

Tropical Cyclone Irene (AL092011)

Event Briefing,

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1 INTRODUCTION

As reported by the National Hurricane Centre (NHC), Tropical Cyclone Irene was named as a Tropical Storm east of Dominica on 20 August 2011 and became a Hurricane on 22 August. It is the ninth recognised Tropical Cyclone of the 2011 Atlantic hurricane season.

The storm passed north of Dominica and through the Lesser Antilles south of the islands of Antigua, St Kitts, and Nevis, just brushing the uninhabited southern tip of Montserrat. Still a Tropical Storm, Irene passed directly over St Croix and reached Hurricane status as it crossed Puerto Rico. The storm then tracked offshore north of Hispaniola, mildly impacting the northern regions of Haiti and the Dominican Republic and reaching Category 2 status.

By 23 August, Irene had passed by Hispaniola and fell back to a Category 1 storm before it passed west of the Turks & Caicos Islands and then northwestward and northwards through the eastern parts of the Bahamian chain.

As Irene moved through the Bahamas, two upgrades to its status were issued. Well before passing about 100km to the east of Nassau on 25 August, it had attained Category 3 status. The system had greatest impact on the less populated islands of the Bahamas chain, in particular Acklins/Crooked Island, Rum Cay/San Salvador, Cat Island, Eleuthera and the Abacos. The major tourist, economic and administrative centres on New Providence (Nassau), Paradise Island and Grand Bahama (Freeport) received only tropical storm force winds along with rain. Irene had cleared the Bahamas chain by late afternoon local time on 25 August although conditions remained abnormal through most of the evening.

Figure 1 shows the path (to the time of issue of this report) of Hurricane Irene along with the wind footprint from the CCRIF hazard/loss model.

