

Ancient Antarctic ice sheet collapse could happen again, triggering a new global flood

21 December 2018, by Doyle Rice, Usa Today



Credit: CC0 Public Domain

It's happened before, and it could happen again.

Tens of thousands of years ago, a giant [ice sheet](#) in Antarctic melted, raising sea levels by up to 30 feet around the world. This inundated huge swaths of what had been dry land. Scientists think it could happen again as the world heats up because of man-made [global warming](#), new research suggests.

Such a collapse would again cause seas to rise dramatically, which would lead to a global flood.

Researchers led by geologist Anders Carlson of Oregon State University said the ice [sheet](#) disappeared about 125,000 years ago under [climate conditions](#) that were similar to today's.

If future research confirms this finding, "the West Antarctic ice sheet might not need a huge nudge to budge," Jeremy Shakun, a paleoclimatologist at Boston College told *Science* magazine. That, in turn, means "the big uptick in [mass loss](#) observed

there in the past decade or two is perhaps the start of that process rather than a short-term blip."

And once the ancient ice sheet melt got started, things got out of hand rather quickly. Global ocean waters may have risen as fast as 8 feet per century, a blink of an eye in climatological terms.

To do their research, Carlson's team examined several marine sediment cores taken offshore of Antarctica. The cores are long cylinders of mud and silt that give clues about past changes in Earth's climate.

Obviously, climate change 125,000 years ago was natural, not human caused as it is today.

Scientists speculate that a slight change in Earth's orbit and [spin axis](#) created [warmer temperatures](#) in the Northern Hemisphere, which caused climate changes around the world, Nathaelle Bouttes at the National Centre for Atmospheric Science in the U.K. told Smithsonian magazine.

The research was announced earlier in December at a meeting of the American Geophysical Union in Washington, D.C.

Some of the process is well underway: Global warming has caused over 3 trillion tons of ice to melt from Antarctica in the past quarter-century and tripled ice loss there in the past decade, a study released in June said.

That total is equivalent to more than 2 quadrillion gallons of water added to the world's oceans, making Antarctica's melting ice sheets one of the largest contributors to rising sea levels. That amount of water is enough to fill more than a billion swimming pools and cover Texas to a depth of nearly 13 feet.

Overall, scientists say the melting ice in Antarctica is responsible for about one-third of all sea-level

rise around the world.

More information: Paul Voosen. Antarctic ice melt 125,000 years ago offers warning, *Science* (2018). DOI: [10.1126/science.362.6421.1339](https://doi.org/10.1126/science.362.6421.1339)

(c)2018 USA Today

Distributed by Tribune Content Agency, LLC.

APA citation: Ancient Antarctic ice sheet collapse could happen again, triggering a new global flood (2018, December 21) retrieved 21 November 2019 from <https://phys.org/news/2018-12-ancient-antarctic-ice-sheet-collapse.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.