CCRIF SPC
The Caribbean Catastrophe Risk Insurance Facility

Tropical Cyclone Bret (AAL032023)

Final Event Briefing

Loss Event
COAST – TC Component

Saint Lucia

25 June 2023

Registered Office: CCRIF SPC c/o Sagicor Insurance Managers Ltd., 198 North Church Street
2nd Floor Sagicor House, P.O. Box 1087, Grand Cayman KY1-1102, Cayman Islands
Email: ccrif@ccrif.org | Website: ccrif.org | Twitter: @ccrif_pr | Facebook: CCRIF SPC

1 SUMMARY

Tropical Storm Bret was the third named tropical cyclone of the 2023 Atlantic Hurricane Season. On 22 and 23 June, Bret passed over Barbados and the Windward Islands.Tropical-storm-force winds spread over Barbados, Saint Lucia and Saint Vincent and the Grenadines. At the time of writing this report, Bret was about to pass north of Aruba, Bonaire and Curacao, and was expected to dissipate in a few hours.

This event briefing is designed to review the modelled losses due to wind and storm surge due to Bret, calculated by the TC component of CCRIF's fisheries model for Saint Lucia, to be analyzed with respect to its COAST policy. Saint Lucia was the only CCRIF member country for which the CCRIF fisheries loss model for wind and storm surge (i.e. the TC component) produced government losses due to Tropical Cyclone Bret. A separate report on Adverse Weather impacts (due to rain and high waves) on affected CCRIF member countries that have COAST policies will be issued if applicable.

The final runs of the CCRIF's COAST loss model for wind and storm surge produced losses for Saint Lucia under the TC component of the country's COAST policy. For this event, the losses were below the lower attachment point (the Tier 2 attachment point) of the TC component. Therefore, no payout is due under the TC component of the COAST policy for Saint Lucia.

2 INTRODUCTION

On 22 June at 1800 UTC, the US National Hurricane Center (NHC) reported that a Tropical Storm named Bret was located at about 140 mi (225 km) E-SE of Saint Lucia. Its centre was approximately sited near latitude 13.4° North, longitude 58.9° West. The minimum central pressure was 1,002 mb and the maximum sustained winds were estimated at 65 mph (100 km/h). The system moved towards the west with an estimated forward velocity of 14 mph (22 km/h).

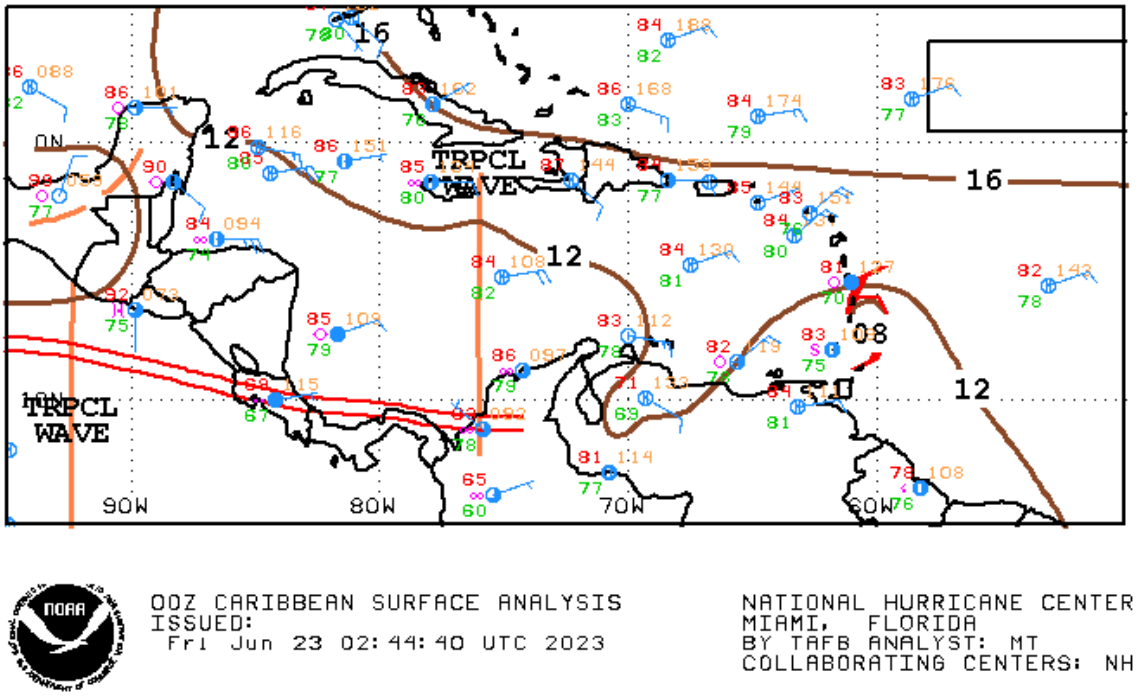
The intensity and features of Tropical Storm Bret were almost unchanged on 22 June at 2100 UTC, when tropical storm conditions spread across portions of the Windward Islands. Sustained tropical-storm-force winds was reported in Saint Lucia. The system centre was located about 100 mi (160 km) E-SE of Saint Lucia (13.4°N, 59.6°W). The maximum sustained winds were unvaried at near 65 mph (100 km/h) and the minimum central pressure was 1,002 mb. The system moved towards west with an estimated forward velocity of 16 mph (26 km/h). Radar data from Barbados and satellite images indicate that Bret was strongly sheared with deep convection mostly confined to the northeastern part of the circulation.

