



Nicaragua

Earthquake

24 February 2024

Preliminary Event Briefing

26 February 2024

1 INTRODUCTION

A magnitude 5.3 earthquake occurred at 21:57:42 (UTC) on 24 February 2024, 8.7 km (5.4 mi) E of El Realejo, Chinandega, Nicaragua; 10 km (6.2 mi) SE of Corinto, Chinandega, Nicaragua and 16 km (10 mi) NE of Chinandega, Chinandega, Nicaragua. Initial estimates from the United States Geological Survey (USGS) located the epicentre of the event at 12.538°N, 83.8°W, and at a depth of 83.8 km (52.07 mi) – Figure 1.

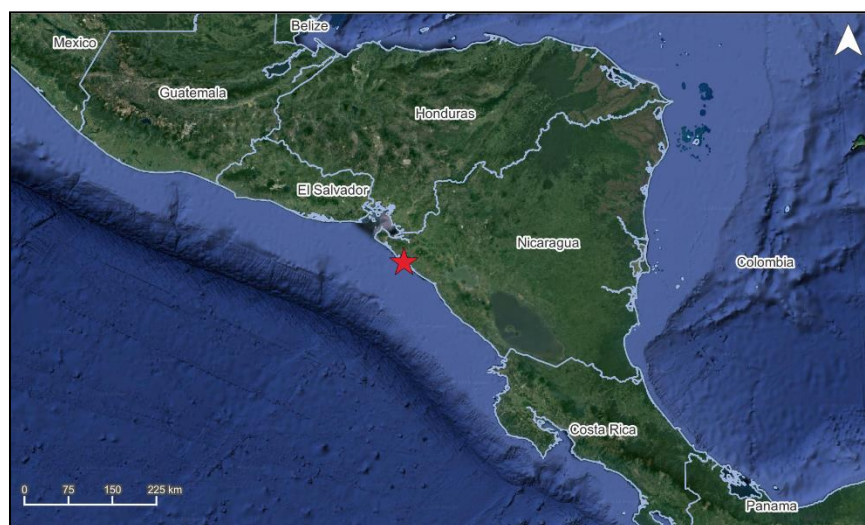


Figure 1 Information from the Earthquake Hazards Program of the United States Geological Survey regarding the earthquake event on 24 February 2024 at 21:57:42 (UTC). Source: USGS¹

Nicaragua was the only CCRIF member country where peak ground acceleration, computed with the SPHERA model, was greater than 0.03 g for this earthquake.

Preliminary runs of CCRIF’s loss model estimated no government losses for Nicaragua and therefore no payout under the country’s earthquake policy is due.

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 0.03 g in one or more grid cells of at least one CCRIF member country. Based on the SPHERA footprint for this earthquake, peak ground acceleration of up to 0.030 g was estimated in Nicaragua (Figure 2), but under the SPHERA model, the earthquake generated a loss estimation of zero.

¹ Download Event KML, United States Geological Survey, review date: 24 February 2024, available at: <https://earthquake.usgs.gov/earthquakes/feed/v1.0/detail/us7000m1ea.kml>

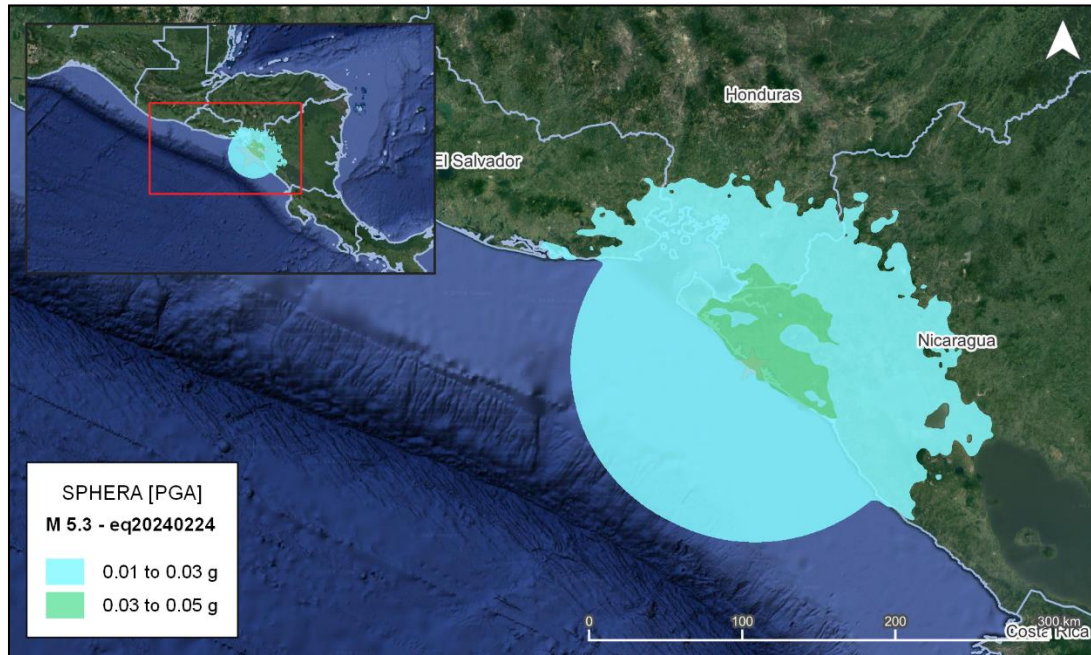


Figure 2 Map showing the peak ground acceleration in Nicaragua computed using the SPHERA model following the magnitude 5.3 earthquake² on 24 February at 21:57:42 UTC
Source: *USGS & CCRIF SPHERA EQ Model*.

3 IMPACTS

At the time of writing this report, there was no available information on damage or loss in Nicaragua due to this earthquake. According to local news, authorities reported no casualties or material damage.³

According to the USGS “Did You Feel It?” online tool, 7 persons in Leon and El Viejo in Chinandega, Nicaragua, within a radius of 93 km (57.78 mi) from the epicentre reported the earthquake as having “light/weak shaking with very light damage” (Mercalli intensity: III-V); 14 people in the area beyond a radius of 140 km (87 mi) from the epicenter reported the earthquake as having “weak shaking with no damage” (Mercalli intensity: II-III).

4 TRIGGER POTENTIAL

Preliminary runs of the CCRIF loss model for peak ground acceleration produced no government losses for Nicaragua. Therefore, no payout under this country’s earthquake policy is due.

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

² United States Geological Survey (USGS), review date: 24 February 2024, available at: [M 5.3 - 8 km W of El Realejo, Nicaragua \(usgs.gov\)](https://www.usgs.gov/locations/global/hazards/earthquake-hazards/m 5.3 - 8 km W of El Realejo, Nicaragua (usgs.gov))

³ 100% Noticias: [Fuerte sismo de 5.6 grados escala richter sacude pacífico de Nicaragua \(100noticias.com.ni\)](https://www.100noticias.com.ni/fuerte-sismo-de-5-6-grados-escala-richter-sacude-pacifico-de-nicaragua)
