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

WTIO30 FMEE 140041
RSMC / TROPICAL CYCLONE CENTER / LA REUNION
TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 20/6/20222023
1.A SEVERE TROPICAL STORM 6 (DINGANI)

2.A POSITION 2023/02/14 AT 0000 UTC:
WITHIN 30 NM RADIUS OF POINT 21.3 S / 72.7 E
(TWENTY ONE DECIMAL THREE DEGREES SOUTH AND
SEVENTY TWO DECIMAL SEVEN DEGREES EAST)
MOVEMENT: SOUTH-SOUTH-WEST 9 KT

3.A DVORAK ANALYSIS: 3.5/4.5/W 1.0/12 H

4.A CENTRAL PRESSURE: 980 HPA
5.A MAX AVERAGE WIND SPEED (10 MN): 60 KT
RADIUS OF MAXIMUM WINDS (RMW): 22 KM

6.A EXTENSION OF WIND BY QUADRANTS (KM):
28 KT NE: 140 SE: 220 SW: 280 NW: 140
34 KT NE: 110 SE: 95 SW: 150 NW: 110
48 KT NE: 35 SE: 75 SW: 70 NW: 35
64 KT NE: 0 SE: 0 SW: 0 NW: 0

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1007 HPA / 1000 KM
8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):
12H: 2023/02/14 12 UTC: 23.0 S / 71.4 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM
28 KT NE: 240 SE: 335 SW: 250 NW: 150
34 KT NE: 140 SE: 205 SW: 165 NW: 95
48 KT NE: 65 SE: 85 SW: 85 NW: 65

24H: 2023/02/15 00 UTC: 25.3 S / 69.9 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM
28 KT NE: 250 SE: 315 SW: 285 NW: 110
34 KT NE: 140 SE: 205 SW: 155 NW: 0

36H: 2023/02/15 12 UTC: 27.5 S / 68.0 E, VENT MAX= 040 KT, POST-TROPICAL DEPRESSION
28 KT NE: 215 SE: 285 SW: 215 NW: 140
34 KT NE: 100 SE: 185 SW: 155 NW: 85

48H: 2023/02/16 00 UTC: 29.0 S / 66.3 E, VENT MAX= 045 KT, POST-TROPICAL DEPRESSION
28 KT NE: 215 SE: 240 SW: 230 NW: 150

34 KT NE: 110 SE: 165 SW: 150 NW: 95

60H: 2023/02/16 12 UTC: 30.0 S / 66.1 E, VENT MAX= 035 KT, POST-TROPICAL DEPRESSION
28 KT NE: 205 SE: 155 SW: 140 NW: 95
34 KT NE: 100 SE: 120 SW: 85 NW: 65

72H: 2023/02/17 00 UTC: 30.8 S / 67.1 E, VENT MAX= 030 KT, FILLING UP
28 KT NE: 205 SE: 130 SW: 0 NW: 95

2.B LONGER-RANGE OUTLOOK:
96H: 2023/02/18 00 UTC: 33.1 S / 72.2 E, VENT MAX= 025 KT, DISSIPATING

2.C ADDITIONAL INFORMATION:
T=3.5 CI=4.5

DURING THE LAST 6 HOURS, UNDER THE INFLUENCE OF THE STRONG UPPER WIND SHEAR (30KT ACCORDING TO THE CIMSS ANALYSIS), THE CONVECTION AROUND DINGANI HAS CLEARLY WEAKENED AND HAS BEEN PROJECTED ENTIRELY IN THE SOUTH OF THE SYSTEM. MOREOVER, THE SATELLITE IMAGES SHOW A CENTER THAT IS NOW EXPOSED, WHICH IS CONFIRMED BY THE SSMIS MICROWAVE IMAGE OF 2247Z. IN AGREEMENT WITH THE SUBJECTIVE AND OBJECTIVE ANALYSES AVAILABLE, DINGANI HAS BEEN DOWNGRADED TO A STRONG TROPICAL STORM WITH WINDS AROUND 60KT.

IN TERMS OF TRACK FORECAST, NO SIGNIFICANT CHANGES. ALL MODELS REMAIN IN GOOD AGREEMENT UNTIL WEDNESDAY. THE SYSTEM WILL CONTINUE ITS SOUTH-SOUTH-WESTERN TRACK BY ACCELERATING PROGRESSIVELY IN CONNECTION WITH THE WITHDRAWAL TOWARDS THE EAST OF THE SUBTROPICAL RIDGE AND WITH THE DESCENT OF THE LEVEL OF THE STEERING FLOW WITH THE WEAKENING OF THE SYSTEM. ON THURSDAY, THE SYSTEM COULD SLOW DOWN IN A BAROMETRIC COLLAR BEFORE RESUMING A SOUTHEASTERLY MOVEMENT BY BEING PROGRESSIVELY TAKEN BACK INTO THE MID-LATITUDE CIRCULATION. AT THESE TIMES, THE CHRONOLOGY DIFFERS A LITTLE MORE BETWEEN THE DIFFERENT MODELS BUT THE CONTEXT REMAINS GLOBALLY THE SAME : A DISAPPEARANCE IN THE MID-LATITUDE CIRCULATION.

IN TERMS OF INTENSITY FORECAST, THE ENVIRONMENTAL CONDITIONS CONTINUE TO DETERIORATE STRONGLY, WITH A SIGNIFICANT NORTH WIND SHEAR THAT WILL PERSIST FOR THE NEXT FEW TIMESCALES. MOREOVER, THE DRY INTRUSIONS BY THE NORTHERN FACADE AND THE DECREASE OF THE OCEANIC POTENTIAL WILL ADD UP TO A DURABLE WEAKENING OF DINGANI. FROM WEDNESDAY OR THURSDAY, IT COULD START TO PROGRESSIVELY LOSE ITS TROPICAL CHARACTERISTICS WHILE KEEPING A GOOD INTENSITY THANKS TO BAROCLINIC PROCESSES AT THE EDGE OF A TROUGH. THESE BAROCLINIC PROCESSES COULD EVEN ALLOW A TEMPORARY INCREASE IN INTENSITY BY THURSDAY. BUT ON FRIDAY, IN A TOTALLY HOSTILE ENVIRONMENT, THE SYSTEM SHOULD WEAKEN DEFINITIVELY AND MERGE WITH THE MID-LATITUDE CIRCULATION.