



# Haiti

## Earthquake

**10 November 2023**

**Final Event Briefing**

**20 November 2023**

## 1 INTRODUCTION

A magnitude 5.0 earthquake occurred at 17:22:28 (UTC) on 10 November 2023, 22.1 km (13.8 mi) SW of Ouanaminthe, Nord-Est, Haiti; 16 km (9.94mi) W of Nan Contrée, Haiti and 7.9 km (4.9 mi) ESE of Las Matas de Santa Cruz, Monte Cristi, Dominican Republic. Initial estimates from the United States Geological Survey (USGS) located the epicentre of the event at 19.691°N, 71.577°W, and at a depth of 19 km (11.80 mi), Figure 1.



**Figure 1** Information from the Earthquake Hazards Program of the United States Geological Survey regarding the earthquake event on 10 November 2023. Source: USGS<sup>1</sup>

Haiti was the only CCRIF member country where peak ground acceleration, computed with the SPHERA<sup>2</sup> earthquake (EQ) model, was greater than 0.03 g for this earthquake.

The modelled loss computed for Haiti using the SPHERA EQ model is US\$60,095.04. This modelled loss is below the attachment point of Haiti's Earthquake policy, and therefore no payout is due.

The Aggregated Deductible Cover (ADC) policy feature for the EQ policy was not activated because the modelled loss was lower than 10% of the minimum payment.

## 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

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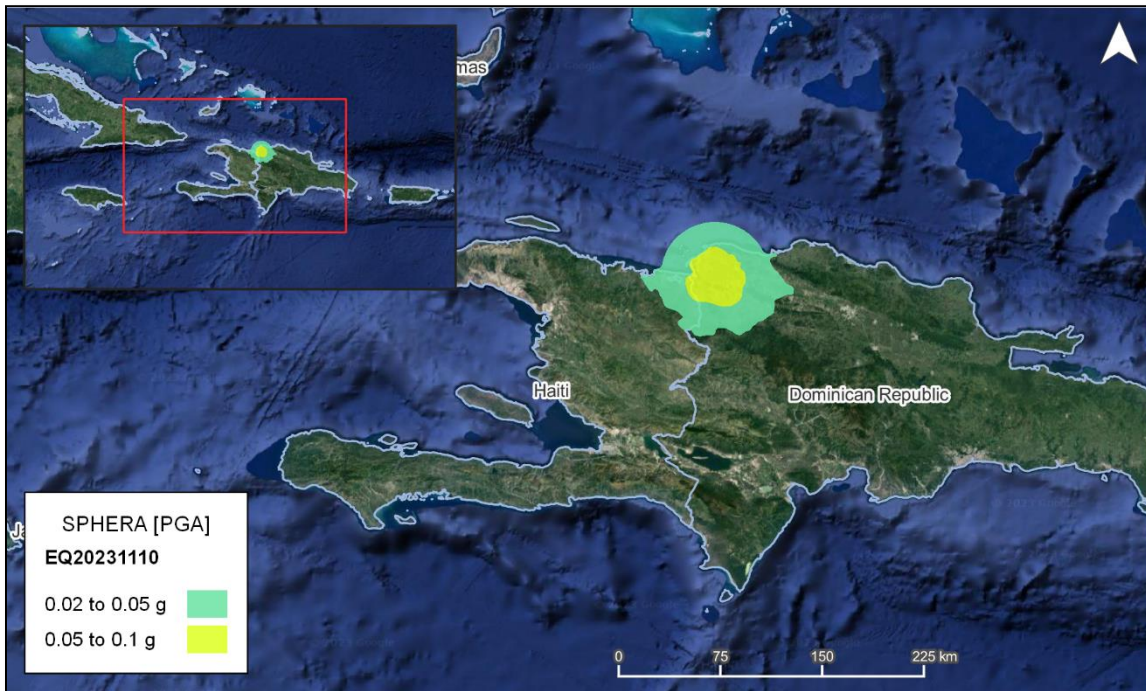
<sup>1</sup> Download Event KML, United States Geological Survey, review date: 10 November 2023, available at: <https://earthquake.usgs.gov/earthquakes/feed/v1.0/detail/us7000la5h.kml>

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

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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 the magnitude 5.0 earthquake, peak ground accelerations of up to 0.2 g were estimated in Haiti. The peak ground acceleration footprint is the output from the CCRIF SPHERA EQ model. Figure 2 shows the regions in Haiti that were affected following the magnitude 5.0 earthquake.



**Figure 2** Map showing the peak ground acceleration in Haiti computed using the SPHERA model following the magnitude 5.0 earthquake<sup>3</sup> on 10 November, 2023.

Source: *USGS & CCRIF SPHERA EQ Model.*

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<sup>3</sup> United States Geological Survey (USGS), review date: 10 November 2023, available at: [M 5.0 - 7 km WNW of Las Matas de Santa Cruz, Dominican Republic \(usgs.gov\)](https://www.usgs.gov/locations/global/news/press-releases/2023/11/10/m50-7km-wnw-of-las-matas-de-santa-cruz-dominican-republic)

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### **3 IMPACTS**

At the time of writing this report, there was no available information on damage or loss in Haiti due to this earthquake.

According to the USGS “*Did You Feel It?*” online tool<sup>4</sup>, 6 persons in Dominican Republic, within a radius of 40 km (24.85 mi) from the epicentre reported the earthquake as being at the level of “light/moderate shaking with no damage” (Mercalli intensity: III-V), there was no other report in this online tool by people in Haiti.

### **4 TRIGGER POTENTIAL**

The modelled loss computed for Haiti using the SPHERA EQ model is US\$60,095.04. This modelled loss is below the attachment point of Haiti’s Earthquake policy, and therefore no payout is due.

The Aggregated Deductible Cover (ADC) policy feature for the EQ policy was not activated because the modelled loss was lower than 10% of the minimum payment.

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: 10 November 2023, available at: [M 5.0 - 7 km WNW of Las Matas de Santa Cruz, Dominican Republic \(usgs.gov\)](#)

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