

WTIO30 FMEE 010639

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 10/5/20232024

1.A REMNANT LOW 5

2.A POSITION 2024/02/01 AT 0600 UTC:

WITHIN 10 NM RADIUS OF POINT 18.8 S / 66.0 E

(EIGHTEEN DECIMAL EIGHT DEGREES SOUTH AND
SIXTY SIX DECIMAL ZERO DEGREES EAST)

MOVEMENT: NORTH-WEST 6 KT

3.A DVORAK ANALYSIS: 1.5/2.0/W 0.5/6 H

4.A CENTRAL PRESSURE: 1004 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 30 KT

RADIUS OF MAXIMUM WINDS (RMW): NIL

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

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

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

48 KT NE: 0 SE: 0 SW: 0 NW: 0

64 KT NE: 0 SE: 0 SW: 0 NW: 0

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

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2024/02/01 18 UTC: 18.6 S / 66.6 E, VENT MAX= 025 KT, REMNANT LOW

24H: 2024/02/02 06 UTC: 19.2 S / 67.5 E, VENT MAX= 030 KT, REMNANT LOW

28 KT NE: 0 SE: 0 SW: 130 NW: 0

36H: 2024/02/02 18 UTC: 20.3 S / 68.5 E, VENT MAX= 035 KT, POST-TROPICAL
DEPRESSION

28 KT NE: 0 SE: 100 SW: 195 NW: 0

34 KT NE: 0 SE: 75 SW: 0 NW: 0

48H: 2024/02/03 06 UTC: 21.9 S / 70.5 E, VENT MAX= 035 KT, POST-TROPICAL
DEPRESSION

28 KT NE: 0 SE: 120 SW: 155 NW: 0

34 KT NE: 0 SE: 75 SW: 0 NW: 0

60H: 2024/02/03 18 UTC: 24.2 S / 72.9 E, VENT MAX= 040 KT, POST-TROPICAL
DEPRESSION

28 KT NE: 110 SE: 155 SW: 130 NW: 0

34 KT NE: 0 SE: 95 SW: 0 NW: 0

72H: 2024/02/04 06 UTC: 26.2 S / 75.4 E, VENT MAX= 040 KT, EXTRATROPICAL DEPRESSION

28 KT NE: 270 SE: 335 SW: 250 NW: 130

34 KT NE: 130 SE: 175 SW: 75 NW: 0

2.B LONGER-RANGE OUTLOOK:

96H: 2024/02/05 06 UTC: 35.1 S / 82.8 E, VENT MAX= 035 KT, EXTRATROPICAL DEPRESSION

28 KT NE: 390 SE: 230 SW: 215 NW: 325

34 KT NE: 185 SE: 150 SW: 185 NW: 185

120H: 2024/02/06 06 UTC: 43.7 S / 94.1 E, VENT MAX= 020 KT, EXTRATROPICAL DEPRESSION

2.C ADDITIONAL INFORMATION:

T=1.5+ CI=2.0+

OVER THE PAST 6 HOURS, CONVECTIVE ACTIVITY HAS DECREASED. THE CENTER IS CLEARLY DISCERNIBLE ON THE VISIBLE SATELLITE PICTURE AT THE NORTH-WEST EDGE OF THE MAIN CONVECTION AND IS MOVING WEST-NORTH-WEST.

WEST-NORTH-WEST WINDSHEAR REACHES 15-20KT ACCORDING TO CIMSS, IN THE OPPOSITE DIRECTION TO THE SYSTEM'S CURRENT DISPLACEMENT. FINALLY, THE 0126Z SSMIS MICROWAVE PASS MADE IT POSSIBLE TO RESITUATE THE LOW-LEVEL CLOUD CENTER AT THE END OF THE NIGHT, AND ALSO CONFIRMS THE CURRENT POOR ORGANIZATION OF THE LOWER TROPOSPHERE. THE SUBJECTIVE DVORAK ANALYSIS OF THE REUNION RSMC IS A LITTLE LOWER THAN THOSE OF THE OTHER CENTERS, BUT THE MAXIMUM WIND INTENSITY IS MAINTAINED AT 30KT DUE TO INERTIA, WHICH IS IN AGREEMENT WITH THE OBJECTIVE ANALYSES. IN VIEW OF THESE FACTORS, THE SYSTEM HAS BEEN DOWNGRADED TO REMANENT LOW.

TRACK FORECASTS ARE SUBJECT TO UNCERTAINTY IN THE SHORT TERM. IN FACT, CURRENTLY IN A AREA BETWEEN TWO RIDGES, THERE ARE NO REALLY ESTABLISHED DIRECT CURRENTS, LEAVING THE SYSTEM QUASI-STATIONARY FOR THE NEXT 12-24HOURS. FROM TONIGHT ONWARDS, IFS, WHICH IS THE MOST ACCURATE MODEL, SUGGESTS A CLEAR START TO SOUTHEASTERLY MOVEMENT, LINKED TO THE PASSAGE OF A MID-TROPOSPHERE TROUGH TO THE SOUTH OF THE SYSTEM, WHICH WILL TAKE IT OUT OF THE TROPICAL DOMAIN OVER THE WEEKEND. THE RSMC TRAJECTORY IS THEREFORE A COMPROMISE BETWEEN THE DIFFERENT GUIDANCE AVAILABLE, WHICH IS CURRENTLY HIGHLY DISPERSED, IN TERMS OF ALONG TRACK, WITH CONSIDERABLE UNCERTAINTY OVER THE NEXT 12-24 HOURS, IN THE CURVATURE TO THE SOUTHEAST. HOWEVER, A SIGNAL PERSISTS ON THE LOCATION OF THE TRAJECTORY WELL TO THE EAST OF RODRIGUES ISLAND.

IN TERMS OF INTENSITY, THE SYSTEM IS STRUGGLING TO SET UP A FIRM, COMPACT CIRCULATION IN THE LOWER LAYERS. THE CENTER IS LIKELY TO REMAIN BEHIND THE CONVECTION, DUE TO AN INCREASE IN UPPER-LEVEL WIND SHEAR. ON THE OTHER HAND, THE QUASI-STATIONARY PHASE SHOULD GRADUALLY REDUCE THE OCEANIC POTENTIAL OVER THE AREA. THE PRESENT RSMC FORECAST THEREFORE ASSUMES THAT THE REMANENT LOW STAGE WILL BE MAINTAINED FOR THE NEXT

12 HOURS. FROM FRIDAY ONWARDS, THE SYSTEM WILL CONTINUE TO ENCOUNTER UNFAVORABLE CONDITIONS AS IT MOVES BACK SOUTHEASTWARDS, WITH INCREASED SHEAR ALOFT, INTRUSIONS OF DRY AIR AND DECREASING OCEAN HEAT CONTENT, AND WILL GRADUALLY LOSE ITS TROPICAL CHARACTERISTICS (DESPITE AN INTENSIFICATION DUE TO THE INTERACTION WITH THE MID-TROPOSPHERE TROUGH). IT SHOULD BECOME AN EXTRA-TROPICAL DEPRESSION OVER THE WEEKEND.

IMPACTS ON INHABITED LAND OVER THE NEXT 72 HOURS :

- RODRIGUES: VERY ROUGH SEA WITH WAVES CLOSE TO 4M ON THURSDAY AND FRIDAY.
- NO IMPACT ON MAURITIUS AND REUNION.