



Covered Area Rainfall Event (4/06/2025 to 5/06/2025)

Excess Rainfall

Event Briefing

The Bahamas Extreme North

13 June 2025

1 INTRODUCTION

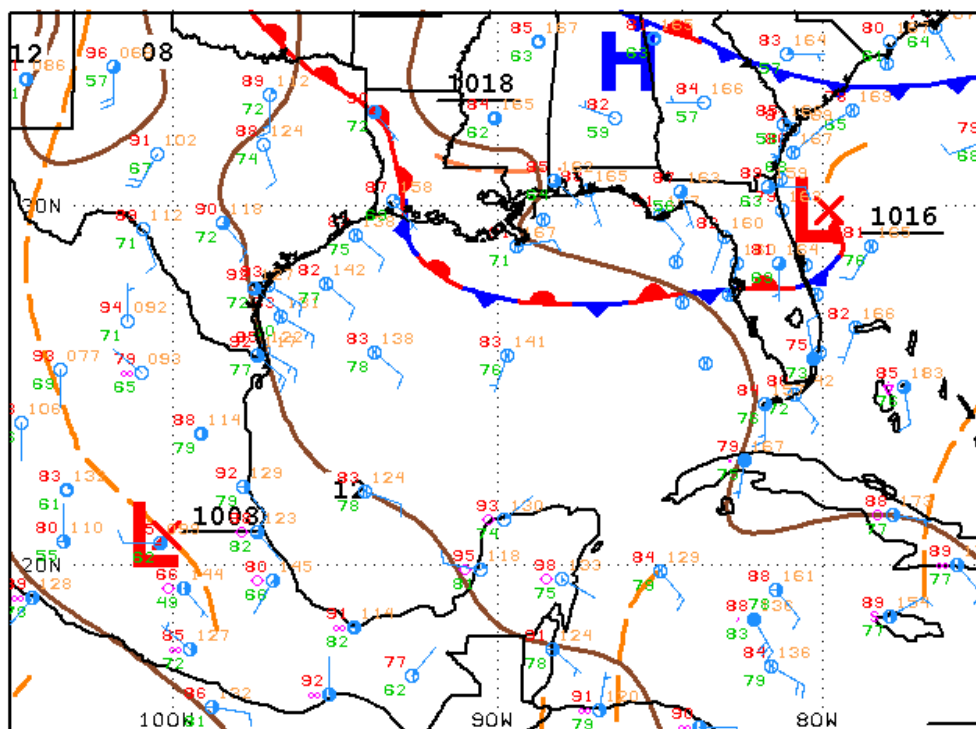
This event briefing describes the impact of rainfall on the northern region of The Bahamas. The Bahamas has 4 Excess Rainfall policies: The Bahamas – South East, The Bahamas - Central, The Bahamas - North and The Bahamas - Extreme North. This rainfall was associated with a Covered Area Rainfall Event (CARE) in The Bahamas - Extreme North area, starting on 4 June 2025 and ending on 5 June 2025. The Rainfall Index Loss (RIL) for the Covered Area Rainfall Event was below the attachment point of The Bahamas' Excess Rainfall policy for the Extreme North area, and therefore no payout is due to the Government of The Bahamas on this policy. Due to this rainfall event, a CARE was activated in two other regions of The Bahamas: The Bahamas-North (for which an Event Briefing was also prepared for this region) and The Bahamas-Central. A separate report with respect to the Excess Rainfall policies of those areas will be issued if applicable¹. A CARE was not identified in The Bahamas – South East.

2 EVENT DESCRIPTION

Intense convection activity began affecting The Bahamas on 2 June, particularly during the latter half of the day, due to the development of a low-pressure system just east of Florida at the end of a stationary front, extending from it northeastward to the western Atlantic Ocean (Figure 1a). This weather pattern, combined with an abundance of tropical moisture and the presence of a diffluent wind flow in the upper atmospheric levels, created favourable conditions for the development of widespread and intense thunderstorms in the northwest and central portions of The Bahamas (Figure 2a). This very active weather persisted over the region throughout most of June 3 (Figure 2b).

