



Tropical Cyclone Bonnie (AAL022022)

Wind and Storm Surge

Final Event Briefing

Trinidad and Tobago - Trinidad

9 July 2022

1 SUMMARY

Tropical Cyclone Bonnie was the second Tropical Cyclone of the 2022 Atlantic Hurricane Season. On June 28 and 29 the storm system had not yet been designated by NOAA as a tropical cyclone when it passed over Trinidad. However, at that time its maximum sustained winds were higher than 39 mph, which is the condition for a storm system qualifying as a CCRIF Tropical Cyclone Event (these conditions did not extend over Tobago), and therefore this event briefing report is issued for Trinidad.

The final runs of the CCRIF loss model for wind and storm surge produced government losses for Trinidad, which were below the attachment point of Trinidad and Tobago's Tropical Cyclone policy for Trinidad. Therefore, no payout under the underlying policy is due.

The Aggregated Deductible Cover (ADC) feature for the Tropical Cyclone policy for Trinidad was not activated. While the modelled loss amount was between 10% of the Minimum Payment and 50% of the Policy Attachment Point, at the time of issuing this final event briefing, a disaster alert was not reported by ReliefWeb for this storm. Therefore, no payment under the ADC feature is due for Trinidad.

This event briefing is designed to review the modelled losses due to wind and storm surge calculated by CCRIF's models for affected CCRIF member countries, to be analyzed with respect to members' Tropical Cyclone policies. Trinidad and Tobago was one of the CCRIF member countries for which the CCRIF loss model for wind and storm surge produced government losses due to Tropical Cyclone Bonnie (for the island of Trinidad). A separate report on rainfall impacts on affected CCRIF member countries will be issued if applicable.

2 INTRODUCTION

On 28 June at 2100 UTC, the US National Hurricane Center (NHC) reported that a tropical disturbance was located about 200 km (124 mi) east of Trinidad near latitude 10.1° North, longitude 59.5° West and heading west at 39 km/h (24 mph), with estimated maximum sustained winds of 64 km/h (40 mph) and minimum central pressure of 1009 mb. The disturbance presented strong convection with some banding features over the northern portion of the system. However, the system lacked a closed circulation.

On 29 June at 0000 UTC, the potential tropical cyclone was located near latitude 10.4° North, longitude 61.0° West, about 15 km (9.3 mi) east of Trinidad (Figure 1) with estimated maximum sustained winds of 65 km/h (40 mph) and minimum central pressure of 1009 mb. Tropical-storm-force winds extended outward up to 95 km (59 mi) from the centre. At 0300 UTC satellite imagery suggested that the tropical disturbance was slowly getting better organized, with gradually increasing convective banding in the northern semicircle. However, surface observations from Trinidad, Tobago, and Grenada indicated that the system had not yet developed a closed circulation. The potential tropical cyclone was located 175 km (108.7 mi)

west-northwest of Trinidad at latitude 10.9° North and longitude 62.8° West, with unchanged maximum sustained winds and the minimum central pressure slightly increased (1011 mb).

On July 1, at 1315 UTC the NHC reported that the potential tropical cyclone became a tropical storm, with the name of Bonnie, over the southwestern Caribbean Sea near latitude 11.2° North, longitude 80.5° West, with maximum winds of 40 mph (65 km/h).

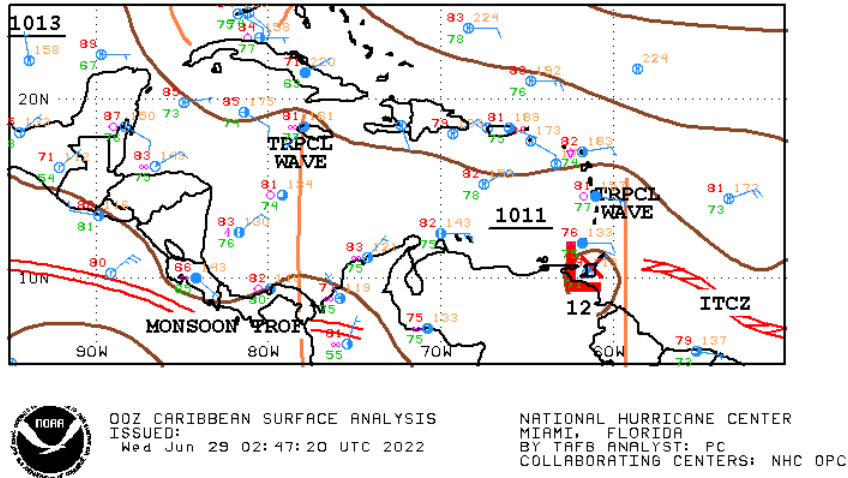
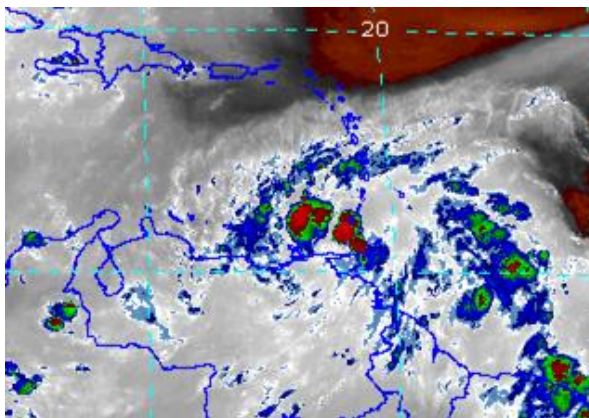


Figure 1 Surface analysis over the Caribbean area on 29 June at 0000 UTC. Source: US National Hurricane Center¹



29 June at 0210 UTC

Figure 2 Satellite imagery on 29 June at 0210UTC from thermal infrared channel enhanced with colour. Blue/green colours represent high altitude clouds (top cloud temperature between -50°C and -70°C), while the red/yellow colours represent very high altitude clouds (top cloud lower than -70°C). High altitude clouds indicate strong convection associated with intense precipitation. Source: NOAA, National Environmental Satellite, Data and Information Service².

