

= Cyclone Megh =

Extremely Severe Cyclonic Storm Megh is regarded as the worst tropical cyclone to ever strike the Yemeni island of Socotra , causing additional destruction there after Cyclone Chapala hit the same island . Megh formed on November 5 , 2015 , in the eastern Arabian Sea , and followed a path similar to Chapala . After moving northward , the cyclone turned to the west , and fueled by warm water temperatures , it quickly intensified . On November 7 , the storm developed an eye in the center and began to rapidly intensify into a mature cyclone . By the next day , the India Meteorological Department estimated peak 3 minute sustained winds of 175 km / h (110 mph) , and the American @-@ based Joint Typhoon Warning Center estimated 1 minute winds of 205 km / h (125 mph) . Shortly thereafter , the cyclone brushed the northern coast of Socotra . The storm steadily weakened thereafter , especially after it skirted the northern Somalia coast . After entering the Gulf of Aden , Megh turned to the west @-@ northwest and struck southwestern Yemen on 10 November as a deep depression , dissipating shortly thereafter .

When Megh passed near Socotra , residents were just beginning to return after the previous cyclone , and many had to evacuate again . Additional heavy rainfall and high winds lashed the island , which destroyed 500 homes and damaged another 3 @, @ 000 . The consecutive storms damaged 785 fishing boats , left 80 % of the roads impassible , and caused an island @-@ wide power outage . Megh killed 18 people on Socotra and injured another 60 . The heavy damage on the island prompted nearby countries and international organizations to deliver relief goods and medical teams . Later , Megh brought torrential rainfall and high waves to northern Somalia , killing livestock and damaging schools . The storm 's final landfall in Yemen marked little rainfall or effects .

= = Meteorological history = =

On November 3 , an area of scattered convection persisted about 860 km (535 mi) southwest of Mumbai , India , in the central Arabian Sea . The thunderstorms were associated with a weak and broad circulation , located in an area of low wind shear and warm water temperatures over 29 ° C (84 ° F) , both favorable conditions . At the time , the system was located east of Cyclone Chapala , which had recently struck Yemen . On November 4 , a distinct low pressure area developed in association with a mid- to upper @-@ level low , while the region was in an active Madden Julian Oscillation phase favorable for storm development . The circulation became better defined as outflow increased , amplified by an anticyclone over the system . Based on the organization , the India Meteorological Department (IMD) classified the low as a depression at 00 : 00 UTC on November 5 . About six hours later , the IMD upgraded the system to a deep depression , and at 12 : 00 UTC that day the agency upgraded it to a cyclonic storm , naming it Megh . Earlier that day , the American @-@ based Joint Typhoon Warning Center (JTWC) initiated advisories on the storm as Tropical Cyclone 05A while the storm was about 1 @, @ 120 km (700 mi) east of Socotra island offshore Yemen .

Upon forming , Megh was moving to the west @-@ southwest due to a ridge to the north . While Megh was in its formative stages , it developed broken rainbands that swirled into the circulation center , which was located beneath the blossoming convection . On November 6 , dry air began to become entrained into the circulation , although the unfavorable conditions did not disrupt the center . Instead , the convection became better organized , developing into a central dense overcast , as well as the beginnings of an eye feature . As the storm continued to develop , the radius of maximum winds shrank , resulting in a smaller storm than the previous Cyclone Chapala . At 12 : 00 UTC on November 7 , the JTWC upgraded Megh to the equivalent of a hurricane after a small defined eye became evident . The storm began rapid deepening that day due to the continued low shear and warm water temperatures , and the convection became more symmetric and circular . Such intensification was not anticipated by tropical cyclone forecast models , which emphasized that the external conditions , such as dry air from the west , would be unfavorable . At 06 : 00 UTC on November 7 , the IMD upgraded Megh to a severe cyclonic storm , and just nine hours later

upgraded it to a very severe cyclonic storm ? the equivalent to hurricane intensity with 3 minute winds of 120 km / h (75 mph) .

