

WTIO30 FMEE 230718

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 36/7/20222023

1.A MODERATE TROPICAL STORM 7 (FREDDY)

2.A POSITION 2023/02/23 AT 0600 UTC:

WITHIN 20 NM RADIUS OF POINT 22.4 S / 40.2 E

(TWENTY TWO DECIMAL FOUR DEGREES SOUTH AND
FORTY DECIMAL TWO DEGREES EAST)

MOVEMENT: WEST 10 KT

3.A DVORAK ANALYSIS: 2.5/2.5/D 0.5/12 H

4.A CENTRAL PRESSURE: 999 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 35 KT

RADIUS OF MAXIMUM WINDS (RMW): 33 KM

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

28 KT NE: 230 SE: 230 SW: 95 NW: 95

34 KT NE: 165 SE: 165 SW: 0 NW: 0

48 KT NE: 0 SE: 0 SW: 0 NW: 0

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: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2023/02/23 18 UTC: 22.1 S / 37.9 E, VENT MAX= 045 KT, MODERATE TROPICAL
STORM

28 KT NE: 155 SE: 260 SW: 155 NW: 130

34 KT NE: 85 SE: 165 SW: 120 NW: 85

24H: 2023/02/24 06 UTC: 21.8 S / 35.7 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM

28 KT NE: 230 SE: 260 SW: 120 NW: 140

34 KT NE: 130 SE: 165 SW: 95 NW: 110

48 KT NE: 65 SE: 85 SW: 55 NW: 45

36H: 2023/02/24 18 UTC: 22.0 S / 33.8 E, VENT MAX= 035 KT, OVERLAND DEPRESSION

28 KT NE: 140 SE: 185 SW: 95 NW: 95

34 KT NE: 75 SE: 120 SW: 0 NW: 0

48H: 2023/02/25 06 UTC: 22.4 S / 32.1 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

60H: 2023/02/25 18 UTC: 21.8 S / 31.6 E, VENT MAX= 020 KT, OVERLAND DEPRESSION

72H: 2023/02/26 06 UTC: 20.8 S / 31.0 E, VENT MAX= 020 KT, OVERLAND DEPRESSION

2.B LONGER-RANGE OUTLOOK:

96H: 2023/02/27 06 UTC: 18.7 S / 28.7 E, VENT MAX= 015 KT, OVERLAND DEPRESSION

120H: 2023/02/28 06 UTC: 18.4 S / 27.0 E, VENT MAX= 015 KT, DISSIPATING

2.C ADDITIONAL INFORMATION:

T=CI=2.5+

CONVECTIVE ACTIVITY HAS INCREASED DURING THE LAST HOURS, ESPECIALLY IN A LARGE NORTHERN SEMICIRCLE. THE LOW LEVEL CIRCULATION HAS CLEARLY IMPROVED, AS SHOWN BY THE GPM PASS OF 0332UTC, AS WELL AS THE HY-2B DATA OF 0230UTC WHICH CONFIRM THE 35KT TTM STAGE.

DRIVEN BY THE SUBTROPICAL RIDGE TO ITS SOUTH WHICH SHOULD THEN STRENGTHEN TO ITS SOUTHWEST, FREDDY SHOULD CONTINUE ITS WESTWARD AND THEN WEST-NORTHWESTWARD MOVEMENT UNTIL LANDFALL ON THE COAST OF MOZAMBIQUE ON FRIDAY MORNING. MODEL DISPERSION HAS DECREASED AND THE LANDFALL AREA SHOULD BE BETWEEN INHAMBANE AND BEIRA, PROBABLY NEAR VILANKULO. FROM THIS WEEKEND, UNDER THE EFFECT OF A TROUGH TO THE SOUTH AND THE CONTRADICTIONARY EFFECT OF THE TWO REMNANT RIDGES EAST AND WEST, THE SYSTEM SHOULD SLOW DOWN AND THEN SLOWLY DRIFT NORTH-WESTWARD INLAND OF SOUTHERN AFRICA WHILE SLOWLY FILLING IN.

FREDDY'S INNER CORE IS REBUILDING, SUGGESTING REINTENSIFICATION OVER THE MOZAMBIQUE CHANNEL IN RATHER CONDUCIVE ENVIRONMENTAL CONDITIONS : GOOD OCEANIC POTENTIAL, MOIST ENVIRONMENT AND RELATIVELY WEAK SHEAR. IT SHOULD THEREFORE REACH THE STAGE OF SEVERE TROPICAL STORM BEFORE LANDFALLING OVER MOZAMBIQUE. ACCORDING TO AVAILABLE MODELS, THE SPEED OF INTENSIFICATION IS NEVERTHELESS RATHER UNCERTAIN AND WILL DEPEND ON THE SPEED OF THE INNER CORE REBUILDING. THE SYSTEM SHOULD THEN WEAKEN SIGNIFICANTLY INLAND FROM FRIDAY.

IMPACTS ON INHABITED LANDS DURING THE NEXT 72 HOURS :

- MOZAMBIQUE: LANDING PLANNED FRIDAY MORNING PROBABLY BETWEEN BEIRA AND INHAMBANE, TOWARDS VILANCULOS.

* PROBABLE ARRIVAL OF THE GALE IN THE NIGHT OF THURSDAY TO FRIDAY AT THE COAST.

* VERY ROUGH TO HEAVY SEAS (UP TO 6-9M) NEAR THE LANDING AREA ON THURSDAY NIGHT AND FRIDAY MORNING. SURGE COULD REACH 50CM TO 1M NEAR THE LANDING ZONE.

* 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.

- NORTHEASTERN SOUTH AFRICA AND SOUTHERN ZIMBABWE : FROM SATURDAY, RISK OF INTENSE RAINS (MORE THAN 50-100 MM IN 24 HOURS) WHICH MAY CAUSE FLOODING IN THE AREAS BORDERING GAZA PROVINCE. DETAILS STILL UNCERTAIN.

