Haiti

Excess Rainfall

Covered Area Rainfall Events
(19 & 23 September 2014)

Event Briefing

17 October 2014

1   INTRODUCTION

Haiti experienced torrential rainfall on 19 and 20 September 2014 and again on 23 and 24 September 2014. This period of rainfall produced two Covered Area Rainfall Events (CAREs) on 19 and 23 September respectively.

Efforts have been made to acquire information regarding damages and actual rainfall measurements on the ground in Haiti. However, due to the fact that these events were not associated with a significant weather system, data from usual CCRIF associates, CIMH[1], UNECLAC[2] and CDEMA[3] and Haiti's disaster management agency have been difficult to access.

2   RAINFALL MODEL OUTPUTS

The Caribbean Rainfall Model uses a 3-day running aggregate of rainfall measurements for Haiti, meaning that the rainfall attributed to a particular day is the total sum of the rainfall on that day itself and the two following days.

For the 19 September CARE, the Caribbean Rainfall Model (operated by Kinetic Analysis Corporation (KAC)) produced Maximum Aggregate Rainfall of 709.95 mm in the west of Haiti and the maximum number of ongoing iTRMM Grid Cell Events (iGCEs) was 9,898.

The 23 September CARE had Maximum Aggregate Rainfall of 433.33 mm, also in the west, and the maximum number of ongoing iGCEs was 9,494.

3   TRIGGER POTENTIAL

The number of ongoing iGCEs exceeded the required threshold (8,274) to trigger the first CARE on 19 September but fell below the threshold the next day. The number of ongoing iGCEs remained below that threshold until 23 September when it exceeded the threshold once again, thus prompting a second CARE.

It must be noted that while each CARE technically lasted only one day, a CARE is not considered complete until the Aggregate Rainfall in each iTRMM Grid Cell (that had an ongoing iGCE that contributed to the CARE) has fallen below 75 mm for at least 2 days. Both CAREs were considered complete on 7 October 2014.

The Rainfall Index Losses calculated for both CAREs were below Haiti's attachment point on its Excess Rainfall policy and therefore no payout is due.

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[1] Caribbean Institute for Meteorology and Hydrology
[2] United Nations Economic Commission for Latin America and the Caribbean
[3] Caribbean Disaster Emergency Management Agency

Figure 1 shows the accumulated rainfall over Haiti from 19 to 21 September 2014. The image shows that the highest values were recorded in the central area of the country in Plateau Central.
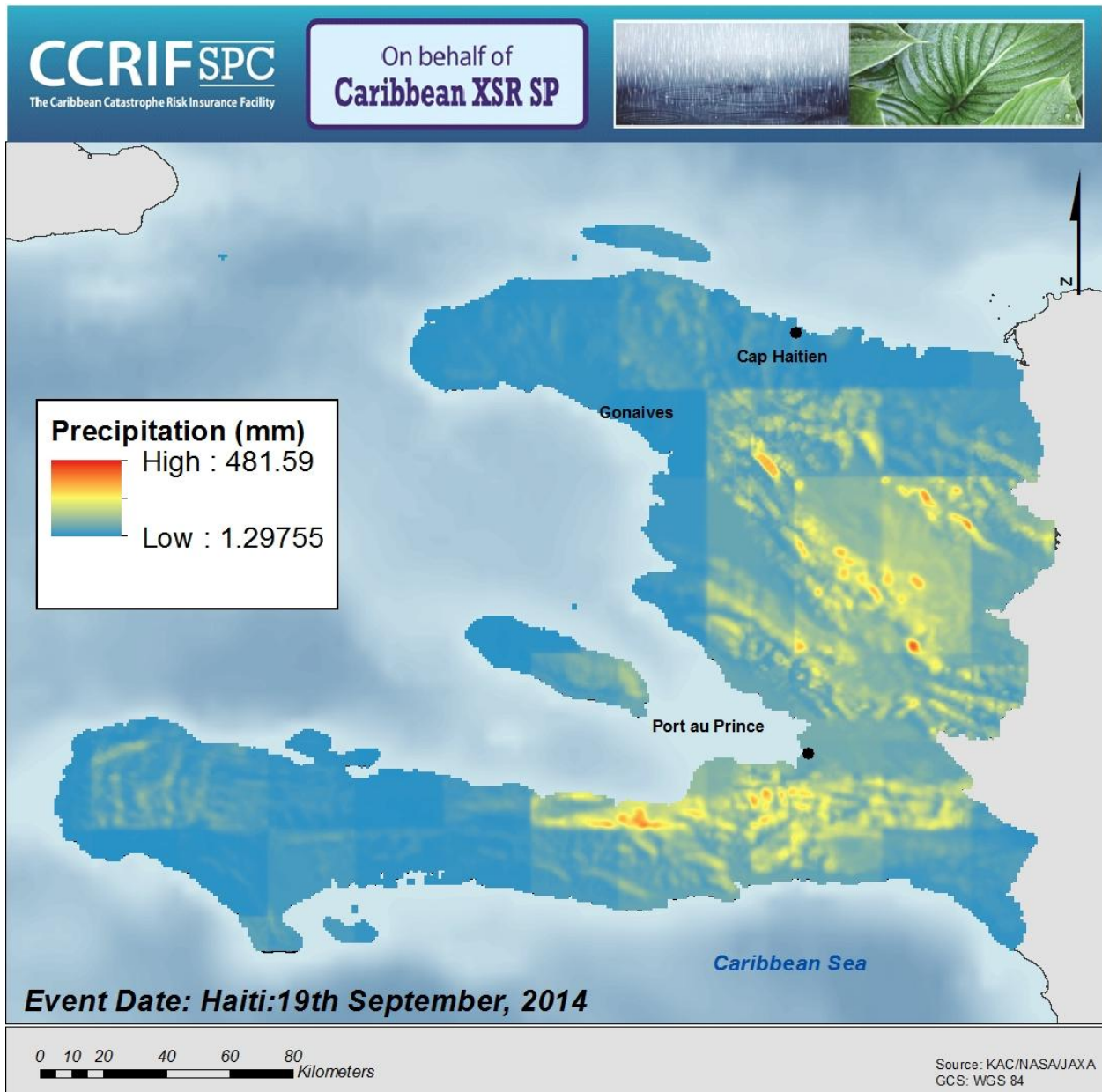

