

= Cyclone Japhet =

Cyclone Japhet was a damaging tropical cyclone that affected southeast Africa in March 2003 . It developed on February 25 near the southwest coast of Madagascar , and initially moved to the northwest before turning to the southwest . With favorable conditions for development , Japhet quickly intensified in the Mozambique Channel , reaching maximum winds of 175 km / h (109 mph) , sustained over 10 minutes . After stalling briefly , the cyclone turned to the northwest , weakening slightly before striking Mozambique just south of Vilankulo on March 2 . Japhet slowly weakened while progressing inland , dissipating over Zambia on March 6 .

Along its path , Japhet dropped heavy rainfall that caused widespread river flooding . The rains occurred after an extended drought , although excessive precipitation caused heavy crop damage , notably around where the storm moved ashore . In two provinces in Mozambique , the cyclone damaged or destroyed 25 @, @ 000 houses , leaving at least 23 @, @ 000 people homeless . Flooding in Zambia caused rivers to rise in Mozambique several days after the storm 's passage . There were 17 deaths in Mozambique . Further inland , remnant rainfall destroyed a bridge and several houses in Zimbabwe , killing eight people .

= Meteorological history =

On February 23 , the Joint Typhoon Warning Center (JTWC) began monitoring an area of convection in the Mozambique Channel . On February 25 , Météo France (MF) initiated advisories on Tropical Disturbance 13 when the system was located along the southwest coast of Madagascar . Later that day , the JTWC issued a Tropical Cyclone Formation Alert , noting that environmental conditions favored development , including weak wind shear . The system developed organized convection in a circular pattern , and on February 26 , the MF and JTWC upgraded the system to Tropical Depression 13 and Tropical Cyclone 19S , respectively . With a mid @-@ level ridge to the south , the depression moved generally westward , and after intensifying further , it was upgraded to Tropical Storm Japhet by the Direction de la Météorologie et de l'Hydrologie of Madagascar late on February 26 .

After attaining tropical storm status , Japhet quickly intensified while it began moving to the southwest , due to a break in the ridge . At 0000 UTC on February 28 , the MF assessed that the storm strengthened into a tropical cyclone ? a storm with 10 minute sustained winds of 120 km / h (75 mph) . This was about 12 hours after the JTWC upgraded Japhet to the same intensity but with 1 minute sustained winds . About 18 hours after designating Japhet as a tropical cyclone , MF estimated the storm attained 10 minute sustained winds of 165 km / h (103 mph) and upgraded the storm to an intense tropical cyclone ; this made Japhet only the sixth such cyclone in the Mozambique Channel in 24 years . After further intensification , the cyclone peaked in intensity on March 1 . The JTWC estimated 1 minute sustained winds of 215 km / h (134 mph) with gusts to 260 km / h (160 mph) , while MF estimated 10 minute sustained winds of 175 km / h (109 mph) .

Cyclone Japhet maintained its peak winds for about 24 hours , during which it remained nearly stationary . Subsequently , the storm began a northwest track toward the Mozambique coast , gradually weakening due to decreased outflow and dry air . At about 1700 UTC on March 2 , Japhet made landfall just south of Vilankulo , Mozambique , with winds of 160 km / h (99 mph) as estimated by the JTWC . The cyclone gradually weakened over land , decreasing below tropical cyclone status by early on March 3 . Japhet crossed into southern Zimbabwe , and both JTWC and MF discontinued warnings before Japhet dissipated on March 5 .

= Impact and aftermath =

While Japhet was developing , the pressure gradient between it and a ridge produced winds of 93 km / h (58 mph) on Europa Island in the Mozambique Channel . Heavy rains affected southwestern Madagascar , but there was no major damage .

Before Japhet struck Mozambique , the local Red Cross office mobilized volunteers , including 100

people in Inhambane Province who assisted local officials in preparations . The cyclone affected the same region that Cyclone Delfina struck two months prior . Japhet produced high winds and heavy rainfall in southern and central Mozambique into southern Zimbabwe . The rains were beneficial in alleviating drought conditions , and dry grounds absorbed much of the excess rainfall . After entering Zimbabwe , Japhet 's rainfall caused the Save River to rise , causing flooding in southern Mozambique several days after the storm passed the area . The resulting floods affected 50 @, @ 000 people in several villages . The Limpopo River also rose to above @-@ normal level . High rains also caused some crop damage , destroying 237 @, @ 000 hectares (585 @, @ 600 acres) of crop fields . This included 12 @, @ 325 downed cashew trees , 6 @, @ 955 wrecked banana plants , and 2 @, @ 495 killed livestock , all in Vilankulo ; however , the rains allowed farming conditions to improve due to wetter conditions in drought areas .

Before Japhet moved ashore , Vilankulo reported sustained winds of 74 km / h (46 mph) , with gusts to 105 km / h (65 mph) . There , the winds destroyed the roofs or damaged the doors and windows of 95 % of brick houses . In Inhambane Province in southern Mozambique , the cyclone destroyed several boats , cut power lines , and disrupted roads with flooding or downed trees , which prevented communication with the province . The storm destroyed 500 classrooms , 35 government buildings , and 7 health facilities . The cyclone damaged or destroyed 25 @, @ 000 houses in Inhambane and Sofala provinces , leaving about 23 @, @ 000 people homeless in Inhambane alone , which was the worst @-@ affected province . Three people were injured in Morrumbene by a fallen tree . There were 17 deaths in the country , which was less than from previous cyclones due to advance warning and coordinated government action .

The Zambia Meteorological Department warned of the potential of intense precipitation before Japhet moved into the region . In neighboring Zimbabwe , ten hours of high rainfall nearly overtopped the Manyuchi Dam and destroyed a bridge . The storm also damaged crops and destroyed houses in the country , killing eight people .

After the storm struck Mozambique , the World Food Programme distributed more than 4 @, @ 300 tons of food to affected citizens . The agency had to transport goods via helicopter due to damaged or flooded roads . The country 's primary north @-@ south highway , which was damaged by the storm , had emergency repairs and was reopened within three days . Mozambique 's National Disaster Management Institute distributed 70 tonnes (69 long tons ; 77 short tons) of maize , 8 tonnes (7 @. @ 9 long tons ; 8 @. @ 8 short tons) of beans , and 80 tents to storm victims . Lingering floods in Zimbabwe contributed to an increase in malaria cases . The Delta Corporation donated \$ 6 million worth of blankets and food to residents in the country .