

# SEARCH: Study of Environmental Arctic Change

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

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### What is SEARCH?

SEARCH is a U.S. interdisciplinary and multi-agency program. The aim of SEARCH is to provide a foundation of arctic change science through collaboration with the research community, funding agencies, and other stakeholders.



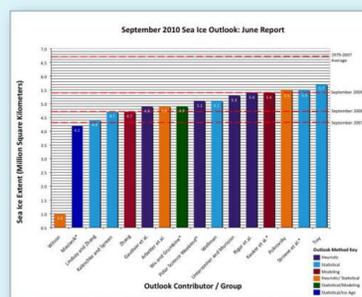
- ❖ **Multi-agency sponsorship:** National Science Foundation (NSF), National Oceanic and Atmospheric Administration (NOAA), National Aeronautics and Space Administration (NASA), Department of Defense, Department of Energy, Department of the Interior, Smithsonian Institution, and the U.S. Department of Agriculture.

- ❖ **Over 100 projects and activities:** Address observing, understanding, and responding to change science.
- ❖ **Observing Change:** Integrated observing networks across the arctic system. Implementation is well underway with the U.S. **Arctic Observing Network (AON)** and links to international efforts.
- ❖ **Understanding Change:** Modeling and analysis; synthesis; Sea Ice Outlook.
- ❖ **Responding to Change:** Stakeholder-driven efforts; decision-support tools; Sea Ice for Walrus Outlook.

### Activity Highlight: Sea Ice Outlook & Sea Ice for Walrus Outlook

#### Sea Ice Outlook

- ❖ **Overview:** The SEARCH Sea Ice Outlook provides online monthly reports during the summer that synthesize many different projections of the arctic sea ice minimum, at both pan-arctic and regional scales.



- ❖ **2011 Season:**
  - Twenty-seven U.S. and international groups provided projections of the 2011 sea ice minimum, using a variety of data sources and methods.
  - The minimum arctic sea ice extent was the second lowest in the satellite record.
  - A post-season report will discuss this year's sea ice season and meteorology, outlook methods, and lessons learned.
- ❖ **Funding:** The Outlook is supported by NSF and NOAA, and through volunteer efforts by research community participants.
- ❖ **Website:** <http://www.arcus.org/search/seaiceoutlook>

#### Sea Ice for Walrus Outlook



- ❖ **Overview:** A resource for Alaska Native subsistence hunters, coastal communities, and others interested in sea ice and walrus. Launched in 2010.
- ❖ **Report Content:** Weekly online reports during walrus hunting season (April-June) provide information on sea ice conditions relevant to walrus in the Northern Bering Sea and southern Chukchi Sea regions of Alaska. Reports include:
  - Current ice conditions.
  - 5- and 10-day outlook of wind conditions.
  - Up-to-date satellite imagery.
  - Observations of ice development from Alaska Native hunters and other sea-ice experts.
- ❖ **Partners:** Forecasters and researchers at NOAA, the National Weather Service, and the University of Alaska; the Arctic Research Consortium of the U.S. (with funding from NSF); the Eskimo Walrus Commission; and Alaska Native sea-ice and walrus experts.
- ❖ **Website:** <http://www.arcus.org/search/siwo>



[www.arcus.org/SEARCH](http://www.arcus.org/SEARCH)

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