

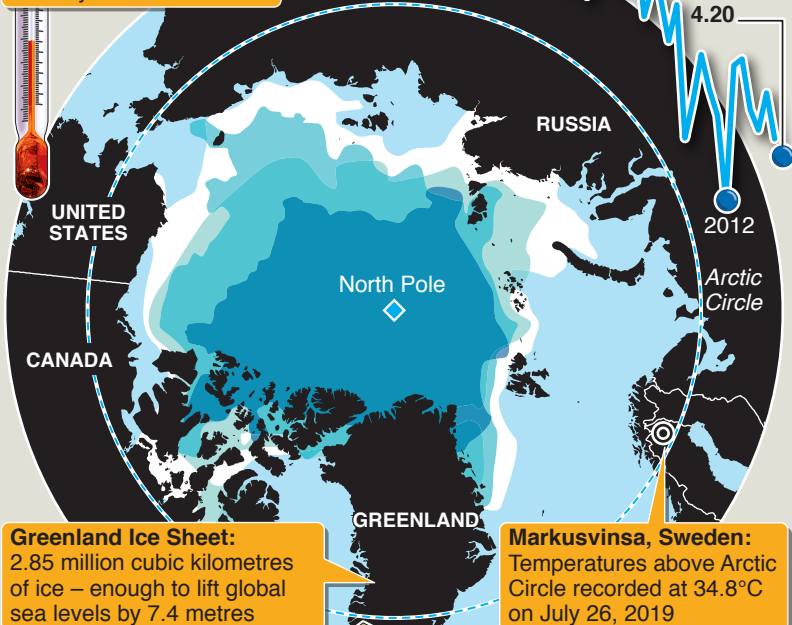
Arctic on front line of climate change

The Arctic is warming twice as fast as the rest of the planet, driven by melting sea ice and thawing of carbon-rich Arctic permafrost, according to the National Oceanic and Atmospheric Administration

Sea ice extent (annual minimum extent, million square km)



2000-16: Average Arctic surface temperature has risen by 3.5° Celsius

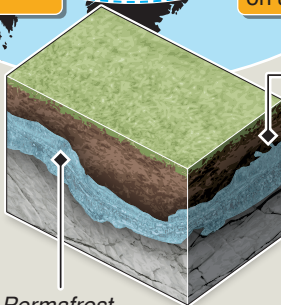


Greenland Ice Sheet:
2.85 million cubic kilometres of ice – enough to lift global sea levels by 7.4 metres

Markusvinsa, Sweden:
Temperatures above Arctic Circle recorded at 34.8°C on July 26, 2019

Permafrost: Layer of rock and soil containing estimated 1-1.5 trillion tonnes* of organic matter – dead plants and animals – that remains continuously frozen

Permafrost extends up to 450m below surface



Permafrost

Active layer, freezes and thaws each year

Permafrost thaws:
Bacteria in soil consume organic matter, releasing carbon dioxide and methane. Gases can speed up greenhouse effect