

WTIO30 FMEE 300047

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 1/5/20232024

1.A TROPICAL DISTURBANCE 5

2.A POSITION 2024/01/30 AT 0000 UTC:

WITHIN 20 NM RADIUS OF POINT 17.7 S / 64.7 E

(SEVENTEEN DECIMAL SEVEN DEGREES SOUTH AND
SIXTY FOUR DECIMAL SEVEN DEGREES EAST)

MOVEMENT: SOUTH-EAST 8 KT

3.A DVORAK ANALYSIS: 2.0/2.0/D 0.5/12 H

4.A CENTRAL PRESSURE: 1003 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 25 KT

RADIUS OF MAXIMUM WINDS (RMW): NIL

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

NIL

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1008 HPA / 500 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2024/01/30 12 UTC: 19.2 S / 65.5 E, VENT MAX= 035 KT, MODERATE TROPICAL
STORM

28 KT NE: 150 SE: 165 SW: 205 NW: 100

34 KT NE: 75 SE: 95 SW: 110 NW: 65

24H: 2024/01/31 00 UTC: 20.2 S / 65.9 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM

28 KT NE: 155 SE: 195 SW: 220 NW: 110

34 KT NE: 85 SE: 110 SW: 130 NW: 75

48 KT NE: 45 SE: 45 SW: 35 NW: 35

36H: 2024/01/31 12 UTC: 20.7 S / 66.4 E, VENT MAX= 045 KT, MODERATE TROPICAL
STORM

28 KT NE: 165 SE: 215 SW: 220 NW: 130

34 KT NE: 100 SE: 140 SW: 140 NW: 85

48H: 2024/02/01 00 UTC: 20.4 S / 66.7 E, VENT MAX= 040 KT, MODERATE TROPICAL
STORM

28 KT NE: 185 SE: 230 SW: 220 NW: 150

34 KT NE: 110 SE: 150 SW: 140 NW: 85

60H: 2024/02/01 12 UTC: 20.4 S / 67.5 E, VENT MAX= 035 KT, MODERATE TROPICAL

STORM

28 KT NE: 195 SE: 260 SW: 220 NW: 155
34 KT NE: 120 SE: 165 SW: 140 NW: 95

72H: 2024/02/02 00 UTC: 21.1 S / 68.5 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM

28 KT NE: 215 SE: 280 SW: 220 NW: 175
34 KT NE: 130 SE: 175 SW: 140 NW: 95

2.B LONGER-RANGE OUTLOOK:

96H: 2024/02/03 00 UTC: 25.3 S / 72.0 E, VENT MAX= 045 KT, POST-TROPICAL DEPRESSION

28 KT NE: 230 SE: 325 SW: 220 NW: 205
34 KT NE: 155 SE: 195 SW: 140 NW: 110

120H: 2024/02/04 00 UTC: 33.5 S / 76.1 E, VENT MAX= 050 KT, POST-TROPICAL DEPRESSION

28 KT NE: 260 SE: 370 SW: 220 NW: 230
34 KT NE: 175 SE: 215 SW: 140 NW: 120
48 KT NE: 60 SE: 60 SW: 60 NW: 60

2.C ADDITIONAL INFORMATION:

A CLOSED CIRCULATION HAS DEVELOPED OFF THE NORTHEAST OF THE MASCARENE ARCHIPELAGO SINCE SATURDAY NIGHT, WITH FLUCTUATING CONVECTION ON SUNDAY. AN ASCAT PASS ON SUNDAY MORNING SHOWED AN INITIALLY ILL-DEFINED CENTER IN THE VICINITY OF 14S/64TH WITH 20KT WINDS IN THE NORTHEAST QUADRANT OF THE CIRCULATION, UNDER THE EFFECT OF A MONSOON FLOW.

SINCE SUNDAY NIGHT AND UP TO NOW, A COMMA-SHAPED CLOUD CLUSTER ASSOCIATED WITH INTENSE CONVECTION HAS PERSISTED IN THE EASTERN PART OF THE CIRCULATION. AN INITIAL DVORAK CLASSIFICATION OF 1.0 CAN BE ESTABLISHED ON MONDAY JANUARY 29 BETWEEN 06 AND 12UTC. AT THAT TIME, THE LOW-LEVEL CIRCULATION STILL APPEARED TO BE ELONGATED OR EVEN TO HAVE TWO VORTICES (WITH A CENTER AT THE WESTERN EDGE OF THE CONVECTIVE CLUSTER, BUT A POSSIBLE OTHER CENTER UNDER THE CONVECTION).

