

WTIO30 FMEE 261222

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 2/2/20212022

1.A TROPICAL DEPRESSION 2

2.A POSITION 2022/01/26 AT 1200 UTC:

WITHIN 30 NM RADIUS OF POINT 14.9 S / 86.6 E

(FOURTEEN DECIMAL NINE DEGREES SOUTH AND
EIGHTY SIX DECIMAL SIX DEGREES EAST)

MOVEMENT: WEST-SOUTH-WEST 14 KT

3.A DVORAK ANALYSIS: 2.5/2.5/D 0.5/6 H

4.A CENTRAL PRESSURE: 1000 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: 185 SW: 165 NW: 0

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1005 HPA / 400 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2022/01/27 00 UTC: 16.4 S / 83.5 E, VENT MAX= 035 KT, MODERATE TROPICAL
STORM

28 KT NE: 0 SE: 250 SW: 205 NW: 0

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

24H: 2022/01/27 12 UTC: 17.5 S / 79.5 E, VENT MAX= 040 KT, MODERATE TROPICAL
STORM

28 KT NE: 0 SE: 250 SW: 205 NW: 0

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

36H: 2022/01/28 00 UTC: 17.8 S / 75.8 E, VENT MAX= 040 KT, MODERATE TROPICAL
STORM

28 KT NE: 95 SE: 250 SW: 205 NW: 0

34 KT NE: 65 SE: 130 SW: 130 NW: 0

48H: 2022/01/28 12 UTC: 17.9 S / 74.0 E, VENT MAX= 035 KT, MODERATE TROPICAL
STORM

28 KT NE: 100 SE: 250 SW: 205 NW: 0

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

60H: 2022/01/29 00 UTC: 18.5 S / 72.6 E, VENT MAX= 035 KT, MODERATE TROPICAL

STORM

28 KT NE: 110 SE: 250 SW: 205 NW: 0
34 KT NE: 85 SE: 130 SW: 130 NW: 0

72H: 2022/01/29 12 UTC: 19.2 S / 70.9 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM

28 KT NE: 120 SE: 250 SW: 205 NW: 0
34 KT NE: 95 SE: 130 SW: 130 NW: 0

2.B LONGER-RANGE OUTLOOK:

96H: 2022/01/30 12 UTC: 19.2 S / 66.7 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM
28 KT NE: 150 SE: 250 SW: 205 NW: 100
34 KT NE: 110 SE: 130 SW: 130 NW: 75
48 KT NE: 65 SE: 75 SW: 45 NW: 55

120H: 2022/01/31 12 UTC: 18.7 S / 62.8 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM
28 KT NE: 175 SE: 250 SW: 205 NW: 100
34 KT NE: 130 SE: 130 SW: 130 NW: 75
48 KT NE: 70 SE: 80 SW: 50 NW: 60

2.C ADDITIONAL INFORMATION:

T=CI=2.5-

IN THE EASTERN PART OF THE MONSOON TROUGH, UNDER THE INFLUENCE OF SOME IMPORTANT EQUATORIAL WAVE ACTIVITY (IN PARTICULAR AN EQUATORIAL-ROSSBY WAVE INDUCING A SURGE OF NORTHWESTERLY MONSOON FLOW), A LOW PRESSURE AREA NEAR 90E HAS SHOWN GRADUAL SIGNS OF ORGANIZATION THESE LAST DAYS, THUS REACHING THE TROPICAL DISTURBANCE STAGE THIS WEDNESDAY AT 06UTC.

DURING THE PAST 6 HOURS, CONVECTIVE ACTIVITY AND CLOUD PATTERN HAVE CONTINUED TO IMPROVE WITH A SMALL CURVED BAND WRAPPING WEST AND NORTH OF THE LOW LEVEL CENTER, WHICH ISN'T FAR OUT FROM THE CDO, ALTHOUGH SOME EASTERLY SHEAR IS APPARENT. THE AMSR2 PASS OF 0806Z CONFIRMS THIS SLIGHTLY IMPROVED ORGANIZATION. SUBJECTIVE DVORAK ANALYSIS GIVES AN INTENSITY OF 2.5-, POINTING TO AN UPGRADE TO TROPICAL DEPRESSION STATUS.

