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Study shows Greenland ice sheet melting faster

A new analysis of satellite data revealed that the melting of Greenland's ice sheet has increased dramatically in the past few years, U.S. scientists said on Thursday.

The loss of ice has been occurring about five times faster from Greenland's southeastern region in the past two years than in the previous year and a half, and much of the loss occurring primarily along the shoreline could potentially affect weather in Western Europe, according to the study.

These findings were published in the Aug. 10 advanced online edition of the journal Science.

If confirmed, the new finding will add to the body of evidence of increased global warming in recent years and would indicate that melting polar ice sheets are contributing to the rise in global sea levels, the researchers from the University of Texas at Austin noted.

Greenland is considered the second largest reservoir of fresh water on Earth with about 10 percent of the world's fresh water.

Melting of ice is expected to have an impact on sea levels, ocean circulation, and potentially the future of climates worldwide.

Using the Gravity Recovery and Climate Experiment (GRACE) satellite mission to collect data, the researchers found the Greenland ice sheet is disappearing at about 240 cubic km per year. The amount of fresh water could add 0.56 millimeters annually to a global increase in sea levels, higher than all previously published measurements.

The GRACE mission, funded by U.S. space agency NASA and the German Aerospace Center, includes two satellites that are sensitive to the gravitational pull of mass changes on Earth. The twin satellites can provide the most comprehensive monthly estimates of Greenland's ice-mass balance.

Further estimates showed that 69 percent, or about 164 cubic km, of the ice-mass loss in recent years came from eastern Greenland, and more than half of that eastern loss involved ice from the glacier complex in southeast Greenland.

"Our latest findings are the most complete measurement of ice mass loss for Greenland," said Byron Tapley, director of the university's Center for Space Research and senior author of the study.

"The sobering thing to see is that the whole process of glacial melting is stepping up much more rapidly than before," he added in a statement.

The rapid rise in meltwater along Greenland's eastern coast could add to other factors that weaken the counterclockwise flow of the North Atlantic Current, thus lowering the temperatures of water and wind that travels past the west coast of Ireland and Great Britain.

If that happens, warmer, southerly waters could be stalled from moving northward, resulting in chillier winters in parts of Western Europe, the researchers forecast.

Source: Xinhua

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