

WTIO30 FMEE 161929

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 40/5/20242025

1.A TROPICAL CYCLONE 5 (DIKELEDI)

2.A POSITION 2025/01/16 AT 1800 UTC:

WITHIN 20 NM RADIUS OF POINT 31.9 S / 48.8 E

(THIRTY ONE DECIMAL NINE DEGREES SOUTH AND  
FORTY EIGHT DECIMAL EIGHT DEGREES EAST)

MOVEMENT: SOUTH-EAST 22 KT

3.A DVORAK ANALYSIS: 4.0/5.0/W 1.5/12 H

4.A CENTRAL PRESSURE: 968 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 75 KT

RADIUS OF MAXIMUM WINDS (RMW): 41 KM

6.A EXTENSION OF WIND BY QUADRANTS (KM):

28 KT NE: 315 SE: 205 SW: 130 NW: 185

34 KT NE: 185 SE: 130 SW: 75 NW: 130

48 KT NE: 110 SE: 75 SW: 60 NW: 85

64 KT NE: 75 SE: 55 SW: 0 NW: 65

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1005 HPA / 500 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2025/01/17 06 UTC: 34.1 S / 54.9 E, VENT MAX= 060 KT, POST-TROPICAL  
DEPRESSION

28 KT NE: 335 SE: 165 SW: 260 NW: 260

34 KT NE: 205 SE: 95 SW: 130 NW: 150

48 KT NE: 110 SE: 55 SW: 75 NW: 75

24H: 2025/01/17 18 UTC: 35.0 S / 61.9 E, VENT MAX= 045 KT, POST-TROPICAL  
DEPRESSION

28 KT NE: 335 SE: 155 SW: 250 NW: 270

34 KT NE: 175 SE: 0 SW: 130 NW: 155

36H: 2025/01/18 06 UTC: 35.1 S / 68.5 E, VENT MAX= 035 KT, EXTRATROPICAL  
DEPRESSION

28 KT NE: 315 SE: 0 SW: 270 NW: 280

34 KT NE: 165 SE: 0 SW: 0 NW: 150

48H: 2025/01/18 18 UTC: 35.3 S / 75.3 E, VENT MAX= 030 KT, EXTRATROPICAL  
DEPRESSION

28 KT NE: 240 SE: 0 SW: 205 NW: 260

60H: 2025/01/19 06 UTC: 35.1 S / 80.9 E, VENT MAX= 025 KT, EXTRATROPICAL DEPRESSION

2.B LONGER-RANGE OUTLOOK:  
NIL

2.C ADDITIONAL INFORMATION:  
T=4.0 CI=5.0

OVER THE PAST 6 HOURS, DIKELEDI HAS ENTERED A PHASE OF RAPID WEAKENING. THE SYSTEM HAS GRADUALLY LOST ITS EYE PATTERN AND CONVECTION HAS SHIFTED TO THE EAST-SOUTHEAST OF THE CENTER, DUE TO INCREASING WEST-NORTHWEST WIND SHEAR. MICROWAVE IMAGES SSMIS F17 AND F16 AT 1533Z AND 1554Z, FOLLOWED BY GPM-GMI AT 1804Z, REVEAL A CDO DISPLACED ABOUT 30-40 NM AWAY FROM THE SURFACE CENTER, WHICH IS PARTIALLY EXPOSED. THE LOW-LEVEL VORTEX IS STILL FAIRLY WELL CONSOLIDATED, BUT HAS WIDENED COMPARED WITH THURSDAY MORNING. SUBJECTIVE DVORAK ANALYSIS IS BASED ON THE MET, RAPIDLY DECREASING FROM THE SYSTEM'S PEAK INTENSITY ON THURSDAY MORNING 03-06UTC. A SMOS PASS AT 1415Z MEASURED WINDS OF 65 KT, INDICATING CLEAR WEAKENING OF THE SYSTEM, BUT THE RELIABILITY OF THIS MEASUREMENT IS UNCERTAIN. OBJECTIVE CIMSS ESTIMATES VARY BETWEEN 70 AND 85 KT (10MIN WINDS). THE FINAL INTENSITY OF THE SYSTEM IS THEREFORE ESTIMATED AT 75 KT AT 18UTC, MAKING A COMPROMISE BETWEEN THESE VARIOUS DATA. IN ADDITION, THE 12UTC INTENSITY WAS RE-EVALUATED AT 90 KT AFTERHAND.

THE SYSTEM'S MOVEMENT IS DRIVEN BY A NORTH-WESTERLY THEN WESTERLY FLOW, ALONGSIDE A MID-LATITUDE TROUGH TO THE SOUTH AND A SUBTROPICAL RIDGE TO THE NORTHEAST THEN NORTH. THERE IS STILL SOME DISPERSION BETWEEN THE DIFFERENT MODELS IN TERMS OF FORWARD SPEED. THE RSMC FORECAST IS A COMPROMISE BETWEEN THE LATEST IFS AND GFS RUNS.

WEAKENING OF THE SYSTEM IS UNAVOIDABLE OVER THE NEXT FEW DAYS, DUE TO THE EFFECTS OF WIND SHEAR AND DECREASING OCEAN HEAT CONTENT. THE INCREASING WESTERLY SHEAR WILL ENHANCE INTRUSIONS OF DRY MID-TROPOSPHERE AIR OVER THE SYSTEM'S CORE ON FRIDAY. AT THE SAME TIME, OCEAN HEAT POTENTIAL WILL CONTINUE TO DROP : CURRENTLY OVER SST NEAR 25C, THE SYSTEM WILL MOVE OVER OCEAN SURFACE TEMPERATURES DROPPING TO AROUND 21-23C ON FRIDAY, THEN 20-21C THIS WEEKEND, WHICH WILL GREATLY WEAKEN ITS CONVECTION. DIKELEDI SHOULD THEREFORE BECOME POST-TROPICAL FROM FRIDAY ONWARDS, WHILE CONTINUING TO WEAKEN THEREAFTER. THE SYSTEM'S REMNANT LOW SHOULD GRADUALLY FILL IN AROUND SUNDAY AT A LATITUDE CLOSE TO 35S.

THE SYSTEM NO LONGER POSES ANY THREAT TO INHABITED LANDS.