

WTIO30 FMEE 080619

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 67/7/20222023

1.A TROPICAL CYCLONE 7 (FREDDY)

2.A POSITION 2023/03/08 AT 0600 UTC:

WITHIN 20 NM RADIUS OF POINT 21.8 S / 40.6 E

(TWENTY ONE DECIMAL EIGHT DEGREES SOUTH AND
FORTY DECIMAL SIX DEGREES EAST)

MOVEMENT: NORTH-WEST 7 KT

3.A DVORAK ANALYSIS: 5.0/5.0/S 0.0/12 H

4.A CENTRAL PRESSURE: 968 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 75 KT

RADIUS OF MAXIMUM WINDS (RMW): NIL

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

28 KT NE: 230 SE: 260 SW: 240 NW: 205

34 KT NE: 110 SE: 100 SW: 130 NW: 110

48 KT NE: 45 SE: 65 SW: 60 NW: 45

64 KT NE: 30 SE: 35 SW: 35 NW: 30

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1009 HPA / 1100 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2023/03/08 18 UTC: 21.0 S / 39.9 E, VENT MAX= 065 KT, TROPICAL CYCLONE

28 KT NE: 240 SE: 240 SW: 220 NW: 175

34 KT NE: 120 SE: 130 SW: 155 NW: 100

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

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

24H: 2023/03/09 06 UTC: 20.3 S / 38.9 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM

28 KT NE: 250 SE: 280 SW: 205 NW: 175

34 KT NE: 130 SE: 155 SW: 155 NW: 100

48 KT NE: 45 SE: 65 SW: 75 NW: 45

36H: 2023/03/09 18 UTC: 19.5 S / 38.2 E, VENT MAX= 065 KT, TROPICAL CYCLONE

28 KT NE: 230 SE: 230 SW: 220 NW: 155

34 KT NE: 120 SE: 120 SW: 140 NW: 75

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

64 KT NE: 35 SE: 30 SW: 30 NW: 35

48H: 2023/03/10 06 UTC: 18.7 S / 37.6 E, VENT MAX= 065 KT, TROPICAL CYCLONE

28 KT NE: 205 SE: 240 SW: 215 NW: 140
34 KT NE: 110 SE: 130 SW: 155 NW: 85
48 KT NE: 45 SE: 55 SW: 75 NW: 45
64 KT NE: 35 SE: 35 SW: 35 NW: 35

60H: 2023/03/10 18 UTC: 18.0 S / 37.2 E, VENT MAX= 065 KT, TROPICAL CYCLONE
28 KT NE: 130 SE: 205 SW: 195 NW: 95
34 KT NE: 55 SE: 100 SW: 110 NW: 65
48 KT NE: 35 SE: 35 SW: 55 NW: 45
64 KT NE: 35 SE: 35 SW: 35 NW: 35

72H: 2023/03/11 06 UTC: 17.6 S / 36.8 E, VENT MAX= 050 KT, OVERLAND DEPRESSION
28 KT NE: 130 SE: 130 SW: 155 NW: 95
34 KT NE: 55 SE: 65 SW: 100 NW: 65
48 KT NE: 35 SE: 45 SW: 55 NW: 45

2.B LONGER-RANGE OUTLOOK:

96H: 2023/03/12 06 UTC: 17.4 S / 35.8 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

120H: 2023/03/13 06 UTC: 17.6 S / 35.0 E, VENT MAX= 020 KT, OVERLAND DEPRESSION

2.C ADDITIONAL INFORMATION:

T=CI=5.0-

DURING THE LAST 6 HOURS, FREDDY HAS LOST ITS EYE PATTERN IN PROFILE OF A CENTER PATTERN DROWNED UNDER THE MASS, UNDER THE EFFECT OF THE SOUTH WIND SHEAR WHICH IS STRENGTHENING. AT THE SAME TIME, THE TEMPERATURE OF THE TOP OF THE CLOUDS HAS COOLED VERY SLIGHTLY. THE ASCAT PASS OF 0615 PLACED THE CENTER 50 NAUTICAL MILES EAST OF BASSAS DA INDIA AND 45 MN NORTH-NORTHEAST OF EUROPA. IN ACCORDANCE WITH THE AVAILABLE OBJECTIVE AND SUBJECTIVE ANALYSES, FREDDY IS MAINTAINED AS A TROPICAL CYCLONE WITH WINDS OF 75KT.

IN TERMS OF TRACK, THE MOVEMENT OF FREDDY IS DRIVEN BY THE PRESENCE OF A SUBTROPICAL RIDGE OVER AFRICA THAT EXTENDS SOUTH OF THE MOZAMBIQUE CHANNEL AND THE MORE PRONOUNCED ESTABLISHMENT OF THE RIDGE TO THE WEST OF THE SYSTEM. WE OBSERVE A WEAK DISPERSION OF THE MODELS ON THIS TRACK TOWARDS THE NORTHWEST FOR THE NEXT 24-36H. THEN THE DISPERSION INCREASES AT THE TIME OF THE LANDING OF FREDDY ON THE COAST OF MOZAMBIQUE WITH DIFFERENCES IN TIMING BUT ALSO IN POSITION. THE RSMC FORECAST IS A CONSENSUS OF THE DIFFERENT SCENARIOS AVAILABLE WITH A LANDFALL ON THE MOZAMBIQUE COAST PROBABLY ON FRIDAY NIGHT BETWEEN ZAMBEZE PROVINCE AND SOFALA PROVINCE.

IN TERMS OF INTENSITY, FREDDY ENTERS AN AREA WITH A MORE PRONOUNCED SOUTHWARD WIND SHEAR OF THE MID-TROPOSPHERE. THIS CONSTRAINT COULD GENERATE A TILT OF THE STRUCTURE ON THE VERTICAL AND ALLOW DRY AIR TO APPROACH THE CENTER. FREDDY COULD THEREFORE LOSE SOME INTENSITY DURING THE NEXT 24 HOURS, AND EVEN BE TEMPORARILY DOWNGRADED TO A STRONG TROPICAL STORM. THEN FROM THURSDAY EVENING, IN SPITE OF THE MAINTENANCE OF THE SHEAR, FREDDY COULD MEET WARMER WATERS WITH A BETTER DIVERGENCE OF ALTITUDE AND THUS TO INTENSIFY AGAIN AT THE STAGE

OF TROPICAL CYCLONE BEFORE ITS LANDFALL ON THE COASTS OF MOZAMBIQUE. THEN NEXT WEEKEND, FREDDY SHOULD WEAKEN OVER LAND.

IMPACTS ON INHABITED LANDS DURING 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.

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

* HEAVY RAINS 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 OF 100 TO 150 MM, LOCALLY 200 MM NEAR THE HEART.