



Dominica

Earthquake

16 April 2023

Preliminary Event Briefing

17 April 2023

1 INTRODUCTION

A magnitude 5.1 earthquake occurred at 11:22:21 (UTC) on 16 April 2023, 31.9 km (19.8 mi) S of Saint Andrew, Dominica; 3.5 km (2.2 mi) NNW of Grand-Bourg, Guadeloupe and 34.9 km (21.7 mi) NW of Capesterre-Belle-Eau, Guadeloupe. Initial estimates from the United States Geological Survey (USGS) located the epicentre of the event at 15.853°N, 61.306°W, and at a depth of 104.1 km (64.68 mi) – Figure 1.

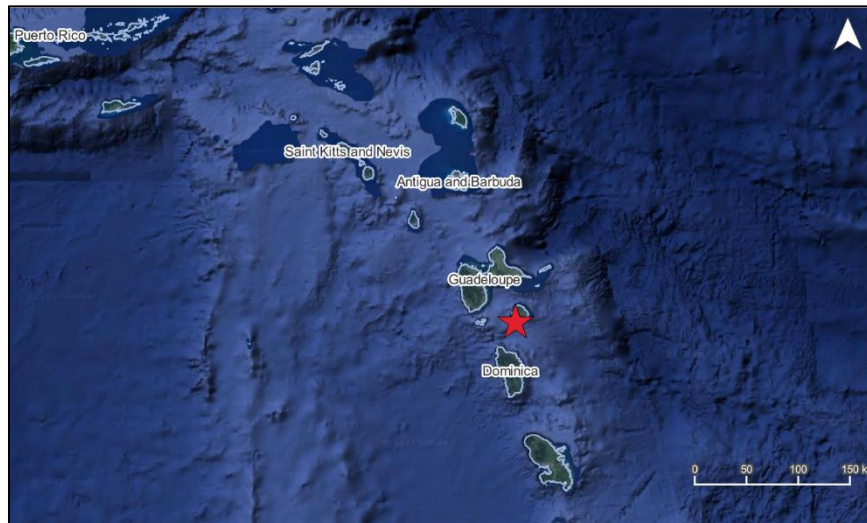


Figure 1 Information from the Earthquake Hazards Program of the United States Geological Survey regarding the earthquake event on 16 April 2023 at 11:22:21 (UTC). Source: USGS¹

Dominica was the only CCRIF member country where peak ground acceleration, computed with the SPHERA model, was greater than 0.01 g for this earthquake.

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

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 this earthquake, peak ground acceleration of up to 0.02 g was estimated in Dominica (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: 16 April 2023, available at: <https://earthquake.usgs.gov/earthquakes/feed/v1.0/detail/us6000k4vv.kml>

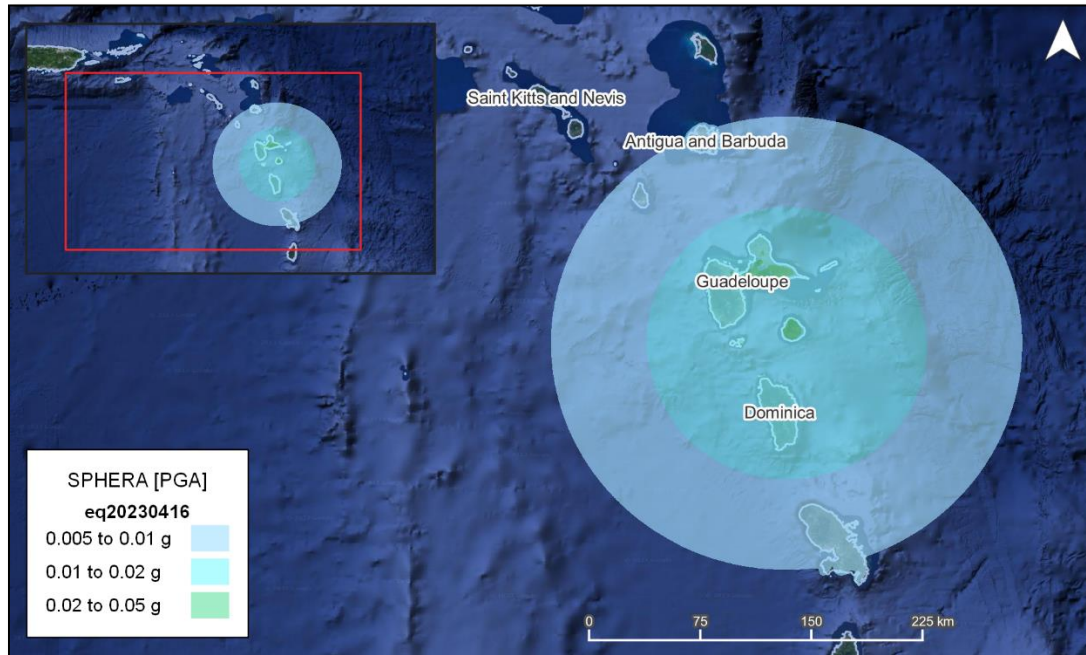


Figure 2 Map showing the peak ground acceleration in Dominica computed using the SPHERA model following the magnitude 5.1 earthquake² on 16 April 2023 at 11:22:21 UTC
Source: *USGS & CCRIF SPHERA EQ Model.*

3 IMPACTS

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

According to the USGS “Did You Feel It?” online tool, 3 persons in Dominica within a radius of 105 km (65.24 mi) from epicentre reported the earthquake as being a “weak shake with no damage” (Mercalli intensity: II-III); 6 persons in Guadeloupe in a distance greater than 105km (65.24 mi) from epicentre reported the earthquake also as “weak shake 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 Dominica. Therefore, no payout is due under this country’s earthquake policy.

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

² United States Geological Survey (USGS), review date: 16 April 2023, available at: [M 5.1 - 3 km SSE of Grand-Bourg, Guadeloupe \(usgs.gov\)](https://www.usgs.gov/locations/global/hazards/earthquake-hazards/m 5.1 - 3 km SSE of Grand-Bourg, Guadeloupe (usgs.gov))
