

= Cyclone Keli =

Severe Tropical Cyclone Keli (NPMOC / JTWC Designation : 38P) was the first recorded post @-@ season tropical cyclone to form in June within the South Pacific Ocean . The system formed on June 7 , 1997 , about 460 kilometers (285 mi) to the north of Tokelau . The depression gradually developed over the next few days while moving southwestward . It was designated as Tropical Cyclone Keli early the next day . Cyclone Keli intensified , slowly reaching its 10 @-@ minute peak wind speeds of 150 km / h , (90 mph) , which made it a Category 3 severe tropical cyclone on the Australian Tropical Cyclone Intensity Scale . As it came under the influence of strong mid latitude westerlies and moved into an area of strong vertical wind shear , the cyclone started to weaken and was declared as extratropical on June 15 .

Cyclone Keli struck the islands of Tuvalu on June 12 and 13 , with extensive damage reported throughout the Islands with trees uprooted by wind and waves . On Nivalakita all buildings except for the church were flattened ; an estimated cost to rebuild all of the houses as they were before the cyclone hit was estimated at A \$ 12 thousand (US \$ 10 thousand) , while it was estimated that the cost of rebuilding the houses with an improved , cyclone @-@ resistant design would be about A \$ 84 thousand (US \$ 63 thousand) . The whole of Tepuka Savilivili was left uninhabitable , as coconut trees and other vegetation were swept away with no more than an area of jagged coral left behind . In Fiji , strong winds and rough seas were reported from the cyclone as it was moving to the north of Fiji , and while the cyclone was weakening it dropped 3 @.@ 76 inches (95.5mm) of rain on American Samoa .

= = Meteorological history = =

Severe Tropical Cyclone Keli was first noted as a depression , to the northeast of the New Zealand territory of Tokelau during June 7 , 1997 . Over the next couple of days the system moved towards the south @-@ west and gradually developed further , with the United States Naval Pacific Meteorology and Oceanography Center (NPMOC) issuing a tropical cyclone formation alert for the system during June 9 .

The NPMOC subsequently designated the system as Tropical Cyclone 38P and initiated advisories on the system early on June 10 , while the system was located about 475 km (295 mi) to the east of Funafuti , Tuvalu . The system was subsequently named Keli by the Fiji Meteorological Service , after it had developed into a Category 1 tropical cyclone on the Australian tropical cyclone intensity scale . During that day the system continued to move south @-@ westwards , towards the island nation of Tuvalu and passed near or over the island of Niulakita during June 11 . After it the system had passed over Niulakita , Keli rapidly intensified in an area of light vertical wind shear , as it moved slowly and performed a small cyclonic loop .

Early on June 12 , the FMS reported that Keli had peaked as a Category 3 severe tropical cyclone , with 10 @-@ minute sustained windspeeds of 150 km / h (90 mph) . During that day the system started to weaken and came to within 65 km (40 mi) of making a second landfall on Niulakita , before it accelerated south @-@ eastwards as it interacted with the Westerlies . The NPMOC also reported during that day that Keli had peaked with 1 @-@ minute sustained wind speeds of 215 km / h (130 mph) , which made it equivalent to a Category 4 hurricane on the Saffir @-@ Simpson hurricane wind scale . During June 13 , the system continued to move south @-@ eastwards and passed about 50 km (30 mi) to the southeast of Mata @-@ Utu in the island nation of Wallis and Futuna . Later that day Keli started to transition into an extratropical cyclone , during the following day the system passed within 200 km (125 mi) of Apia , Samoa . During June 15 , the FMS reported that Keli had weakened into a tropical depression , while the NPMOC reported that it had degenerated into an extratropical cyclone . The system was subsequently last noted during June 17 , while it was located about 2 @,@ 140 km (1 @,@ 330 mi) to the southeast of Adamstown in the Pitcairn Islands .

