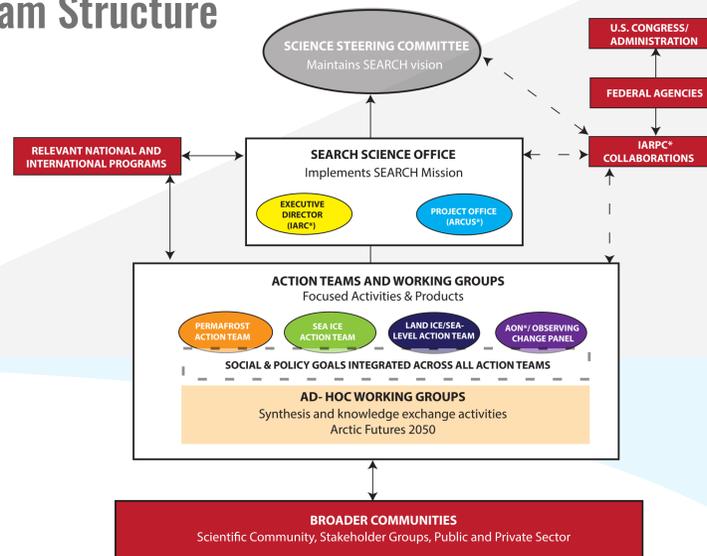
#### Program Mission

The Study of Environmental Arctic Change (SEARCH) is a U.S. program with a mission to provide a foundation of Arctic change science through collaboration with the research community, funding agencies, and other stakeholders.

To achieve this mission, SEARCH:

- Generates and synthesizes research findings and promotes Arctic science and scientific discovery across disciplines and among agencies.
- Identifies emerging issues in Arctic environmental change.
- Provides scientific information to Arctic stakeholders, policy-makers, and the public to help them understand and respond to Arctic environmental change.
- Facilitates research activities across local-to-global scales, with an emphasis on addressing needs of decision-makers.
- Collaborates with national and international science programs integral to SEARCH goals.

#### Program Structure



SEARCH is led by a Science Steering Committee (SSC). The SSC ensures the program is achieving its vision and mission, and that all activities are contributing to the long-term science goals.

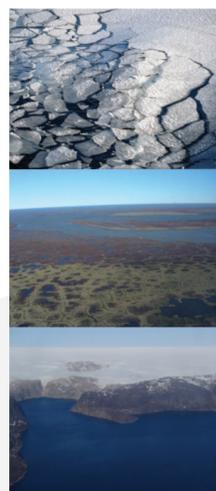
The SEARCH Executive Director is responsible for implementing the SEARCH program and overseeing its day-to-day activities.

The SEARCH Project Office, housed at the Arctic Research Consortium of the U. S. (ARCUS), supports the program's strategic planning, project management, meeting planning, and communication activities.

The National Science Foundation (NSF) Division of Polar Programs provides core support for SEARCH (IARC: PLR-1331100 & ARCUS: PLR-1331083). Other recent contributors include: NCAR, USGS, UAF, USARC, the Center for the Blue Economy and the Bolin Centre at Stockholm University. Other agencies have provided past program support and continue their intellectual engagement.

### What Does SEARCH Do?

#### Action Team Science Goals



**Action Team 1:** Improve Understanding, Advance Prediction, and Explore Consequences of Changing Arctic Sea Ice

##### Sea Ice Team Leads:

Jennifer Francis, Rutgers University  
Henry Huntington, Huntington Consulting

**Action Team 2:** Document and Understand How Degradation of Near-Surface Permafrost Will Affect Arctic and Global Systems