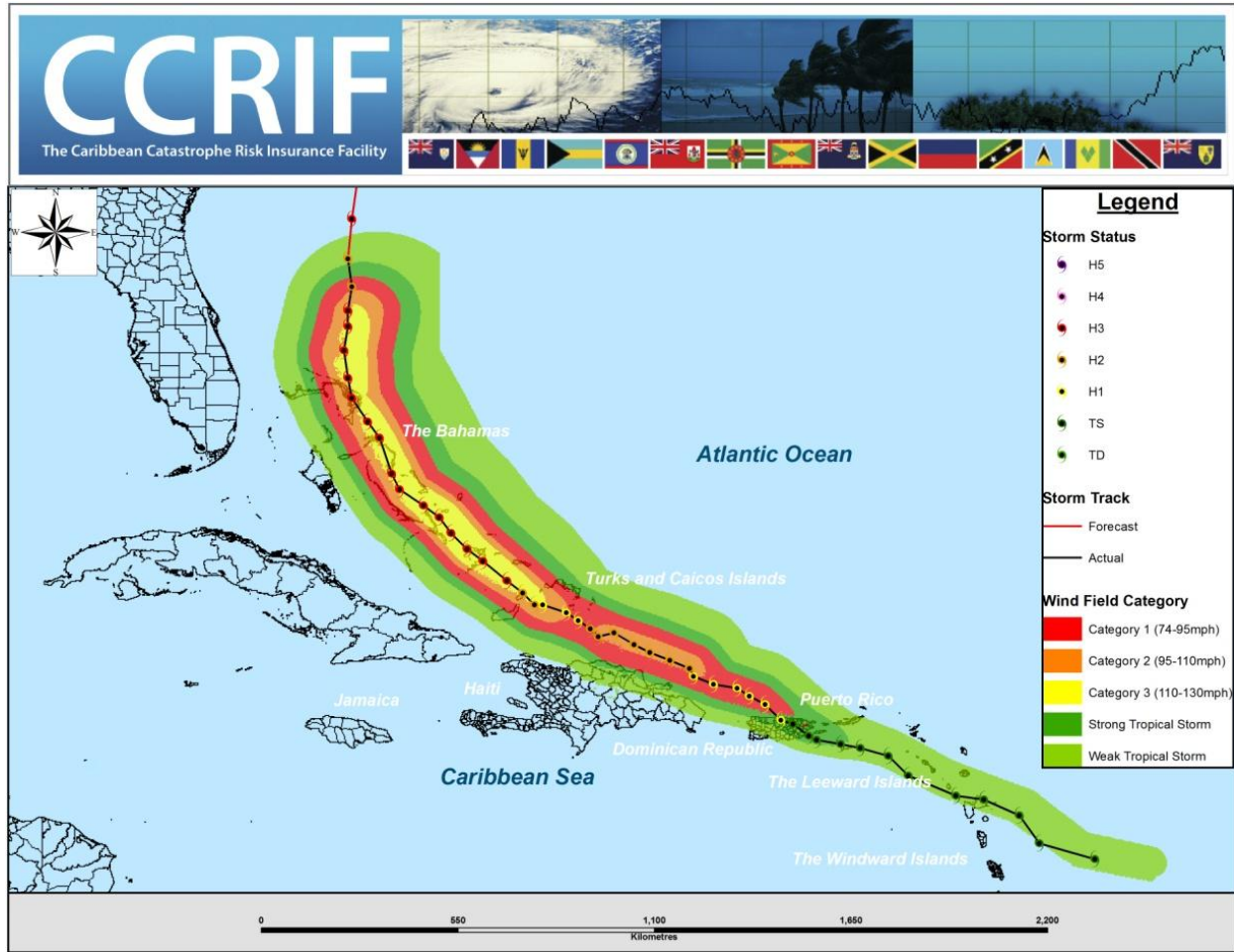


Figure 1 Map showing the path of Hurricane Irene and the CCRIF model wind footprint.
Sources: NHC & CCRIF/KAC MPRES.

2 CCRIF MODEL OUTPUTS

The wind footprint (Figure 1) is one of the outputs from the CCRIF Multi-Peril Risk Estimation System (MPRES). As can be seen, Irene achieved the minimum requirements of a defined event under CCRIF’s loss calculation protocol by having winds of greater than 39mph in a number of member countries.

The modelled wind speed is very consistent with surface wind speed estimates from NOAA-NHC (both the public wind footprint issued with each Advisory – see Figure 2 - and from the NHC research department’s H*WIND algorithm, which rationalises all actual wind speed measurements collected on the ground and from flights and satellites.) CCRIF will also be requesting ground-based wind and rain information from the relevant national and/or regional meteorological agencies in order to further verify the modelled wind field and storm surge.

