

WTIO30 FMEE 261808
RSMC / TROPICAL CYCLONE CENTER / LA REUNION
TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 3/2/20212022

1.A TROPICAL DEPRESSION 2

2.A POSITION 2022/01/26 AT 1800 UTC:
WITHIN 20 NM RADIUS OF POINT 15.6 S / 85.1 E
(FIFTEEN DECIMAL SIX DEGREES SOUTH AND
EIGHTY FIVE DECIMAL ONE DEGREES EAST)
MOVEMENT: WEST-SOUTH-WEST 15 KT

3.A DVORAK ANALYSIS: 2.0/2.5/S 0.0/12 H

4.A CENTRAL PRESSURE: 1001 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: 185 NW: 0

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1006 HPA / 300 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2022/01/27 06 UTC: 16.9 S / 82.1 E, VENT MAX= 035 KT, MODERATE TROPICAL
STORM

28 KT NE: 0 SE: 240 SW: 215 NW: 0

34 KT NE: 0 SE: 140 SW: 130 NW: 0

24H: 2022/01/27 18 UTC: 17.8 S / 78.0 E, VENT MAX= 040 KT, MODERATE TROPICAL
STORM

28 KT NE: 0 SE: 230 SW: 205 NW: 0

34 KT NE: 0 SE: 140 SW: 130 NW: 0

36H: 2022/01/28 06 UTC: 17.8 S / 75.0 E, VENT MAX= 035 KT, MODERATE TROPICAL
STORM

28 KT NE: 95 SE: 230 SW: 195 NW: 0

34 KT NE: 65 SE: 140 SW: 130 NW: 0

48H: 2022/01/28 18 UTC: 18.3 S / 73.2 E, VENT MAX= 035 KT, MODERATE TROPICAL
STORM

28 KT NE: 110 SE: 220 SW: 195 NW: 0

34 KT NE: 85 SE: 140 SW: 130 NW: 0

60H: 2022/01/29 06 UTC: 19.1 S / 71.7 E, VENT MAX= 040 KT, MODERATE TROPICAL

STORM

28 KT NE: 120 SE: 215 SW: 185 NW: 0

34 KT NE: 95 SE: 140 SW: 130 NW: 0

72H: 2022/01/29 18 UTC: 19.4 S / 69.2 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM

28 KT NE: 130 SE: 205 SW: 175 NW: 0

34 KT NE: 100 SE: 140 SW: 130 NW: 0

2.B LONGER-RANGE OUTLOOK:

96H: 2022/01/30 18 UTC: 19.0 S / 65.6 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 150 SE: 195 SW: 165 NW: 100

34 KT NE: 120 SE: 140 SW: 130 NW: 75

48 KT NE: 65 SE: 85 SW: 45 NW: 55

120H: 2022/01/31 18 UTC: 18.7 S / 61.4 E, VENT MAX= 065 KT, TROPICAL CYCLONE

28 KT NE: 185 SE: 175 SW: 155 NW: 120

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

48 KT NE: 70 SE: 80 SW: 90 NW: 70

64 KT NE: 60 SE: 60 SW: 80 NW: 60

2.C ADDITIONAL INFORMATION:

T=2.0 CI=2.5-

DURING THE LAST 6 HOURS, THE CONVECTIVE ACTIVITY HAS FLUCTUATED A LOT. UNDER THE PROBABLE EFFECT OF THE INTRUSION OF DRY AIR FROM THE NORTHWEST, THE CONVECTIVE ACTIVITY HAS COLLAPSED, LEAVING A RATHER LIMITED CLOUD PATTERN CONCENTRATED IN THE WESTERN SECTOR NEAR THE CENTER. THIS ONE SEEMS TO START AGAIN DURING THE LAST MOMENTS. THE PARTIAL ASCAT SWATH OF 1612UTC ALLOWS TO ESTIMATE WINDS OF ABOUT 30KT IN THE SOUTH SECTOR OF THE SYSTEM WHICH CORROBORATES THE ANALYSIS OF DVORAK OF 2.5 IN CI ALTHOUGH THE CLOUDY CONFIGURATION IS LESS WELL DEFINED THAN DURING THE 12 PREVIOUS HOURS. THE SYSTEM 02-20212022 REMAINS AT THE THRESHOLD OF A TROPICAL DEPRESSION.

IN TERMS OF TRACK, THE 02-20212022 SYSTEM IS MOVING WEST-SOUTHWEST GUIDED BY THE MID-TROPOSPHERE RIDGE TO THE SOUTH AND THE MONSOON GYRE TO THE NORTH. ITS MOVEMENT SHOULD SLOW DOWN A BIT FROM FRIDAY IN RELATION WITH THE RELATIVE WEAKENING OF THE SUBTROPICAL RIDGE AND A PROBABLE INTERACTION WITH A SECONDARY VORTEX LOCATED FURTHER NORTH IN THE MONSOON TROUGH. THE UNCERTAINTY ON THE PRECISE ORIENTATION OF THE TRACK IS QUITE HIGH BETWEEN THE DIFFERENT MODELS. FROM SUNDAY, THE STRENGTHENING OF THE SUBTROPICAL RIDGE SOUTH OF MADAGASCAR SHOULD SLIGHTLY BEND THE TRACK TOWARDS WEST-NORTHWEST WHILE THE SYSTEM WILL TRANSIT NEAR THE EAST OF THE MASCAREIGNES (NEAR RODRIGUES ISLAND). AT THESE TIMES AND BECAUSE OF THE DISPERSION OF THE ENSEMBLE FORECASTS, THERE IS A LARGE UNCERTAINTY ON THE TIMING AND DISTANCE OF PASSAGE NEAR INHABITED LAND.

ENVIRONMENTAL CONDITIONS ARE IMPROVING. THE CONVERGENCE OF LOW LAYERS IS GOOD BETWEEN THE NORTHWEST MONSOON FLOW AND THE EAST-SOUTHEAST TRADE WINDS, IN A SUFFICIENTLY HUMID ENVIRONMENT. BUT

THE VERTICAL WIND SHEAR, ALTHOUGH DECREASING THANKS TO THE SHIFT OF THE SYSTEM TOWARDS MORE MERIDIONAL LATITUDES, IS STILL LIMITING FOR A MORE FRANK INTENSIFICATION. IN THESE CONDITIONS, THE SYSTEM SHOULD INTENSIFY PROGRESSIVELY AND REACH THE THRESHOLD OF MODERATE TROPICAL STORM IN THE MORNING OR DAY OF THURSDAY. WITH THE DECREASE OF THE EQUATORIAL COAST CONVERGENCE IN CONNECTION WITH THE INTERACTION WITH THE VORTICITY CORE LOCATED MORE IN THE NORTH, THE INTENSIFICATION OF THE SYSTEM COULD BE SLOWED DOWN AT THE APPROACH OF THE WEEKEND. IN THE LONGER TERM, DURING ITS MOVEMENT, THE SYSTEM WILL BE LOCATED IN A LESS SHEARED ENVIRONMENT, BENEFITING FROM MORE FAVORABLE ENVIRONMENTAL CONDITIONS AGAIN. THE RSMC FORECAST THUS PROPOSES AN INTENSIFICATION INTO A STRONG TROPICAL STORM AT THE END OF THE PERIOD, BUT THIS WILL NEED TO BE REVISED LATER, AS THE DISPERSION BETWEEN MODELS IS 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) BEING INTENSIFIED. A SIGNIFICANT DEGRADATION OF WEATHER CONDITIONS IS EXPECTED NEAR RODRIGUES 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.