##### Permafrost Team Lead:

Ted Schuur, Northern Arizona University

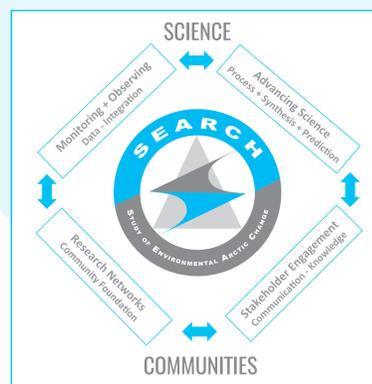
**Action Team 3:** Improve Predictions of Future Land-Ice Loss and Impacts on Sea Level

##### Land Ice/Sea Level Team Leads:

Fiamma Straneo, Woods Hole Oceanographic Institution  
Ted Scambos, National Snow & Ice Data Center

**Cross-Cutting Science Themes Shared by All Action Teams:**  
Analyze Societal and Policy Implications of Arctic Environmental Change  
Arctic Futures Scenarios  
Arctic Observing Coordination

#### Program Activities



- Science Synthesis
- Interdisciplinary Research
- Research Network Building
- Science Communication
- Stakeholder Engagement
- Interagency Coordination
- International Collaboration
- Knowledge for Decision-Making
- Open Science Meetings
- Webinars & Workshops

**Activity Highlight:** The Arctic Observing Open Science Meeting (AOOSM)



In November 2015, SEARCH's Arctic Observing Open Science Meeting (AOOSM) brought together over 200 individuals from academia, agencies, industry, and other organizations to discuss the collection, processing, analysis, and use of Arctic observation data. Learn more about the goals and outcomes of this important Arctic research community event at: <https://www.arcus.org/search-program/meetings/2015/aosm>

### How To Get Involved

#### SEARCH Networks, Committees, & Teams

Each of SEARCH's networks, committees, and teams regularly seeks the involvement of the wider research community. From short-term working group assignments to multi-year committee memberships, there are many different ways to participate in SEARCH's activities. To learn more about current engagement opportunities please visit the SEARCH website (<http://www.arcus.org/search-program>) or subscribe to ARCUS' ArcticInfo listserv (<https://www.arcus.org/arctic-info/subscribe>).

**Smartphone Tip:** Use your smartphone to visit our SEARCH team websites by scanning the black and white QR codes below with your phone's camera. Don't have a code reader app installed on your phone yet? Download one for free at: <https://scan.me/download>



##### SEARCH Program Leadership Teams

- SEARCH Science Steering Committee
- SEARCH Observing Change Panel
- SEARCH Sea Ice Action Team
- SEARCH Land Ice/Sea Level Action Team
- SEARCH Permafrost Action Team



##### Permafrost Carbon Network

The Permafrost Carbon Network is an international scientific community working to synthesize and link existing research about permafrost carbon in order to quantify the role it plays in driving global climate change.



##### Sea Ice Prediction Network (SIPN)

The Sea Ice Prediction Network (SIPN) is a collaborative network of scientists and stakeholders working to advance research on sea ice prediction and communicate sea ice knowledge and tools.



##### Sea Ice for Walrus Outlook

The Sea Ice for Walrus Outlook works with Alaskan subsistence hunters, coastal communities, and the research community to monitor sea ice conditions relevant to walrus in the northern Bering Sea and southern Chukchi Sea.

### Contact Information

Helen Wiggins & Brit Myers (SEARCH Project Office)  
Arctic Research Consortium of the U.S. | [www.arcus.org](http://www.arcus.org)  
907-474-1600 • [helen@arcus.org](mailto:helen@arcus.org) • [brit@arcus.org](mailto:brit@arcus.org)

Brendan P. Kelly (SEARCH Executive Director)  
International Arctic Research Center  
University of Alaska Fairbanks | [www.iarc.uaf.edu](http://www.iarc.uaf.edu)  
907-474-1950 • [bpkelly@alaska.edu](mailto:bpkelly@alaska.edu)

Caspar Ammann (Science Steering Committee Chair)  
National Center for Atmospheric Research | [ncar.ucar.edu](http://ncar.ucar.edu)  
303-497-1705 • [ammann@ucar.edu](mailto:ammann@ucar.edu)

