

= Typhoon Ivan =

Typhoon Ivan , known in the Philippines as Typhoon Narsing , was an intense tropical cyclone that existed simultaneously with another storm of the same intensity in October 1997 . Forming out of an area of disturbed weather on October 13 , Ivan gradually intensified into a typhoon as it tracked steadily to the west @-@ northwest . On October 15 , the storm underwent rapid intensification and reached an intensity corresponding to Category 5 status on the Saffir ? Simpson Hurricane Scale . Late on October 17 , Ivan reached its peak strength with winds of 295 km / h (185 mph) and a barometric pressure of 905 hPa (mbar) . Shortly thereafter , the typhoon began to weaken as it approached the Philippines . Ivan eventually made landfall in northern Luzon with winds of 220 km / h (140 mph) on October 20 before weakening to a tropical storm the next day . The storm then curved northeastward and became extratropical on October 25 and dissipating the following day .

Although Ivan was a powerful storm at landfall , its effects were relatively minor compared to the storms ' intensity ; however , 14 people were killed during the storm and two others were listed as missing . Agricultural industries sustained the most severe damage , as thousands of animals drowned in the storm . Total damage was estimated at \$ 9 @. @ 6 million (1997 USD ; \$ 13 @. @ 1 million 2009 USD) . A total of 1 @, @ 779 homes were destroyed , 13 @, @ 771 others were damaged and 4 @, @ 600 hectares of farmland were flooded by the storm .

= = Meteorological history = =

Typhoon Ivan originated from an area of disturbed weather near the equator during the first week of October 1997 . Two equatorial troughs , one in the Northern Hemisphere and one in the Southern Hemisphere developed from this system . Three resultant areas of low pressure formed ; one in the Southern Hemisphere developed into Tropical Cyclone Lusi on October 8 , and two north of the equator steadily tracked westward . The eastern low developed into Typhoon Joan , while the western cyclone became the system that would intensify into Typhoon Ivan . Situated in an environment without significant convective activity , this system initially struggled to become organized . However , the disturbance began to mature , and by October 11 , the Joint Typhoon Warning Center (JTWC) discovered a low @-@ level circulation center , prompting the issuance of a Tropical Cyclone Formation Alert the following day .

The system quickly tracked toward the west @-@ northwest at a forward speed of 33 km / h (21 mph) . The JTWC issued their first advisory on the storm early on October 13 , designating it Tropical Depression 27W . Around this time , the Japan Meteorological Agency (JMA) also classified the cyclone as a tropical depression .

Convective banding features developed late on October 13 . The JTWC upgraded the depression to a tropical storm and gave it the name Ivan . Early the next day , the JMA also upgraded Ivan to a tropical storm . Later on October 14 , Ivan passed roughly 100 km (65 mi) south of Guam and subsequently intensified . Several hours afterwards , the JMA upgraded Ivan to a typhoon . During a 24 @-@ hour span , Ivan 's winds increased from 120 km / h (75 mph) to 270 km / h (165 mph) , making it a Category 5 super typhoon , the eighth of the season . Late on October 17 , Ivan attained its peak intensity with winds of 295 km / h (185 mph) and an official barometric pressure of 905 hPa (mbar) . However , the JTWC reported an unofficial pressure of 872 hPa (mbar) , which would tie Ivan for the second strongest tropical cyclone worldwide with Typhoons Gay , Angela , Joan , Keith and Zeb .

Due to the storm 's proximity to Typhoon Joan , forecast models anticipated Ivan to re @-@ curve before reaching the Philippines ; however , the storm maintained its track and did not take the northward turn until impacting the country . The typhoon began to slow and weaken , and on October 20 , its center made landfall in extreme northern Luzon with winds of 220 km / h (140 mph) . After emerging into the Luzon Strait , Ivan turned to the north @-@ northeast and weakened to a tropical storm . On October 22 , the storm briefly re @-@ attained typhoon status before accelerating in forward speed . The system steadily weakened and the JTWC issued their final advisory on the storm on October 24 . The JMA continued to monitor Ivan as a tropical cyclone for

another day before classifying it as extratropical . The remnants of the powerful typhoon eventually dissipated on October 26 .

= = Preparations and impact = =

Thousands of people evacuated from northern areas of the Philippines as Ivan approached . Power was shut off prior to the storm to reduce the risk of electrocution . Four flights were cancelled in Taiwan , Hong Kong , and the Philippines due to the storm . Residents in Taiwan were advised to take precautions for Typhoon Ivan , though autumn typhoons are rare in the island . Vessels were urged to stay at port due to rough seas throughout the Philippines . Disaster agencies were put on high alert ; relief supplies were then stockpiled , the navy was placed on standby , and military search and rescue vehicles were prepped .

On October 20 , Ivan made landfall in the northern Philippines , producing torrential rains that triggered waist @-@ deep flooding in localized areas . Severe crop losses were reported throughout northern Luzon . One person drowned in floodwaters in Cagayan . Elsewhere in the country , two other people drowned in floodwaters . Numerous power lines and trees were downed throughout the region , rain @-@ triggered landslides blocked several roads . Throughout the country , a total of 14 people were killed and two others were listed as missing . Poultry farms and fisheries sustained significant damage ; an estimated \$ 3 @. @ 6 million in losses resulted from lost stocks in the two businesses . Several thousand animals drowned during the storm . Total damage was estimated at \$ 9 @. @ 6 million (1997 USD ; \$ 13 @. @ 1 million 2009 USD) . A total of 1 @, @ 779 homes were destroyed , 13 @, @ 771 others were damaged and 4 @, @ 600 hectares of croplands were inundated by Typhoon Ivan . Rainfall from the storm was considered to be helpful as the area impacted had been suffering from below average rainfall for several months . Minor damage was also reported in the Marshall Islands . The island of Tiyan recorded 5 @. @ 26 in (134 mm) of precipitation , contributing to above @-@ average rainfall during the month of October .