



Covered Area Rainfall Events (16/08/2025 to 18/08/2025)

Excess Rainfall

Event Briefing

Sint Maarten

29 August 2025

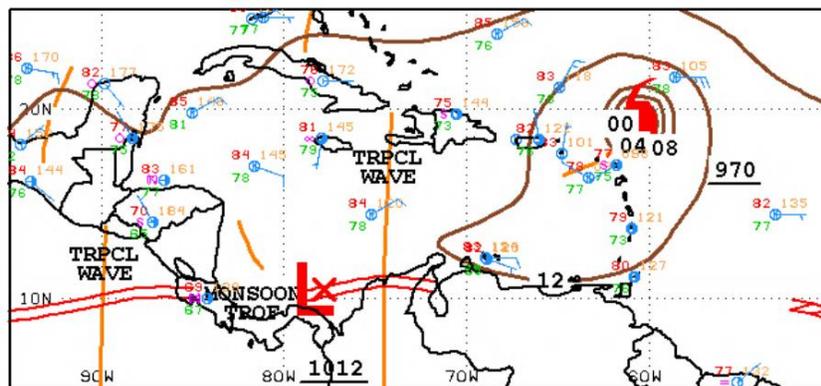
1 INTRODUCTION

This event briefing describes the impact of rainfall on Sint Maarten which was associated with a Covered Area Rainfall Event (CARE) starting on 16 August and ending on 18 August 2025, this CARE is associated to Hurricane Erin. 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

On 11 August 2025 at 1500 UTC, a tropical storm formed just west of the Cabo Verde Islands and was named Erin. Over the next four days, Tropical Storm Erin strengthened slowly as it moved westward across the central Atlantic Ocean, hindered by relatively cool sea surface temperatures. On 15 August at 1500 UTC, it was upgraded to a hurricane while located approximately 460 mi (740 km) east of the northern Leeward Islands. From that point, Erin began to rapidly intensify due to warmer sea surface temperatures over the Atlantic waters east of the northern Caribbean Sea.

By 0600 UTC on 16 August, Erin had become a Category 2 hurricane with sustained winds of 100 mph (155 km/h), as it approached the northern Leeward Islands. At that time, the hurricane's centre was located at latitude 19.5° North, longitude 59.5° West, approximately 255 mi (409 km) northeast of Sint Maarten. It was moving west-north-westward at 17 mph (28 km/h) (see Figure 1).



06Z CARIBBEAN SURFACE ANALYSIS
ISSUED:
Sat Aug 16 08:43:56 UTC 2025

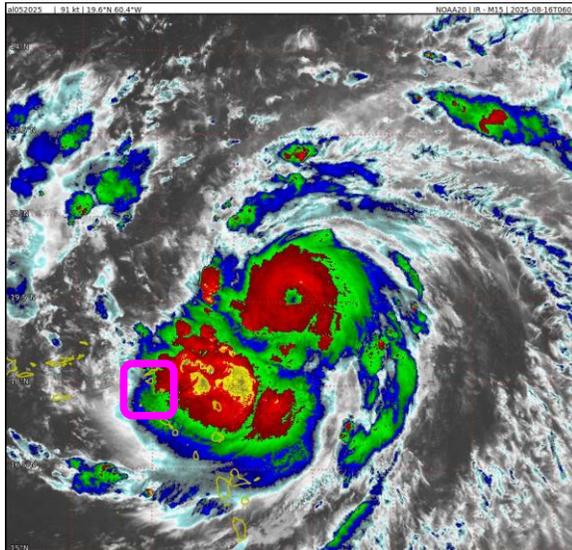
NATIONAL HURRICANE CENTER
MIAMI, FLORIDA
BY TAFB ANALYST: PC
COLLABORATING CENTERS: NHC OPC

Figure 1 Surface analysis over the Caribbean area on 16 August at 0600UTC. Source: US National Hurricane centre¹

