

WTIO30 FMEE 111830

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 20/5/20242025

1.A SEVERE TROPICAL STORM 5 (DIKELEDI)

2.A POSITION 2025/01/11 AT 1800 UTC:

WITHIN 40 NM RADIUS OF POINT 13.0 S / 49.4 E

(THIRTEEN DECIMAL ZERO DEGREES SOUTH AND
FORTY NINE DECIMAL FOUR DEGREES EAST)

MOVEMENT: WEST-SOUTH-WEST 9 KT

3.A DVORAK ANALYSIS: 5.0/5.0/S 0.0/6 H

4.A CENTRAL PRESSURE: 990 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 60 KT

RADIUS OF MAXIMUM WINDS (RMW): 22 KM

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

28 KT NE: 215 SE: 240 SW: 240 NW: 205

34 KT NE: 155 SE: 150 SW: 140 NW: 175

48 KT NE: 65 SE: 85 SW: 100 NW: 65

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1010 HPA / 700 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2025/01/12 06 UTC: 13.6 S / 46.8 E, VENT MAX= 045 KT, MODERATE TROPICAL
STORM

28 KT NE: 140 SE: 155 SW: 155 NW: 120

34 KT NE: 95 SE: 95 SW: 110 NW: 85

24H: 2025/01/12 18 UTC: 14.4 S / 44.0 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 155 SE: 185 SW: 165 NW: 130

34 KT NE: 110 SE: 100 SW: 120 NW: 85

48 KT NE: 55 SE: 75 SW: 65 NW: 35

36H: 2025/01/13 06 UTC: 15.5 S / 41.9 E, VENT MAX= 065 KT, TROPICAL CYCLONE

28 KT NE: 215 SE: 205 SW: 155 NW: 150

34 KT NE: 140 SE: 110 SW: 130 NW: 95

48 KT NE: 75 SE: 75 SW: 75 NW: 45

64 KT NE: 55 SE: 45 SW: 45 NW: 35

48H: 2025/01/13 18 UTC: 16.5 S / 40.9 E, VENT MAX= 085 KT, TROPICAL CYCLONE

28 KT NE: 175 SE: 195 SW: 150 NW: 110

34 KT NE: 110 SE: 100 SW: 120 NW: 75

48 KT NE: 65 SE: 65 SW: 65 NW: 55
64 KT NE: 45 SE: 45 SW: 55 NW: 45

60H: 2025/01/14 06 UTC: 17.9 S / 40.1 E, VENT MAX= 095 KT, INTENSE TROPICAL CYCLONE

28 KT NE: 175 SE: 240 SW: 185 NW: 130
34 KT NE: 110 SE: 140 SW: 100 NW: 75
48 KT NE: 75 SE: 75 SW: 65 NW: 55
64 KT NE: 45 SE: 55 SW: 45 NW: 45

72H: 2025/01/14 18 UTC: 19.8 S / 39.9 E, VENT MAX= 100 KT, INTENSE TROPICAL CYCLONE

28 KT NE: 220 SE: 240 SW: 140 NW: 140
34 KT NE: 130 SE: 140 SW: 110 NW: 85
48 KT NE: 75 SE: 75 SW: 75 NW: 65
64 KT NE: 45 SE: 55 SW: 65 NW: 55

2.B LONGER-RANGE OUTLOOK:

96H: 2025/01/15 18 UTC: 23.9 S / 41.2 E, VENT MAX= 100 KT, INTENSE TROPICAL CYCLONE

28 KT NE: 360 SE: 260 SW: 185 NW: 150
34 KT NE: 215 SE: 155 SW: 155 NW: 95
48 KT NE: 85 SE: 75 SW: 85 NW: 75
64 KT NE: 45 SE: 55 SW: 75 NW: 65

120H: 2025/01/16 18 UTC: 28.7 S / 44.9 E, VENT MAX= 095 KT, INTENSE TROPICAL CYCLONE

28 KT NE: 270 SE: 215 SW: 335 NW: 215
34 KT NE: 140 SE: 120 SW: 155 NW: 110
48 KT NE: 80 SE: 60 SW: 70 NW: 60
64 KT NE: 60 SE: 60 SW: 60 NW: 60

2.C ADDITIONAL INFORMATION:

T=4.5 CI=5.0

OVER THE PAST 6 HOURS, DIKELEDI HAS CONTINUED ITS WESTWARD TRACK, MAKING LANDFALL ON THE NORTHERN TIP OF MADAGASCAR AT AROUND 1630 UTC BETWEEN THE TOWNS OF ANTSIRANANA AND VOHEMAR. IT WAS THEN AT THE TROPICAL CYCLONE STAGE, WITH WINDS OF 70KT. ON LANDING, DIKELEDI LOST INTENSITY AND WAS DOWNGRADED TO A SEVERE TROPICAL STORM WITH WINDS OF 60KT.

