= Cyclone Mala =

Cyclone Mala was the strongest tropical cyclone of the 2006 North Indian Ocean cyclone season . In mid @-@ April , an area of disturbed weather formed over the southern Bay of Bengal and nearby Andaman Sea . Over a period of several days , the system became increasingly organized and was classified as a depression on April 24 . Situated within a region of weak steering currents , the storm slowly intensified as it drifted in a general northward direction . It attained gale @-@ force winds and was named Mala the next day . Conditions for strengthening improved markedly on April 27 and Mala subsequently underwent rapid intensification which culminated in the cyclone attaining its peak . Early on April 28 , the cyclone had estimated winds of 185 km / h (115 mph) . The Joint Typhoon Warning Center considered Mala to have been slightly stronger , classifying it as a Category 4 @-@ equivalent cyclone . Steady weakening ensued thereafter and the storm made landfall in Myanmar 's Rakhine State on April 29 . Rapid dissipation took place once onshore and Mala was last noted early the next morning .

In contrast to Mala 's intensity , damage was relatively minimal across Myanmar due to adequate early warnings , while timely and effective evacuations minimized loss of life along the coast . The greatest damage resulted from a thunderstorm near Yangon on April 28 that spawned a possible tornado in an industrial zone . A total of 586 homes were damaged there . Just outside the city in the Hinthada District , a flash flood killed at least 18 people . Overall , the storm claimed 37 lives in the country and left US $ 6 @.@ 7 million in damage . In the wake of Mala , the Red Cross distributed relief aid to affected residents while local officials set up shelters to house those left homeless . Government and social organizations donated 5 @.@ 4 million kyat (US $ 4 @,@ 320) in cash to survivors in the Ayeyarwady Region .

= = Meteorological history = =

In mid- to late @-@ April , a pulse in the Madden ? Julian oscillation , coupled with a Kelvin wave , (which later contributed to the formation of Typhoon Chanchu in the western Pacific) enhanced convective activity over the Bay of Bengal . By April 22 , a trough developed along an axis from the southern Bay of Bengal eastward to the Andaman Sea . The Joint Typhoon Warning Center (JTWC) began monitoring the system for potential tropical cyclogenesis the following day . By 0600 UTC on April 24 , an area of low pressure formed southeast of the Andaman Islands and the India Meteorological Department (IMD) began monitoring the disturbance . Quickly organizing , the low developed into a tropical depression later on April 24 and the JTWC began writing full advisories on the cyclone without issuing a Tropical Cyclone Formation Alert . Organization slowed thereafter due to moderate wind shear , but continued at a near @-@ climatological rate as upper @-@ level outflow allowed for continued convective development . Early on April 25 , the JTWC estimated the system to have attained gale @-@ force winds . The IMD followed suit later that day and subsequently assigned it the name Mala . Weak steering currents prompted slow and erratic movement with an overall northward trajectory .

Forecasters at this time anticipated little intensification as the system was expected to move into a region of higher shear . However , on April 27 , the system moved under a subtropical ridge and conditions quickly became favorable for intensification . The presence of the ridge greatly enhanced the outflow over the cyclone and an eye developed by 1200 UTC . By this time , both the JTWC and IMD estimated Mala to have attained hurricane @-@ force winds with the latter classifying it as a very severe cyclonic storm . The previously weak steering currents became more established as well , with the storm now tracking northeast toward Myanmar through a weakness in a ridge over Southeast Asia . Situated in an area with sea surface temperatures of 28 to 29 ° C (82 to 84 ° F) , the cyclone was able to undergo rapid intensification as wind shear abruptly diminished . The IMD estimated Mala to have reached its peak intensity at 0900 UTC on April 28 with winds of 185 km / h (115 mph) and a barometric pressure of 954 mbar (hPa ; 28 @.@ 17 inHg) . Using the Dvorak technique , a method of determining a tropical cyclone 's strength via satellite imagery , the agency gave Mala a rating of T # 5 @.@ 5 which yields an intensity of 189 km / h (117 mph) .

The JTWC estimated Mala to have been a stronger system , with peak winds of 220 km / h (140 mph) and a pressure of 922 mb (hPa ; 27 @.@ 23 inHg) ? equivalent to a Category 4 hurricane on the Saffir ? Simpson hurricane wind scale . Their Dvorak values peaked at T # 6 @.@ 5 or 235 km / h (146 mph) . As the powerful storm approached Myanmar , the combined effects of increasing wind shear and land interaction soon took their toll on Mala . At 0700 UTC on April 29 , Mala made landfall just south of Thandwe in Myanmar 's Rakhine State as a very severe cyclonic storm . The JTWC estimated winds at this time to have been 165 km / h (105 mph) . Rapid weakening ensued once the cyclone moved onshore . Within 12 hours of landfall , Mala weakened to a deep depression and was last noted as a dissipating system earl on April 30 .

