

= Typhoon Lee ( 1981 ) =

Typhoon Lee , known in the Philippines as Typhoon Dinang , was the second storm to affect the Philippines during December 1981 . Lee originated from an area of thunderstorm activity near the Truk Atoll towards the end of December . Following an increase in organization , the system was classified as a tropical cyclone on December 22 . After becoming a tropical storm , Lee began to slowly strengthen , and attained typhoon status on December 24 . While turning west towards the Philippines , Lee began to intensify more rapidly . It is estimated to have reached peak intensity the next day , with winds of 145 km / h ( 90 mph ) . At peak intensity , the storm moved ashore the central Philippines later on December 25 . Lee emerged into the South China Sea the following day as a tropical storm . Initially , the storm maintained its intensity , but soon began to weaken due to increased wind shear . By December 28 , all of the thunderstorm activity was removed from the center , and on December 29 , Lee dissipated . However , the remnants of the cyclone was last noted a few hundred kilometers south of Hong Kong .

Across the Philippines , Typhoon Lee killed 188 people . In addition , 674 @, @ 619 people were directly affected by the typhoon . Furthermore , 76 @, @ 169 dwellings were demolished while 39 @, @ 586 families , or 208 @, @ 336 people , were rendered as homeless . A total of 53 @, @ 314 houses were partially damaged . Also , 548 @, @ 525 people sought refuge in shelters . Additionally , 1 @, @ 586 individuals were injured due to Lee . Overall , damage totaled to \$ 74 @. @ 1 million ( 1981 USD ) , \$ 46 @. @ 4 million of which was from infrastructure and an additional \$ 2 @. @ 2 million came from agriculture .

The island of Samar sustained the worst damage caused by the storm . There , 82 fatalities were reported and 56 were injured . A total of 19 @, @ 390 people were displaced ; roughly 8 @, @ 000 families or 48 @, @ 000 people was forced to move to evacuation centers . Elsewhere , in the coastal town of Calapan , 5 @, @ 600 dwellings received damage , and 85 % of the coastal town 's residents were displaced from their homes .

= = Meteorological history = =

On December 21 , 1981 , an area of convection began to organize west of the Truk Atoll . Despite strong wind shear , Hurricane Hunter aircraft data yielded winds of near @- @ gale force and a barometric pressure of 1 @, @ 002 mbar ( 29 @. @ 6 inHg ) the next day . Initially , the aircraft did not find any evidence of a closed low @- @ level circulation . At 1000 UTC on December 22 , the Joint Typhoon Warning Center ( JTWC ) issued a Tropical Cyclone Formation Alert ( TCFA ) for the system . Two hours later , the JTWC upgraded the disturbance into Tropical Depression 29 following the discovery of a closed surface circulation by Hurricane Hunters . By that evening , thunderstorm activity had become more concentrated towards the center ; as such , the Japan Meteorological Agency ( JMA ) first classified the system as a tropical cyclone . Following a further increase in organization , both the JMA and JTWC upgraded the cyclone into Tropical Storm Lee early on December 23 . Meanwhile , the Philippine Atmospheric , Geophysical and Astronomical Services Administration ( PAGASA ) also monitored the storm and assigned it with the local name Dinang .

Initially , Lee veered west @- @ northwest due to a mid @- @ latitude trough exiting off the Asia mainland . At 0600 UTC on December 23 , the JTWC classified Lee as a typhoon . At 0000 UTC on December 24 , the JMA upgraded Lee into a severe tropical storm . Six hours later , the agency classified Lee as a typhoon . Around this time , the JTWC predicted that Lee would turn north after entering the South China Sea due to the influence of an extratropical cyclone . However , as the storm turned west because the trough had moved away , the JTWC kept prolonging the northward turn . Moving in the general direction of the Philippines , Lee began to rapidly intensify . At 0600 UTC on December 25 , the JTWC reported winds of 180 km / h ( 110 mph ) , equivalent to a high @- @ end Category 2 hurricane on the United States @- @ based Saffir @- @ Simpson Hurricane Wind Scale . According to the JTWC , this would be the storm 's peak intensity . Meanwhile , the JMA estimated peak intensity of 145 km / h ( 90 mph ) and a minimum pressure of 950 mbar ( 30 inHg ) . That afternoon , the typhoon made landfall along the central portion of the Philippines .