On 23 June at 0300 UTC the centre of Bret approached Saint Lucia. Its centre was approximately sited near latitude 13.3° North, longitude 61.1° West, at 35 mi (55 km) South of Saint Lucia. Tropical-storm-force winds extended outward up to 115 miles (185 km) from the centre. Tropical-storm conditions were also being reported from Martinique. Satellite imagery and radar data from Barbados indicated that the cyclone was losing organization due to increasing vertical wind shear,

with only minimal convection currently near the centre. The remainder of the convection was in bands and clusters well removed from the centre in the eastern semicircle. The maximum sustained winds were near 60 mph (95 km/h) and the minimum central pressure was 1,004 mb. The system moved towards the west with an estimated forward velocity of 18 mph (30 km/h).

Three hours later the centre of the Tropical storm passed at the west side of Saint Lucia. It was located at 13.4°N, 61.9°W at a distance of 65 mi (105 km) W-SW of Saint Lucia. Tropical-storm-force winds extended outward up to 115 miles (185 km) from the centre. Grantly Adams International Airport on Barbados reported a sustained wind of 44 mph (70 km/h) and a gust to 56 mph (91 km/h) in thunderstorm activity well to the east of Bret's centre. The intensity and features of Tropical Storm Bret were almost unchanged. The system moved towards west with the estimated forward velocity of 17 mph (28 km/h).

At the time of writing this report, Bret was about to pass north of Aruba, Bonaire and Curacao, and it was expected to dissipate within a few hours.



00Z CARIBBEAN SURFACE ANALYSIS
ISSUED:
Fri Jun 23 02:44:40 UTC 2023

NATIONAL HURRICANE CENTER
MIAMI, FLORIDA
BY TAFB ANALYST: MT
COLLABORATING CENTERS: NHC OPC

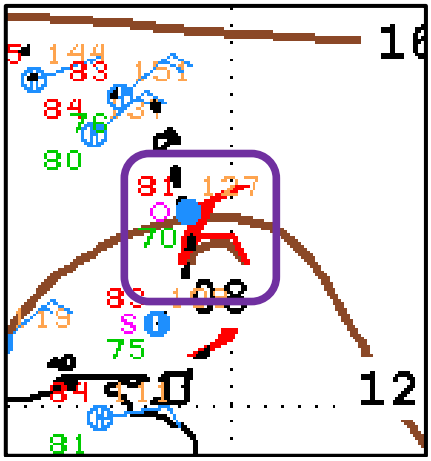


Figure 1 Surface analysis over the Caribbean area on 23 June at 0000UTC. Tropical Cyclone Bret was located over the Windward Islands. And the zoom image over Saint Lucia. Saint Lucia is surrounded by a violet square. Source: US National Hurricane Center[1]

[1]National Oceanic and Atmospheric Administration - FTP, National Hurricane Center, review date: 23 June 2023, available at: *https://www.nhc.noaa.gov/tafb/CAR_00Z.gif*

