

About the SEARCH Sea Ice Outlook

The SEARCH Sea Ice Outlook is an international effort to provide an integrated, community-wide summary of the state of arctic sea ice over the 2008 summer season.

This effort, which emerged from discussions at the "Arctic Observation Integration Workshops" (www.arcus.org/search/meetings/2008/aow/index.php) held March 2008 in Palisades, NY, is a response by the scientific community to the need for better understanding of the arctic sea ice system, given the drastic and unexpected sea ice decline witnessed in 2007.

The Sea Ice Outlook produces monthly reports based on an open and inclusive process that synthesizes input from a broad range of scientific perspectives:

- Each month, a request to the international arctic science community solicits information on the current and expected state of the arctic sea ice.
- The community submissions are synthesized and reviewed by the Sea Ice Outlook Core Integration Group and Advisory Group.
- An integrated monthly report is produced that summarizes the evolution and expected state of arctic sea ice for September 2008, based on the observations and analyses submitted by the science community. These reports are posted on the SEARCH Sea Ice Outlook website (www.arcus.org/search/seaiceoutlook/index.php) and widely distributed.

The process for producing the Sea Ice Outlook reports was repeated monthly from May through September 2008. The intent is not to issue predictions, but rather to summarize all available information from ongoing observing and modeling efforts to provide the scientific community, stakeholders, and the public the best available information on the evolution of the arctic sea ice cover.

A retrospective report will include an analysis of factors and driving forces for the 2008 sea ice minimum, an assessment of our current predictive ability and how it can be improved, and an initial plan for a 2009 Sea Ice Outlook.

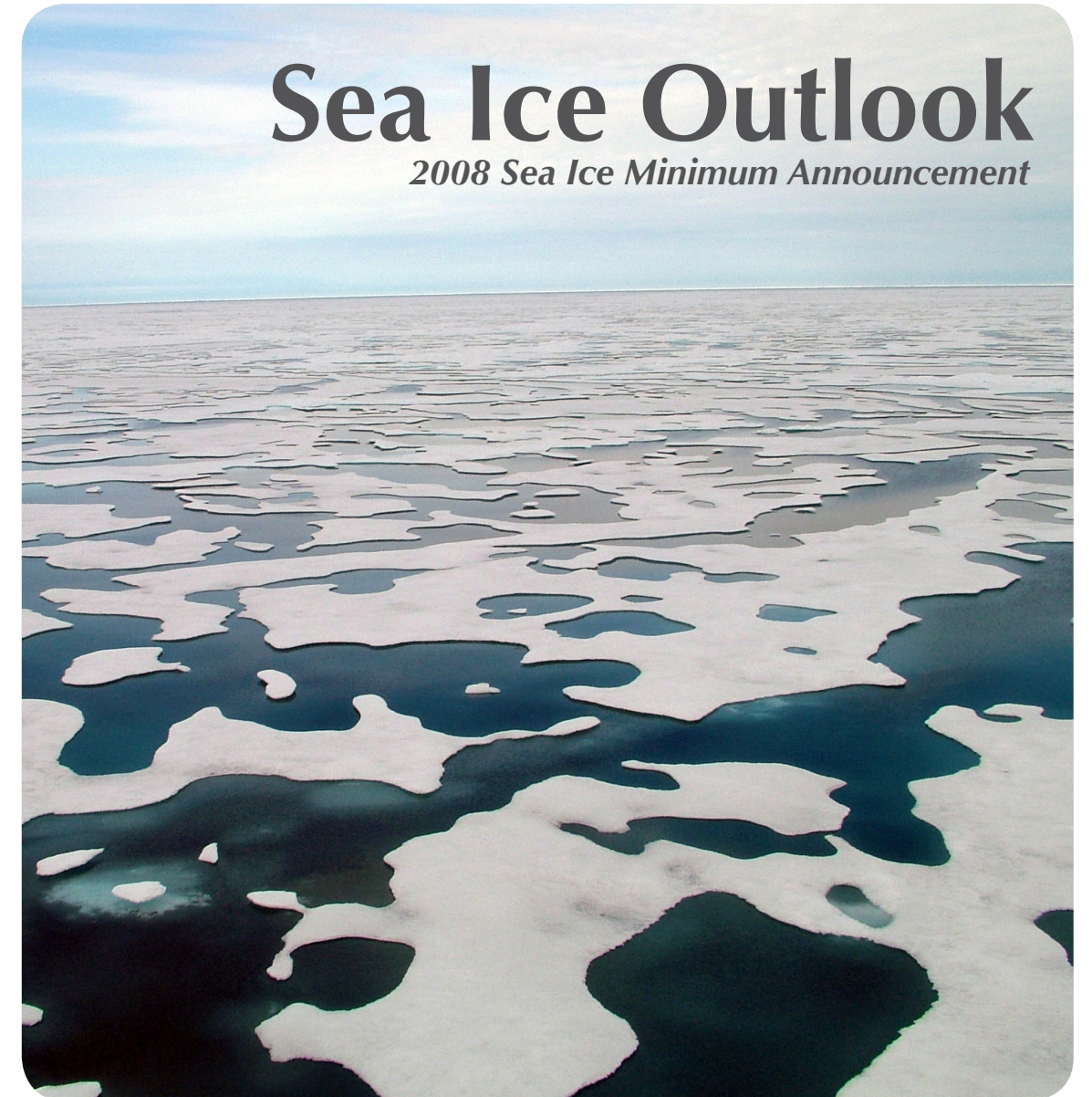
The SEARCH Sea Ice Outlook is implemented through close cooperation with the DAMOCLES program and other relevant national and international efforts. Sea Ice Outlook activities are supported in part through the National Science Foundation (NSF) and the National Oceanic and Atmospheric Administration (NOAA).

