

Arctic Report Card: Update for 2012

Tracking recent environmental changes

[Home](#) [About](#) [Printouts](#) [Previous Report Cards](#) [NOAA Arctic Theme Page](#) [Contacts](#)

HOME

[Executive Summary](#)

ATMOSPHERE

[Temperature & Clouds](#)
[Ozone & UV Radiation](#)
[Greenhouse Gases](#)

SEA ICE & OCEAN

[Sea Ice](#)
[Ocean](#)

MARINE ECOSYSTEMS

[Seabirds](#)
[Primary Productivity & Nutrients](#)
[Barrow Canyon Ecosystem](#)
[Fish & Fisheries](#)
[Marine Mammals](#)
[Benthos](#)

TERRESTRIAL ECOSYSTEMS

[Waders \(Shorebirds\)](#)
[Vegetation](#)
[Lemmings](#)
[Arctic Fox](#)
[Caribou & Reindeer](#)

TERRESTRIAL CRYOSPHERE

[Snow](#)
[Glaciers & Ice Caps](#)
[Greenland Ice Sheet](#)
[Permafrost](#)

What's new in 2012?

New records set for snow extent, sea ice extent and ice sheet surface melting, despite air temperatures - a key cause of melting - being unremarkable relative to the last decade.

Multiple observations provide strong evidence of widespread, sustained change driving Arctic environmental system into new state.



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Highlights

Record low snow extent and low sea ice extent occurred in June and September, respectively.

Growing season length is increasing along with tundra greenness and above-ground biomass. Below the tundra, **record high permafrost temperatures** occurred in northernmost Alaska.

Duration of melting was the longest observed yet on the Greenland ice sheet, and a **rare, nearly ice sheet-wide melt event** occurred in July.

Massive phytoplankton blooms below summer sea ice suggest previous estimates of ocean primary productivity might be ten times too low.

Arctic fox is close to extinction in Fennoscandia and vulnerable to further changes in the lemming cycle and the encroaching Red fox.

Severe weather events included extreme cold and snowfall in Eurasia, and two major storms with deep central pressure and strong winds offshore of western and northern Alaska.



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