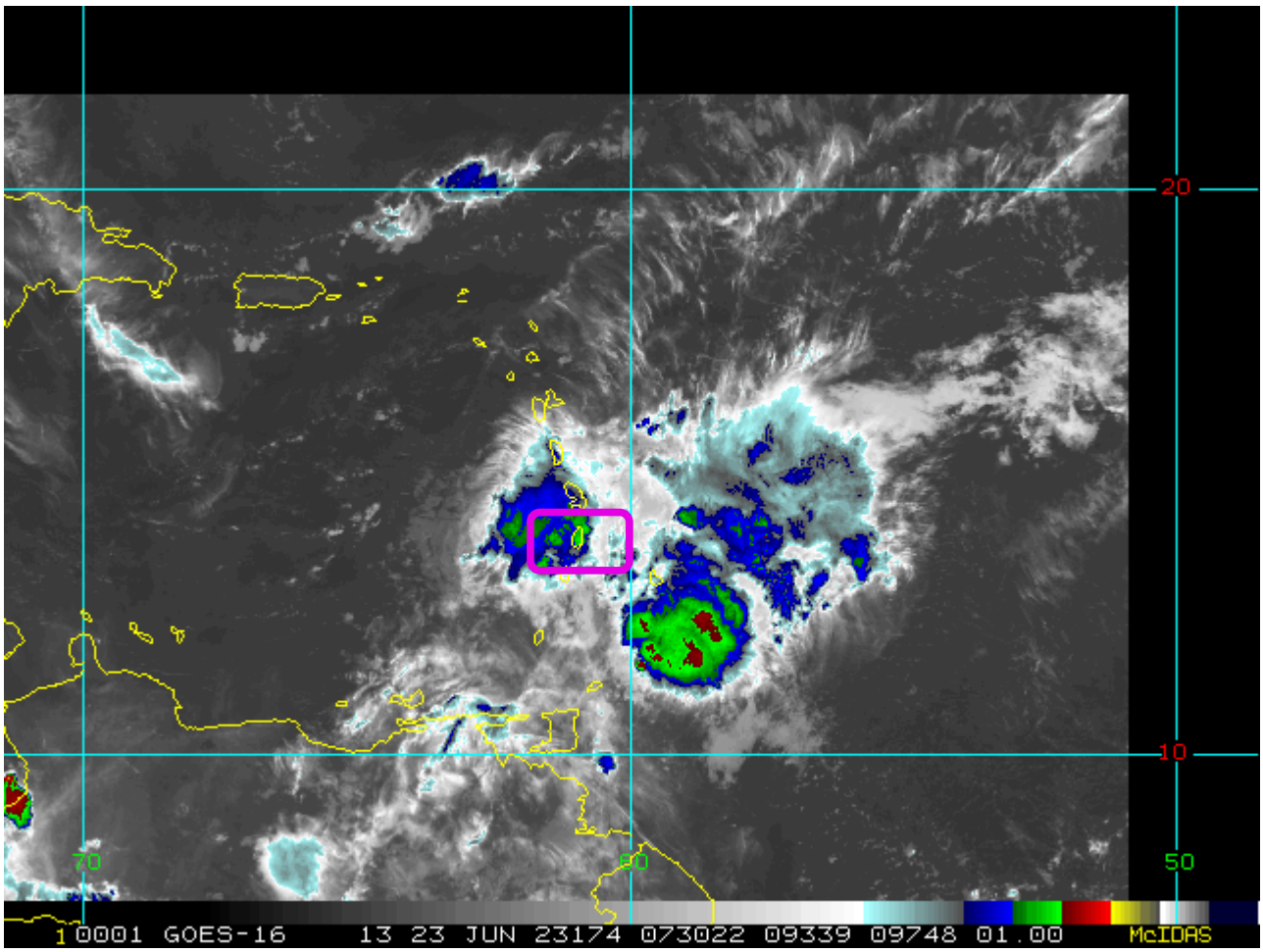


Figure 2 Satellite imagery on 23 June at 0730UTC from thermal infrared channel enhanced with colour. Blue/green colours represent high altitude clouds (top cloud temperature between -50°C and -70°C), while the red/yellow colours represent very high altitude clouds (top cloud lower than -70°C). High altitude clouds indicate strong convection associated with intense precipitation. Saint Lucia is surrounded by a violet square. Source: NOAA, National Environmental Satellite, Data and Information Service[2].

[2]RAMSDIS Online Archive, NOAA Satellite and Information Service, available at: https://rammb-data.cira.colostate.edu/tc_realtime/storm.asp?storm_identifier=al032023

