Covered Area Rainfall Events (10/10/2025 to 12/10/2025)

Excess Rainfall

Event Briefing

Antigua and Barbuda

21 October 2025

Registered Office: c/o Willis Towers Watson Management (Cayman) Limited, The White House (c/o Regus), 20 Genesis Close, George Town, P.O. Box 30600, Grand Cayman, KY1-1203, Cayman Islands
Email: ccrif@ccrif.org | **Website:** www.ccrif.org

1 INTRODUCTION

This event briefing describes the impact of rainfall on Antigua and Barbuda which was associated with a Covered Area Rainfall Event (CARE) that started on 8 October and ended on 9 October 2025. The Rainfall Index Loss (RIL) for the Covered Area Rainfall Event was below the attachment point of Antigua and Barbuda's Excess Rainfall policy, and therefore no payout is due to the Government of Antigua and Barbuda. This CARE did not activate the Wet Season Trigger[1] or Localized Event Trigger[2] endorsement of Antigua and Barbuda's Excess Rainfall policy and therefore no payout under either of these endorsements is due.

2 EVENT DESCRIPTION

On 8 October 2025, the passage of a tropical wave over the eastern Caribbean Sea brought unsettled weather to the northern Leeward Islands. In particular, during the early hours of the day, a strong thunderstorm developed over Anguilla and extended eastward, primarily affecting Barbuda and, to a lesser extent, Antigua. Moderate to locally intense rainfall was reported from around 0900 UTC, lasting for approximately three hours.

On 9 October, no significant convective activity was observed over the northern Leeward Islands. However, on the following day, 10 October, the passage of Tropical Storm Jerry produced an intense rainfall event across the region.

On 10 October at 0000 UTC, Jerry was located over the western tropical Atlantic Ocean, approximately 140 mi (225 km) east-southeast of the northern Leeward Islands, moving toward them at a forward speed of 18 mph (30 km/h). At that time, Jerry's centre was positioned at latitude 17.5° North and longitude 61.1° West, about 44 mi (70 km) east of Antigua and Barbuda (Figure 1). This marked the storm's closest approach to Antigua and Barbuda along its track.

Although Jerry was classified as a moderate-intensity tropical storm—with estimated maximum sustained winds of 65 mph (100 km/h) and a minimum central pressure of 1001 mb—satellite imagery revealed that it was poorly organized and strongly sheared, as shown in Figure 2a. The low-level centre appeared fully exposed and elongated, while the main area of deep convection was displaced to the south and southeast of the centre. This structure was the result of moderate vertical wind shear, which separated the storm's centre from its convective core, inhibiting any rapid intensification of the system.

Thus, heavy rainfall reached Antigua and Barbuda only at that point, despite the storm's close approach (Figure 2a). The intense rainfall associated with Jerry then affected Antigua and Barbuda for sixteen hours (Figure 2), with a peak of intensity around 0600UTC, due to a strong convective plume located over Antigua and Barbuda (Figure 2b). At 1800UTC, the convective core drifted northward, while the storm's centre had already moved to a position roughly 185 mi (297 km) north of the northern Leeward Islands.

[1] The Wet Index (WI) was below the Wet Season Trigger Activation Threshold (AT_{WST})
[2] The Local Index (LI) was below the Localized Event Trigger Activation Threshold (AT_{LET})

After that, rainfall gradually diminished over Antigua and Barbuda, ceasing entirely later in the day as the system moved farther away (Figure 2d). In the following two days, 11 and 12 October, scattered showers of moderate intensity passed at a fast velocity over Antigua and Barbuda produced some additional localized rainfall.

