



Covered Area Rainfall Event (17/09/2025 to 19/09/2025)

Excess Rainfall

Event Briefing

Haiti

27 September 2025

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1 INTRODUCTION

This event briefing describes the impact of rainfall on Haiti, which was associated with a Covered Area Rainfall Event (CARE) starting on 17 September and ending on 19 September 2025. The Rainfall Index Loss (RIL) for the Covered Area Rainfall Event was below the attachment point of Haiti's Excess Rainfall policy, and therefore no payout is due to the Government of Haiti. 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 endorsement is due.

2 EVENT DESCRIPTION

On 16 September at 1800 UTC, a tropical wave extended across the central Caribbean Sea near longitude 78°W, stretching from latitude 20°N southward across western Jamaica and toward the Colombia–Panama border (Figure 1). The system was moving westward at approximately 11 mph (18 km/h). The atmospheric instability left in the wake of the tropical wave, combined with high moisture content in the upper atmosphere, supported the development of convective activity over parts of Cuba, Jamaica, Haiti, as well as portions of Colombia and Panama.

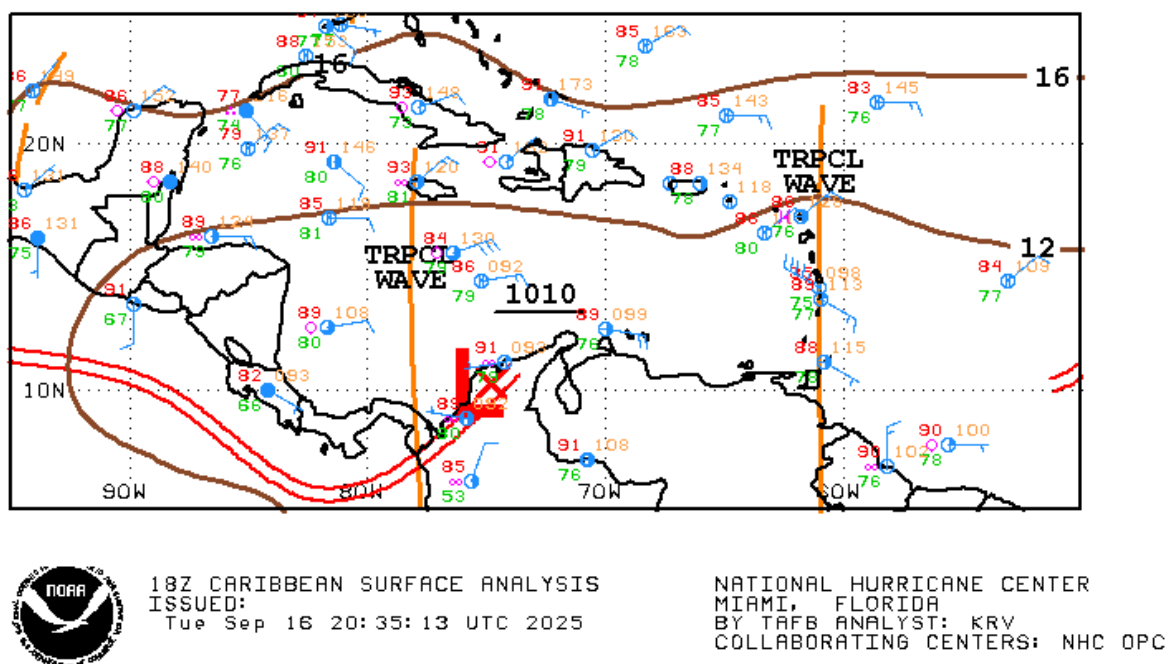
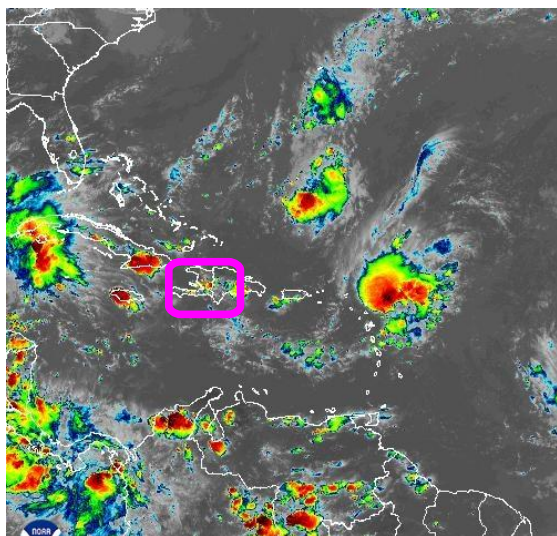