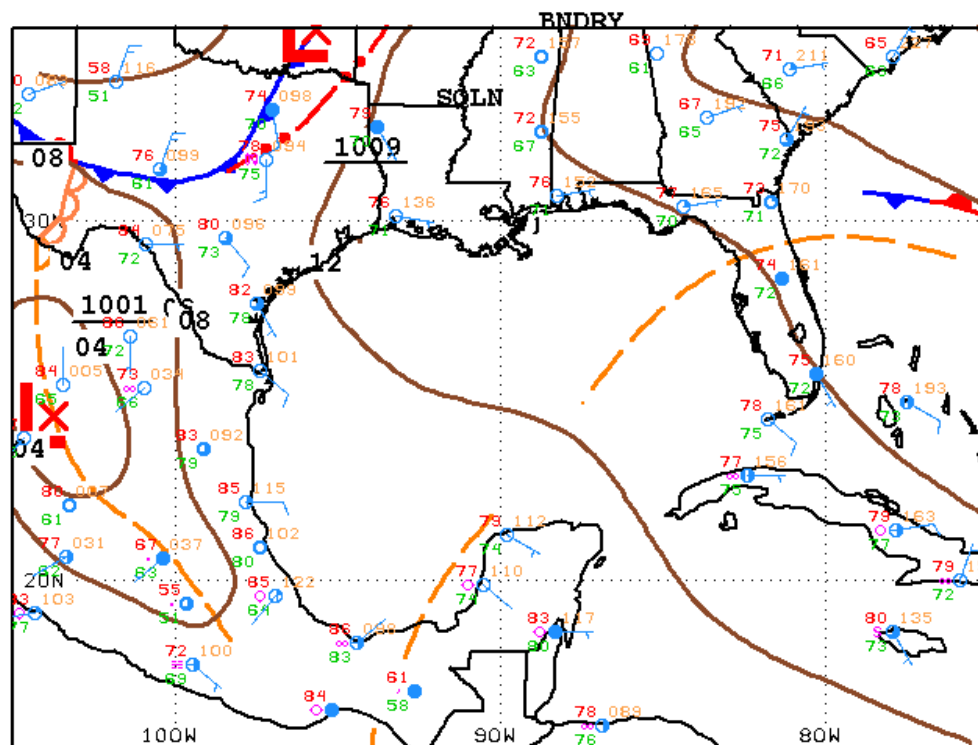
On 4 June, convection ceased over the central portion of The Bahamas due to the dissipation of the low-pressure system, while locally intense thunderstorms persisted over the extreme northern sector of The Bahamas and adjacent waters (Figure 2c), driven by the development of a surface trough over the northwestern waters off the coast of northern Florida (Figure 1b). By 5 June, convective activity had weakened across the region, resulting in scattered, moderate-intensity showers during the afternoon hours (Figure 2d), which dissipated later that day as the supporting meteorological features diminished.

¹ Applicable if is considered a Loss Event: A Covered Area Rainfall Event for which the Rainfall Index Loss is greater than zero but lower than the policy Attachment Point (AP), which include the following two cases: a) at least one among the CMORPH-based Rainfall Index Loss (RIL) and the IMERG-based RIL is greater than the Loss Threshold, and at least three among the CMORPH-based RIL, the IMERG-based RIL, the WRF5-based RIL, the WRF7-based RIL, the WRF11-based RIL and the WRF15-based RIL are greater than the loss threshold and the final RIL is lower than the policy AP; and b) a Country Disaster Alert is issued and at least one among the CMORPH-based RIL, the IMERG-based RIL, the WRF5-based RIL, the WRF7-based RIL, the WRF11-based RIL and the WRF15-based RIL is greater than zero and the final RIL is lower than the policy AP.



18Z GULF SURFACE ANALYSIS NATIONAL HURRICANE CENTER
 ISSUED: MIAMI, FLORIDA
 Mon Jun 2 20:50:43 UTC 2025 BY TAFB ANALYST: PC
 COLLABORATING CENTERS: NHC OPC WPC