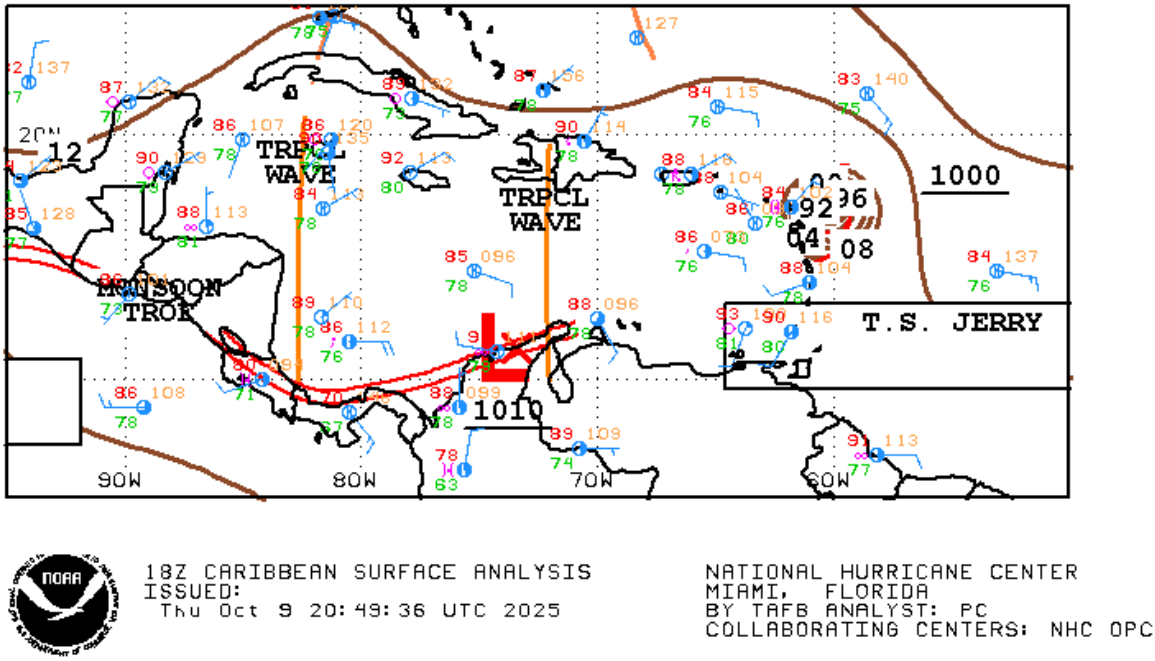
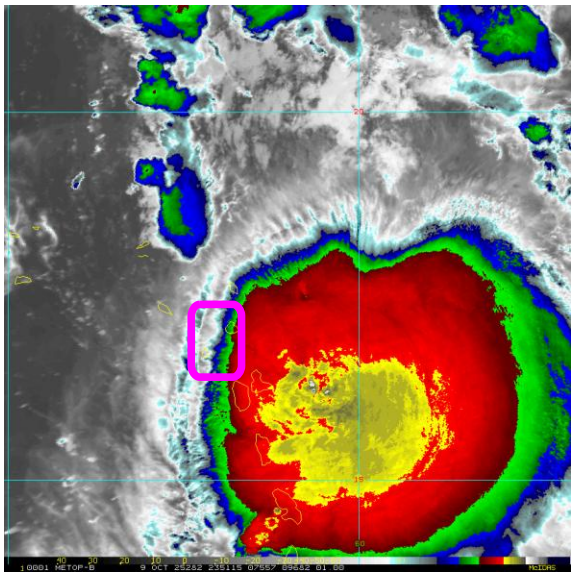
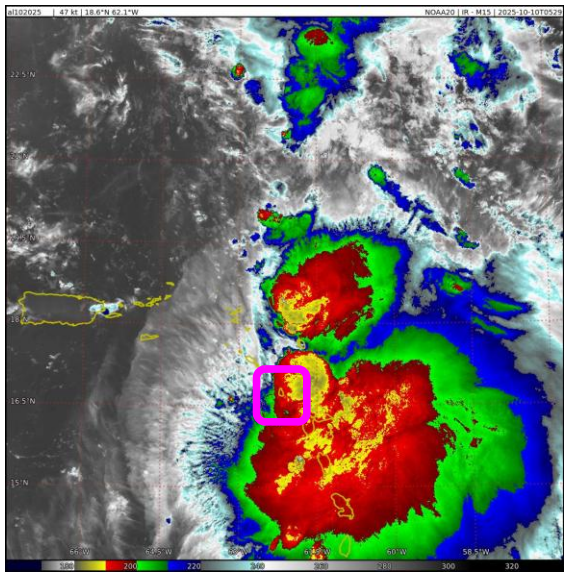


