= Tropical Storm Linfa (2009) =

Severe Tropical Storm Linfa was the second named storm to develop in the South China Sea during the 2009 Pacific typhoon season . It is the seventh depression and third typhoon of the season . Forming out of an area of low pressure on June 14 , the storm briefly attained tropical depression status before degenerating . By June 17 the system regenerated in the South China Sea . Slowly tracking northward , the storm intensified , attaining severe tropical storm status on June 19 and peaking in intensity the following day . On June 21 , Linfa made landfall in Fujian Province , China as a tropical storm before weakening to a tropical depression .

In Taiwan , outer bands of the storm produced significant amounts of rain over southeastern areas of the island . Along the western coast , rip currents resulted in the drowning of one person . Six hikers also were reported to be missing . In China , torrential rains triggered flooding that destroyed 100 homes , killed one person and left six others missing . In all , seven people were killed by Linfa , with damages in mainland China estimated at ¥ 641 million (US $ 93 @.@ 8 million) and agricultural losses in Taiwan reached NT $ 400 million (US $ 12 @.@ 1 million) .

= = Meteorological history = =

On June 10 , the Joint Typhoon Warning Center (JTWC) began monitoring a persistent area of convection situated about 140 kilometres (85 mi) southeast of Palau . Satellite imagery depicted an elongated low @-@ level circulation with deep convection centered along the southwestern portion of the system . Strong wind shear , which normally inhibits cyclonic development , provided energy for further convective development around the system . Tracking in a general northwestward direction , the low gradually developed northward outflow due to a tropical upper tropospheric trough (TUTT) located north of the disturbance . Following further development , the Japan Meteorological Agency declared the system as a tropical depression at 0600 UTC on June 14 .

Later on June 14 , the JTWC issued a Tropical Cyclone Formation Alert (TCFA) for the depression . Deep convection consolidated around the center of circulation and convective banding features developed along the periphery of the system . Several hours later , the TCFA was canceled as the system rapidly degenerated , with convection mostly dissipating and an exposed low . Outflow significantly deteriorated as the system detached itself from the TUTT . By this time , the JMA had ceased advisories on the depression . Two days later , after tracking across Luzon , the system began to regenerate . Convection redeveloped around the low and outflow was reestablished to the south .

Early on June 17 , the JTWC issued a second TCFA as the system continued to organize . By this time the system was nearly stationary and at 0600 UTC , the JMA declared that the low had developed into a tropical depression . Several hours later , the JTWC designated the system as Tropical Depression 03W while the storm was situated about 705 km (440 mi) south @-@ southwest of Kaohsiung , Taiwan . Little movement took place for the first few days of the storm 's existence as weak steering currents were in place over the South China Sea . Following further development of the depression , the JTWC upgraded it to a tropical storm late on June 17 . At 0600 UTC on June 18 , the JMA classified the system as a tropical storm and gave it the name Linfa . Limited poleward outflow hindered intensification for the remainder of June 18 . By this time , the storm began to increase in forward motion due to a strengthening subtropical ridge located east of Taiwan and a mid @-@ latitude trough to the west .

Around 1200 UTC the following day , Linfa further intensified into a severe tropical storm . A microwave satellite image of the storm depicted an eye @-@ feature surrounded by deep convection . Interacting with a nearby upper @-@ level low , poleward outflow significantly improved late on June 19 , fueling further strengthening . Slowly tracking in a general northward direction , Linfa continued to organize and by June 20 , the JTWC upgraded Linfa to a typhoon . A small , ragged eye appeared on visible satellite images by this time and several hours later , the storm reached its peak intensity just below typhoon @-@ status according to the JMA . Maximum sustained winds peaked at 110 km / h (70 mph 10 @-@ minute winds) and a barometric pressure

of 975 hPa (mbar) .

Later on June 20 , convection near the center of circulation began to decrease ? an indication of weakening ? and the eye was no longer visible . Upper @-@ level wind shear rapidly increased to 55 km / h (35 mph) , preventing re @-@ intensification of the cyclone . Taking a more northward track than anticipated , Linfa began to interact with land and was downgraded to a tropical storm by the JTWC on June 21 . Around 1230 UTC , the storm made landfall in southern Fujian as a tropical storm with winds of 85 km / h (50 mph 10 @-@ minute winds) . Deep convection rapidly dissipated shortly thereafter due to interaction with land . Several hours later , the JTWC downgraded Linfa to a tropical depression . The following day , the JMA also downgraded Linfa to a tropical depression as the storm moved away from the Chinese coastline . The system later dissipated just offshore ; a circulation was no longer evident on satellite imagery .

