

Inland ice

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An ice sheet covering about 80 percent of the island of Greenland. The largest mass of ice in the Northern Hemisphere. Also called the Greenland Ice Sheet.

An ice sheet is a [glacier](#) that is larger than 50,000 km². Today only two ice sheets exist on Earth, the Greenland Ice Sheet and the Antarctic Ice Sheet. The Greenland Ice Sheet has a surface area of approximately 1.7 million km², and is up to 3.2 km thick. In comparison the Antarctic Ice Sheet covers almost 14 million km².

The inland ice is the last major remain of the large ice sheets, which covered big parts of the Northern Hemisphere during recent [ice ages](#).

The Inland Ice is thicker in the center than along its edges. Mass is constantly being added to the inland ice by falling snow, that is eventually compacted into ice. Every year snow equal to roughly 600 km³ of ice accumulates. But the addition of ice is balanced by the loss of ice through melting and break off (calving) at the edges.

Greenland has not always been covered by the inland ice. The island has also been covered by forests and grass. Evidence from sediments in the northern part of Greenland suggests that the island was without ice free about 2.4 million years ago. There is some uncertainty about which factors caused the transition from a largely ice-free Greenland to the ice-covered island of today. Possible explanations include changes in ocean currents or changes in the concentration of atmospheric [greenhouse gases](#).

The Inland Ice is a valuable source of information for scientists studying climate changes. By drilling [ice cores](#), the scientists can get samples of ice that is thousands of years old, which can reveal several things about past climates.

Increased rates of melting of the Inland Ice have been reported in recent years, and some fear that the melting is reaching a [tipping point](#) where continued melting is unstoppable. Should [global warming](#) cause all of the Inland Ice to melt, it would raise the world oceans by about 7 meters. Concerns have also been raised that the increased melting from the Inland Ice could disturb the flow of the [Gulf Stream](#).

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