



Study of Environmental Arctic Change (SEARCH) SEARCH One-Page Primer

SEARCH Vision: <https://www.arcus.org/search-program/vision>

“Scientific understanding of arctic environmental change to help society understand and respond to a rapidly changing Arctic.”

SEARCH Goals: <https://www.arcus.org/search-program/goals>

The SEARCH program’s five-year science goals were developed with significant input from the broader scientific community and represent key unknowns in the arctic system. They were designed to catalyze interagency and inter-disciplinary activities, with a strong focus on decision-makers' needs. SEARCH’s goals are:

1. Improve Understanding, Advance Prediction, and Explore Consequences of Changing Arctic Sea Ice
2. Document and Understand How Degradation of Near-Surface Permafrost Will Affect Arctic and Global Systems
3. Improve Predictions of Future Land-ice Loss and Impacts on Sea Level
4. Analyze Societal and Policy Implications of Arctic Environmental Change

SEARCH Activities: <https://www.arcus.org/search-program>

The work of SEARCH’s Action Teams drive much of the science on the five-year goal timescale. Other planned program activities will produce critical synthesis products that cut across SEARCH’s science goals, develop scenarios to help decision-makers prepare for a future Arctic, and coordinate science in support of an Integrated Arctic Observing System. By fostering collaboration that allows for co-production of knowledge and exchange across a range of Arctic research disciplines and societal concerns, SEARCH’s activities are designed to generate a system-wide understanding of Arctic change. As a coordinating framework, the program’s impact is increased through additional participation & support from the broader Arctic research community, agencies and stakeholders.

SEARCH Structure and Implementation: <https://www.arcus.org/search-program/structure>

SEARCH is led by a Science Steering Committee (SSC). The SSC ensures that the program is achieving its vision, mission and long-term science goals by providing oversight and guidance to the program’s Executive Director, Action Team and Observing Change Panel. The SEARCH Executive Director is responsible for implementing the SEARCH program and overseeing day-to-day activities. Dr. Brendan P. Kelly was selected by the SEARCH SSC as the program's first Executive Director in August 2015.

In 2014, SEARCH’s core activities were funded through a five-year multi-institutional grant from the National Science Foundation. Funding awarded to the University of Alaska’s International Arctic Research Center provides majority support for the SEARCH Executive Director and subawards for each of SEARCH’s three Action Teams. Action Team subawards include minor salary support for Action Team chairs, post-doc staffing and Action Team meeting/travel funds. A second award to the Arctic Research Consortium of the U.S. (ARCUS) provides staffing for the SEARCH project office at the level of 1.3 FTEs as well as additional travel and meeting support for SSC-focused meetings.

Although the National Science Foundation (NSF) provides the largest share of support for the SEARCH program, these resources have been further supplemented by recent contributions from the National Center for Atmospheric Research, the U.S. Geological Survey, the University of Alaska Fairbanks, the Center for the Blue Economy (Middlebury Institute of International Studies at Monterey) and the U. S. Arctic Research Commission. Other agencies have provided past program support in the past and continue their intellectual engagement.