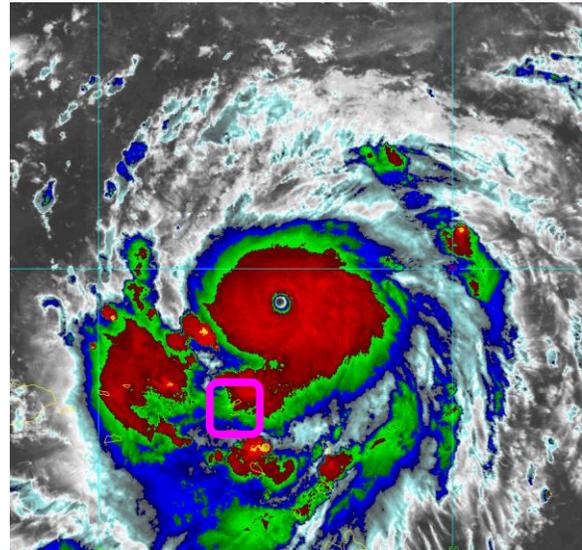
Satellite imagery (Figure 2a) showed a well-organized hurricane, characterized by a small eye, a compact and symmetric inner core, and a large area of deep convection southwest of the centre.

¹ National Oceanic and Atmospheric Administration - FTP, National Hurricane centre, review date: 16 August 2025, available at: https://www.nhc.noaa.gov/tafb/CAR_06_Z.gif

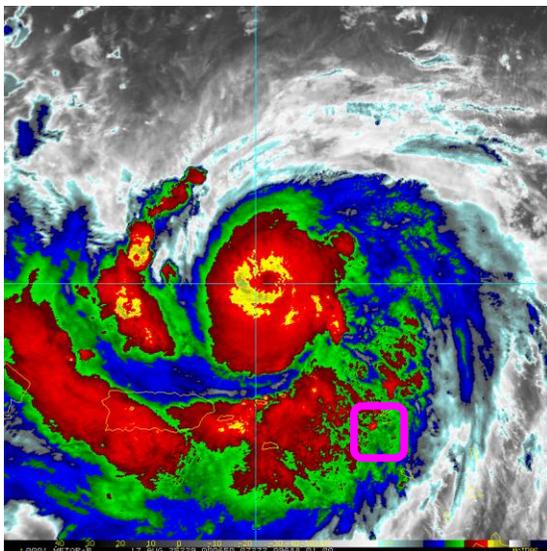
Those outer rainbands began to affect the northern Leeward Islands, including Sint Maarten, with moderate to locally intense precipitation (Figure 2a).



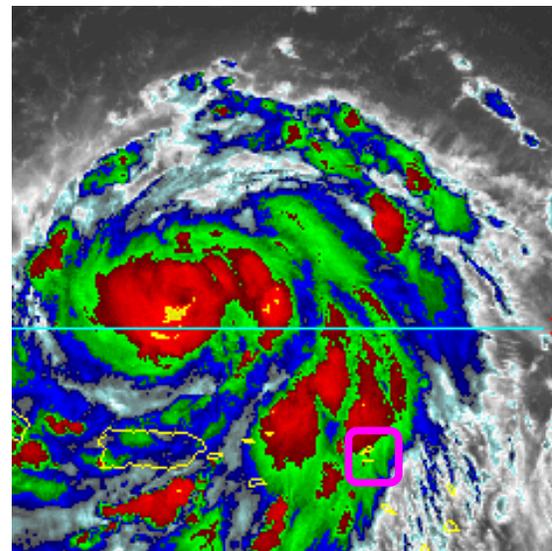
a) 16 August at 0600UTC



b) 16 August at 1336UTC



c) 17 August at 0006UTC



d) 17 August at 0600UTC

Figure 2 Satellite imagery on 16 and 17 August 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 Sint Maarten. Source: NOAA, National Environmental Satellite, Data and Information Service².

Over the following nine hours, Erin rapidly intensified and, by 1520 UTC, had reached Category 5 status, with maximum sustained winds near 160 mph (255 km/h) and a minimum central pressure

² RAMSDIS Online Archive, NOAA Satellite and Information Service, available at: https://rammb-data.cira.colostate.edu/tc_realtime/storm.asp?storm_identifier=a1052025

of 917 mb. At that time, the hurricane’s centre was located at latitude 19.7° North and longitude 62.8° West, at its closest point to Sint Maarten—approximately 115 mi (185 km) north of its territory. Moderate to locally heavy rainfall continued to affect the country, driven by intense convection within the outer rainbands located to the southwest of the hurricane’s inner core (Figure 2b). These conditions persisted throughout the remainder of the day (Figure 2c), while the Category 5 hurricane continued westward at approximately 16 mph (26 km/h).

