



West of Trinidad

Earthquake

21 August 2018

Event Briefing

23 August 2018

1 INTRODUCTION

A magnitude 7.3 earthquake occurred at 21:31:46 UTC on 21 August 2018, (19:31:46 local time), at 45.7 km (28.4 mi) ENE of Carúpano, Venezuela; 108.5 km (67.4 mi) E of Porlamar, Venezuela and 71.0 km (44.1 mi) WNW of Güiria, Venezuela. Initial estimates from the United States Geological Survey (USGS) located the epicentre of the event at 10.855°N, 62.883°W, and at a depth of 154.3 km (95.87 mi) (Figure 1). Trinidad and Tobago and Grenada were the CCRIF member countries where peak ground acceleration, computed with the MPRES model, was greater than 0.01g for this earthquake.

The earthquake was reported also by the University of the West Indies (UWI) Seismic Research Centre, with epicentre coordinates 10.56°N and 62.80°W, magnitude of 6.9 and depth of 86 km (53.4 mi).

This event briefing is designed to review the possible impact and damages from peak ground acceleration using the seismic parameters reported by the USGS.

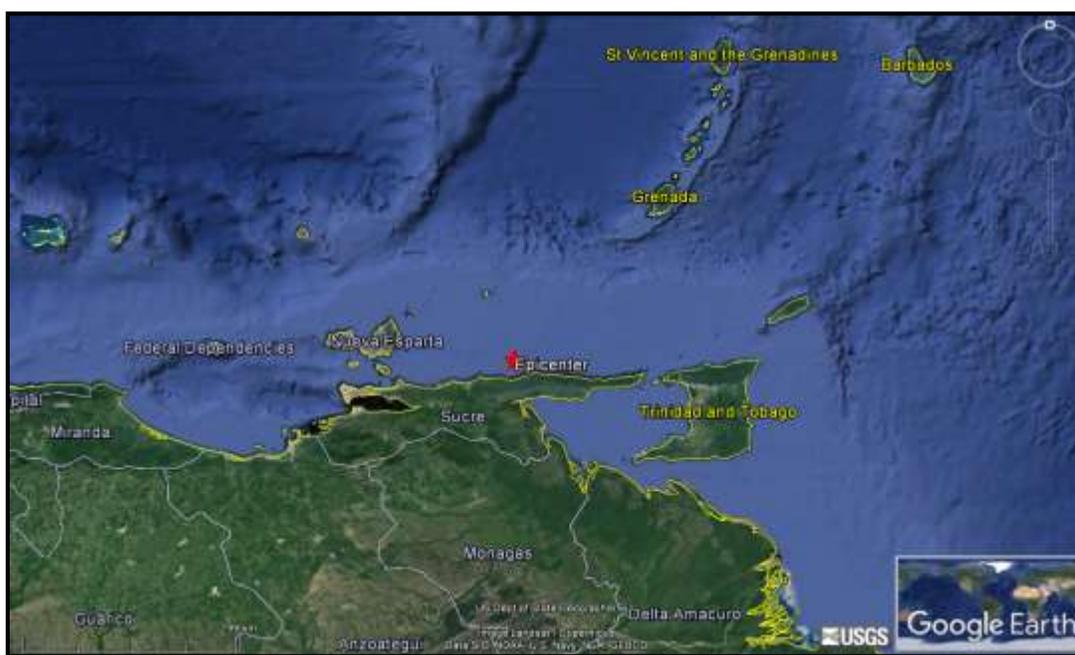


Figure 1 Information from the Earthquake Hazards Program of the United States Geological Survey, regarding the earthquake event on 21 August 2018. Source: USGS (<https://earthquake.usgs.gov>).

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 that occurs within the region monitored by CCRIF and which generates a peak ground acceleration of at least 0.01 g in one or more grid cells of at least one member country. Based on the MPRES footprint for this earthquake, peak ground acceleration between 0.01g and 0.05g was estimated in the territory of two member countries: Trinidad and Tobago (Figure 2) and Grenada (Figure 3), for which the MPRES loss estimation was zero.

