

= Cyclone Gamede =

Cyclone Gamede was among the wettest tropical cyclones on record , dropping more than 5 @.@ 5 m (18 ft) of rain in a nine @-@ day period on Réunion island in the southwest Indian Ocean . The seventh named storm of the 2006 ? 07 South @-@ West Indian Ocean cyclone season , Gamede formed on February 20 as a tropical depression to the south of Diego Garcia . It tracked generally westward and steadily intensified , passing northwest of Mauritius and Réunion as a broad but moderately intense tropical cyclone . For four days it remained within 400 km (250 mi) of Réunion before accelerating southward , and on March 3 Gamede transitioned into an extratropical cyclone to the south of Madagascar .

Gamede broke rainfall records set by Tropical Cyclone Hyacinthe 27 years earlier for the accumulated totals between three and nine days . The rainfall caused moderate damage in Réunion , and in the southern portion of the island a bridge collapsed due to the storm . Two people each were killed on Mauritius and Réunion . The name Gamede was submitted to the World Meteorological Organization by South Africa .

= = Meteorological history = =

On February 19 , an area of convection persisted over a weak , but well @-@ defined low @-@ level circulation about 1130 km (700 mi) southeast of Diego Garcia . It quickly developed banding features , and organized into a tropical disturbance . Located beneath an anticyclone , the system experienced weak vertical wind shear and favorable outflow . With a subtropical ridge to its south , the disturbance tracked quickly westward . Early on February 20 , Météo @-@ France (MFR) classified the system as Tropical Depression Ten , and later in the day the Joint Typhoon Warning Center (JTWC) issued a Tropical Cyclone Formation Alert as the convection improved significantly in organization . It strengthened further , attaining tropical storm status by 0000 UTC on February 21 , and six hours later the MFR named the system Gamede while it was about 785 km (490 mi) south @-@ southwest of Diego Garcia , or about 995 km (620 mi) northeast of Rodrigues .

After being named , Gamede quickly intensified , and the JTWC classified it with winds of 120 km / h (75 mph) early on February 22 . As it turned west @-@ southwestward , an eye feature became evident on satellite imagery , and the JTWC upgraded Gamede to tropical cyclone status , or the equivalence of a minimal hurricane . Subsequently , its intensification rate slowed somewhat , due to restricted outflow . At 0000 UTC on February 23 the MFR upgraded the storm to Tropical Cyclone Gamede , and shortly thereafter it passed over St. Brandon island . Subsequently , outflow became better established , and the JTWC unofficially estimated the cyclone attained winds of 185 km / h (115 mph) late on February 23 about 250 km (400 mi) north @-@ northeast of Mauritius island . Initially it was forecast to strengthen further , though slight weakening occurred when a nearby upper @-@ level trough restricted outflow .

Cyclone Gamede remained a broad system , and by February 24 it produced winds of near gale force up to 670 km (415 mi) southeast of its center ; later in the day , it passed about 300 km (190 mi) north of Réunion , its closest point of approach to the island . For over 90 hours , the cyclone remained within 400 km (250 mi) of the island , resulting in torrential rainfall in the island 's mountainous region . Radar imagery on the island indicated Gamede maintained an eye diameter of 60 ? 70 km (37 ? 43 mi) . After tracking generally southwestward for several days , a building ridge to its south changed the motion of the cyclone to the west before it became quasi @-@ stationary . Initially , it was predicted to continue westward and strike Madagascar near Toamasina . The cyclone re @-@ intensified while executing a small loop , and late on February 25 Gamede officially attained peak winds of 165 km / h (105 mph) about halfway between Réunion island and the coast of Madagascar ; at the time , wind gusts in association with the storm reached 230 km / h (135 mph) .

