

# Arctic icecap safe from runaway melting: study

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Ice Fjord of Ilulissat in Greenland. There is no "tipping point" beyond which climate change will inevitably push the Arctic ice cap into terminal melt off, according to a study released Wednesday.

There is no "tipping point" beyond which climate change will inevitably push the Arctic ice cap into terminal melt off, according to a study released Wednesday.

The northern polar cap has shrunk between 15 and 20 percent over the last 30 years, unleashing concern that on current trends -- with regional temperature increases twice or triple the global average -- it could disappear entirely during the summer months by century's end.

One of the factors in this calculation is a so-called positive feedback, in which a reduced area of floating ice helps to stoke global warming.

As ice cover recedes decade by decade, more of the Sun's radiative force is absorbed by dark-blue sea rather than bounced back into space by reflective ice and snow.

But a new study published in the British science [journal Nature](#) shows that there is nothing inevitable about this process, and that it can be halted or even reversed.

"There is no 'tipping point' that would result in unstoppable loss of summer sea ice when greenhouse gas-driven warming rose above a certain threshold," said Steven Amstrup, a professor at the University of Washington and lead author of the study.

Up to now, many scientists worried that there was an as yet unidentified temperature threshold which, once passed, would doom the ice cap.

But the study, based on computer models, indicates that if annual emissions of [greenhouse gases](#) are substantially reduced over the next two decades, an initial phase of rapid ice loss would be followed by a period of stability and, eventually, partial recovery.

If so, that could mean a reprieve for polar bears, which use [floating ice](#) shelves as a staging areas for stalking ringed and bearded seals, their preferred food.

Already today, many of the majestic predators are teetering on the edge of starvation because the ice melts sooner in spring and forms later in autumn, shortening their hunting season.

The new research "offers a very promising, hopeful message," said co-author and University of Washington professor Cecilia Blitz.

"But it's also an incentive for mitigating [greenhouse gas](#) emissions," she

said in a statement.

In earlier research, Amstrup and colleagues had calculated that only a third of the world's estimated 22,000 polar bears would still be around by 2050, and that even these survivors could eventually disappear.

In 2008, Washington listed polar bears under the Endangered Species Act.

Earlier this week, more than 150 biologists and climate scientists called in an open letter on US President Barack Obama to step up action to save the Arctic's top predator.

The US Department of the Interior faces a court-imposed deadline next week on whether [polar bears](#) should continue to be classified merely as "threatened" or given maximum protection under US law as "endangered."

And a separate study also published in Nature Wednesday warned that melting ice was pushing Arctic mammals to breed with cousin species, in a trend that could be pushing the polar bear and other iconic animals towards extinction.

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