

WTIO30 FMEE 121300

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 6/2/20232024

1.A TROPICAL DEPRESSION 2

2.A POSITION 2024/01/12 AT 1200 UTC:

WITHIN 30 NM RADIUS OF POINT 13.3 S / 56.5 E

(THIRTEEN DECIMAL THREE DEGREES SOUTH AND
FIFTY SIX DECIMAL FIVE DEGREES EAST)

MOVEMENT: WEST-SOUTH-WEST 9 KT

3.A DVORAK ANALYSIS: 2.5/2.5/D 0.5/6 H

4.A CENTRAL PRESSURE: 1000 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 30 KT

RADIUS OF MAXIMUM WINDS (RMW): 22 KM

6.A EXTENSION OF WIND BY QUADRANTS (KM):

28 KT NE: 120 SE: 165 SW: 165 NW: 120

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1009 HPA / 1000 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2024/01/13 00 UTC: 14.4 S / 55.4 E, VENT MAX= 045 KT, MODERATE TROPICAL
STORM

28 KT NE: 140 SE: 205 SW: 205 NW: 120

34 KT NE: 75 SE: 110 SW: 120 NW: 65

24H: 2024/01/13 12 UTC: 15.9 S / 54.6 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM

28 KT NE: 150 SE: 220 SW: 215 NW: 120

34 KT NE: 85 SE: 120 SW: 130 NW: 75

48 KT NE: 55 SE: 65 SW: 55 NW: 45

36H: 2024/01/14 00 UTC: 17.5 S / 54.3 E, VENT MAX= 070 KT, TROPICAL CYCLONE

28 KT NE: 155 SE: 230 SW: 215 NW: 130

34 KT NE: 95 SE: 130 SW: 130 NW: 75

48 KT NE: 55 SE: 65 SW: 65 NW: 55

64 KT NE: 45 SE: 45 SW: 45 NW: 45

48H: 2024/01/14 12 UTC: 18.7 S / 54.6 E, VENT MAX= 080 KT, TROPICAL CYCLONE

28 KT NE: 195 SE: 230 SW: 230 NW: 155

34 KT NE: 110 SE: 130 SW: 120 NW: 120

48 KT NE: 55 SE: 65 SW: 65 NW: 55

64 KT NE: 45 SE: 45 SW: 45 NW: 45

60H: 2024/01/15 00 UTC: 19.5 S / 55.1 E, VENT MAX= 095 KT, INTENSE TROPICAL CYCLONE

28 KT NE: 220 SE: 250 SW: 230 NW: 185

34 KT NE: 130 SE: 140 SW: 120 NW: 110

48 KT NE: 75 SE: 75 SW: 65 NW: 75

64 KT NE: 45 SE: 45 SW: 35 NW: 35

72H: 2024/01/15 12 UTC: 20.3 S / 55.8 E, VENT MAX= 095 KT, INTENSE TROPICAL CYCLONE

28 KT NE: 260 SE: 240 SW: 230 NW: 195

34 KT NE: 150 SE: 130 SW: 140 NW: 130

48 KT NE: 75 SE: 75 SW: 65 NW: 75

64 KT NE: 45 SE: 45 SW: 45 NW: 45

2.B LONGER-RANGE OUTLOOK:

96H: 2024/01/16 12 UTC: 21.6 S / 57.8 E, VENT MAX= 085 KT, TROPICAL CYCLONE

28 KT NE: 285 SE: 260 SW: 240 NW: 220

34 KT NE: 165 SE: 140 SW: 150 NW: 150

48 KT NE: 85 SE: 75 SW: 75 NW: 75

64 KT NE: 55 SE: 45 SW: 45 NW: 35

120H: 2024/01/17 12 UTC: 22.6 S / 61.5 E, VENT MAX= 075 KT, TROPICAL CYCLONE

28 KT NE: 295 SE: 435 SW: 350 NW: 250

34 KT NE: 175 SE: 270 SW: 215 NW: 155

48 KT NE: 80 SE: 80 SW: 70 NW: 70

64 KT NE: 60 SE: 60 SW: 60 NW: 50

2.C ADDITIONAL INFORMATION:

T=CI=2.5+

OVER THE PAST 6 HOURS, CONVECTIVE ACTIVITY ASSOCIATED WITH TROPICAL DEPRESSION 02 HAS INTENSIFIED, WITH GOOD EQUATORIAL FEEDING AND REDUCED VERTICAL SHEAR. THE LATEST AMSR2 MICROWAVE IMAGE FROM 1013Z SHOWS AN EYE IN THE LOWER LAYERS (37GHZ), CONFIRMING THE INTENSIFICATION. THE NAMING STAGE IS IMMINENT.

