



Covered Area Rainfall Events (08/10/2025)

Excess Rainfall

Event Briefing

Sint Maarten

16 October 2025

1 INTRODUCTION

This event briefing describes the impact of rainfall on Sint Maarten which was associated with a Covered Area Rainfall Event (CARE) starting on 8 October and ending on 8 October 2025. The Rainfall Index Loss (RIL) for the Covered Area Rainfall Event was below the attachment point of Sint Maarten's Excess Rainfall policy, and therefore no payout is due to the Government of Sint Maarten.

2 EVENT DESCRIPTION

Between 7 and 8 October 2025, Sint Maarten experienced significant rainfall associated with the passage of an intense tropical wave moving across the Eastern Caribbean.

The event commenced with the arrival of the tropical wave over the Leeward Islands. As of 1800 UTC on 7 October, the wave's axis was positioned along longitude 62.0° West, extending from approximately 20° North southward across the Lesser Antilles to near Trinidad and Tobago (Figure 1). The system was moving westward at around 11 mph (18 km/h). Its passage triggered a surge in atmospheric instability and moisture across the region, leading to widespread convective activity. Satellite imagery (Figure 2) showed significant development extending from the Virgin Islands and the northern Leeward Islands southward to approximately 11° North.

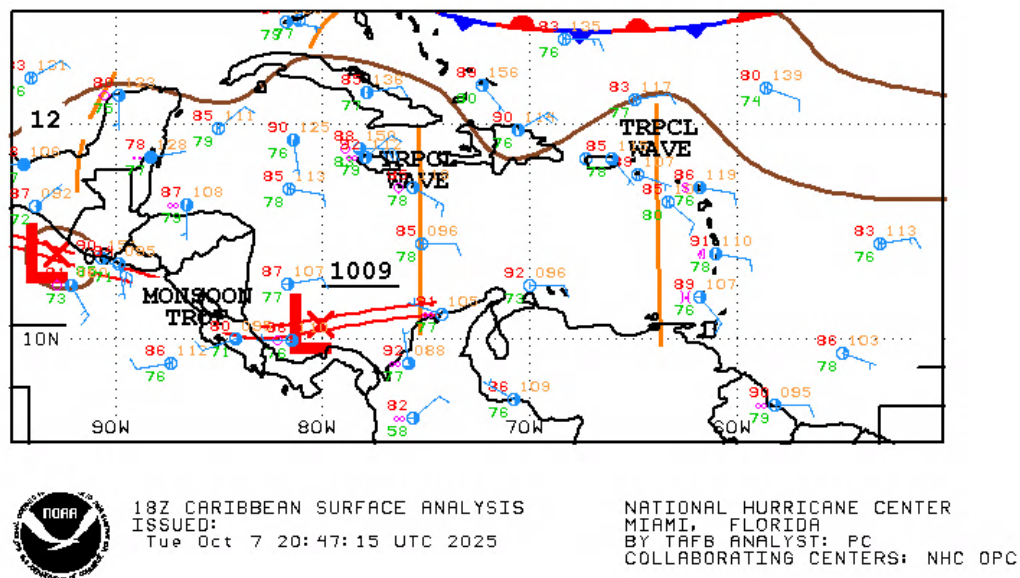


Figure 1 Surface analysis over the Caribbean area on 7 October at 1800UTC. Source: US National Hurricane centre¹

¹ National Oceanic and Atmospheric Administration - FTP, National Hurricane centre, review date: 7 October 2025, available at: <https://www.nhc.noaa.gov/tafb/CAR18Z.gif>

Convective activity over the northern Leeward Islands began around 1500 UTC on 7 October, with moderate to locally heavy showers persisting through the remainder of the day (Figure 2a). The intensity increased markedly at 0300 UTC on 8 October, when a strong thunderstorm developed over the area, bringing heavy rainfall to Sint Maarten until approximately 0900 UTC (Figure 2b).

Rainfall intensity gradually diminished later that day as the tropical wave continued its westward movement, marking the end of the rainfall episode over the northern Leeward Islands.

