

# Tropical Storm Alex, June 2010

## Event Briefing

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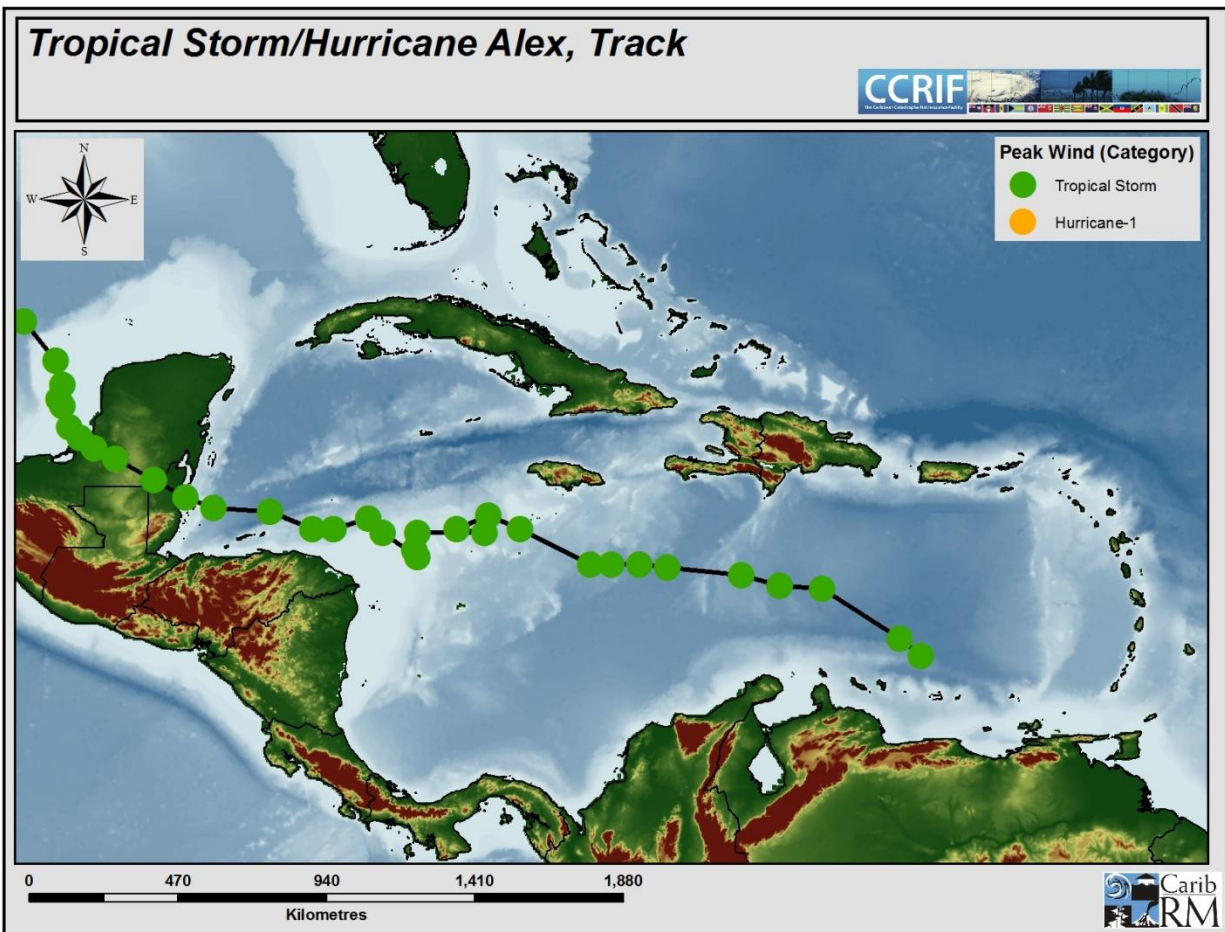


