

Rapid Arctic Warming Is Accelerating Permafrost Collapse in Siberia, New Report Warns

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Permafrost currently covers about 65% of Russian territory, but is melting fast. **Lance Anderson / unsplash**

Siberia and other Northern Russian regions are becoming increasingly vulnerable to the impact of the climate crisis, which is accelerating exceptionally fast in the Arctic regions, the international Climate Crisis Advisory Group (CCAG) said in a new [report](#) on Thursday.

The Arctic is warming roughly three times faster than the planet as a whole, scientists warned in the report. Annual Arctic temperatures are now 3.5 degrees Celsius above the pre-industrial level, while Earth in general has warmed by 1.2 C. However, the present scale of weather disasters is much bigger than climate scientists had anticipated for this level of global warming.

Permafrost currently covers about 65% of Russian territory, but is melting fast due to the climate crisis. The Republic of Sakha and the Chukotka and Magadan regions are the most

vulnerable to permafrost collapse, according to the report.

“Scientists have been shocked that the warm weather conducive to permafrost thawing is occurring roughly 70 years ahead of model projections,” it said.

The report also warned that by 2100 the Arctic could have lost 89% of its permafrost.

Vast natural reserves of methane and other greenhouse gases are locked into the permafrost. Due to its rapid melting, more and more gases are being emitted into the atmosphere, accelerating the climate crisis.

When coupled with the melting of glacier and sea ice, this could push the Arctic over the tipping point beyond which it will become close to impossible to stop climate change from accelerating.

As permafrost melts, it releases chemicals and bacteria which have been frozen for millennia. Experts warned in the report that this could cause levels of toxic mercury in rivers to increase, and even revive smallpox and other illnesses that have been dormant for generations.

Melting permafrost can also seriously damage pipelines, roads, airports, and other vital infrastructure, the scientists warned. The nuclear power plant in Chukotka's Bilibino and several hydro dams around Magadan are under threat of collapse because they sit on permafrost.

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