



A-76: World's Largest Iceberg

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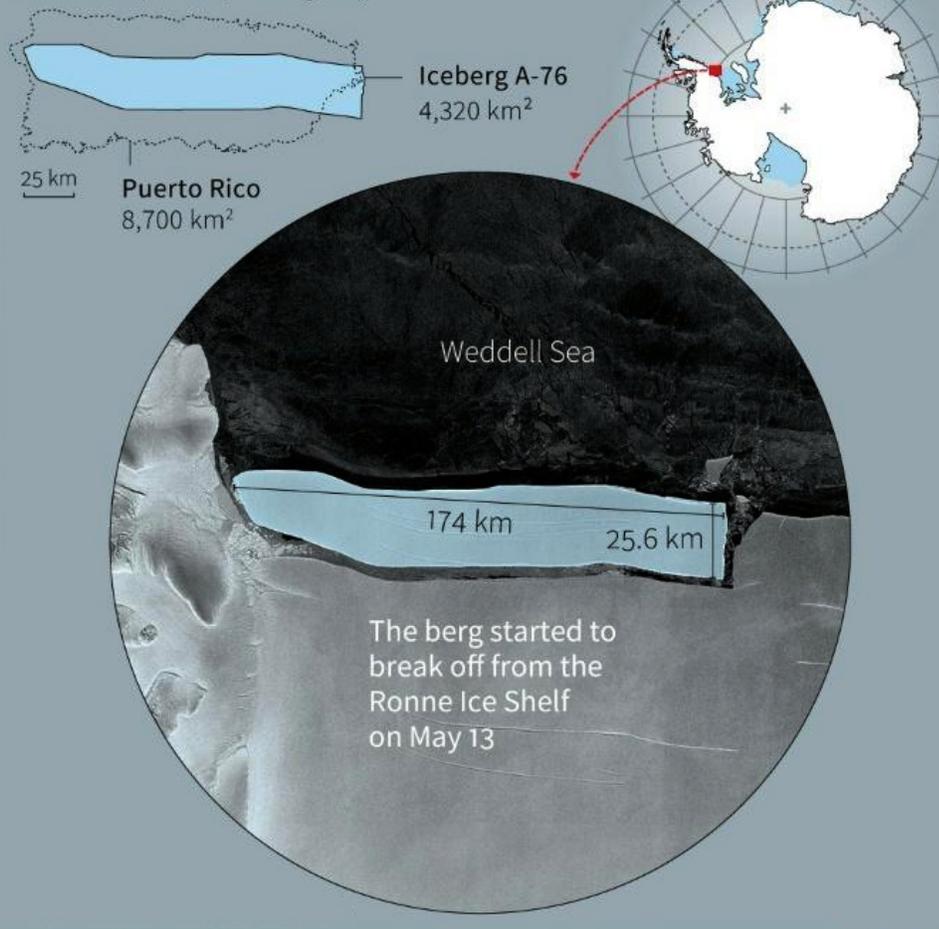
Why in News

An enormous iceberg 'A-76' has calved from the western side of the Ronne Ice Shelf, lying in the Weddell Sea, in Antarctica.

It measures around 4320 sq km in size – currently making it the largest berg in the world.

Giant iceberg breaks off Antarctica

"Currently the largest berg in the world", according to the European Space Agency



Key Points

- **About A-76:**
 - The **newly calved berg 'A-76'** was spotted in recent satellite images captured by the **Copernicus Sentinel-1 mission**.
Sentinel-1 is one of the missions of the European Space Agency (ESA) under Copernicus initiative (an earth observation programme).
 - It has **surpassed the now second-place A-23A**, about 3,380 sq km in size and also floating in the **Weddell Sea**.

- **Iceberg:**

- An iceberg is **ice that broke off from glaciers or shelf ice** and is floating in open water.
- Icebergs **travel with ocean currents** and either get caught up in shallow waters or ground themselves.
- The **US National Ice Center (USNIC)** is the **only organisation** that names and tracks Antarctic Icebergs.

Icebergs are named according to the **Antarctic quadrant** in which they are spotted.

- **Ice Shelves:**

- An ice shelf is a **floating extension of land ice**. The Antarctic continent is surrounded by ice shelves.
- The **Ronne Ice Shelf** on the flank of the Antarctic Peninsula is **one of the largest of several enormous floating sheets of ice** that connect to the **continent's landmass and extend out into the surrounding seas**.

- **Iceberg Calving:**

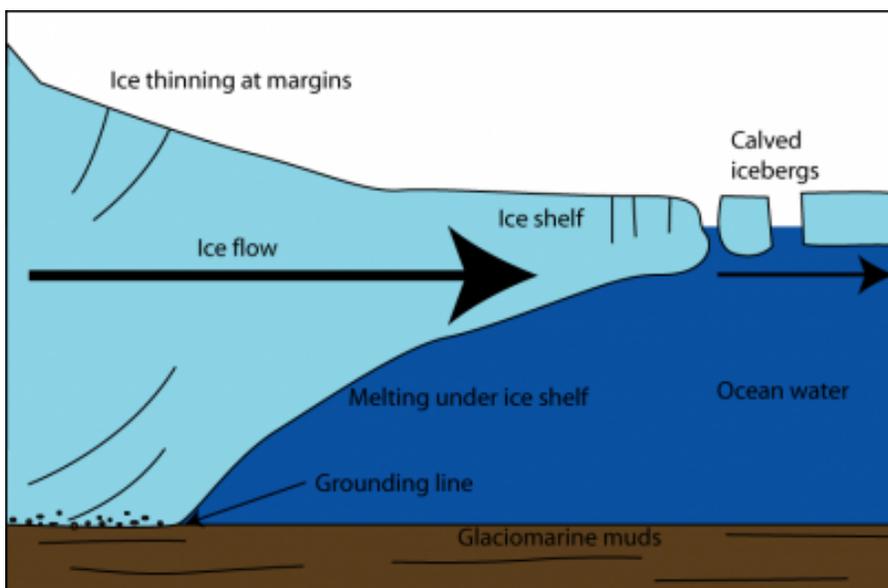
- **Meaning:**

- **Calving** is the **glaciological term for the mechanical loss** (or simply, breaking off) **of ice** from a glacier margin.
- Calving is most common when a glacier flows into water (i.e. lakes or the ocean) but can also occur on dry land, where it is known as **dry calving**.

- **Recent Cases of Calving:**

Up to the end of the 20th century, the **Larsen Ice Shelf** (on the West Antarctic Peninsula) had been stable for more than 10,000 years.

- In 1995, however, a huge chunk broke off, followed by another in 2002.
- This was followed by the **breakup of the nearby Wilkins Ice Shelf in 2008 and 2009, and A68a in 2017**.



Concerns:

- Periodic calving off of large chunks of those shelves is part of a **natural cycle**, but the process has been **accelerated by climate change**.
- **Average sea levels** have risen about **nine inches since 1880**, and about a **quarter of that increase** comes from **ice melting in the Greenland and Antarctica ice sheets**, along with land-based glaciers elsewhere.
- According to a recent study, **more ambitious national goals** to cut **greenhouse gas emissions** and **slow down climate change** set recently are **not enough to stop sea levels from rising**.

In fact, melting glaciers and ice sheets will raise sea levels twice as fast as they would if countries fulfilled their earlier pledges under the **Paris Agreement**.

Source: TH