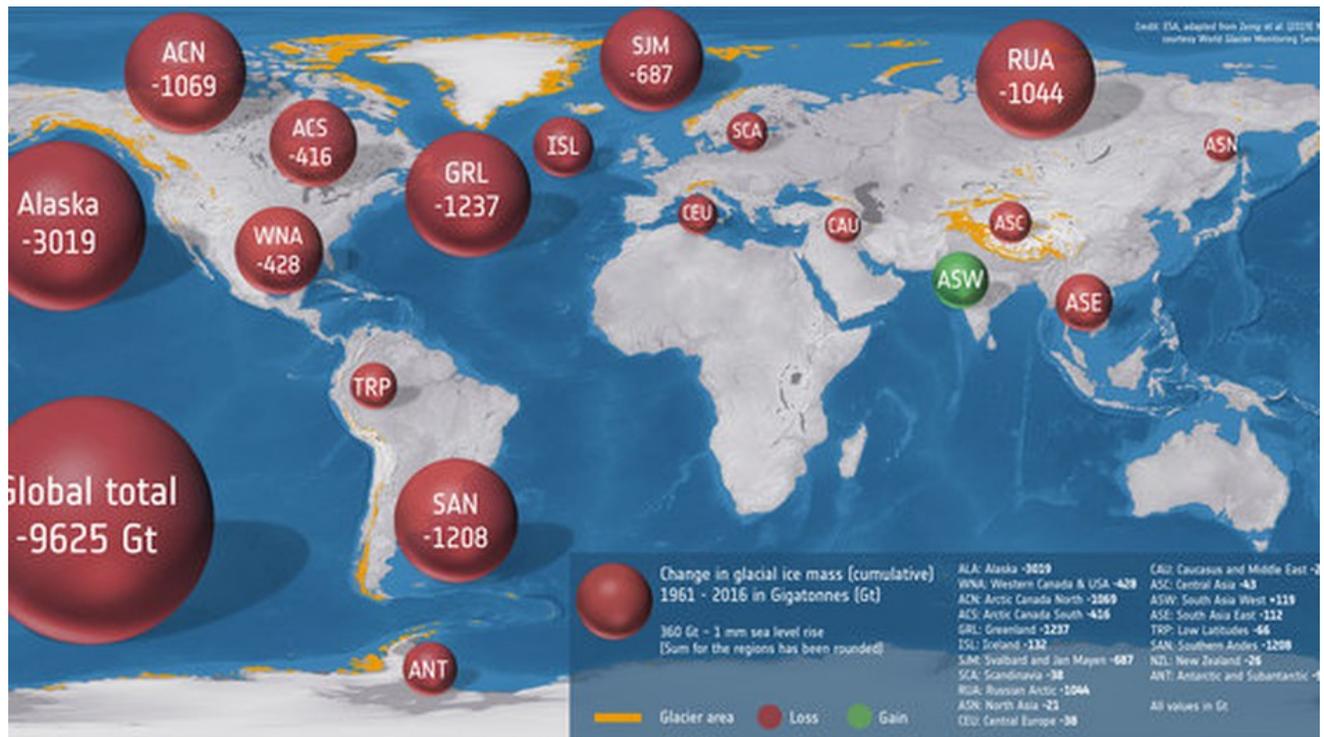


Earth's glaciers lost 9 trillion tons of ice. That's the weight of 27 billion 747s.

m mashable.com/article/glaciers-melting-climate-change

By Mark Kaufman Apr 08, 2019



Nine trillion metric tons.

