

WTIO30 FMEE 071238

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 64/7/20222023

1.A TROPICAL CYCLONE 7 (FREDDY)

2.A POSITION 2023/03/07 AT 1200 UTC:

WITHIN 20 NM RADIUS OF POINT 23.1 S / 42.1 E

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

MOVEMENT: NORTH-NORTH-WEST 4 KT

3.A DVORAK ANALYSIS: 4.5/4.5/D 0.5/6 H

4.A CENTRAL PRESSURE: 967 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 70 KT

RADIUS OF MAXIMUM WINDS (RMW): 19 KM

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

28 KT NE: 205 SE: 425 SW: 445 NW: 350

34 KT NE: 185 SE: 150 SW: 220 NW: 220

48 KT NE: 55 SE: 55 SW: 60 NW: 55

64 KT NE: 30 SE: 30 SW: 30 NW: 30

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: 2023/03/08 00 UTC: 22.2 S / 41.2 E, VENT MAX= 075 KT, TROPICAL CYCLONE

28 KT NE: 230 SE: 315 SW: 280 NW: 195

34 KT NE: 140 SE: 165 SW: 185 NW: 100

48 KT NE: 75 SE: 75 SW: 55 NW: 65

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

24H: 2023/03/08 12 UTC: 21.3 S / 40.4 E, VENT MAX= 070 KT, TROPICAL CYCLONE

28 KT NE: 230 SE: 305 SW: 260 NW: 250

34 KT NE: 140 SE: 155 SW: 165 NW: 130

48 KT NE: 75 SE: 85 SW: 65 NW: 75

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

36H: 2023/03/09 00 UTC: 20.4 S / 39.4 E, VENT MAX= 065 KT, TROPICAL CYCLONE

28 KT NE: 240 SE: 315 SW: 285 NW: 220

34 KT NE: 155 SE: 155 SW: 165 NW: 120

48 KT NE: 85 SE: 75 SW: 55 NW: 45

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

48H: 2023/03/09 12 UTC: 19.8 S / 38.7 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM  
28 KT NE: 230 SE: 305 SW: 280 NW: 230  
34 KT NE: 150 SE: 150 SW: 185 NW: 110  
48 KT NE: 85 SE: 85 SW: 65 NW: 45

60H: 2023/03/10 00 UTC: 18.6 S / 38.1 E, VENT MAX= 070 KT, TROPICAL CYCLONE  
28 KT NE: 195 SE: 295 SW: 295 NW: 195  
34 KT NE: 130 SE: 150 SW: 165 NW: 100  
48 KT NE: 65 SE: 75 SW: 55 NW: 45  
64 KT NE: 45 SE: 45 SW: 45 NW: 35

72H: 2023/03/10 12 UTC: 17.7 S / 37.9 E, VENT MAX= 080 KT, TROPICAL CYCLONE  
28 KT NE: 155 SE: 250 SW: 295 NW: 130  
34 KT NE: 100 SE: 110 SW: 140 NW: 65  
48 KT NE: 55 SE: 65 SW: 55 NW: 45  
64 KT NE: 35 SE: 45 SW: 45 NW: 35

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

96H: 2023/03/11 12 UTC: 17.1 S / 37.4 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM  
28 KT NE: 0 SE: 280 SW: 240 NW: 100  
34 KT NE: 0 SE: 120 SW: 120 NW: 0

120H: 2023/03/12 12 UTC: 17.0 S / 36.1 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

#### 2.C ADDITIONAL INFORMATION:

T=CI=4.5+

FREDDY HAS STARTED TO DEVELOP A MORE PERENNIAL EYE PATTERN SINCE 0745Z WITH RAW DT ANALYSIS THAT AVERAGED OVER 3H GAVE A DT AT JUST OVER 4.5. ON THE OBJECTIVE ANALYSES, THE ATMS ANALYSIS OF S-NPP FROM 1033Z AND THE AIDT A LITTLE BEFORE 12Z ALSO PLEAD FOR AN INTENSITY ANALYSIS AT 70 KT.