a) 2 June at 1800UTC

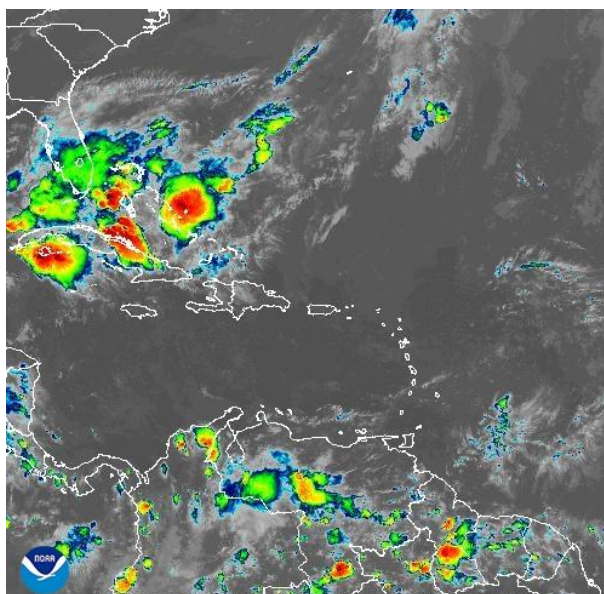


06Z GULF SURFACE ANALYSIS NATIONAL HURRICANE CENTER
ISSUED: MIAMI, FLORIDA
Wed Jun 4 08:39:35 UTC 2025 BY TAFB ANALYST: DELGADO
COLLABORATING CENTERS: NHC OPC WPC

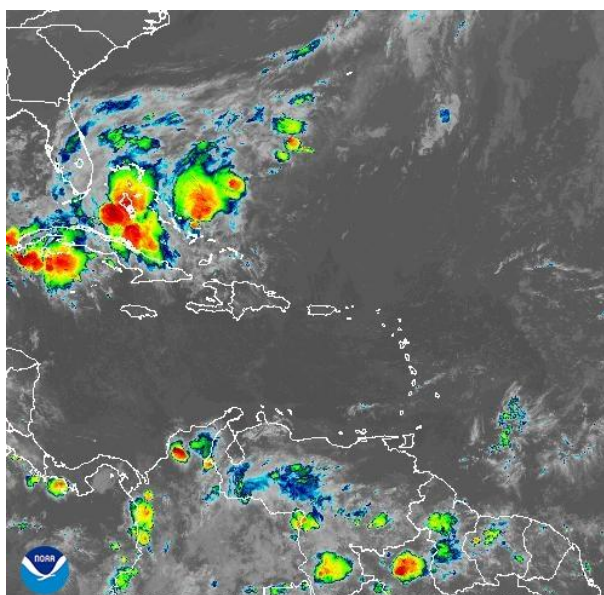
b) 4 June at 0600UTC

Figure 1. Surface analysis over the northwestern Caribbean Sea and Gulf of Mexico on 2 and 4 June 2025 at different times as indicated by the labels UTC. Source: US National Hurricane Center²

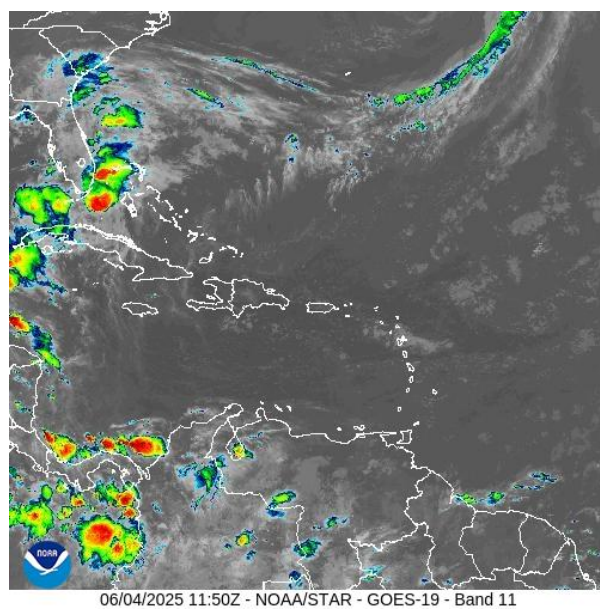
² National Oceanic and Atmospheric Administration - FTP, National Hurricane Center, review dates: 2 and 4 June 2025, available at: https://www.nhc.noaa.gov/tafb/WATL_06Z.gif, https://www.nhc.noaa.gov/tafb/WATL_18Z.gif