Figure 1 Surface analysis over the Caribbean area on 9 October at 1800UTC. Source: US National Hurricane centre[3]

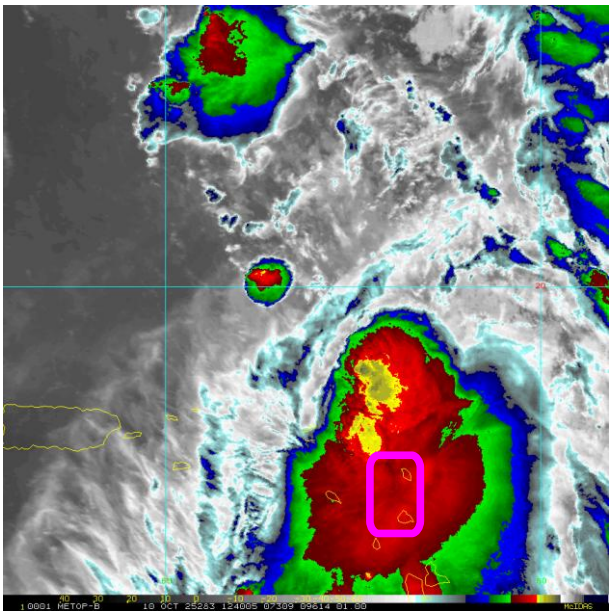


a) 9 October at 2351UTC

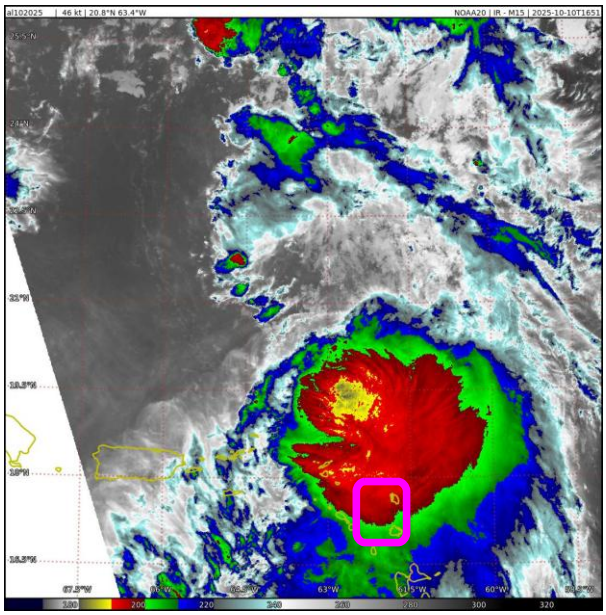


b) 10 October at 0529UTC

[3] National Oceanic and Atmospheric Administration - FTP, National Hurricane centre, review date: 9 October 2025, available at: https://www.nhc.noaa.gov/tafb /CAR18Z.gif



c) 10 October at 1240UTC



d) 10 October at 1650UTC

Figure 2 Satellite imagery on 9 and 10 October, 2025 at different times as indicated in the labels from the 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. Antigua and Barbuda is highlighted by a violet square. Source: NOAA, National Environmental Satellite, Data and Information Service[4].

3 REPORTED IMPACTS

Heavy rainfall caused flash flooding, road damage[5], and the closure of airports in Antigua and Barbuda. While the new terminal of the V.C. Bird International Airport reopened on October 10 quickly after minimal flooding, the older, decommissioned terminal experienced water damage from clogged drains[6]. Widespread disruption occurred, with schools[7] and businesses closed due to heavy rain, though the rainfall also provided significant benefits by recharging water catchments like Potworks Dam[8].

