

Covered Area Rainfall Event (4/10/2026 to 7/10/2026)

Excess Rainfall

Event Briefing

Guatemala

16 October 2026

1 INTRODUCTION

This event briefing describes the impact of rainfall on Guatemala, which was associated with a Covered Area Rainfall Event (CARE) starting on 4 October and ending on 7 October 2026. The Rainfall Index Loss (RIL) for the Covered Area Rainfall Event was below the attachment point of Guatemala's Excess Rainfall policy and therefore no payout is due to the Government.

2 EVENT DESCRIPTION

On 4 October 2026, a broad area of low pressure was established over the Pacific waters southwest of Guatemala. It created unstable atmospheric conditions over the area and supported a south-southwesterly wind flow over Guatemala, drawing in the abundant moisture available over the Pacific waters (Figure 1). This combination of factors triggered thunderstorms across the country throughout the day. Several convective nuclei began developing nationwide from the early morning hours (Figure 2a), eventually peaking in two strong thunderstorms: the first centred over northeastern Guatemala, most active around 0600UTC (Figure 2b), and the second affecting mainly southern and central Guatemala, peaking around 1200UTC and lasting more than six hours (Figure 2c and 2d).

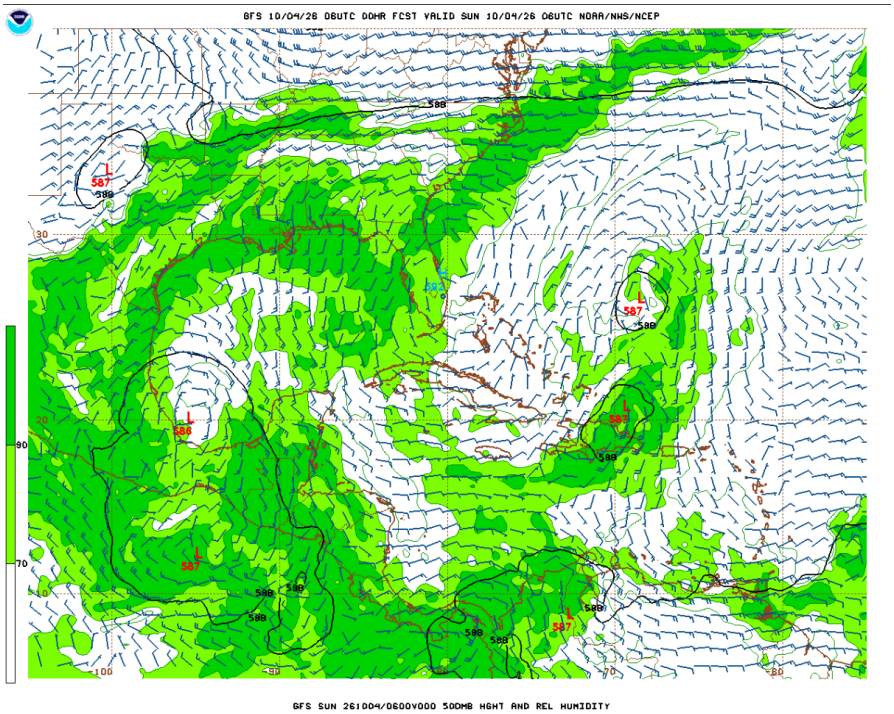
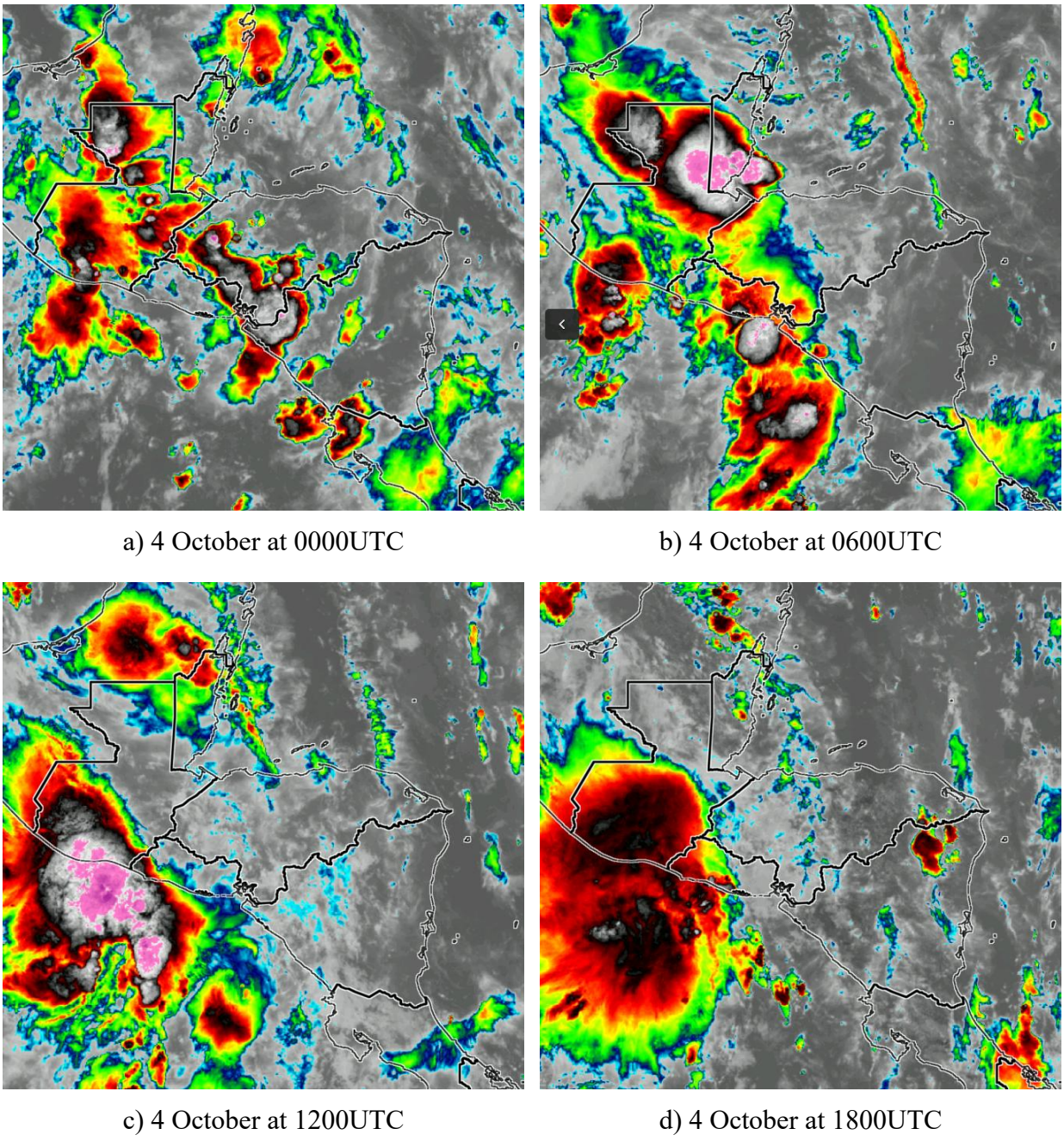


Figure 1. Upper level analysis over the Caribbean and Central America area on 4 Octber,2026 at 0600UTC. The map reports geopotential height, wind and relative humidity at 500hPa. The green colours indicate areas with relative humidity higher than 70% (light green) and 90% (dark green). Source: US National Hurricane Center[1]

[1] National Oceanic and Atmospheric Administration, National Weather Service, review dates: 4 October, 2026, available at: https://mag.ncep.noaa.gov/data/gfs/00/west-atl/500_rh_ht/gfs_west-atl_000_500_rh_ht.gif



a) 4 October at 0000UTC

b) 4 October at 0600UTC

c) 4 October at 1200UTC

d) 4 October at 1800UTC

Figure 2 Satellite imagery on 4 October,2026 at different times as indicated by the labels from the thermal infrared channel enhanced with colour. Yellow/red colours represent high-altitude clouds (top cloud temperature between -50°C and -70°C), while the grey/pink 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 Service.

The following day, 5 October, the low-pressure area moved northwestward, carrying the associated convective activity away from Guatemala.

