

Climate at a Glance: Greenland Ice Melt

Bullet-Point Summary:

- **Climate activists**, including government bureaucrats, **claim** the Greenland ice sheet is **melting six times faster than it was 30 years ago.**
- Thirty years ago, the Greenland ice sheet was barely melting at all. **“Six times” almost no ice loss remains almost no ice loss.**
- When recent ice loss is compared to the full Greenland ice sheet, the loss is so small that it is almost undetectable.
- Sea-level measurements contradict claims that Greenland ice loss threatens coastal flooding. NASA satellite instruments, with readings dating back to 1993, show global **sea level rising** at a pace of **merely 1.2 inches per decade**, which is **not significantly different than** the typical rate of sea-level rise since the **mid-1800s.**

Short Summary: NASA scientists and media pundits have said this about the Greenland and Antarctic ice sheets: *“The two regions have lost 6.4 trillion tons of ice in three decades; unabated, this rate of melting could cause flooding that affects hundreds of millions of people by 2100.”* However, that is far short of even 1 percent of Greenland’s ice mass. As shown in the right graph in Figure 1, below, the total ice loss each year is a nearly undetectable five one-thousandths of one percent (0.005 percent) of the Greenland ice mass.

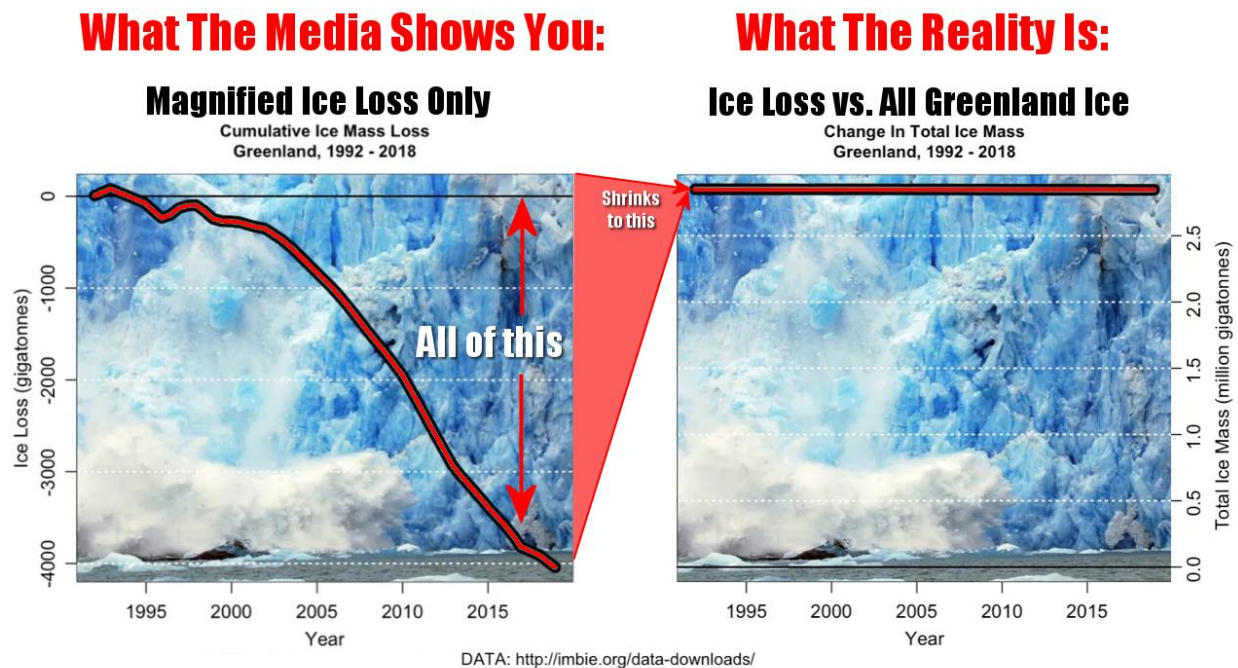


Figure 1: comparison of satellite data for Greenland ice mass loss. Cumulative ice mass loss on the left, and that same data compared to the total mass of ice on the right. Data source: <http://imbie.org>. Graphs originally by Willis Eschenbach, adapted and annotated by Anthony Watts.

Further reading:

1. Greenland, Antarctica Melting Six Times Faster Than in the 1990s source: NASA press release. Accessed 03/28/20 <https://www.nasa.gov/feature/jpl/greenland-antarctica-melting-six-times-faster-than-in-the-1990s>
2. Global sea level rise remains modest and relatively steady, at a pace of 1.2 inches per decade. Source: NASA satellite measurements as reported by the University of Colorado. Accessed November 3, 2019: <http://sealevel.colorado.edu>
3. NASA satellite instruments, with readings dating back to 1993, show global sea level rising at a pace of merely 1.2 inches per decade. “Sea Level Rise,” *Climate at a Glance*, accessed 4/2/20, <https://climateataglance.com/climate-at-a-glance-sea-level-rise/>
4. The data plotted in the graphs above is from the ice sheet mass balance inter-comparison exercise (IMBIE), a joint exercise by NASA and the European Space Agency. <http://imbie.org/about-the-project/>

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