UNTIL TOMORROW, SYSTEM 02-20212022IS WILL KEEP MOVING RAPIDLY WEST-SOUTHWESTWARD BETWEEN THE SUBTROPICAL HIGH PRESSURE TO THE SOUTH AND THE MONSOON GYRE THAT THE SYSTEM IS BYPASSING ON ITS SOUTHEAST AND THEN SOUTHERN FLANK. ITS MOVEMENT SHOULD SLOW DOWN A LITTLE FROM FRIDAY IN CONNECTION WITH THE RELATIVE WEAKENING OF THE RIDGE TO THE SOUTH OF THE SYSTEM AND A PROBABLE INTERACTION (FUJIWHARA-TYPE OR ABSORPTION) WITH A SECONDARY VORTEX INITIALLY LOCATED TO THE NORTH OF IT, EMBEDDED IN THE MONSOON TROUGH, WHICH ALSO BRINGS UNCERTAINTY ON THE PRECISE ORIENTATION OF THE TRACK. FROM SUNDAY, STRENGTHENING OF THE SUBTROPICAL HIGH TO THE SOUTH OF MADAGASCAR SHOULD SLIGHTLY BEND THE TRACK TOWARDS THE WEST-NORTH-WEST WHILE THE SYSTEM WILL TRANSIT NEAR THE EAST OF THE MASCARENE ARCHIPELAGO (NEAR RODRIGUES ISLAND), BUT WITH A STRONG UNCERTAINTY ON THE TIMING AND THE DISTANCE OF THE PASSAGE NEAR INHABITED LANDS.

ENVIRONMENTAL CONDITIONS KEEP SLIGHTLY IMPROVING IN THE VERY SHORT TERM. THANKS TO THE SOUTHWARD SHIFT OF THE SYSTEM, VERTICAL WIND SHEAR IS DECREASING, ESTIMATED EASTERLY AROUND 15KT, KNOWING THAT THE SYSTEM ITSELF IS MOVING AT ABOUT 15KT IN A SIMILAR DIRECTION. LOW LEVEL CONVERGENCE IS GOOD BETWEEN THE NORTH-WEST MONSOON FLOW AND THE EAST-SOUTHEAST TRADE WINDS, IN A SUFFICIENTLY MOIST TROPOSPHERE, WHICH COULD ALLOW INTENSIFICATION UP TO MODERATE TROPICAL STORM STAGE BETWEEN TONIGHT AND THURSDAY. THE SYSTEM'S SMALL SIZE HOWEVER INDUCES AN IMPORTANT UNCERTAINTY ON THIS INTENSITY FORECAST. AROUND FRIDAY 28, CONDITIONS COULD BECOME TEMPORARILY LESS FAVORABLE, WITH LESS FAVORABLE EQUATORWARDL CONVERGENCE DUE TO THE INTERACTION WITH THE SECONDARY SUB-VORTEX LOCATED MORE NORTH, AND ALSO A POSSIBLE INFLUENCE OF DRIER AIR FROM THE MID-TROPOSPHERE WRAPPING AROUND THE SOUTH OF THE SYSTEM. DURING THE WEEKEND, THE CIRCULATION COULD THEN RECONSOLIDATE IN THE HEART OF THE MONSOON GYRE AND BENEFIT FROM MORE FAVORABLE ENVIRONMENTAL CONDITIONS IN TERMS OF LOW LEVEL CONVERGENCE AND UPPER LEVEL DIVERGENCE. THE RSMC'S FORECAST THUS SUGGESTS INTENSIFICATION INTO A STRONG TROPICAL STORM BY SUNDAY OR MONDAY, BUT THIS WILL NEED TO BE PRECISED LATER, AS DISPERSION BETWEEN MODELS IS STILL QUITE LARGE. IN ADDITION, THE STAGE OF TROPICAL CYCLONE CANNOT BE COMPLETELY RULED OUT.

POSSIBLE IMPACTS ON INHABITED LANDS:

THIS SYSTEM WILL STAY AWAY FROM INHABITED LANDS UNTIL SATURDAY INCLUDED. FROM SUNDAY OR MONDAY, IT COULD APPROACH THE EAST OF THE MASCARENE ARCHIPELAGO (RODRIGUES ISLAND IN THE FIRST PLACE) AT A RELATIVELY MATURE STAGE OF DEVELOPMENT, BUT WITH A STILL UNCERTAIN TRACK. A SIGNIFICANT DEGRADATION OF WEATHER CONDITIONS IS EXPECTED NEAR RODRIGUES (STRONG WINDS, ROUGH SEA STATE, RAINFALL) FROM SUNDAY OR MONDAY, BUT ITS EXTENT IS STILL UNCERTAIN. CONCERNING MAURITIUS AND REUNION ISLANDS, IT IS STILL TOO EARLY TO TELL ABOUT POSSIBLE IMPACTS.