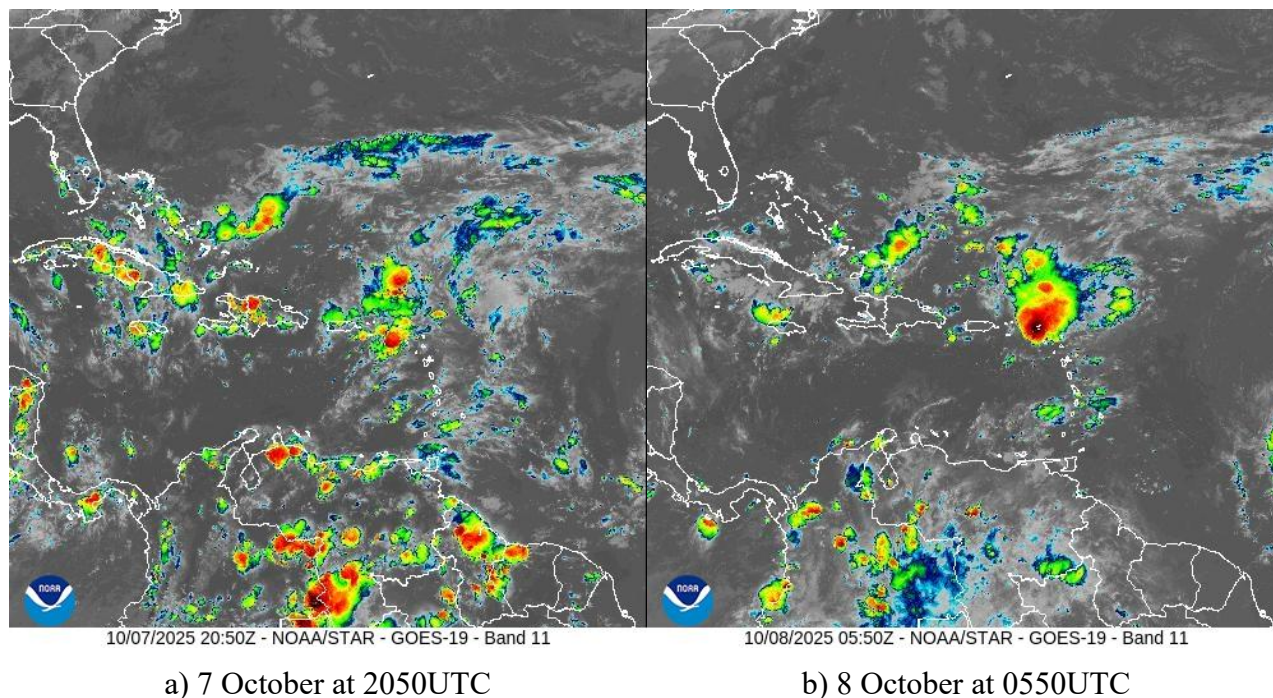


Figure 2 Satellite imagery on 7 and 8 October, 2025 at different times as indicated in the labels from the thermal infrared channel enhanced with colour. Blue/green colours represent high altitude clouds (top cloud temperature between -50°C and -70°C), while the red/yellow colours represent very high altitude clouds (top cloud lower than -70°C). High altitude clouds indicate strong convection associated with intense precipitation. Source: NOAA, National Environmental Satellite, Data and Information Service².

3 REPORTED IMPACTS

At the time of writing this report, there was no information about damage in Sint Maarten due to this Covered Area Rainfall Event during the indicated period.

²RAMSDIS Online Archive, NOAA Satellite and Information Service, available at:
<https://cdn.star.nesdis.noaa.gov/GOES16/ABI/SECTOR/pr/11/>

4 RAINFALL MODEL OUTPUTS

All data sources used by the XSR 3.1 model, CMORPH, IMERG, WRF5, WRF7, WRF11 and WRF15³, detected the occurrence of precipitation over Sint Maarten and the surrounding waters during the period 06 to 08 October 2025. Each data source reported a specific distribution and accumulation of rainfall, as discussed below and shown in Figure 3. A CARE for Sint Maarten was activated on 08 October and closed on the same day. The CARE was activated due to the use of the 12-hour and the 48-hour aggregation intervals for precipitation⁴ and thus the period considered by the XSR 3.1 model for the loss estimate based on the accumulated precipitation in Sint Maarten was 06 to 08 October 2025.

Table 1: Report from XSR 3.1 Data Sources on the Precipitation over Sint Maarten, October 06 to 08, 2025

CMORPH	CMORPH reported total accumulated values of precipitation ranging between 60 mm and 120 mm over Sint Maarten, with the highest values, between 100 mm and 120 mm, over the western region.
IMERG	IMERG reported total accumulated values of precipitation ranging between 120 mm and 140 mm over Sint Maarten.
WRF5	WRF5 showed total accumulated values of precipitation ranging between 60 mm and 80 mm over Sint Maarten.
WRF7	WRF7 showed total accumulated values of precipitation ranging between 80 mm and 120 mm over Sint Maarten, with the lowest values, between 80 mm and 100 mm, over the western region.
WRF11	WRF11 showed total accumulated values of precipitation lower than 60mm over most of Sint Marteen. Lower values, ranging between 20mm and 40mm, were reported over the western region.
WRF15	WRF15 reported accumulated values of precipitation lower than 40 mm over the entire territory of Sint Maarten. The highest values, ranging between 20 mm and 40 mm, were reported over the eastern part of the country.

³ 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 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.

⁴ 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.

