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

0.A WARNING NUMBER: 1/8/20222023
1.A ZONE OF DISTURBED WEATHER 8

2.A POSITION 2023/02/21 AT 1200 UTC:
WITHIN 20 NM RADIUS OF POINT 11.8 S / 78.9 E
(ELEVEN DECIMAL EIGHT DEGREES SOUTH AND
SEVENTY EIGHT DECIMAL NINE DEGREES EAST)
MOVEMENT: WEST-SOUTH-WEST 15 KT

3.A DVORAK ANALYSIS: 1.5/1.5/D 0.5/24 H

4.A CENTRAL PRESSURE: 1006 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): 1010 HPA / 600 KM
8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):
12H: 2023/02/22 00 UTC: 13.1 S / 76.1 E, VENT MAX= 025 KT, TROPICAL DISTURBANCE

24H: 2023/02/22 12 UTC: 14.5 S / 74.3 E, VENT MAX= 030 KT, TROPICAL DEPRESSION
28 KT NE: 150 SE: 220 SW: 240 NW: 110

36H: 2023/02/23 00 UTC: 16.2 S / 72.9 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM
28 KT NE: 155 SE: 240 SW: 240 NW: 120
34 KT NE: 100 SE: 130 SW: 140 NW: 85

48H: 2023/02/23 12 UTC: 17.8 S / 72.3 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM
28 KT NE: 165 SE: 250 SW: 240 NW: 130
34 KT NE: 110 SE: 140 SW: 140 NW: 95

60H: 2023/02/24 00 UTC: 19.9 S / 71.8 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM
28 KT NE: 175 SE: 260 SW: 240 NW: 140
34 KT NE: 110 SE: 140 SW: 140 NW: 95

72H: 2023/02/24 12 UTC: 21.8 S / 71.1 E, VENT MAX= 035 KT, MODERATE TROPICAL

STORM
28 KT NE: 195 SE: 270 SW: 240 NW: 150
34 KT NE: 120 SE: 150 SW: 140 NW: 100

2.B LONGER-RANGE OUTLOOK:
96H: 2023/02/25 12 UTC: 24.0 S / 68.4 E, VENT MAX= 030 KT, FILLING UP
28 KT NE: 215 SE: 295 SW: 240 NW: 165

120H: 2023/02/26 12 UTC: 25.8 S / 65.1 E, VENT MAX= 020 KT, REMNANT LOW

2.C ADDITIONAL INFORMATION:
T=CI=1.5

THE RSMC HAS STARTED IRREGULAR ISSUANCE OF ADVISORIES ON ZONE OF DISTURBED WEATHER NUMBER 08-20222023 LOCATED OVER THE EAST OF THE BASIN. ITS PRECURSOR VORTEX FORMED AT THE END OF LAST WEEK EAST OF THE COCOS ISLANDS AND ENTERED OUR BASIN ON SUNDAY 19TH. DURING THE LAST 24 HOURS, CONVECTION HAS INTENSIFIED CLOSE TO THE CIRCULATION CENTER AND HAS BECOME MORE PERSISTENT. THE LAST SATELLITE IMAGES SHOW AN IMPROVEMENT OF LOW-LEVEL CLOUDS CURVATURE, A CLEAR INTENSIFICATION OF THE CONVECTION IN THE SOUTH-WESTERN SEMICIRCLE ACCOMPANIED BY LIGHTNING ACTIVITY AND IMPROVING UPPER LEVEL DIVERGENCE WITH A NICE CIRRUS OUTFLOW CHANNELLED TO THE NORTH-WEST OF THE SYSTEM. MICROWAVE DATA SHOW THAT DEEP CONVECTION IS STILL OUT OF PHASE FROM THE LOW LEVEL CENTER BUT SUGGEST A POSSIBLE BEGINNING OF A SHORT-WRAPPED CURVED BAND. ASCAT DATA ENABLE TO ESTIMATE WIND INTENSITY AT 25KT.

THE SYSTEM IS MOVING SOUTHWESTWARD BETWEEN THE SUBTROPICAL RIDGE TO THE SOUTH AND SOUTHEAST AND A RELATIVE LOW GEOPOTENTIAL AREA TO THE NORTHWEST OF THE SYSTEM. ITS TRACK SHOULD CURVE SOUTHWARD BETWEEN WEDNESDAY EVENING AND FRIDAY, IN CONNECTION WITH A WEAKNESS IN THE RIDGE SOUTH OF THE SYSTEM, WHILE THE STEERING FLOW COULD RISE TO HIGHER LEVELS IN CONNECTION WITH THE POSSIBLE INTENSIFICATION OF THE SYSTEM. FROM FRIDAY OR SATURDAY, WITH ITS WEAKENING, THE STEERING FLOW SHOULD COME BACK DOWN TO LOW LEVEL AND MAKE THE TRACK SHIFT WEST-SOUTHWESTWARDS.

IN ITS SOUTHWESTWARD TRACK, THIS SYSTEM IS MOVING INTO A WEAKLY SHEARED AREA, WHICH COULD FAVOUR ITS DEVELOPMENT IN THE SHORT TERM BY ENABLING THE LOW LEVEL CENTER TO BETTER PHASE WITH DEEP CONVECTION. AT THE SAME TIME, IT BENEFITS FROM GOOD OCEANIC POTENTIAL. UPPER LEVEL DIVERGENCE WILL CONTINUE TO IMPROVE WITH THE BUILD-UP OF A NEW OUTFLOW CHANNEL ALSO ON THE SOUTHERN SIDE OF THE SYSTEM FAR AHEAD OF AN UPPER LEVEL TROUGH. THESE CONDUCIVE CONDITIONS SHOULD ENABLE STRENGTHENING TO THE STAGE OF MODERATE TROPICAL STORM BY THURSDAY. HOWEVER, FROM FRIDAY ONWARDS, INCREASING WIND SHEAR ASSOCIATED WITH THE UPPER TROUGH APPROACHING FROM THE SOUTH/SOUTHWEST SHOULD INHIBIT ITS DEVELOPMENT AND CAUSE DRY AIR INTRUSIONS FROM THE NORTHWEST, LEADING TO FINAL WEAKENING BY THE WEEKEND.

THIS SYSTEM DOES NOT POSE ANY THREAT TO THE INHABITED LANDS.