



# **Tropical Cyclone Mindy (AL132021)**

## **Wind and Storm Surge**

### **Preliminary Event Briefing**

#### **Nicaragua**

**11 September 2021**

## 1 SUMMARY

Tropical Cyclone Mindy was the thirteenth named storm of the 2021 Atlantic Hurricane Season. On 1 and 2 September it was in its early stage as a tropical disturbance while it passed over northeast Nicaragua. In the following days, the disturbance left Central America and crossed the Gulf of Mexico. On 8 September, it developed as a tropical storm while it was over the northeast Gulf of Mexico, west of Florida.

Preliminary runs of the CCRIF loss model for wind and storm surge produced government losses for Nicaragua, which were below the attachment point of this country's tropical cyclone (TC) policy. Therefore, no payout under the policy is due.

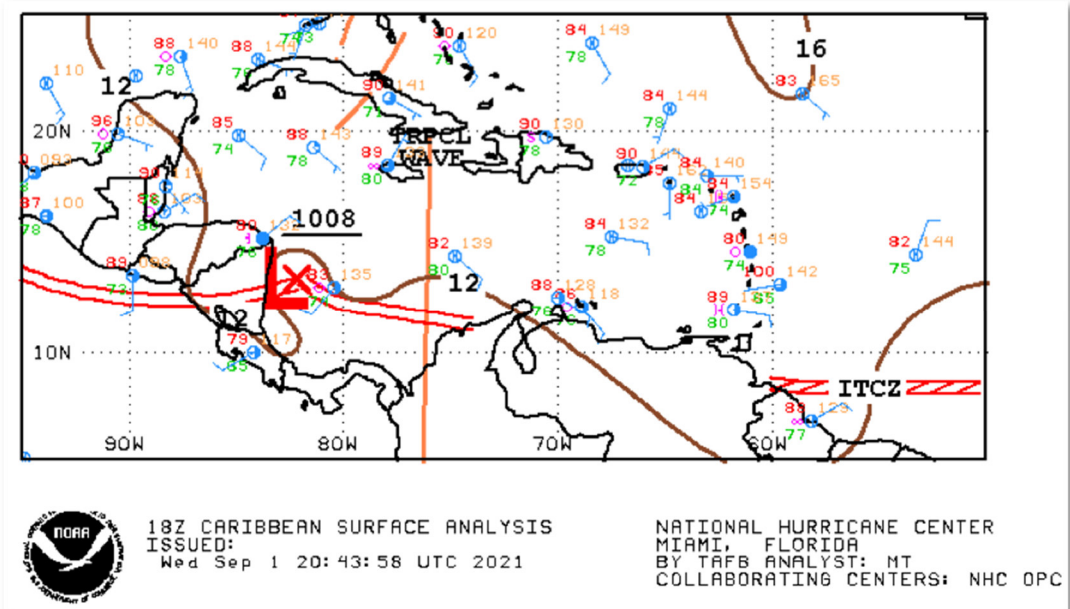
The Aggregated Deductible Cover (ADC) for this country's TC policy was not activated because the modelled losses were below 10 per cent of the minimum payment of the policy. Therefore, no payment under the ADC feature is due for Nicaragua.

This event briefing is designed to review the modelled losses due to wind and storm surge calculated by CCRIF's SPHERA TC model for affected CCRIF member countries, to be analyzed with respect to members' tropical cyclone policies. Nicaragua was the only CCRIF member country for which the CCRIF loss model for wind and storm surge produced government losses due to Tropical Cyclone Mindy, although the wind speeds, computed with the CCRIF SPHERA model, were lower than 39 mph (62.7 km/h). A separate report on rainfall impacts on affected CCRIF member countries with excess rainfall policies will be issued if applicable.

