

WTIO30 FMEE 051242

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 56/7/20222023

1.A MODERATE TROPICAL STORM 7 (FREDDY)

2.A POSITION 2023/03/05 AT 1200 UTC:

WITHIN 20 NM RADIUS OF POINT 23.0 S / 42.0 E

(TWENTY THREE DECIMAL ZERO DEGREES SOUTH AND  
FORTY TWO DECIMAL ZERO DEGREES EAST)

MOVEMENT: EAST 4 KT

3.A DVORAK ANALYSIS: 3.0/3.0/S 0.0/12 H

4.A CENTRAL PRESSURE: 988 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 45 KT

RADIUS OF MAXIMUM WINDS (RMW): NIL

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

28 KT NE: 350 SE: 360 SW: 315 NW: 260

34 KT NE: 220 SE: 250 SW: 195 NW: 195

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1008 HPA / 900 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2023/03/06 00 UTC: 23.3 S / 42.6 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 220 SE: 285 SW: 315 NW: 130

34 KT NE: 140 SE: 215 SW: 140 NW: 65

48 KT NE: 75 SE: 75 SW: 0 NW: 45

24H: 2023/03/06 12 UTC: 23.5 S / 42.7 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM

28 KT NE: 220 SE: 250 SW: 325 NW: 140

34 KT NE: 130 SE: 205 SW: 140 NW: 65

48 KT NE: 85 SE: 85 SW: 35 NW: 45

36H: 2023/03/07 00 UTC: 23.0 S / 42.4 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM

28 KT NE: 220 SE: 240 SW: 325 NW: 140

34 KT NE: 130 SE: 205 SW: 130 NW: 75

48 KT NE: 85 SE: 85 SW: 45 NW: 45

48H: 2023/03/07 12 UTC: 22.6 S / 42.1 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM

28 KT NE: 230 SE: 220 SW: 250 NW: 150

34 KT NE: 140 SE: 195 SW: 120 NW: 85

48 KT NE: 85 SE: 85 SW: 35 NW: 55

60H: 2023/03/08 00 UTC: 21.8 S / 41.3 E, VENT MAX= 065 KT, TROPICAL CYCLONE  
28 KT NE: 295 SE: 260 SW: 260 NW: 155  
34 KT NE: 165 SE: 220 SW: 140 NW: 100  
48 KT NE: 95 SE: 95 SW: 55 NW: 55  
64 KT NE: 55 SE: 45 SW: 45 NW: 35

72H: 2023/03/08 12 UTC: 21.0 S / 40.5 E, VENT MAX= 065 KT, TROPICAL CYCLONE  
28 KT NE: 295 SE: 295 SW: 305 NW: 205  
34 KT NE: 175 SE: 250 SW: 155 NW: 110  
48 KT NE: 95 SE: 95 SW: 55 NW: 55  
64 KT NE: 55 SE: 55 SW: 45 NW: 35

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

96H: 2023/03/09 12 UTC: 19.6 S / 39.8 E, VENT MAX= 080 KT, TROPICAL CYCLONE  
28 KT NE: 325 SE: 285 SW: 280 NW: 230  
34 KT NE: 185 SE: 260 SW: 165 NW: 120  
48 KT NE: 100 SE: 100 SW: 65 NW: 65  
64 KT NE: 65 SE: 65 SW: 55 NW: 45

120H: 2023/03/10 12 UTC: 18.5 S / 39.0 E, VENT MAX= 070 KT, TROPICAL CYCLONE  
28 KT NE: 350 SE: 315 SW: 295 NW: 220  
34 KT NE: 185 SE: 285 SW: 185 NW: 150  
48 KT NE: 110 SE: 110 SW: 60 NW: 70  
64 KT NE: 60 SE: 70 SW: 60 NW: 50

#### 2.C ADDITIONAL INFORMATION:

FT=CI=3.0

DURING THE LAST 6 HOURS, THE CONVECTION AROUND THE CENTER OF FREDDY HAS IMPROVED WHILE CONSOLIDATING A MORE COMPACT LOW-LEVEL CIRCULATION. IN THE ABSENCE OF NEW ASCAT OR MICROWAVE DATA AND IN AGREEMENT WITH THE AVAILABLE OBJECTIVE AND SUBJECTIVE ANALYSES, THE INTENSITY OF FREDDY IS MAINTAINED AT 45KT.