The cyclone weakened while remaining nearly stationary , losing most of its deep convection due to upwelling ; this is the process in which a stationary storm causes the water temperatures to decrease by bringing the cooler , deeper waters to the surface . It remained nearly stationary until

beginning a steady south @-@ southwestward motion late on February 26 , a change due to an approaching mid @-@ level trough to its south . On February 28 , convection increased around a rebuilding eyewall as it accelerated southward , though on March 1 the cyclone again weakened as wind shear increased and as water temperatures gradually decreased . Gamede weakened to tropical storm status as its center became exposed from the deep convection , and late on March 1 it transitioned into an extratropical cyclone . After completing the transition , the storm became nearly stationary for about two days , during which its winds decreased to below gale force . The remnants of Gamede turned westward and persisted until dissipating on March 6 .

= = Preparations = =

In Mauritius , a total of 200 people evacuated to storm shelters due to the cyclone . The island was under a Cyclone Warning Class III for 36 hours , and for a few more hours it was under a Cyclone Warning Class IV , the latter meaning wind gusts of 120 km / h (75 mph) were reported or expected . Prior to the storm affecting the area , officials in Réunion closed schools and also issued a temporary driving ban . Due to the threat of the storm , several flights in and out of Mauritius , Réunion , and Rodrigues were canceled . Fishermen were banned from sailing out to sea .

= = Impact and records = =

On midday February 23 , Cyclone Gamede moved over St. Brandon island , where a pressure of 960 mbar was recorded .

The cyclone affected the country of Mauritius on February 25 . Power was knocked out to 70 % of the island 's population , and some light infrastructure damage was also reported . Food crops were also affected . Despite warnings to remain inside , several people ventured outside during the storm . Gamede killed two on Mauritius , including one who drowned in high waves .

The large size of the cyclone resulted in several days of very heavy , continuous rainfall in the mountainous region on Réunion island . The island is the location for several tropical cyclone rainfall records ; due to the orography of the island , tropical moisture will travel upward to the volcanic peaks , where it cools and condenses into rainfall . The heaviest totals occurred from February 24 through February 28 . Commerson 's Crater , located at an elevation of 2 @.@ 3 km (1 @.@ 4 mi) , reported 2463 mm (97 in) in 48 hours , which is just short of the worldwide record set by an unnamed tropical cyclone in April 1958 . Gamede broke worldwide rainfall records between three and nine days , with its total precipitation amounting to 5512 mm (217 in) in Commerson 's Crater ; Tropical Cyclone Hyacinthe in 1980 remains the wettest tropical cyclone on record , having produced greater totals after ten days . Several locations on the island reported great totals . In a 24 ? hour period , Hell @-@ Bourg reported 1489 mm (58 @.@ 6 in) , and in a 72 ? hour period , Cilaos reported 2321 mm (91 @.@ 4 in) .

The passage of the cyclone left about 100 @, @ 000 homes without power or water on Réunion . The rainfall caused some flood damage , and the combination of precipitation and strong winds caused heavy crop damage , including to the sugar cane and banana crops . Several roads and bridges were damaged on the island . A 520 m (1700 ft) bridge over the Saint Etienne River collapsed near Saint @-@ Louis , with the cost estimated at ? 20 million (2007 EUR , \$ 26 million 2007 USD) . The bridge , which carried about 50 @, @ 000 vehicles per day , collapsed as river flow increased from the heavy rainfall ; two towns were left temporarily isolated due to the incident . Two people died on the island after attempting to cross rivers during the storm . Nine people were injured on the island , including two who were seriously injured . A peak wind gust of 205 km / h (127 mph) was reported on the island . On June 13 , 2007 , the government of France provided a relief fund to Réunion of ? 17 @.@ 6 million (2007 EUR) in aid , including ? 9 @.@ 6 million for farmers affected by the cyclone . The assistance provided ? 7 @.@ 7 million for repairing roads and infrastructure , including rebuilding the destroyed bridge over the Saint Etienne River . In the immediate aftermath of the storm , officials deployed army resources to establish a temporary aerial bridge while a new bridge was built .

Rough waves and strong winds affected a cruise ship to the east of Madagascar ; several windows were broken , though no serious injuries were reported . Along Madagascar 's east coast , Gamede produced squally rain and winds . Gamede had followed shortly after Tropical Cyclones Bondo , Clovis , and Favio , being the fourth tropical cyclone to impact Madagascar in two months .