



# Nicaragua

## Earthquake

**6 April 2023**

## Final Event Briefing

**16 April 2023**

## 1 INTRODUCTION

A magnitude 5.1 earthquake occurred at 06:39:06 (UTC) on 6 April 2023, 16.1 km (10 mi) SE of Moyogalpa, Nicaragua; 24 km (14.9 mi) S of Rivas, Nicaragua and 30.6 km (19 mi) WNW of Nandaime, Nicaragua. Final estimates from the United States Geological Survey (USGS) located the epicentre of the event at 11.650°N, 85.794°W, and at a depth of 10 km (6.2 mi), Figure 1.



**Figure 1** Information from the Earthquake Hazards Program of the United States Geological Survey regarding the earthquake event on 6 April 2023 at 06:39:06 UTC. Source: USGS<sup>1</sup>

Nicaragua was the only CCRIF member country where peak ground acceleration, computed with the SPHERA<sup>2</sup> EQ model, was greater than 0.01 g for this earthquake.

Final 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. The modelled loss was below the 10% of the minimum payment and, at the time of writing this report, no Disaster Alert has been issued for Nicaragua by ReliefWeb for this earthquake. Therefore, no payment under the ADC feature is due for Nicaragua.

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<sup>1</sup> Download Event KML, United States Geological Survey, review date: 16 April 2023, available at: <https://earthquake.usgs.gov/earthquakes/feed/v1.0/detail/us6000k2b0.kml>

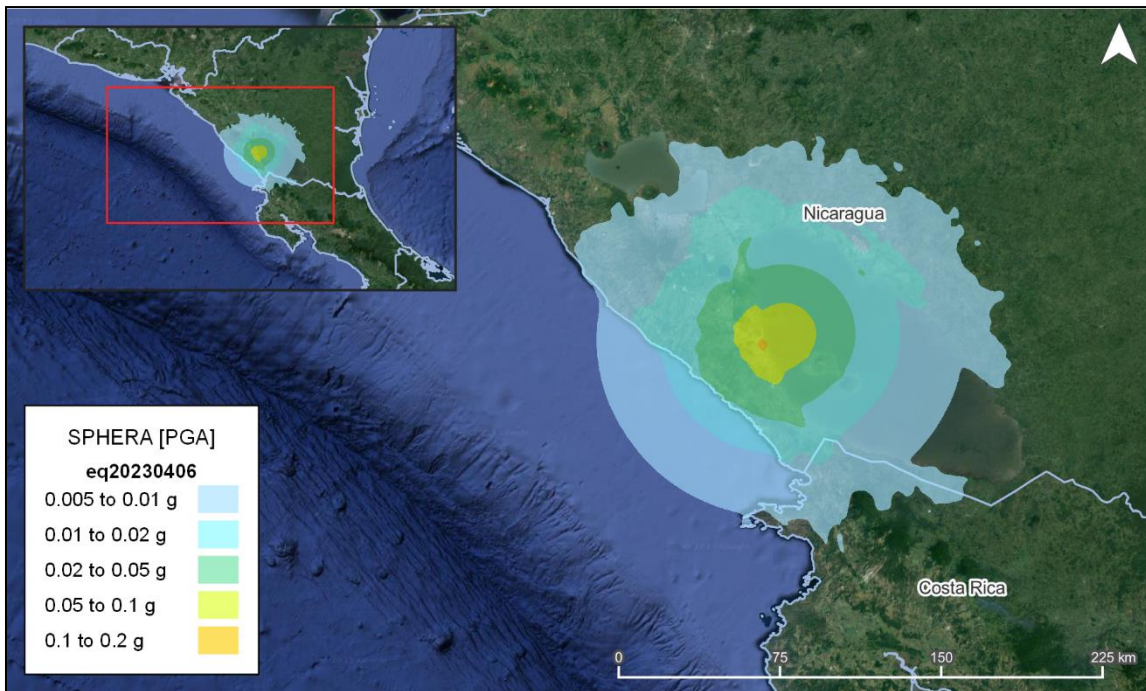
<sup>2</sup> System for Probabilistic Hazard Evaluation and Risk Assessment.

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## 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 5.1 earthquake, peak ground accelerations of up to 0.2 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 5.1 earthquake.



**Figure 2** Map showing the peak ground acceleration in Nicaragua computed using the SPHERA model following the magnitude 5.1 earthquake<sup>3</sup> on 6 April at 06:39:06 UTC.

Source: *USGS & CCRIF SPHERA EQ Model.*

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<sup>3</sup> United States Geological Survey (USGS), review date: 16 April 2023, available at: '[M 5.1 - 16 km NW of Moyogalpa, Nicaragua \(usgs.gov\)](https://www.usgs.gov/locations/nicaragua/m51-16km-nw-of-moyogalpa)'

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### **3 IMPACTS**

According to the USGS “*Did You Feel It?*” online tool<sup>4</sup>, 5 persons in Rivas, Nicaragua within a radius of 30 km (18.6 mi) from the epicentre reported the earthquake as being a “light shake with no damage” (Mercalli intensities: III - IV); 9 persons in the regions Granada, Carazo and Managua within a radius of 65 km (40.3 mi) also reported the earthquake as “light shake with no damage” (Mercalli intensities: III - IV) another 6 persons in a radius greater than 65 km (40.3 mi) reported the earthquake as “weak shake with no damage” (Mercalli intensity: III).

### **4 TRIGGER POTENTIAL**

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For additional information, please contact CCRIF SPC at: [pr@ccrif.org](mailto:pr@ccrif.org)

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<sup>4</sup> Did You Feel It?, United States Geological Survey, review date: 16 April 2023, available at: [M 5.1 - 16 km NW of Moyogalpa, Nicaragua \(usgs.gov\)](https://www.usgs.gov/earthquake-hazard-data/did-you-feel-it/)

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