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Press release

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New record minimum ice extent in the Arctic and it is still melting rapidly

A record minimum sea ice area in the Arctic is observed now in August 2012 and the ice is still melting rapidly. The ice area is recorded to be 3,26 million square kilometres on 26th August (see figure below), while the previous record sea ice area minimum was 3.64 million square kilometres, reported in 2007. Also a record minimum ice extent (i.e. the ice edge position, see lower figure) is observed at 4.64 million square kilometres, which is significantly less than previous minimum (4,73 million km²) reported on 19th September 2007. The observations are based on the information published at the Nansen Center's European ice information service www.arctic-roos.org.

The Nansen Centers hovercraft expedition now at 85 degrees North in the Arctic Ocean, has during the last days reported warm weather with temperatures between 6-8 degrees C. This indicates that still significant melting of the Arctic sea ice will occur this summer season.

In general, the summer sea ice has decreased by about 10 percent per decade since 1979, when good quality satellite data became available from the U.S. National Ice Data Center. There are often differences between calculations of sea ice extent publish by the various ice centers even when they are using the same satellite data. The reason for this is that the different formulas are used. This difference can be up to ± 0.3 to 0.5 million square kilometers, see www.arctic-roos.org, where a comparison is presented.

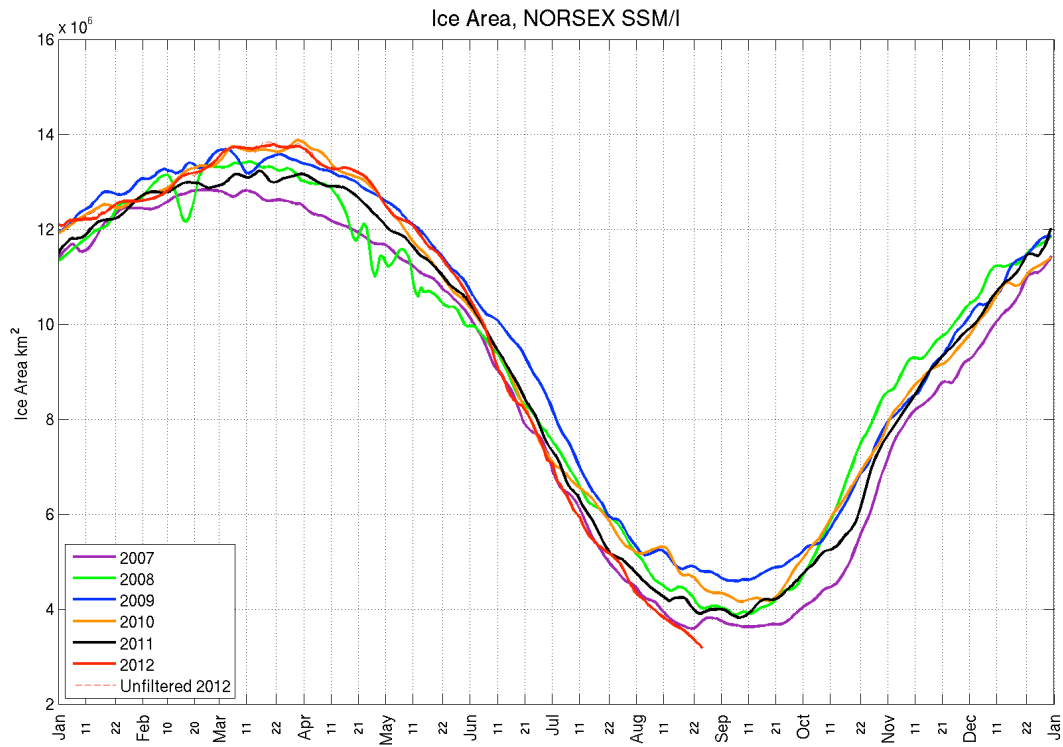
In general, the ice cover is decreasing and if CO₂ emissions continue the summer ice will gradually disappear. This is shown by global climate models, although with a large spread. Ola M. Johannessen published in 2008 a paper "Decreasing Arctic Sea Ice Mirrors Increasing CO₂ on decadal Time Scale" (attached). Here he found a correlation of 0.9 based on annual data between increasing CO₂ and decreasing ice extent in the Arctic. A similar analysis for every month of September since 1901 to 2011, where ice generally reaches its minimum (not including 2012), indicates that the summer ice will disappear when CO₂ concentration is 500 ppmv. Today it is 400 ppmv CO₂ concentration and increases by about 2.5 ppmv per year. If this increase continues in the years ahead, which of course we do not hope, the summer

