

## How Jamaica would fare with an earthquake?

Data emerging from an earthquake simulation, carried out last year by the Mona GeoInformatics Institute and The Earthquake Unit at The University of the West Indies, indicate that NEM Insurance Company Jamaica Limited has adequate reinsurance coverage to cope with a 7.0 magnitude earthquake, similar to the one which struck Haiti last January.

The area of Ness Castle-Arntully at the foothills of the Blue Mountain range was selected as the focal point of the earthquake for the simulation, which had been commissioned by NEM to assess its risk exposure. Dr. Parris Lyew-Ayee, Director of Mona GeoInformatics, explained that in such a scenario, the entire island would feel the effects.

“We created a Haiti-in-Jamaica scenario, with the same depth and magnitude, along the Plantain Garden-Enriquillo Fault System, which stretches from Jamaica in the West to the Dominican Republic in the East,” Dr. Lyew-Ayee stated, “and building types were classified by roof and wall types, with weights applied to their sum insured value, as well as the probability for loss in category and each zone.”

The Jamaican simulation sought to answer questions as to what would be the “scenario” if a similar event originating from this fault system took place in this country, he told journalists at a media briefing, at the Knutsford Court Hotel, in Kingston, yesterday (January 11), as the world refocused on the situation in Haiti one year after the disastrous earthquake in that country.

“The simulation revealed that the entire island would experience some level of shaking, with more than 75% serious enough to cause structural damage in some buildings,” the report indicated, “and a significant number of people and buildings are located within this damage zone, as well as a significant number of NEM clients and sum insured values.”

Chris Hind, General Manager of NEM, pointed out that, “in this scenario, losses on the company’s property portfolio would amount to just under \$11 billion.” He added that the company’s reinsurance provisions with overseas providers would adequately cope with such a disaster, as well as a second catastrophe in the same year.

“The analysis of the simulation provides our Company with extremely valuable data which is vital for advance planning and reinsurance,” Mr. Hind stated. He said “We, therefore, plan to examine our property portfolio, and educate our clients about the probabilities that this simulation reveals; and, determine, based on the geology of their locations and the structure of their buildings, how best we can refine our levels of exposure.”

He noted that NEM would make elements of the simulation available to its clients; and, said that the Company plans to carry out a general public education programme, to increase awareness for business continuity throughout the country.

“We know that there is value in examining risks and exposure; and we have witnessed the unfortunate local and international experience of what marginal reinsured portfolios can do to insurance companies, which do not explore the full extent of their risks,” The NEM General Manager stated.

Dr. Lyndon Brown, Head of the Earthquake Unit, said “faults exist right across Jamaica, so we have to be very careful about where we build, and pay careful attention to the building codes.”

A fault line is a crack in the Earth’s crust, where two or more gigantic slabs of rock adjoin. An earthquake occurs when these slabs move against each other.

Different rocks behave differently in an earthquake and alluvial soils in Jamaica’s coastal areas are subject to especially significant shaking, Dr. Brown said. That is why, “You should pay attention to the implications of building in any location and get professional advice on the risks you face.”

In his presentation, Dr. Lyew-Ayee pointed out that earthquakes are measured by their magnitudes and intensities, using the Richter Scale; and the Modified Mercalli Intensity Scale, a qualitative measure that records effects ranging from “imperceptible to catastrophic,” which is based on “observed, though not necessarily measured, reports.”

Using maps, charts and graphics, he also demonstrated how the computer software at the Institute was used to carry out the Seismic Hazard Analysis.

Segments of the report will be made available from the NEM website at: [www.nemjam.com](http://www.nemjam.com)