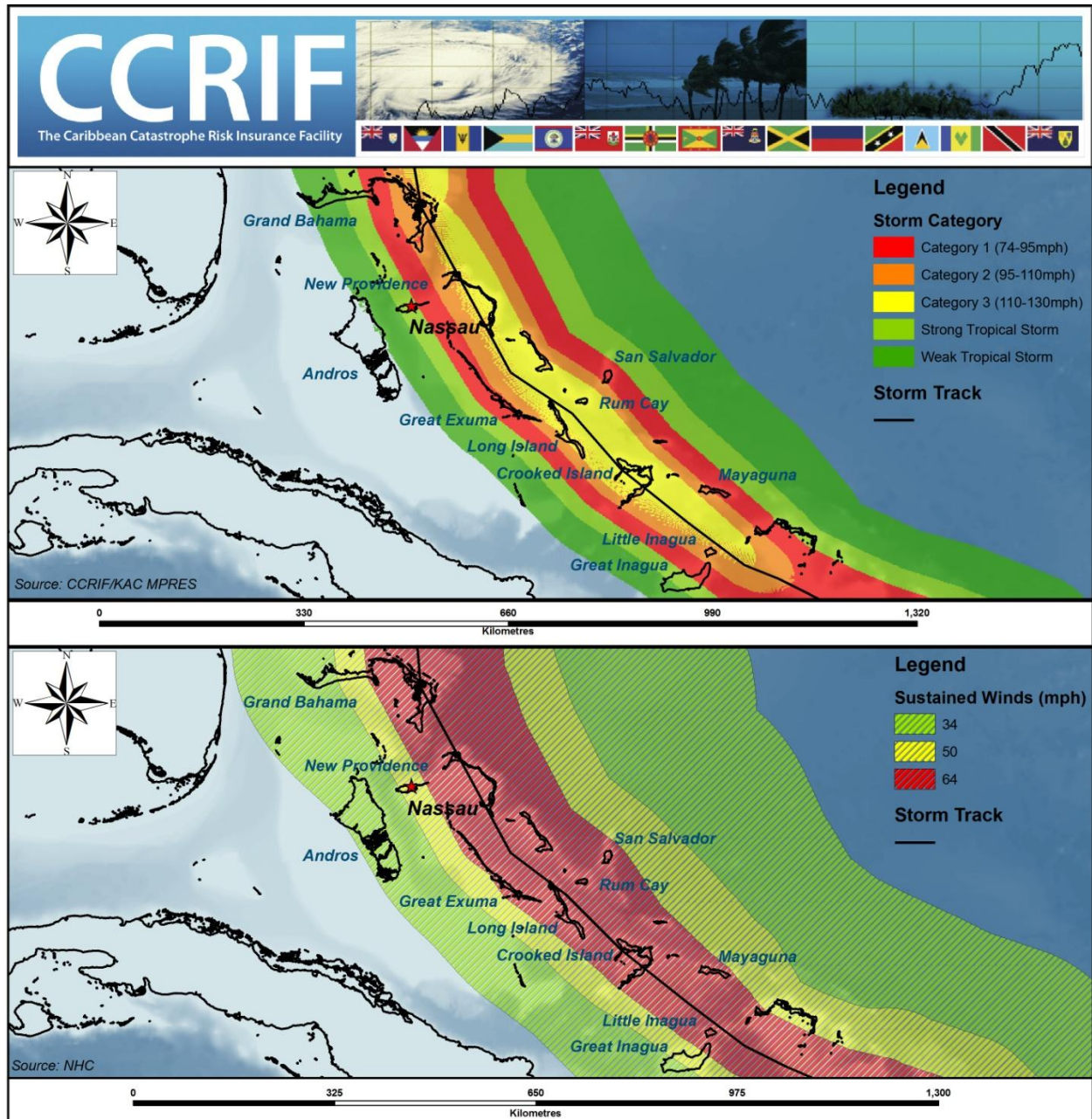


Figure 2 Comparison of CCRIF (top) and NHC wind footprints. Sources: NHC & CCRIF/KAC MPRES.

3 IMPACTS AND MODELLED LOSS

The CCRIF model generated losses in six CCRIF member countries. These were Anguilla, Antigua & Barbuda, the Bahamas, Haiti, St Kitts & Nevis and the Turks & Caicos Islands. Of all these countries, Bahamas registered the highest losses. No policy was triggered by this event, as loss estimates were all below the 15-year return period minimum attachment point currently in force for CCRIF policies.

In the case of the Bahamas, the damage reports suggest that impacts were not as severe as had been anticipated and this was reflected in the modelled loss which was not as large as originally expected. This was due to the fact that most of the islands which are the centres of administrative or economic activity (*i.e.* tourism and financial services) and therefore represent the main exposure concentrations in the CCRIF model, were spared the worst of the system. Figure 3 shows the distribution of exposure relative to the wind footprint for Irene; only ~12% of the total national exposure was affected by winds of hurricane strength.

As indicated earlier, most of the damage inflicted occurred in the less populated islands, with damage being primarily infrastructural in nature. This corresponds closely with media reports which also indicated that the main cruise ship ports were reopened by the evening of 25 August, with all airports expected to reopen by the morning of 26 August (<http://www.bahamas.com/news-announcement/2011/08/hurricane-irene>.) There were no deaths or injuries recorded.

In the Turks & Caicos Islands, indications are that the damage was also quite limited, with government sources indicating to CCRIF the occurrence of some roof loss, flooded roads and downed power lines but no major damage.

Under the terms of CCRIF policies, a final loss and payout calculation will be undertaken on 15 September, with the National Hurricane Centre data available at that time used as input to the loss model and at which point a final event report will be issued.