4 RAINFALL MODEL OUTPUTS

All data sources used by the XSR 3.1 model, CMORPH, IMERG, WRF5, WRF7, WRF11 and WRF15[9], detected the occurrence of precipitation over Antigua and Barbuda and the surrounding

[4] RAMSDIS Online Archive, NOAA Satellite and Information Service, available at: https://rammb-data.cira.colostate.edu/tc_realtime/storm.asp?storm_identifier=al102025

[5] Disaster Risk Reduction events disrupted by flash flooding - Antigua Observer Newspaper

[6] Antigua and Barbuda Airport Authority Reports Swift Operational Recovery After Tropical Storm Jerry

[7] All Public Schools Closed Today as Heavy Rains from Tropical Storm Jerry Soak Antigua and Barbuda

[8] 19 | October | 2025 | Dale Destin - 268Weather

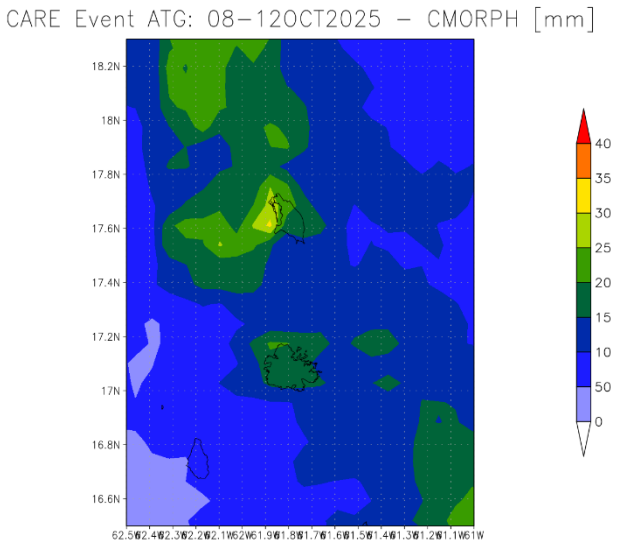
[9] CMORPH Model: the satellite-based rainfall precipitation estimates provided by the NOAA Climate Prediction centre (CPC) using the so-called Morphing Technique

waters during the period 08 to 12 October 2025. Each data source reported a specific distribution and accumulation of rainfall, as discussed below and shown in Figure 3. A CARE for Antigua and Barbuda was activated on 10 October and closed on 12 October. The CARE was activated due to the use of the 12-hour and the 48-hour aggregation intervals for precipitation and thus the period considered by the XSR 3.1 model for the loss estimate based on the accumulated precipitation in Antigua and Barbuda was 08 to 12 October 2025.

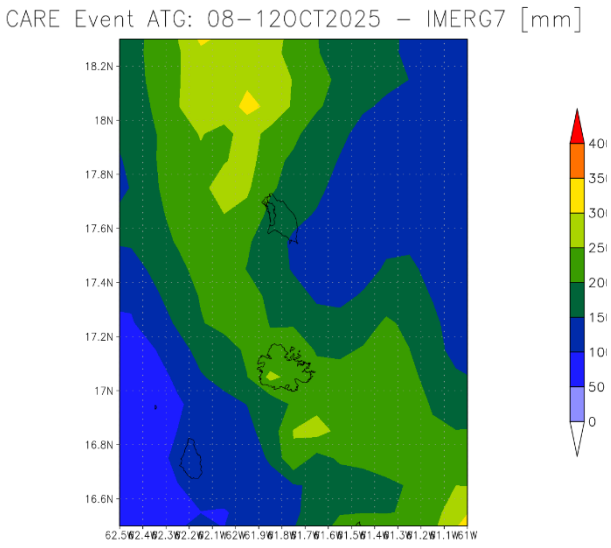
Table 1: Report from XSR 3.1 Data Sources on the Precipitation over Antigua and Barbuda, October 08 to 12, 2025

