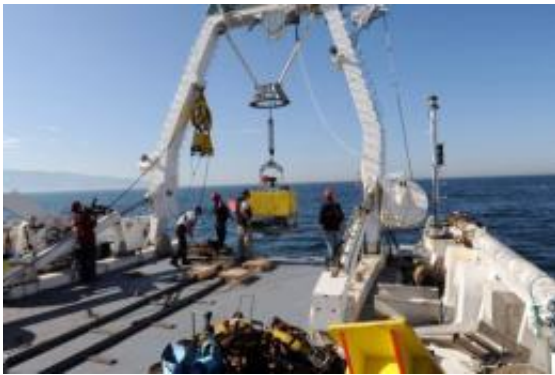


# Underwater gas may hold clues on Turkey quake risk

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A French research team prepares to put in water the robot BOB (Bubbles OBservatory module) in the Marmara sea, south of Istanbul in November. Natural gas that lies under Turkey's Marmara Sea close to Istanbul could provide advance warning of an earthquake experts believe will hit the country's largest city, scientists have said.

Natural gas that lies under Turkey's Marmara Sea close to Istanbul could provide advance warning of an earthquake experts believe will hit the country's largest city, scientists said on Tuesday.

Researchers from France and Turkey scanned the Marmara's [seabed](#) over six weeks using a robotic sonar device, similar to the kind of equipment used to detect shoals of fish.

Their mission was to study the link between gas bubble expulsion and

earthquakes along the North Anatolia fault, which lies some 20 kilometres (12 miles) to the south of Istanbul, the country's biggest city with 15 million people.

Using the underwater robot, they found two points where natural gas was coming through the fault and believe by looking out for changes in these gas flows, earthquakes could be detected earlier.

"We realised that the ([gas](#)) reservoirs... leak continually at two points (along the North Anatolia fault), one south of Istanbul and the other further west," said Louis Geli, a geophysicist with French Research Institute for Exploitation of the Sea.

Naci Gorur, a seismologist from Istanbul Technical University, called for monitoring stations to be set up.

"By installing observation points to monitor the changes to the fluids coming through the fault, it will be perhaps possible to detect early signs of an [earthquake](#)," said Gorur.

Geli said experts predict another earthquake to hit the area shortly and called on Turkish authorities to set up two underwater observatories and a submarine research centre.

He estimated the projects would cost between five and eight million euros (seven to 11 million dollars).

The North Anatolia fault's eastern strand, the Izmit fault, ruptured in 1999 in two huge quakes that killed about 20,000 people in Turkey's densely-populated northwest.

Its western strand, the Ganos fault, was responsible for a big quake in 1912.

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