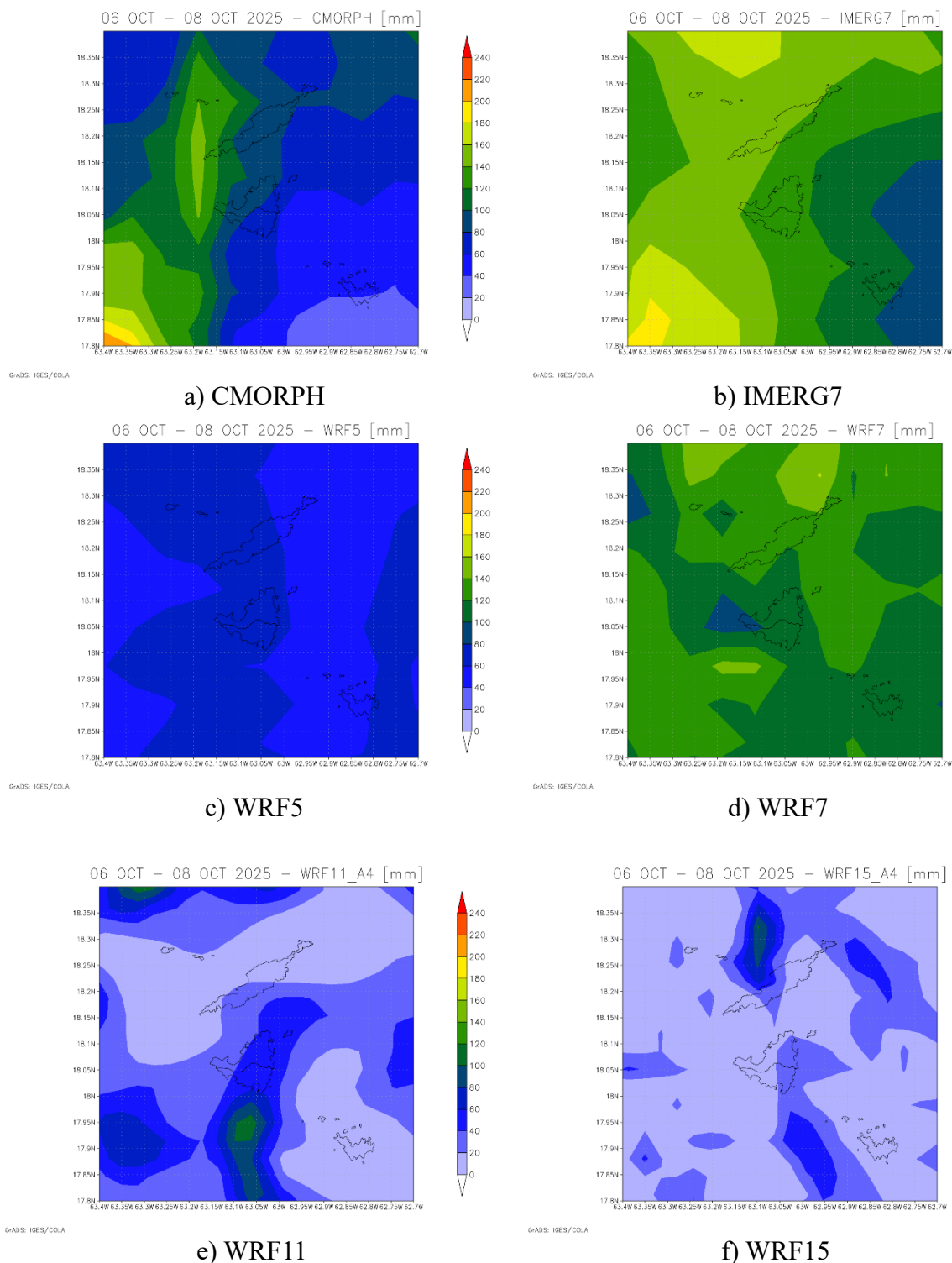


Figure 3 Total accumulated precipitation during the period 06 to 08 October, 2025 imated by CMORPH (a), IMERG7 (b), WRF5 (c), WRF7 (d), WRF11 (e), WRF15 (f). Source: CCRIF SPC

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/SXM/CARE_2_2025/daily_prec_short.mp4

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

The Rainfall Index Loss (RIL) was above the loss threshold for Sint Maarten for four of the data sources used by XSR3.1: CMORPH, IMERG, WRF5 and WRF7. 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 WRF7. The RIL_{FINAL} was below the attachment point of the Excess Rainfall policy for Sint Maarten, and therefore the policy was not triggered. Therefore, no payout is due under this Excess Rainfall policy to the Government of Sint Maarten.

5 TRIGGER POTENTIAL

The Rainfall Index Loss calculated for the Covered Area Rainfall Event (CARE) for Sint Maarten was below the attachment point of Sint Maarten's Excess Rainfall policy, and therefore no payout is due.

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.
<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.