CCRIF SPC
The Caribbean Catastrophe Risk Insurance Facility

Nicaragua

Earthquake

6 January 2022

Preliminary Event Briefing

7 January 2022

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1 INTRODUCTION

A magnitude 6.1 earthquake occurred at 16:25:07 (UTC) on 6 January 2022, 56.8 km (35.3 mi) S of Corinto, Nicaragua; 57.7 km (35.9 mi) SSW of León, Nicaragua and 63 km (39.1 mi) SW of La Paz Centro, Nicaragua. Initial estimates from the United States Geological Survey (USGS) located the epicentre of the event at 11.975°N, 87.118°W, and at a depth of 21.7 km (13.5 mi) – Figure 1.

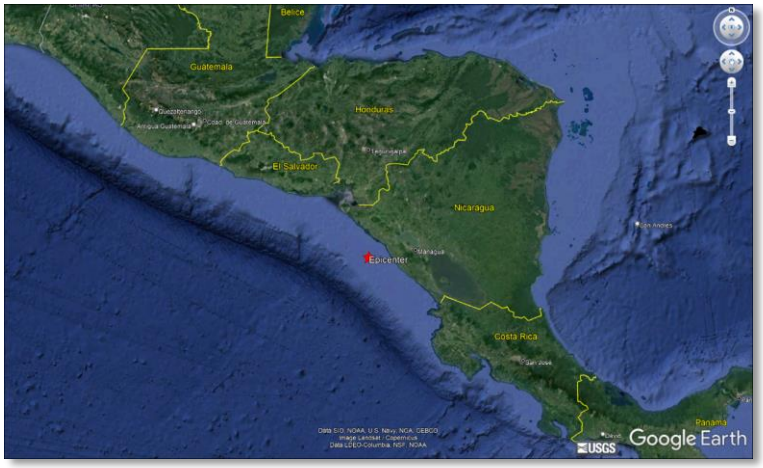

Figure 1 Information from the Earthquake Hazards Program of the United States Geological Survey regarding the magnitude 6.1 earthquake event on 6 January 2022 at 16:25:07 UTC. Source: USGS[1]

According to the USGS, the magnitude 6.1 earthquake was followed by an aftershock with the following characteristics:

Event	Date - Time [UTC]	Depth [km]	Lat [°N]	Long [°W]
M5.0 - 56 km S of Corinto, Nicaragua	Jan 7, 17:04:18	42.5	11.970	87.171

This is considered to be aftershock of the magnitude 6.1 earthquake[2] within the CCRIF System for Probabilistic Hazard Evaluation and Risk Assessment (SPHERA) EQ model.

Event	Hypocentral Offset Distance from M 6.1 earthquake
M5.0 - 56 km S of Corinto, Nicaragua	21.6 km

[1] Download Event KML, United States Geological Survey, review date: 6 January 2022, available at: *https://earthquake.usgs.gov/earthquakes/eventpage/us7000g9nb/executive*

[2] An Earthquake Event is defined as follows: An earthquake occurring during the Policy Period with a source moment magnitude of 5.0 or greater, in the Model Domain within a box bounded by the following – Latitude 4° and 34°N, Longitude 95° and 53°W, as reported by the Earthquake Reporting Agencies, provided that if multiple Earthquake Events occur within a specific 25-Day Period and within a radius of 50 kilometers of the location of the Earthquake Event that occurs at the beginning of the 25-Day Period, the Earthquake Event shall be the earthquake with the highest resulting Modelled Loss (EQ). The distance between two Earthquake Events shall be calculated using the formula defining Hypocentral Offset Distance.

Nicaragua was the only CCRIF member country where peak ground acceleration, computed with the CCRIF SPHERA model, was greater than 0.01 g for this earthquake.

Preliminary runs of the CCRIF loss model for peak ground acceleration produced government losses for Nicaragua, which were below the attachment point of the country's earthquake policy and therefore no payout under the policy is due.

The Aggregated Deductible Cover (ADC) for this country's EQ policy was not activated because the modelled losses were below 10 per cent of the minimum payment of the policy. Therefore, no payment under the ADC feature is due for Nicaragua.

2 CCRIF MODEL OUTPUTS

Under CCRIF's loss calculation protocol, a report using the CCRIF SPHERA model is produced for any earthquake with a magnitude 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 CCRIF member country.

Based on the SPHERA footprint for the magnitude 6.1 earthquake, peak ground accelerations of up to 0.086 g were estimated in Nicaragua. The peak ground acceleration footprint is the output from the CCRIF SPHERA EQ model. Figure 2 shows the regions in Nicaragua affected following the magnitude 6.1 earthquake and Figure 3 show the regions affected by the aftershock with a source moment magnitude of 5.0 or greater.