Figure 1   Map showing accumulated rainfall in Haiti, 19-21 September 2014.

Figure 2 shows accumulated rainfall from 23 to 25 September 2014. The image shows that the highest values were recorded in the rural central west area of Haiti.
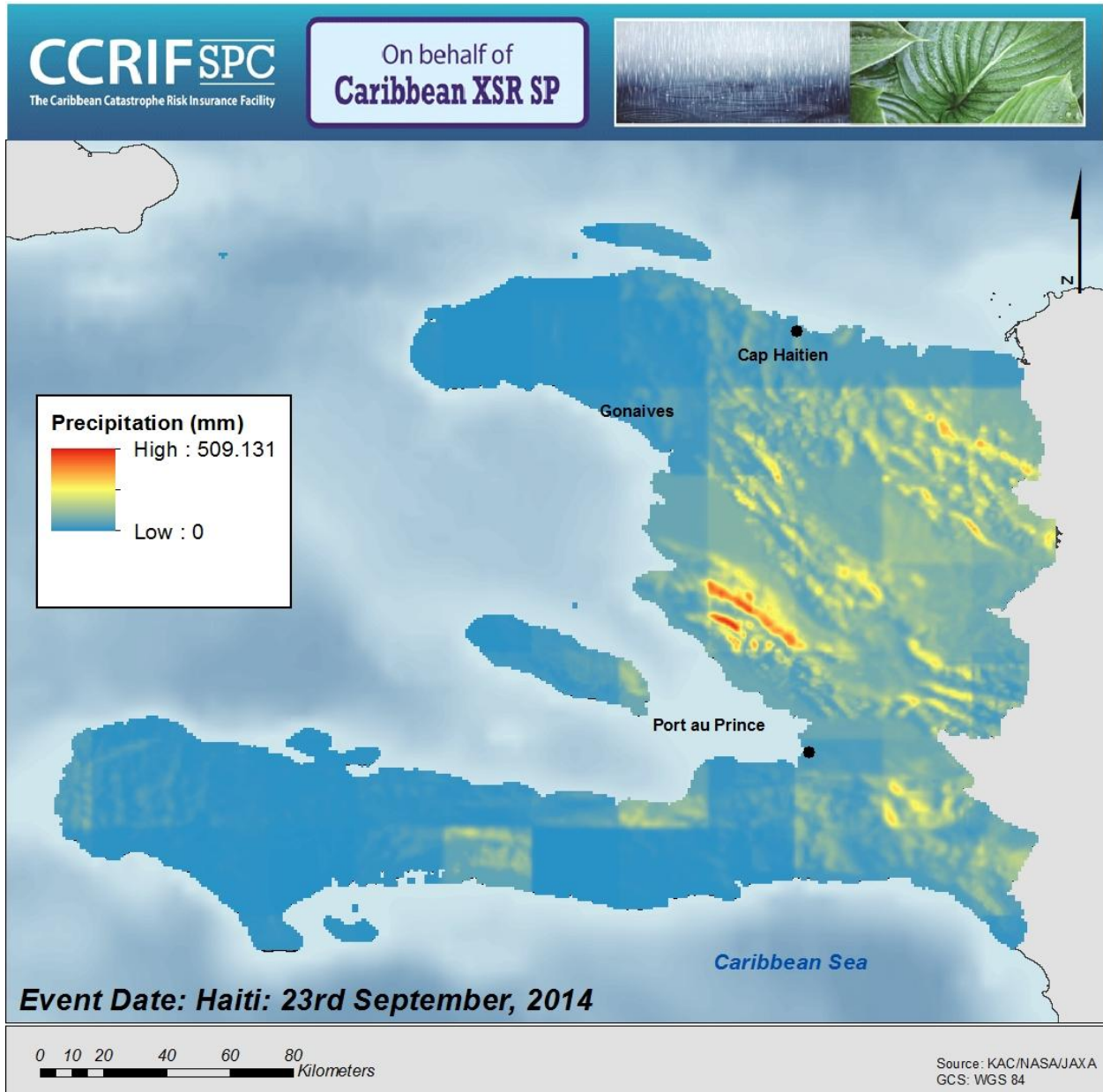
Figure 2   Map showing accumulated rainfall in Haiti, 23-25 September 2014.