After landfall , rapid weakening occurred , and when the storm entered the South China Sea on December 26 , the JTWC reduced the winds of Lee to 70 km / h ( 45 mph ) . Despite this , data from the JMA suggests that system was stronger , with winds of 105 km / h ( 65 mph ) . Based on additional reports from Hurricane Hunters , the JTWC revised its forecast and now anticipated the tropical cyclone to move on a westerly course and strike central Vietnam . Moving into an area of decreased monsoonal flow , Lee maintained its intensity for 18 hours . Satellite imagery showed a banding @-@ type eye . However , by December 27 , Lee began to feel the effects of an extratropical cyclone located to the north of the storm ; consequently , Lee began to make a gradual turn towards the northwest . Lee began to encounter increased vertical wind shear , and early on December 27 , the JMA lowered the intensity of Lee to 105 km / h ( 65 mph ) . Later that day , a Hurricane Hunter investigation recorded a pressure of 998 mbar ( 29 @.@ 5 inHg ) as the storm began to turn towards the north , exiting PAGASA 's warning zone . By 0000 UTC on December 28 , all of the deep convection was displaced from the center . Six hours later , the JMA estimated that Lee weakened to winds below tropical storm force . By midday , satellite imagery suggested that Lee was no longer a tropical cyclone ; however , the JTWC continued to issue warnings on the system until 0000 UTC on December 29 . At 1800 UTC , the JMA stopped watching the system . The remnants of Lee were last noted by the JTWC roughly 275 km ( 170 mi ) south of Hong Kong .

= = Preparations and impact = =

Prior to landfall , twelve provinces , including some in Luzon , were placed on typhoon alert . Upon moving through the central Philippines , Typhoon Lee affected some of the same areas devastated by Typhoon Irma earlier that month , which was considered the strongest storm to affect the island since 1970 . Lee knocked out communications and left many coconut @-@ producing areas isolated . Railway services to and from Manila was suspended . Even though nine domestic flights were canceled , the Manila International Airport remained open throughout the passage of the typhoon . Across Manila , some flooding was reported and high winds tore off some Christmas decorations in hotels along the bay . The Sorsogon Province was one of the hardest hit areas by the typhoon ; 20 casualties happened there because of flooding . In the coastal region of Legaspi , home to a large volcano , 150 houses were demolished due to storm surge , 25 of which were swept out at sea . Telephone lines were also cut off for four days in the city . Storm surge was also noted in coastal towns in the Sorsogon , Masbate , and Albay provinces . In the latter , three villages were damaged .

Just south of the capital city of Manila , in the coastal town of Calapan on Mindoro Island , 5 @,@ 600 houses were damaged , and 20 @,@ 000 persons or 85 % of the town 's residents were left without a home . Two fatalities were reported in the city . In the fishing village of San Fernando on Masbate Island , 50 thatched huts were flattened . Elsewhere , four people were killed and three others injured in Naujan , where 86 homes were either damaged or destroyed .

According to officials , 82 people were killed on the island of Samar . Throughout the island , the system destroyed schools , residences , an airport terminal , the government house in Catarman , and a jail , enabling 11 prisoners to escape . Most of damage to Samar was caused by collapsing houses and uprooted coconut trees hurled by the gusty winds . A total of 19 @,@ 390 people were displaced ; roughly 8 @,@ 000 families or 48 @,@ 000 people of which were forced to move to evacuation centers . An additional 56 people were hurt province @-@ wide . Ten homes were washed away along a coastal village in the Marinduque Province . One person also perished due to electrocution outside of Naga City .

One hundred eighty @-@ eight people were killed , primarily due to drownings . Another 674 @,@ 619 people were directly affected by the typhoon . A total of 76 @,@ 169 dwellings were demolished , and 39 @,@ 586 families , or 208 @,@ 336 people , were displaced . This total included approximately 6 @,@ 000 people in the provinces of Romblon , Quezon , and Albay . Overall , a total of 53 @,@ 314 homes were partially damaged . Moreover , 548 @,@ 525 people sought refuge in shelters . Additionally , 1 @,@ 586 persons were injured due to Lee . Overall , damage totaled to \$ 74 @. @ 1 million , including \$ 46 @. @ 4 million from infrastructure and \$ 2

@.@ 2 million from agriculture . Damage was estimated at \$ 44 million in Samar .

= = Aftermath = =

Within a few days after the passage of Typhoon Lee , relief agencies were deployed to distribute food and medicines to families temporarily housed in schools , town halls and churches . Philippine President Ferdinand E. Marcos declared an emergency and a " state of calamity " in the provinces of Northern Samar , Masbate , Mindoro Oriental , and Romblon . He subsequently released \$ 1 @.@ 8 million in order to repair roads , bridges and schools . Several evacuation centers were opened up in schools and town halls .