On 17 August, Erin underwent an eyewall replacement cycle—a structural change that occurs in the most intense hurricanes—resulting in a temporary weakening of intensity but an increase in size. As a result, despite the increasing distance from Sint Maarten, the expanded rainbands situated southeast of the hurricane's core continued to produce moderate to locally intense precipitation over the territory until around 0800 UTC (Figure 2d). Throughout the rest of the day, the system continued moving west-north-westward at 14 mph (22 km/h), traversing the Atlantic waters north of Puerto Rico and gradually moving away from the Leeward Islands.

3 REPORTED IMPACTS

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

4 RAINFALL MODEL OUTPUTS

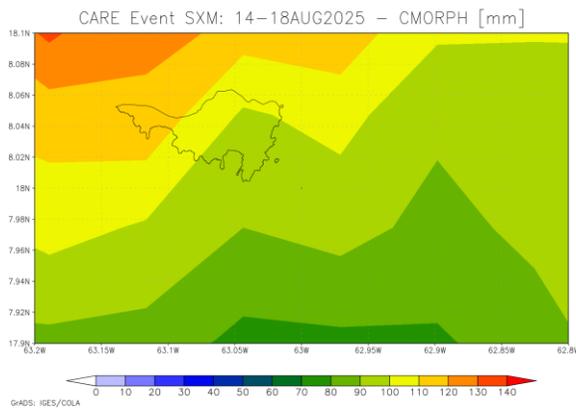
All data sources used by the XSR 3.1 model, CMORPH, IMERG, WRF5, WRF7, WRF11 and WRF15³, detected the occurrence of precipitation over Sint Maarten and the surrounding waters during the period 14 to 18 August 2025. Each data source reported a specific distribution and accumulation of rainfall, as discussed below and shown in Figure 3. A CARE for Sint Maarten was activated on 16 August and closed on 18 August. 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 14 to 18 August 2025.

Table 1: Report from XSR 3.1 Data Sources on the Precipitation over Sint Maarten, August 14 to 18, 2025

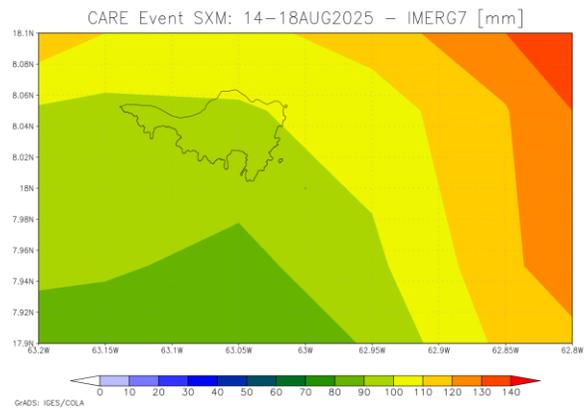
³ CMORPH Model: the satellite-based rainfall precipitation estimates provided by the NOAA Climate Prediction centre (CPC) using the so-called Morphing Technique http://www.cpc.ncep.noaa.gov/products/janowiak/cmorph_description.html. Further details are provided in the Definitions section of this report. 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.

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.

- CMORPH CMORPH reported total accumulated values of precipitation ranging between 90 mm and 120 mm over Sint Maarten, with the highest values, between 110 mm and 120 mm, over the northwestern region.
- IMERG IMERG reported total accumulated values of precipitation ranging between 90 mm and 100 mm over most of Sint Maarten. Higher values, between 100 mm and 110 mm, were showed along the northeastern border of the country.
- WRF5 WRF5 showed total accumulated values of precipitation ranging between 70 mm and 100 mm over Sint Maarten, with the highest values, between 90 mm and 100 mm, over the northwestern region.
- WRF7 WRF7 showed total accumulated values of precipitation ranging between 90 mm and 130 mm over Sint Maarten, with the highest values, between 120 mm and 130 mm, over the northwestern region.
- WRF11 WRF11 showed total accumulated values of precipitation lower than 50mm over most of Sint Marteen. Higher values, ranging between 60mm and 70mm, were reported along the northeastern edge of the country.
- WRF15 WRF15 reported accumulated values of precipitation lower than 50 mm over the entire territory of Sint Maarten. The highest values, ranging between 40 mm and 50 mm, were reported over the eastern part of the country.



