

ARCTIC REPORT CARD SHOWS CONTINUING CHANGE IN MOST ENVIRONMENTAL INDICATORS

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ABOUT THE REPORT CARD

An international team of research scientists has created a peer-reviewed website, <http://www.arctic.noaa.gov/reportcard/>, which tracks multiple changes in the

Arctic environment (Fig. 1). While the 2007 loss of summertime sea ice is the most dramatic example, changes are also seen in the atmosphere, on land and in the ocean, and as shifts in location and abundance of Arctic species.



Fig 1. Screen snapshot of website home page, www.arctic.noaa.gov/reportcard/.

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The Arctic Report Card 2007 is introduced as a means of presenting clear, reliable, and concise information on recent observations of environmental conditions in the Arctic relative to historical time series records. It provides a method of updating and expanding the content of the 2006 State of the Arctic Report to reflect current conditions.

Material presented in the Report Card is prepared by an international team of scientists and is peer reviewed by topical experts nominated by the U.S. Polar Research Board.


PRESENTATION OF INFORMATION

The Arctic Report Card is presented on the Web, which maximizes availability and facilitates future timely updates. The red and yellow boxes (Fig. 2) provide a quick look at environmental conditions that are warming or showing mixed signals. More information is contained in the newspaper-style headlines (Fig. 2). Clicking on the headline leads to details in an essay format with scientific references.

The layered presentation makes scientifically credible information approachable, understandable, and useful for scientists, students, teachers, decision makers and the general public.

NOAA ARCTIC WEBSITES

The Arctic Report Card is specifically focused on tracking recent changes in the Arctic environment. NOAA also provides the Arctic Theme Page, <http://www.arctic.noaa.gov>, as a broadly informative comprehensive resource. It contains information including: essays on key Arctic issues by respected Arctic scientists, frequently asked questions about the Arctic, North Pole web cam, central access to widely-distributed data and information related to the Arctic from research institutions world-wide, color graphics and animations of Arctic related data, educational links, including topics such as Northern Lights, Arctic pollution, animals, maps, Arctic exploration, native peoples, information about NOAA Arctic research elements and programs, etc., and links to national and international Arctic scientific research institutions, program offices and data centers. The Arctic Theme Page has wide appeal. From January 1–18, 2008, 55234 unique sites visited the NOAA Arctic pages, and the total number of hits was 3.1 million.

	Atmosphere		Biology
	Sea Ice		Ocean
	Greenland		Land

Warming and mixed signals

Collectively, the observations indicate that the overall warming of the Arctic system continued in 2007. There are some elements that are stabilizing or returning to climatological norms. These mixed tendencies illustrate the sensitivity and complexity of the Arctic System.







 <p>Atmosphere Hot spot shifts toward Europe</p>	 <p>Ocean North Pole Temperatures at depth returning to 1990s values</p>
 <p>Sea Ice Summer extent at record minimum</p>	 <p>Greenland Recent warm temperatures associated with net ice loss</p>
 <p>Biology <ul style="list-style-type: none"> • Increasing tundra shrub cover and variable treeline advance • Up to 80% declines in some caribou herds, while goose populations double </p>	 <p>Land Increase in permafrost temperatures is slowing down</p>

Fig 2. Detail view of presentation style on home page. Note quick-look red and yellow boxes, newspaper-style headlines. Clicking on the headline leads to details in an Essay format with scientific references.

CITATION

Richter-Menge, J., J. Overland, E. Hanna, M.J.J.E. Loonen, A. Proshutinsky, V. Romanovsky, D. Russell, R. Van Bogaert, R. Armstrong, L. Bengtsson, J. Box, T.V. Callaghan, M. De Dapper, B. Ebbinge, O. Grau, M. Hallinger, L.D. Hinzman, P. Huybrechts, G.J. Jia, C. Jonasson, J. Morison, S. Nghiem, N. Oberman, D. Perovich, R. Przybylak, I. Rigor, A. Shiklomanov, D. Walker, J. Walsh, and C. Zöckler (2007). Arctic Report Card 2007, <http://www.arctic.noaa.gov/reportcard>.

CREDITS

The Report Card is organized by NOAA and will be updated annually. Support is provided by the NOAA Climate Program Office and Arctic Research Program. The atmosphere image is from NOAA's North Pole Web Cam, the sea ice photograph is provided courtesy of Jeremy Harbeck, the biology photograph of snow geese is from Saskatchewan Schools, Canada, the ocean photograph of oceanographic instrumentation is from the NOAA Ocean Explorer program, the Greenland image is from NASA/SVS, and the land/permafrost photograph is from Vladimir E. Romanovsky. Jackie Richter-Menge is the chief editor. The web page has been coordinated and developed by James E. Overland, Nancy N. Soreide, and Tracey Nakamura.