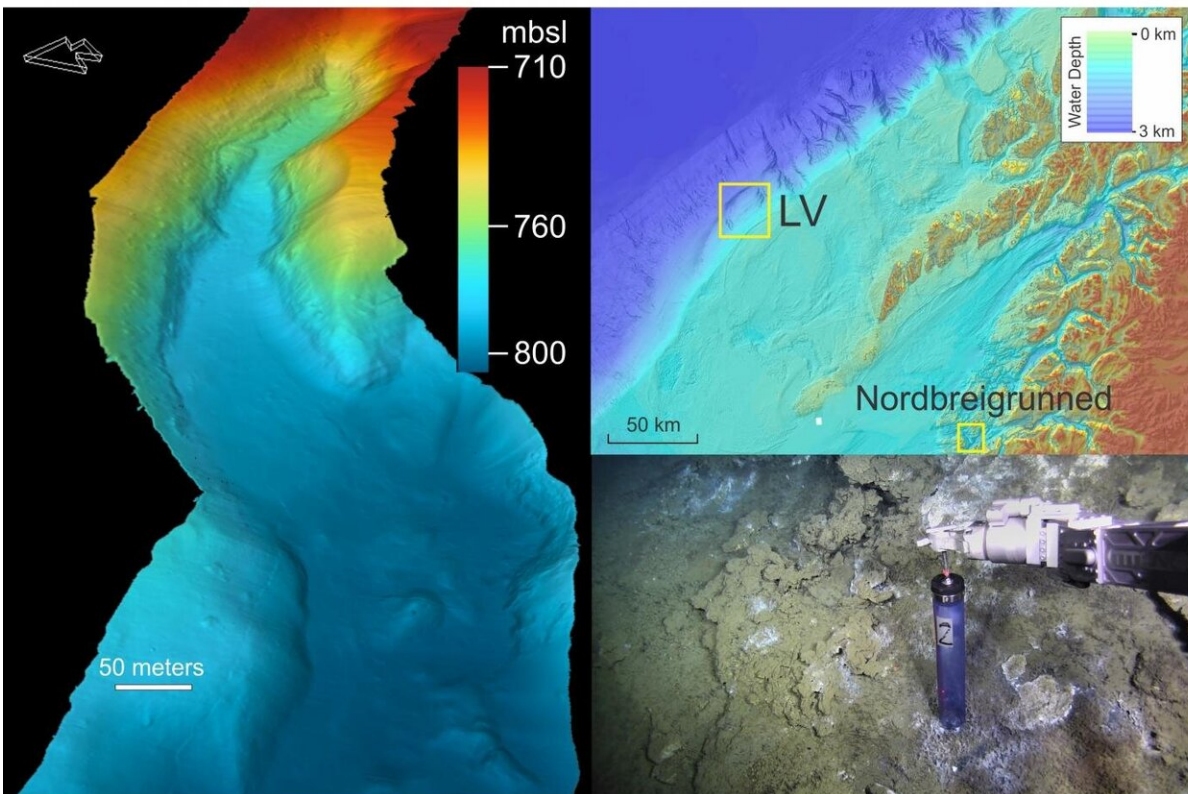


# Fresh water found in the Norwegian Sea

August 28 2019, by Gudmund Løvø



Scientists have detected fresh water in two subsea canyons near Lofoten archipelago. Credit: NORCRUST/CAGE

When we the found fresh water leaking from the seabed, we were very surprised," explains scientist and marine geologist Wei-Li Hong at the Geological Survey of Norway (NGU).

A remote-controlled vehicle, deployed from research vessel G.O. Sars, collected and measured the water during an expedition in 2017. The leakage likely originated from a large pocket of [fresh water](#), otherwise known as an aquifer, hidden beneath the sediment of the seabed.

## **Remnants of the last Ice Age**

"Fisherman in Nordland county have told us that they also found fresh water in the sea, so pure that it could even be used for coffee. This was in Nordbreigrunnen, a few kilometers outside the town of Meløy," Hong claims.

This phenomenon probably began during the last Ice Age. The thick ice caps that enveloped Norway pushed down on the crust of the Earth with tremendous force, squeezing large amounts of meltwater down through cracks in the seabed.

"This is a geological process that began millions of years ago when the water became trapped under the sediment. Only now is it finding its way through the cracks and faults again," Hong says.

The water was found around a kilometer below the seabed, but the aquifer itself could be deeper, and scientists at NGU are unsure how much fresh water remains.

## **Similar conditions found in the United States**

Scientists from Columbia University in New York and the Woods Hole Oceanographic Institution in Massachusetts recently found fresh water in

the Atlantic Ocean as well, along the east coast of the United States.

"It's the exact same phenomenon that we have here in Norway," comments NGU project manager and marine geologist Jochen Knies.

The Atlantic Ocean aquifer extends along the coast from the southern tip of New Jersey to the northern end of Massachusetts. According to CNN, researchers estimated that it contains enough water to fill 1.1 billion swimming pools. This makes it the largest underwater freshwater [aquifer](#) found on Earth.

## A possible resource

The findings in Norway and the US suggest that there may be other such aquifers elsewhere in the world.

"Such large pockets of fresh water could be a potential resource in areas with no drinking [water](#) on land," Knies points out.

**More information:** Wei-Li Hong et al, Discharge of Meteoric Water in the Eastern Norwegian Sea since the Last Glacial Period, *Geophysical Research Letters* (2019). [DOI: 10.1029/2019GL084237](https://doi.org/10.1029/2019GL084237)

Provided by CAGE

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