Direction Interrégionale de Météo-France pour l'Océan Indien
50 Boulevard du Chaudron
97490 Sainte-Clotilde
Tél : 0262 92 11 00
Fax Exploitation : 0262 92 11 48
Fax Direction : 0262 92 11 47

WTIO30 FMEE 161836
RSMC / TROPICAL CYCLONE CENTER / LA REUNION
TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 3/11/20202021
1.A TROPICAL DEPRESSION 11

2.A POSITION 2021/02/16 AT 1800 UTC:
WITHIN 30 NM RADIUS OF POINT 20.8 S / 36.7 E
(TWENTY DECIMAL EIGHT DEGREES SOUTH AND
THIRTY SIX DECIMAL SEVEN DEGREES EAST)
MOVEMENT: EAST-NORTH-EAST 5 KT

3.A DVORAK ANALYSIS: 1.5/1.5/S 0.0/6 H

4.A CENTRAL PRESSURE: 994 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: 95 SE: 0 SW: 0 NW: 165

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1003 HPA / 900 KM
8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):
12H: 2021/02/17 06 UTC: 20.7 S / 37.1 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM
28 KT NE: 100 SE: 55 SW: 35 NW: 130
34 KT NE: 65 SE: 45 SW: 30 NW: 110

24H: 2021/02/17 18 UTC: 20.8 S / 37.5 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM
28 KT NE: 150 SE: 95 SW: 45 NW: 100
34 KT NE: 85 SE: 75 SW: 35 NW: 95

36H: 2021/02/18 06 UTC: 21.3 S / 37.8 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM
28 KT NE: 230 SE: 175 SW: 75 NW: 175
34 KT NE: 130 SE: 140 SW: 65 NW: 100

48H: 2021/02/18 18 UTC: 22.1 S / 37.8 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM
28 KT NE: 165 SE: 130 SW: 95 NW: 120
34 KT NE: 85 SE: 110 SW: 85 NW: 100
48 KT NE: 35 SE: 35 SW: 35 NW: 35

60H: 2021/02/19 06 UTC: 23.1 S / 37.6 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM

28 KT NE: 215 SE: 175 SW: 120 NW: 95
34 KT NE: 95 SE: 150 SW: 110 NW: 85
48 KT NE: 35 SE: 35 SW: 35 NW: 35

72H: 2021/02/19 18 UTC: 24.0 S / 37.4 E, VENT MAX= 070 KT, TROPICAL CYCLONE
28 KT NE: 230 SE: 195 SW: 100 NW: 155
34 KT NE: 120 SE: 150 SW: 95 NW: 110
48 KT NE: 65 SE: 45 SW: 45 NW: 65
64 KT NE: 30 SE: 30 SW: 20 NW: 55

2.B LONGER-RANGE OUTLOOK:
96H: 2021/02/20 18 UTC: 26.4 S / 37.3 E, VENT MAX= 090 KT, INTENSE TROPICAL CYCLONE
28 KT NE: 305 SE: 205 SW: 150 NW: 175
34 KT NE: 155 SE: 100 SW: 75 NW: 95
48 KT NE: 55 SE: 45 SW: 45 NW: 45
64 KT NE: 45 SE: 35 SW: 30 NW: 35

120H: 2021/02/21 18 UTC: 29.8 S / 40.3 E, VENT MAX= 065 KT, TROPICAL CYCLONE
28 KT NE: 295 SE: 250 SW: 215 NW: 175
34 KT NE: 120 SE: 130 SW: 130 NW: 85
48 KT NE: 60 SE: 50 SW: 50 NW: 70
64 KT NE: 60 SE: 40 SW: 40 NW: 40

2.C ADDITIONAL INFORMATION:
T=CI=1.5

OVER THE LAST SIX HOURS, CONVECTIVE ACTIVITY REMAINED QUITE SCATTERED AND ISOLATED NEAR THE CENTER. BUT, IT DID INCREASE AGAIN ON THE LAST INFRARED IMAGES. THE MICROWAVE IMAGES (1604Z SSMIS) AND THE 1743Z ASCAT PASS SHOW THAT THE CORE OF THE CIRCULATION IS STILL QUITE BROAD AND ASYMMETRICAL WITH WEAKER WINDS SOUTHEAST OF THE CENTER. NEVERTHELESS, THE ASCAT PASS SHOWS THAT NEAR GALE FORCE IS REACHED IN THE NORTHERN SEMICIRCLE.

AFTER MOVING NORTHEASTWARD, THE SYSTEM SEEMS TO START SLOWING DOWN UNDER THE INFLUENCE OF OPOSSITE STEERING FLOWS. ON THE NORTHEASTERN EDGE OF THE SUBTROPICAL GEOPOTENTIAL HIGH, THE SYSTEM IS EXPOSED TO A SOUTHEASTERLY FLOW, WHILE TO THE NORTHEAST, A NEAR EQUATORIAL RIDGE BLOWS A NORTHWESTERLY FLOW. THIS SITUATION MAKES THE SHORT-RANGE FORECAST PARTICULARLY UNCERTAIN. FROM THURSDAY, A SUBTROPICAL RIDGE IS REBUILDING OVER MADAGASCAR, BENDING THE TRACK SOUTHWARD ON ITS WESTERN EDGE. WITH THE PERSISTENCE OF A RIDGE OVER SOUTHERN AFRICA, THIS MOVEMENT IS EXPECTED TO REMAIN FAIRLY SLOW. BY THE END OF THE WEEK, THE PRESENCE OF A DEEP MID-LATITUDE TROUGH SOUTH OF THE CHANNEL SHOULD FAVOR AN ACCELERATION SOUTHWESTWARD.

THE SYSTEM IS SUBJECT TO LOW VERTICAL SHEAR BELOW THE UPPER RIDGE, IN A HUMID ENVIRONMENT AT ALL LEVELS. THE LOW LEVEL CONVERGENCE, EXCELLENT ON THE POLAR SIDE THANKS TO THE SOUTHERLY BURST TODAY, IS NOT OPTIMAL ON THE NORTHEAST SIDE OF THE SYSTEM, THE FASTEST MONSOON FLOW LIES QUITE FAR AWAY FROM THE CENTER. THIS CONFIGURATION FAVOURS

AN ELONGATED CIRCULATION WHICH COULD LIMIT THE DEEPENING RATE AT SHORT RANGE. FROM THURSDAY ONWARDS, A FASTER INTENSIFICATION IS LIKELY, UNDER THE INFLUENCE OF A INCREASING UPPER DIVERGENCE. THESE FAVOURABLE CONDITIONS, COMBINED WITH WARM WATERS, SHOULD ALLOW SYSTEM 11 TO REACH TROPICAL CYCLONE OR EVEN INTENSE TROPICAL CYCLONE STAGE. HOWEVER, AT LONGER RANGE, CLOSE TO THE MID-LATITUDE TROUGH, THE NORTHWESTERLY SHEAR COULD GRADUALLY STRENGTHEN AND ADVECT DRY AIR INTO THE INNER CORE OF THE SYSTEM, LEADING TO ITS WEAKENING.