= = Preparations and impact = =

Although Linfa was not forecast to directly impact the Philippines , the outer effects of the storm were anticipated to produce increased rainfall and large swells along western facing coastlines . By June 20 , the Central Weather Bureau issued extremely heavy rain warnings , indicating 24 @-@ hour rainfall totals in excess of 130 mm (5 @.@ 1 in) were anticipated , for most of Taiwan . Beaches throughout Taiwan were closed due to rough seas and local officials inspected all public shelters to ensure they were stocked and prepared to provide for evacuees . Later that day , a level 3 emergency was declared for eastern Guangdong Province and southern Fujian Province . The local governments in the provinces enacted their emergency response plans following this declaration .

On June 21 , officials in China closed Xiamen port and stated that it would resume operations once the storm passed . Later that day 33 @,@ 000 vessels sought refuge at port . Following the issuance of a land warning , government offices and schools were closed throughout the island . Officials sent 10 million text messages to residents throughout Fujian Province to warn them about the approaching storm . In Hong Kong , public warning signal number one was raised for nearly 24 hours as Linfa briefly threatened the city on June 20 . Officials also evacuated roughly 160 @,@ 000 people from coastal areas in Fujian . A total of 167 flights to and from Taiwan were canceled or delayed due to the storm .

On June 21 , large swells of up to 5 @.@ 6 m (18 ft) caused a 498 @-@ tonne oil tanker , the Colombo Queen , to run aground in southern Taiwan . Rescue crews were unable to reach the ship as it was still in the storm . Although no fuel was reported to have leaked , the ship struck a coral reef , damaging the coral . Once Linfa passed , rescuers were able to reach the nine crew members on the ship . Officials estimated that it would take over a week to remove all 39 @,@ 000 litres (8 @,@ 600 imp gal ; 10 @,@ 000 US gal) of fuel from the tanker . In Taiwan , two people were hit by fallen trees and two monks were struck by a wall that collapsed during a ceremony . Rip currents in Taiwan resulted in one death after a boy went into the water unwatched . Six hikers also went missing . Power to all 505 residences of Chiangchun was also lost during the storm . Average amounts of 150 mm (5 @.@ 9 in) of rain were recorded across southeastern parts of Taiwan on June 21 . The highest total was 350 mm (14 in) in Taitung . Further rainfall of 150 mm (5 @.@ 9 in) fell on June 22 , pushing totals over 450 mm (18 in) in isolated areas along southeastern areas . In Kinmen County , 50 trees were downed , six billboards were destroyed and two homes lost their roofs . By June 22 , power companies reported that 2 @,@ 834 residents had lost power in Wuqiu Township for several hours . Severe damage was reported in the agricultural sector in Taiwan , leaving NT $ 400 million (US $ 12 @.@ 1 million) in losses .

In mainland China , Linfa produced torrential rains , peaking at 488 @.@ 1 mm (19 @.@ 22 in) and triggering severe flooding . Heavy rains also impacted Hong Kong , where more than 100 mm (3 @.@ 9 in) fell over a three @-@ day span . Following a landslide , one person was killed . Flood waters destroyed 100 homes and inundated 10 @,@ 000 others as well as an estimated 32 @,@ 000 hectares of farmland in Fujian Province . In Taoyuan Town , a total of 191 mm (7 @.@ 5 in) of rain fell within one hour , breaking a 200 @-@ year @-@ old record in the town . In Meizhou ,

Guongdong Province , flash flooding resulted in five additional fatalities after 413 @.@ 7 mm (16 @.@ 29 in) of rain fell within a nine @-@ hour span . This rainfall was higher than any recorded amount in the past 100 years in the region . A total of 362 homes were destroyed in the town and infrastructure was severely damaged . Additionally , an estimated 20 million people were affected by the storm . Damages from Linfa in China amounted to ¥ 641 million ($ 93 @.@ 8 million) .