¹ National Oceanic and Atmospheric Administration - FTP, National Hurricane Center, review dates: 29 June 2022, available at: https://www.nhc.noaa.gov/tafb/CAR_00Z.gif

² RAMSDIS Online Archive, NOAA Satellite and Information Service, available at: https://rammb.cira.colostate.edu/ramsdgis/online/images/rmtc/rmtcnhir38/rmtcnhir38_20220629021020.gif

3 CCRIF SPC MODEL OUTPUTS

Under CCRIF’s loss calculation protocol, a CCRIF System for Probabilistic Hazard Evaluation and Risk Assessment (SPHERA) report is required for any tropical cyclone affecting at least one member country with winds greater than 39 mph (62.7 km/h). Trinidad and Tobago was affected by Tropical Cyclone Bonnie, which qualified as a Loss Event³ for Trinidad. In the case of Tobago, model wind speeds were below 39 mph (62.7 km/h) and the estimated model loss was zero, therefore it didn’t qualified as a Tropical Cyclone event for Tobago.

The wind footprint and surge field are two of the outputs from the CCRIF model. Figure 3 shows the wind footprint for the regions affected by Tropical Cyclone Bonnie in Trinidad. Due to the relatively low wind speeds, storm surge was insignificant, and did not contribute to the damage. Therefore storm surge is not shown on the hazard map.

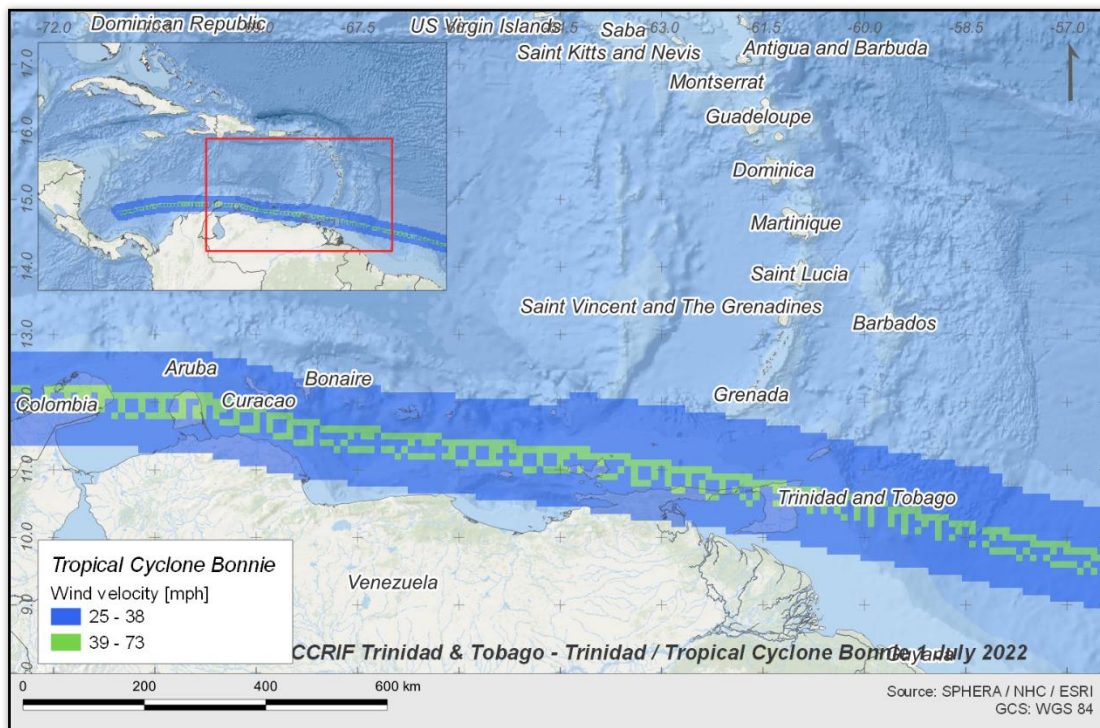


Figure 3 Map showing the wind field associated with Tropical Cyclone Bonnie in Trinidad and Tobago - Trinidad. Source: NHC & CCRIF/SPHERA

4 IMPACTS

At the time of this report, no information was available related to damage or loss in Trinidad due to the passing of the Tropical Cyclone Bonnie. In Trinidad and Tobago, for safety measures schools were closed, and many business, financial institutions and government offices were closed to allow employees to return home safely due to weather conditions. Certain domestic

³ Any Tropical Cyclone event which produces a modelled loss greater than zero in one or more policyholder countries.

and international flights were disrupted, and ferry sailings between Trinidad and Tobago were canceled.⁴

5 CCRIF LOSS MODEL

Final runs of the CCRIF loss model for wind and storm surge produced government losses for Trinidad, which were below the attachment point of the Trinidad and Tobago's tropical cyclone policy for Trinidad and therefore no payout under the policy is due.

Additionally, the Aggregate Deductible Cover was not activated. While the modelled loss amount was between 10% of the Minimum Payment and 50% of the Policy Attachment Point, at the time of issuing this final loss report, a disaster alert was not reported by ReliefWeb for this storm. For additional information, please contact CCRIF SPC at: pr@ccrif.org

⁴ Globalvoices.org – [The southern Caribbean prepares for a tropical storm](#)
