

WTIO30 FMEE 120037

RSMC / TROPICAL CYCLONE CENTER / LA REUNION
TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 14/8/20232024

1.A SEVERE TROPICAL STORM 8 (FILIPO)

2.A POSITION 2024/03/12 AT 0000 UTC:

WITHIN 30 NM RADIUS OF POINT 21.1 S / 35.5 E

(TWENTY ONE DECIMAL ONE DEGREES SOUTH AND
THIRTY FIVE DECIMAL FIVE DEGREES EAST)

MOVEMENT: SOUTH-WEST 8 KT

3.A DVORAK ANALYSIS: 4.0/4.0/S 0.0/6 H

4.A CENTRAL PRESSURE: 989 HPA

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

RADIUS OF MAXIMUM WINDS (RMW): 59 KM

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

28 KT NE: 205 SE: 315 SW: 240 NW: 150

34 KT NE: 130 SE: 220 SW: 150 NW: 110

48 KT NE: 0 SE: 85 SW: 70 NW: 0

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1012 HPA / 700 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2024/03/12 12 UTC: 22.5 S / 34.4 E, VENT MAX= 035 KT, MODERATE TROPICAL
STORM

28 KT NE: 185 SE: 260 SW: 0 NW: 0

34 KT NE: 130 SE: 155 SW: 0 NW: 0

24H: 2024/03/13 00 UTC: 24.5 S / 33.7 E, VENT MAX= 035 KT, OVERLAND DEPRESSION

28 KT NE: 220 SE: 270 SW: 185 NW: 0

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

36H: 2024/03/13 12 UTC: 26.8 S / 34.3 E, VENT MAX= 045 KT, MODERATE TROPICAL
STORM

28 KT NE: 280 SE: 270 SW: 205 NW: 185

34 KT NE: 150 SE: 155 SW: 140 NW: 100

48H: 2024/03/14 00 UTC: 29.3 S / 36.9 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM

28 KT NE: 345 SE: 270 SW: 230 NW: 270

34 KT NE: 185 SE: 155 SW: 150 NW: 155

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

60H: 2024/03/14 12 UTC: 32.4 S / 41.4 E, VENT MAX= 070 KT, TROPICAL CYCLONE
28 KT NE: 455 SE: 315 SW: 325 NW: 360
34 KT NE: 240 SE: 195 SW: 215 NW: 220
48 KT NE: 95 SE: 75 SW: 75 NW: 75
64 KT NE: 55 SE: 45 SW: 55 NW: 45

72H: 2024/03/15 00 UTC: 35.4 S / 47.1 E, VENT MAX= 065 KT, POST-TROPICAL
DEPRESSION
28 KT NE: 490 SE: 405 SW: 360 NW: 345
34 KT NE: 260 SE: 250 SW: 230 NW: 195
48 KT NE: 95 SE: 75 SW: 85 NW: 75
64 KT NE: 85 SE: 45 SW: 55 NW: 45

2.B LONGER-RANGE OUTLOOK:

96H: 2024/03/16 00 UTC: 39.6 S / 58.6 E, VENT MAX= 050 KT, EXTRATROPICAL
DEPRESSION
28 KT NE: 435 SE: 350 SW: 295 NW: 350
34 KT NE: 215 SE: 220 SW: 230 NW: 185
48 KT NE: 100 SE: 65 SW: 45 NW: 85

2.C ADDITIONAL INFORMATION:

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THE WESTERN EDGE OF FILIPO'S LARGE INTENSE CORE IS NOW OVER THE COAST OF MOZAMBIQUE, WHILE ITS ESTIMATED BAROMETRIC CENTER IS LESS THAN 50 KM OFFSHORE. ASCAT PASSES AT 1857Z AND 1945Z HAVE ENABLED TO LOCATE THE 18UTC POINT A LITTLE FURTHER NORTHEAST THAN PREVIOUSLY ESTIMATED, INDICATING A SLIGHTLY SLOWER MOVEMENT, WHICH SLIGHTLY DELAYS LANDFALL. IN ADDITION, THESE ASCAT WIND MEASUREMENTS ARE COMPATIBLE WITH THE ASSESSED SEVERE TROPICAL STORM STAGE. FINALLY, THE RADIUS OF MAXIMUM WINDS AT 18UTC WAS GREATER THAN PREVIOUSLY ESTIMATED, CLOSER TO 35 NM THAN 30 NM. OVER THE LAST FEW HOURS, THE CURVED BAND PATTERN HAS BECOME PROGRESSIVELY LESS DEFINED AS THE PERIPHERAL BANDS INTERACT WITH MOZAMBIQUE'S INLAND AREA. NEVERTHELESS, INTENSE CONVECTION HAS PERSISTED NEAR THE CENTER, TENDING TO SHIFT TO THE SOUTH PART OF THE SYSTEM NEAR 00UTC, POSSIBLY UNDER THE EFFECT OF MODERATE NORTH-NORTH-WESTERLY SHEAR. IN THE ABSENCE OF NEW DATA, THE INTENSITY IS MAINTAINED BY INERTIA AT 55KT, BUT STORM-FORCE WINDS ARE PROBABLY ONLY PRESENT IN THE SOUTHERN SEMICIRCLE, GIVEN THE SYSTEM'S ASYMMETRY. THESE VIOLENT WINDS ARE CURRENTLY AFFECTING THE NORTH OF INHAMBANE PROVINCE, CLOSE TO BAZARUTO ISLAND AND INHASSORO DISTRICT.

