

WTIO30 FMEE 260642

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 1/2/20212022

1.A TROPICAL DISTURBANCE 2

2.A POSITION 2022/01/26 AT 0600 UTC:

WITHIN 30 NM RADIUS OF POINT 14.7 S / 87.7 E

(FOURTEEN DECIMAL SEVEN DEGREES SOUTH AND
EIGHTY SEVEN DECIMAL SEVEN DEGREES EAST)

MOVEMENT: WEST-SOUTH-WEST 16 KT

3.A DVORAK ANALYSIS: 2.0/2.0/D 1.0/24 H

4.A CENTRAL PRESSURE: 1002 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): 1006 HPA / 400 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2022/01/26 18 UTC: 15.7 S / 84.7 E, VENT MAX= 030 KT, TROPICAL DEPRESSION
28 KT NE: 0 SE: 185 SW: 185 NW: 0

24H: 2022/01/27 06 UTC: 16.8 S / 81.1 E, VENT MAX= 035 KT, MODERATE TROPICAL
STORM

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

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

36H: 2022/01/27 18 UTC: 17.3 S / 77.7 E, VENT MAX= 040 KT, MODERATE TROPICAL
STORM

28 KT NE: 130 SE: 220 SW: 220 NW: 0

34 KT NE: 0 SE: 110 SW: 110 NW: 0

48H: 2022/01/28 06 UTC: 17.4 S / 75.4 E, VENT MAX= 040 KT, MODERATE TROPICAL
STORM

28 KT NE: 150 SE: 220 SW: 220 NW: 0

34 KT NE: 110 SE: 110 SW: 110 NW: 0

60H: 2022/01/28 18 UTC: 17.5 S / 73.7 E, VENT MAX= 035 KT, MODERATE TROPICAL
STORM

28 KT NE: 130 SE: 185 SW: 185 NW: 0

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

72H: 2022/01/29 06 UTC: 17.7 S / 72.1 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM

28 KT NE: 110 SE: 165 SW: 165 NW: 0

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

2.B LONGER-RANGE OUTLOOK:

96H: 2022/01/30 06 UTC: 17.9 S / 68.9 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM

28 KT NE: 185 SE: 220 SW: 220 NW: 0

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

120H: 2022/01/31 06 UTC: 18.5 S / 64.9 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM

28 KT NE: 185 SE: 240 SW: 240 NW: 150

34 KT NE: 120 SE: 130 SW: 130 NW: 0

2.C ADDITIONAL INFORMATION:

IN THE EASTERN PART OF THE MONSOON TROUGH, A LOW PRESSURE AREA THAT HAS BEEN MONITORED FOR A FEW DAYS, LOCATED NEAR 90E, HAS SHOWN GRADUAL SIGNS OF ORGANIZATION SINCE MONDAY WITH THE HELP OF A MONSOON FLOW SURGE IN AN ACTIVE EQUATORIAL WAVE ACTIVITY BACKGROUND (EQUATORIAL-ROSSBY, KELVIN). SINCE TUESDAY, CONVECTIVE ACTIVITY HAS BEEN REGULAR NEAR A CENTER BECOMING BETTER DEFINED IN MICROWAVE IMAGERY (AMSR2 ON THE 25TH AT 0723Z THEN SSMIS ON THE 26TH AT 0047Z, THE LATTER EVEN SHOWING AN ALMOST CLOSED LOW-LEVEL CENTRAL RING) WITH ALSO AN IMPROVEMENT OF THE CURVATURE OF LOW CLOUDS CONVERGING IN SPIRAL TOWARDS THE LLC. PARTIAL SWATHS HY-2C AT 0222Z AND ASCAT-C AT 0341Z ALSO SUGGEST THE PRESENCE OF A CLOSED CIRCULATION WITH WINDS REACHING 25KT AND EVEN VERY LOCALLY 30KT IN THE SOUTHEAST SEMICIRCLE. THERE IS NEVERTHELESS SOME UNCERTAINTY ON THE EXACT INTENSITY AT THE TIME OF THIS ANALYSIS BECAUSE OF THE LACK OF A DIRECT PASS OVER THE CENTER. SUBJECTIVE DVORAK ANALYSIS, MAINLY BASED ON THE MET GIVING AN INTENSITY OF 2.0, CONFIRMS THE FEW OTHER AVAILABLE DATA, HENCE A SYSTEM ESTIMATED AT THE STAGE OF TROPICAL DISTURBANCE.