CMORPH	CMORPH reported total accumulated values of precipitation higher than 150 mm over most of Antigua and Barbuda. The highest values, between 250 mm and 300 mm, were reported over Barbuda.
IMERG	IMERG reported total accumulated precipitation higher than 200 mm over Antigua, with the highest values, between 250 mm and 300 mm, across Saint Mary parish. Lower values were reported over Barbuda.
WRF5	WRF5 showed total accumulated values of precipitation ranging between 50 mm and 100 mm over most of Antigua and Barbuda. Higher values, between 100 mm and 150 mm, were reported over and area between Saint Peter and Saint Philip parishes.
WRF7	WRF7 reported total accumulated values of precipitation lower than 100 mm over the entire territory of Antigua and Barbuda.
WRF11	WRF11 showed total accumulated values of precipitation higher than 150 mm over a portion of Barbuda. Values lower than 150 mm were shown over the rest of the territory.
WRF15	WRF15 reported total accumulated values of precipitation lower than 150 mm over the entire territory of Antigua and Barbuda. The highest values, between 100 mm and 150 mm, were reported over Saint Philip parish.

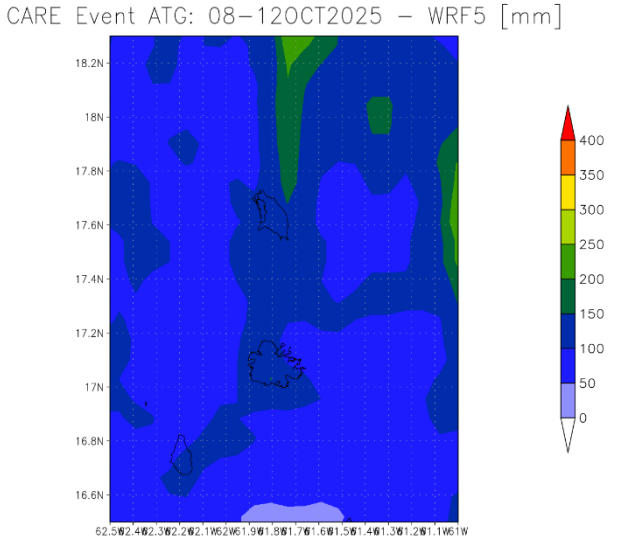
http://www.cpc.ncep.noaa.gov/products/janowiak/cmorph_description.html. Further details are provided in the Definitions section of this reportIMERG Model: The satellite-based rainfall estimation model developed by NASA, expressed in mm, derived by aggregating the IMERG 30-minute Rainfall Data at 10km spatial resolution and available at *https://jsimpsonhttps.pps.eosdis.nasa.gov/imerg/late*. Further details in the Definitions section of this reportWRF5, WRF7, WRF11 and WRF15 Models: the Weather Research and Forecasting Model weather model-based Configuration #1 and #2 data *https://www.mmm.ucar.edu/weather-research-and-forecasting-model.* These data are initialised by the NCEP FNL dataset. (NCEP FNL Operational Model Global Tropospheric Analyses [*http://rda.ucar.edu/datasets/ds083.2/*]). Further details are provided in the Definitions section of this report.



