

Trinidad and Tobago Earthquake

7 April 2016

Event Briefing

8 April 2016

1 INTRODUCTION

According to the United States Geological Survey (USGS) a magnitude 5.2 earthquake occurred at 12:22:21 UTC (8:22:21 local time) on 7 April 2016 at 5 km (3.1 mi) SSW of Irapa, Venezuela, 33 km (20.5 mi) W of Gueiria, Venezuela, 73 km (45.4 mi) ESE of Carupano, Venezuela and 119 km (73.9 mi) W of Port-of-Spain, Trinidad and Tobago. Initial estimates from the USGS located the epicentre of the event at 10.526° N, 62.599°W, and at a depth of 83.7 km (52 mi).

The earthquake was reported also by the Seismic Research Centre of the University of the West Indies (UWI), with the following earthquake characteristics:

- Epicentre coordinates: 10.60° N and 62.56°W; depth of 79 km (49 mi); magnitude 5.7 (see Figure 1).

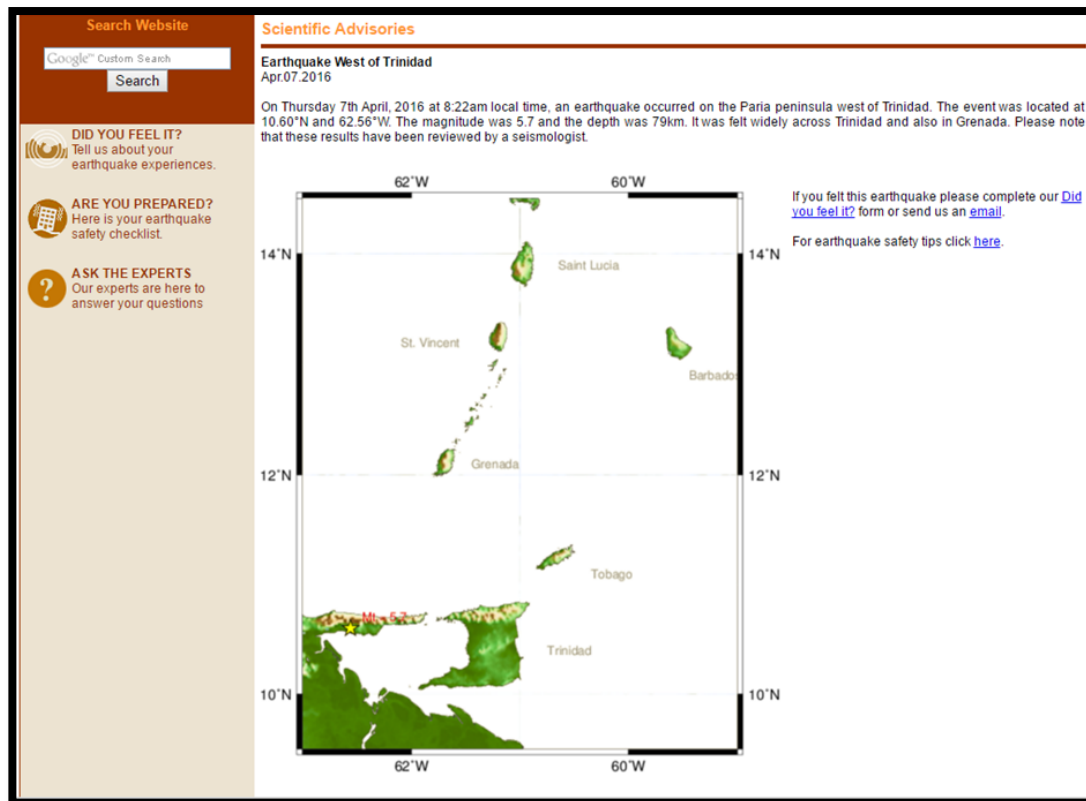


Figure 1 Information from the UWI Seismic Research Centre regarding earthquake event on 7 April 2016

Note: Those differences in the earthquake characteristics between the agencies (USGS and UWI) are generally due to the methodology and seismic instrumentation used to record the earthquakes. For this report both earthquake characteristics were evaluated, but footprint of peak ground acceleration (PGA) using USGS data is zero because of the earthquake depth; using UWI earthquake information the PGA values are bigger than zero but small close to the earthquake epicenter, for this reason we show UWI information.