Figure 1 Surface analysis over the Caribbean area on 16 September at 1800UTC. Source: US National Hurricane centre¹

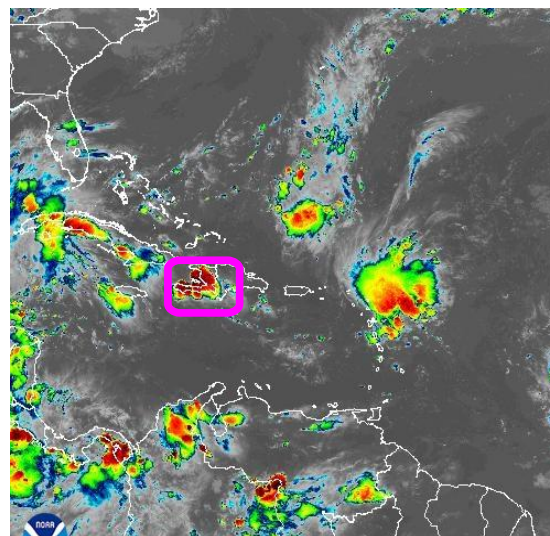
Notably, a strong thunderstorm developed over central Haiti at around 2100 UTC and brought heavy rainfall to parts of the country and nearby waters. This activity persisted until 0600 UTC

¹ National Oceanic and Atmospheric Administration - FTP, National Hurricane centre, review date: 16 September 2025, available at: <https://www.nhc.noaa.gov/tafb/CAR18Z.gif>

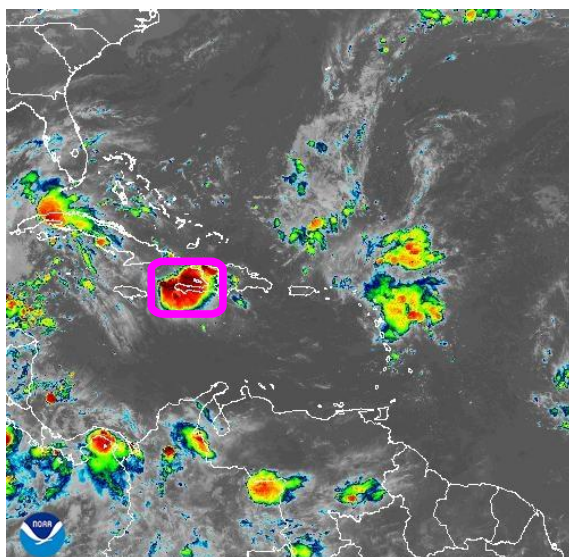
on 17 September, when it finally dissipated. Satellite imagery (Figure 2) shows the intensity and extent of the thunderstorm over Haiti during this period.



