Polar glaciers are melting and have lost trillions of tons of ice

Report in *Washington Post*, Sept 17, 2026

Ice from Greenland and from Antarctica is flowing faster into the ocean, a new study shows, causing sea levels to rise. This leaves millions of humans immediately threatened by rising ocean levels, with hundreds of millions more threatened in the coming decades.

In a fjord in western Greenland, there is a glacier that flows so fast it generates some 41 billion metric tons of icebergs every year. Day after day, building-size blocks of blue-white ice calve into the ocean and drift like a fleet of frozen ships through the fjord's still waters. Each additional berg causes sea levels to rise ever so slightly, like an ice cube being added to a glass.

But this glacier, known to scientists as Jakobshavn, is only the fastest example of a phenomenon that is unfolding at both poles — and accelerating every year.

Icebergs calfed from the Jakobshavn Glacier (aka Sermeq Kujalleq) stranded near the mouth of the Ilulissat Icefjord, Greenland in May 2023 (photo by Bonnie Jo Mount, Washington Post)

A study published Wednesday, September 16 in the journal *Scientific Data* finds that Greenland and Antarctica's glaciers have lost 11.3 trillion metric tons of ice over the past half-century, enough to fill roughly 4.5 billion Olympic-size swimming pools.

All that meltwater has caused global sea levels to rise by more than 3 centimeters in the past 47 years, the researchers said. That number may seem small, but it's enough to put an additional 6

million to 9 million people at risk of flooding and coastal erosion, according to geoscientist Andrew Shepherd, who founded the international collaboration that produced the study.

The analysis, which is based on satellite records going back as far as 1972, provides the most complete picture yet of declining polar glaciers, according to the study's authors. It indicates most of the problem comes not from simple melting on the surface of the ice sheets but the accelerating flows of glaciers like Jakobshavn.

"[This] tells us the long-term trend is being driven by the dynamic response of the ice sheets to a warming ocean," the study's lead author, Northumbria University ice scientist Inès Otosaka, said in a statement.

The oceans absorb the vast majority of the heat created by humanity's greenhouse gas pollution. Global sea surface temperatures are thought to be higher now than at any point in the past 11,000 years. When glaciers that end in the ocean, like Jakobshavn, are exposed to this warmer water, their ice starts to thin and break. As the front of the glacier is destabilized, it becomes less able to hold back all the ice behind it, and the flow accelerates.

Other studies also indicate that higher temperatures enable more meltwater to seep down to the bottom of an ice sheet, where it acts as a lubricant and allows the ice to slide faster over rock.

The accelerated ice loss is worrying, scientists say, because melt from Greenland and Antarctica is expected to become the dominant driver of surging sea levels in the coming decades. According to NASA, the two poles are expected to cause three to six feet of ocean rise by 2100 — though the total amount depends on whether humanity takes action to halt planetary warming.