ice will disappear in about 40 years. It should be noted that this is a rough estimate, and second, that it is not taken into account the dominant natural variations, which occur in the Arctic climate system.

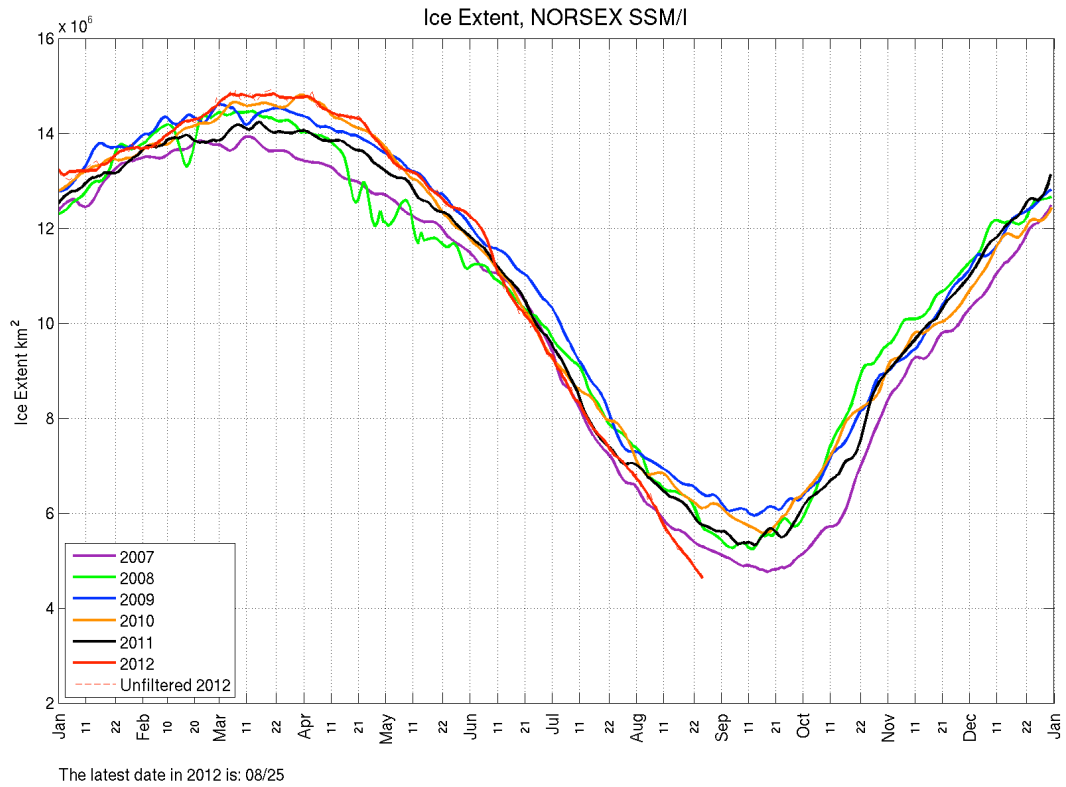
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The latest date in 2012 is: 08/25



Arctic sea ice area (upper) and ice extent (lower) during the years 2007 to 2012 per 25th August, 2012 as reported at the Nansen Center's European ice information service. Source: Nansen Center/ www.arctic-roos.org

Attached file; Ola M. Johannessen (2008): Decreasing Arctic sea ice mirrors the increasing CO_2 on decadal time scales. *Atmospheric and Oceanic Science Letters*, Vol.1, No. 1, November, 2008.