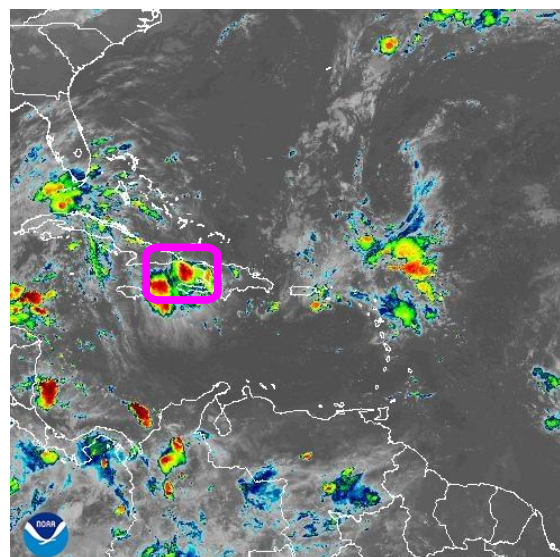
a) 16 September at 2100UTC



b) 17 September at 0000UTC



c) 17 August at 0300UTC



d) 17 August at 0600UTC

Figure 2 Satellite imagery on 16 and 17 September 2025 at different times as indicated by 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. The violet square indicates the location of Haiti. Source: NOAA, National Environmental Satellite, Data and Information Service².

² RAMSDIS Online Archive, NOAA Satellite and Information Service, available at: https://rammb-data.cira.colostate.edu/tc_realtime/storm.asp?storm_identifier=al052025

On the following two days, 18 and 19 September, residual atmospheric instability over Haiti contributed to scattered showers. These were of lower intensity and extension compared to the previous thunderstorm and mostly occurred between 2100 UTC and 0300 UTC, corresponding to the late afternoon and early evening hours in local time.

3 REPORTED IMPACTS

According to the Directorate of Civil Protection, approximately 823 families were affected by this rainfall. In Port-de-Paix, 550 houses were flooded, 75 were severely damaged, and 25 were destroyed.³.

The floods caused significant material losses across multiple sectors. School supplies were destroyed, plantations along the Trois-Rivières River and in Audrin were devastated, and small businesses suffered considerable losses. Damages were also reported in both the fishing and livestock sectors. A landslide occurred in Ti Fond.

Infrastructure in the Port-de-Paix area was impacted, the Trois-Rivières bridge sustained damage and now poses a danger to the population. Several roads connecting affected communities were cut off, including the road linking Port-de-Paix with the Bas Nord-Ouest communes, which became impassable due to flooding. The northern façade of the COUD (Departmental Emergency Operations Center) was severely damaged.

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 Haiti and the surrounding waters during the period 15 to 19 September 2025. Each data source reported a specific distribution and accumulation of rainfall, as discussed below and shown in Figure 3. A CARE for Haiti was activated on 17 September and closed on 19 September. 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 Haiti was 15 to 19 September 2025.

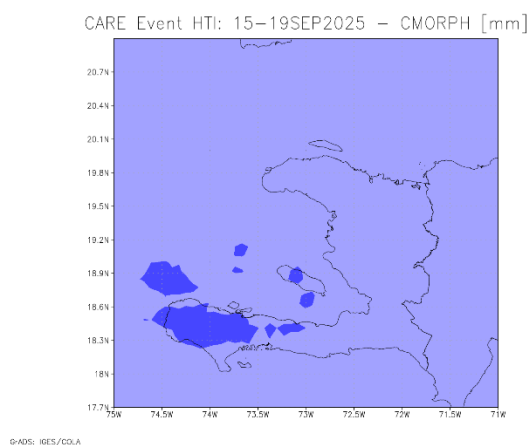
Table 1: Report from XSR 3.1 Data Sources on the Precipitation over Haiti, September 15 to 19, 2025

³ OCHA - FLASH UPDATE N0.1 – as of 22 September 2025

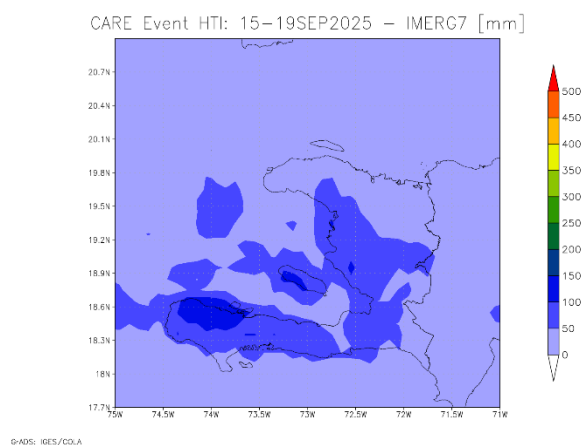
⁴ CMORPH Model: the satellite-based rainfall precipitation estimates provided by the NOAA Climate Prediction centre (CPC) using the so-called Morphing Technique http://www.cpc.ncep.noaa.gov/products/janowiak/cmorph_description.html. Further details are provided in the Definitions section of this report 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 WRF5, 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.

