

WTIO30 FMEE 220118

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 3/8/20222023

1.A TROPICAL DEPRESSION 8

2.A POSITION 2023/02/22 AT 0000 UTC:

WITHIN 30 NM RADIUS OF POINT 12.8 S / 76.5 E

(TWELVE DECIMAL EIGHT DEGREES SOUTH AND
SEVENTY SIX DECIMAL FIVE DEGREES EAST)

MOVEMENT: WEST-SOUTH-WEST 12 KT

3.A DVORAK ANALYSIS: 2.5/2.5/D 1.0/12 H

4.A CENTRAL PRESSURE: 1002 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: 130 SW: 130 NW: 0

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

48 KT NE: 0 SE: 0 SW: 0 NW: 0

64 KT NE: 0 SE: 0 SW: 0 NW: 0

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1010 HPA / 600 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2023/02/22 12 UTC: 14.4 S / 74.5 E, VENT MAX= 030 KT, TROPICAL DEPRESSION

28 KT NE: 150 SE: 220 SW: 240 NW: 110

24H: 2023/02/23 00 UTC: 16.3 S / 73.1 E, VENT MAX= 035 KT, MODERATE TROPICAL
STORM

28 KT NE: 155 SE: 240 SW: 240 NW: 120

34 KT NE: 100 SE: 130 SW: 145 NW: 85

36H: 2023/02/23 12 UTC: 18.1 S / 72.2 E, VENT MAX= 040 KT, MODERATE TROPICAL
STORM

28 KT NE: 165 SE: 250 SW: 240 NW: 130

34 KT NE: 110 SE: 140 SW: 140 NW: 95

48H: 2023/02/24 00 UTC: 19.9 S / 71.7 E, VENT MAX= 040 KT, MODERATE TROPICAL
STORM

28 KT NE: 175 SE: 260 SW: 240 NW: 140

34 KT NE: 110 SE: 140 SW: 140 NW: 95

60H: 2023/02/24 12 UTC: 21.8 S / 70.9 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM
28 KT NE: 195 SE: 270 SW: 240 NW: 150
34 KT NE: 120 SE: 150 SW: 140 NW: 100

72H: 2023/02/25 00 UTC: 23.1 S / 69.5 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM
28 KT NE: 205 SE: 285 SW: 240 NW: 155
34 KT NE: 120 SE: 150 SW: 140 NW: 100

2.B LONGER-RANGE OUTLOOK:

96H: 2023/02/26 00 UTC: 24.8 S / 66.5 E, VENT MAX= 025 KT, REMNANT LOW

120H: 2023/02/27 00 UTC: 26.3 S / 62.8 E, VENT MAX= 020 KT, REMNANT LOW

2.C ADDITIONAL INFORMATION:

T=CI=2.5-

DURING THE LAST 12 HOURS, THE CONVECTION AROUND THE MINIMUM DEPRESSION HAS BEEN MAINTAINED AND IS BEGINNING TO SHOW SIGNS OF ORGANIZATION IN CURVED BANDS. ON THE OTHER HAND, THE 2245Z SSMIS MICROWAVE IMAGE SHOWS A MORE CONCENTRATED CIRCULATION AROUND THE CENTER AND CONVECTION MORE IN PHASE WITH THE CENTER, MAINLY IN THE SOUTHERN PART OF THE SYSTEM. THE HY2B PASS OF 1330Z ALSO SHOWS A LESS ELONGATED CIRCULATION WITH WINDS BETWEEN 25 AND 30KT IN THE SOUTHWEST QUADRANT. IN VIEW OF THE DIFFERENT ELEMENTS AVAILABLE, THE SYSTEM IS UPGRADED TO A TROPICAL DEPRESSION WITH WINDS OF 30KT AT 00UTC.

THE SYSTEM IS MOVING TOWARDS THE SOUTHWEST BETWEEN THE SUBTROPICAL RIDGE TO THE SOUTH AND SOUTHEAST AND A RELATIVE MINIMUM TO THE NORTHWEST OF THE SYSTEM. ITS TRACK SHOULD CURVE SOUTHWARD BETWEEN WEDNESDAY EVENING AND FRIDAY, IN CONNECTION WITH A WEAKNESS IN THE RIDGE SOUTH OF THE SYSTEM, WHILE THE STEERING FLOW COULD RISE TO HIGHER LEVELS IN CONNECTION WITH THE POSSIBLE INTENSIFICATION OF THE SYSTEM. FROM FRIDAY OR SATURDAY, WITH ITS WEAKENING, THE STEERING FLOW SHOULD COME BACK IN LOW LAYERS AND DIRECT THE TRACK TOWARDS WEST-SOUTHWEST.

IN ITS SOUTH-WESTERN MOVEMENT, THE SYSTEM IS EVOLVING IN A LOW SHEAR ZONE, WHICH COULD FAVOUR ITS DEVELOPMENT IN THE SHORT TERM BY BRINGING THE LOW LEVEL CENTER INTO PHASE WITH THE CONVECTION. AT THE SAME TIME, IT BENEFITS FROM A GOOD OCEANIC POTENTIAL. THE UPPER LEVEL DIVERGENCE WILL CONTINUE TO IMPROVE WITH THE APPEARANCE OF AN EVACUATION CHANNEL ALSO ON THE SOUTHERN SIDE OF THE SYSTEM AT THE FAR EDGE OF AN UPPER LEVEL TROUGH. THESE GOOD CONDITIONS COULD ALLOW A STRENGTHENING TO THE STAGE OF MODERATE TROPICAL STORM BY THURSDAY. NEVERTHELESS, FROM FRIDAY ONWARDS, THE STRENGTHENING OF THE SHEAR ASSOCIATED WITH THE APPROACH OF THE UPPER TROUGH FROM THE SOUTH-WEST SHOULD CLOSE THE DEVELOPMENT WINDOW AND PROVOKE INTRUSIONS OF DRY AIR FROM THE NORTH-WEST, HENCE A DEFINITIVE WEAKENING EXPECTED DURING THE WEEKEND.

THIS SYSTEM POSES NO THREAT TO THE INHABITED LANDS.