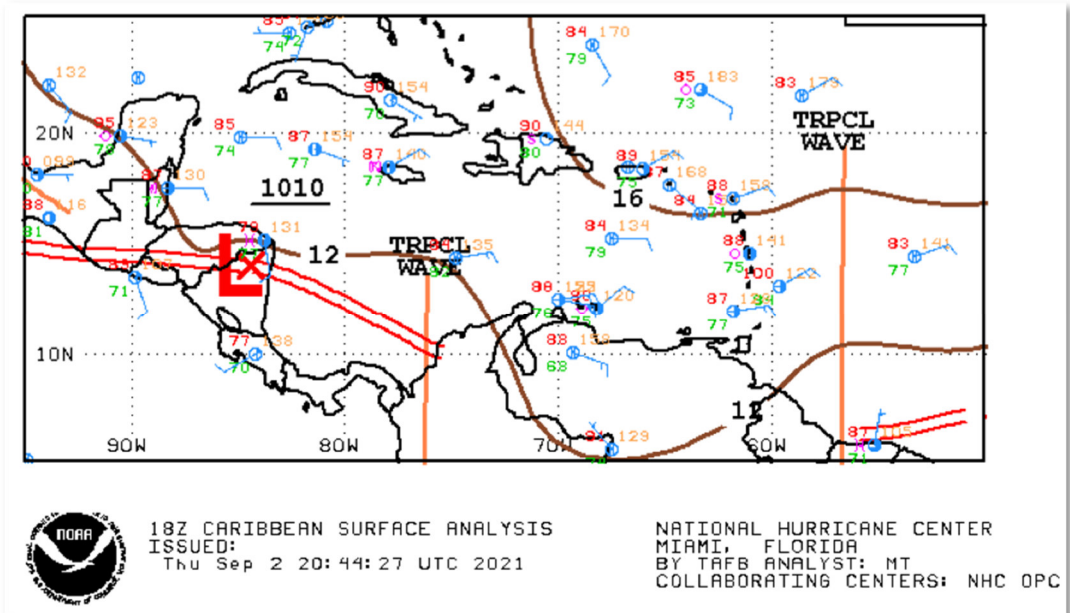
## 2 INTRODUCTION

On 1 September at 1800 UTC, a small area of low pressure was located just off the Atlantic coast of Nicaragua near latitude 13.5° North, longitude 82° West (Figure 1a). It was embedded in a monsoon trough and the minimum central pressure was 1008 mb. It was identified as a tropical disturbance and monitored by the US National Hurricane Center (NHC) because it presented the potential to become a tropical cyclone. At this stage the tropical disturbance was producing disorganized shower and thunderstorm activity within 106 mi (170 km) north of its approximate centre. It was moving west-northwestward or northwestward at 5 to 10 mph (8 to 16 km/h) heading for the Nicaragua coast.

On the following day, 2 September, the tropical disturbance moved inland and its centre passed over northeast Nicaragua (Figures 1b and Figure 2). The minimum central pressure was unchanged, while convection extended to 293 mi (470 km) northeast of the centre. It continued to move northwestward and on 3 September it left Nicaragua. On 4 September it passed over the Yucatan Peninsula and the following day it moved into the Gulf of Mexico. While moving across the Gulf of Mexico the tropical disturbance became more organized and it developed as a tropical storm (and was named Tropical Cyclone Mindy) on 8 September in the northeast Gulf of Mexico, west of Florida, United States of America.



a) 1 September at 1800UTC



b) 2 September at 1800UTC

Figure 1 Surface analysis over the Caribbean area at different times as indicated by labels.  
Source: US National Hurricane Center<sup>1</sup>

<sup>1</sup> National Oceanic and Atmospheric Administration - FTP, National Hurricane Center, review dates: 1-2 September 2021, available at: [https://www.nhc.noaa.gov/tafb/CAR\\_18Z.gif](https://www.nhc.noaa.gov/tafb/CAR_18Z.gif)

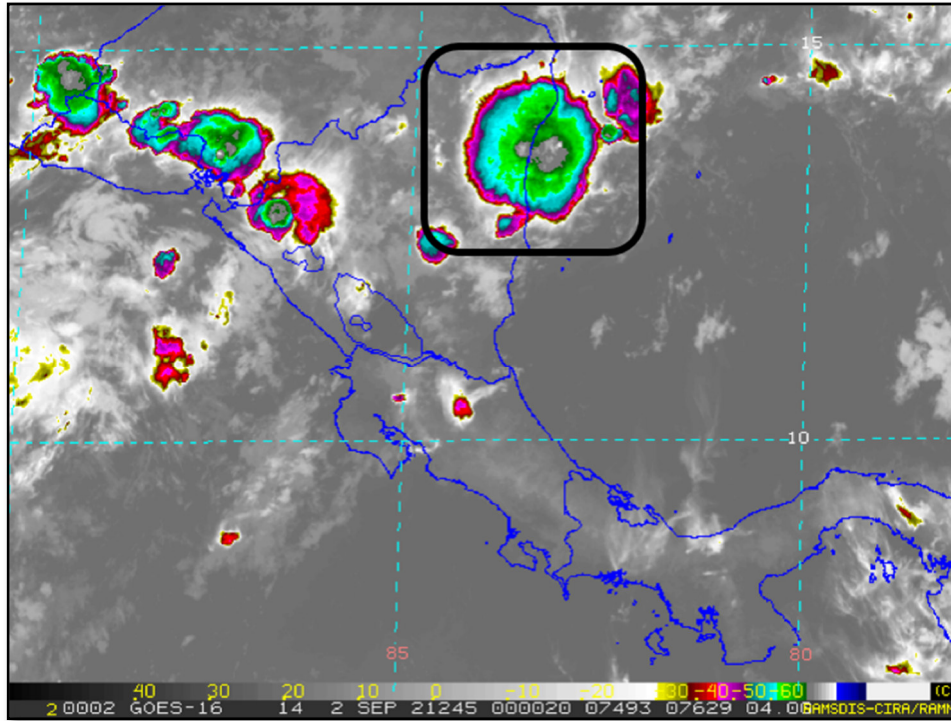


Figure 2 Satellite imagery on 2 September at 0000UTC (as indicated in the label) from thermal infrared channel enhanced with colour. The black box indicated the position of the low pressure along the coast of Nicaragua. Blue/green colours represent high altitude clouds (top cloud temperature between -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 Service<sup>2</sup>.

