= Hurricane Cristobal (2014) =

Hurricane Cristobal was a moderately strong Atlantic tropical cyclone that affected multiple landmasses from Puerto Rico to Iceland in late August and early September 2014 . It was also the strongest Atlantic hurricane in terms of pressure since Hurricane Sandy in 2012 . Slow to develop , and plagued by unfavorable wind shear for most of its life , the storm formed on August 23 near the Caicos Islands from a long @-@ tracked tropical wave . Moving generally northward , Cristobal gradually intensified despite a ragged appearance on satellite imagery , and passed midway between Bermuda and North Carolina on August 27 . While accelerating toward the northeast the next day , Cristobal achieved its peak strength as a Category 1 hurricane . A colder environment converted Cristobal into an extratropical cyclone on August 29 , but it retained much of its strength as it sped across the northern Atlantic and struck Iceland on September 1 .

Before its classification as a tropical cyclone , the disturbance that would become Cristobal dropped heavy rainfall over Puerto Rico , locally reaching 13 @.@ 21 in (336 mm) . Widespread flooding and scattered landslides affected the territory , with 19 major rivers exceeding minor flood stage . The system went on to douse the island of Hispaniola with torrential rains , leading to at least four drowning deaths in Haiti and the Dominican Republic . Floodwaters damaged or destroyed over 800 houses and temporarily isolated 23 communities in the Dominican Republic , while about 640 families were displaced in Haiti . Another person was killed by floodwaters in the Turks and Caicos . The hurricane generated strong surf and dangerous rip currents along the U.S. East Coast , killing two swimmers in Maryland and New Jersey and leading to large numbers of lifeguard rescues . Later , the extratropical remnants of Cristobal buffeted Iceland with heavy rain and gusty winds , causing flooding around the capital city of Reykjavík .

= = Meteorological history = =

Hurricane Cristobal originated from a westward @-@ tracking tropical wave which emerged from the western coast of Africa on August 14 , accompanied for several days by an expanse of clouds . Some cyclonic turning was evident as the disturbance approached the Leeward Islands by August 21 , but a Hurricane Hunters flight tasked with investigating the system did not reveal a strong circulation at the surface . The system failed to consolidate as it traversed Puerto Rico and Hispaniola , but on August 23 , further reconnaissance data confirmed the formation of a tropical depression just south of the Caicos Islands . The nascent cyclone slowly moved north @-@ northwestward toward a weakness in the subtropical ridge . Moderate wind shear in the area kept convection over the depression disorganized and outflow limited , and the storm only gradually intensified . The depression strengthened into Tropical Storm Cristobal at 06 : 00 UTC on August 24 , while located just north of Mayaguana in the Bahamas , but its structure was vertically tilted and suboptimally broad .

Weak steering currents kept Cristobal 's forward motion slow and erratic , and the storm remained heavily affected by shear , with most deep convection displaced from the center . On August 25 , the system turned toward the north @-@ northeast in response to a mid @-@ level trough to the north . Despite a ragged cloud pattern characterized by an exposed low @-@ level center and a distinct lack of banding features , Cristobal intensified into a Category 1 hurricane at 00 : 00 UTC on August 26 , as indicated by aircraft observations . The newly upgraded hurricane headed along a general northward path , and for the next couple days , pockets of dry air kept prevented further intensification . Convection fluctuated in intensity and coverage , and early on August 27 the National Hurricane Center remarked that " the satellite presentation resembles a subtropical cyclone " . However , later that same day , the hurricane showed signs of increased development while located midway between Bermuda and Cape Hatteras , North Carolina . In particular , its cloud pattern became much more symmetric , and some cloud tops cooled to ? 70 ° C (? 95 ° F) . Around the same time , Cristobal accelerated toward the northeast as it became embedded within the mid @-@ latitude westerlies ahead of an advancing shortwave trough .

An area of relatively warm cloud tops at the center of a central dense overcast gave way to an eye

feature evident on visible satellite imagery on August 28 . Rapidly gaining latitude , Cristobal reached its peak intensity at 18 : 00 UTC , with winds of 85 mph (140 km / h) , roughly 490 mi (790 km) due south of Halifax , Nova Scotia . Shortly thereafter , the hurricane began to degrade as it moved over significantly colder waters and began to encounter further dry air , signalling the beginning of its transition to an extratropical cyclone . Cristobal 's circulation soon began to interact with a frontal boundary , and deep convection became distanced well to the north of the center . Consequently , the hurricane lost its tropical identity by 12 : 00 UTC on August 29 , just north of 44 ° N. Baroclinic processes preserved much of the extratropical cyclone 's intensity , allowing it to maintain hurricane @-@ force winds until August 30 . Speeding generally northeastward , the storm slowly weakened over the northern Atlantic , making landfall on Iceland on September 1 . It merged with another storm system north of the country by the next day .