Between 6 and 7 October, a tropical wave and the long-distance effects of Tropical Cyclone Isaias brought additional atmospheric instability to the country. By 1800 UTC of 6 October, Isaias was still Tropical Depression Nine, developing over the eastern Gulf of Mexico (Figure 3). Together, these factors produced moderate showers to locally intense thunderstorms from the late hours of 6 October until 0900UTC on 7 October mostly over central and northern Guatemala.

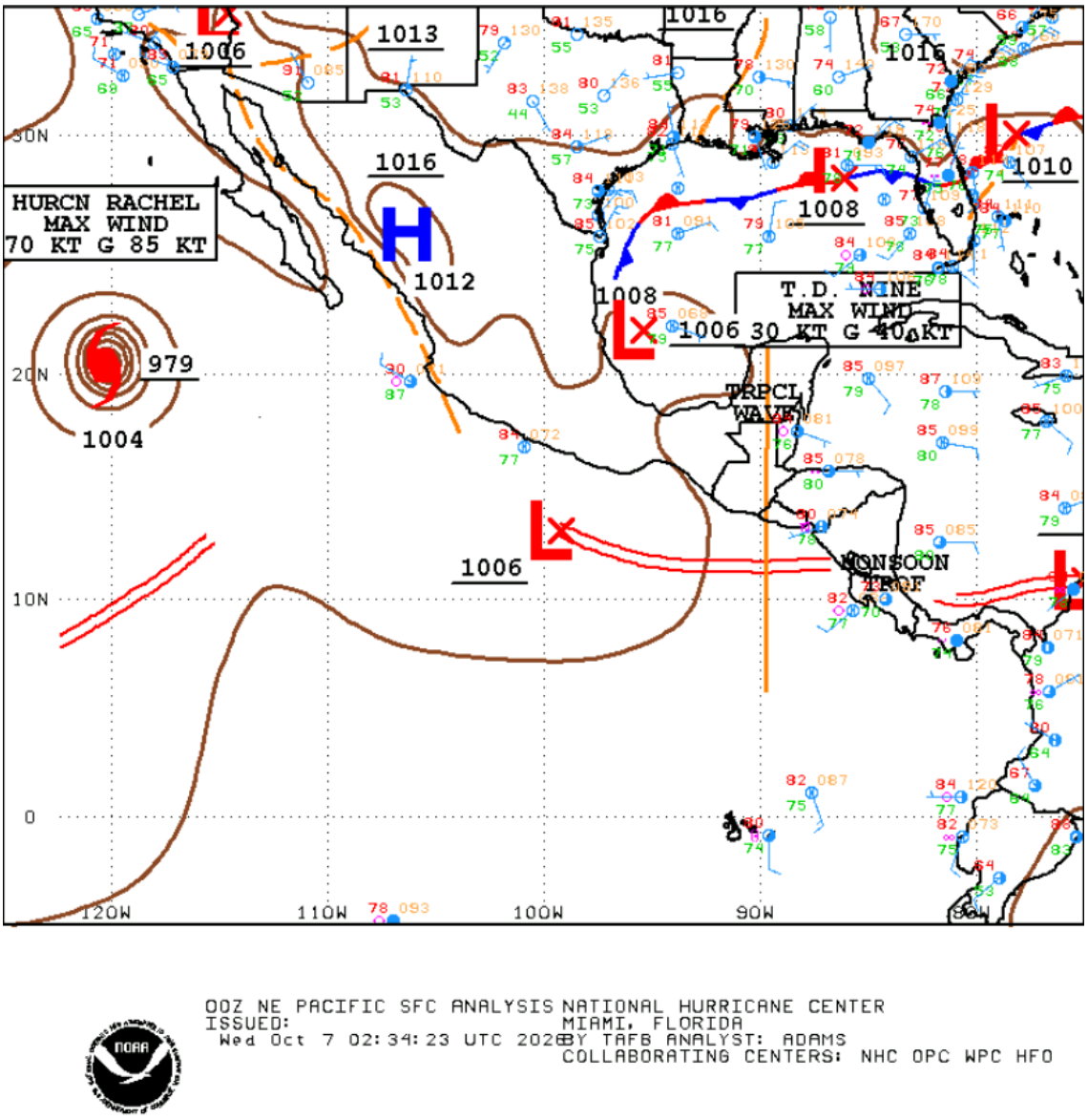


Figure 3 Surface analysis over the Central America and eastern Pacific Ocean on 7 October, 2026 at 0000UTC. Source: US National Hurricane Center[2]