IN TERMS OF TRACK, FEW CHANGES. DRIVEN BY A POWERFUL SUBTROPICAL RIDGE, DIKELEDI CONTINUED ITS GENERAL WESTWARD MOVEMENT UNTIL IT TOUCHED THE NORTHERN TIP OF MADAGASCAR THIS EVENING. THEN, WITH A WEAKENING RIDGE OVER THE MOZAMBIQUE CHANNEL, THE SYSTEM SHOULD GRADUALLY TILT ITS TRACK TO THE WEST-SOUTH-WEST AND THEN SOUTH-WEST OVER THE NEXT 48 HOURS. IT WILL THEN TURN SOUTH THEN SOUTHEAST ON TUESDAY. THERE IS A SMALL DISPERSION BETWEEN MODELS AS IT EXITS THE SEA FROM DIKELEDI, THEN IT INCREASES SHARPLY FROM MONDAY WITH A MORE OR LESS RAPID TURN AND MORE OR LESS CLOSE TO THE COASTS OF MOZAMBIQUE (NAMPULA PROVINCE), DEPENDING ON THE GREATER OR LESSER EFFECT OF A

TROUGH OVER SOUTHERN AFRICA. THE RSMC FORECAST IS A COMPROMISE BETWEEN THE DIFFERENT GUIDANCE AVAILABLE, AND IS CLOSER TO THE AROME SCENARIO, WITH A TURN MORE TOWARDS THE CENTER OF THE CHANNEL (NOTE THAT THE 06Z GFS RUN NOW ALSO TAKES THE SYSTEM TOWARDS THE CENTER OF THE CHANNEL AND NO LONGER TOWARDS THE COAST OF MOZAMBIQUE, WHICH REINFORCES OUR FORECAST).

IN TERMS OF INTENSITY, CURRENTLY OVER THE NORTHERN TIP OF MADAGASCAR, DIKELEDI WILL WEAKEN CONSIDERABLY OVER THE NEXT FEW HOURS AND BE TEMPORARILY DOWNGRADED TO A MODERATE TROPICAL STORM. ON REACHING THE MOZAMBIQUE CHANNEL, THE SYSTEM WILL MOVE THROUGH VERY WARM WATERS AND A HUMID ENVIRONMENT, ENABLING IT TO RESTRUCTURE RAPIDLY. HOWEVER, WIND SHEAR WILL INITIALLY LIMIT ITS INTENSIFICATION A LITTLE TOMORROW, BEFORE DIKELEDI RAPIDLY INTENSIFIES AS IT EASES OVERNIGHT. THERE IS STILL CONSIDERABLE UNCERTAINTY ABOUT THE INTENSITY OF THE SYSTEM, AS THIS WILL DEPEND ON ITS FINAL TRACK. INDEED, WITH A CENTRAL TRACK LIKE THE ONE PROPOSED BY THE RSMC, THERE ARE FEW BRAKES ON DIKELEDI'S INTENSIFICATION UP TO THE STAGE OF AN INTENSE TROPICAL CYCLONE (LOW SHEAR, EXCELLENT ALTITUDE DIVERGENCE, EXCEPTIONAL OCEANIC HEAT CONTENT). HOWEVER, IF THERE IS INTERACTION WITH AFRICAN COASTS, INTENSIFICATION WILL BE SLOWER. IN ADDITION, A POSSIBLE REPLACEMENT OF THE EYEWALL DURING ITS MATURE PHASE COULD CAUSE ITS INTENSITY TO FLUCTUATE.

IMPACTS ON INHABITED LAND IN THE NEXT 72 HOURS :

MADAGASCAR:

- STORM-FORCE WINDS UNDERWAY OVER THE PROVINCE OF ANTSIRANANA, GRADUALLY EVACUATING IN THE SECOND HALF OF THE NIGHT. GALE EXTENDING TO CAPE SAINT-ANDRE ALONG MAHAJANGA PROVINCE UNTIL SUNDAY EVENING, THEN POSSIBLE EXTENSION NEXT WEEK SOUTH OF CAPE SAINT-ANDRE ON MONDAY AND TUESDAY.
- HEAVY RAINS UNDERWAY UNTIL SUNDAY MORNING OVER ANTSIRANANA PROVINCE AND NORTHERN TOAMASINA PROVINCE. RAINFALL TOTALS OF OVER 100 MM, LOCALLY 200-300 MM IN 24 HOURS NEAR THE CENTER OF THE SYSTEM AND EXPOSED MOUNTAINOUS TERRAIN.
- VERY ROUGH TO HEAVY SEAS, LOCALLY VERY HEAVY. WAVES OF 4 TO 6 METRES BETWEEN CAP D'AMBRE AND CAP EST DIMINISHING RAPIDLY.
- WAVES OF 4 METRES POSSIBLE ON THE WEST COAST OF MAHAJANGA PROVINCE (NEAR CAP SAINT-ANDRE) BETWEEN SUNDAY EVENING AND MONDAY.

MAYOTTE:

- GALE FORCE WINDS POSSIBLE OVER THE SOUTH OF THE ISLAND ON SUNDAY.
- HEAVY RAIN UNTIL THE END OF THE DAY SUNDAY UNDER THE PERIPHERAL BANDS. TOTAL RAINFALL OVER 100-150 MM IN 12 HOURS POSSIBLE.

COMOROS :

- HEAVY RAINS ON SUNDAY AROUND THE SYSTEM. CUMULUS CLOSE TO 100 MM IN 24H LOCALLY, 150-200 MM ON THE EXPOSED RELIEF.

MOZAMBIQUE (COAST OF NAMPULA PROVINCE):

- GALE FORCE WINDS LIKELY DURING THE DAY ON MONDAY AND INTO THE

FOLLOWING NIGHT. STORM FORCE WINDS POSSIBLE ON MONDAY AFTERNOON AND EVENING.

- HEAVY RAIN LIKELY FROM MONDAY. 100-200 MM IN 24H POSSIBLE LOCALLY ALONG THE COAST.

- WAVES OF 4 TO 6 METRES POSSIBLE DURING THE DAY ON MONDAY AND UNTIL TUESDAY MORNING.