FREDDY IS MOVING EASTWARD UNDER THE INFLUENCE OF THE NEAR-EQUATORIAL RIDGE TO THE NORTH. THIS MOVEMENT WILL REMAIN SLOW BECAUSE OF A SECOND WEAKER CONTRADICTORY STEERING FLOW DRIVEN BY THE SUBTROPICAL RIDGE IN THE SOUTH. THEN A NEW SUBTROPICAL RIDGE SWELLS SOUTHWEST OF FREDDY AND HE SHOULD MAKE A TURN IN THE NEXT 24 HOURS BEFORE TAKING A NORTHWEST TRACK. IF ALL THE AVAILABLE MODELS PROPOSE THIS TURN, THERE IS STILL SOME UNCERTAINTY ABOUT THE EXACT LOCATION OF THIS CHANGE OF TRACK. HOWEVER, THE OPTION OF A LANDING ON MADAGASCAR SEEMS TO BE DISCARDED AT THE MOMENT. IN THE LONGER TERM, TWO SCENARIOS SEEM TO BE EMERGING: ONE PROPOSES A MORE SOUTHERLY AND FASTER TRACK AS SUGGESTED BY GFS, THE OTHER A MORE NORTHERLY AND SLOWER TRACK AS SUGGESTED BY IFS. THE RMSC FORECAST IS A COMPROMISE BETWEEN THE TWO SCENARIOS, WITH A PREFERENCE FOR A MORE NORTHERN TRACK. THE UNCERTAINTY IS STILL GREAT IN THE LONGER TERM AND WILL DEPEND ON THE TURN OF FREDDY.

IN TERMS OF INTENSITY, FREDDY IS CURRENTLY BENEFITING FAVORABLE ENVIRONMENTAL CONDITIONS FOR ITS INTENSIFICATION. INDEED, WITH A WEAK

WIND SHEAR, A GOOD OCEANIC POTENTIAL ALONG THE TRACK AND A GOOD ALTITUDE DIVERGENCE, FREDDY SHOULD REACH THE STAGE OF STRONG TROPICAL STORM DURING THE NEXT NIGHT. IN THE LONGER TERM, ALL THE MODELS SUGGEST THAT FREDDY SHOULD INTENSIFY UNTIL THE STAGE OF TROPICAL CYCLONE. NEVERTHELESS, A SHEAR STRESS FROM THE SOUTH WILL BE PRESENT FROM WEDNESDAY ONWARDS WHEN IT MOVES NORTHWARDS, AND COULD TEMPORARILY SLOW DOWN A MORE IMPORTANT INTENSIFICATION.

IMPACTS ON INHABITED LANDS DURING THE NEXT 72 HOURS :

- MADAGASCAR

\* HEAVY RAINS IN THE NEXT 72 HOURS OVER THE COASTAL AREAS OF THE WEST COAST OF MENABE AND ATSIMO-ANDREFANA. CUMULATIVE RAINFALL OVER 72 HOURS RANGING FROM 100 TO 150 MM WITH A POTENTIAL OF 200 MM OVER THE REGION OF ATSIMO-ANDREFANA.

\* GALE OVER ATSIMO-ANDREFANA REGION, FOR THE NEXT 36H, MAINLY OVER COASTAL AREAS, BEFORE AN IMPROVEMENT ON TUESDAY.

\* VERY STRONG SEA WITH WAVES CLOSE TO 4M FROM CAPE SAINT-VINCENT TO CAPE SAINTE-MARIE, GRADUALLY DIMINISHING DURING MONDAY.