[2] National Oceanic and Atmospheric Administration - FTP, National Hurricane Center, review date: 7 October 2026, available at: https://www.nhc.noaa.gov/tafb/EPAC_00Z.gif

By 8 October, the tropical wave had dissipated over Central America, while TC Isaias drew its convective activity closer to its own centre over the eastern Gulf of Mexico. Atmospheric conditions over Guatemala grew more stable as a result, bringing this rainfall event to an end.

3 REPORTED IMPACTS

The heavy and persistent rainfall in Guatemala caused localized damage and disruption. Official reports from the National Coordinator for Disaster Reduction (CONRED) and the Guatemalan News Agency (AGN) indicate rain-related incidents including fallen trees in urban areas of Guatemala City and along the CA-2 highway near San Antonio Suchitepéquez, partially blocking roads and affecting traffic flow[3]. During this same period, CONRED, using data from the national meteorological agency, INSIVUMEH[4], reported soil saturation levels equal to or greater than 90% in multiple departments (including Alta Verapaz, Baja Verapaz, Guatemala, Huehuetenango, Quiché, Chimaltenango, Escuintla, Izabal, Quetzaltenango, Sacatepéquez, San Marcos, and Sololá).[5]

4 RAINFALL MODEL OUTPUTS

All data sources used by the CCRIF Excess Rainfall XSR 3.1 model, CMORPH, IMERG, WRF5, WRF7, WRF11 and WRF15[6], detected the occurrence of precipitation over Guatemala during the period 01 to 07 October 2026. Each data source reported a specific distribution and accumulation of rainfall, as discussed below and shown in Figure 3. A CARE for Guatemala was activated on 04 October and closed on 07 October 2026. The CARE was activated due to the use of the 24-hour and the 72-hour aggregation intervals for precipitation[7], and thus the period considered by the XSR 3.1 model for the loss estimate based on the accumulated precipitation in Guatemala was 01 to 07 October 2026.

[3] Sistema Conred atiende emergencias provocadas por lluvias - Agencia Guatemalteca de Noticias

[4] National Institute of Seismology, Vulcanology, Meteorology and Hydrology

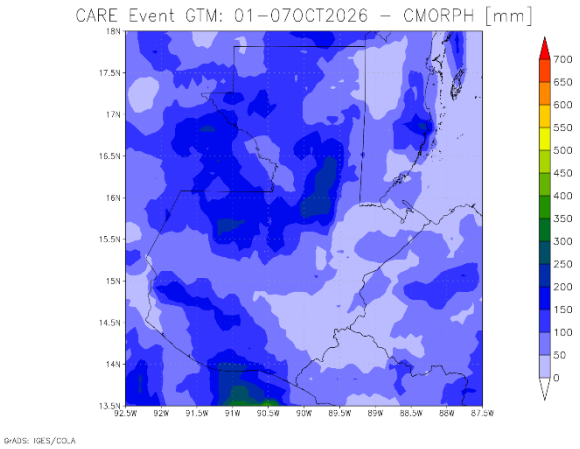
[5] Lluvias generan saturación de suelo en varios departamentos - CONRED

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

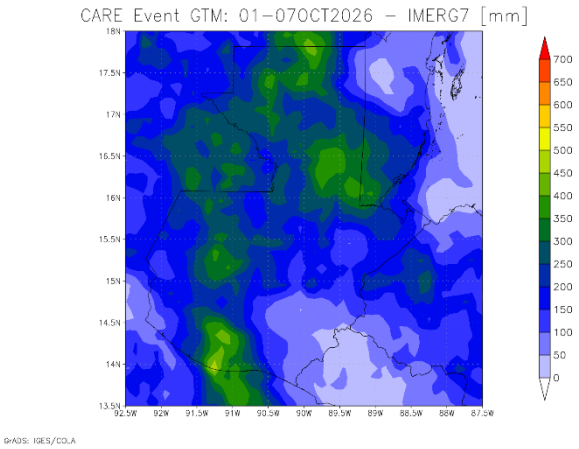
[7] The two aggregation periods correspond to the Rainfall Aggregation Period #1 and Rainfall Aggregation Period #2, as indicated in the Schedule. Further details in the Definitions section of this report.

