

WTIO30 FMEE 091823

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 73/7/20222023

1.A TROPICAL CYCLONE 7 (FREDDY)

2.A POSITION 2023/03/09 AT 1800 UTC:

WITHIN 20 NM RADIUS OF POINT 19.2 S / 38.8 E

(NINETEEN DECIMAL TWO DEGREES SOUTH AND
THIRTY EIGHT DECIMAL EIGHT DEGREES EAST)

MOVEMENT: NORTH-NORTH-WEST 6 KT

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

4.A CENTRAL PRESSURE: 976 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 65 KT

RADIUS OF MAXIMUM WINDS (RMW): 37 KM

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

28 KT NE: 240 SE: 230 SW: 220 NW: 240

34 KT NE: 120 SE: 130 SW: 120 NW: 100

48 KT NE: 65 SE: 85 SW: 60 NW: 65

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

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1008 HPA / 1100 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2023/03/10 06 UTC: 18.5 S / 37.9 E, VENT MAX= 080 KT, TROPICAL CYCLONE

28 KT NE: 205 SE: 240 SW: 230 NW: 155

34 KT NE: 110 SE: 140 SW: 140 NW: 100

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

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

24H: 2023/03/10 18 UTC: 18.0 S / 37.3 E, VENT MAX= 090 KT, INTENSE TROPICAL
CYCLONE

28 KT NE: 165 SE: 220 SW: 175 NW: 140

34 KT NE: 95 SE: 120 SW: 120 NW: 85

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

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

36H: 2023/03/11 06 UTC: 17.6 S / 36.7 E, VENT MAX= 055 KT, OVERLAND DEPRESSION

28 KT NE: 155 SE: 220 SW: 130 NW: 120

34 KT NE: 85 SE: 120 SW: 95 NW: 95

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

48H: 2023/03/11 18 UTC: 17.3 S / 36.0 E, VENT MAX= 030 KT, OVERLAND DEPRESSION
28 KT NE: 150 SE: 220 SW: 130 NW: 100

60H: 2023/03/12 06 UTC: 17.0 S / 35.1 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

72H: 2023/03/12 18 UTC: 16.7 S / 34.0 E, VENT MAX= 020 KT, OVERLAND DEPRESSION

2.B LONGER-RANGE OUTLOOK:

96H: 2023/03/13 18 UTC: 16.8 S / 33.0 E, VENT MAX= 020 KT, OVERLAND DEPRESSION

2.C ADDITIONAL INFORMATION:

T=CI=4.5-

DURING THE LAST 6 HOURS, THE CLOUDY CONFIGURATION IN CDO HAS BEEN MAINTAINED ALTHOUGH THE CONVECTIVE TOPS HAVE WARMED UP THEN COOLED DOWN AGAIN. IT IS QUITE DIFFICULT TO LOCATE WITH PRECISION THE CIRCULATION CENTER BUT IT REMAINS WELL UNDER THE MOST MARKED CONVECTION. IN THE ABSENCE OF OTHER SATELLITE WIND ESTIMATES, A DVORAK ANALYSIS IN CDO OF 4.5- CAN BE MADE LETTING FREDDY PASS THE TROPICAL CYCLONE THRESHOLD.

ALWAYS SO MANY DIFFERENCES BETWEEN THE GUIDANCES WHICH CAN BE EXPLAINED BY THE PREDOMINANCE OR NOT OF THE SUBTROPICAL RIDGE OVER AFRICA WHICH DRIVES MORE OR LESS THE DIRECTIONAL FLOW ON FREDDY. THE CURRENT MOVEMENT OF FREDDY TOWARDS THE NORTH-NORTH-WEST REMAINS DRIVEN BY THE PRESENCE OF THIS SUBTROPICAL RIDGE. IN THE SHORT TERM, THIS RIDGE WILL INDUCE A MORE NORTH-WESTERLY MOVEMENT WHILE MAINTAINING A FAIRLY CONSTANT SPEED AND LEAD TO A LANDING STILL PLANNED ON THE COAST OF MOZAMBIQUE ON THE WESTERN PART OF THE PROVINCE OF ZAMBEZE NEAR QUELIMANE, ON FRIDAY EVENING OR DURING THE FOLLOWING NIGHT. SOME GUIDELINES WHOSE CURRENT LOCATION IS TOO SOUTHERN SUGGEST A SLOWER MOVEMENT UNDER THE EFFECT OF A MORE MARKED INFLUENCE OF THE NEAR EQUATORIAL RIDGE, A SCENARIO THAT IS NOT FOLLOWED BY THE RSMC. ON A LONGER TIME SCALE, IT IS POSSIBLE THAT THE RESIDUAL VORTEX OF FREDDY GOES OUT TO SEA AGAIN.

IN TERMS OF INTENSITY, THE DECREASE OF THE SHEAR, THE WARMER WATERS AND A BETTER DIVERGENCE OF ALOFT SHOULD FAVOUR THE INTENSIFICATION OF FREDDY, WITH A POSSIBLE RAPID INTENSIFICATION IN THE NEXT HOURS. FREDDY COULD THEREFORE REACH THE STAGE OF INTENSE TROPICAL CYCLONE BEFORE ITS LANDING ON THE COASTS OF MOZAMBIQUE. THIS PREDICTION REMAINS UNCERTAIN AND WILL DEPEND ON THE TIMING OF THE LANDFALL. THEREAFTER OVER THE WEEKEND, FREDDY IS EXPECTED TO WEAKEN AS IT PASSES OVER THE MOZAMBIQUE COAST.

IMPACTS ON INHABITED LANDS OVER THE NEXT 72 HOURS:

FREDDY'S EFFECTS WILL BE CONTAINED DUE TO THE SMALL SIZE OF THE SYSTEM.

- MOZAMBIQUE :

* GALE FORCE WINDS ARE LIKELY TO ARRIVE IN THE MORNING OF FRIDAY OVER ZAMBEZE PROVINCE AND THE NORTHERN PART OF SOFALA PROVINCE, FOLLOWED BY STORM FORCE WINDS IN THE AFTERNOON OR EVENING. HURRICANE WINDS

POSSIBLE IN THE IMMEDIATE VICINITY OF THE CENTER.

* DEGRADATION OF THE SEA STATE WITH A SEA BECOMING VERY ROUGH TO BIG DURING THE DAY ON FRIDAY (H1/3 BETWEEN 4 AND 6 M). A 1M50 TO 2M SURGE IS POSSIBLE NEAR THE LANDFALL LOCATION.

* HEAVY RAIN ARE LIKELY DURING THE DAY ON FRIDAY AND THE FOLLOWING NIGHT WITH THE ARRIVAL OF THE HEART OF THE SYSTEM ON THE COAST. EXPECTED RAINFALL TOTALS OF 100 TO 150 MM BUT LOCALLY MORE THAN 300 MM ON THE COAST NEAR THE HEART OF THE PHENOMENON.

-MALAWI:

* POSSIBLE ARRIVAL OF HEAVY RAINS RELATED TO FREDDY OVER THE SOUTH OF THE COUNTRY DURING SATURDAY AND PERSISTENT ON SUNDAY AND MONDAY. RAINFALL EXCEEDING 100MM IN 24 HOURS ARE EXPECTED.