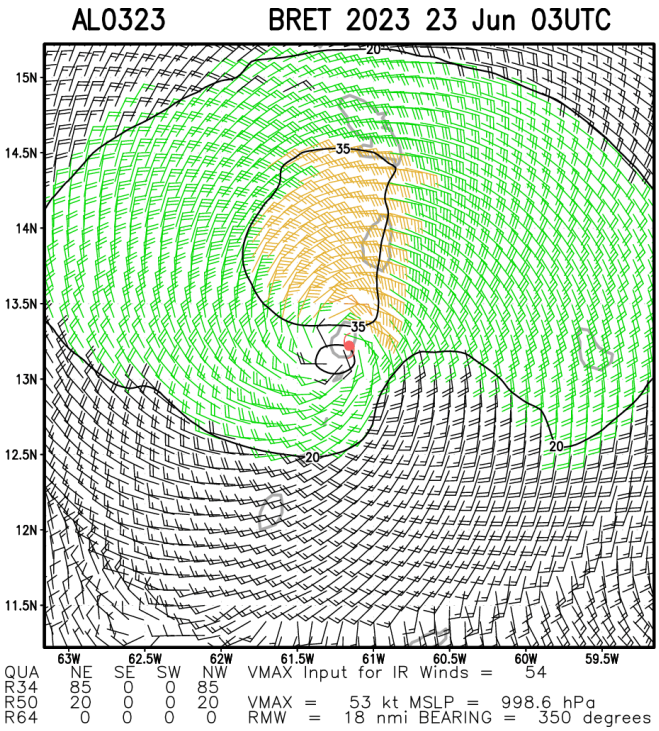


Figure 3 Multiplatform satellite based tropical cyclone surface wind analysis estimated on 23 June at 0300UTC. Contouring indicates wind intensity at 20 kn (23 mph, 37 km/h) and at 35 kn (40mph, 65km/h). Source: NOAA, National Environmental Satellite, Data and Information Service[3]

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). A COAST report is required for any CCRIF member country that has a COAST policy, which meets this criterion. Saint Lucia was affected by Tropical Cyclone Bret, which qualified as a Loss Event for the TC component of its COAST policy[4]. Figure 4 shows the wind footprint for the region affected by Tropical Cyclone Bret around this country.

[3]RAMSDIS Online Archive, NOAA Satellite and Information Service, available at: https://rammb-data.cira.colostate.edu/tc_realtime/storm.asp?storm_identifier=al032023

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

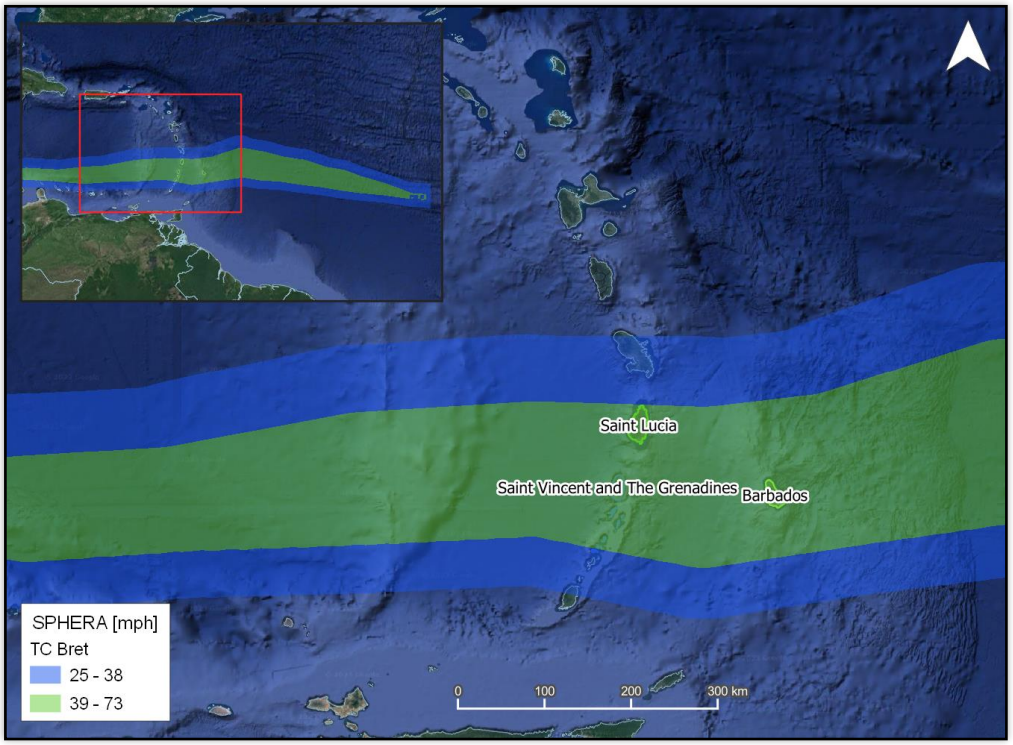


Figure 4 Map showing the wind field associated with Tropical Cyclone Bret around Saint Lucia
Source: NHC & CCRIF/SPHERA

4 IMPACTS

Heavy rains and strong winds affected Saint Lucia. TC Bret downed power lines, flattened banana crops, damage roofs, caused flooding and mudslides in some communities. So far there has been no report of impact in the fisheries sector.

5 CCRIF LOSS MODEL

The final runs of the CCRIF Fisheries model using the input data downloaded from the National Hurricane Center on 23 June 2023, demonstrated that the event qualifies as a Loss Event for the Tropical Cyclone (TC) component of Saint Lucia's COAST policy. However, the losses were below the lower attachment point (the Tier 2 attachment point) of the TC component. Therefore, no payout is due under the TC component of the COAST policy for Saint Lucia.

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