AN ASCAT-B PASS ON MONDAY AT 1733Z SHOWED WINDS OF 25KT IN THE EASTERN SEMICIRCLE. THE LATEST SATELLITE IMAGES SEEM TO SHOW THE BEGINNINGS OF A CURVED BAND STRUCTURE AND VERY POWERFUL THUNDERY CONVECTIVE BURST. THE SYSTEM IS ESTIMATED AT TROPICAL DISTURBANCE STAGE AND T2.0 AT 00UTC.

THIS SYSTEM IS EXPECTED TO MOVE SOUTH-SOUTHEASTWARDS UNTIL WEDNESDAY MORNING, CHANNELLED BETWEEN A LOW PRESSURE AREA OVER THE WESTERN MASCARENE ISLANDS AND A WEAK RIDGE OF HIGH PRESSURE TO THE EAST AND NORTHEAST, WHICH SHOULD BRING IT TO THE IMMEDIATE EAST OF RODRIGUES ON TUESDAY EVENING. ITS MOVEMENT SHOULD THEN BECOME TEMPORARILY SLOWER BETWEEN WEDNESDAY AND THURSDAY, IN A BAROMETRIC COL BETWEEN TWO RIDGES. FROM THURSDAY EVENING OR FRIDAY ONWARDS, MOST NUMERICAL MODELS SUGGEST A RESUMPTION OF EASTWARD THEN SOUTHEASTWARD MOVEMENT UNDER THE INFLUENCE OF A MID-TROPOSPHERE TROUGH PASSING TO THE SOUTH OF THE SYSTEM.

OVERALL ENVIRONMENTAL CONDITIONS ARE RATHER CONDUCTIVE FOR DEVELOPMENT IN THE SHORT TERM, ALTHOUGH SOMEHOW MIXED. WHILE THE SYSTEM BENEFITS FROM STRONG OCEANIC POTENTIAL, GOOD UPPER DIVERGENCE AS WELL AS GOOD MONSOON FLOW SUPPLY, CONVERGENCE REMAINS INSUFFICIENT SOUTH OF THE SYSTEM AND THE INITIALLY ELONGATED STRUCTURE OF THE VORTEX CAN DELAY THE CONSOLIDATION OF A TIGHT CENTRAL CORE. NEVERTHELESS, IF A PRESSURE CENTER MANAGES TO POSITION ITSELF UNDER ACTIVE CONVECTION, SIGNIFICANT DEVELOPMENT OF THE SYSTEM SEEMS LIKELY ON TUESDAY AND THE FOLLOWING NIGHT, AS SUGGESTED BY SOME NUMERICAL MODELS (AROME, GFS). FROM WEDNESDAY OR THURSDAY, SURFACE CONVERGENCE SHOULD IMPROVE BUT SLOWER MOVEMENT COMBINED WITH INCREASING WESTERLY SHEAR COULD ADVECT DRY AIR INTO THE SYSTEM'S CORE, THUS WEAKENING IT. FROM FRIDAY ONWARDS, THE SYSTEM COULD GRADUALLY LOSE SOME OF ITS TROPICAL CHARACTERISTICS DUE TO BAROCLINIC INTERACTION WITH A TROUGH.

IMPACTS ON INHABITED LANDS IN THE NEXT 72 HOURS:

- RODRIGUES: ACCORDING TO THE MOST LIKELY SCENARIO, THE SYSTEM COULD TRANSIT EAST OF RODRIGUES AT TROPICAL STORM STAGE WITH A CENTER REMAINING MORE THAN 150 KM FROM THE ISLAND. GIVEN THE SMALL SIZE OF THE SYSTEM, THE AREA OF STRONG WINDS AND HEAVY RAIN SHOULD THEREFORE REMAIN FAR AWAY FROM RODRIGUES. ONLY SOME SQUALLS AND ROUGH SEAS SHOULD AFFECT THE ISLAND IN THE SYSTEM'S PERIPHERY. NEVERTHELESS, GIVEN THE UNCERTAINTY ABOUT THE EXACT TRACK, A CLOSER PASSAGE IS NOT COMPLETELY RULED OUT (PROBABILITY LESS THAN 20 PERCENT OF PASSING LESS THAN 100 KM FROM THE ISLAND). RESIDENTS OF RODRIGUES ARE INVITED TO FOLLOW THE EVOLUTION OF FORECASTS AND TO COMPLY WITH THE RECOMMENDATIONS OF LOCAL AUTHORITIES.

- NO PARTICULAR IMPACTS EXPECTED FOR MAURITIUS AND REUNION ISLAND.