### 3 CCRIF SPC MODEL OUTPUTS

Under CCRIF’s loss calculation protocol, a CCRIF System for Probabilistic Hazard Evaluation and Risk Assessment (SPHERA) report is required for any tropical cyclone affecting at least one member country with winds greater than 39 mph (62.7 km/h). Tropical Storm Mindy, although it did not exceed winds greater than 39 mph (62.7 km/h), qualified as a Loss Event<sup>3</sup> for Nicaragua.

The wind footprint and surge field are two of the outputs from the CCRIF model. Figure 4 shows the wind footprint for the regions affected by Tropical Cyclone Mindy in Nicaragua. Due to the relatively low wind speeds, storm surge was insignificant, did not contribute to the damage, and is therefore not shown on the hazard map.

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<sup>2</sup> RAMSDIS Online Archive, NOAA Satellite and Information Service, available at: [https://rammb.cira.colostate.edu/ramsdiskonline/images/rmtc/rmtccosir42/rmtccosir42\\_20210902000020.gif](https://rammb.cira.colostate.edu/ramsdiskonline/images/rmtc/rmtccosir42/rmtccosir42_20210902000020.gif)  
<sup>3</sup> Any Tropical Cyclone event which produces a modelled loss greater than zero in one or more policyholder countries.

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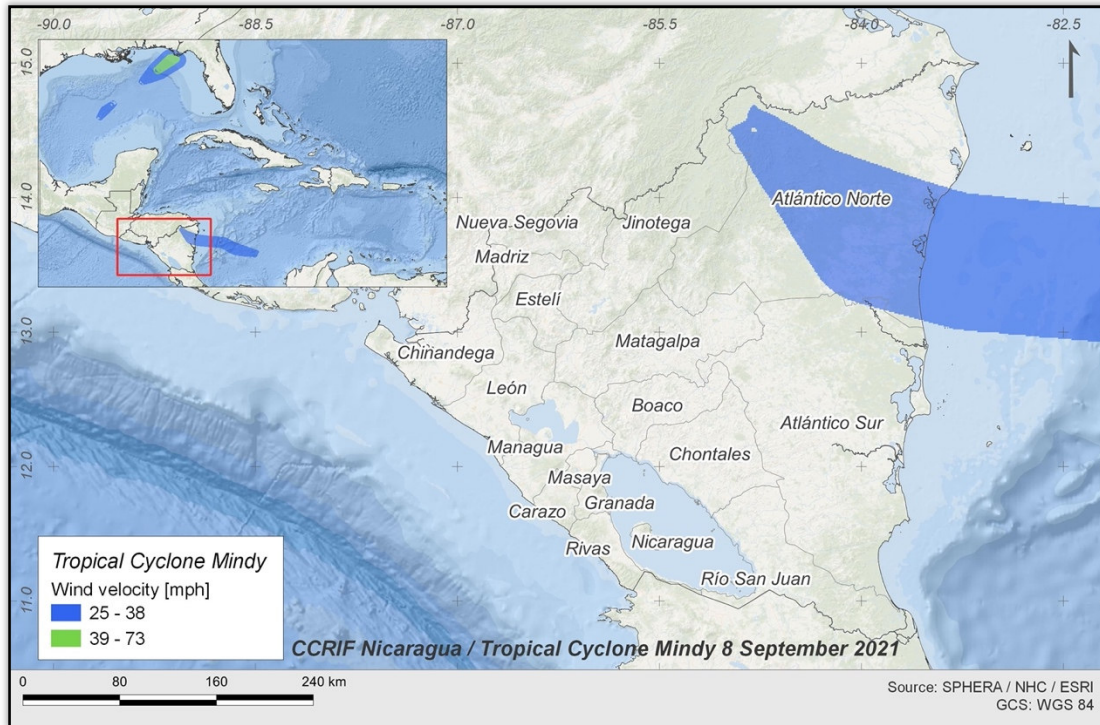


Figure 4 Map showing the wind field associated with Tropical Cyclone Mindy in Nicaragua.  
Source: NHC & CCRIF/SPHERA

## 4 IMPACTS

At the time of this report, no information was available related to damage or loss in Nicaragua due to the passing of the tropical disturbance. According to the reports from Nicaragua’s National Meteorological Service, the tropical disturbance and its development to become Tropical Storm Mindy were closely monitored.

## 5 CCRIF LOSS MODEL

Preliminary runs of the CCRIF loss model for wind and storm surge produced government losses for Nicaragua, which were below the attachment point of the country’s tropical cyclone policy and therefore no payout under the policy is due.

The Aggregated Deductible Cover (ADC) for this country’s TC policy was not activated because the modelled losses were below 10 per cent of the minimum payment of the policy. Therefore, no payment under the ADC feature is due for Nicaragua.

For additional information, please contact CCRIF SPC at: [pr@ccrif.org](mailto:pr@ccrif.org)