

= Hurricane Madeline (1976) =

Hurricane Madeline was a Category 4 hurricane that made landfall in Mexico in October 1976 . Madeline formed on September 29 , not far from Central America . The next day , the circulation dissipated , and as a result weakened to a remnant low . Four days later , on October 3 , the low regenerated into a tropical depression . The system remained weak for three days as it drifted west @-@ northwest . When it began to recurve towards Mexico on October 6 , the cyclone rapidly intensified , eventually making landfall at peak intensity as a Category 4 . Shortly after landfall , the cyclone rapidly dissipated .

Prior to the arrival of Madeline , 15 @,@ 000 people evacuated from the coast , which had already been impacted by Hurricane Liza . Heavy damage was reported , along with seven fatalities . Two dams were flooded ; extensive crop damage was reported .

= = Meteorological history = =

Early on September 27 , 1976 , the Eastern Pacific Hurricane Center (EPHC) reported that a tropical disturbance had formed about 770 km (480 mi) to the southwest of San Jose , Costa Rica . During the next two days the disturbance slowly developed while moving northwest . By the morning of September 29 , the disturbance was upgraded to a 40 mph (65 km / h) tropical storm and based on ship reports and satellite imagery . Due to the fact that it attained tropical storm status , it was named Madeline . At this time , the cyclone had developed a center of circulation . Its intensification was short @-@ lived and Madeline remained at tropical storm strength for just 12 hours before it was downgraded into a tropical depression . Madeline remained at tropical depression strength until September 30 . At that time , the EPHC reported that the circulation center was no longer visible and downgraded the system to a remnant low , while located 575 mi (925 km) to the southeast of Acapulco , Mexico .

Over the following days , the low moved towards the west and started to regenerate with a circulation center becoming visible early on October 3 . Based on this , the EPHC re @-@ upgraded Madeline to a tropical depression . Continuing to intensify , Madeline was soon upgraded to a tropical storm for the second time . During the next day or two , Madeline remained near stationary before turning towards the northeast on October 5 . As the cyclone moved over an area of warm seas surface temperatures , the storm started to intensify . During the next day , Madeline slowly developed an eye before intensifying into a hurricane . In addition , a Hurricane Hunter aircraft reported winds 75 mph (120 km / h) winds and a pressure of 984 millibars .

During October 7 , with warm water helping to fuel its intensification , Madeline quickly intensified into a Category 2 hurricane , and was upgraded to a major hurricane (Category 3 or higher on the Saffir @-@ Simpson Hurricane Scale) early on October 8 . Based on hurricane hunter reports , Madeline reached its peak sustained winds of 145 mph (230 km / h) and a peak pressure of 940 millibars early on the 8th . This made Madeline a moderate Category 4 hurricane . Later that morning Madeline made landfall to the northwest of Zihuatanejo as a powerful Category 4 hurricane , before it rapidly dissipated over land .

= = Preparations and impact = =

Mexican army headquarters put in effect an emergency plan three days prior to the arrival of the hurricane . An estimated 15 @,@ 000 people evacuated from threatened areas in the path of Madeline . According to one report , evacuations prior to Madeline were considered a success . Hurricane warnings and flood warnings were issued along the coastlines of Michoacán and Guerrero . In addition , tropical storm warnings were issued for nine states in Mexico . This warning area extended as far inland as the area west of the Gulf of Mexico .

Hurricane Madeline produced heavy rains over Mexico , peaking at 16 @.@ 57 in (421 mm) , rainfall fell at El Povenir / San Marcos . According to Comision Nacional del Agua , a parent agency of the Servicio Meteorológico Nacional , rainfall fell at 2 @,@ 069 sites . Damage from the hurricane

was considered to be severe . In Chilpancingo , Guerrero , two people drowned from the hurricane . In addition , five other deaths were reported . The cyclone also flooded two major hydro @-@ electrical dams and power outages were reported . While no serious damage was reported in Zihuatanejo , many boats were damaged . In addition , the storm caused extensive crop damage . Losses from Madeline , combined with previous hurricanes Liza and Kathleen , were estimated at \$ 200 million (1976 USD) . It was the second storm to strike Mexico within a week ; Hurricane Liza was the first . When Madeline was over the ocean , it impacted several ships , but no major damage from these ships was reported .