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## News

### Acidic seas threaten coral reefs

by Mico Tatalovic

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LONDON: A volcanic crater that recently emerged in the Mediterranean Sea has made it possible to experiment on how corals will be affected as the oceans become more acidic from carbon dioxide.

An Italian group will present their preliminary findings in Wageningen, Netherlands at the "Reefs in a Changing Environment" symposium (13-17 December) organised by the International Society for Reef Studies.

Preliminary results show that corals exposed to lower pH levels suffer higher mortality than corals at current pH levels. Seawater worldwide is predicted to increase in acidity (decrease in pH) due to carbon dioxide emissions, which dissolve in water and cause acidity to rise.

#### A volcanic crater near Sicily

Erik Caroselli, a marine biologist at the University of Bologna, Italy, said this is the first time such an experiment has been possible in the wild, although similar findings have been reported in laboratory experiments.

The team from the University of Bologna, headed by Stefano Goffredo, set up experimental plots of three species of Mediterranean corals, at different distances from a natural source of carbon dioxide - a volcanic crater in the Tyrrhenian sea near Sicily. pH levels in the area range from 8.2 (current, normal levels) to 7.9 within the actual crater, which is around 30 meters in diameter.

"Observational studies of biodiversity have shown that the closer you get to such carbon dioxide sources in the sea, the fewer corals and calcifying organisms (such as shells and sea urchins) you see," he said.

#### Outside the lab, for the first time

"But no one has ever done an experiment to test this in the wild, mainly because it is difficult to exclude the confounding effects of acidity, temperature, and the presence of other potentially toxic gases."



Aerial photo of the area near Panarea Island in the Tyrrhenian Sea when the crater formed in 2002. One of the signs of the volcanic activity was water discoloration.

Credit: INGV

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