

WTIO30 FMEE 240118

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 39/7/20222023

1.A SEVERE TROPICAL STORM 7 (FREDDY)

2.A POSITION 2023/02/24 AT 0000 UTC:

WITHIN 20 NM RADIUS OF POINT 22.2 S / 37.5 E

(TWENTY TWO DECIMAL TWO DEGREES SOUTH AND
THIRTY SEVEN DECIMAL FIVE DEGREES EAST)

MOVEMENT: WEST 11 KT

3.A DVORAK ANALYSIS: 3.5/3.5/D 1.5/24 H

4.A CENTRAL PRESSURE: 986 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 55 KT

RADIUS OF MAXIMUM WINDS (RMW): 43 KM

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

28 KT NE: 205 SE: 220 SW: 220 NW: 220

34 KT NE: 130 SE: 165 SW: 150 NW: 130

48 KT NE: 85 SE: 85 SW: 70 NW: 65

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

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1010 HPA / 700 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2023/02/24 12 UTC: 22.1 S / 35.4 E, VENT MAX= 070 KT, TROPICAL CYCLONE

28 KT NE: 220 SE: 230 SW: 155 NW: 120

34 KT NE: 120 SE: 150 SW: 100 NW: 75

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

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

24H: 2023/02/25 00 UTC: 22.3 S / 33.8 E, VENT MAX= 035 KT, OVERLAND DEPRESSION

28 KT NE: 155 SE: 195 SW: 155 NW: 110

34 KT NE: 85 SE: 130 SW: 0 NW: 0

36H: 2023/02/25 12 UTC: 22.3 S / 32.6 E, VENT MAX= 030 KT, OVERLAND DEPRESSION

28 KT NE: 110 SE: 155 SW: 110 NW: 0

48H: 2023/02/26 00 UTC: 21.7 S / 32.0 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

60H: 2023/02/26 12 UTC: 20.9 S / 31.4 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

72H: 2023/02/27 00 UTC: 19.9 S / 30.8 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

2.B LONGER-RANGE OUTLOOK:

96H: 2023/02/28 00 UTC: 18.8 S / 28.3 E, VENT MAX= 020 KT, FILLING UP

120H: 2023/03/01 00 UTC: 18.4 S / 27.4 E, VENT MAX= 015 KT, DISSIPATING

2.C ADDITIONAL INFORMATION:

T=CI=3.5+

FREDDY'S CURVED BAND HAS CONTINUED TO WRAP MORE AND MORE AROUND THE STORM'S CENTER WITH ACTIVE CONVECTION. A 1522Z SMAP PASS INDICATED WINDS UP TO 58KT, PERFECTLY IN LINE WITH THE SURFACE OBSERVATIONS FROM EUROPA ISLAND A BIT EARLIER. L'INTENSITE EST MAINTENUE A 55KT A 00UTC. THE SYSTEM HAS A QUITE BROAD CENTRAL CORE, WHICH HAS SLOWED ITS INTENSIFICATION UP TO NOW. ITS OBSERVED TRACK IS A BIT FURTHER SOUTH AND A BIT SLOWER THAN INITIALLY FORECAST.

DRIVEN BY THE SUBTROPICAL RIDGE TO ITS SOUTH, FREDDY KEEPS TRACKING WESTWARDS UNTIL LANDFALL ON THE COAST OF MOZAMBIQUE ON FRIDAY AROUND NOON. FROM THIS WEEKEND, UNDER THE EFFECT OF A TROUGH TO THE SOUTH AND THE CONTRADICTIONARY STEERING FLOWS FROM TWO REMNANT RIDGES EAST AND WEST, THE SYSTEM SHOULD SLOW DOWN AND THEN SLOWLY DRIFT NORTHWESTWARD INLAND OF SOUTHERN AFRICA WHILE SLOWLY FILLING IN.

UNDER CONDUCIVE ENVIRONMENTAL CONDITIONS (GOOD OCEANIC POTENTIAL, MOIST ENVIRONMENT, LOW WIND SHEAR), THE SYSTEM IS EXPECTED TO REACH TROPICAL CYCLONE STAGE BEFORE ITS LANDFALL OVER MOZAMBIQUE, ESPECIALLY SINCE ITS MOVEMENT HAS BEEN SLIGHTLY DELAYED, WHICH GIVES IT A FEW EXTRA HOURS OVER THE MOZAMBIQUE CHANNEL'S WARM WATERS. THE SPEED OF INTENSIFICATION IS STILL PARTLY UNCERTAIN AND DEPENDS ON THE MORE OR LESS RAPID CONTRACTION OF THE CONVECTIVE CORE, WHICH IS INITIALLY QUITE BROAD. THE SYSTEM SHOULD THEN WEAKEN SIGNIFICANTLY INLAND FROM FRIDAY EVENING.

IMPACTS ON INHABITED LANDS DURING THE NEXT 72 HOURS :

- MOZAMBIQUE: LANDFALL EXPECTED ON FRIDAY LATE MORNING AND AROUND NOON ON THE NORTH-EAST OF INHAMBANE PROVINCE, NEAR VILANCULOS.

* ARRIVAL OF GALE FORCE WINDS IN THE END OF NIGHT OF THURSDAY TO FRIDAY. HURRICANE FORCE WINDS LIKELY DURING FRIDAY MORNING UNTIL EARLY AFTERNOON.

* HEAVY SEAS (6 TO 9 METERS) NEAR THE LANDFALL AREA ON FRIDAY MORNING AND NOON. STORM SURGE COULD REACH AROUND 1 METER NEAR THE LANDFALL AREA.

* INTENSE RAINFALL SOUTH OF BEIRA, NOTABLY IN INHAMBANE PROVINCE, RAPIDLY SPREADING INLAND (GAZA PROVINCE) WITH ACCUMULATIONS EXCEEDING 200 TO 300 MM AND LOCALLY 400 MM IN 72H. SEVERE FLOODING VERY LIKELY.

- SOUTH/SOUTHEASTERN ZIMBABWE (AND POSSIBLY EXTREME NORTHEASTERN SOUTH AFRICA) : INTENSE RAINFALL FROM SATURDAY EXCEEDING 100-200 MM IN

24H AND LOCALLY 300 MM IN 48H, WHICH MAY CAUSE SEVERE FLOODING.