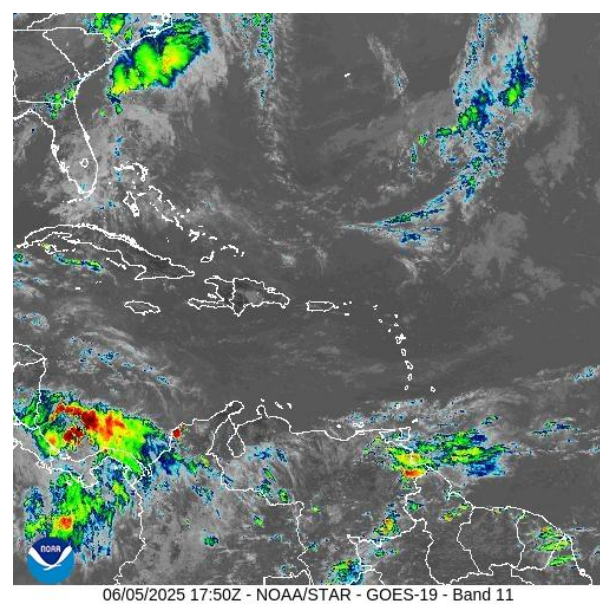
a) 2 June at 2350UTC



b) 3 June at 0250UTC



c) 4 June at 1150UTC



d) 5 June at 1750UTC

Figure 2 Satellite imagery on 2, 3, 4 and 5 June 2025 at different times as indicated by the labels. 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 Service³.

³ RAMSDIS Online Archive, NOAA Satellite and Information Service, available at:
<https://cdn.star.nesdis.noaa.gov/GOES16/ABI/SECTOR/pr/11/>

3 REPORTED IMPACTS

At the time of writing this report, there is no information about damages in the extreme northern area of The Bahamas due to this Covered Area Rainfall Event during the indicated period.

4 RAINFALL MODEL OUTPUTS

All data sources used by the XSR 3.1 model, CMORPH, IMERG, WRF5, WRF7, WRF11 and WRF15⁴, detected the occurrence of precipitation over The Bahamas and the surrounding waters during the period 02 to 05 June 2025. Each data source reported a specific distribution and accumulation of rainfall, as discussed below and shown in Figure 3. A CARE for The Bahamas-Extreme North was activated on 04 June and lasted only that day, ending on 05 June. The CARE was activated due to the use of the 12-hour and the 48-hour aggregation intervals for precipitation⁵ and thus the period considered by the XSR 3.1 model for the loss estimate based on the accumulated precipitation in The Bahamas-Extreme North was 02 to 05 June 2025.

CMORPH	CMORPH reported total accumulated values of precipitation between 30 mm and 180 mm over The Bahamas-Extreme North with the maximum values between 120 mm and 180 mm reported along the extreme western edge of Grand Bahama.
IMERG	IMERG reported total accumulated values of precipitation less than 150 mm over The Bahamas-Extreme North area. The maximum values between 120 mm and 150 mm were reported along a small area of Grand Bahama.
WRF5	WRF5 reported total accumulated values of precipitation less than 60 mm over The Bahamas-Extreme North.

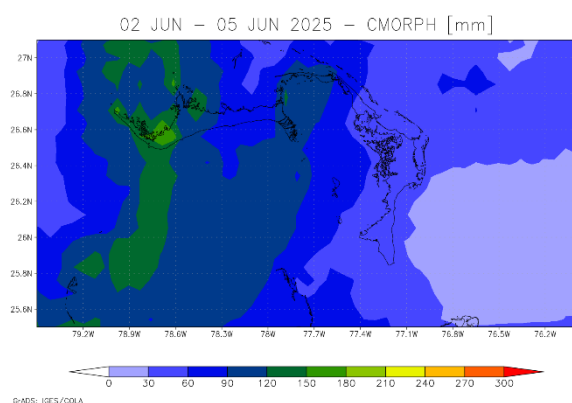
⁴ CMORPH Model: the satellite-based rainfall precipitation estimates provided by the NOAA Climate Prediction Center (CPC) using the so-called Morphing Technique http://www.cpc.ncep.noaa.gov/products/janowiak/cmorph_description.html. Further details are provided in the Definitions section of this report