a) CMORPH



b) IMERG7

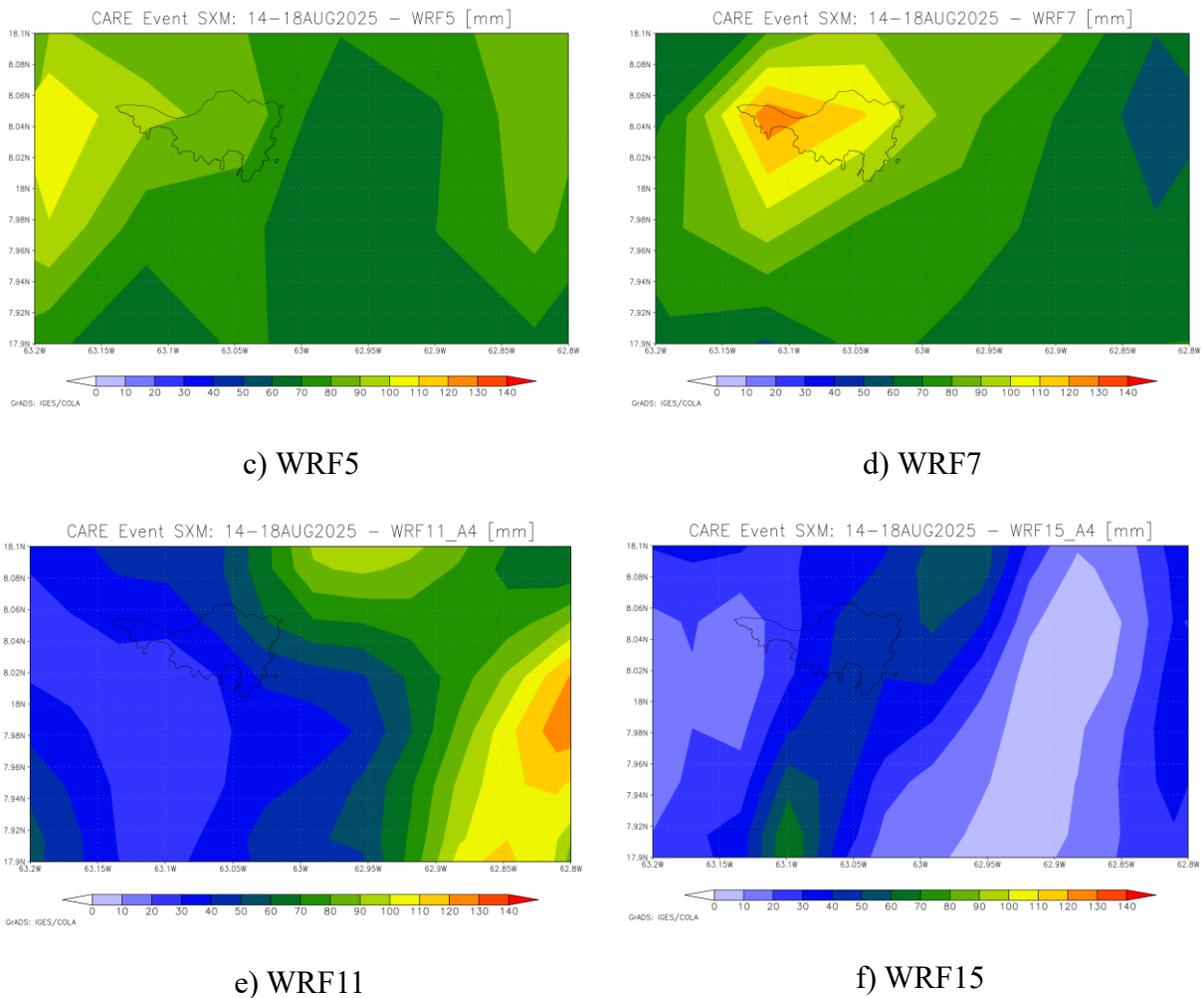


Figure 3 Total accumulated precipitation during the period 14 to 18 August, 2025

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 Sint Maarten for four of the data sources used by XSR3.1: CMORPH, IMERG, WRF5 and WRF7. The RIL was the highest for CMORPH.

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’.

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.

<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.