

= Hurricane Karen (2007) =

Hurricane Karen was the eleventh named storm and fourth hurricane of the 2007 Atlantic hurricane season . Karen was a Cape Verde @-@ type hurricane that developed in the eastern tropical Atlantic out of a large tropical wave . The storm briefly reached Category 1 hurricane intensity before slowly weakening due to increased wind shear . As the storm remained away from land , no damages or fatalities were reported in association with Karen .

= = Meteorological history = =

The system began as a tropical wave that emerged off the west coast of Africa on September 21 . The wave was not well @-@ organized with only scattered thunderstorm activity and large area of low pressure . As the system tracked westward south of Cape Verde , deep convection gradually increased , curved banding features became defined , and a poorly defined circulation became evident . Early on September 23 , Dvorak classification estimates were introduced . Little change in organization took place until the evening of September 24 . That evening , the low @-@ level circulation and banding features became better defined as the system tracked west @-@ northwest . Late that evening , the system was declared Tropical Depression Twelve while west @-@ southwest of the Cape Verde islands .

The tropical depression quickly intensified into early on September 25 as the system continued to organize , and was upgraded to Tropical Storm Karen that morning . The strengthening trend was temporarily halted , and Karen remained a weak tropical storm with relatively shallow convection . Late that evening , new bursts of deep convection developed with the storm . Early on September 26 , Karen intensified significantly and an inner core began to develop . That morning , a ragged eye developed and the system strengthened into a hurricane with 75 mph (120 km / h) winds . The intensification trend was short @-@ lived , and the storm leveled off that afternoon as upper @-@ level wind shear increased substantially due to the presence of a nearby tropical upper tropospheric trough . The storm became less organized that evening . Hurricane Karen weakened to a tropical storm as flight data from NOAA Hurricane Hunters confirmed surface winds of 72 mph (115 km / h) and a very large wind field late that evening . Operationally , Karen was classified as a strong tropical storm , but was reclassified as a Category 1 hurricane based on data from the reconnaissance flight late on September 26 and the less organized structure of the storm at that time .

A slow weakening trend began early on September 27 due to the increased shear while remaining on a west @-@ northwest track . At the same time , the center of circulation became exposed at times due to the southwesterly wind shear . As a result , an unusual wind field was observed in that the strongest winds were recorded well to the east and to the northwest of the center . The weakening trend remained fairly slow that evening as the storm continued to produce persistent deep convection . The weakening trend accelerated on September 28 as the convection weakened and the circulation became more disorganized in the high @-@ shear environment . By that morning , Karen weakened to a minimal tropical storm with 40 mph (65 km / h) winds . Karen also turned abruptly to the north for a short while , as convection interacted with the low @-@ level center and southerly winds increased in the low @-@ level environment . The weakening trend slowed that afternoon as deep convection returned to the disorganized storm . Early on September 29 , the high wind shear continued and Karen weakened to a tropical depression with a very poorly defined center . That afternoon , the circulation dissipated while east of the Lesser Antilles . Remnant squalls continued across the area east of the Lesser Antilles for a few days after dissipation .

= = Impact = =

The National Hurricane Center briefly assessed a minimal threat to the Lesser Antilles , with one forecaster noting a 5 % probability for the cyclone to produce tropical storm winds on Barbuda . However , Karen stayed in the open Atlantic Ocean and never affected any land area . No incidents

of damage or casualties were reported . No ship reports of tropical storm @-@ force or stronger were received . Some of the vorticity from Karen 's remnants may have been responsible for the development of the short @-@ lived Tropical Depression Fifteen on October 11 .