CMORPH	CMORPH reported total accumulated precipitation values below 50 mm across most of Haiti, with higher values, ranging between 50 mm and 100 mm, observed over a localized area in southwestern Haiti.
IMERG	IMERG reported total accumulated precipitation values ranging from 100 mm to 150 mm over parts of the Grand'Anse Department and Gonâve Island. Accumulations between 50 mm and 100 mm were reported across most of southern and central Haiti, while lower values were showed over the remaining areas of the country.
WRF5	WRF5 showed total accumulated precipitation values below 50 mm across most of Haiti. Higher values, ranging from 50 mm to 100 mm, were reported in an area between the Nord-Ouest and Nord Departments, as well as in localized areas of southeastern Haiti. The highest values, between 100 mm and 150 mm, were showed in a small region situated between the Nord-Ouest and Nord Departments.
WRF7	WRF7 showed total accumulated values of precipitation ranging between 50 mm and 100 mm over most of Haiti. The highest values, between 150 mm and 200 mm, were reported over a small area in the Centre Department near the border with the Dominican Republic.
WRF11	WRF11 reported accumulated values of precipitation higher than 50 mm across the central and the south areas of Haiti. The highest values, between 450 mm and 500 mm, were concentrated over a small area within the Grand'Anse Department.
WRF15	WRF15 reported accumulated values of precipitation higher than 50 mm across most of Haiti. The highest values, exceeding 500 mm, were reported over a small area in the Grand'Anse Department, showing a spatial distribution similar to that reported by WRF11.