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DEFINITIONS

Active Percentage

The percentage of the total number of iTRMM Grid Cells, within the Covered Area of the Insured, in which an iTRMM Grid Cell Event must be occurring to trigger a Covered Area Rainfall Event. The Active Percentage is defined in the Schedule.

Aggregate Rainfall

The value of Aggregate Rainfall, as measured in millimetres (mm), using the iTRMM Precipitation Data over the Covered Area and evaluated by the Calculation Agent as part of the Rainfall Index Loss Calculation Methodology. For a given day:

(a) 2-day aggregate - the total sum of rainfall on the day itself, and the day after; or

(b) 3-day aggregate - the total sum of rainfall on the day itself, and the two following days.

Caribbean Rainfall Model

The computer model used to calculate the iTRMM Grid Cell Event Loss and the Rainfall Index Loss.

Covered Area Rainfall Event (CARE)

Any continuous period of days during which the number of iTRMM Grid Cell Events is greater than or equal to the product of (a) Active Percentage multiplied by (b) the total number of iTRMM Grid Cells within the Covered Area.

Covered Area

The territory of the Insured as represented in the Caribbean Rainfall Model.

iTRMM Grid Cell

The 30 arc-second by 30 arc-second grid of cells each of which is attributed with an exposure value and, for those with exposure value greater than zero, to which an Aggregate Rainfall Amount is attributed each day.

iTRMM Grid Cell Event (iGCE)

Any continuous period of days during which the Aggregate Rainfall value equals or exceeds the Rainfall Event Threshold in an iTRMM Grid Cell. For Covered Areas that have 3-day aggregation periods, an iTRMM Grid Cell Event is only considered to be over once there have been two or more consecutive days where the Aggregate Rainfall does not exceed the Rainfall Event Threshold.

iTRMM Grid Cell Event Loss   For any iTRMM Grid Cell Event, the US Dollar loss calculated by the Calculation Agent, using the Caribbean Rainfall Model.

Maximum Aggregate Rainfall   The highest Aggregate Rainfall amount during an iTRMM Grid Cell Event for each iTRMM Grid Cell in which there is an iTRMM Grid Cell Event.

Rainfall Event Threshold   Aggregate Rainfall level which, when exceeded, starts an iTRMM Grid Cell Event.

Rainfall Index Loss   For any Covered Area Rainfall Event affecting the Insured, the US Dollar loss calculated by the Calculation Agent using the Caribbean Rainfall Model.