

WTIO30 FMEE 240728

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 40/7/20222023

1.A SEVERE TROPICAL STORM 7 (FREDDY)

2.A POSITION 2023/02/24 AT 0600 UTC:

WITHIN 30 NM RADIUS OF POINT 22.5 S / 36.5 E

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

MOVEMENT: WEST-SOUTH-WEST 9 KT

3.A DVORAK ANALYSIS: 4.0/4.0/D 0.5/6 H

4.A CENTRAL PRESSURE: 986 HPA

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

RADIUS OF MAXIMUM WINDS (RMW): 65 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): 1009 HPA / 600 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2023/02/24 18 UTC: 22.6 S / 34.6 E, VENT MAX= 045 KT, OVERLAND DEPRESSION

28 KT NE: 185 SE: 195 SW: 155 NW: 140

34 KT NE: 120 SE: 120 SW: 95 NW: 75

24H: 2023/02/25 06 UTC: 22.7 S / 33.3 E, VENT MAX= 035 KT, OVERLAND DEPRESSION

28 KT NE: 100 SE: 110 SW: 140 NW: 85

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

36H: 2023/02/25 18 UTC: 22.5 S / 32.5 E, VENT MAX= 030 KT, OVERLAND DEPRESSION

28 KT NE: 100 SE: 215 SW: 0 NW: 85

48H: 2023/02/26 06 UTC: 21.6 S / 32.3 E, VENT MAX= 030 KT, OVERLAND DEPRESSION

28 KT NE: 100 SE: 215 SW: 0 NW: 85

60H: 2023/02/26 18 UTC: 20.6 S / 31.9 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

72H: 2023/02/27 06 UTC: 20.0 S / 31.3 E, VENT MAX= 020 KT, OVERLAND DEPRESSION

2.B LONGER-RANGE OUTLOOK:
NIL

2.C ADDITIONAL INFORMATION:
T=CI=4.0-

THE FREDDY CLOUD PATTERN HAS DETERIORATED OVER THE LAST SIX HOURS, AS IT APPROACHES THE MOZAMBIKAN COASTS. INDEED, THE CURVED BAND PATTERN IN FORMATION SINCE 00Z, HAS PROGRESSIVELY LOST IN DEFINITION, WITH CLOUDY TOPS THAT HAVE RAPIDLY WARMED UP. THE CENTER OF THE LLC REMAINED SOUTH OF THE MAIN CONVECTIVE MASS. THE SSMIS MICRO-ONDE IMAGE OF 0149Z PRESENTS A WIDE EYE WITH A MAJOR BREAK IN THE NORTHERN HALF-CIRCLE. COMPARED TO THE PREVIOUS TRACK, THE 06Z TRACK SHOWS A SLIGHTLY MORE SOUTHERLY LANDING, BUT WITH AN EQUIVALENT TIMING AND INTENSITY AT THE SEVERE STORM STAGE.

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 CONTRADICTORY 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.

THE ENVIRONMENTAL CONDITIONS REMAIN FAVORABLE (GOOD OCEANIC POTENTIAL, HUMID ENVIRONMENT, LOW SHEAR) SHOULD ALLOW THE SYSTEM TO MAINTAIN ITSELF AT THE STAGE OF SEVERE TROPICAL STORM BEFORE ITS LANDING ON MOZAMBIQUE. THE INTENSIFICATION IS STRUGGLING TO CONTINUE, PROBABLY BECAUSE OF THE WIDTH OF THE CONVECTIVE CORE. THE SYSTEM WILL 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 INHAMBANE PROVINCE, SOUTH VILANCULOS.

- * ARRIVAL OF STORM FORCE WINDS LATE MORNING 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 50 CM 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.