

## Tropical Cyclone Tomas (AL212010)

**Event Briefing, Eastern Caribbean Impacts** 

Caribbean Risk Managers Ltd Facility Supervisor

**31 October 2010** 

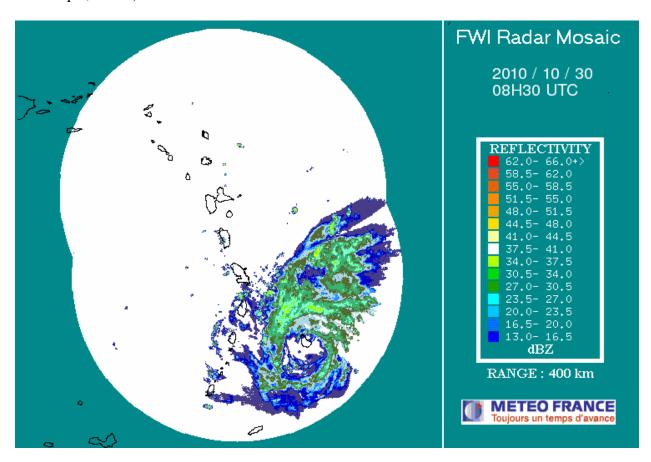




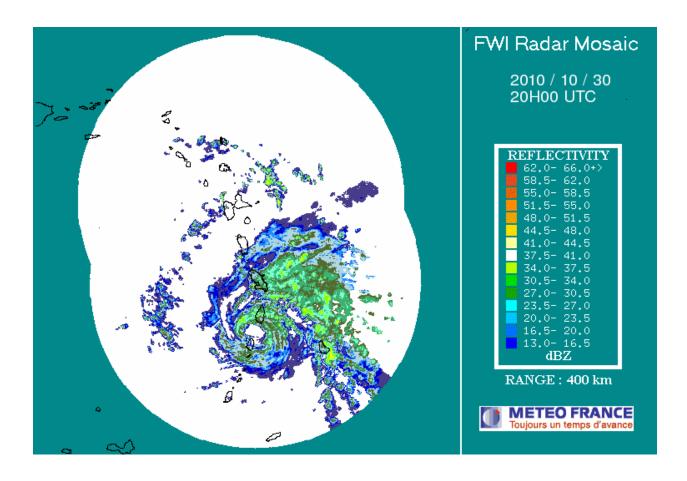
## 1 Introduction

Invest91, an area of disturbed weather which developed to the southeast of the eastern Caribbean during the last week of October was designated Tropical Storm Tomas at 5pm local time (Eastern Caribbean, GMT/UTC -4 hours) on 29 October and then was upgraded to Hurricane status at 11am local time on 30 October.

After a sharp northward tack during the night of 29 October, Tomas tracked directly over Barbados as an intense Tropical Storm during the early morning hours, the large eye structure passing right over Barbados at around 4.30am local time (see radar image from MeteoFrance, Martinique, below).



Tomas then tracked westwards, reaching Category 1 Hurricane status just west of Barbados and passing between Saint Lucia and St Vincent at around 4pm local time (see radar image over). The southern part of Saint Lucia was within the strongest, northern eyewall of Tomas, while the northern parts of St Vincent received the southern and leading/trailing eyewalls.

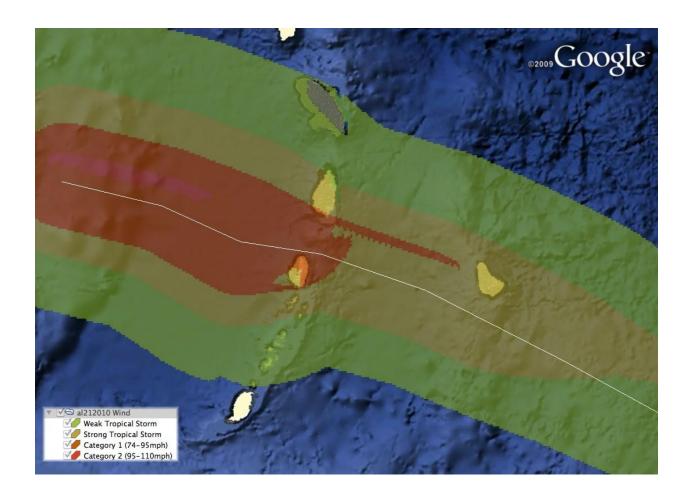


The eastern outer bands of Tomas cleared the Windward Islands earlier today, 31 October, although heavy rain showers persisted.

## 2 CCRIF MODEL OUTPUTS

The wind footprint on the following page is one of the outputs from the CCRIF Second-Generation Hazard and Risk Model. As can be seen, Tomas has so far achieved the minimal requirements of a defined event under the CCRIF Policy by having winds of greater than 39mph in four member states in the eastern Caribbean; Barbados, Saint Lucia, St Vincent & the Grenadines, and Grenada. Grenada is included due to the tropical storm wind footprint just touching Carriacou, the northernmost part of Grenada sovereign territory.

For Barbados, the entire island was affected by severe Tropical Storm force winds, with gusts to Hurricane force. Due to the track of Tomas directly over the island, these winds persisted at a high level for a relatively long time. Storm surge and wave action was also significant.



Hurricane force winds affected the southernmost part of Saint Lucia as well as the northern and eastern areas of St Vincent. The southwestern parts of St Vincent avoided hurricane force winds due to the protective effect of the interior mountains. The Grenadines received Tropical Storm force winds, high in the north, minimal towards the south of the chain. Again, storm surge and wave action were significant, and of particular note is likely high wave action on the leeward coast of St Vincent, which received very rare onshore westerly winds as the storm passed to the north.

The modelled wind speed is generally consistent with surface wind speed estimates from NOAA-NHC (from their H\*WIND algorithm, which rationalises all actual wind speed measurements collected on the ground and from flights and satellites.) However, relatively few data points were used in this analysis, and CCRIF has requested ground-based wind and rain information from the relevant national meteorological agencies in order to further verify the modelled wind field.

## 3 IMPACTS AND MODELLED LOSS

The CCRIF model generated substantial government losses in Barbados, Saint Lucia and St Vincent & the Grenadines. Barbados endured the biggest actual loss (as it is a significantly bigger economy than the other two) as well as the biggest loss relative to GDP (just over 1.5%), the latter due largely to the fact that near-hurricane force winds affected the entire island and due also to high coastal exposure. Both Saint Lucia and St Vincent & the Grenadines endured modelled losses of around half of one percent of GDP.

Preliminary reports from all three islands suggest that the impacts are commensurate with these levels of losses. All areas of Barbados have been significantly impacted, whereas severe impacts have been limited to the southern parts of Saint Lucia and the northern parts of St Vincent.

CCRIF coverage triggered in all three islands in which losses were recorded in the CCRIF model. Preliminary calculations show payouts of ~US\$8.5 million for Barbados, ~US\$3.2 million for Saint Lucia and ~US\$1.1 million for St Vincent & the Grenadines. These payouts reflect the application of policy conditions to the modelled government loss. Each member of CCRIF selects their own policy attachment point (equivalent to a deductible), exhaustion point (equivalent to the full policy value) and the level of premium they wish to pay. These three conditions then dictate what the payout will be relative to the loss.

Under the terms of CCRIF policies, a final loss and payout calculation will be undertaken on 13 November, with the National Hurricane Centre data available at that time used as input to the loss model. Payouts will be made as soon thereafter as possible.

Hurricane Tomas remains an active storm and could impact further CCRIF-covered countries. Should that occur, a second event report will be issued.