= Cyclone Arthur (2007) =

Cyclone Arthur (RSMC Nadi designation : 08F , JTWC designation : 09P) was the eighth tropical depression and fourth tropical cyclone of the 2006 ? 07 South Pacific cyclone season . Forming as tropical depression on January 25 , Arthur rapidly intensified into a strong Category 2 cyclone on the Australian intensity scale according to the Regional Specialized Meteorological Centre in Nadi , Fiji . The Joint Typhoon Warning Center assessed the storm to have peaked as a minimal Category 1 cyclone . Shortly after peaking in intensity , the cyclone began to deteriorate due to unfavorable conditions . Quickly moving towards the east @-@ southeast , the Arthur began to undergo an extratropical transition . After turning towards the southeast , the center of circulation was almost fully exposed due to strong wind shear . However , Arthur briefly re @-@ strengthened late on January 26 before becoming extratropical the next day . Tropical Cyclone Arthur affected several small islands during its existence . French Polynesia observed the most noteworthy effects from the storm , where several landslides damaged a few homes .

= = Meteorological history = =

On January 21 , 2007 , the Regional Specialized Meteorological Centre in Nadi , Fiji identified a tropical depression , which was given the number 08F , about 435 km (270 mi) west @-@ northwest of Savai 'i island in Samoa . The depression slowly traveled towards the east @-@ southeast for several days as the overall structure of the storm fluctuated due to diurnal variations and strong wind shear . Around 1700 UTC on January 22 , the Joint Typhoon Warning Center (JTWC) issued a Tropical Cyclone Formation Alert for the depression . The system developed a large banding feature in the northern portion of the circulation and deep convection formed around the center of circulation . The depression had moved into an area of weak to moderate wind shear with favorable diffulence aloft . Later that day , gale warnings were issued for the northeastern quadrant of the system . Tropical Depression 08F continued to develop as an anticyclone developed above the system , enhancing the environment around it . A mid @-@ latitude trough located north of the depression was steering it towards the east .

Early on January 24 , the system became better organized and strengthened into a cyclone at 0600 UTC . The storm , which was named Arthur by the RSMC Nadi , began to undergo rapid intensification as the structure improved significantly . Deep convection developed around the center with strong outflow towards the north . Several hours after becoming a cyclone , the JTWC issued their first advisory on Tropical Cyclone 09P as it traveled quickly towards the east @-@ southeast . The quick movement was due to the influences of subtropical ridge to the north and a trough to the south . Later that day , a banding eye feature began to develop as the storm intensified into a Category 2 cyclone on the Australian intensity scale . At 1800 UTC , the JTWC assessed Arthur to have reached its peak intensity with winds of 120 km / h (75 mph 1 @-@ minute winds) , the equivalent of a minimal Category 1 hurricane on the Saffir @-@ Simpson Hurricane Scale . Early on January 25 , Arthur reached its peak intensity with winds of 110 km / h (70 mph 10 @-@ minute winds) with a minimum pressure of 975 hPa (mbar) while located about 635 km (350 mi) north @-@ northwest of Rarotonga . Shortly after peaking in intensity , Arthur began to undergo an extratropical transition and rapidly deteriorated due to strong wind shear .

The storm also began to merge with a low @-@ level frontal boundary associated with the remnants of Tropical Cyclone Zita . The strong shear left the center of circulation partially exposed , with deep convection persisting in only the southeastern quadrant . In addition to the shear , dry air began to enter the system , causing it to weaken further . While continuing to move at a quick pace , the storm began to turn towards the southeast along a baroclinic zone . Early on January 26 , the JTWC issued their final advisory on the cyclone as it lost most of its tropical characteristics . Arthur re @-@ intensified shortly after and the JTWC reissued advisories on the storm around 2100 UTC . The brief re @-@ strengthening was the result of a breakdown in the baroclinic zone which allowed convection to redevelop around the center . Around the same time , Arthur left RSMC Nadi 's area of responsibility (AoR) and entered the Tropical Cyclone Warning Centre Wellington 's AoR . The

storm completed its extratropical transition around 1200 UTC on January 27 , leading to the final advisory being issued on the storm .

= = Preparations and impact = =

On January 21 , a gale watch was issued for Tutuila , American Samoa , Manu 'a , and Swains Island as Tropical Depression 08F approached the islands . Winds of up to 55 km / h (35 mph) , with gusts up to 75 km / h (45 mph) , were expected . Small craft advisories were issued for the Cook Islands due to large swells produced by the storm . All of the watches were cancelled late on January 23 as the depression was no longer forecast to impact the islands . On January 24 , an Orange Alert was issued for the Austral Islands . As the storm neared the region , the alert was upgraded to a Red Alert for Rurutu and Tubuai . Arthur produced minor damages in the Cook Islands ? primarily consisting of beach erosion ? on January 24 . Heavy rains throughout French Polynesia resulted in several landslides which damaged several homes on Tahiti and Moorea . Waves near the islands ranged from 1 @.@ 5 to 2 m (4 @.@ 9 to 6 @.@ 5 ft) . Winds in Tubuai reached 85 km / h (50 mph 10 @-@ minute winds) with gusts up to 115 km / h (71 mph) . Several homes were damaged and roads were blocked by fallen trees throughout the island . Minor coastal flooding also occurred due to the large swells .