THE SYSTEM'S TRACK IS DRIVEN BY A RIDGE OF LOW LEVEL LAYERS TO THE SOUTH-EAST. THIS WILL IMPOSE A SOUTH-WESTERLY TRACK TOWARDS THE MASCAREIGNES DURING THE FIRST HOURS UNTIL SUNDAY MORNING. THEREAFTER, AS THE SYSTEM INTENSIFIES, IT WILL BE DRIVEN BY A HIGH-ALTITUDE STEERING FLOW, ON THE WESTERN SIDE OF A RIDGE OF HIGH LEVEL THAT WOULD IMPOSE A SOUTHERLY THEN SOUTHEASTERLY TRACK ON IT. ACCORDING TO THE CURRENT RSMC FORECAST, THE SYSTEM SHOULD MOVE NORTH OF THE MASCAREIGNES BETWEEN SUNDAY EVENING AND MONDAY MORNING, CONTINUING TO MOVE CLOSER TOGETHER. THIS TIMING WILL DEPEND CLOSELY ON THE WEAKNESS OF THE RIDGE OF HIGH PRESSURE FURTHER TO THE SOUTH OF THE SYSTEM, WHICH COULD DELAY THE TURN AND SLOW THE MOVEMENT. THE RSMC FORECAST IS BASED ON A COMPROMISE BETWEEN THE BEST AVAILABLE MODELS, WHOSE DISPERSION REMAINS SIGNIFICANT AT THESE TIMES, LEADING TO UNCERTAINTY OVER THE DISTANCES OVER THE MASCAREIGNES ISLANDS ON MONDAY AND BEYOND.

THE MINIMUM WILL BENEFIT FROM GOOD ENVIRONMENTAL CONDITIONS, WITH A GOOD SUPPLY OF MOIST AIR, LOW VERTICAL SHEAR, VERY WARM WATERS WITH HIGH ENERGY POTENTIAL AND GOOD ALTITUDE DIVERGENCE. THE SYSTEM ALSO BENEFITS FROM GOOD EQUATORIAL LOW-LEVEL CONVERGENCE, THANKS TO A DYNAMIC MONSOON FLOW. WE CAN THEREFORE EXPECT A SUSTAINED TO RAPID INTENSIFICATION THAT WILL ENABLE IT TO REACH THE MODERATE TROPICAL STORM STAGE IN THE COMING HOURS. APPROACHING THE GREAT MASCAREIGNES (REUNION - MAURITIUS), THE SYSTEM SHOULD CONTINUE TO INTENSIFY, PROBABLY REACHING THE STAGE OF INTENSE TROPICAL CYCLONE.

EXPECTED IMPACTS IN LA REUNION AND MAURITIUS OVER THE NEXT 72 HOURS :

- WAVES OF AROUND 4 METERS ARE EXPECTED NORTH OF THE MASCAREIGNES ON SUNDAY, RISING TO 6 METERS BY MONDAY. THE HIGHEST WAVES MAY REACH TWICE THESE HEIGHTS.
- GALE FORCE WINDS ARE LIKELY FROM SUNDAY EVENING IN LA REUNION, AND FROM MONDAY IN MAURITIUS. STORM FORCE WINDS POSSIBLE ON MONDAY.
- HEAVY RAINS EXCEEDING 100MM IN 24H IN REUNION HIGH GROUNDS FROM SATURDAY EVENING. HEAVY RAINS SUPERIEURES A 100MM EN 24H GENERALIZED POSSIBLY FROM SUNDAY EVENING IN LA REUNION AND FROM MONDAY IN MAURITIUS.