

Arctic warming three times faster than the planet, report warns

May 20 2021, by Pierre-Henry Deshayes



In less than half a century, from 1971 to 2019, the Arctic's average annual temperature rose by 3.1C, compared to 1C for the planet as a whole.

The Arctic has warmed three times more quickly than the planet as a whole, and faster than previously thought, a report warned on Thursday.

Arctic sea ice looks set to be an early victims of rising temperatures,

with each fraction of a degree making a big difference: the chance of it disappearing entirely in summer is 10 times greater if Earth warms by 2 degrees Celsius above pre-industrial levels compared to 1.5C, the goal set by the 2015 Paris Accord.

The alarming finding comes from the Arctic Monitoring and Assessment Programme (AMAP) in a report timed to coincide with a ministerial meeting this week of the Arctic Council in Reykjavik, which gathers countries bordering the region.

"The Arctic is a real hotspot for [climate warming](#)," said Jason Box, a glaciologist at the Geological Survey of Denmark and Greenland.

In less than half a century, from 1971 to 2019, the Arctic's average annual temperature rose by 3.1C, compared to 1C for the planet as a whole.

That's more than previously suspected. In a 2019 report on Earth's frozen spaces, the UN's Intergovernmental Panel on Climate Change (IPCC) concluded that Arctic surface air temperature has likely increased "by more than double the global average".

Forest fires

According to researchers, a turning point came in 2004 when the temperature in the Arctic surged for largely unexplained reason.

Since then, warming has continued at a rate 30 percent higher than in previous decades.

The region is now experiencing "more and longer lasting winter warm events," Box told AFP.

During the [summer months](#) from June to September, there is added heat from the ocean, which is increasingly free of ice and the insulation it provides.

And the warming is not coming to an end any time soon.

According to forecasts in the report, by the end of the century average temperatures in the Arctic are expected to rise 3.3 to 10 degrees above the average for the period 1985-2014.

The final figure depends on how rapidly humanity draws down greenhouse gas emissions.

Claiming the Arctic



Sources: Arctic Council/University of Durham/UN document

© AFP

According to researchers, a turning point came in 2004 when the temperature in

the Arctic surged for largely unexplained reason.

Warming has immediate consequences for the Arctic ecosystem, including changes in habitat, food habits and interactions between animals—including the iconic polar bear—and the migration of some species.

From Siberia to Alaska, [forest fires](#) have also become a problem.

"This is what 3C looks like, it's not just numbers, it's forests on fire," said Box.

"The impacts of wild land fires are not limited to public safety concerns, such as protecting life and property," said US researcher Michael Young, Arctic Council Wildland Fire Projects Coordinator.

"The smoke they produce also contains [carbon dioxide](#) and black carbon, which both contribute to [climate change](#)."

Global impact

The consequences are also dramatic for the four million people who live in the region, especially [indigenous peoples](#).

"Hunters in northwestern Greenland report that the period when travel by dog sleds on sea ice is possible has decreased from five to three months," said Sarah Trainor, director of the Alaska Center for Climate Assessment and Policy.

"Indigenous hunters and fishermen in Canada and Russia have reported thinner seals, decreased health of wildlife and a greater prevalence of

worms in fish and sea mammals," she added.

A warmer Arctic is also more humid, with rain replacing snow.

"Reindeer herders in Fennoscandia (Finland and Scandinavia) and Russia have experienced major losses in their herds due to extreme snowfall and rain-on-snow events," added Trainor, as layers of frozen rain prevent reindeer from reaching the lichen they eat.

"No one on Earth is immune to Arctic warming," the AMAP report said, noting its effects were felt far and wide.

The melting of hundreds of billions of tonnes of ice each year in Greenland leads to rising sea levels, which endanger the lives of people living thousands of kilometres away.

The receding ice has opened up economic opportunities—often to the dismay of environmental activists—including new fishing zones, new commercial shipping routes, and easier access to potential mineral and oil and gas resources.

However, notes Trainor, "the potential for expansion of these industries is tempered by efforts to limit [greenhouse gas emissions](#) and achieve goals established under the Paris Agreement."

© 2021 AFP

Citation: Arctic warming three times faster than the planet, report warns (2021, May 20) retrieved 16 October 2024 from <https://phys.org/news/2021-05-arctic-faster-planet.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.