

= Cyclone Jokwe =

Cyclone Jokwe of March 2008 was the first tropical cyclone to make landfall in Mozambique since Cyclone Favio struck in the previous year . The tenth named storm of the 2007 ? 08 South @-@ West Indian Ocean cyclone season , Jokwe was first classified as a tropical depression on March 2 over the open Southwest Indian Ocean . It tracked west @-@ southwest , crossing northern Madagascar as a tropical storm on March 5 before intensifying into a tropical cyclone on March 6 . Jokwe rapidly intensified to reach peak winds of 195 km / h (120 mph) , before weakening slightly and striking Nampula Province in northeastern Mozambique . It quickly weakened while paralleling the coastline , though the storm restrengthened as it turned southward in the Mozambique Channel . Late in its duration , it remained nearly stationary for several days , and steadily weakened due to wind shear before dissipating on March 16 .

The storm caused minor damage in northern Madagascar . In Mozambique , the cyclone affected 200 @,@ 000 people , and left at least sixteen fatalities . Cyclone Jokwe destroyed over 9 @,@ 000 houses and damaged over 3 @,@ 000 more , with the heaviest damage in Angoche and the Island of Mozambique in Nampula Province . The storm also caused widespread power outages and crop damages . The name Jokwe was submitted to the World Meteorological Organization by Botswana .

= = Meteorological history = =

In the beginning of the month , an area of convection persisted in association with a broad low @-@ level circulation about 565 km (350 mi) west @-@ southwest of Diego Garcia . The disturbance tracked west @-@ southwestward , and on March 2 the Météo @-@ France (MFR) declared it as a weak depression . Initially in an area of moderate wind shear , the system at first failed to maintain deep convection . Early on March 4 , convection increased and organized around the center of circulation , and the MFR classified it as Tropical Depression Twelve , about 270 km (170 mi) southwest of the Agaléga Islands . Initially the MFR forecast that the depression would intensify further before striking Madagascar .

The cyclone tracked generally westward along the northern periphery of a ridge . The circulation became better defined , though convection was displaced to the west of the center due to persistent wind shear . Intensification was favored , though , due to warm water temperatures and good outflow . Early on March 5 , the Joint Typhoon Warning Center (JTWC) classified the system as Tropical Cyclone 22S . Shortly thereafter , the MFR upgraded the depression to Moderate Tropical Storm Jokwe about 675 km (420 mi) southwest of the Agalega Islands , or about 230 km (140 mi) northeast of the northern tip of Madagascar . At first , the storm was smaller than usual , with gale force winds extending 37 km (23 mi) from the center . Jokwe turned to the west @-@ southwest in response to the development of a trough of low pressure in the Mozambique Channel , and late on March 5 the storm crossed over northern Madagascar . The low @-@ level circulation became disorganized due to land interaction , though its mid and upper @-@ level circulation remained well @-@ organized . Subsequently , the storm encountered more favorable conditions , and an eye developed ; Jokwe underwent rapid deepening and intensified to tropical cyclone status , or the equivalence of a minimal hurricane , midday on March 6 off the northwest coast of Madagascar .

Shortly after attaining tropical cyclone status , Jokwe began weakening as its eye disappeared , and it weakened to tropical storm status . The weakening trend was short @-@ lived , and after turning westward the storm re @-@ developed a 13 km (8 mi) eye . Jokwe again underwent rapid intensification as it approached the coast of Mozambique , becoming an intense " midget cyclone " with winds of 175 km / h (110 mph) late on March 7 ; the MFR explained its rapid intensity changes due to its small size . Excellent upper @-@ level outflow and warm waters contributed to the intensification . At 0000 UTC on March 8 , Jokwe attained peak winds of 195 km / h (120 mph) about 75 km (45 mi) east of the Island of Mozambique in Nampula Province ; at the same time , its gusts reached about 275 km / h (170 mph) . It weakened slightly while paralleling the coastline just offshore , and at 1015 UTC Jokwe made landfall between the Island of Mozambique and Angoche .

