

WTIO30 FMEE 190703

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 20/7/20222023

1.A VERY INTENSE TROPICAL CYCLONE 7 (FREDDY)

2.A POSITION 2023/02/19 AT 0600 UTC:

WITHIN 10 NM RADIUS OF POINT 16.9 S / 65.6 E

(SIXTEEN DECIMAL NINE DEGREES SOUTH AND
SIXTY FIVE DECIMAL SIX DEGREES EAST)

MOVEMENT: WEST 13 KT

3.A DVORAK ANALYSIS: 6.0/7.0/W 1.0/6 H

4.A CENTRAL PRESSURE: 931 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 120 KT

RADIUS OF MAXIMUM WINDS (RMW): 31 KM

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

28 KT NE: 185 SE: 240 SW: 220 NW: 130

34 KT NE: 130 SE: 155 SW: 150 NW: 110

48 KT NE: 100 SE: 110 SW: 100 NW: 95

64 KT NE: 75 SE: 85 SW: 85 NW: 75

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: 2023/02/19 18 UTC: 17.6 S / 62.5 E, VENT MAX= 115 KT, INTENSE TROPICAL
CYCLONE

28 KT NE: 205 SE: 325 SW: 230 NW: 150

34 KT NE: 130 SE: 185 SW: 175 NW: 100

48 KT NE: 75 SE: 95 SW: 95 NW: 75

64 KT NE: 55 SE: 65 SW: 55 NW: 55

24H: 2023/02/20 06 UTC: 18.3 S / 59.0 E, VENT MAX= 110 KT, INTENSE TROPICAL
CYCLONE

28 KT NE: 205 SE: 335 SW: 250 NW: 150

34 KT NE: 130 SE: 185 SW: 175 NW: 110

48 KT NE: 75 SE: 95 SW: 100 NW: 75

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

36H: 2023/02/20 18 UTC: 19.1 S / 55.3 E, VENT MAX= 110 KT, INTENSE TROPICAL
CYCLONE

28 KT NE: 195 SE: 295 SW: 260 NW: 150

34 KT NE: 120 SE: 185 SW: 165 NW: 100

48 KT NE: 75 SE: 95 SW: 95 NW: 75
64 KT NE: 55 SE: 65 SW: 55 NW: 45

48H: 2023/02/21 06 UTC: 19.9 S / 51.7 E, VENT MAX= 105 KT, INTENSE TROPICAL CYCLONE

28 KT NE: 220 SE: 315 SW: 230 NW: 175
34 KT NE: 130 SE: 185 SW: 175 NW: 120
48 KT NE: 75 SE: 95 SW: 100 NW: 65
64 KT NE: 45 SE: 45 SW: 45 NW: 45

60H: 2023/02/21 18 UTC: 20.5 S / 48.6 E, VENT MAX= 105 KT, INTENSE TROPICAL CYCLONE

28 KT NE: 220 SE: 280 SW: 230 NW: 100
34 KT NE: 130 SE: 165 SW: 140 NW: 75
48 KT NE: 75 SE: 75 SW: 95 NW: 55
64 KT NE: 45 SE: 55 SW: 45 NW: 45

72H: 2023/02/22 06 UTC: 21.1 S / 45.0 E, VENT MAX= 040 KT, OVERLAND DEPRESSION

28 KT NE: 100 SE: 165 SW: 110 NW: 0
34 KT NE: 0 SE: 100 SW: 0 NW: 0

2.B LONGER-RANGE OUTLOOK:

96H: 2023/02/23 06 UTC: 20.6 S / 38.9 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM

28 KT NE: 240 SE: 260 SW: 295 NW: 100
34 KT NE: 140 SE: 155 SW: 155 NW: 0

120H: 2023/02/24 06 UTC: 19.6 S / 34.4 E, VENT MAX= 065 KT, TROPICAL CYCLONE

28 KT NE: 150 SE: 240 SW: 155 NW: 100
34 KT NE: 85 SE: 150 SW: 110 NW: 75
48 KT NE: 60 SE: 60 SW: 90 NW: 60
64 KT NE: 40 SE: 40 SW: 40 NW: 50

2.C ADDITIONAL INFORMATION:

T=6.0 CI=7.0-

DURING THE LAST 6 HOURS, THE CLOUD TOPS WARMED UP SIGNIFICANTLY, RESULTING IN A DECREASE OF THE SUBJECTIVE DVORAK ANALYSIS. HOWEVER, AT THE SAME TIME, THE EYE STILL APPEARS PARTICULARLY WELL DEFINED ON THE INFRARED AND VISIBLE IMAGES. IN THE ABSENCE OF RELIABLE OBJECTIVE DATA AND TAKING INTO ACCOUNT INERTIA, THE INTENSITY IS MAINTAINED AT 120KT.

