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

0.A WARNING NUMBER: 1/5/20222023
1.A ZONE OF DISTURBED WEATHER 5

2.A POSITION 2023/01/17 AT 0600 UTC:
WITHIN 30 NM RADIUS OF POINT 13.0 S / 63.6 E
(THIRTEEN DECIMAL ZERO DEGREES SOUTH AND
SIXTY THREE DECIMAL SIX DEGREES EAST)
MOVEMENT: WEST-SOUTH-WEST 15 KT

3.A DVORAK ANALYSIS: NIL
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): 1009 HPA / 700 KM
8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):
12H: 2023/01/17 18 UTC: 13.7 S / 60.1 E, VENT MAX= 025 KT, ZONE OF DISTURBED WEATHER

24H: 2023/01/18 06 UTC: 14.0 S / 55.5 E, VENT MAX= 025 KT, TROPICAL DISTURBANCE

36H: 2023/01/18 18 UTC: 13.3 S / 52.7 E, VENT MAX= 030 KT, TROPICAL DEPRESSION
28 KT NE: 0 SE: 0 SW: 260 NW: 150

48H: 2023/01/19 06 UTC: 14.3 S / 51.6 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM
28 KT NE: 240 SE: 240 SW: 260 NW: 335
34 KT NE: 110 SE: 150 SW: 150 NW: 110

60H: 2023/01/19 18 UTC: 15.2 S / 50.9 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM
28 KT NE: 350 SE: 315 SW: 260 NW: 150
34 KT NE: 150 SE: 150 SW: 150 NW: 110
48 KT NE: 55 SE: 55 SW: 0 NW: 0

72H: 2023/01/20 06 UTC: 16.0 S / 50.0 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM
28 KT NE: 350 SE: 315 SW: 150 NW: 110
34 KT NE: 150 SE: 150 SW: 55 NW: 55

2.B LONGER-RANGE OUTLOOK:
96H: 2023/01/21 06 UTC: 17.4 S / 49.2 E, VENT MAX= 030 KT, OVERLAND DEPRESSION
28 KT NE: 350 SE: 315 SW: 0 NW: 0

120H: 2023/01/22 06 UTC: 18.9 S / 50.0 E, VENT MAX= 030 KT, TROPICAL DEPRESSION
28 KT NE: 350 SE: 315 SW: 110 NW: 110

2.C ADDITIONAL INFORMATION:
THE SUSPECTED AREA FOLLOWED SINCE LAST FRIDAY CONTINUES TO SHOW GRADUAL SIGNS OF INTENSIFICATION WITH SIGNIFICANT RAINSTORM ACTIVITY BUT WHICH REMAINS VERY FLUCTUATING. WIND AND PRESSURE DATA FROM A BUOY LOCATED AROUND 12.2S AND 67.3E HAVE ALLOWED US TO OBSERVE THAT THE CENTER INITIALLY FOLLOWED HAS DISSIPATED AROUND 70E AND THAT A NEW CENTER, NOT WELL DEFINED, HAS REFORMED LAST NIGHT NEAR THE BUOY. THE INTENSITY HAS BEEN ESTIMATED FROM THE PARTIAL ASCAT DATA AND THE BUOY.

THE SYSTEM IS MOVING RAPIDLY WEST-SOUTHWESTWARD ON THE NORTHERN SIDE OF THE HIGH SUBTROPICAL GEOPOTENTIALS LOCATED TO THE SOUTH. THIS MOVEMENT SHOULD CONTINUE DURING THE NEXT 36H WITH A WEST-NORTHWEST TREND ON WEDNESDAY EVENING WHEN THE SYSTEM SHOULD INTERACT WITH ANOTHER LOW CURRENTLY PRESENT IN THE NORTHWEST (AND EVENTUALLY BEING ABSORBED INTO THE CIRCULATION OF SYSTEM NUMBER 05). FROM THURSDAY ON, A MID-TROPOSPHERE BAROMETRIC COL WILL SET UP SOUTH OF THE MASCARENE ISLANDS AND A NEAR EQUATORIAL RIDGE WILL BUILD UP NORTHEAST OF THE SYSTEM. A SUBTROPICAL DORASALE IS MAINTAINED ON THE SOUTH OF THE MOZAMBIQUE CHANNEL. THIS SITUATION IS FAVORABLE TO A SLOWER AND MORE MERIDIAN TRACK.
IF THE GLOBAL MODELS ARE RATHER IN GOOD AGREEMENT ON THE ZONAL PORTION OF THE TRACK (OVER THE FIRST 48 HOURS), THE DISPERSION INCREASES RAPIDLY BEYOND, WHICH MAKES THE TRACK PREDICTION BEYOND 72 HOURS VERY UNCERTAIN. THE PRESENT FORECAST IS BASED ON AN AVERAGE OF ALL AVAILABLE GUIDANCE.

IN TERMS OF INTENSITY, THE INTERACTION WITH THE LOW PRESENT TO THE NORTHWESTERLY OF THE SYSTEM SHOULD STRONGLY LIMIT THE END OF THE CYCLOGENESIS PROCESS DURING THE NEXT 24 TO 36H. A MODERATE EAST SHEAR SHOULD ALSO CONTRIBUTE TO PENALIZE THE INTENSIFICATION. WITHIN 48H, THE SYSTEM SHOULD HAVE COMPLETELY DIGESTED THE SECONDARY MINIMUM AND CONDITIONS SHOULD THEN BE FAVORABLE FOR A STRONGER INTENSIFICATION BEFORE INTERACTING WITH THE MADAGASCAR RELIEF. THE PRESENT INTENSITY IS CLOSE TO THE NUMERICAL GUIDANCES SUGGESTING A SLOW INTENSIFICATION (LIKE IFS). GFS, HWRF AND AROME PROPOSE ALTERNATIVE SCENARIOS THAT ARE MUCH MORE AGGRESSIVE (INTENSIFICATION TO CYCLONE STAGE BEFORE HITTING THE COAST) BUT WHICH DO NOT SEEM CREDIBLE AT THIS TIME IN VIEW OF THE CONTEXT.

IMPACTS ON INHABITED LANDS DURING THE NEXT 72 HOURS.

MADAGASCAR:
- HEAVY RAINS WILL START ON WEDNESDAY EVENING OVER NORTHEASTERN MADAGASCAR AS THE SYSTEM APPROACHES. THESE HEAVY RAINS WILL THEN

LAST AT LEAST UNTIL SUNDAY, SPREADING TO THE WHOLE NORTHERN PART OF THE ISLAND (NORTH OF A TAMATAVE - MAJUNGA AXIS) WITH 4 DAYS ACCUMULATIONS EXCEEDING 300 MM OVER A LARGE PART OF THE AREA WITH LOC MORE THAN 500 MM OVER THE NORTHERN RELIEF.
- STRONG WIND CONDITIONS (GALE) ARE EXPECTED ON THURSDAY DURING THE DAY OR THE FOLLOWING NIGHT BETWEEN SAINTE-MARIE ISLAND IN THE SOUTH AND SAMBAVA IN THE NORTH. DESTRUCTIVE WINDS (STORM CONDITIONS) ARE POSSIBLE NEAR THE LANDFALL AREA.