Direction Interrégionale de Météo-France pour l'Océan Indien
50 Boulevard du Chaudron
97490 Sainte-Clotilde
Tél : 0262 92 11 00

WTIO30 FMEE 171845
RSMC / TROPICAL CYCLONE CENTER / LA REUNION
TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 3/5/20222023
1.A TROPICAL DISTURBANCE 5

2.A POSITION 2023/01/17 AT 1800 UTC:
WITHIN 20 NM RADIUS OF POINT 14.0 S / 58.0 E
(FOURTEEN DECIMAL ZERO DEGREES SOUTH AND
FIFTY EIGHT DECIMAL ZERO DEGREES EAST)
MOVEMENT: WEST 25 KT

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

4.A CENTRAL PRESSURE: 1004 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 / 1200 KM
8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):
12H: 2023/01/18 06 UTC: 14.0 S / 54.6 E, VENT MAX= 030 KT, TROPICAL DEPRESSION
28 KT NE: 0 SE: 165 SW: 165 NW: 0

24H: 2023/01/18 18 UTC: 13.8 S / 52.0 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM
28 KT NE: 185 SE: 205 SW: 195 NW: 150
34 KT NE: 100 SE: 110 SW: 110 NW: 100

36H: 2023/01/19 06 UTC: 14.3 S / 50.9 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM
28 KT NE: 110 SE: 220 SW: 150 NW: 155
34 KT NE: 110 SE: 110 SW: 95 NW: 100
48 KT NE: 45 SE: 45 SW: 45 NW: 45

48H: 2023/01/19 18 UTC: 15.3 S / 50.2 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM
28 KT NE: 110 SE: 220 SW: 150 NW: 95
34 KT NE: 100 SE: 110 SW: 95 NW: 65
48 KT NE: 55 SE: 55 SW: 0 NW: 0

60H: 2023/01/20 06 UTC: 15.9 S / 49.8 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM
28 KT NE: 120 SE: 220 SW: 150 NW: 0

34 KT NE: 95 SE: 110 SW: 95 NW: 0

72H: 2023/01/20 18 UTC: 16.4 S / 49.6 E, VENT MAX= 035 KT, OVERLAND DEPRESSION
28 KT NE: 120 SE: 220 SW: 150 NW: 0
34 KT NE: 0 SE: 120 SW: 95 NW: 0

2.B LONGER-RANGE OUTLOOK:
96H: 2023/01/21 18 UTC: 18.1 S / 49.3 E, VENT MAX= 030 KT, OVERLAND DEPRESSION
28 KT NE: 130 SE: 220 SW: 150 NW: 0

120H: 2023/01/22 18 UTC: 19.8 S / 50.2 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM
28 KT NE: 120 SE: 220 SW: 150 NW: 0
34 KT NE: 0 SE: 120 SW: 95 NW: 0

2.C ADDITIONAL INFORMATION:
FT=CI=2.0

THE SUSPECT AREA MONITORED SINCE LAST FRIDAY CONTINUES TO SHOW GRADUAL SIGNS OF INTENSIFICATION WITH INCREASING SIGNS OF CURVATURE AND SLIGHTLY BETTER ORGANIZED DEEP CONVECTION, NOW STARTING TO FORM A SHORTLY-WRAPPED CURVED BAND. THE LLC IS NOW HIDDEN BY THE CLOUD MASS SO IS DIFFICULT TO LOCATE PRECISELY. A 1737Z ASCAT-B PASS MISSED THE LLC BUT MANAGED TO SAMPLE SOME WINDS ABOVE 25KT IN THE SOUTHWESTERN QUADRANT.
MOREOVER, THIS ASCAT PASS TOTALLY SAMPLED THE OTHER VORTEX LOCATED TO THE NORTHWEST OF AGALEGA (NEAR 8.7S/55.0E) DISPLAYING WINDS UP TO 30KT (OR EVEN 35KT UNDER THUNDERSTORMS), BUT WITH AN ELONGATED CIRCULATION AND A VERY MUCH SHEARED CLOUD PATTERN.

