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

WTIO30 FMEE 070018
RSMC / TROPICAL CYCLONE CENTER / LA REUNION
TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 4/2/20222023
1.A TROPICAL DEPRESSION 2

2.A POSITION 2022/10/07 AT 0000 UTC:
WITHIN 20 NM RADIUS OF POINT 9.5 S / 85.7 E
(NINE DECIMAL FIVE DEGREES SOUTH AND
EIGHTY FIVE DECIMAL SEVEN DEGREES EAST)
MOVEMENT: SOUTH-WEST 3 KT

3.A DVORAK ANALYSIS: 2.5/2.5/S 0.0/12 H

4.A CENTRAL PRESSURE: 999 HPA
5.A MAX AVERAGE WIND SPEED (10 MN): 30 KT
RADIUS OF MAXIMUM WINDS (RMW): NIL

6.A EXTENSION OF WIND BY QUADRANTS (KM):
28 KT NE: 0 SE: 500 SW: 350 NW: 0

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1008 HPA / 700 KM
8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):
12H: 2022/10/07 12 UTC: 10.5 S / 85.2 E, VENT MAX= 030 KT, TROPICAL DEPRESSION
28 KT NE: 0 SE: 425 SW: 335 NW: 185

24H: 2022/10/08 00 UTC: 11.7 S / 85.1 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM
28 KT NE: 0 SE: 370 SW: 335 NW: 185
34 KT NE: 0 SE: 110 SW: 110 NW: 0

36H: 2022/10/08 12 UTC: 13.2 S / 85.3 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM
28 KT NE: 165 SE: 370 SW: 335 NW: 165
34 KT NE: 95 SE: 130 SW: 130 NW: 100

48H: 2022/10/09 00 UTC: 14.5 S / 85.7 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM
28 KT NE: 165 SE: 370 SW: 335 NW: 185
34 KT NE: 95 SE: 185 SW: 165 NW: 130

60H: 2022/10/09 12 UTC: 15.4 S / 86.0 E, VENT MAX= 040 KT, POST-TROPICAL DEPRESSION
28 KT NE: 185 SE: 390 SW: 350 NW: 220

34 KT NE: 0 SE: 220 SW: 185 NW: 130

72H: 2022/10/10 00 UTC: 15.8 S / 85.6 E, VENT MAX= 040 KT, POST-TROPICAL DEPRESSION
28 KT NE: 185 SE: 445 SW: 370 NW: 260
34 KT NE: 0 SE: 240 SW: 205 NW: 130

2.B LONGER-RANGE OUTLOOK:
96H: 2022/10/11 00 UTC: 15.1 S / 82.8 E, VENT MAX= 030 KT, FILLING UP
28 KT NE: 0 SE: 425 SW: 370 NW: 0

120H: 2022/10/12 00 UTC: 15.0 S / 80.0 E, VENT MAX= 020 KT, FILLING UP

2.C ADDITIONAL INFORMATION:
T=CI=2.5

THE SYSTEM'S STRUCTURE HASN'T EVOLVED MUCH OVERNIGHT WITH A LOW-LEVEL CENTER ON THE EDGE OF THE CDO AND STRONG CONVECTIVE ACTIVITY IN THE SOUTHWESTERN SEMI-CIRCLE DUE TO MODERATE NORTHEASTERLY VERTICAL WIND SHEAR. CLASSIC SATELLITE IMAGERY AND MICRO-WAVE DATA SHOW A BEGINNING OF CURVED BAND PATTERN WRAPPING ABOUT 0.5 ON THE LOG10 SPIRAL. THEY ALSO ENABLE TO LOCATE THE CENTER A BIT MORE WEST THAN INITIALLY EXPECTED. IN THE VERY RECENT HOURS, CONVECTION HAS BEEN INCREASING NEAR THE LLC. THESE SIGNS OF SLIGHT INTENSIFICATION REMAIN FRAGILE AND WILL NEED TO BE CONFIRMED THIS FRIDAY. WITHOUT ANY NEW OBJECTIVE DATA AND ACCORDING TO A DVORAK ANALYSIS YIELDING A DT OF 2.5, INTENSITY IS KEPT AT 30KT.

IN THE NEXT 48 HOURS, THE SYSTEM'S TRACK WILL BE DRIVEN BY A STRENGTHENING NORTHEASTERLY THEN NORTHERLY STEERING FLOW, AS A BAROMETRIC COL APPROACHES TO THE SOUTHWEST THEN SOUTH OF THE SYSTEM AND WITH A RIDGE REMAINING TO THE EAST. THE SYSTEM'S MOVEMENT SHOULD THUS ACCELERATE SOUTH-SOUTHWESTWARD THEN SOUTH-SOUTHEASTWARD UNTIL SATURDAY. FROM SUNDAY EVENING ONWARDS, A NEW HIGH-PRESSURE CELL WILL APPROACH FROM THE SOUTHWEST AND WILL FAVOR A WESTWARD TRACK. THERE IS A STRONG SPREAD WITHIN NWP GUIDANCE ESPECIALLY ON THE SYSTEM'S MOVEMENT SPEED AND THE WESTWARD TURN'S TIMING. THEREFORE, THE FORECAST IS QUITE UNCERTAIN BEYOND 48H.

ENVIRONMENTAL CONDITIONS, WHICH HAVE BEEN QUITE UNFAVORABLE UP TO NOW, COULD START TO BECOME MORE CONDUCIVE THIS FRIDAY, ESPECIALLY DUE TO DECREASING WIND SHEAR, FORECAST TO REACH A MINIMUM AROUND 10/15KT BETWEEN TODAY AND SATURDAY, BUT ALSO THANKS TO THE SYSTEM'S FASTER SOUTHWARD MOVEMENT, THEN ALSO BENEFITING FROM INCREASING UPPER DIVERGENCE FROM SATURDAY. THIS COULD HELP DEEPEN THE SYSTEM UP TO MODERATE TROPICAL STORM STAGE. HOWEVER THIS FAVORABLE WINDOW SHOULD NOT LAST. FROM SUNDAY ONWARDS, AHEAD OF A MID-TROPOSPHERE TROUGH, THE NORTH-WESTERLY MID-SHEAR SHOULD STRENGTHEN AND ALTER THE SYSTEM STRUCTURE THROUGH MID-LEVEL DRY AIR ADVECTION. MEANWHILE, OCEAN HEAT CONTENT SHOULD ALSO BECOME INSUFFICIENT. THE SYSTEM COULD THEN LOSE SOME OF ITS TROPICAL CHARACTERISTICS. EARLY NEXT WEEK, IN A DRY ENVIRONMENT IN THE MID-TROPOSPHERE, THE REMNANT LOW SHOULD

GRADUALLY FILL UP.