



Nicaragua

Earthquake

31 July 2019

Final Event Briefing

11 August 2019

1 INTRODUCTION

A magnitude 5.9 earthquake occurred at 05:54:55 UTC on 31 July 2019 (30 July 2019 at 23:54:55 local time), 24.6 km (15.3 mi) N of La Libertad, El Salvador; 45.9 km (28.5 mi) N of Santa Tecla, El Salvador and 46.6 km (28.9 mi) NNE of San Marcos, El Salvador. Initial estimates from the United States Geological Survey (USGS) located the epicentre of the event (Figure 1) at 13.266°N, 89.338°W, and at a depth of 72.5 km (45 mi). Nicaragua was the only CCRIF member country where peak ground acceleration, computed with the SPHERA model, was greater than 0.01g for this earthquake.



Figure 1 Information from the Earthquake Hazards Program of the United States Geological Survey, regarding the earthquake event on 31 July 2019 at 05:54:55 UTC. Source: USGS (<https://earthquake.usgs.gov>).

The earthquake was reported also by the Seismology Department of the Nicaraguan Institute of Territorial Studies (in Spanish: Dirección de Sismología del Instituto Nicaragüense de Estudios Territoriales), with epicentre coordinates 13.177°N and 89.441°W, magnitude 6.2 and depth of 63 km (39.1 mi).

This event briefing is designed to review the model outputs for affected CCRIF member countries using the seismic parameters reported by the USGS.

Final runs of CCRIF's loss model estimated no government losses for Nicaragua and therefore no payout is due.

2 CCRIF MODEL OUTPUTS

Under CCRIF's loss calculation protocol, a CCRIF System for Probabilistic Hazard Evaluation and Risk Assessment (SPHERA) 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 SPHERA footprint for this earthquake, peak ground acceleration between 0.005g and 0.02g was estimated in the territory of Nicaragua (Figure 2), for which the SPHERA loss estimation was zero.

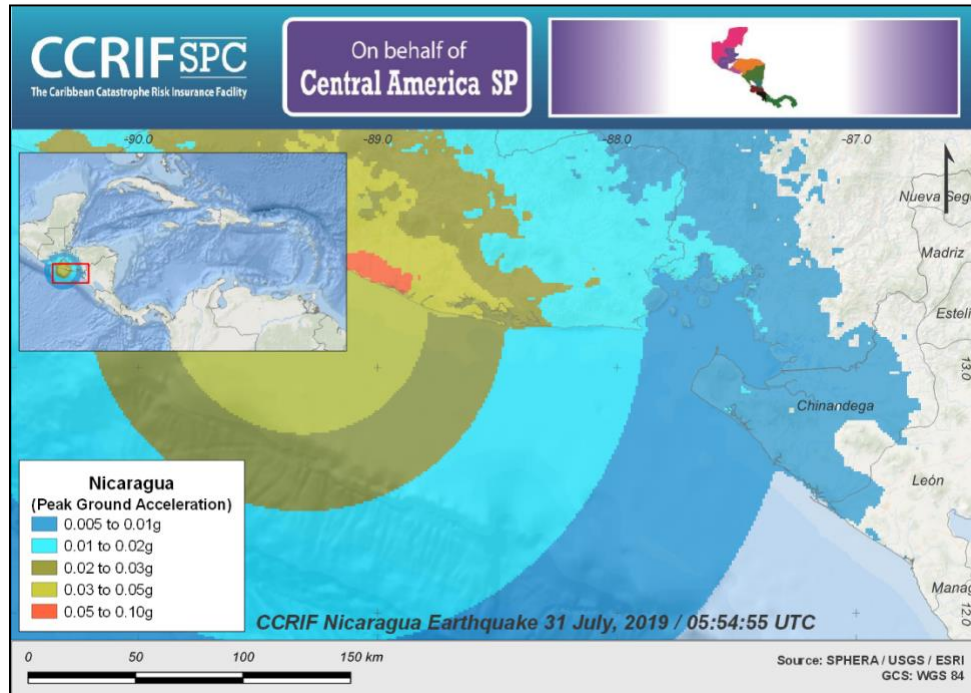


Figure 2 Map showing the peak ground acceleration computed using SPHERA model in Nicaragua following the magnitude 5.9 earthquake on 31 July 2019 at 05:54:55 UTC. Source: *USGS & CCRIF SPHERA EQ Model*.

3 IMPACTS

Ten days after the earthquake’s occurrence, no information was available related to damages or losses in Nicaragua due to this earthquake.

According to the USGS “Did You Feel It?” online tool¹, in Nicaragua there were no reports of people feeling any ground motion for this earthquake.

4 TRIGGER POTENTIAL

The lack of impact reports corroborates final runs of CCRIF’s loss model that generated no government losses for Nicaragua, and therefore no payout is due.

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

Evaluación de Riesgos Naturales
Vito Alessio Robles No.179
Col. Hda Gpe Chimalistac.
Del. Álvaro Obregón. Cp 01050, México D.F.
+52 (55) 5616-8161, 62, 64
cavelar@ccrif.org

¹ Did You Feel It?, United States Geological Survey, review date: 11 August 2019, available at: <https://earthquake.usgs.gov/earthquakes/eventpage/us60004xtc/dyfi/responses>