



This is the print version of the [Skeptical Science](http://sks.to/greenland) article '[Greenland is gaining ice](http://sks.to/greenland)', which can be found at <http://sks.to/greenland>.

## Is Greenland gaining or losing ice?

### What The Science Says:

Greenland on the whole is losing ice, as confirmed by multiple satellite and on the ground field measurements.

### Climate Myth: Greenland is gaining ice

"[E]ven if it were true that Greenland's ice had been melting at 'new record' rates, after seven and a half years of global cooling global warming cannot be the cause. The true position in Greenland is to be found in Johannessen et al. (2005), where satellite altimetry established that the mean thickness of the entire Greenland ice sheet had increased at 2 inches per year - a total of almost 2 feet - in the 11 years 1993-2003." ([Christopher Monckton](#))

Confusion caused by anecdotes of structures being buried by accumulating snow on Greenland's ice sheet leads some skeptics to believe [Greenland is Gaining Ice](#). As always, the best way to tease out the truth here by following the research of scientists investigating Greenland's ice mass balance.

In general, the best available science tells us that Greenland is losing ice extensively (Figure 1) and that these losses have drastically increased since the year 2000.

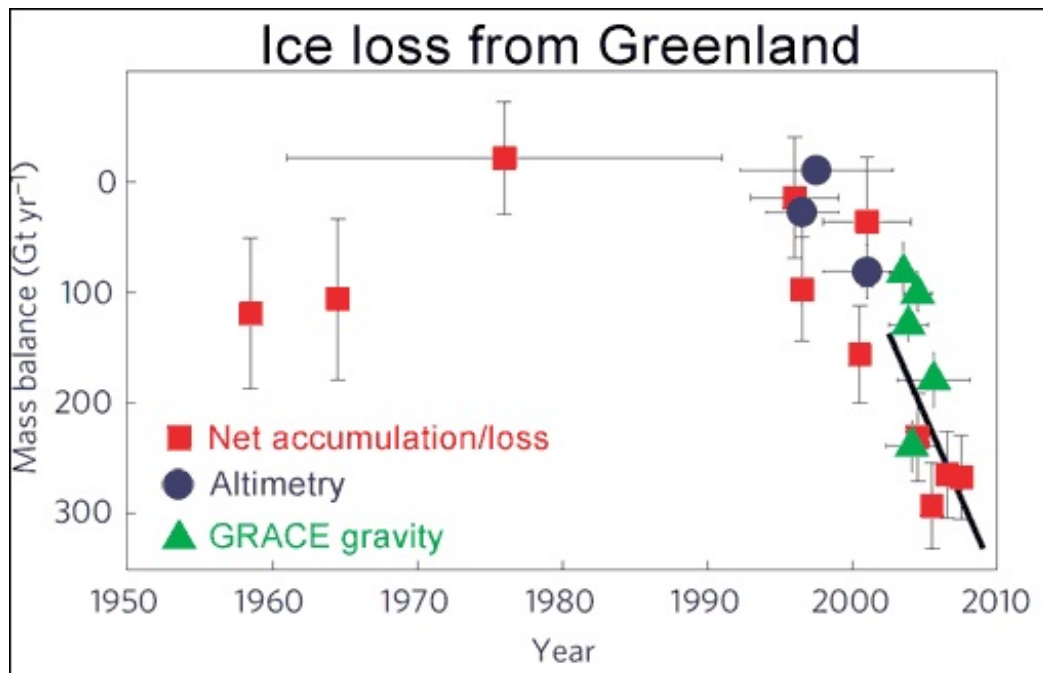


Figure 1: Estimated Greenland Ice Sheet mass balance changes since 1950 using three different methods ([Jiang 2010](#)). Mass Balance Measurement Techniques are discussed [here](#).

The evidence suggested by a multitude of different measurement techniques suggests that not only is Greenland losing ice but that these ice losses are accelerating at a rapid pace ([Velicogna 2009](#)). Further evidence suggests that although ice losses have up to this point primarily occurred in the South and Southwest portions of Greenland, these losses are now spreading to the Northwest sector of the ice sheet ([Khan et al 2010](#)).

Although there have been some gains at high altitudes, significant ice losses are occurring at low altitudes ([Wouters 2008](#)) along the coastline where glaciers are calving ice into the oceans far quicker than ice is being accumulated at the top of the ice sheet ([Rignot and Kanagaratnam 2006](#)).

In conclusion Greenland is losing ice extensively along its margins where fast flowing ice streams are pushing more ice into the ocean than is gained in the center of the ice sheet. For more information on how ice sheets lose mass, a more comprehensive discussion is available [here](#).

Basic rebuttal written by Robert way

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**Update July 2015:**

Here is a related lecture-video from [Denial101x - Making Sense of Climate Science Denial](#)



Skeptical Science explains the science of global warming and examines climate misinformation through the lens of peer-reviewed research. The website won the Australian Museum 2011 Eureka Prize for the Advancement of Climate Change Knowledge. Members of the Skeptical Science team have authored peer-reviewed papers, a [college textbook on climate change](#) and the book [Climate Change Denial: Heads in the Sand](#). Skeptical Science content has been used in university courses, textbooks, government reports on climate change, television documentaries and numerous books.



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