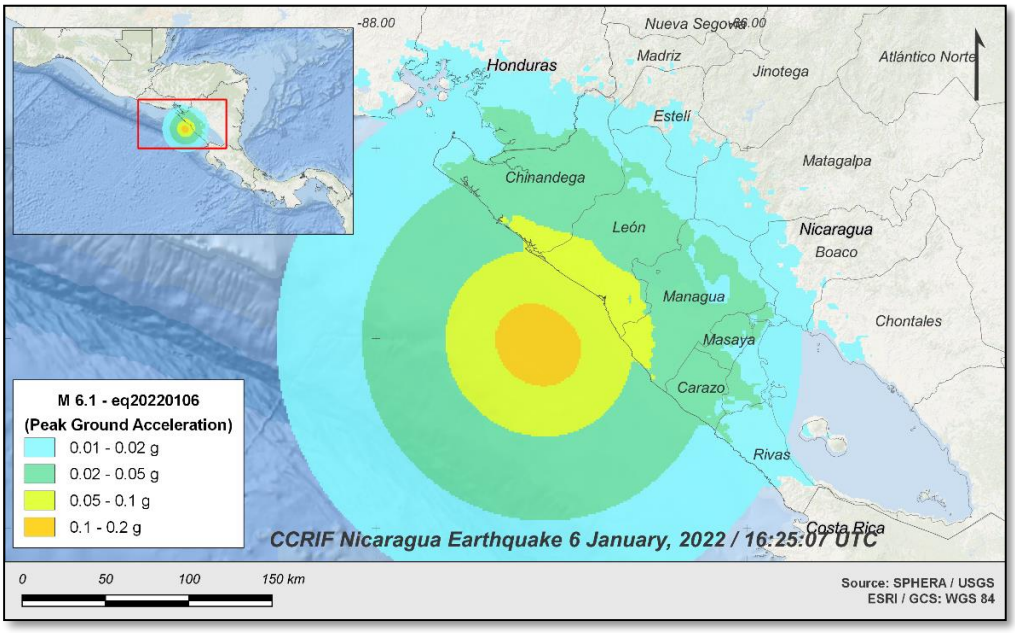

Figure 2 Map showing the peak ground acceleration in Nicaragua computed using the SPHERA model following the magnitude 6.1 earthquake[3] on 6 January at 16:25:07 UTC. Source: *USGS & CCRIF SPHERA EQ Model*.

[3] USGS, review date: 6 January 2022, available at: '*M 6.1 - 56 km S of Corinto, Nicaragua*'

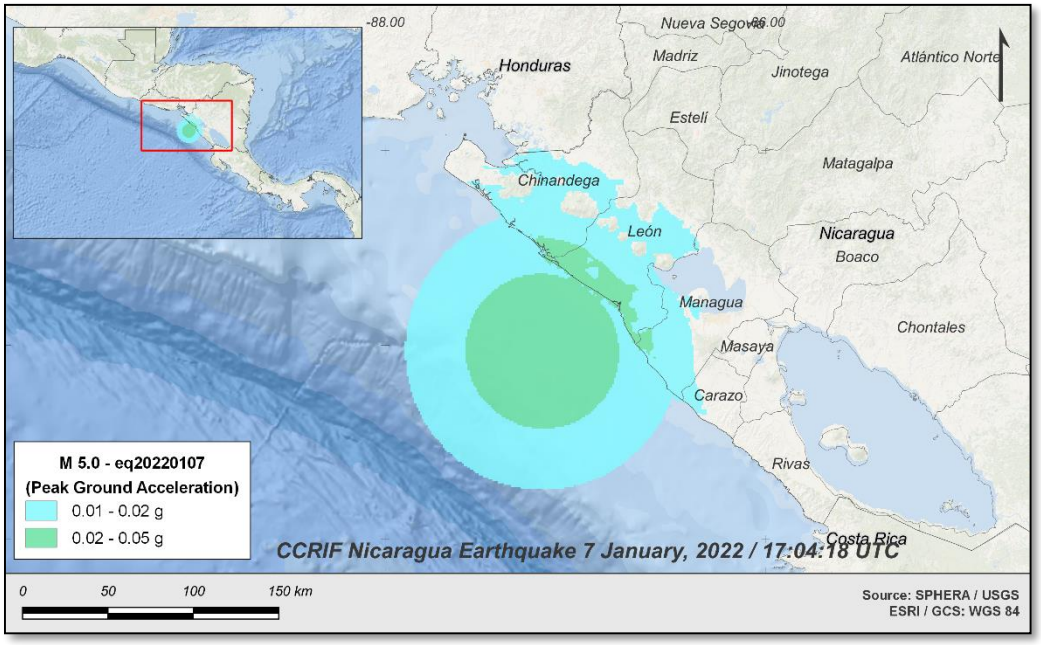

Figure 3 Map showing the peak ground acceleration in Nicaragua computed using the SPHERA model following the aftershock[4] of magnitude 5.0 on 7 January at 17:04:18 UTC. Source: *USGS & CCRIF SPHERA EQ Model*.

3 IMPACTS

At the time of writing this report and according to Nicaragua's authorities and with information published in the local news[5] [6], the earthquake was felt by the population in Managua, some western Departments and other regions of Nicaragua but no injuries to persons or damage to infrastructure were reported.

According to the USGS "*Did You Feel It?*" online tool[7], 35 persons in Nicaragua within a radius of 195 km (121.2 mi) from the epicentre reported the earthquake as being a "no shake with no damage" to "light shake with no damage" (Mercalli intensities: I - IV).

4 TRIGGER POTENTIAL

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[4] USGS, review date: 7 January 2022, available at: '*M 5.0 - 56 km S of Corinto, Nicaragua*'
[5] The San Diego Union-Tribune, review date: 7 January 2022, available at: '*Sismo de magnitud 6.1 sacude Nicaragua; no hay víctimas*'
[6] La nueva Televisión del Sur C.A., review date: 7 January 2022, available at: '*Reportan sismo de magnitud 6,1 en Nicaragua*'
[7] Did You Feel It?, United States Geological Survey, review date: 7 January 2022, available at: *https://earthquake.usgs.gov/earthquakes/eventpage/us7000g9nb/dyfi/responses*

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For additional information, please contact CCRIF SPC at: pr@ccrif.org