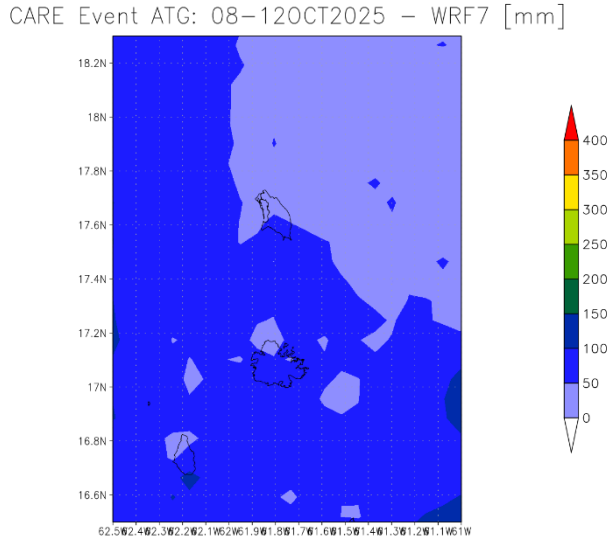
a) CMORPH



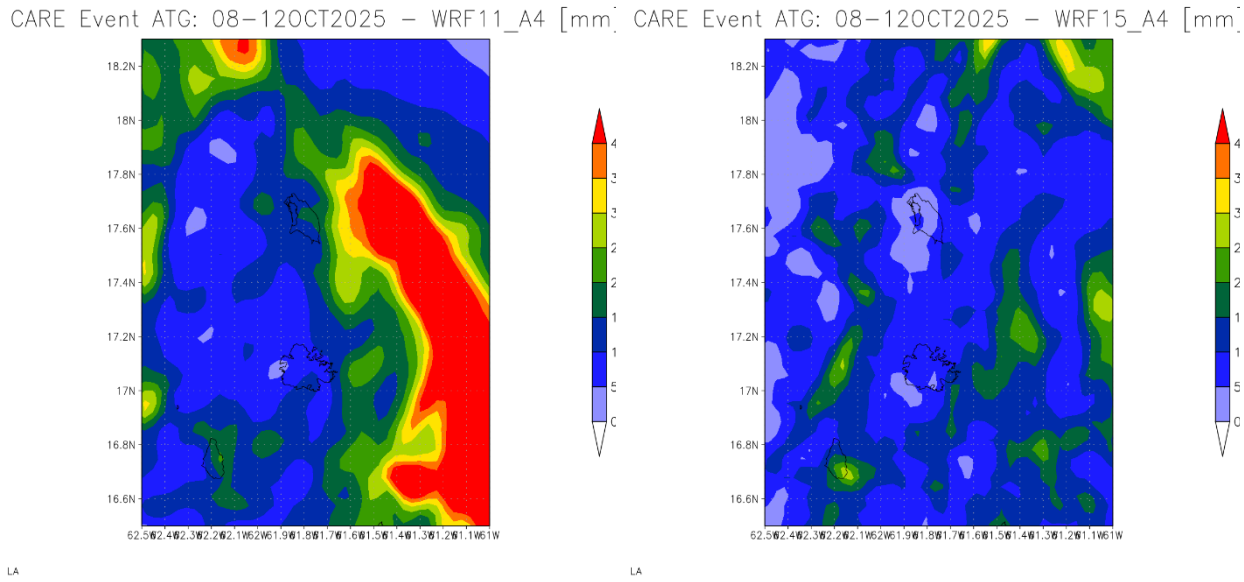
b) IMERG7



c) WRF5



d) WRF7



e) WRF11 f) WRF15

Figure 3 Total accumulated precipitation during the period 08 to 12 October, 2025 estimated by CMORPH (a), IMERG7 (b), WRF5 (c), WRF7 (d), WRF11 (e), WRF15 (f). Source: CCRIF SPC

Daily rainfall maps by CMORPH, IMERG, WRF5, WRF7, WRF11 and WRF15 over the exposure map of XSR 3.1 are not included here and they can be downloaded at the following links for 12-hour aggregation and 48-hour aggregation respectively:

https://wemap.ccrif.org/OUTPUT/CCRIF/XSR/Events/ATG/CARE_2_2025/daily_prec_short.mp4

https://wemap.ccrif.org/OUTPUT/CCRIF/XSR/Events/ATG/CARE_2_2025/daily_prec_long.mp4

The Rainfall Index Loss (RIL) was above the loss threshold for Antigua and Barbuda for five of the data sources used by XSR3.1: CMORPH, IMERG, WRF5, WRF7 and WRF11. The RIL was the highest for CMORPH.

The final RIL (RIL_{FINAL}) was calculated as the average of the five RILs from CMORPH, IMERG, WRF5, WRF7 and WRF11. The RIL_{FINAL} was below the attachment point of the country's Excess Rainfall policy, and thus the policy was not triggered. Therefore, no payout is due under the Excess Rainfall policy of the Government of Antigua and Barbuda.

The Wet Season Trigger (WST) endorsement of the XSR3.1 model did not identify this CARE as a "Wet Season" event[10]. Therefore, no payout is due under the Wet Season Trigger endorsement of Antigua and Barbuda's Excess Rainfall policy.

