



Leeward Islands

Earthquake

20 January 2023

Final Event Briefing

20 January 2023

1 INTRODUCTION

A magnitude 6.2 earthquake occurred at 11:23:41 (UTC) on 20 January 2023, 116 km (72.09 mi) SSW of Saint John's, Antigua and Barbuda; 122.82 km (76.32 mi) SSE of Charleston, Saint Kitts and Nevis and 95.7 km (59.5 mi) SE of Portsmouth, Dominica. Final estimates from the United States Geological Survey (USGS) located the epicentre of the event at 16.131°N, 62.156°W, and at a depth of 166.4 km (103.39 mi) – Figure 1.

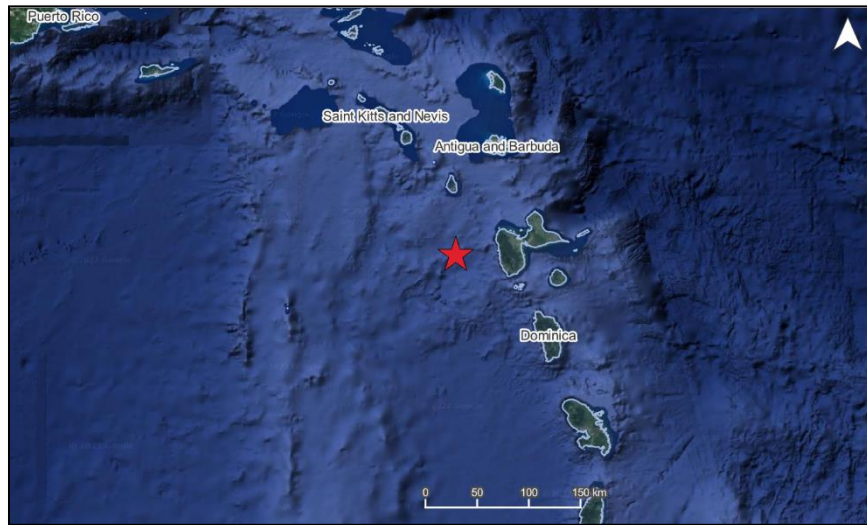


Figure 1 Information from the Earthquake Hazards Program of the United States Geological Survey regarding the earthquake event on 20 January 2023 at 11:23:41 (UTC). Source: USGS¹

Antigua and Barbuda, Saint Kitts and Nevis and Dominica were the only CCRIF member countries where peak ground acceleration, computed with the SPHERA model, was greater than 0.01 g for this earthquake.

Final runs of CCRIF's loss model estimated no government losses for these countries and therefore no payouts are due under countries' earthquake policies.

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 0.020 g was estimated in Antigua and Barbuda, Saint Kitts and Nevis and 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: 20 January 2023, available at: <https://earthquake.usgs.gov/earthquakes/feed/v1.0/detail/us7000j5sc.kml>

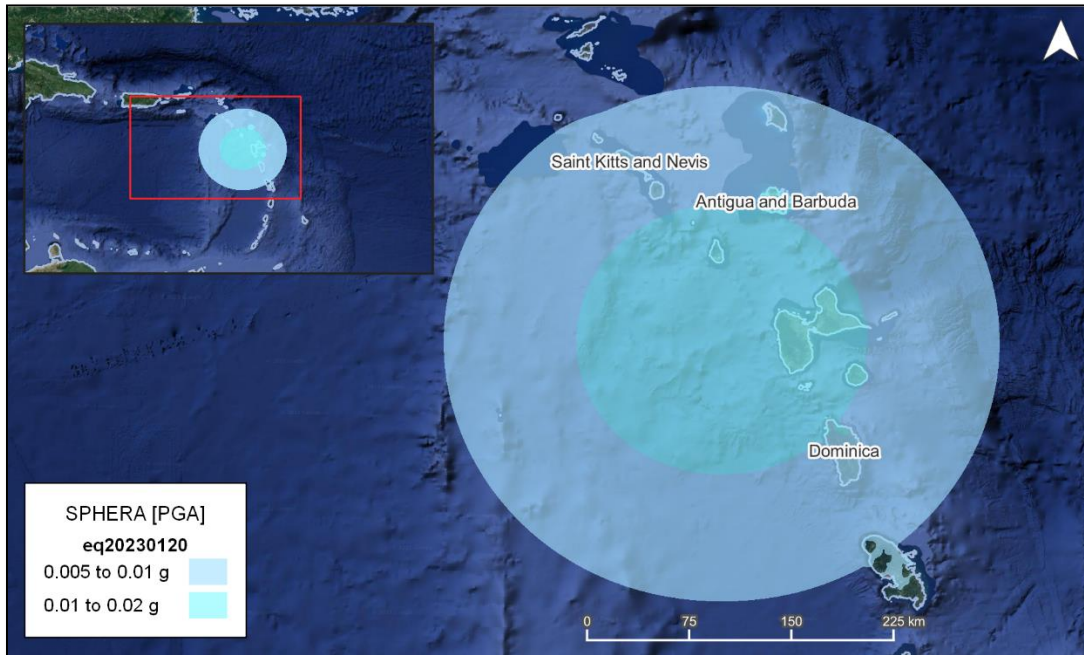


Figure 2 Map showing the peak ground acceleration in Leeward Islands computed using the SPHERA model following the magnitude 6.2 earthquake² on 20 January at 11:23:41 UTC
Source: *USGS & CCRIF SPHERA EQ Model.*

3 IMPACTS

At the time of writing this report, there was no available information on damage or loss in Antigua and Barbuda, Saint Kitts and Nevis or Dominica due to this earthquake.

4 TRIGGER POTENTIAL

Final runs of the CCRIF loss model for peak ground acceleration produced no government losses for Antigua and Barbuda, Saint Kitts and Nevis or Dominica. Therefore, no payouts are due under countries' earthquake policies.

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

² United States Geological Survey (USGS), review date: 31 January 2023, available at: [M 6.2 - 40 km WSW of Pointe-Noire, Guadeloupe \(usgs.gov\)](https://www.usgs.gov/locations/global/hazards/earthquake-hazards/m6.2-40-km-wsw-of-pointe-noire-guadeloupe)
