

MEDIA ADVISORY
International Cryosphere
Climate Initiative

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**Two Sides of the Same Ice Cube:
Latest Tipping Points Research Shows Thresholds for Ice Sheets and Glaciers
Well Below the 1.5°C Paris Limit**

Emissions reductions even before more urgent than we thought, scientists tell UN negotiators

WHEN: Tuesday, June 17, 16:30 CET / 10:30 EDT (GMT+2)

WHERE: Press Conference Room, WCC Bonn and Online:

Livestream: <https://unfccc.int/event/icci-two-sides-of-the-same-ice-cube-parallel-new-papers-on-ice-sheets-and-glaciers-point-to-tipping>

BONN, GERMANY: Major tipping points for Earth's ice sheets and mountain glaciers can occur at temperatures well below 1.5°C, say scientists briefing UN climate negotiators here on Tuesday.

Lead authors of parallel keystone papers -- one on ice sheets, the second on glaciers -- urge governments to adopt far more ambitious climate commitments by COP30 to prevent the worst impacts.

"Historical records show that even current warming levels at 1.2°C, if sustained, will likely lead to several meters of sea-level rise over coming centuries," says Dr. Chris Stokes, who led several IPCC scientists evaluating current evidence on polar ice sheets. "This will result in extensive loss and damage to coastlines, making adaptation not just challenging, but impossible."

Earth's glaciers face an equally dire fate, with four regions - the European Alps, Rockies of the Western U.S. and Canada, Iceland, and Scandinavia - committed to losing at least half their ice at or below sustained 1°C. These same regions lose nearly all ice at 2°C.

Dr. Harry Zekollari, who co-led an author team of more than 20 glacier scientists, notes that only 24% of present-day glacier mass will remain if the world warms to 2.7°C, the trajectory set by current climate policies. In contrast, limiting warming to 1.5°C would preserve 54% of global glacier ice, with 10-25% in even the most sensitive regions.

"Staying close to 1.5°C preserves at least some glacier ice nearly everywhere, with 40-45% in the Himalayas and Caucuses, stressing the growing urgency of the 1.5°C temperature goal and rapid decarbonization to achieve it," says Zekollari.

Limiting temperature rise to 1.5°C will however not halt sea-level rise for Greenland and Antarctica: ice loss would continue for centuries, though at a far slower pace than our current 2.7°C trajectory. Even the current global average of 1.2°C increase could lead to irreversible collapse of both ice sheets, especially in West Antarctica, a development some scientists believe is already underway.

Slowing sea-level rise from ice sheets to a manageable level now is thought to require a long-term temperature goal close to 1°C or possibly lower. Currently, around 230 million people live within just 1 meter of sea level and 1 billion within 10 meters; melting ice represents an existential threat to those communities as well as several low-lying nations.

Both scientists urge strengthened climate commitments, or Nationally Determined Contributions (NDCs), at COP30 in Brazil this fall, noting that ill-advised "geo-engineering" schemes, like shooting sulfate pollution into the atmosphere to supposedly cool the planet, might well make the situation worse. "Emissions reductions are a sure-fire way to slow and halt warming," concludes Zekollari. Stokes adds, "Given the limited time available, the only realistic and effective approach remains rapid and sustained decarbonization to net zero."

ENDS

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Links to Papers:

- Warming of +1.5 °C is too high for polar ice sheets: *Comms Earth & Enviro*, 20 May 2025
<https://www.nature.com/articles/s43247-025-02299-w>
- Glacier preservation doubled by limiting warming to 1.5°C versus 2.7°C: *Science*, 29 May 2025
<https://www.science.org/doi/10.1126/science.adu4675>