

# Scientists call for greater study of glacier geoengineering options

Report says serious research needed into risks and benefits as melting could cause devastating sea level rise

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Wed 24 Jul 2024 06.00 BST



The melting of the Thwaites glacier and others could lead to sea level rises of as much as a metre by 2100. Photograph: US National Science Foundation/US Antarctic Program/PA

We need to seriously consider geoengineering projects to save our glaciers or face catastrophic sea level rise, scientists say in a [report](#).

Antarctica and Greenland's ice sheets are melting fast and even if we manage to reduce carbon emissions and limit global heating to 2C, it is not clear if that will be enough to prevent ice sheet collapse. But geoengineering glaciers may be a way to buy us vital time, the authors of the report argue.

Without intervention we will face sea level rises of as much as [a metre by 2100](#), obliterating low-lying cities and displacing millions of people. Much of that sea level rise will come from the melting of just a handful of glaciers, such as Thwaites and Pine Island in the Amundsen Sea.

The scientists suggest fixing curtains around the toes of these glaciers (to protect them from the relatively warm water lapping at their base) or drilling holes through the glaciers to drain the ice sheet streams could significantly slow the melt.

The report, which emerged from a town hall meeting at the European Geosciences Union conference in April 2024, recognises that cutting carbon emissions must remain the priority but calls for serious research into glacier geoengineering now, to assess the risks and benefits and to avoid panicked decisions at a later date.