IMERG 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 report

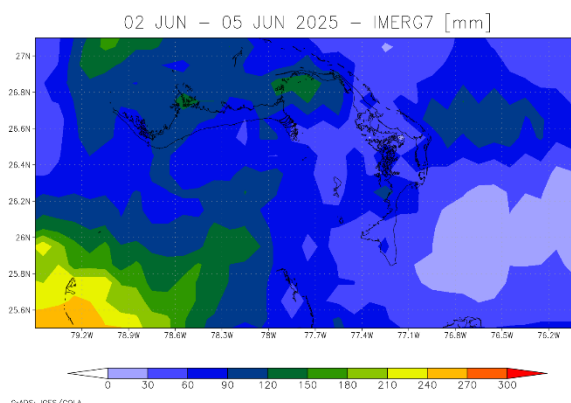
WRF7, WRF11 and WRF15 Models: the Weather Research and Forecasting Model weather model-based Configuration #1 and #2 data <https://www.mmm.ucar.edu/weather-research-and-forecasting-model>. These data are initialised by the NCEP FNL dataset. (NCEP FNL Operational Model Global Tropospheric Analyses [<http://rda.ucar.edu/datasets/ds083.2/>]). Further details are provided in the Definitions section of this report.

⁵ The two aggregation periods correspond to the Rainfall Aggregation Period #1 and Rainfall Aggregation Period #2, as indicated in the Schedule. Further details in the Definitions section of this report.

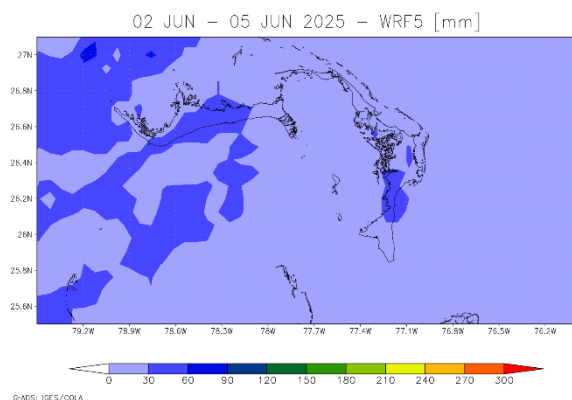
- WRF7** WRF7 showed total accumulated values of precipitation less than 90 mm across the entire region of The Bahamas-Extreme North, except for two small areas in Grand Bahama, where values ranged from 90 mm to 120 mm.
- WRF11** WRF11 showed total accumulated values of precipitation less than 60 mm across the entire region of The Bahamas-Extreme North, except for an area located in the western part of Grand Bahama, where values reached 300 mm.
- WRF15** WRF15 reported accumulated values of precipitation less than 150 mm across the entire region of The Bahamas-Extreme North.