FILIPO WILL KEEP TRACKING SOUTHWESTWARDS THEN SOUTHWARDS ALONG THE NORTHWESTERN EDGE OF A MID-LEVEL RIDGE WHICH IS SHIFTING TO THE SOUTH-EAST OF MADAGASCAR. THIS WILL MAKE IT TRACK ACROSS SOUTHERN MOZAMBIQUE LANDS THIS TUESDAY AND THE FOLLOWING NIGHT. ON WEDNESDAY, THE SYSTEM SHOULD MOVE BACK OVER THE SOUTHERN MOZAMBIQUE CHANNEL, HEADING SOUTH-EAST AND ACCELERATING AS IT INTERACTS WITH THE EDGE OF A MID-LATITUDE TROUGH. IT SHOULD THEN EVACUATE DEFINITELY TOWARDS THE SOUTHERN LATITUDES BY THE SECOND HALF OF THE WEEK.

AFTER A LANDFALL EXPECTED AT SEVERE TROPICAL STORM STAGE, FILIPO WILL TYPICALLY LOSE INTENSITY AS IT CROSSES THE INLAND AREA, BUT ITS CYCLONIC CIRCULATION SHOULD HOLD UP FAIRLY WELL THANKS TO THE AREA'S LOW TERRAIN. AS THE SYSTEM EMERGES SOUTH OF MOZAMBIQUE ON WEDNESDAY, INTENSIFICATION COULD RESUME FAIRLY QUICKLY, IN A CONTEXT OF STRONG UPPER-LEVEL DIVERGENCE ON THE EDGE OF A SUBTROPICAL TROUGH AND OVER WARM WATERS NORTH OF 32S. HOWEVER, THIS INTENSIFICATION WILL DEPEND ON ITS ORGANIZATION AS IT EMERGES OVER SEA. WITH RAPIDLY INCREASNG WIND SHEAR FROM WEDNESDAY EVENING AND THE SIGNIFICANT DECLINE OF OCEAN HEAT CONTENT ON THURSDAY EVENING, THE SYSTEM COULD MORE OR LESS RAPIDLY LOSE ITS TROPICAL CHARACTERISTICS. HOWEVER, MOST RECENT MODEL RUNS FAVOR A QUITE LATE EXTRATROPICAL TRANSITION AND A MORE SIGNIFICANT INTENSITY ENABLED BY THE SYSTEM'S RAPID MOVEMENT IN THE SAME DIRECTION AS THE WIND SHEAR. IT COULD THUS REACH TROPICAL CYCLONE INTENSITY ON THURSDAY AND THEN KEEP A VERY SIGNIFICANT INTENSITY UNTIL FRIDAY DESPITE BECOMING POST-TROPICAL.

IMPACTS EXPECTED ON INHABITED LANDS OVER THE NEXT 72 HOURS:

MOZAMBIQUE:

- LANDFALL EXPECTED THIS TUESDAY AROUND 03UTC OVER THE EXTREME NORTH OF INHAMBANE PROVINCE, SOUTH OF SAVE RIVER'S MOUTH AND NORTH OF VILANCULOS, PROBABLY JUST NORTH OF THE TOWN OF INHASSORO.
- WINDS: GALES LIKELY TO PERSIST WELL AFTER LANDFALL, ALONG THE ENTIRE SOUTHERN COASTLINE UNTIL WEDNESDAY AND THE SYSTEM'S EXIT. STORM-FORCE WINDS EXPECTED THIS TUESDAY MORNING SOUTH OF THE LANDFALL AREA.
- RAINFALL: 100-200 MM OVER 48 HOURS OVER THE PROVINCES OF INHAMBANE AND GAZA, THEN MAPUTO. LOCALLY UP TO 300 MM SOUTH OF THE LANDFALL AREA (INHAMBANE PROVINCE).
- WAVES NEAR 6 M UNTIL TUESDAY EVENING.
- STORM SURGE FROM 50CM TO 1M IN THE SOUTHERN VICINITY OF THE LANDFALL AREA, ESPECIALLY FROM INHASSORO TO VILANKULO.

ESWATINI AND EXTREME EASTERN SOUTH AFRICA :

- HEAVY RAINFALL IS POSSIBLE, BUT HIGHLY DEPENDENT ON THE SYSTEM'S FINAL TRACK. ACCORDING TO THE CURRENT RSMC FORECAST, RAINFALL TOTALS SHOULD REMAIN BELOW 100 MM, BUT THIS WILL NEED TO BE CONFIRMED.