= = Impact = =

= = = Antilles = = =

As Cristobal 's parent wave moved over Puerto Rico , it engaged with an abnormally moist air mass to produce torrential rains totaling more than 10 in (250 mm) . The highest rainfall totals were enhanced by orographic lift over mountainous terrain . A rain gauge near Tibes recorded a peak total of 13 @.@ 21 in (336 mm) , the majority of which fell on August 24 . Luis Muñoz Marín International Airport near San Juan reported 5 @.@ 52 in (140 mm) of precipitation . In total , 19 rivers reached minor flood stage and five reached moderate flood stage ; some of them inundated adjacent roadways and urban areas . The heavy rains triggered multiple landslides , at least one of which forced a family to evacuate . The floods cut electricity to nearly 17 @,@ 000 customers and left 7 @,@ 000 without clean drinking water after putting some 18 filtration plants out of service . In some cases , however , the rains proved beneficial , refilling reservoirs after an abnormally dry summer . Only the northwest corner of Puerto Rico escaped hydrological issues . Gusty winds caused minor damage to trees and tree branches in the territory . Moderate to heavy rainfall also affected the U.S. Virgin Islands , amounting to 5 @.@ 27 in (134 mm) on Saint Thomas and 2 @.@ 22 in (56 mm) on Saint Croix .
The island of Hispaniola also received damaging rains from the slow @-@ moving storm . La Romana , Dominican Republic , recorded 5 @.@ 04 in (128 mm) of rain in 24 hours on August 23 and 24 , the result being destructive flooding . The floods isolated 23 towns from the outside world and damaged or destroyed more than 800 dwellings , especially in eastern and northeastern parts of the nation . Just over 4 @,@ 100 individuals were forced to leave their homes and seek refuge with friends and family . In Santo Domingo Province , three people required rescue from their stricken car after trying to cross the swollen Isabela River . Two people were killed in the Dominican Republic , one of them after trying to drive across a flooded river in the Hato Mayor Province . In neighboring Haiti , flooding totally destroyed four homes and heavily damaged 28 others , with a total of about 640 families left temporarily homeless . At least two people in the country were swept away by rushing waters , and many others sustained injuries .
Shortly after the storm 's genesis , tropical storm warnings were issued for the central and southeastern Bahamas and the Turks and Caicos Islands . The advisories were discontinued by August 25 . Heavy rain fell over the region , reaching 10 @.@ 9 in (280 mm) on the island of Providenciales , where one person drowned in the ensuing floods . Floodwaters on North Caicos ran 5 ft (1 @.@ 5 m) deep , blocking access to some communities . Governor Peter Beckingham reported " extensive damage to people 's property and possessions " throughout the overseas territory .

= = = Elsewhere = = =

A tropical storm watch was issued for Bermuda on August 25 , and ultimately discontinued about

three days later . Two cruise ships left Bermuda early to avoid the storm , and another two postponed their scheduled stops there . The threat of the storm , combined with a lack of passengers due to cruise ship diversions , resulted in the suspension of ferry service . Cristobal ultimately passed well to the northwest of the island , producing breezy conditions and heightened surf .

The offshore hurricane lashed the East Coast of the United States with high swells and rip currents , prompting widespread swimming restrictions and bans . A teenaged male Virginia resident died in a drowning incident at Ocean City , Maryland , less than an hour after lifeguards went off @-@ duty . In a 24 @-@ hour period , the Ocean City Beach Patrol rescued about 120 people caught in rip currents . Just off the coast , the rough seas capsized a 17 ft (5 @.@ 2 m) boat , forcing the Coast Guard to rescue its three occupants . Another young male drowned at Sandy Hook , New Jersey ; a wave reportedly knocked him down in shallow water before a rip current pulled the inexperienced swimmer farther out . Dangerous swimming conditions extended north to New England beaches , leading to numerous lifeguard rescues .

In southern Iceland , the extratropical remnants of Cristobal produced gusty winds and heavy rainfall , leading to extensive flooding in the capital city of Reykjavík . The fire department there responded to 37 calls for flooded buildings . Reykjavík Airport and Keflavík International Airport recorded wind gusts to 58 mph (93 km / h) and 62 mph (100 km / h) , respectively . The adverse conditions impeded aerial surveillance of the ongoing volcanic eruptions at Bárðarbunga .