[10] The WST endorsement is designed to provide a predetermined payout for rainfall events occurring amidst already saturated soil conditions, effectively capturing the heightened risk of flooding and landslides. It is activated based on two factors: the Wet Index (the average 1-month Standardized Precipitation Index for all grid cells in the country) and Wet Periods (the period of time where the Wet Index exceeds 1, which indicates that the soil is wetter than its long-term average and serves as an indicator of soil saturation). The WST policy endorsement provides a payment when one or more CAREs with a modelled loss greater than zero

The Localized Event Trigger (LET) component of the XSR3.1 model did not identify this CARE as a localized event[11]. Therefore, no payout is due under the Local Event Trigger endorsement of the Antigua and Barbuda's Excess Rainfall policy.

5 TRIGGER POTENTIAL

The Rainfall Index Loss calculated for the Covered Area Rainfall Event (CARE) for Antigua and Barbuda was below the attachment point of Antigua and Barbuda's Excess Rainfall policy, and therefore no payout is due. This CARE did not activate the Wet Season Trigger or Localized Event Trigger endorsement of the Excess Rainfall policy and therefore no payout under either of these endorsements is due.

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

and lower than the policy Attachment Point occur within a Wet Period and the corresponding value of the Wet Index during the Wet Period exceeds a predetermined threshold. Wet season event (WE). Any period of consecutive days, during which the Wet Index (WI) is equal or greater than 1.

11 The LET is designed to cover rainfall events that affect only a small portion of the country. To determine a qualifying localized event, two conditions must be met: the average precipitation in the 10% of the area with highest precipitation – known as the "Local Exposure" - from (i) either of the satellite datasets (CMORPH or IMERG) and (ii) at least three of the six WRF models must be greater than the local precipitation threshold (LPT).

DEFINITIONS

Active Exposure Cell Percentage Threshold	The percentage of the total number of XSR Exposure Grid Cells within the Covered Area of the Insured, that must be exceeded to trigger a Covered Area Rainfall Event.
Active Exposure Grid Cells	The XSR Exposure Grid Cells for which in the same single day the Aggregate Rainfall #1 value computed using the CMORPH-based Rainfall Estimate equals or exceeds the Rainfall Event Threshold #1 or the Aggregate Rainfall #2 value computed using the CMORPH-based Rainfall Estimate equals or exceeds the Rainfall Event Threshold #2.
Aggregate Rainfall #1	The rainfall amount accumulated over the Rainfall Aggregation Period #1 (as defined in the Schedule) measured in millimeters (mm) in any of the XSR Exposure Grid Cells in the Covered Area of the Insured. For a given day and a Rainfall Aggregation Period #1 of n hours, the Aggregate Rainfall #1 is the maximum amount of rainfall accumulated over any of the n-hour windows that intersect the day itself considering a time interval of 3 hours.
Aggregate Rainfall #2	The rainfall amount accumulated over the Rainfall Aggregation Period #2 (as defined in the Schedule) measured in millimeters (mm) in any of the XSR Exposure Grid Cells in the Covered Area of the Insured. For a given day and a Rainfall Aggregation Period #2 of n hours, the Aggregate Rainfall #2 is the maximum amount of rainfall accumulated over any of the n-hour windows that intersect the day itself considering a time interval of 3 hours.
Calculation Agent	Entity charged with undertaking the primary calculation of the Rainfall Index Loss.
CMORPH-based Maximum Aggregate Rainfall #1	The maximum value during the Covered Area Rainfall Event of the Aggregate Rainfall #1 computed using the CMORPH-based Rainfall Estimates in any given XSR Exposure Grid Cell over the Covered Area of the Insured.
CMORPH-based Maximum Aggregate Rainfall #2	The maximum value during the Covered Area Rainfall Event of the Aggregate Rainfall #2 computed using the CMORPH-based Rainfall Estimates in any given XSR Exposure Grid Cell over the Covered Area of the Insured.
CMORPH-based Covered Area Rainfall Parameters	The CMORPH Model information provided on a continuous basis by the XSR Model Data Reporting Agency used by the

