CCRIF SPC
The Caribbean Catastrophe Risk Insurance Facility

Jamaica

Earthquake

30 October 2023

Final Event Briefing

10 November 2023

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1 INTRODUCTION

A magnitude 5.4 earthquake occurred at 15:57:20 (UTC) on 30 October 2023, 4.4 km (2.7 mi) ESE of Hope Bay, Portland, Jamaica; 16.7 km (10.4 mi) ESE of Port Antonio, Portland, Jamaica and 26.6 km (16.5 mi) SW of Constant Spring, St. Andrew, Jamaica. Initial estimates from the United States Geological Survey (USGS) located the epicentre of the event at 18.190°N, 76.607°W, and at a depth of 10 km (6.21 mi), Figure 1.

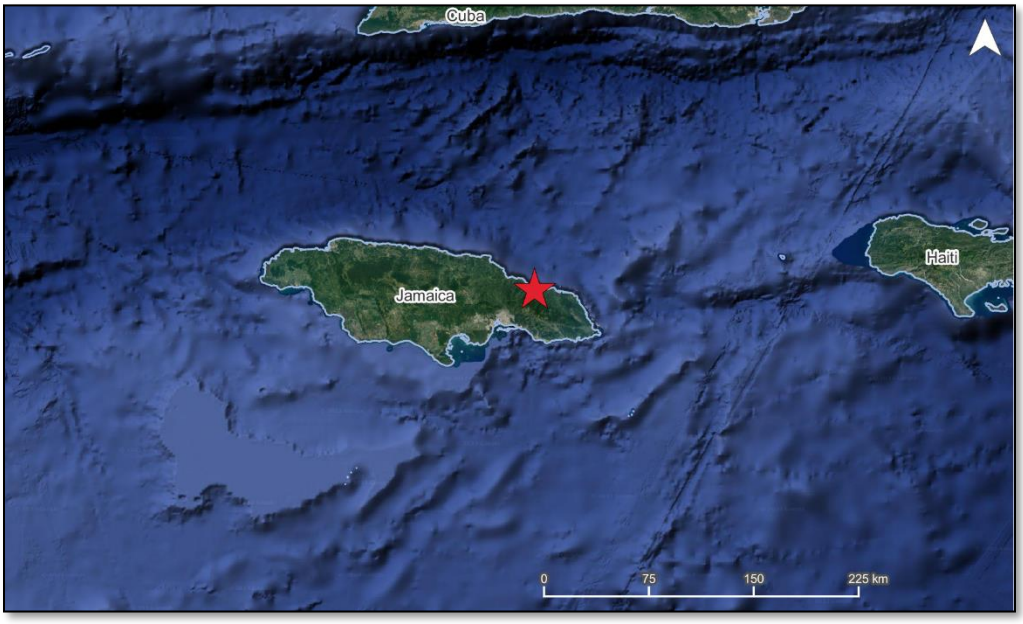

Figure 1 Information from the Earthquake Hazards Program of the United States Geological Survey regarding the earthquake event on 30 October 2023 at 15:57:20 UTC. Source: USGS[1]

Jamaica was the only CCRIF member country where peak ground acceleration, computed with the SPHERA[2] earthquake (EQ) model, was greater than 0.03 g for this earthquake.

The modelled loss computed for Jamaica using the SPHERA EQ model is US$993,985.37. This modelled loss is below the attachment point of Jamaica's Earthquake policy, and therefore no payout is due.

The Aggregated Deductible Cover (ADC) policy feature for the EQ policy was not activated because, even though the modelled loss was greater than 10% of the minimum payment and less than 50% of the Attachment Point, at the time of issuing this final report, a Disaster Alert was not issued by ReliefWeb for this earthquake for Jamaica.[3]

[1] Download Event KML, United States Geological Survey, review date: 9 November 2023, available at: https://earthquake.usgs.gov/earthquakes/feed/v1.0/detail/us7000l7jv.kml

[2] System for Probabilistic Hazard Evaluation and Risk Assessment.

[3] The ADC would be activated if the modelled loss is greater than 10% of the minimum payment, and less than 50% of the Attachment Point and a Disaster Alert is issued for this earthquake within 7 days,

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 the magnitude 5.4 earthquake, peak ground accelerations of up to 0.2 g were estimated in Jamaica. The peak ground acceleration footprint is the output from the CCRIF SPHERA EQ model. Figure 2 shows the regions in Jamaica that were affected following the magnitude 5.4 earthquake.

