

Greenland extracts from Sept. 2019 IPCC Cryosphere Report

The largest ice bodies on Earth are the Greenland and Antarctic ice sheets. Marine-based sections of ice sheets (e.g., West Antarctic Ice Sheet) sit upon bedrock that largely lies below sea level and are in contact with ocean heat, making them **vulnerable to rapid and irreversible ice loss**.

From Summary For Policy makers

A3. Global mean sea level (GMSL) is rising, with acceleration in recent decades due to increasing rates of ice loss from the Greenland and Antarctic ice sheets, as well as continued glacier mass loss and ocean thermal expansion. Increases in tropical cyclone winds and rainfall, and increases in extreme waves, combined with relative sea level rise, exacerbate extreme sea level events and coastal hazards

A3.2 Sea-level rise has accelerated due to the combined increased ice loss from the Greenland and Antarctic ice sheets

. Mass loss from the Antarctic ice sheet over the period 2007–2016 tripled relative to 1997–2006. For Greenland, mass loss doubled over the same period

SPM.B PROJECTED CHANGES AND RISKS

B1. Global-scale glacier mass loss, permafrost thaw, and decline in snow cover and Arctic sea ice extent are projected to continue in the near-term (2031–2050) due to surface air temperature increases, with unavoidable consequences for river runoff and local hazards. The Greenland and Antarctic Ice Sheets are projected to lose mass at an increasing rate throughout the 21st century and beyond

B1.2 The Greenland Ice Sheet is currently contributing more to sea-level rise than the Antarctic Ice Sheet, but Antarctica could become a larger contributor by the end of the 21st century as a consequence of rapid retreat. Beyond 2100, increasing divergence between Greenland and Antarctica's relative contributions to GMSL rise under RCP8.5 has important consequences for the pace of relative sea-level rise in the Northern Hemisphere.