THE TRACK FORECAST IS SIGNIFICANTLY FASTER THAN THE PREVIOUS ONE AND REFLECTS THE GROWING CONSENSUS WITH THE 00Z AND 06Z RUNS ON THE SPEED OF MOVEMENT OF THE SYSTEM TO THE MOZAMBICAN COAST: UNDER THE IMPULSE OF THE STRENGTHENING OF THE SUBTROPICAL RIDGE TO THE SOUTH AND THE CLEARER ESTABLISHMENT OF THE RIDGE TO THE WEST OF THE SYSTEM, FREDDY HAS BEGUN A NORTH-WESTERN MOVEMENT WHICH IT SHOULD MAINTAIN FOR THE NEXT SEVERAL DAYS. EVEN IF THERE IS NOT YET A UNANIMOUS AGREEMENT ON ALL THE NUMERICAL GUIDANCE, THE EUROPEAN AND AMERICAN MODELS ARE NOW IN VERY GOOD AGREEMENT ON THE TIMING OF THE ARRIVAL OF FREDDY ON THE MOZAMBICAN COAST. THE PRESENT FORECAST FULLY REFLECTS A GFS/IFS COMPROMISE OVER THE WHOLE PERIOD. THE ARRIVAL OF FREDDY ON THE MOZAMBICAN COASTS IS NOW EXPECTED FOR FRIDAY AT THE END OF THE DAY OR BEGINNING OF THE FOLLOWING NIGHT.

THE INTENSIFICATION STILL IN PROGRESS IS CARRIED OUT IN A CONTEXT OF RATHER WEAK VERTICAL SHEAR (LOWERED TO 7 KT FROM THE SOUTH ACCORDING TO THE CIMSS AT 06Z). HOWEVER, BY TOMORROW, A MID TROPOSPHERIC SHEAR FROM THE SOUTH SHOULD IMPACT FREDDY FOR ABOUT 48 HOURS. THE INTENSITY FORECAST CONTINUES TO CONSIDER A POSSIBLE IMPACT OF THIS CONSTRAINT

WHICH CAN MAKE THE INTENSITY OF FREDDY FLUCTUATE: POSSIBLE CONTINUATION OF THE INTENSIFICATION NEXT NIGHT THEN POSSIBLE SLIGHT WEAKENING / STABILIZATION OF THE INTENSITY, WEDNESDAY AND THURSDAY UNDER THE SHEARED CONSTRAINT. FROM THURSDAY EVENING, THE SHEAR FADES AND WITH AN INCREASING OCEANIC POTENTIAL, FREDDY COULD INTENSIFY FURTHER AS IT APPROACHES THE MOZAMBIQUE COAST ON FRIDAY.

IMPACTS ON INHABITED LANDS DURING THE NEXT 72 HOURS:

- MADAGASCAR :

\* IMPROVEMENT IN PROGRESS: ADDITIONAL RAINFALL EXPECTED OVER MADAGASCAR SHOULD NOT EXCEED 100 MM IN 24 HOURS, EXCEPT LOCALLY OVER THE NORTH OF THE ATSIMO-ANDREFANA REGION.

\* GALE OVER THE NORTHERN PART OF ATSIMO-ANDREFANA REGION FOR THE NEXT 06/12H. END OF THE GALE NEXT NIGHT.

\* SEA STATE STILL VERY STRONG ON A NORTHERN PORTION OF THE COASTLINE OF THE REGION OF ATSIMO-ANDREFANA. IMPROVEMENT NEXT NIGHT.

- MOZAMBIQUE :

\* GALE LIKELY TO ARRIVE ON FRIDAY OVER ZAMBEZE PROVINCE (PROBABILITY OVER 60%) AND POSSIBLY OVER THE NORTHERN PART OF SOFALA PROVINCE (PROBABILITY OF 20-30%).

\* DEGRADATION OF THE SEA STATE WITH SEAS THAT COULD BECOME VERY ROUGH TO HEAVY DURING THE DAY ON FRIDAY (H1/3 COULD REACH AND EXCEED 6M). A SURGE OF ABOUT 1M IS POSSIBLE NEAR THE LANDFALL AREA.

\* HEAVY RAIN EPISODE LIKELY DURING THE DAY ON FRIDAY WITH THE ARRIVAL OF THE INNER CORE OF THE CYCLONE ON THE COAST. TOTAL STORM RAINFALL TO BE SPECIFIED LATER.