

WTIO30 FMEE 240629

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 8/3/20232024

1.A TROPICAL DEPRESSION 3

2.A POSITION 2024/01/24 AT 0600 UTC:

WITHIN 30 NM RADIUS OF POINT 19.9 S / 57.5 E

(NINETEEN DECIMAL NINE DEGREES SOUTH AND  
FIFTY SEVEN DECIMAL FIVE DEGREES EAST)

MOVEMENT: NORTH-EAST 3 KT

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

4.A CENTRAL PRESSURE: 995 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: 390 SE: 270 SW: 0 NW: 335

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1007 HPA / 1400 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2024/01/24 18 UTC: 20.8 S / 58.5 E, VENT MAX= 035 KT, MODERATE TROPICAL  
STORM

28 KT NE: 370 SE: 260 SW: 150 NW: 270

34 KT NE: 195 SE: 110 SW: 55 NW: 120

24H: 2024/01/25 06 UTC: 22.4 S / 59.5 E, VENT MAX= 045 KT, MODERATE TROPICAL  
STORM

28 KT NE: 390 SE: 230 SW: 100 NW: 195

34 KT NE: 175 SE: 100 SW: 75 NW: 95

36H: 2024/01/25 18 UTC: 24.5 S / 60.9 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 325 SE: 305 SW: 390 NW: 250

34 KT NE: 130 SE: 165 SW: 120 NW: 120

48 KT NE: 0 SE: 45 SW: 0 NW: 0

48H: 2024/01/26 06 UTC: 26.3 S / 61.7 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM

28 KT NE: 345 SE: 455 SW: 435 NW: 315

34 KT NE: 140 SE: 260 SW: 250 NW: 165

48 KT NE: 0 SE: 55 SW: 85 NW: 55

60H: 2024/01/26 18 UTC: 27.5 S / 61.2 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 305 SE: 510 SW: 425 NW: 285  
34 KT NE: 110 SE: 285 SW: 250 NW: 155  
48 KT NE: 0 SE: 100 SW: 85 NW: 0

72H: 2024/01/27 06 UTC: 29.0 S / 60.1 E, VENT MAX= 045 KT, POST-TROPICAL  
DEPRESSION

28 KT NE: 215 SE: 480 SW: 400 NW: 185  
34 KT NE: 0 SE: 280 SW: 175 NW: 85

#### 2.B LONGER-RANGE OUTLOOK:

96H: 2024/01/28 06 UTC: 32.1 S / 58.3 E, VENT MAX= 030 KT, EXTRATROPICAL  
DEPRESSION

28 KT NE: 195 SE: 155 SW: 0 NW: 140

120H: 2024/01/29 06 UTC: 33.6 S / 60.3 E, VENT MAX= 025 KT, EXTRATROPICAL  
DEPRESSION

#### 2.C ADDITIONAL INFORMATION:

PT=CI=2.5

OVER THE LAST 6 HOURS, CONVECTIVE ACTIVITY HAS REMAINED MAINLY IN THE NORTHWEST QUADRANT OF THE CIRCULATION. THE SUMMITS REMAIN QUITE COLD. THE LOW-LEVEL CIRCULATION SEEMS TO BE BETTER DEFINED, WITH THE 0507UTC ASCAT SWATH ALLOWING 30KT WINDS TO BE MEASURED IN THE NORTHEAST QUADRANT. IN A BAND CONFIGURATION THAT IS NOT YET WELL DEFINED, A DVORAK ANALYSIS IN 2.5 PT CONFIRMS 30KT VALUES. PRESSURE MEASUREMENTS ON MAURITIUS WITH CORRECTION ALLOW US TO ESTIMATE THE PRESSURE AT THE CENTER AT 995HPA. THE BAPTISM THRESHOLD IS NOT TOO FAR AWAY.

