

= Tropical Storm Dorothy (1970) =

Tropical Storm Dorothy was the deadliest tropical cyclone of the 1970 Atlantic hurricane season . The fourth named storm and fifth tropical storm or hurricane of the season , Dorothy developed on August 17 from a tropical wave to the east of the Lesser Antilles . It tracked west @-@ northwestward throughout its entire duration , and despite forecasts of attaining hurricane status , Dorothy reached peak winds of 70 mph (110 km / h) ? slightly below hurricane status . The storm struck Martinique on August 20 , and subsequently began a gradual weakening trend in the Caribbean Sea . On August 23 , Dorothy dissipated south of Hispaniola .

Most significantly affected by the storm was Martinique , which received 26 @. @ 8 in (680 mm) of rainfall in a 24 ? hour period . The rainfall caused flooding and mudslides , resulting in about \$ 34 million in damage (1970 USD) ; 186 homes were destroyed , and 700 people were left homeless . The flooding killed up to 50 people on the island . Elsewhere in the Lesser Antilles , the storm killed one person on Dominica from heavy rainfall , and in Guadeloupe heavy damage to the banana crop was reported .

= = Meteorological history = =

The origins of Tropical Storm Dorothy were from a tropical wave that moved off the coast of Africa on August 13 . It tracked generally westward , developing into a tropical depression on August 17 about 1375 mi (2210 km) east of Tobago in the Lesser Antilles . Two days later , it strengthened into Tropical Storm Dorothy , while located about 500 mi (800 km) east of the Lesser Antilles , with its intensity confirmed by the Hurricane Hunters .

With light vertical wind shear and warm water temperatures , the National Hurricane Center (NHC) remarked on August 19 that " hurricane status would probably be attained this afternoon or tonight . " Its track was expected to continue generally west @-@ northwestward , influenced by a ridge near the Bahamas , and within 60 hours Dorothy was forecast to be north or over Puerto Rico . However , a subsequent Hurricane Hunters flight reported a more westerly motion , which would bring its track through the central Lesser Antilles . Tropical Storm Dorothy gradually intensified , reaching peak winds of 70 mph (110 km / h) on August 20 just east @-@ northeast of Barbados . Hurricane Hunters confirmed the intensity , though the flight also reported a weakness of low @-@ level inflow . Despite maintaining winds of just below hurricane @-@ force , there was no evidence of an eyewall on radars as the storm approached the Lesser Antilles . Late on August 20 , the storm moved across Martinique into the Caribbean Sea , during which its low @-@ level circulation became disorganized .

As Tropical Storm Dorothy moved further into the Caribbean Sea , it began a gradual weakening trend initiated by a persistent tropical upper tropospheric trough , as well as the presence of strong wind shear and a lack of inflow . Hurricane Hunter flights late on August 21 and early on August 22 failed to locate a closed low @-@ level circulation , and as a result the storm was downgraded to a tropical depression . After another flight into the system could not detect a circulation , the NHC discontinued advisories on Dorothy to the south of Hispaniola late on August 22 . Around the same time , thunderstorms increased in association with the cyclone , and forecasters remarked the potential for re @-@ intensification over the western Caribbean Sea . However , the storm became more disorganized , and on August 23 Dorothy degenerated into a tropical wave .

= = Preparations and impact = =

After the first tropical cyclone advisory was issued on Tropical Storm Dorothy , a hurricane watch and storm warning were issued for the Leeward Islands from Dominica northward . As its westward track became more apparent , the watches and warnings were extended southward to include Martinique and Saint Lucia . On Martinique , authorities released a statement that warned the public for the potential for strong winds , heavy rainfall , and rough waves . Also on the island , officials converted schools and government buildings into shelters for people in low @-@ lying areas . As a

result of the storm , the Martinique Aimé Césaire International Airport in Le Lamentin was closed .

The storm dropped heavy rainfall while crossing the Lesser Antilles . In Martinique , the highest 24 hour total was 26 @. @ 8 inches (680 mm) in Fourniols , which was twice the average rainfall for August . Additionally , the capital city of Fort @-@ de @@ France reported 13 @. @ 4 in (341 mm) . There , the rainfall broke all records for durations up to 24 hours ; about 1 inch (26 mm) fell in 5 minutes , and in one hour a station reported 6 @. @ 02 inches (153 mm) . The rainfall caused flooding and mudslides , as well as rivers exceeding their banks ; several bridges collapsed during the storm , and many homes were washed away . During the passage of the storm , sustained winds on the island reached 67 mph (108 km / h) , with gusts reaching 99 mph (160 km / h) in the Caravelle peninsula . Throughout the country , the storm destroyed 186 homes and left 700 people homeless . The passage of Dorothy left heavy crop damage on the island , totaling 32 million francs (1970 FRF , \$ 5 @. @ 8 million 1970 USD) ; a total of 3 @. @ 75 mi ² (9 @. @ 72 km ²) of banana crop was destroyed , and 2 @. @ 16 mi ² (5 @. @ 6 km ²) of sugar cane was destroyed . Damage on the island totaled 190 million francs (1970 FRF , \$ 34 million 1970 USD) .

Tropical Storm Dorothy caused several deaths on Martinique , although the exact death toll is unknown . The National Hurricane Center reported 50 deaths , although the post event report provided by the French meteorological agency reported 44 people dead or missing . Most of the deaths were in Saint @-@ Joseph , where 20 people drowned in the Riviere l 'Or . Floodwater rescues had been made difficult due to washed out roads and poor communications after the storm . In addition to the deaths , several people were injured . After the passage of the storm , Martinique was temporarily left isolated , when communications were downed with other nearby islands . The French Red Cross distributed 500 blankets and one ton of condensed milk ; the agency also sought international assistance .

Elsewhere in the Lesser Antilles , the storm caused flooding and mudslides in Dominica . There , the storm caused one death , when flooding heavy rainfall washed out a bridge . Also , all of the capital city of Roseau lost power and water service due to the storm . In neighboring Guadeloupe , the storm left much of the banana crop destroyed . Later , after it entered the Caribbean Sea , small craft warnings were issued for the Leeward Islands , the Virgin Islands , and Puerto Rico . In its review of the storm , the National Hurricane Center did not mention any damage in the Greater Antilles .