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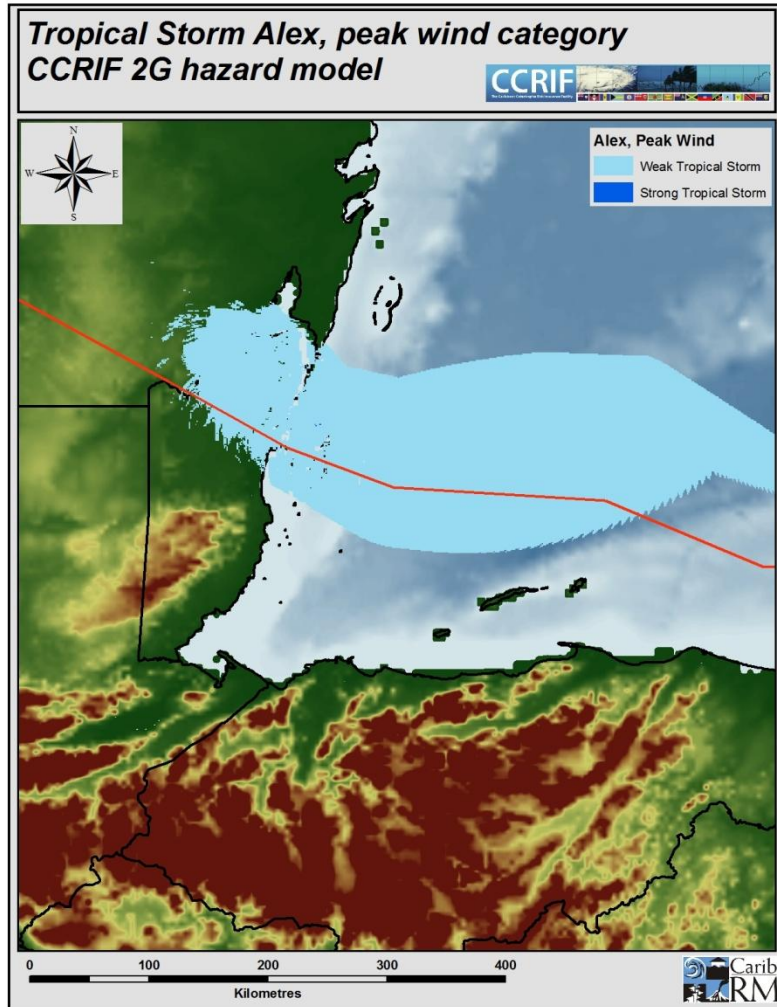
# 1 INTRODUCTION

Tropical Storm, later Hurricane Alex, the first named system of the 2010 Atlantic Hurricane Season, made its first landfall at Belize City, Belize at around midnight GMT on 27 June having meandered across the Caribbean Sea during the previous 6 days (Figure 1.) It crossed Belize moving east to west in about 6 hours, with peak 1-minute sustained winds prior to landfall (as estimated by the National Hurricane Center, NHC) of 50 knots (57mph), dropping to 35 knots (40mph) during its passage across Belize.



**Figure 1** Track of Alex and location/wind speed at 6-hourly NHC reporting times.

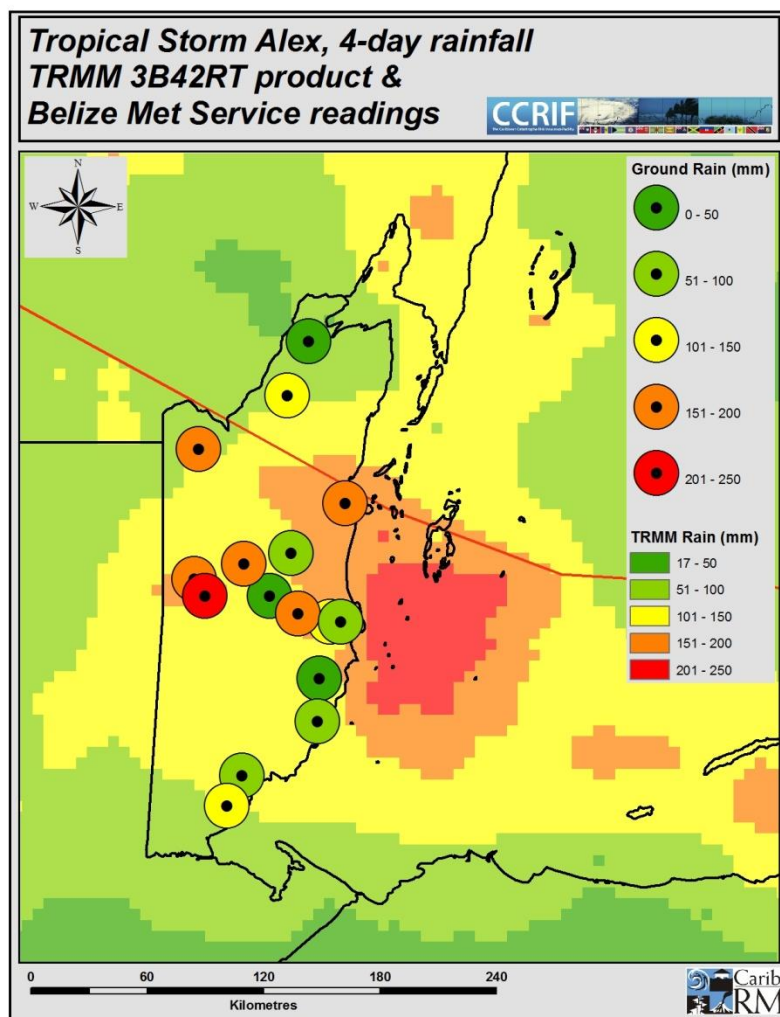
The wind footprint of Alex, as modelled in the CCRIF Second-Generation Hazard Model, is shown in Figure 2. As can be seen, Alex did achieve the minimal requirements of a defined event under the CCRIF Policy by having winds of greater than 39mph somewhere in Belize. However, the entire wind footprint is at weak Tropical Storm force (peak winds at or less than 50mph) apart from a few very localised areas of slightly higher winds.