Table 1: Report from XSR 3.1 Data Sources on the Precipitation over Guatemala October 01 to 06, 2026

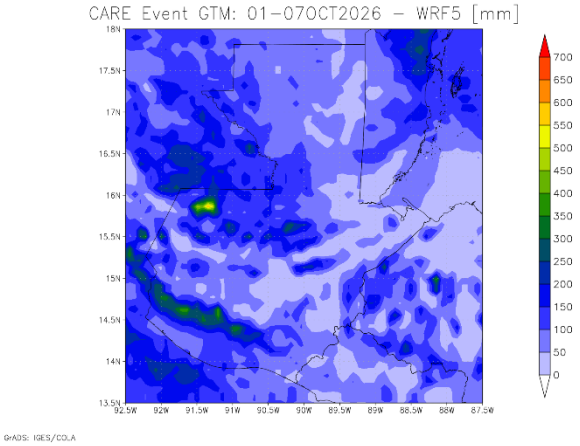
CMORPH	CMORPH reported total accumulated values of precipitation between 50 mm and 150 mm over most of Guatemala. The highest values, between 150 mm and 250 mm, were reported over the central-northern part of the country, between the Noroccidental and Norte Regions, and over a small area in southern Petén. Lower values were reported over the eastern and south-eastern part of the country.
IMERG	IMERG reported total accumulated values of precipitation between 200 mm and 350 mm over most of the northern and central part of Guatemala. Higher values, between 350 mm and 450 mm, were reported over northern Petén and over central-southern Petén, towards the border with Belize. The highest values, between 400 mm and 500 mm, were reported over the Suroccidental Region along the Pacific slope. Lower values were reported over the eastern and south-eastern part of the country.
WRF5	WRF5 reported total accumulated values of precipitation between 50 mm and 150 mm over most of Guatemala, including Petén. Values between 200 mm and 350 mm were reported over the western highlands along the Pacific slope, in the Suroccidental Region. The highest values, between 500 mm and 600 mm, were reported over a localized area in the Noroccidental Region. Lower values were reported over the central and eastern part of the country.
WRF7	WRF7 showed a pattern of total accumulated values of precipitation similar to that of WRF5, with rainfall more concentrated over the western part of the country. The highest values, between 450 mm and 550 mm, were reported over a small area near the border with Mexico. Values between 250 mm and 350 mm were reported over the central-northern part of Guatemala. Lower values were reported over the central and eastern part of the country.
WRF11	WRF11 showed total accumulated values of precipitation higher than 400 mm over several localized areas in the western and north-western part of Guatemala. The highest values, higher than 650 mm, were reported over the Noroccidental Region, while values higher than 600 mm were reported over the Suroccidental Region along the Pacific slope. Values between 300 mm and 400 mm were reported over central-western Petén. Lower values were reported over the eastern part of the country and along the Pacific coastal plain.
WRF15	WRF15 reported total accumulated values of precipitation higher than 400 mm over large areas in the western and north-western part of Guatemala. The highest values, between 650 mm and 700 mm, were reported along the Pacific slope and near the border with Mexico. Values between 500 mm and 550 mm were reported over northern Huehuetenango Department, and values up to 350–400 mm over Petén. Lower values were reported over a strip crossing the central-eastern part of the country towards the border with Honduras.