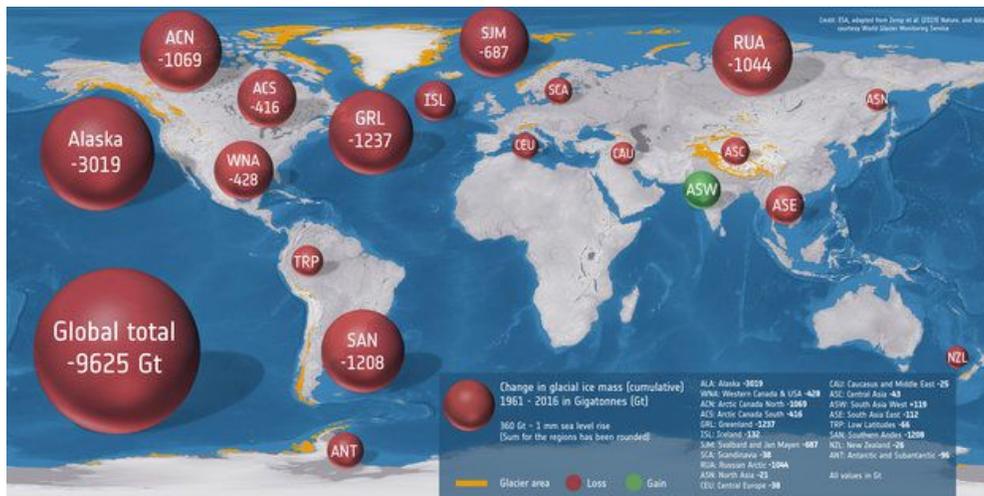
That's how much ice Earth's glaciers lost in the 55 years between 1961 and 2016. An international team of scientists used satellite and direct field observations to conclude that Earth's glaciers have melted such a profound sum of ice in the last half-century. They published their [report](#) Monday in the journal *Nature*.

If one were to assume an average weight of 735,000 pounds for a 747 airliner (not the colossal Alaskan bear), that comes out to around 27 billion 747s worth of ice lost over this period.

This grand figure also means the planet is now losing, on average, 335 billion metric tons of ice per year. (For reference, there are 2 trillion pounds of ice in just 1 billion tons.)

"In other words, every single year we are losing about three times the volume of all ice stored in the European Alps, and this accounts for around 30 percent of the current rate of sea-level rise," Michael Zemp, director of the World Glacier Monitoring Service at the University of Zurich and lead author of the research, said in a [statement](#).

The map below, developed by the European Space Agency, illustrates where this ice loss has occurred. Alaska leads the race with over 3019 gigatons lost in total, or 816 million 747s.



The world's total ice loss between 1961 and 2016.

Image: EUROPEAN SPACE AGENCY / ADAPTED FROM ZEMP ET AL. (2019) NATURE / DATA COURTESY OF WORLD GLACIER MONITORING SERVICE

The pronounced melting in Alaska is little surprise. The Arctic is the fastest warming region on Earth, warming two to three times faster than the rest of the globe.

Overall, the over 9 trillion metric tons of melted ice equates to a little over an inch of sea level rise, or 27 millimeters, over the 55-year period.

But, critically, it's not just melting glaciers that are driving sea level rise, which has raised sea levels by around 9 inches along portions of the East Coast in the last century. The ocean is absorbing vast quantities of heat, and is expanding. Specifically, the absorbent oceans soak up over 90 percent of the heat trapped by human-generated greenhouse gas emissions.

What's more, the pace of melt is expected to pick up as the planet continues on its accelerated warming trend — stoked by the highest levels of atmospheric carbon dioxide in millions of years.

Projections of sea level rise by century's end are between two and three feet, though NASA scientists admit this is almost certainly a "conservative estimate." In more extreme scenarios, the number could be as much as six feet by 2100.

There is only one region of the world, southwest Asia, that has gained some ice mass since the 1960s. But its neighbor, southeast Asia, lost a similar amount of ice, canceling these fleeting gains.

Overall, the picture is clear. Greenland is in hot water. Ice loss in the Antarctic is picking up steam. The vast Himalayan glaciers have a dire future, at best. And you don't need to be a scientist employing sophisticated satellite technology to see what's transpiring on Earth.

Animation showing how the distribution over Earth's surface of annual average temperature anomalies has been shifting due to global warming since 1850. [#GlobalWarming #ClimateChange pic.twitter.com/HNUmJaZS2l](#)

— Robert Rohde (@RARohde) [March 29, 2019](#)

Alaska's famous Mendenhall Glacier is vanishing in front of the public's eyes. In 1850, there were an estimated 150 sizable glaciers in what is now Glacier National Park. Today, there are 26 glaciers large enough to be counted.

The reason for such wide-scale planetary change is not due to the whims of weather, natural variation, volcanoes, or other factors climate scientists have considered for decades.

"We know it's caused by global warming and human emissions of these greenhouse gases," NASA oceanographer Josh Willis, who has been watching Greenland melt into the sea, told Mashable. "The basic physics of the warming planet have been known for over a century."