

# Jamaica at Continuing Risk from Earthquakes

Jamaica is located an active zone of seismic activity, and experiences more than 200 tremors annually, according to the Earthquake Unit at The University of the West Indies.

The destruction of Port Royal by a massive earthquake in 1692, which left half of the town buried under the sea; and the devastation of Kingston in 1907, are common knowledge. What is less widely acknowledged are the other significant tremors that the country has suffered, many of which have caused death and destruction of property.

"Earthquakes are a fact of life in Jamaica," said Chris Hind, General Manager of JN General Insurance Company (JNGI). "Even when we are not aware of them, they are a part of our every day existence."

Data from the Earthquake Unit reveals that the great quake in Port Royal, which killed some 3,000, was foreshadowed four years earlier by one which damaged houses and ships; and five years before that there was another, even bigger quake causing large landslides.

In 1812, less than a century before the leveling of Kingston, which killed 1,000 persons, the city was struck by a major earthquake which also killed several people and damaged buildings. Seven years after the 1907 Kingston quake, eastern Jamaica was again rocked by tremors which cracked buildings open and stopped clocks.

"We also need to be aware that significant earthquakes are not just a matter of historical record for Jamaica," Mr. Hind said. "In living memory, we have experienced destructive quakes on this island."

The Earthquake Unit records that four persons died, bridges were damaged and utility poles toppled on March 1, 1957, when an earthquake centred around Montego Bay, in St. James, rocked the entire island. It was reported that monuments were rotated and the flow of springs affected.

On January 13, 1993, two persons died in an earthquake which terrified many across the island. Centred around the Corporate Area of Kingston and St. Andrew, it halted business in New Kingston, caused some structural damage, and tipped items from shelves.

Then, on the Sunday night of June 12, 2005, the Unit reports that some people had to be dug out of a collapsed dwelling, when an earthquake struck central Jamaica. Some homes suffered significant damage in Top Alston, Silent Hill and Aenon Town in Clarendon; as well as at Coleyville Manchester, with some damage also reported in St. Andrew.

"The country straddles active areas of earthquake activity on its east and western sides," Mr. Hind stated. The Plantain Garden fault runs into the Yallahs, Blue Mountain, Wagwater and Silver Hill faults, in eastern Jamaica, the Unit reports. In the west, the the South Coast, Spur Tree and Montpelier-Newmarket faults influence the topography.

The catastrophic 2010 Haiti earthquake which killed more than 300,000, occurred along an area of the Plantain Garden fault, which stretches as far as the Dominican Republic, he pointed out. JN General Insurance Company commissioned two documentaries, "Quake: Haiti in Jamaica" and "When the Ground Shakes" to alert the public to the danger, and these can be viewed on its web-site [www.jngijamaica.com](http://www.jngijamaica.com).

To better assess the implications to local human activities of this environment, the Mona Geoinformatics Institute and the Earthquake Unit developed an earthquake risk model for the insurance company. The first such risk model created in the Caribbean, it is used to ensure that JNGI has adequate reinsurance coverage to cope with the associated damage and loss following a major earthquake.

"We have been using this model to examine our property portfolio, and to educate our clients about their risk probabilities," Mr. Hind said. "And, to best advantage, we can determine their risk exposure, based on the geology of their property locations and the structure of their buildings."

"Few people consider their earthquake risk levels when they move to a particular location," Mr. Hind stated. "And, our history with low intensity as well as major earthquakes, indicates that this can be a serious oversight."