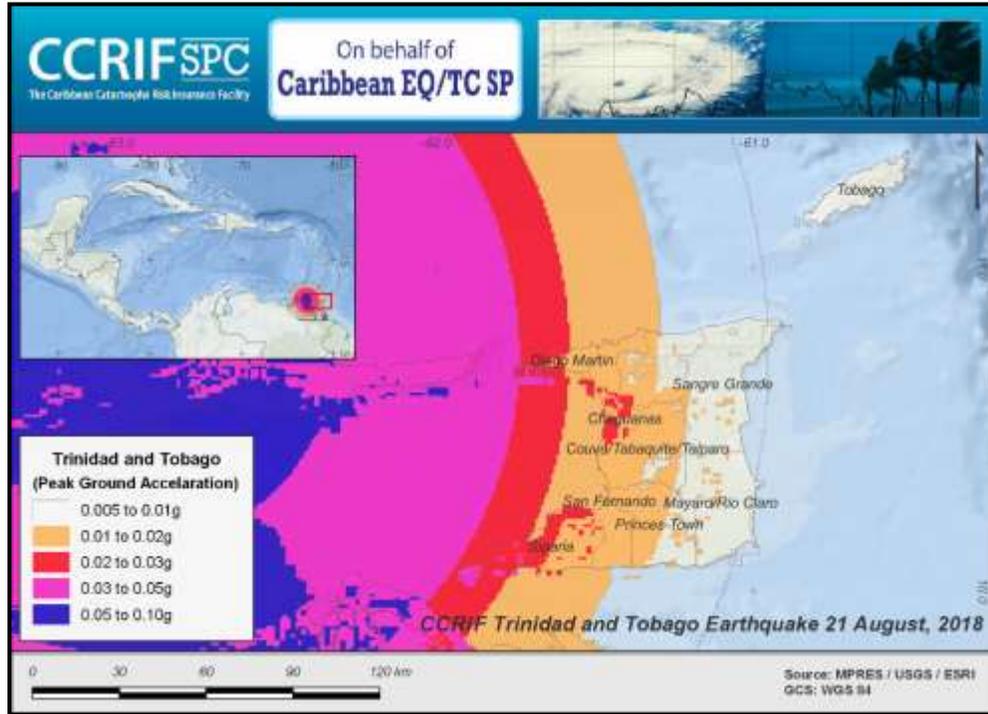


Figure 2 Map showing the peak ground acceleration computed using MPRES model in Trinidad and Tobago following the magnitude 7.3 earthquake on 21 August 2018. Source: *USGS & CCRIF MPRES*.

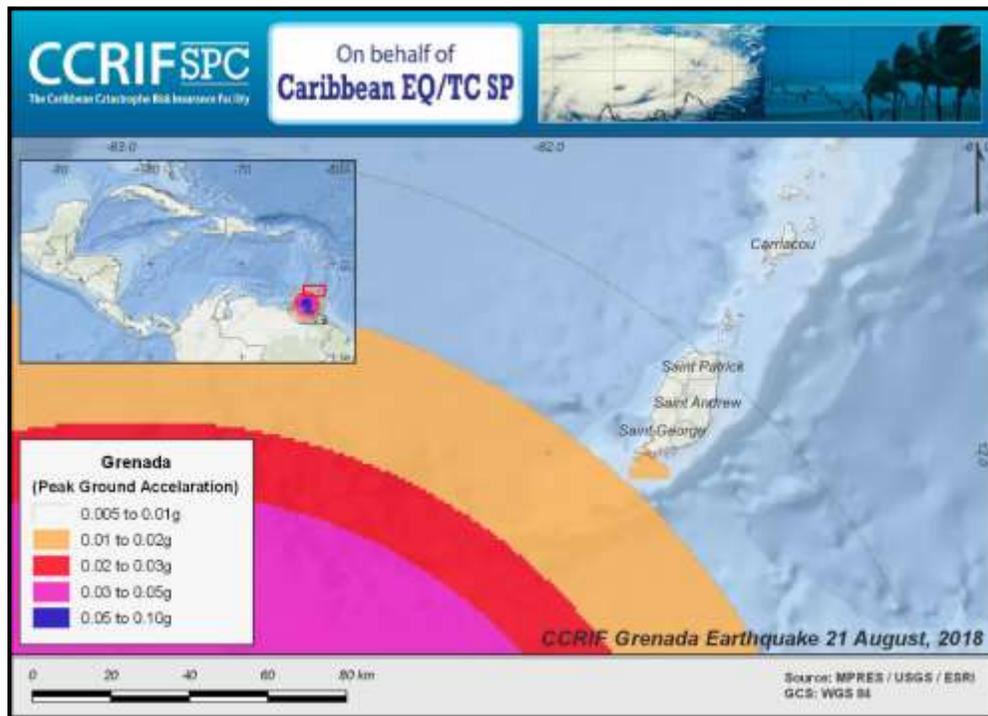


Figure 3 Map showing the peak ground acceleration computed using MPRES model in Grenada following the magnitude 7.3 earthquake on 21 August 2018. Source: *USGS & CCRIF MPRES*.

3 IMPACTS

According to the University of the West Indies Seismic Research Centre ¹, this earthquake was felt widely in the Eastern Caribbean. The earthquake was felt strongly in Trinidad and Tobago, in the cities of Port of Spain and San Fernando. No fatalities were reported.

Trinidad and Tobago

At the time of this report, according to the National Emergency Operations Centre, there are no reports of serious injury, loss of life or significant damage to critical infrastructure. Also the National Disaster Coordinator in Trinidad and Tobago reported no injuries due to this earthquake, but there was some structural damage to private homes and public services such as electric power were affected.

Grenada

According to the President of Grenada's Red Cross, this earthquake was felt intensely in the country. According to reports there were a few rock falls, ground cracking in some areas and broken windscreens on cars.

According to the USGS "Did You Feel It?" online tool², in Trinidad and Tobago within a radius of 282 km (175.2 mi) from the epicentre, 228 people reported the earthquake as a "weak shake with no damage" to "strong shake with light damage" (Mercalli intensities: III to VI). In Grenada within a radius of 283 km (175.8 mi) from the epicentre, 69 people reported the earthquake as a "weak shake with no damage" to "light shake with no damage" (Mercalli intensities: III-IV).

4 TRIGGER POTENTIAL

Preliminary runs of CCRIF's loss model reported no government losses for Trinidad and Tobago and Grenada, and therefore no payout is due.

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

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¹ Seismic Research Centre, The University of the West Indies, review date: 23 August 2018, available at: <http://uwiseismic.com/NewsDetails.aspx?id=586>

² Did You Feel It?, United States Geological Survey, review date: 23 August 2018, available at: <https://earthquake.usgs.gov/earthquakes/eventpage/us1000gez7#dyfi>