For more information, go to the SEARCH Sea Ice Outlook website (www.arcus.org/search/seaiceoutlook/index.php), or contact James Overland at NOAA (james.e.overland@noaa.gov), Hajo Eicken at the University of Alaska Fairbanks (hajo.eicken@gi.alaska.edu), or Helen Wiggins at ARCUS (helen@arcus.org).



SEARCH SEA ICE OUTLOOK

Sea Ice Outlook 2008 Sea Ice Minimum Announcement



August / September 2008 Summary Report

Arctic sea ice reached its 2008 minimum extent on September 14th, at 4.52 million square kilometers (1.74 million square miles), according to preliminary data reported by the National Snow and Ice Data Center (NSIDC). The 2008 minimum represents the second lowest extent recorded since satellite observations began in 1979, slightly above the record low minimum of 2007.

The 2008 minimum extent, which is well below the 1979–2007 average minimum of 6.7 million square kilometers, indicates a continuation of the strong downward trend of summer sea ice in the Arctic. The ice cover continues to thin, with less older (multi-year) ice. In addition, for the first time since recorded observations, the ice has retreated away from the coast along the entire perimeter of the Arctic, opening both the Northern Sea Route (Northeast Passage) along the coast of Siberia and the Northwest Passage along the North American coast.

Arctic Sea Ice Extent Minimum 1979-2008

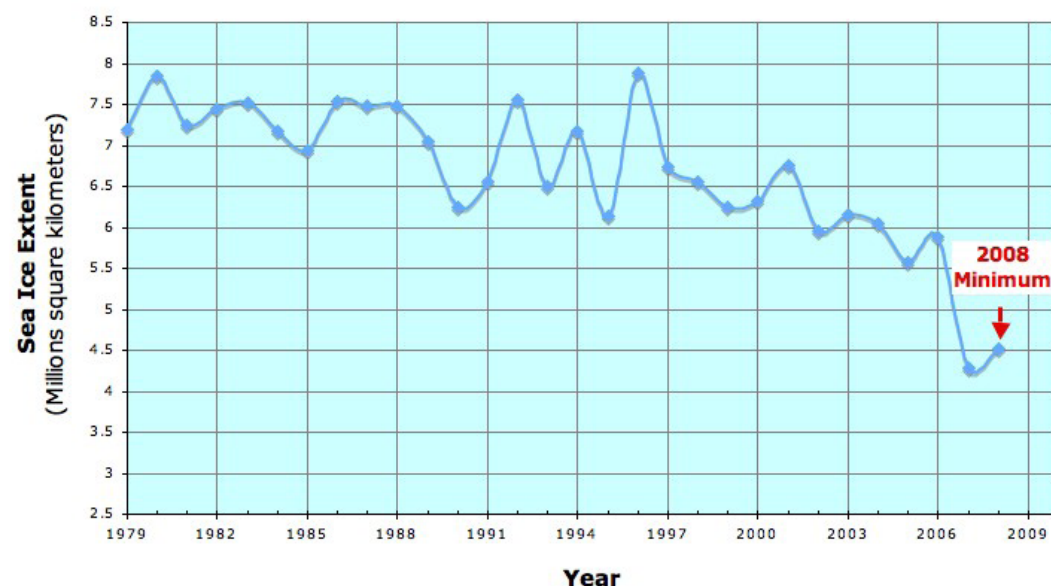


Figure 1. Annual arctic sea ice minimum extents since 1979. 2008 value depicted is lowest September sea ice extent, rather than September average. Data from the NSIDC Sea Ice Index (http://nsidc.org/data/seaice_index/archives/index.html). Graph courtesy of ARCUS.

