Hurricane Iris (1995)

Hurricane Iris was the ninth named storm and fifth hurricane of the 1995 Atlantic hurricane season . Iris was the first of three tropical cyclones to affect the Lesser Antilles in a three @-@ week period , preceding the more destructive hurricanes Luis and Marilyn . It developed from a tropical wave to the east of the Lesser Antilles on August 22 and attained hurricane status within 30 hours . The hurricane weakened to a tropical storm before crossing the islands of the eastern Caribbean from August 26 through August 28 . During that time , Iris became one of four active tropical storms in the Atlantic basin . Earlier it had interacted with Hurricane Humberto , and beginning on August 30 , Iris interacted with Tropical Storm Karen . Iris re @-@ intensified into a hurricane and attained peak sustained winds of 110 mph (175 km / h) while moving slowly across the central Atlantic . The hurricane accelerated to the north and absorbed a dissipating Tropical Depression Karen on September 3 . Iris weakened to a tropical storm and became extratropical on September 4 , though its remnants reattained hurricane @-@ force winds before affecting western Europe on September 7 .

As a tropical storm , Iris produced heavy rainfall across much of the Leeward Islands . In the southern Lesser Antilles , high waves caused coastal flooding in Trinidad , while in Martinique further north , significant amounts of precipitation led to flooding and landslides . The threat from the hurricane halted airplane evacuations on Montserrat , which was being threatened by the eruption of the Soufrière Hills volcano . There were five deaths in association with Iris ? four in Martinique , and one in Guadeloupe .

Meteorological history

A tropical wave exited western Africa on August 16 , with a circulation emerging just south of Dakar , Senegal . It was the first of four consecutive waves that would later develop into tropical cyclones . As the system moved westward , thunderstorms diminished on August 18 , before they gradually redeveloped . At around 1200 UTC , the National Hurricane Center (NHC) classified the system as Tropical Depression Ten about 690 mi (1 @,@ 110 km) east of the Lesser Antilles . Around that time , the depression had a well @-@ organized area of convection and evident circulation , as confirmed by a nearby ship . Within six hours of developing , the depression had intensified into a tropical storm . Initially , tropical cyclone forecast models had difficulty predicting the future of the storm , due to uncertain interaction between it and Tropical Storm Humberto to its northeast . In real @-@ time , the NHC upgraded the depression to Tropical Storm Iris at 1500 UTC on August 23 , or about 21 hours later than assessed in post @-@ analysis . The intensity was based on satellite intensity estimates . At that time , the storm had a ragged central dense overcast ? a uniformly circular area of thunderstorms ? as well as rainbands to the north and south . A hurricane hunters flight late on August 23 indicated that Iris was significantly stronger , reporting 10 ? second sustained winds of 106 mph (170 km / h) at flight @-@ level . Based on the reading , it is estimated Iris attained hurricane status around 1800 UTC that day , or about three hours after it was named .

After Iris strengthened into a hurricane , it turned to the west @-@ southwest due to interaction with Hurricane Humberto . An upper @-@ level low north of Puerto Rico increased wind shear over the hurricane , which dislocated the center from the deep convection . As a result , Iris weakened to tropical storm status on August 24 after being a hurricane for about 24 hours . As the storm approached the Lesser Antilles , the thunderstorms decreased markedly and the cloud pattern became disorganized . As late as August 25 , there was uncertainty whether Iris would continue toward the islands or turn to the north . A new circulation became the dominant center as the storm continued westward , and Iris brushed Saint Lucia early on August 26 . An approaching trough turned the storm to the northwest , bringing it near most of the Lesser Antilles . Early on August 27 , Iris weakened to an intensity of 40 mph (64 km / h) , although it immediately began restrengthening . Later that day , the center made landfall on Montserrat , Anguilla , and Barbuda with winds of over 60 mph (95 km / h) . By that time , an eye began reforming , and the structure became better organized as wind shear decreased .

