= Cyclone Alessia =

Tropical Cyclone Alessia was the first tropical cyclone to affect the Northern Territory of Australia in November since Cyclone Joan in 1975 . The storm was first identified as a tropical low on 20 November 2013 well to the northwest of Australia . Tracking generally west to west @-@ southwest , the small system steadily organized into a tropical cyclone by 22 November . Maintaining a small central dense overcast , Alessia brushed the Kimberley region before making landfall in the Top End region with winds of 65 km / h (40 mph) on 23 and 24 November respectively . Some weakening took place as the system moved over land ; however , reorganization occurred as it neared the Gulf of Carpentaria . After moving over water on 26 November , it redeveloped gale @-@ force winds . Alessia reached its peak intensity on 27 November with winds of 85 km / h (50 mph) and a barometric pressure of 991 mbar (hPa ; 29 @.@ 26 inHg) and subsequently made its final landfall near Wollogorang . Weakening ensued once more as the storm traveled over land ; though , Alessia 's remnants looped eastward back over water before doubling back to the west . The system was last noted moving inland again over the Northern Territory on 1 December .

Throughout Alessia 's existence , it caused only minimal damage . Several areas experienced gale @-@ force winds , with gusts measured up to 109 km / h (68 mph) on Centre Island . Moderate to heavy rains accompanied the system as well , with a storm maxima of 290 @.@ 4 mm (11 @.@ 43 in) also occurring on Centre Island .

= = Meteorological history = =

On 20 November 2013 , an area of low pressure , accompanied by persistent deep convection , developed over the southern Indian Ocean , roughly 1 @,@ 465 km (910 mi) north of RAAF Learmonth in Western Australia . At the mid @-@ levels , the circulation appeared more broad in nature , with notable rainbands wrapping into the low . Environmental conditions favored tropical cyclogenesis , with moderate wind shear , high sea surface temperatures , and prominent outflow that extended into the mid @-@ latitude westerlies . By this time , the Bureau of Meteorology (BOM) noted this system as a tropical low just outside their area of responsibility . Owing to increasing organization over the following day , the Joint Typhoon Warning Center (JTWC) issued a Tropical Cyclone Formation Alert for the system late on 21 November . Subsequently , the JTWC began issuing advisories on the system under the identifier Tropical Cyclone 02S on 22 November , estimating it to have attained gale @-@ force winds . Situated along the edge of a near @-@ equatorial ridge , the storm tracked generally east and was forecast to maintain this movement for much of its existence . Later on 21 November , the BOM classified the system as a Category 1 tropical cyclone on the Australian cyclone intensity scale and assigned it the name Alessia , at which time it was located 390 km (240 mi) north of Broome . A smaller @-@ than @-@ average cyclone , Alessia featured a core of deep convection but no notable banding features , making Dvorak satellite intensity estimates difficult .

The storm , having a maximum diameter of no more than 335 km (210 mi) with gale @-@ force winds covering less than half that distance , maintained a very small central dense overcast as it approached the Kimberley region . Around 0600 UTC on 23 November , the JTWC estimated Alessia to have attained one @-@ minute sustained winds of 85 km / h (50 mph) . Throughout 23 November , a slight northerly component took place in the track , with Alessia remaining offshore as it brushed the Kimberley region . However , dry air from over Australia was drawn into the system , causing a dramatic decrease in convection . At this time , Alessia became the first storm since Tropical Cyclone Anika in 2008 to affect Western Australia during November . Later that day , the storm passed over Troughton Island where gale @-@ force winds were measured . Moving over the Joseph Bonaparte Gulf at the southern end of the Timor Sea early on 24 November , a burst in convection over Alessia 's center indicated it was maintaining its intensity as a minimal tropical cyclone . Continued reorganization of the cyclone 's structure took place as it accelerated east toward the Top End region , with defined banding apparent on satellite imagary and a tight circulation center seen on local radar . Alessia made landfall at 0930 UTC on 24 November near the

Daly River Mouth , south of Darwin , Northern Territory , before rapidly weakening to a tropical low . Alessia 's movement onshore marked the first time since Cyclone Joan in 1975 that a tropical cyclone affected the Northern Territory during November . In light of the system moving overland , the JTWC issues their final advisory on the cyclone . Moving steadily eastward across Top End , Alessia remained weak but its proximity to water allowed significant bursts of convection to develop during this time .

