



# Haiti

## Earthquake

**15 August 2021**

## Final Event Briefing

**25 August 2021**

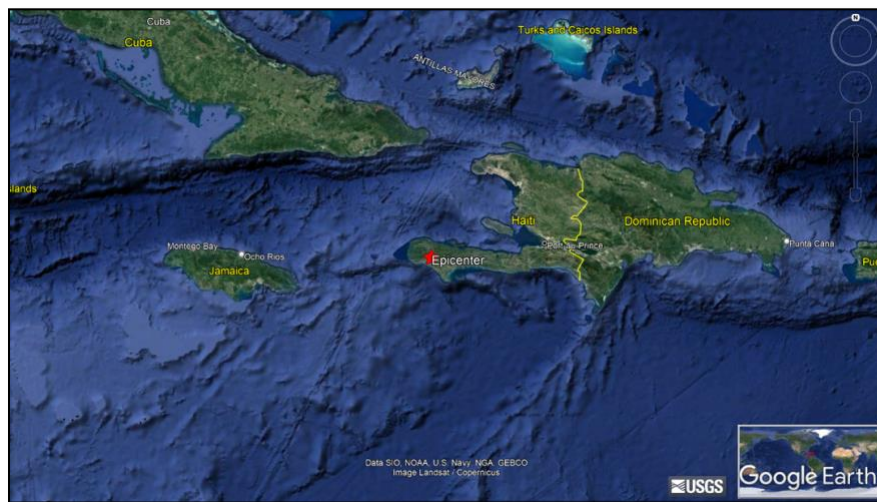
## 1 INTRODUCTION

A magnitude 5.8 earthquake occurred at 03:20:45 (UTC) on 15 August 2021, 12.8 km (8 mi) NNE of Chardonnière, Haiti; 42.2 km (26.2 mi) WNW of Les Cayes, Haiti and 106.9 km (66.4 mi) W of Miragoâne, Haiti. Estimates from the United States Geological Survey (USGS) located the epicentre of the event at 18.371°N, 74.099°W, and at a depth of 12.0 km (19.3 mi) – Figure 1. Haiti was the only CCRIF member country with an earthquake policy, where peak ground acceleration, computed with the CCRIF SPHERA model, was greater than 0.01 g following the magnitude 5.8 earthquake.

Final runs of the CCRIF loss model for peak ground acceleration produced government losses for Haiti, 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 there was no declaration of a Disaster alert for Haiti by ReliefWeb due to magnitude 5.8 earthquake. Therefore, no payment under the ADC feature is due for Haiti.

This event briefing is designed to review the modelled losses due to peak ground acceleration from the magnitude 5.8 earthquake event calculated by CCRIF’s SPHERA model for Haiti, to be analyzed with respect to the country’s earthquake policy. As reported in a separate event briefing that addressed loss and damages from the magnitude 7.2 earthquake that occurred in Haiti on 14 August 2021, Haiti experienced heavy peak ground accelerations from the magnitude 7.2 earthquake event. For that earthquake, the CCRIF earthquake loss model produced losses above the attachment point of Haiti’s earthquake policy and payment of US\$39,953,272.00 was due under the earthquake policy.



**Figure 1** Information from the Earthquake Hazards Program of the United States Geological Survey regarding the magnitude 5.8 earthquake event on 15 August 2021 at 03:20:45 UTC. Source: USGS<sup>1</sup>

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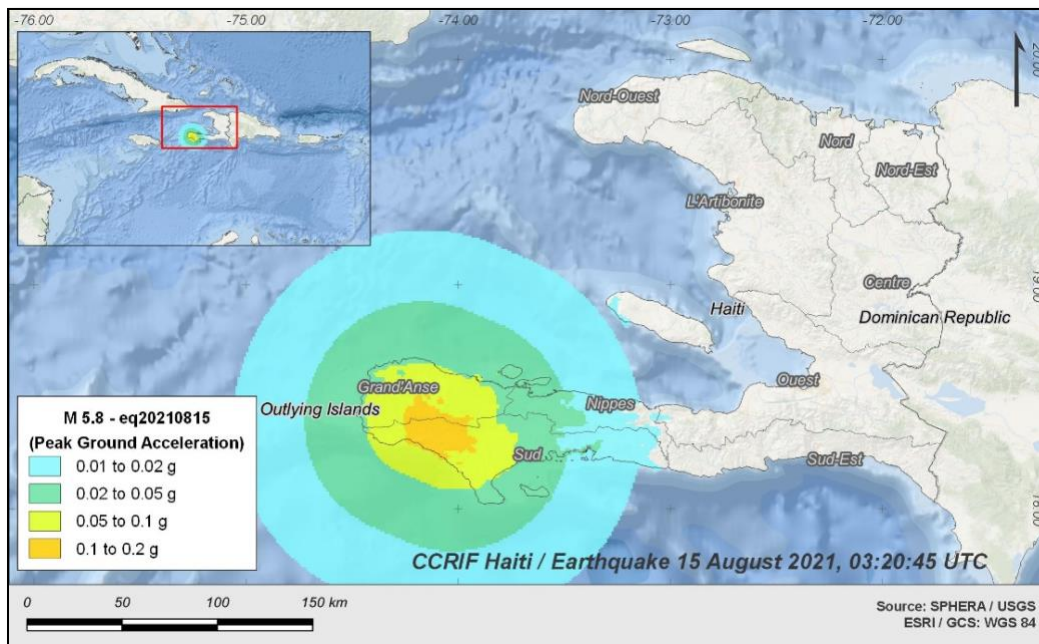
<sup>1</sup> Download Event KML, United States Geological Survey, review date: 25 August 2021, available at: <https://earthquake.usgs.gov/earthquakes/eventpage/us6000f6ez/executive>

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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 5.8 earthquake, peak ground accelerations between 0.01 g and 0.14 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 affected following the magnitude 5.8 earthquake.



**Figure 2** Map showing the peak ground acceleration in Haiti computed using SPHERA model following the magnitude 5.8 earthquake<sup>2</sup> on 15 August at 03:20:45 UTC. Source: *USGS & CCRIF SPHERA EQ Model*.

## 3 IMPACTS

It is difficult to evaluate the impacts of magnitude 5.8 earthquake and to differentiate those from the impacts of the magnitude 7.2 earthquake which occurred on August 14, 2021. The magnitude 7.2 earthquake resulted in extensive destruction in south-western Haiti as reported by authorities in Haiti.

Days after the occurrence of the magnitude 5.8 earthquake, approximately 2,200 deaths were reported and at least 135,000 buildings were damaged or destroyed, as a result of the magnitude 7.2 earthquake that occurred the previous day.

<sup>2</sup> USGS, review date: 25 August 2021, available at: [‘M 5.8 - 12 km NNE of Chardonnière, Haiti’](#)

## **4 TRIGGER POTENTIAL**

Final runs of the CCRIF loss model for peak ground acceleration produced government losses for Haiti, 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 there was no declaration of a Disaster alert for Haiti by ReliefWeb due to magnitude 5.8 earthquake. Therefore, no payment under the ADC feature is due for Haiti.

CCRIF expresses sympathy with the Government and people of Haiti for the loss of life and impacts on communities and infrastructure at this vulnerable time as they recover from the two earthquakes.

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