Cyclone Jokwe remained over land for about 18 hours before emerging into the Mozambique Channel , weakening quickly to tropical storm status . Upon reaching open waters , convection increased over the center , and late on March 9 Jokwe re @-@ intensified to a tropical cyclone as an eye reappeared on satellite imagery . The cyclone turned to the south @-@ southeast , around the periphery of a ridge to its east . An upper @-@ level low to its south produced good outflow which , in combination with warm waters , allowed Jokwe to re @-@ intensify . Late on March 10 , the storm passed about 35 km (21 mi) east of Europa Island , and shortly thereafter the MFR upgraded Jokwe to intense tropical cyclone status with winds of 170 km / h (105 mph) . Subsequently , an increase in wind shear caused a steady weakening trend , and by March 12 Jokwe weakened to tropical storm status as its center became partially exposed from the deep convection ; at the same time , the storm turned to the southwest .

Later on March 12 , thunderstorms reformed over the center , as its movement became nearly stationary due to a ridge to its south and northwest . Early on March 13 , it began a steady movement to the northwest , and its organization increased with an eye re @-@ appearing ; after briefly re @-@ attaining tropical cyclone status , Jokwe again weakened to tropical storm status due to persistent wind shear . Convection continued to diminish , and on March 14 Jokwe weakened to tropical depression status as the center became almost fully exposed . Early on March 15 , the MFR issued its last advisory on the system . The remnants accelerated southeastward and dissipated on March 16 to the southwest of Madagascar .

= = Impact = =

Crossing northern Madagascar as a tropical storm , Jokwe damaged or destroyed 44 buildings in Nosy Be , leaving 400 homeless . Satellite @-@ based rainfall estimates reached over 200 mm (8 inches) in northwestern Madagascar .

On March 7 , the National Emergency Operational Centre of Mozambique warned for coastal residents in Nampula and Zambezia provinces to be on alert . A day later , the agency issued a Red Alert for northern Nampula Province , advising potentially affected residents to seek shelter . Subsequently , the alert was extended southwestward along the coastline . Strong winds and heavy rains from the storm left the island of Mozambique without power , as well as water . There winds knocked down several poorly constructed houses , and also destroyed the roofs of two schools . Satellite @-@ based rainfall estimates reached over 300 mm (12 inches) in northwestern Madagascar . Across Nampula Province , heavy agricultural damage was reported ; a total of 508 animals on farms were killed , and about 2 million cashew trees were destroyed . Widespread power outages were reported , with 75 % of power transmission lines damaged or destroyed . The cyclone destroyed at least 200 boats and the roofs of at least 80 schools . The storm destroyed a bridge across the Mogincual River , which left the town of Namige isolated . Across Nampula Province , Jokwe destroyed 9 @, @ 316 houses and damaged 3 @, @ 220 more , most of which in Angoche . In Pebane District in neighboring Zambezia Province , the cyclone destroyed nine houses . Rainfall was reported throughout the province , though damage was not as heavy due to lack of strong winds . Throughout Mozambique , the cyclone affected 200 @, @ 000 people , with a total of 55 @, @ 000 people left homeless . Ten people were killed in Nampula Province , and six more were killed in coastal districts of Zambezia Province .

On March 10 , a station on Europa Island in the Mozambique Channel reported a pressure of 985 @. @ 5 mbar .

= = Aftermath = =

Shortly after the cyclone moved ashore along Mozambique , officials distributed tents and food to the affected citizens . The government activated the National Civil Protection Unit to clear fallen trees from roadways , as well as assist in rebuilding damaged or destroyed homes . A few days after the storm , the Mozambique Red Cross began delivering mosquito nets , blankets , plastic buckets , and sleeping mats . The government of Nampula estimated it would require \$ 8 million (USD) to

repair storm damage in the province .

Two weeks after the storm , the World Food Programme announced it would provide food for 60 @, @ 000 people in the impacted areas of Mozambique . On March 27 , the government of Portugal donated \$ 700 @, @ 000 (USD) to the Mozambique National Disasters Management Institute ; over half of the total was aid for flood victims affected by Jokwe and flooding earlier in the year .