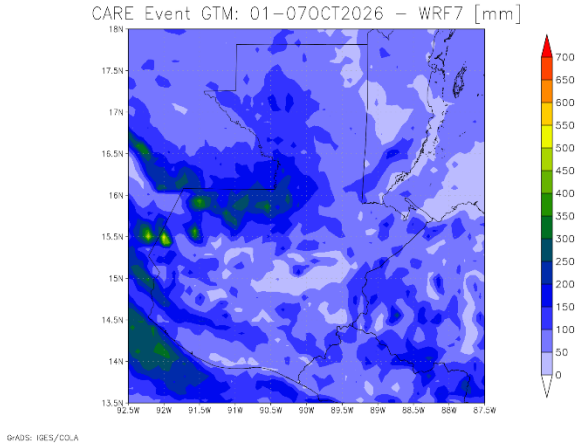
a) CMORPH



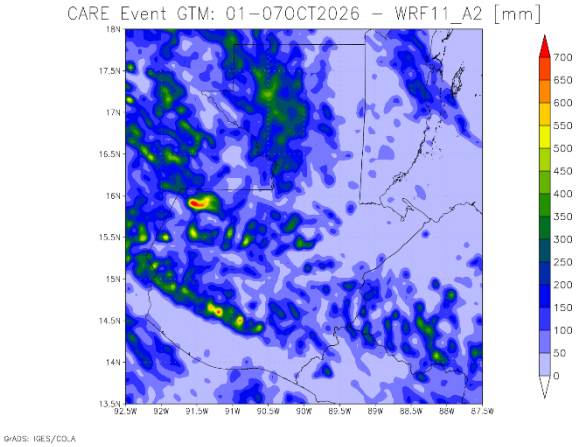
b) IMERG7



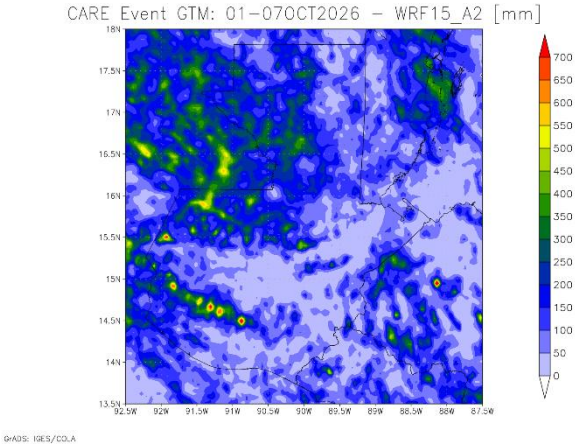
c) WRF5



d) WRF7



e) WRF11



f) WRF15

Figure 3 Total accumulated precipitation during the period 01 to 07 October, 2026 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 24-hour aggregation and 72-hour aggregation respectively:

https://wemap.ccrif.org/OUTPUT/CCRIF/XSR/Events/GTM/CARE_3_2026/daily_prec_short.mp4

https://wemap.ccrif.org/OUTPUT/CCRIF/XSR/Events/GTM/CARE_3_2026/daily_prec_long.mp4

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

The final RIL (RIL_{FINAL}) was calculated as the average of the four RILs from CMORPH, IMERG, WRF5 and WRF11. The RIL_{FINAL} was below the attachment point of the Excess Rainfall policy for Guatemala, and thus the policy was not triggered. Therefore, no payout is due under the Excess Rainfall policy to the Government of Guatemala.

The Wet Season Trigger (WST) endorsement of the XSR3.1 model did not identify this CARE as a "Wet Season" event[8]. Therefore, no payout is due under the Wet Season Trigger endorsement of Guatemala's Excess Rainfall policy.

The Localized Event Trigger (LET) component of the XSR3.1 model did not identify this CARE as a localized event[9]. Therefore, no payout is due under the Localized Event Trigger endorsement of Guatemala's Excess Rainfall policy.

5 TRIGGER POTENTIAL

The Rainfall Index Loss for the Covered Area Rainfall Event (CARE) was below the attachment point of Guatemala's Excess Rainfall policy; 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

[8] 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.

[9] 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.
IMERG Model	The satellite-based rainfall estimation model developed by NASA as described in the Rainfall Estimation Models section of this Attachment.
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.
WRF11 Model	The weather research and forecasting rainfall model by NOAA with Configuration #11 initialized with the data provided by the National Center for Environmental Prediction and based on the standard setup provided by the Caribbean Institute for Meteorology and Hydrology (CIMH) as described in the Rainfall Estimation Models and in the Input Data to the Rainfall Estimation Models sections of this Attachment.

WRF15 Model	The weather research and forecasting rainfall model by NOAA with Configuration #15 initialized with and assimilating the data provided by the National Center for Environmental Prediction and based on the standard setup provided by the Instituto National de Sismología, Vulcanología, Meteorología e Hidrología (INSIVUMEH) of Guatemala, 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.