



Tropical Cyclone Danny (23-24 August 2015)

Excess Rainfall

Event Briefing

31 August 2015

1 INTRODUCTION

The remnants of TC Danny (AL042015) caused heavy rainfall over the island of Dominica with areas receiving nearly 2 inches (50 mm) of rain in a short period on Monday 24 August, 2015. Antigua and Barbuda, Dominica and St. Kitts and Nevis were the only CCRIF member countries with Excess Rainfall policies¹ that were affected by Danny. However, a Covered Area Rainfall Event (CARE) was only triggered in Dominica, where approximately 80% of the country's area received excess rainfall.

The Caribbean Rainfall Model indicated that a CARE was generated in Dominica starting on 23 August 2015 and ending on 24 August 2015. The Rainfall Index Losses calculated for this CARE did not exceed the attachment point on Dominica's Excess Rainfall policy and therefore no payout is due.

2 IMPACTS

National Disaster Coordinator at Dominica's Office of Disaster Management (ODM), Mr. Don Corriette, stated that the country saw "moderate to heavy rainfall and thunderstorms" in the early hours of the morning of 24 August 2015 as a result of Danny. He reported that there were rock falls in Massacre, Tarreau and Colihaut. The rock fall in the vicinity of Dan's Pharmacy in Massacre partially blocked the road following adverse weather conditions associated with Danny. However, there were no reports of damage or major landslides.²

3 DAILY MODEL RAINFALL DATA

The rainfall measured by the Caribbean Rainfall Model (operated by Kinetic Analysis Corporation (KAC)) from 23 to 24 August 2015 in Dominica, was concentrated near the centre of the island, northeast of Morne Trois peak with maximum accumulated rainfall of 247.51 mm over the two days. This area drains into the following communities: Canefield, Campbell, Saint Sauveur, Good Hope, Castle Bruce, Mahut, Laudat and the capital Roseau. In addition, the model shows significant precipitation between Morne Turner and Morne Les Resources Peaks, which drains into Portsmouth, Picard and Glanville.

At the time of this report, Dominica's Meteorological Services had not officially released information regarding recorded rainfall associated with Danny.

¹ Twelve member countries have purchased Excess Rainfall policies. These are: Anguilla, Antigua and Barbuda, The Bahamas, Barbados, Dominica, Grenada, Haiti, Jamaica, Saint Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines and Turks and Caicos.

² <http://dominicanewsonline.com/news/homepage/news/general/large-rock-fall-reported-in-massacre/>

Figure 1 shows the accumulated rainfall over Dominica from 23 to 24 August 2015.