**Figure 2** Wind footprint of Alex across Belize from CCRIF 2G model.

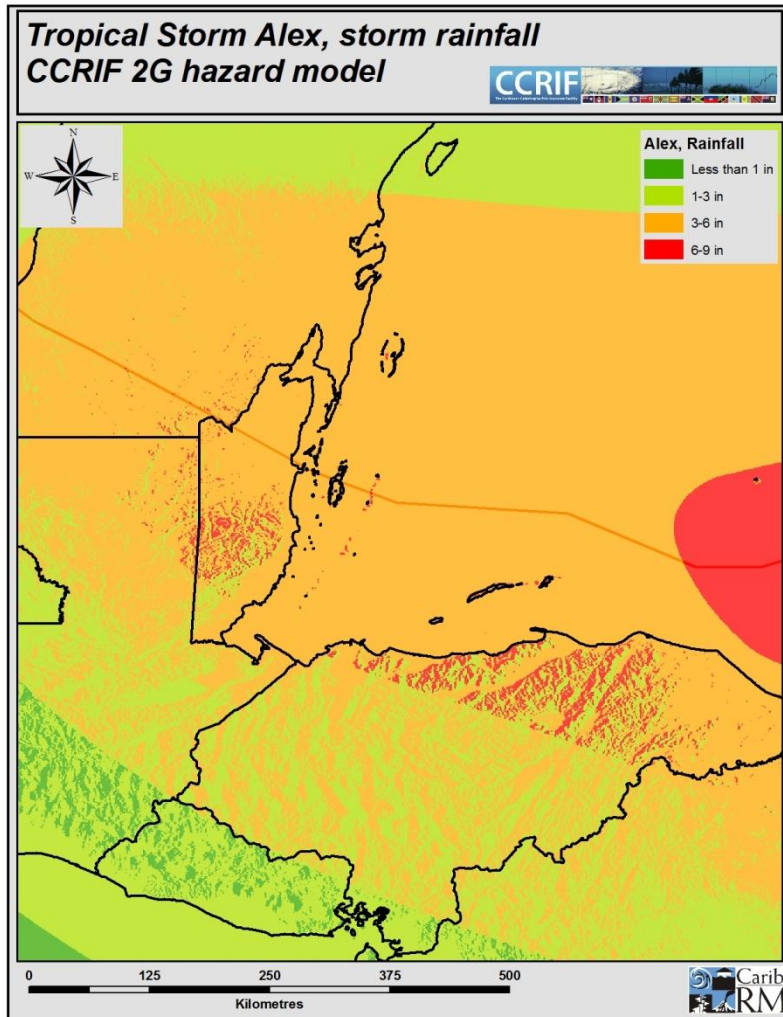
Although wind (and coastal) impacts of Alex on Belize were minimal, heavy rain did affect the country. The Belize Meteorological Service shared its ground-based rainfall data with CCRIF, and these data are shown on Figure 3, overlain on the Tropical Rainfall Measurement Mission (TRMM) data for the same 4-day period. TRMM data are at ~25km resolution.

Although there are overall differences in the amounts of rainfall in different locations between the two measurement methods, the overall pattern is similar, with peak rainfall between 200 and 250mm (8-10 inches) recorded just offshore and in the interior mountains south of the track. Rainfall in Belize City, for example, corresponds very well between the two data sets, at about 160mm.



**Figure 3** Ground-based and TRMM 4-day rainfall for Alex.

The CCRIF 2G hazard model also produces a rainfall footprint, for the full storm event, which is shown in Figure 4. For comparison, 1 inch approximates to 25mm. Again, this footprint is similar in its general characteristics to the TRMM and ground-based data, with heaviest rain offshore and in the interior highlands south of the track. Peak rainfall in the CCRIF 2G model is somewhat lower than that recorded on the ground and by TRMM.



**Figure 4** Rain footprint of Alex across Belize from CCRIF 2G model.

The overall impact of Alex in Belize was low, with rainfall not reaching critical levels such as could cause major flooding and other damage and loss. Detailed outputs from the CCRIF 2G Loss Model relevant to CCRIF coverage will be reported separately; the model recorded a very small loss from this event, well within Belize’s deductible.