The chart on the next page (Figure 2) shows the observed 2008 sea ice minimum value as compared to the most recent Sea Ice Outlook values (from the July outlook report). The Sea Ice Outlook participants are currently undertaking an analysis of the 2008 season, including an assessment of the factors and processes controlling the sea ice distribution patterns observed this summer, an analysis of the monthly outlooks in comparison to the observed minimum, and an examination of approaches that can improve our predictive capabilities for future efforts. As outlined in detail in the different monthly outlook reports, the effort has provided substantial insight not only into summer ice retreat in the context of a long-term trend, but also into the degree of success and uncertainty associated with different forecast approaches.

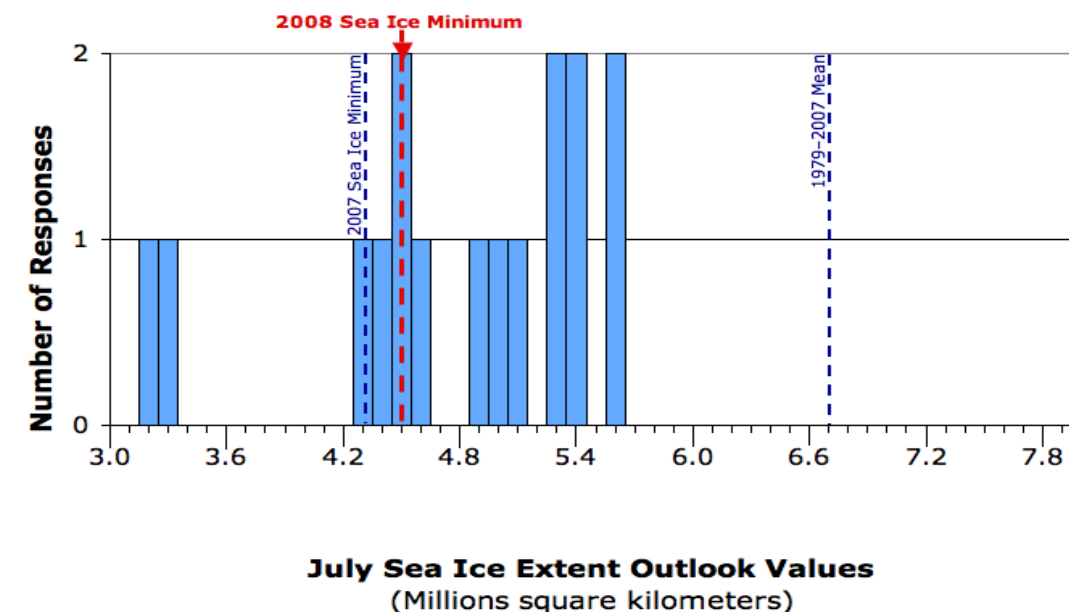


Figure 2. The observed 2008 sea ice minimum (red dashed line, 4.52 million square kilometers) as compared to the July SEARCH Sea Ice Outlook Values (www.arcus.org/search/seaiceoutlook/report_july.php). For reference, the dashed blue lines depict the 2007 sea ice minimum extent (4.3 million square kilometers), and the 1979–2007 mean (6.7 million square kilometers).

Upcoming Sea Ice Outlook Effort Activities:

Early October 2008: Preliminary Retrospective Report Released—Report will include a preliminary analysis of factors and driving forces for the 2008 minimum, and an initial assessment of our predictive ability and how it can be improved.

17 December 2008: Sea Ice Outlook Community Meeting at the Fall AGU Meeting in San Francisco (Time and Room TBA)—Open evening meeting to discuss the 2008 arctic sea ice season, evaluate the Sea Ice Outlook effort, and discuss how to improve Outlook activities for the 2009 season.

January/February 2009: Sea Ice Outlook Working Group Meeting and Community eMeeting—A small working group meeting and an open community eMeeting will build on previous community discussions and provide input into the retrospective report and planning for a 2009 Sea Ice Outlook.

February/March 2009: Final Retrospective Sea Ice Outlook Report Published; Submission of Peer Reviewed Paper.

Winter/Spring 2009: Planning for Potential 2009 Sea Ice Outlook Effort.

For more information and images related to the 2008 sea ice minimum, visit NSIDC's Sea Ice News and Analysis website (<http://nsidc.org/arcticseaicenews/>) and NASA's Images and Animations webpage (<http://svs.gsfc.nasa.gov/vis/a000000/a003400/a003464/index.html>).