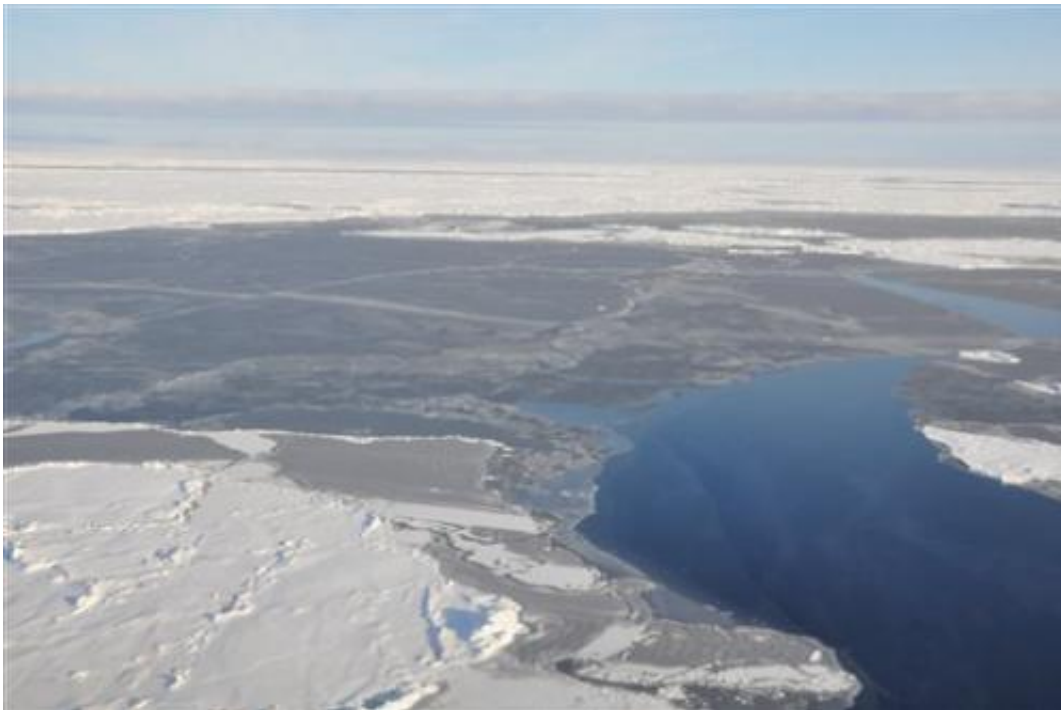


Report: Arctic loses snow, ice; absorbs more heat

December 17 2014, by Seth Borenstein



This 2014 photo provided by NOAA shows the Arctic ice coverage. Earth's icy northern region lost more of its signature whiteness that reflects the sun's heat. It was replaced temporarily with dark land and water that absorbs more energy, keeping yet more heat on already warming planet, according to the Arctic report card issued Thursday, Dec. 17, 2014. (AP Photo/NOAA)

(AP)—The Arctic and its future are looking dimmer every year, a new federal report says.

In the spring and summer of 2014, Earth's icy northern region lost more of its signature whiteness that reflects the sun's heat. It was replaced temporarily with dark land and water that absorbs more energy, keeping yet more heat on already warming planet, according to the Arctic report card issued Thursday.

Spring snow cover in Eurasia reached a record low in April. Arctic summer sea ice, while not setting a new record, continued a long-term, steady decline. And Greenland set a record in August for the least amount of sunlight reflected in that month, said the peer-reviewed report from the National Oceanic and Atmospheric Administration and other agencies.

Overall, the report card written by 63 scientists from 13 countries shows few single-year dramatic changes, unlike other years.

"We can't expect records every year. It need not be spectacular for the Arctic to continue to be changing," said report lead editor Martin Jeffries, an Arctic scientist for the Office of Naval Research, at a San Francisco news conference Wednesday.



As sea ice retreats in summer, in this 2014 image provided by NASA, more sunlight reaches the upper layers of the sea, triggering increased blooms of phytoplankton in the Bering Sea. Earth's icy northern region lost more of its signature whiteness that reflects the sun's heat. It was replaced temporarily with dark land and water that absorbs more energy, keeping yet more heat on already warming planet, according to the Arctic report card issued Thursday, Dec. 17, 2014.(AP Photo/NASA)

The report illustrates instead a relentless decline in cold, snow and ice conditions and how they combine with each other. And several of those have to do with how the Arctic reflects sun heat

The Arctic's drop in reflectivity is crucial because "it plays a role like a thermostat in regulating global climate," Jeffries said, in an interview. As the bright areas are replaced, even temporarily, with dark heat-absorbing dark areas, "That has global implications."

The world's thermostat setting gets nudged up a bit because more heat is being absorbed instead of reflected, he said.

The Arctic has been affected more by man-made warming than the rest of the globe, Jeffries and the report said. But it comes in spurts, pauses and drops. Not every year will be a record, Jeffries said.



This undated photo provided by NOAA shows a polar bear swimming. Earth's icy northern region lost more of its signature whiteness that reflects the sun's heat. It was replaced temporarily with dark land and water that absorbs more energy, keeping yet more heat on already warming planet, according to the Arctic report card issued Thursday, Dec. 17, 2014. (AP Photo/NOAA)

For example, the Arctic sea ice's lowest point this year wasn't as small as 2012 and was only the sixth lowest since 1979. But the last eight years have all had the eight lowest amounts of summer sea ice on record,

Jeffries said.

While Greenland's ice sheet lost 474 billion tons of ice in 2012, it only lost 6 billion tons in the past summer, the report said. While the U.S. East Coast shivered during January's cold snap from a polar vortex that slipped south, parts of Alaska were 18 degrees warmer than normal.



This undated photo provided by NOAA shows a polar bear standing on ice. In the spring and summer of 2014, Earth's icy northern region lost more of its signature whiteness that reflects the sun's heat. It was replaced temporarily with dark land and water that absorbs more energy, keeping yet more heat on already warming planet, according to the Arctic report card issued Thursday, Dec. 17, 2014. (AP Photo/NOAA, Kathy Crane)

Polar bear populations in parts of the Alaska region were shrinking but elsewhere they were more or less stable, the report said.

"Eight years ago, 2014 would have been considered an alarming year," said University of Colorado ice scientist Ted Scambos, who didn't contribute to the report. "With 2007 and 2012 behind us, not so much now. The continued summertime darkening of Greenland, particularly in a year when surface melt did not reach record levels, is worrisome, and sets up the potential for record surface melting in future years."

© 2014 The Associated Press. All rights reserved.

Citation: Report: Arctic loses snow, ice; absorbs more heat (2014, December 17) retrieved 27 April 2024 from <https://phys.org/news/2014-12-arctic-ice-absorbs.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.