	Calculation Agent to obtain the CMORPH-based Rainfall Estimates using the XSR Rainfall Model. Parameters are drawn from XSR Exposure Grid Cells within the Covered Area of the Insured, by their respective latitude and longitude. Measurement units and precision of data ingested by the XSR Rainfall Model are identical to those provided by the XSR Model Data Reporting Agency and are further elaborated in the Attachment entitled 'Calculation of Rainfall Index Loss and Policy Payment'.
CMORPH Model	The satellite-based rainfall estimation model provided by NOAA CPC as described in the Rainfall Estimation Models section of the Policy.
Covered Area	The territory of the Insured as represented in the XSR Rainfall Model.
Covered Area Rainfall Event	Any period of days, with an interruption less than or equals to the Event Tolerance Period, during which the number of Active Exposure Grid Cells is greater than or equal to the product of (a) Active Exposure Cell Percentage Threshold multiplied by (b) the total number of XSR Exposure Grid Cells within the Covered Area.
Country Disaster Alert	An official disaster alert issued by ReliefWeb (*http://reliefweb.int/*) for the country in question for one of the following types of events: tropical cyclone, flood, flash flood and severe local storm. Any disaster alert issued later than seven (7) days after the completion of the Covered Area Rainfall Event (CARE) event will not be considered. The Disaster Alert description issued by ReliefWeb and/or its attached documentation must include specific reference to the CARE dates with a tolerance period of 2 calendar days.
Maximum Aggregate Rainfall #1	The highest value during a Covered Area Rainfall Event of the Aggregate Rainfall #1 amount in any of the XSR Exposure Grid Cells in the Covered Area of the Insured computed.
Maximum Aggregate Rainfall #2	The highest value during a Covered Area Rainfall Event of the Aggregate Rainfall #2 amount in any of the XSR Exposure Grid Cells in the Covered Area of the Insured computed.
Rainfall Event Threshold #1	Aggregate Rainfall #1 level as defined in the Schedule which should be exceeded to trigger an Active Exposure Cell.

Rainfall Event Threshold #2	Aggregate Rainfall #2 level as defined in the Schedule which should be exceeded to trigger an Active Exposure Cell.
Rainfall Aggregation Period #1	The number of hours over which the Aggregate Rainfall #1 is computed for all XSR Exposure Grid Cells during a Covered Area Rainfall Event.
Rainfall Aggregation Period #2	The number of hours over which the Aggregate Rainfall #2 is computed for all XSR Exposure Grid Cells during a Covered Area Rainfall Event.
Rainfall Index Loss	For any Covered Area Rainfall Event affecting the Insured, the US Dollar loss calculated by the Calculation Agent using the XSR Rainfall Model, as described in the Attachment entitled 'Calculation of Rainfall Index Loss and Policy Payment'. The Rainfall Index Loss can only be calculated once the Covered Area Rainfall Event is completed.
WRF5 Model	The weather research and forecasting rainfall model by NOAA with Configuration #5 data initialized with and assimilating the data provided by the National Center for Environmental Prediction as described in the Rainfall Estimation Models and in the Input Data to the Rainfall Estimation Models sections of this Attachment.
WRF7 Model	The weather research and forecasting rainfall model by NOAA with Configuration #7 data initialized with and assimilating the data provided by the National Center for Environmental Prediction as described in the Rainfall Estimation Models and in the Input Data to the Rainfall Estimation Models sections of this Attachment.
XSR Rainfall Model	The computer model used to calculate the Rainfall Index Loss, as described in the Attachment entitled 'Calculation of Rainfall Index Loss and Policy Payment'.
XSR Exposure Grid Cells	The 30 arc-second by 30 arc-second grid of cells each of which is attributed with an XSR Grid Cell Exposure Value greater than zero.
XSR Grid Cell Exposure Value	The value, used to calculate the CMORPH-based Exposure Grid Cell Loss, the WRF5-based Exposure Grid Cell Loss, and the WRF7-based Exposure Grid Cell Loss.