On August 28 , Iris moved away from the Lesser Antilles , and at 1800 UTC re @-@ attained hurricane status as it began a steady motion to the north @-@ northwest . By that time , there was uncertainty in its future track due to the possible interactions among Iris , Humberto to the northeast , Tropical Storm Karen to the southeast , and the remnants of Tropical Storm Jerry to the west . In addition , after Tropical Storm Luis formed on August 27 , there were four active tropical cyclones in the Atlantic . A few days later , there were three simultaneous hurricanes , which is a rare event , when Luis attained hurricane status . On August 30 , Iris turned to the northeast while it began interacting directly with Tropical Storm Karen . Over the next few days , the smaller tropical storm moved around the larger circulation of Iris , potentially causing the hurricane to move erratically . Iris ' intensity did not change significantly during that time , and it maintained strong outflow but a weak eyewall . An eastward @-@ moving trough bypassed the storm to the north , causing the motion to become nearly stationary . A building ridge to the northeast caused Iris to turn to a northwest drift on September 1 . By that time , the eye had become distinct and well @-@ organized , and at 0600 UTC that day , Iris attained peak winds of 110 mph (175 km / h) to the southeast of Bermuda .

After reaching peak intensity , the hurricane began weakening due to increasing shear and cooler waters . An approaching trough turned Iris to the north , and early on September 3 the hurricane passed about 350 mi (560 km) east of Bermuda . That day , Iris absorbed the dissipating Tropical Depression Karen . It accelerated to the northeast as it lost tropical characteristics , and after weakening to a tropical storm , Iris transitioned into an extratropical cyclone on September 4 to the southeast of Newfoundland . The remnants turned to the east , moving in tandem with an extratropical storm to its north . On September 5 , the barometric pressure dropped by more than 24 millibars (0 @.@ 71 inHg) , which qualified as being classified as a meteorological bomb . The next day , the winds strengthened to hurricane @-@ status , and the storm maintained a track to the east due to a ridge weakening to the north . The pressure reached a minimum of 957 mb (28 @.@ 3 inHg) early on September 7 , lower than while Iris was tropical . That day , the storm weakened as it entered the English Channel , and the extratropical remnants continued across western Europe .

= = Preparations and impact = =

Before Iris moved through the Lesser Antilles , tropical storm watches , and later warnings , were issued from Barbados through the British Virgin Islands . The storm produced tropical storm force winds across the eastern Caribbean , although the primary meteorological event occurred from heavy rainfall . Flooding prompted evacuations in communities in Saint Lucia , Dominica , and Saint Vincent and the Grenadines . Iris was the first of three storms in a three @-@ week period to affect the region , preceding the more destructive hurricanes Luis and Marilyn .

In western Trinidad , a feeder produced winds of 37 mph (60 km / h) along the Gulf of Paria . The winds increased waves that caused coastal flooding and some damage to boats . On Martinique , Iris produced gusts of 56 mph (90 km / h) , with torrential rainfall occurring on the island . A station in Les Trois @-@ Îlets recorded 1 @.@ 89 in (48 mm) in a 30 minute period , and the highest total on the island was 17 @.@ 72 in (450 mm) at Ducos . The rains caused mudslides that killed four people , including two after a house was swept off a cliff in Le Vauclin . Flooding was reported across coastal areas of Martinique , and heavy damage was reported in the southern city of Le Vauclin . To the north of Martinique , winds reached 43 mph (69 km / h) on Dominica . While the storm passed Guadeloupe , it produced sustained winds of 45 mph (72 km / h) , with gusts to 65 mph (105 km / h) on La Désirade . There was one death on the island after a person drowned in a storm @-@ flooded river . To the northwest , the hurricane moved over Montserrat , causing additional problems on the island just weeks after the Soufrière Hills volcano began erupting . Officials on the island closed the primary airport due to the storm , which prevented residents from evacuating from the island from the volcano threat . Further north , Iris dropped 6 in (150 mm) of rain on Antigua , which destroyed banana trees and caused flooding in low @-@ lying areas .

Due to uncertainties in Iris ' track , the government of Bermuda issued a tropical storm watch on September 1 . This was downgraded on September 3 after the hurricane bypassed the island . Later , after Iris became extratropical , the storm produced winds of 45 mph (72 km / h) at La Rochelle on

the Atlantic coast of France .