IN TERMS OF TRACK, THE FIRST STAGES REMAIN TRICKY DUE TO THE STILL BROAD STRUCTURE OF THE CIRCULATION. CURRENTLY LOOPING OR QUASI-STATIONARY TO THE NORTH OF MAURITIUS, TROPICAL DEPRESSION 3 WILL CONTINUE TO MOVE SLOWLY AS THE RIDGE OF HIGH PRESSURE SHIFTS EASTWARDS. WITH THE ARRIVAL OF A SOUTH-WESTERLY TROUGH TODAY AND THE STRENGTHENING OF THE RIDGE TO THE NORTH-EAST, THE MAIN FLOW WILL GRADUALLY TURN NORTH-WESTERLY, FAVORING AN ACCELERATING MOVEMENT TO THE SOUTH-EAST. OVER THE NEXT 24 HOURS, CONFIDENCE IN THE TRACK HAS IMPROVED, WITH A CONSENSUS AMONG ALL THE NUMERICAL MODELS. AT THE END OF THE WEEK, WITH THE ARRIVAL OF A SUBTROPICAL RIDGE TO THE SOUTH-WEST AND THEN EAST, AND THE EASING OF THE MAIN FLOW, TROPICAL DEPRESSION 3 SHOULD SLOW DOWN AND TURN SOUTH-WEST.

IN TERMS OF INTENSITY, LITTLE CHANGE FROM THE PREVIOUS FORECAST. TROPICAL DEPRESSION 3 IS BENEFITING IN THE SHORT TERM FROM EXCELLENT CONVERGENCE ON THE EQUATORIAL COAST, WITH A POWERFUL MONSOON FLOW. INTENSIFICATION IS BEGINNING AND SHOULD PERSIST OVER THE NEXT 36-48H THANKS TO AN INCREASINGLY FAVORABLE ENVIRONMENT (STRONG OCEANIC POTENTIAL, DECREASING VERTICAL SHEAR AND INCREASING UPPER LEVEL DIVERGENCE). IT SHOULDN'T BE TOO LONG BEFORE THE 34KT THRESHOLD IS CROSSED. TROPICAL DEPRESSION 3 COULD THEN REACH THE STAGE OF A STRONG TROPICAL STORM BETWEEN THURSDAY AND FRIDAY. HOWEVER, THERE IS STILL A

GREAT DEAL OF UNCERTAINTY SURROUNDING THIS INTENSIFICATION, SINCE THE MODELS ARE NOT ALL CONVERGING AS TO THE CONSOLIDATION OF THE SYSTEM'S CORE. THE NEXT FEW HOURS WILL BE MORE INFORMATIVE AS TO THE GRADUAL INTENSIFICATION CHOSEN. AT THE END OF THE WEEK, THE STRENGTHENING OF THE NORTH-WESTERLY SHEAR AND THE SIGNIFICANT DROP IN OCEANIC POTENTIAL SOUTH OF 25S SHOULD ENCOURAGE THE SYSTEM TO WEAKEN OR EVEN EXTRATROPICALIZE.

EXPECTED IMPACTS IN THE NEXT 72 HOURS.

MAURITIUS:

- GALE FORCE WINDS POSSIBLE WEDNESDAY TO THURSDAY NIGHT.
- HEAVY RAIN POSSIBLE UP TO THURSDAY. RAINFALL RANGING FORM 50 TO 200MM IN 24H ESPECIALLY IN THE HILLS.
- VERY ROUGH SEA 4M FROM WEDNESDAY EVENING.

REUNION :

- NEAR GALE FORCE WINDS POSSIBLE WEDNESDAY TO THURSDAY NIGHT.
- HEAVY RAIN ON THE SOUTHERN PART UP TO FRIDAY MORNING. TOTAL RAINFALL AROUND 100 TO 200MM IN 24HRS, REACHING 300 TO 500MM ON EXPOSED SLOPES.
- VERY ROUGH SEA 4M FROM WEDNESDAY EVENING.

RODRIGUES :

- VERY ROUGH SEA 4M FROM WEDNESDAY.