

# Arctic amplification (Polar amplification)

By Lennart Kiil



Researchers take water samples from a melt pond on the sea ice in the Chukchi Sea in July 2011. The melt ponds are darker than the ice and absorb more sunlight.

Kathryn Hansen, NASA. Public domain. [Wikimedia Commons](#).

More pronounced [climate change](#) near the North Pole compared to the rest of the globe.

The Arctic region is more sensitive to global warming through [radiative forcing](#) caused by [greenhouse gases](#) than other regions in the world.

Temperatures in the Arctic region have been rising more than in the rest of the world. This is also an example that global warming is not uniformly expressed everywhere, in spite of the name.

The arctic amplification phenomena is explained primarily by a lowering of ice and snow [albedo](#) and a resulting [positive warming feedback](#). This leads to [arctic shrinkage](#), which in turn leads to [rising sea levels](#).

[General Circulation Models](#) predict Arctic amplification, and in the long run a general polar amplification. This means they predict both Arctic and Antarctic amplification in the future.

The current lack of amplification in the Antarctic has been explained with the fact that the sea around the Antarctic functions as a heat sink. An area that removes heat from the surface.

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