Cyclone Megh continued to rapidly intensify while approaching the island of Socotra . It developed a small eye just 7 @. @ 4 km (4 @. @ 6 mi) in diameter by early on November 8 , along with a convective core just 280 km (175 mi) in diameter . At 03 : 00 UTC that day , the IMD upgraded the system to an extremely severe cyclonic storm , and three hours later estimated peak 3 minute winds of 175 km / h (110 mph) . At the same time , the JTWC estimated peak 1 minute winds of 205 km / h (125 mph) . Since accurate record keeping began in the basin in 1990 , this marked the first time in the Arabian Sea that there were two cyclones in one season with 1 minute winds of at least 185 km / h (115 km / h) . Between 06 : 00 ? 12 : 00 UTC on November 8 , the eye of Megh crossed the northern coast of Socotra , with the resulting land interaction causing the eyewall to disappear and for the winds to diminish . After exiting the island , the cyclone began weakening further due to cooler water temperatures and drier air from the Arabian Peninsula to the northwest . Early on November 9 , the center of Megh passed 57 km (36 mi) north of Cape Guardafui , and further land interaction with Somalia to the south increasingly degraded the storm 's structure . At 00 : 00 UTC that day , Megh weakened into a very severe cyclonic storm .

After passing just north of Somalia , Megh progressed westward into the Gulf of Aden , the waterway between Somalia and the Arabian Peninsula . This marked the first time on record when two storms entered the body of water in the same year . By 12 : 00 UTC on November 9 , the center was beginning to become exposed from the convection due to the unfavorable conditions . Throughout the day , the structure rapidly deteriorated as the storm curved to the west @- @ northwest . At 21 : 00 UTC on November 9 , Megh weakened further into a severe cyclonic storm , and degraded further to a cyclonic storm by six hours later . While just offshore Yemen , the circulation slowed and turned to the northeast , after the ridge to the north receded eastward . At 06 : 00 UTC on November 10 the storm weakened to a deep depression , and three hours later Megh made landfall in southwestern Yemen northeast of Zinjibar , with estimated winds of 55 km / h (35 mph) . The structure eroded significantly over land , prompting the JTWC to discontinue advisories . The circulation continued inland , and Megh degenerated into a low pressure area by 18 : 00 UTC on November 10 .

= = Preparations and impact = =

Occurring just days after Cyclone Chapala bypassed the island , Cyclone Megh struck Socotra , bringing further winds , rainfall , and flash flooding . Residents who returned home after Chapala had to evacuate again due to Megh , and 800 people on the nearby island of Abd al Kuri evacuated to Hadhramaut Governorate on the Yemeni mainland . Some relief goods delivered after Chapala were damaged during Megh . The cyclone wrecked about 500 homes and damaged 3 @, @ 000 others , which displaced about 18 @, @ 000 people to schools and mosques . The storm disrupted entire villages ? tainting water wells and affecting communication towers ? while also damaging the main hospital and power station . This resulted in fuel shortages and an island wide power outage . The combination of high winds and rainfall caused the island 's main port to close , with 785 fishing boats and 1 @, @ 130 fishing nets damaged by Chapala and Megh . About 80 % of the roads on Socotra were left impassible . The storm also killed many livestock and downed thousands of palm trees . Two people died on Socotra when their homes collapsed . Overall , the storm killed 18 people on the island and injured 60 others .

After the storm , communication disruptions on Socotra made it difficult for relief workers to determine the needs of the affected residents . Due to the main port being damaged , residents built a makeshift pathway to assist relief distribution from a ship carrying 700 tons of supplies from the United Arab Emirates . Relief distribution was also disrupted by the heavy damage to Socotra 's infrastructure , including damaged roads and minimal power or fuel supply . After the storm , displaced residents stayed in public buildings or outside damaged houses . Due to the collective impacts of Chapala and Megh , various Persian Gulf countries sent 43 planes with supplies to the island by 19 November . The United Arab Emirates sent a ship and a plane , carrying 500 tons of

food , 10 tons of blankets and tents , and 1 @, @ 200 barrels of food . The local Red Cross gave cooked meals and tarps to the island 's residents . The International Organization for Migration provided 2 @, @ 000 shelter kits as well as a medical team to Socotra .

While brushing the northern tip of Somalia , Megh dropped heavy rainfall to coastal regions of the nation , particularly in the Puntland region . There , stations recorded more than 300 % of the average annual rainfall . Eyl reported 160 mm (6 @. @ 3 in) of rainfall over 24 hours . Megh also lashed the coast with strong waves , and the combination with rainfall damaged several boats . The rains led to flash flooding that blocked roads . Megh damaged schools , police stations , and the main hospital in Alula District . The passage of Megh also resulted in the loss of livestock in the region , and many fruit and palm trees were knocked down . After the passages of earlier Cyclone Chapala and Megh , the local Red Cross chapter distributed blankets , sleeping mats , and mattresses to the affected families .

By the time Megh made landfall on the Yemen mainland , it had weakened enough to not produce any strong winds or heavy rainfall .