FREDDY WILL KEEP HEADING WEST-SOUTHWESTWARDS UNTIL TUESDAY, MOVING ALONG THE NORTHERN EDGE OF A STRONG SUBTROPICAL MID-TROPOSPHERIC HIGH. MODEL GUIDANCE CONTINUES TO DISPLAY LITTLE DISPERSION AND REMAINS QUITE STABLE, LEADING TO GOOD CONFIDENCE ON A TRACK PASSING TO THE NORTH OF THE MASCARENE ISLANDS AND ACCELERATING TOWARDS A TUESDAY EVENING LANDFALL OVER THE MALAGASY COAST. DISPERSION INCREASES AFTER THE EXIT ON THE MOZAMBIQUE CHANNEL. THE RSMC FORECAST FOLLOWS A MEDIAN SCENARIO.

CONDUCIVE ENVIRONMENTAL CONDITIONS SHOULD ALLOW FREDDY TO MAINTAIN

A SIGNIFICANT INTENSITY UNTIL TUESDAY, WITH GOOD EQUATORWARD UPPER DIVERGENCE, HIGH OCEANIC POTENTIAL AND NOT ENOUGH WIND SHEAR TO DISRUPT THE SYSTEM WITH DRY AIR INTRUSIONS. FREDDY COULD THEREFORE REMAIN AT LEAST AN INTENSE TROPICAL CYCLONE. A POSSIBLE EYEWALL REPLACEMENT CYCLE COULD MAYBE MAKE THE INTENSITY FLUCTUATE OR DROP A BIT BEFORE LANDFALL BUT THERE IS CURRENTLY NO EVIDENCE IN FAVOR OF THIS SCENARIO . FROM WEDNESDAY, AFTER CLASSIC RAPID WEAKENING OVER MALAGASY LANDS, FREDDY'S INNER CORE SHOULD GRADUALLY REORGANIZE THEN REINTENSIFY OVER THE MOZAMBIQUE CHANNEL, UNDER CONDUCTIVE CONDITIONS THERE AGAIN. IT COULD BECOME AGAIN A TROPICAL CYCLONE.

IMPACTS ON INHABITED LANDS DURING THE NEXT 72 HOURS :

- RODRIGUES ISLAND : VERY ROUGH SEA (4-6M) SUNDAY AFTERNOON AND THE FOLLOWING NIGHT.

- MAURITIUS ISLAND : GALE FORCE WINDS LIKELY FROM MONDAY 09TC UNTIL 18UTC. HIGH SEA (6-8M) FROM MONDAY AROUND NOON UNTIL THE FIRST PART OF THE FOLLOWING NIGHT. VERY ROUGH SEA (4-6M) UNTIL TUESDAY MORNING.

- REUNION : GALE FORCE WINDS FROM MONDAY EVENING UNTIL TUESDAY EARLY MORNING. HIGH AND VERY ROUGH SEA (6M) MONDAY TO TUESDAY NIGHT.

- MADAGASCAR : LANDFALL EXPECTED TUESDAY EVENING AROUND 18UTC, PROBABLY SOMEWHERE BETWEEN TOAMASINA AND MANAKARA. ONSET OF GALE FORCE WINDS FROM TUESDAY 12UTC. VERY HIGH SEA AND LOCALLY PHENOMENAL SEA LIKELY NEAR THE LANDFALL AREA (10 TO 15M WAVES), WITH STORM SURGE POSSIBLY REACHING 1 TO 2M LOCALLY. HEAVY RAINFALL TUESDAY NIGHT, AMOUNTING UP TO AROUND 200MM NEAR THE CYCLONE'S TRACK, WITH RISK OF LOCAL FLASH-FLOODS.

- MOZAMBIQUE : FREDDY COULD LAND AT THE END OF THE WEEK (THURSDAY OR FRIDAY) AS A TROPICAL CYCLONE, THE LANDING AREA AS WELL AS THE INTENSITY OF THE SYSTEM AT THIS TIME, ARE STILL VERY UNCERTAIN.