

Rain on Greenland ice sheet signals climate change risk

August 23 2021



Credit: Pixabay/CC0 Public Domain

Rain fell at the highest point on Greenland's ice sheet—possibly for the first time—in an event Danish scientists on Monday said was most likely driven by climate change.

The rain was observed for several hours on August 14 at a measuring

post more than 3,000 metres (9,800 feet) up on the sheet, the US Snow and Ice Data Center reported.

For rain to fall, temperatures must be above or just slightly below zero degrees Centigrade, signalling the risk that rising temperatures pose to the world's second-largest [ice sheet](#) after Antarctica.

"This is an extreme event as it may never have happened before," Martin Stendel, a researcher at the Danish Meteorological Institute, told AFP.

"It's probable that this is a sign of global warming."

Temperatures have risen above freezing at the peak of the sheet only nine times in the past 2,000 years, he said.

Three of those events have been in the past 10 years—but on the previous two occasions, in 2012 and 2019, there was no rain, he said.

"We cannot prove whether it rained or not at the six occasions before but it's very unlikely, which makes the rainfall we observed even more remarkable," Stendel said.

The [rain](#) comes after a summer in which northern Greenland has experienced record-setting temperatures of more than 20 degrees.

This heat wave has seen the rate of melting of the ice sheet accelerate further.

Its retreat, which began several decades ago, began to speed up in 1990.

With a [surface area](#) more than three times that of France, the ice sheet covering Greenland locks up enough water to raise [global sea levels](#) by up to seven metres.

The melting is causing concern among scientists, as warming in the Arctic is faster than the [global average](#).

According to a European study published in January, the melting of the Greenland ice sheet is expected to contribute to the overall rise in sea levels by 10 to 18 centimetres by 2100, 60 percent faster than the previous estimate.

© 2021 AFP

Citation: Rain on Greenland ice sheet signals climate change risk (2021, August 23) retrieved 24 April 2024 from <https://phys.org/news/2021-08-greenland-ice-sheet-climate.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.