= = Impact and aftermath = =

Heavy rain was reported in American Samoa with a rainfall total , of 160 mm (6 @. @ 3 in) reported at Afono in American Samoa . The name Keli was retired after this usage of the name and was replaced with the name Kofi .

= = = Tuvalu = = =

Keli was the third and final tropical cyclone to impact Tuvalu during the 1996 @-@ 97 season , after Severe Tropical Cyclone 's Gavin and Hina affected the island nation during March 1997 . Ahead of the system impacting Tuvalu , storm and gale force wind warnings were issued for the islands of Niulakita and Nukulaelae , while a strong wind warning was issued for the rest of the group during June 10 . During that day the system moved south @-@ westwards and passed near or over Niulakita later that day , before it performed a cyclonic loop and passed within 65 km (40 mi) of Niulakita during June 12 .

As Cyclone Keli struck the islands of Tuvalu on June 12 and 13 , peak wind gusts of 165 km / h , (105 mph) were reported , with extensive damage also reported throughout the Islands with trees uprooted by wind and waves . On Nivalakita all buildings except for the church were flattened with an estimated cost to rebuild the houses exactly as they were was estimated at A \$ 12 @, @ 000 (US \$ 10 @, @ 000 1997) , while it was estimated that the cost of rebuilding the houses with an improved , cyclone @-@ resistant design would be about A \$ 84 @, @ 000 (63 @, @ 000 USD 1997) . Also on Nivalakita communications were cut with the telephone operator having to resort to sending a Morse code message , however as the storm re @-@ curved and re @-@ hit Tuvalu on June 14 , it silenced the weak radio telegraph system . In Tepuka Savilivili the whole island was left uninhabitable as coconut trees and other vegetation were swept away with no more than an area of jagged coral left behind .

With effect from June 12 , a state of public emergency was declared for the whole of Tuvalu , by the then Governor @-@ General of Tuvalu , Sir Tulaga Manuella . This was because there was only a limited amount of food available on Funafuti to cater for the whole of the island nation , while providing Niulakita with immediate relief supplies . This enabled the Tuvaluan embassy in Suva , Fiji to appeal to various overseas countries and organisations including Australia , New Zealand , the United Kingdom and the United Nations Development Programme to provide aid and assistance to the island nation . During June 14 , the Royal New Zealand Air Force deployed a transport plane carrying some relief materials including tarpaulins and water from New Zealand . The plane subsequently stopped in Noumea , New Caledonia and Nadi , Fiji to pick up further relief supplies that had been donated by Australia , Fiji and France . The crew of the plane subsequently conducted an aerial assessment of the damage on Niulakita , and reported seeing widespread damage , before they arrived at Funafuti Airport during June 15 .

= = = Wallis and Futuna = = =

Cyclone Keli was the third out of four tropical cyclones to impact the French Territory of Wallis and Futuna during a ten @-@ month period , after Cyclones Gavin and Hina had affected the island during March 1997 . There was almost no damage recorded in the archipeligo from Keli , while rainfall totals of 171 @. @ 6 mm (6 @. @ 76 in) and 160 mm (6 @. @ 3 in) were recorded at Hihifo and Aka 'aka on Wallis during June 11 . Wind gusts of up to 70 km / h (45 mph) were recorded at Maopopo on Futuna island during July 13 .

= = = Tonga = = =

Keli was the second of three tropical cyclones to affect Tonga during a ten @-@ month period , with Cyclones Hina and Ron affecting the island nation during March 1997 and January 1998 . Ahead of the system impacting Tonga , the FMS issued cyclone warnings for the Niuas and strong wind warnings for the rest of Tonga . As a result of the warnings a vessel that was heading to the island

group had to be recalled , which was predicted to affect supplies on the islands when it was likely to be most needed . During June 13 , Keli caused some damage to the islands with plantations , breadfruit trees and other large trees devastated . The strong winds also destroyed several residences while causing damage to public buildings .