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

0.A WARNING NUMBER: 1/10/20222023
1.A TROPICAL DISTURBANCE 10

2.A POSITION 2023/05/13 AT 0600 UTC:
WITHIN 20 NM RADIUS OF POINT 3.0 S / 86.0 E
(THREE DECIMAL ZERO DEGREES SOUTH AND
EIGHTY SIX DECIMAL ZERO DEGREES EAST)
MOVEMENT: WEST-SOUTH-WEST 5 KT

3.A DVORAK ANALYSIS: 2.0/2.0/D 1.0/24 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: 2023/05/13 18 UTC: 4.0 S / 84.9 E, VENT MAX= 025 KT, TROPICAL DISTURBANCE

24H: 2023/05/14 06 UTC: 4.9 S / 83.0 E, VENT MAX= 030 KT, TROPICAL DEPRESSION
28 KT NE: 110 SE: 205 SW: 240 NW: 95

36H: 2023/05/14 18 UTC: 5.6 S / 80.9 E, VENT MAX= 030 KT, TROPICAL DEPRESSION
28 KT NE: 120 SE: 205 SW: 240 NW: 95

48H: 2023/05/15 06 UTC: 5.9 S / 79.0 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM
28 KT NE: 120 SE: 205 SW: 240 NW: 120
34 KT NE: 75 SE: 110 SW: 140 NW: 95

60H: 2023/05/15 18 UTC: 6.6 S / 77.4 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM
28 KT NE: 120 SE: 215 SW: 240 NW: 120
34 KT NE: 75 SE: 110 SW: 140 NW: 95

72H: 2023/05/16 06 UTC: 7.4 S / 76.2 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM
28 KT NE: 120 SE: 215 SW: 240 NW: 130
34 KT NE: 75 SE: 110 SW: 140 NW: 100

48 KT NE: 35 SE: 45 SW: 55 NW: 55

2.B LONGER-RANGE OUTLOOK:
96H: 2023/05/17 06 UTC: 9.0 S / 75.2 E, VENT MAX= 065 KT, TROPICAL CYCLONE
28 KT NE: 120 SE: 220 SW: 240 NW: 130
34 KT NE: 75 SE: 110 SW: 140 NW: 100
48 KT NE: 45 SE: 55 SW: 65 NW: 55
64 KT NE: 35 SE: 35 SW: 35 NW: 35

120H: 2023/05/18 06 UTC: 10.1 S / 74.8 E, VENT MAX= 065 KT, TROPICAL CYCLONE
28 KT NE: 120 SE: 220 SW: 240 NW: 140
34 KT NE: 75 SE: 120 SW: 140 NW: 110
48 KT NE: 50 SE: 60 SW: 70 NW: 60
64 KT NE: 40 SE: 40 SW: 40 NW: 40

2.C ADDITIONAL INFORMATION:
FT=CI=2.0

A WEAK TROPICAL LOW HAS FORMED SINCE THURSDAY CLOSE TO THE NORTHEAST BORDER OF THE BASIN IN A CONTEXT OF FAVORABLE EQUATORIAL WAVES (WHICH ALSO TRIGGERED THE DEEPENING OF CYCLONE MOCHA IN THE BAY OF BENGAL). SINCE FRIDAY, THIS LOW HAS SHOWN SIGNS OF BETTER ORGANIZATION WITH MORE PERSISTENT CONVECTION AND A LLCC BECOMING MORE DISTINCT. AN INITIAL DVORAK 1.0 CLASSIFICATION CAN THUS BE DEFINED FROM FRIDAY 12Z. SINCE LAST NIGHT, THE SYSTEM HAS SHOWN RENEWED DEEP CONVECTION AND A CLEAR IMPROVEMENT OF LOW-LEVEL CLOUDS CURVATURE. AN ASCAT-B PASS THIS SATURDAY AT 0319Z ALLOWS TO LOCATE THE CENTER MORE PRECISELY AROUND 2.9S/86.3E AND INDICATES WINDS REACHING AT LEAST 25KT WITH LOCAL PEAKS AT 30/35KT UNDER THE CONVECTIVE BURSTS IN THE SOUTHWEST QUADRANT, BUT WHICH DO NOT SEEM TO REPRESENT THE INTENSITY OF THE SYSTEM. THE LAST MICROWAVE PASSES DO NOT INDICATE FOR THE MOMENT ANY WELL-ORGANIZED CONVECTIVE CORE. CIMSS ANALYSES INDICATE THE PRESENCE OF MODERATE EAST-NORTHEASTERLY DEEP-LAYER SHEAR AT 15/20KT, WHICH SEEMS TO LIMIT INTENSIFICATION FOR THE MOMENT. SUBJECTIVE DVORAK ANALYSIS BASED ON MET COMBINED WITH RECENT ASCAT DATA ENABLES TO CLASSIFY THE SYSTEM AS A TROPICAL DISTURBANCE WITH ESTIMATED WINDS OF 25KT. IT IS THE 10TH SYSTEM MONITORED BY RSMC LA REUNION FOR THE 2022-2023 SEASON.

IN TERMS OF TRACK FORECAST, IN THE NEXT FEW DAYS THE SYSTEM SHOULD MOVE WEST-SOUTH-WESTWARD THEN SOUTH-WESTWARD UNDER THE DOMINANT EFFECT OF A SUBTROPICAL RIDGE LOCATED TO ITS SOUTH-EAST. FROM THE MIDDLE OF NEXT WEEK ONWARDS, MORE CONTRADICTORY STEERING FLOWS SHOULD CAUSE IT TO SLOW DOWN. THE RSMC TRACK FORECAST IS A COMPROMISE BETWEEN THE EUROPEAN AND AMERICAN MODELS. THE SYSTEM SHOULD REMAIN OFF THE EAST OF THE CHAGOS ARCHIPELAGO WITH NO DIRECT THREAT TO THE BASIN'S INHABITED ISLANDS.

IN TERMS OF INTENSITY, THE SYSTEM'S SHORT-TERM DEVELOPMENT SHOULD BE SLOWED DOWN BY MODERATE EAST-NORTH-EASTERLY SHEAR, DESPITE A VERY MOIST ENVIRONMENT, FAVORABLE OCEANIC POTENTIAL AND A GOOD POLEWARD LOW-LEVEL CONVERGENCE. FROM MONDAY ONWARDS, WITH DECREASING WIND SHEAR, BETTER EQUATORWARD LOW-LEVEL CONVERGENCE AND GOOD UPPER

DIVERGENCE ALOFT, A MORE FRANK INTENSIFICATION IS FORESEEN. THE RSMC FORECAST THUS EXPECTS A SLOW DEVELOPMENT AT FIRST THIS WEEKEND AND THEN A FASTER ONE NEXT WEEK, POTENTIALLY LEADING TO REACH TROPICAL CYCLONE STAGE BY MID-WEEK, AS SUGGESTED BY NWP OUTPUT.