SYSTEM 02-20212022 IS EXPECTED TO FOLLOW A WEST-SOUTHWESTWARD THEN WESTWARD TRACK DURING THE NEXT FIVE DAYS, UNDER AN EAST-NORTHEAST THEN EAST STEERING FLOW BETWEEN THE SUBTROPICAL HIGH AND THE MONSOON GYRE WHICH THE SYSTEM SKIRTS ON ITS SOUTHEAST FLANK THEN SOUTH. ITS MOVEMENT IS FAST UNTIL TOMORROW THURSDAY THEN SHOULD SLOW DOWN FROM FRIDAY IN CONNECTION WITH THE RELATIVE WEAKENING OF HIGH PRESSURE ON THE SOUTHERN SIDE OF THE SYSTEM AND A POSSIBLE INTERACTION WITH ANOTHER SUBVORTEX EMBEDDED IN THE MONSOON TROUGH, WHICH ALSO BRINGS UNCERTAINTY ON THE PRECISE ORIENTATION OF THE TRACK. THE RSMC'S FORECAST FOLLOWS A MEDIAN SCENARIO BETWEEN THE DIFFERENT AVAILABLE MODEL OUTPUTS, WHICH TAKES THE SYSTEM CLOSE TO THE EAST OF THE MASCARENE ARCHIPELAGO (NEAR RODRIGUES ISLAND) BETWEEN SUNDAY AND MONDAY, WITH A HIGH UNCERTAINTY ON THE TIMING AND DISTANCE OF THE PASSAGE CLOSE TO THE INHABITED LANDS.

ENVIRONMENTAL CONDITIONS IN THE VICINITY OF TROPICAL DISTURBANCE 02-20212022 ARE GRADUALLY IMPROVING IN THE VERY SHORT TERM. EASTERLY VERTICAL WIND SHEAR IS DECREASING COMPARED TO YESTERDAY THANKS TO THE SOUTHWARD SHIFT OF THE SYSTEM, AND IS ESTIMATED AROUND 15KT THIS WEDNESDAY, KNOWING THAT THE SYSTEM IS MOVING ITSELF AT ABOUT 15KT IN A SIMILAR DIRECTION. LOW LEVEL CONVERGENCE IS WELL ESTABLISHED BETWEEN THE NORTHEASTERLY MONSOON FLOW AND THE EAST TO SOUTHEASTERLY TRADE WINDS, IN A SUFFICIENTLY MOIST TROPOSPHERIC ENVIRONMENT, WHICH SHOULD ALLOW DEVELOPMENT INTO A MODERATE TROPICAL STORM BY TOMORROW THURSDAY. HOWEVER, THE CURRENT SYSTEM'S SMALL SIZE INDUCES AN IMPORTANT UNCERTAINTY ON THE INTENSITY FORECAST. AROUND FRIDAY 28TH, CONDITIONS COULD BECOME TEMPORARILY LESS FAVORABLE, WITH A DECREASE IN EQUATORWARD CONVERGENCE, A PROBABLE INTERACTION WITH THE SECONDARY VORTEX LOCATED FURTHER NORTH, AND ALSO A POSSIBLE INFLUENCE OF DRIER MID-TROPOSPHERE AIR SOUTH OF THE SYSTEM. DURING THE WEEKEND, THE CIRCULATION COULD THEN RECONSOLIDATE AND BECOME WIDER, BENEFITING FROM ENVIRONMENTAL CONDITIONS AGAIN A LITTLE MORE FAVORABLE. NEVERTHELESS, THERE IS A STRONG DISPERSION BETWEEN INTENSITY FORECASTS SUGGESTED BY DETERMINISTIC AND ENSEMBLIST MODELS. THE RSMC'S FORECAST SUGGESTS SOME INTENSIFICATION AT THE END OF TAU, BUT THIS WILL NEED TO BE PRECISED IN THE FOLLOWING BULLETINS.

POSSIBLE IMPACTS ON INHABITED LANDS:

THIS SYSTEM WILL STAY AWAY FROM INHABITED LANDS UNTIL SATURDAY INCLUDED. FROM SUNDAY OR MONDAY, THE SYSTEM COULD APPROACH THE EAST OF THE MASCARENE ARCHIPELAGO (IN PARTICULAR, RODRIGUES ISLAND IN THE FIRST PLACE) BUT WITH A STILL UNCERTAIN TRACK. WE CAN AT LEAST EXPECT A SIGNIFICANTLY DISTURBED WEATHER CONDITIONS (WIND, SEA STATE, RAIN) ON RODRIGUES FROM SUNDAY OR MONDAY. CONCERNING MAURITIUS AND REUNION ISLANDS, IT IS STILL TOO EARLY TO KNOW ABOUT POSSIBLE IMPACTS.