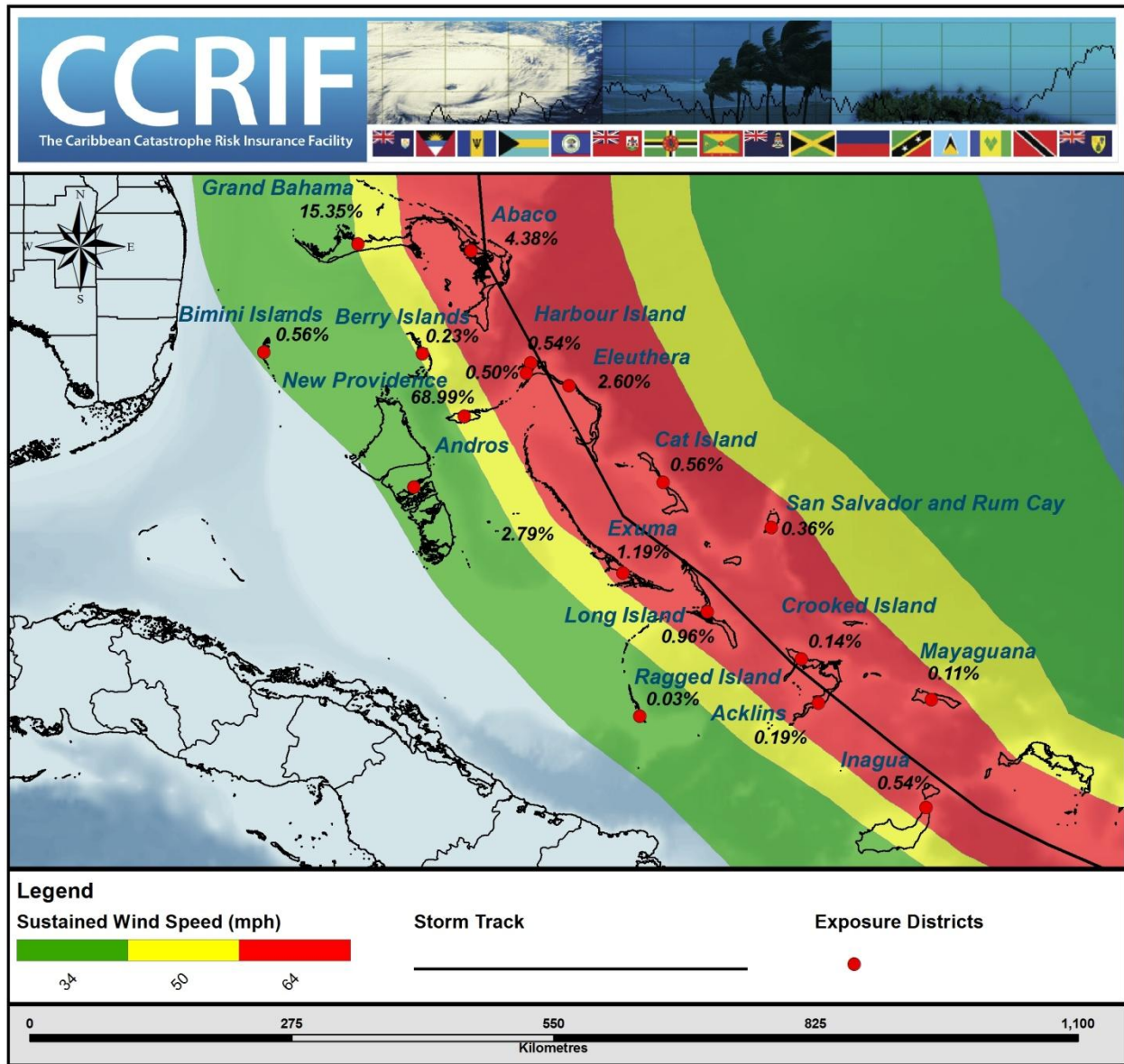


Figure 3 Map showing the distribution of risk exposure as represented in the CCRIF loss model (expressed as percentages of the total national risk) in relation to Irene’s wind foot print. Sources: NHC & CCRIF/KAC MPRES.