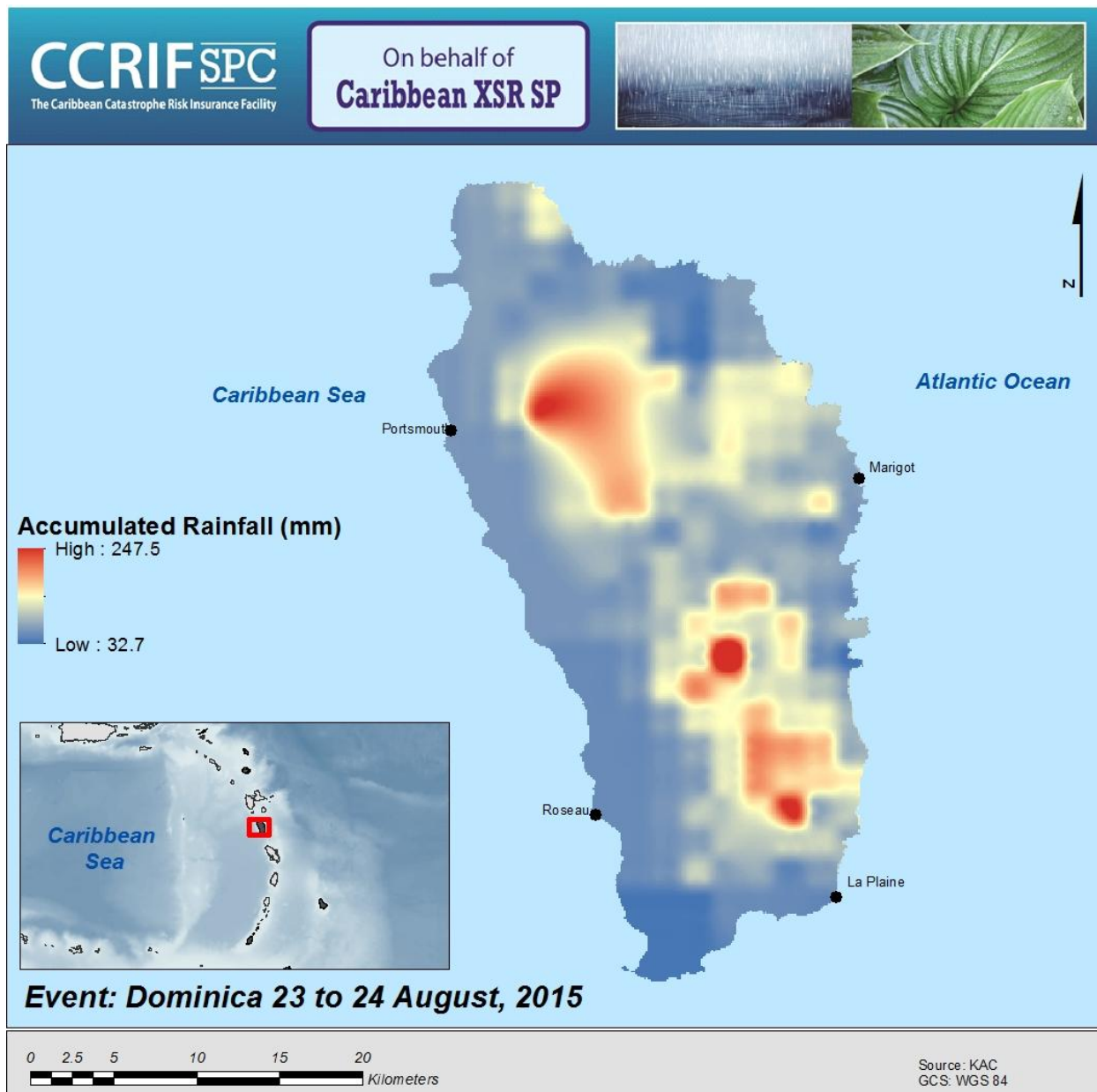


Figure 1 Map showing accumulated rainfall in Dominica, 23 to 24 August 2015

3 RAINFALL MODEL OUTPUTS

The Caribbean Rainfall Model uses a 2-day running aggregate of rainfall measurements for Dominica as a basis for determining Rainfall Index Losses, meaning that the rainfall attributed to a particular day is the total sum of the rainfall on that day itself and the following day.

For the CARE in Dominica, the Caribbean Rainfall Model produced Maximum Aggregate Rainfall of 247.51 mm on 23 August (this includes daily rainfall measurements from 23 to 24 August). The maximum number of ongoing excess rainfall Grid Cell Events (GCEs) was 615 (Dominica's full complement is 772).

4 TRIGGER POTENTIAL

The number of ongoing GCEs in Dominica exceeded the required threshold (579) to trigger the CARE on 23 August and fell below the threshold on 25 August.

It must be noted that a CARE in Dominica is not considered complete until the Aggregate Rainfall in each XSR Grid Cell that had an ongoing GCE that contributed to the CARE has fallen below 50 mm for at least 1 day. In this instance, the CARE and its contributing GCEs ended on 24 August.

The Rainfall Index Losses calculated for Dominica's CARE did not exceed the attachment point on its Excess Rainfall policy and therefore no payout is due.

For further information, please contact Caribbean Risk Managers Ltd., the CCRIF SPC Facility Supervisor.

Caribbean Risk Managers Ltd.
Haggatt Hall
St. Michael
BB11059, Barbados
Tel: +1 (246) 426-1525
Fax +1 (246) 426-1704
ccrif@ccrif.org

DEFINITIONS

- Active Percentage*** The percentage of the total number of XSR Grid Cells, within the Covered Area of the Insured, in which an XSR Grid Cell Event must be occurring to trigger a Covered Area Rainfall Event. The Active Percentage is defined in the Schedule.
- Aggregate Rainfall*** The value of Aggregate Rainfall (where the number of days in the aggregation period is defined in the Schedule), as measured in millimetres (mm), using the XSR Precipitation Data over the Covered Area and evaluated by the Calculation Agent as part of the Rainfall Index Loss Calculation Methodology. For a given day:
- (a) 2-day aggregate - the total sum of rainfall on the day itself, and the day after; or
 - (b) 3-day aggregate - the total sum of rainfall on the day itself, and the two following days.
- Caribbean Rainfall Model*** The computer model used to calculate the XSR Grid Cell Event Loss and the Rainfall Index Loss.
- Covered Area Rainfall Event*** Any continuous period of days during which the number of XSR Grid Cell Events is greater than or equal to the product of (a) Active Percentage multiplied by (b) the total number of XSR Grid Cells within the Covered Area.
- Covered Area*** The territory of the Insured as represented in the Caribbean Rainfall Model.
- XSR Grid Cell (grid cell)*** The 30 arc-second by 30 arc-second grid of cells each of which is attributed with an exposure value and, for those with exposure value greater than zero, to which an Aggregate Rainfall Amount is attributed each day.
- XSR Grid Cell Event (cell event)*** Any continuous period of days during which the Aggregate Rainfall value equals or exceeds the Rainfall Event Threshold in an XSR Grid Cell. For Covered Areas that have 3-day aggregation periods, an XSR Grid Cell Event is only considered to be over once there have been two or

more consecutive days where the Aggregate Rainfall does not exceed the Rainfall Event Threshold.

Maximum Aggregate Rainfall

The highest Aggregate Rainfall amount during an XSR Grid Cell Event for each iTRMM Grid Cell in which there is an XSR Grid Cell Event.

Rainfall Event Threshold

Aggregate Rainfall level which, when exceeded, starts an XSR Grid Cell Event.

Rainfall Index Loss

For any Covered Area Rainfall Event affecting the Insured, the US Dollar loss calculated by the Calculation Agent using the Caribbean Rainfall Model.