2 CCRIF MODEL OUTPUTS

Under CCRIF's loss calculation protocol, a CCRIF Multi-Peril Risk Estimation System (MPRES) report is required for any earthquake with a magnitude of greater than or equal to 5.0 and resulting in a peak ground acceleration of at least 0.01g within the country territory. Based on the MPRES footprint using the information from the UWI Seismic Research Centre, peak ground acceleration inside the country territory is between 0.01 and 0.02g (small shaking); also loss result is zero according to MPRES evaluation for this earthquake.

3 IMPACTS

According to the Regional Coordinator of the Office of Disaster Preparedness and Management in Trinidad and Tobago (Eric Mackie): *"The event was widely felt from the Northwest Peninsula along the East-West Corridor to Arima and along the western coastline to San Fernando in the south. Furthest reports were from Rio Claro and Mayaro to the southeast. The event was reported by the Tobago Emergency Management Agency as mildly felt in Scarborough, Tobago. At this time, there are no reports of injuries or damage to buildings and infrastructure."*

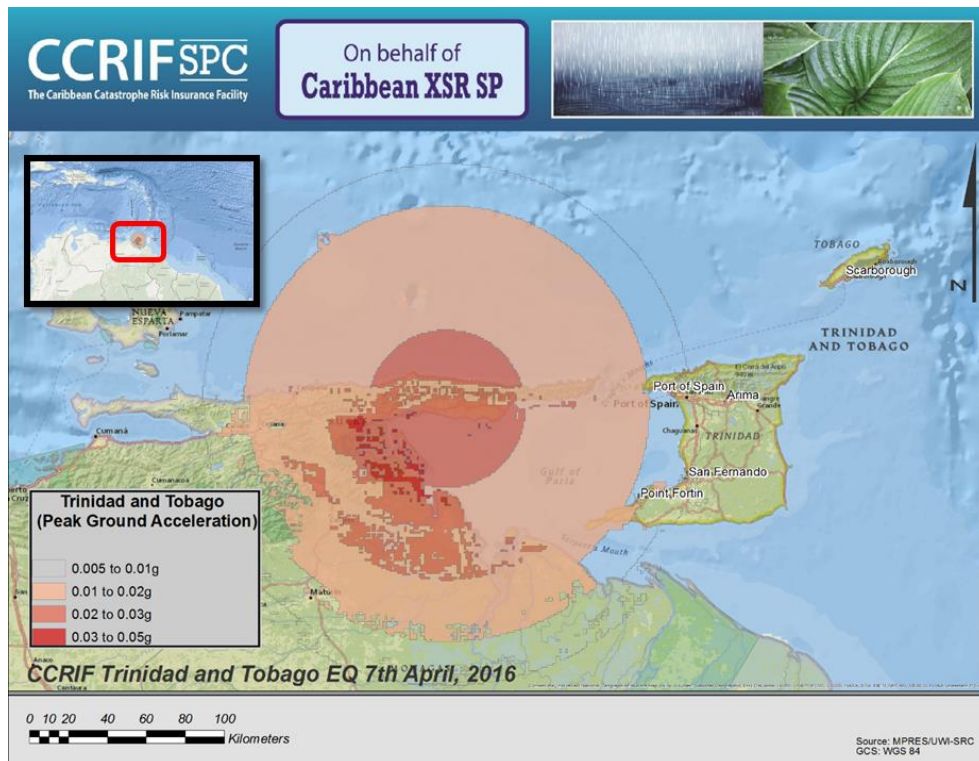


Figure 2 Map showing the peak ground acceleration following the magnitude 5.7 earthquake on 7 April 2016.
Source: UWI SRC & CCRIF KAC/MPRES

For further information, please contact ERN-RED, the CCRIF SPC Risk Management Specialist.

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