

Study says Arctic sea ice melting faster than expected



The Associated Press

Updated: Fri. Apr. 3 2009 7:58 AM ET

WASHINGTON — Arctic sea ice is melting so fast most of it could be gone in 30 years.

A new analysis of changing conditions in the region, using complex computer models of weather and climate, says conditions that had been forecast by the end of the century could occur much sooner.

A change in the amount of ice is important because the white surface reflects sunlight back into space.

When ice is replaced by dark ocean water, that sunlight can be absorbed, warming the water and increasing the warming of the planet.

The finding adds to concern about climate change caused by human activities such as burning fossil fuels.

The problem that has begun receiving more attention in U.S. President Barack Obama's administration and was part of the G20 discussions in London.

"Due to the recent loss of sea ice, the 2005-2008 autumn central Arctic surface air temperatures were greater than 5 C above" what would be expected, the new study reports.

That amount of temperature increase had been expected by the year 2070.

The new report by Muyin Wang of the Joint Institute for the Study of Atmosphere and Ocean and James E. Overland of the National Oceanic and Atmospheric Administration's Pacific Marine Environmental Laboratory, appears in Friday's edition of the journal *Geophysical Research Letters*.

They expect the area covered by summer sea ice to decline from about 7.2 million square kilometres normally to 1.6 million square kilometres within 30 years.

Last year's summer minimum was 4.6 million square kilometres in September, second lowest only to 2007 which had a minimum of 4.2 million square kilometres, according to the National Snow and Ice Data Center.

The Center said Arctic sea ice reached its winter maximum for this year at 15 million square kilometres on Feb. 28. That was 720,000 square kilometres below the 1979-2000 average making it the fifth lowest on record. The six lowest maximums since 1979 have all occurred in the last six years.

Overland and Wang combined sea-ice observations with six complex computer models used by the Intergovernmental Panel on Climate Change to reach their conclusions. Combining several computer models helps avoid uncertainties caused by natural variability.

Much of the remaining ice would be north of Canada and Greenland, with much less between Alaska and Russia in the Pacific Arctic.

"The Arctic is often called the Earth's refrigerator because the sea ice helps cool the planet by reflecting the sun's radiation back into space," Wang said in a statement. "With less ice, the sun's warmth is instead absorbed by the open water, contributing to warmer temperatures in the water and the air."

The study was supported by the NOAA Climate Change Program Office, the Institute for the Study of the Ocean and Atmosphere and the U.S. Department of Energy.