a) CMORPH



b) IMERG7

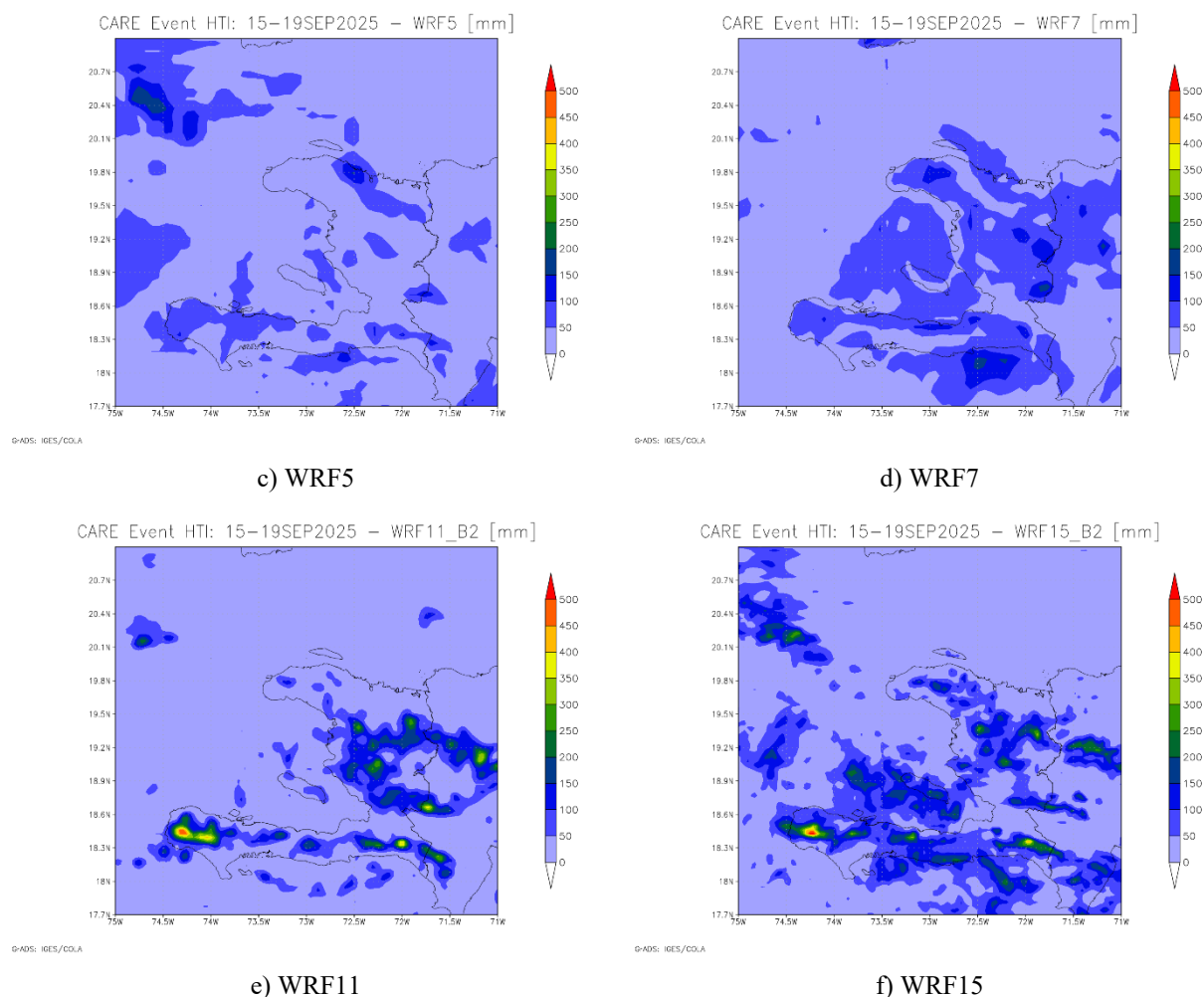


Figure 3 Total accumulated precipitation during the period 15 to 19 September 2025 estimated by CMORPH (a), IMERG7 (b), WRF5 (c), WRF7 (d), WRF11 (e), WRF15 (f). Source: CCRIF SPC

The Rainfall Index Loss (RIL) was above the loss threshold for Haiti for two of the data sources used by XSR3.1: WRF11 and WRF15. The RIL was the highest for WRF11. Also, a Disaster Alert declaration (52446) was issued on 25 September by ReliefWeb for Haiti related to the rain event during the night of 16-17 September.

The final RIL (RIL_{FINAL}) was calculated as the average of the two RILs from WRF11 and WRF15. 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 this Excess Rainfall policy to the Government of Haiti.

The Wet Season Trigger (WST) endorsement of the XSR3.1 model did not identify this CARE as

a “Wet Season” event⁶. Therefore, no payout is due under the Wet Season Trigger endorsement of Haiti’s Excess Rainfall policy.

The Localized Event Trigger (LET) component of the XSR3.1 model did not identify this CARE as a localized event,⁷ only two of the six WRF models (WRF₁₁ and WRF₁₅) were above the Loss Threshold, these values were reported in the Southwestern area of Haiti. Therefore, no payout is due under the Local Event Trigger endorsement of the Haiti’s Excess Rainfall policy.

5 TRIGGER POTENTIAL

The Rainfall Index Loss calculated for the Covered Area Rainfall Event (CARE) for Haiti was below the attachment point of Haiti’s Excess Rainfall policy, and therefore no payout is due. This CARE did not activate the Wet Season Trigger or the 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

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.

⁷ 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

<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.
<i>CMORPH-based Covered Area Rainfall Parameters</i>	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’.
<i>CMORPH Model</i>	The satellite-based rainfall estimation model provided by NOAA CPC as described in the Rainfall Estimation Models section of the Policy.
<i>Covered Area</i>	The territory of the Insured as represented in the XSR Rainfall Model.
<i>Covered Area Rainfall Event</i>	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.
<i>Country Disaster Alert</i>	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.
<i>Maximum Aggregate Rainfall #1</i>	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.
<i>Maximum Aggregate Rainfall #2</i>	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.
<i>XSR Grid Cell Exposure Value</i>	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.