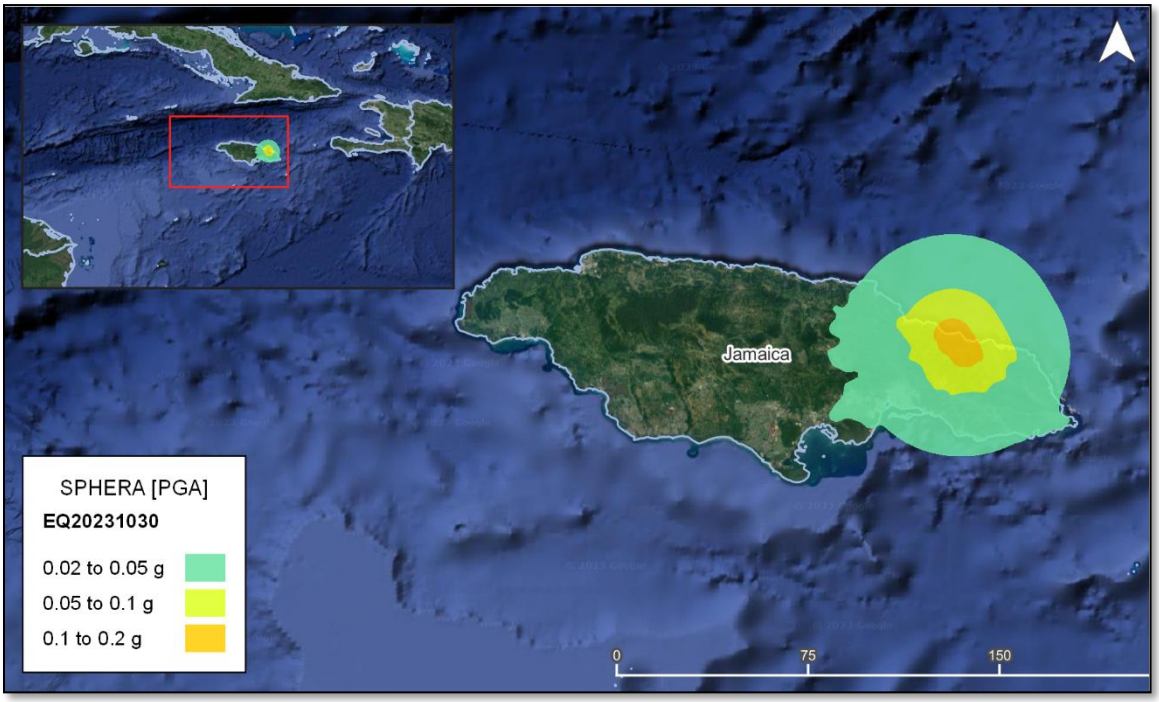

Figure 2 Map showing the peak ground acceleration in Jamaica computed using the SPHERA model following the magnitude 5.4 earthquake[4] on 30 October, 2023.
Source: *USGS & CCRIF SPHERA EQ Model*.

[4] United States Geological Survey (USGS), review date: 9 November 2023, available at: M 5.4 - 4 km WNW of Hope Bay, Jamaica (usgs.gov)

3 IMPACTS

At the time of writing this report, there was no available information on damage or loss in Jamaica due to this earthquake. According to local news, the Prime Minister said no deaths, injuries, or severe damage had been reported.[5] The tremor shook some buildings causing items to fall off shelves in grocery stores and some minor damage to buildings was reported.

According to the USGS "*Did You Feel It?*" online tool[6], 1 person in Hope Bay within a radius of 10 km (6.21 mi) from the epicentre reported the earthquake as being at the level of "a severe shaking with moderate damage" (Mercalli intensity: VIII); 48 persons in Saint Andrew within a radius of 33 km (20.5 mi) from the epicentre reported the earthquake as being "light to moderate shaking with strong damage" (Mercalli intensities: V – VI); 28 persons in Saint Catherine and Saint Ann within a radius of 70 km (43.46 mi) from the epicentre, felt the earthquake as "light to moderate shaking with very light damage" (Mercalli intensities: III – V); another 23 people felt the shake in other localities in Jamaica far away from the epicentre (more than 80 km – 49.70 mi).

4 TRIGGER POTENTIAL

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

[5] No damage as 5.4 magnitude earthquake shakes Jamaica | The Canberra Times | Canberra, ACT

[6] Did You Feel It?, United States Geological Survey, review date: 30 October 2023, available at: M 5.4 - 4 km WNW of Hope Bay, Jamaica (usgs.gov)