Arctic sea ice melt 'even faster'

By Richard Black
Environment correspondent, BBC News website

A widespread Arctic melt would have major impacts on wildlife

Arctic sea ice is melting even faster than last year, despite a cold winter.

Data from the US National Snow and Ice Data Center (NSIDC) shows that the year began with ice covering a larger area than at the beginning of 2007.

But now it is down to levels seen last June, at the beginning of a summer that broke records for sea ice loss.

Scientists on the project say much of the ice is so thin as to melt easily, and the Arctic seas may be ice-free in summer within five to 10 years.

"We had a bit more ice in the winter, although we were still way below the long-term average," said Julienne Stroeve from NSIDC in Boulder, Colorado.

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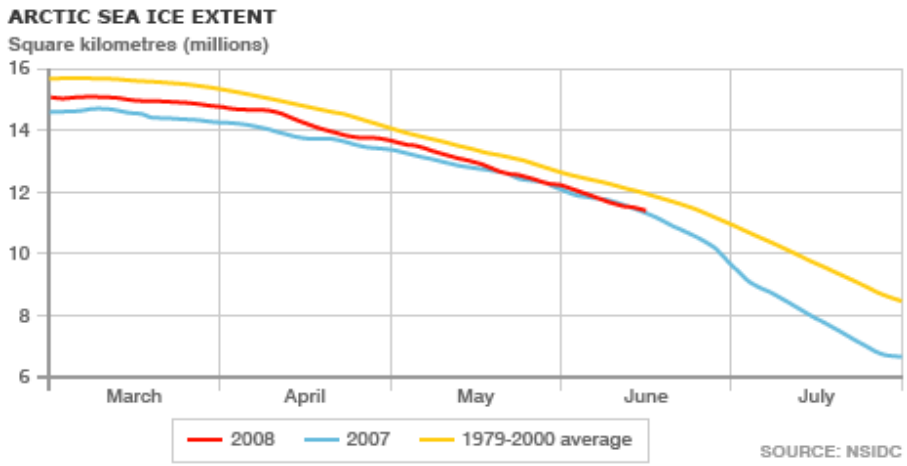
>
> Julienne Stroeve

"So we had a partial recovery. But the real issue is that most of the pack ice has become really thin, and if we have a regular summer now, it can just melt away," she told BBC News.

In March, Nasa reported that the area covered by sea ice was slightly larger than in 2007, but much of it consisted of thin floes that had formed during the previous winter. These are much less robust than thicker, less saline floes that have already survived for several years.



After a colder winter, ice has been melting even faster than last year

A few years ago, scientists were predicting that Arctic waters would be ice-free in summers by about 2080.

Then computer models started projecting earlier dates, around 2030 to 2050.

Then came the 2007 summer that saw Arctic sea ice shrink to the smallest extent ever recorded, down to 4.2 million sq km from 7.8 million sq km in 1980.

By the end of last year, one research group was forecasting ice-free summers by 2013.

"I think we're going to beat last year's record melt, though I'd love to be wrong," said Dr Stroeve.

"If we do, then I don't think 2013 is far off any more. If what we think is going to happen does happen, then it'll be within a decade anyway."

Rising tide

Countries surrounding the Arctic are eyeing the economic opportunities that melting ice might bring.

Canada and Russia are exploring sovereignty claims over tracts of Arctic seafloor, while just this week US President George Bush has urged more oil exploration in US waters - which could point the way to exploitation of reserves off the Alaskan coast.

But from a climate point of view, the melt could bring global impacts accelerating the rate of warming and of sea level rise.

"This is a positive feedback process," commented Dr Ian Willis, from the Scott Polar Research Institute in Cambridge.

"Sea ice has a higher albedo (reflectivity) than ocean water; so as the ice melts, the water absorbs more of the Sun's energy and warms up more, and that in turn warms the atmosphere more - including the atmosphere over the Greenland ice sheet."

Greenland is already losing ice to the oceans, contributing to the gradual rise in sea levels. The ice cap holds enough water to lift sea levels globally by about seven metres (22ft) if it all melted.

Natural climatic cycles such as the Arctic Oscillation play a role in year-to-year variations in ice cover. But Julienne Stroeve believes the sea ice is now so thin that there is little chance of the melting trend turning round.

"If the ice were as thick as it was in the 1970s, last year's conditions would have brought a dip in cover, but nothing exceptional.

"But now it's so thin that you would have to have an exceptional sequence of cold winters and cold summers in order for it to rebuild."

Richard.Black-INTERNET@bbc.co.uk
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