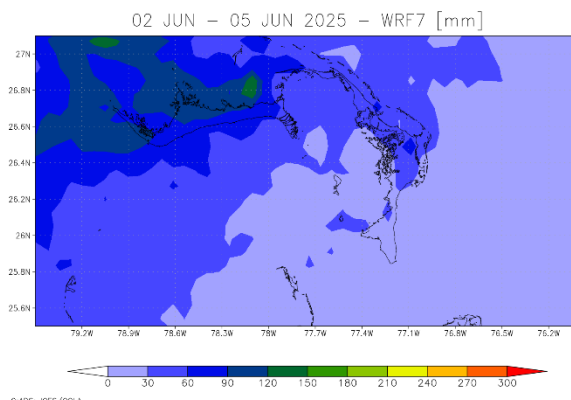
a) CMORPH



b) IMERG



c) WRF5



d) WRF7

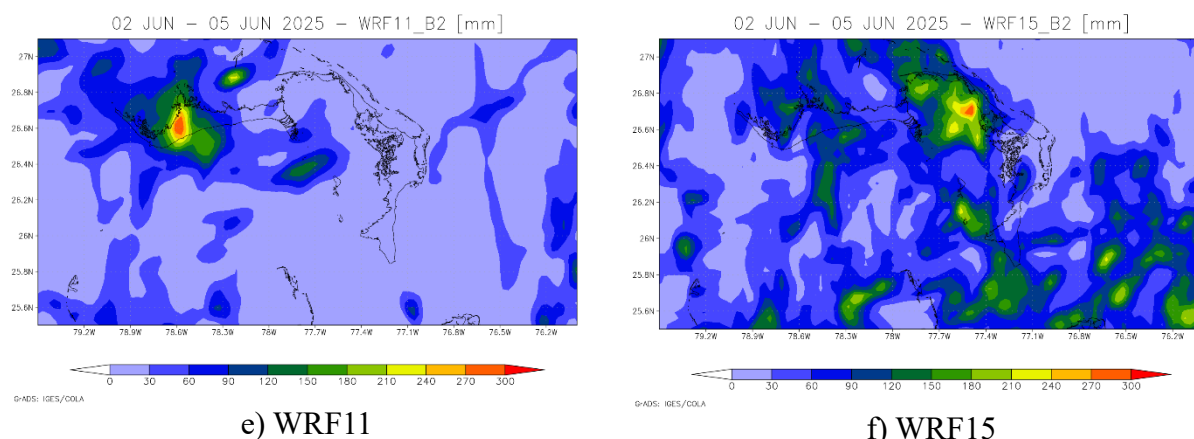


Figure 3 Total accumulated precipitation during the period 02 to 05 June, 2025 estimated by CMORPH (a), IMERG (b), WRF5 (c), WRF7 (d), WRF11 (e), WRF15 (f). Source: CCRIF SPC

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/BHS/BHS_EN/CARE_1_2025/daily_prec_short.mp4

https://wemap.ccrif.org/OUTPUT/CCRIF/XSR/Events/BHS/BHS_EN/CARE_1_2025/daily_prec_long.mp4

The Rainfall Index Loss (RIL) was above the loss threshold for The Bahamas-Extreme North for three of the data sources used by XSR3.1: CMORPH, IMERG and WRF11. The RIL was the highest for CMORPH.

The final RIL (RIL_{FINAL}) was calculated as the average of the three RILs from CMORPH, IMERG and WRF11. The RIL_{FINAL} was below the attachment point of the Excess Rainfall policy for The Bahamas - Extreme North, and thus the policy was not triggered. Therefore, no payout is due under this Excess Rainfall policy for the Extreme North to the Government of The Bahamas.

The Wet Season Trigger (WST) endorsement of the XSR3.1 model did not identify this CARE as a “Wet Season” event⁶. Therefore, no payment is due under the Wet Season Trigger endorsement of The Bahamas’ Excess Rainfall policy for the Extreme North.

⁶ 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 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.

5 TRIGGER POTENTIAL

The Rainfall Index Loss calculated for this Covered Area Rainfall Event (CARE) was below the attachment point of The Bahamas' Excess Rainfall policy for the Extreme North and therefore no payout is due to the Government of The Bahamas on this policy.

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

DEFINITIONS

<i>Active Exposure Cell Percentage Threshold</i>	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.
<i>Active Exposure Grid Cells</i>	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.
<i>Aggregate Rainfall #1</i>	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.
<i>Aggregate Rainfall #2</i>	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.
<i>Calculation Agent</i>	Entity charged with undertaking the primary calculation of the Rainfall Index Loss.
<i>CMORPH-based Maximum Aggregate Rainfall #1</i>	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.
<i>CMORPH-based Maximum Aggregate Rainfall #2</i>	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.

<i>Rainfall Event Threshold #1</i>	Aggregate Rainfall #1 level as defined in the Schedule which should be exceeded to trigger an Active Exposure Cell.
<i>Rainfall Event Threshold #2</i>	Aggregate Rainfall #2 level as defined in the Schedule which should be exceeded to trigger an Active Exposure Cell.
<i>Rainfall Aggregation Period #1</i>	The number of hours over which the Aggregate Rainfall #1 is computed for all XSR Exposure Grid Cells during a Covered Area Rainfall Event.
<i>Rainfall Aggregation Period #2</i>	The number of hours over which the Aggregate Rainfall #2 is computed for all XSR Exposure Grid Cells during a Covered Area Rainfall Event.
<i>Rainfall Index Loss</i>	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.
<i>WRF5 Model</i>	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.
<i>WRF7 Model</i>	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.
<i>XSR Rainfall Model</i>	The computer model used to calculate the Rainfall Index Loss, as described in the Attachment entitled ‘Calculation of Rainfall Index Loss and Policy Payment’.
<i>XSR Exposure Grid Cells</i>	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.