Early on 26 November , the former cyclone emerged over the Gulf of Carpentaria near Blue Mud Bay . Once offshore , a break in the upper @-@ level ridge previously steering the storm eastward caused a southward shift in the track , bringing it directly over Groote Eylandt for several hours . Gale @-@ force winds soon redeveloped over the southeastern quadrant of Alessia ; however , it was not re @-@ designated as a tropical cyclone until 27 November when the winds extended halfway around the circulation . As Alessia re @-@ intensified over the southwestern Gulf , its movement became more southeasterly , taking the circulation parallel to the coast . With an anticyclone over the Northern Territory providing modest outflow for the cyclone , it continued to intensify ; the JTWC also re @-@ initiated advisories on the storm by 0600 UTC on 27 November . Hours later , Alessia reached its peak strength with winds of 85 km / h (50 mph) and a barometric pressure estimated at 991 mbar (hPa ; 29 @.@ 27 inHg) . Simultaneously , it moved ashore near Wollogorang , roughly 130 km (80 mi) east of Borroloola . Increasing shear and land interaction caused the low- and mid @-@ level circulations to separate , with the later continuing eastward over water . The storm soon weakened to a tropical low and its movement became erratic . Its remnants persisted for several days in the same general region , executing a clockwise loop before moving back over the Gulf of Carpentaria on 28 November . While environmental conditions favored redevelopment once again and deep convection had formed over the system , its low @-@ level circulation remained poorly organized . Failing to regenerate , Alessia moved eastward before doubling back to the west , passing near the Sir Edward Pellew Group of Islands on 30 November . It was last noted on 1 December over the Top End region .

= = Preparations and impact = =

= = = Kimberley and Top End = = =

On 21 November , a cyclone watch was raised for coastal and nearby inland areas of Western Australia between Wyndham and Beagle Bay . This watch was soon expanded to encompass areas east to the Western Australia ? Northern Territory border and west to the Mitchell Plateau . Additionally , areas from Mitchell Plateau to Cockatoo Island were placed under a cyclone warning . The following day , watches extended to Cape Hotham Light in the Northern Territory , including the city of Darwin and the Tiwi Islands . As the cyclone intensified , warnings gradually spread eastward . Warnings reached as far east as Point Stuart prior to Alessia 's landfall . All watches and warnings were dropped on 24 November as Alessia moved inland and degraded to a tropical low .

Though impact from the storm was expected to be fairly minimal , residents were still advised to stock up on emergency supplies and be prepared . Northern Territory Police Commissioner , John McRoberts , urged residents to heed warnings despite the generally non @-@ threatening nature of the storm , " complacency can often be your worst enemy in these types of events . " Many stores across Darwin reported a sharp increase in the sales of bottled water due to the storm . Despite the approaching storm , regional airports , schools , and businesses remained open . Ferry service to the Tiwi Islands , however , was suspended for 24 November .

On 23 November , Cyclone Alessia brushed the Kimberley coastline of Western Australia as a low @-@ end Category 1 . The strongest winds were measured on Troughton Island at 69 km / h (43 mph) with gusts to 94 km / h (58 mph) . The storm 's brisk forward motion limited rainfall , however , with only 24 @.@ 8 mm (0 @.@ 98 in) falling on the island . Farther west , Kalumburu received 37 @.@ 8 mm (1 @.@ 49 in) of rain . Effects across the Top End region were similar to Kimberly , some reports of gale @-@ force winds with generally light to moderate rain , peaking at 126 mm (5

@.@ 0 in) along the Upper Wickham River . Owing to previously dry conditions , the rains proved mostly beneficial to the region . Flash flooding along the Goomadeer River in Arnhem Land caught at least seven people off @-@ guard , including one infant , as their two vehicles were overcome with water . Six people safely made it out while another was swept downstream . He was rescued two days later by local police . In Darwin , strong winds downed a few trees in the Northern Suburbs and Howard Springs while localised flooding occurred in Palmerston . Additionally , one power line was downed in the city . Local authorities reported no serious traffic accidents in relation to the storm nor injuries . In Milne , a few residents seeking shelter at a local fire station found themselves locked out despite officials advising people to seek shelter if necessary .

= = = Gulf of Carpentaria = = =

Following Alessia 's reorganization over the Gulf of Carpentaria early on 27 November , a cyclone warning was raised for areas between Port Roper , Northern Territory to Karumba , Queensland , including Mornington Island . Once the storm moved onshore in the Northern Territory , all watches and warnings were dropped later that same day . On Centre Island , daily rainfall peaked at 162 @.@ 8 mm (6 @.@ 41 in) on 27 November , with an additional 127 @.@ 6 mm (5 @.@ 02 in) falling over the subsequent three days as Alessia moved erratically in the southwestern Gulf of Carpentaria . Sustained winds of 87 km / h (54 mph) and gusts to 109 km / h (68 mph) affected the island during the storm 's passage . The McArthur River zinc mine received 200 mm (7 @.@ 9 in) of rain on 27 November . Heavy rains extended eastward into Queensland with 164 @.@ 4 mm (6 @.@ 47 in) falling on Mornington Island over a five @-@ day period .