THE SYSTEM IS MOVING RAPIDLY WEST-SOUTHWESTWARD ON THE NORTHERN SIDE OF THE SUBTROPICAL HIGH 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 THE OTHER LOW CURRENTLY TO ITS NORTHWEST (WHICH WILL FINALLY GET ABSORBED INTO SYSTEM NUMBER 05'S CIRCULATION). 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 RIDGE WILL MAINTAINING ITSELF ON THE SOUTH OF THE MOZAMBIQUE CHANNEL. THIS SITUATION IS FAVORABLE TO A SLOWER AND MORE MERIDIAN TRACK. IF GLOBAL MODELS ARE RATHER IN GOOD AGREEMENT ON THE ZONAL PORTION OF THE TRACK (DESPITE SOME DISAGREEMENTS IN THE SPEED OF MOVEMENT), DISPERSION INCREASES RAPIDLY BEYOND, WHICH MAKES THE TRACK FORECAST PARTICULARLY UNCERTAIN BEYOND 72H, WITH MANY DIFFERENT OPTIONS BEING POSSIBLE. THE ECMWF ENSEMBLE FORECAST FAVORS A TRACK STAYING MORE OR LESS ON THE EASTERN SIDE OF MADAGASCAR, BEFORE A POSSIBLE SOUTHEASTWARD TURN AT THE EXTREME END OF THE FORECAST PERIOD, WHICH STILL REMAINS VERY UNCERTAIN.

IN TERMS OF INTENSITY, THE INTERACTION WITH THE LOW LOCATED NORTHWEST OF THE SYSTEM SHOULD MAKE THE END OF THE CYCLOGENESIS PROCESS DIFFICULT DURING THE NEXT 24H. A MODERATE EASTERLY SHEAR CONSTRAINT

SHOULD ALSO CONTRIBUTE TO PENALIZE THE INTENSIFICATION. WITHIN THE NEXT 24 TO 36H, THE SYSTEM SHOULD HAVE COMPLETELY DIGESTED THE SECONDARY LOW AND CONDITIONS SHOULD THEN BE FAVORABLE FOR A STRONGER INTENSIFICATION BEFORE INTERACTION WITH THE MADAGASCAR HIGH TERRAINS. THE PRESENT INTENSITY FORECAST IS CLOSE TO THE GUIDANCE SUGGESTING QUITE A SLOW OR MEDIUM INTENSIFICATION RATE (LIKE IFS). SOME GFS, HWRF OR AROME RUNS SUGGEST A MORE AGGRESSIVE SCENARIO (INTENSIFICATION UP TO TROPICAL CYCLONE STAGE BEFORE HITTING THE COAST) BUT DOES NOT SEEM VERY RELIABLE FOR THE MOMENT.

IMPACTS ON INHABITED LANDS DURING THE NEXT 72 HOURS.

MADAGASCAR:
- HEAVY RAINS WILL START TO FALL FROM WEDNESDAY EVENING ON THE NORTH-EAST OF MADAGASCAR WITH THE APPROACH OF THE SYSTEM. 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) IN CONNECTION WITH THE ESTABLISHMENT OF A VERY ACTIVE MONSOON FLOW. CUMULATIVE RAINFALL OVER 4 DAYS EXCEEDED 300 MM OVER A LARGE PART OF THE AREA WITH LOCALLY MORE THAN 500 MM OVER HIGH GROUND.

- STRONG WIND CONDITIONS (GALE FORCE WINDS) ARE EXPECTED ON THURSDAY DURING THE DAY OR THE FOLLOWING NIGHT BETWEEN SAINTE-MARIE ISLAND IN THE SOUTH AND SAMBAVA IN THE NORTH. DESTRUCTIVE WIND CONDITIONS (STORM FORCE WINDS) ARE POSSIBLE NEAR THE LANDFALL AREA.

- A DANGEROUS SEA STATE WITH SIGNIFICANT WAVES OF MORE THAN 4M WILL ALSO SPREAD ALONG THE NORTHEASTERN COAST ON THURSDAY WITH LOCALLY A RISK OF COASTAL FLOODING.