

# Haiti earthquake risk 'not over'

**Scientists say fault system still experiencing significant stress**  
**By Andrea Thompson**



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The earthquake that devastated Haiti in January increased stresses on nearby faults, potentially increasing the likelihood of another major temblor in the islands, scientists have found.

Jian Lin, a senior scientist at the Woods Hole Oceanographic Institution in Massachusetts, was studying a fault system on the island of Hispaniola (home to both Haiti in the west and the Dominican Republic in the east), when the 7.0-magnitude **earthquake** that destroyed much of Port-au-Prince struck on Jan. 12.

Lin and his colleagues, who had been measuring the stresses on **fault systems** in the area, were well aware of the potential for a major earthquake in Haiti.

"For us, the risk of earthquakes in this region is not really a surprise," Lin said.

The fault system that runs through Hispaniola and other parts of the Caribbean is bounded by two tectonic plates (the Caribbean and North American plates), which slowly slide past one another as they move across the Earth's surface. But while the plates move, their touching boundaries can become stuck against one another, which builds up stress along the fault. "It's building up stress every year, every month, every day, basically," Lin told LiveScience.

That stress can build up to the point where it overwhelms the grip of the plates against each other and the fault snaps, shifting the surrounding earth with potentially **deadly consequences**.

The **earthquake in Haiti** was the result of a rupture of a 25-mile-long segment of the Enriquillo fault. Lin and his colleagues measured the stresses along other parts of the same fault that didn't rupture during the earthquake. They found that on two adjacent sections of the fault (lying just

to the east and west of the section that ruptured) there was "a significant increase in stress," Lin said.

That increased stress could increase the likelihood of one of these other fault sections suddenly snapping and causing another earthquake. In the case of the section to the east, this is of "major concern," because the epicenter from a quake along this portion of the fault could be as close as 3 miles from Port-au-Prince — the Jan. 12 quake was 9 miles from the Haitian capital.

But when an earthquake might occur on these sections and how big it might be are things scientists can't predict.

"Scientists don't have information on the timing of the earthquake," Lin said.

Lin hopes that more researchers will monitor and study the faults around Haiti to better understand the risks associated with them, and that the continued risk of earthquakes can be better communicated to the Haitian public. He said that scientists and the government, without causing any public panic, need to communicate that "the risk of an earthquake is not over."

Lin presented his team's findings on May 3 at the European Geosciences Union General Assembly in Vienna, Austria.

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