

What is Doomsday Glacier?

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About Doomsday Glacier

- Thwaites Glacier, also known as the “Doomsday Glacier,” is located in the remote Amundsen Sea in West Antarctica.
- It’s a wide and fast-flowing glacier, roughly the size of Florida or Great Britain, and it has been a significant focus of scientific study due to its sensitivity to climate change.
- It is one of the most vulnerable and important glaciers in the world in terms of future global sea-level rise.
- Satellite measurements have shown that the glacier is losing an enormous amount of ice each year, nearly 50 billion tons annually, contributing to rising global sea levels. The glacier already contributes 4% of global sea level rise.
- If the entire Thwaites Glacier were to melt, it could raise the world’s oceans by about 65 centimeters (over 2 feet).
- It also acts as a buffer, holding back neighboring glaciers that contain around three meters of potential sea level rise.
- A critical concern is that much of Thwaites sits on land that is below sea level, in a configuration known as “marine-based.”

- This situation means that as the glacier's grounding line – the point where the glacier's ice lifts off the land and starts floating on the sea – retreats inland, it can pass over deeper and deeper valleys.
 - This process allows more and more ice to discharge into the sea, which might accelerate the glacier's melt in a phenomenon known as "marine ice sheet instability."
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Q1) What is a Glacier?

Glaciers are massive bodies of slowly moving ice. Glaciers form on land, and they are made up of fallen snow that gets compressed into ice over many centuries. They move slowly downward from the pull of gravity. Most of the world's glaciers exist in the polar regions, in areas like Greenland, the Canadian Arctic, and Antarctica.

Source: [Antarctica's 'Doomsday Glacier' has been losing ice since 1940s, and El Nino is to blame: Study](#)

Source: <https://vajiramandravi.com/current-affairs/doomsday-glacier/>

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