Sea surface temperatures in the wake of Cyclone Mala decreased up to 4 ? 5 ° C (7 ? 9 ° F) due to upwelling . From April 28 ? 29 , the low @-@ level inflow associated affected much of the northern Bay of Bengal and resulted in northwesterly winds as far away as Hyderabad , India . These winds brought dry , dust filled air over the bay with mean particulate @-@ matter doubling over the region .

= = Preparations = =

On April 26 , the local Department of Meteorology and Hydrology in Myanmar stated that the Ayeyarwady , Bago Region , and Yangon regions were likely to be affected within two days and Rakhine State within three days . Officials began broadcasting storm warning to the public over radio the following day . Evacuations of at @-@ risk coastal areas were conducted , though specifics are unknown . Once the storm moved inland , residents across the country were advised of the likelihood of widespread heavy rain from the remnant system .

Despite never being forecast to strike Bangladesh , officials there warned residents that the storm could strike the nation and cause loss of life . Cautionary signals were raised at ports in Chittagong , Cox 's Bazar , and Mongla , advising seafaring vessels to remain docked until the storm 's passage . Roughly 34 @,@ 000 members of the Bangladesh Red Crescent Society were placed on standby for possible relief efforts .

Flash flood warnings were issued across northern Thailand on April 29 under the threat of heavy rains from Mala 's remnants .

= = Impact = =

Throughout almost the entire existence of Mala , it produced rainfall in the Andaman and Nicobar islands . Daily totals peaked on April 27 at 100 mm (3 @.@ 9 in) in Car Nicobar .

After moving through Myanmar , Mala brought heavy rains to northern Thailand . According to local meteorologists the storm also accelerated the onset of the seasonal monsoon which would contribute to a wetter @-@ than @-@ average year for the region .

= = = Myanmar = = =

Though Mala struck Myanmar as a powerful cyclone , early warnings and proper evacuations minimized loss of life along coastal areas . Additionally , no major storm surge was reported , limiting the potential for major damage . The most significant effects were caused inland from torrential rains rather than at the coast . Overall , the storm claimed 37 lives and left 1 @.@ 24 billion kyat (US $ 6 @.@ 7 million) in damage . Approximately 12 @,@ 000 families were significantly affected by the cyclone .

Rakhine State suffered a direct hit from the cyclone , with Gwa Township reporting the worst damage . There , 88 homes were destroyed and 1 @,@ 246 more were damaged . One person was killed and at least four others were injured in the township . Ra Haing Ku Toe village suffered significant losses as well , with 132 homes destroyed and 531 more damaged . A storm surge of 4 @.@ 57 m (15 @.@ 0 ft) struck the region , but did not impact populated areas .

Across the Irrawaddy Delta , hurricane @-@ force winds caused extensive damage to housing and

infrastructure . Haigyi Island was the first area struck by the storm . Several homes were destroyed and many more lost their roof there . Thunderstorms from the storm 's outer bands on April 28 damaged 586 homes in Hlaingthaya Township . Residents described what appeared to be a tornado as the cause of the damage . The Hlaingthaya industrial zone was hardest hit , with five factories destroyed and dozens of homes having their roof torn off . Locals , however , claimed that the damage was more severe than reported by the government . Cars were reportedly tossed into the air during the storm . Two people were killed and fourteen others were injured in Hlaingthaya . The winds also downed numerous power lines , leaving many without electricity . In Labutta Township , near the southern tip of the Delta , 88 homes were destroyed . In the Hinthada District , torrential rains caused flash flooding that killed 18 people and left 14 others missing .

= = = = Aftermath = = = =

By May 1 , the local branch of the Red Cross distributed essential supplies to residents in Labutta Township . In coordination with the Disaster Assistance Response Team , the areas in greatest need for aid were identified and requests for tarpaulin were made . Members of the Cabinet of Burma donated 3 @.@ 7 million kyat (US $ 2 @,@ 960) in cash and 140 bags of rice to victims in the Ayeyarwady Region . On May 3 , another 1 @.@ 7 million kyat (US $ 1 @,@ 360) was donated by social organizations to residents in rural areas outside Yangon . Temporary shelters were set up across Gwa Township . Local donations provided residents in the town with 200 @,@ 000 kyat (US $ 160) worth of blankets , clothes , and cash . A local newspaper , The New Light of Myanmar , claimed that government officials immediately provided assistance to affected residents across the country . Red Cross operations continued through November 30 , by which time 3 @,@ 485 families were provided with aid . Additionally , though the agency planned to assist 4 @,@ 000 families with rebuilding their homes , a lack of necessary funds prevented the operation . Instead , a cash donation was provided to the 1 @,@ 000 most affected families .