

WTIO30 FMEE 120646

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

0.A WARNING NUMBER: 15/8/20232024

1.A MODERATE TROPICAL STORM 8 (FILIPO)

2.A POSITION 2024/03/12 AT 0600 UTC:

WITHIN 30 NM RADIUS OF POINT 21.8 S / 35.1 E

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

MOVEMENT: SOUTH-SOUTH-WEST 8 KT

3.A DVORAK ANALYSIS: NIL

4.A CENTRAL PRESSURE: 993 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 45 KT

RADIUS OF MAXIMUM WINDS (RMW): 59 KM

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

28 KT NE: 220 SE: 295 SW: 0 NW: 0

34 KT NE: 140 SE: 140 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): 1011 HPA / 600 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2024/03/12 18 UTC: 23.2 S / 34.0 E, VENT MAX= 035 KT, OVERLAND DEPRESSION

28 KT NE: 150 SE: 250 SW: 0 NW: 0

34 KT NE: 75 SE: 140 SW: 0 NW: 0

24H: 2024/03/13 06 UTC: 25.6 S / 33.7 E, VENT MAX= 040 KT, MODERATE TROPICAL  
STORM

28 KT NE: 205 SE: 280 SW: 0 NW: 85

34 KT NE: 100 SE: 150 SW: 0 NW: 55

36H: 2024/03/13 18 UTC: 27.8 S / 35.5 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 285 SE: 270 SW: 215 NW: 195

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

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

48H: 2024/03/14 06 UTC: 30.6 S / 38.8 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM

28 KT NE: 390 SE: 325 SW: 285 NW: 270

34 KT NE: 205 SE: 175 SW: 165 NW: 175

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

60H: 2024/03/14 18 UTC: 33.8 S / 44.3 E, VENT MAX= 070 KT, TROPICAL CYCLONE  
28 KT NE: 435 SE: 370 SW: 295 NW: 280  
34 KT NE: 230 SE: 215 SW: 195 NW: 175  
48 KT NE: 85 SE: 65 SW: 75 NW: 65  
64 KT NE: 55 SE: 45 SW: 55 NW: 45

72H: 2024/03/15 06 UTC: 36.3 S / 50.1 E, VENT MAX= 060 KT, POST-TROPICAL  
DEPRESSION  
28 KT NE: 465 SE: 315 SW: 230 NW: 345  
34 KT NE: 240 SE: 175 SW: 155 NW: 220  
48 KT NE: 95 SE: 65 SW: 55 NW: 75

#### 2.B LONGER-RANGE OUTLOOK:

96H: 2024/03/16 06 UTC: 40.4 S / 61.4 E, VENT MAX= 040 KT, EXTRATROPICAL  
DEPRESSION  
28 KT NE: 370 SE: 305 SW: 220 NW: 285  
34 KT NE: 165 SE: 155 SW: 130 NW: 140

#### 2.C ADDITIONAL INFORMATION:

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THE FILIPO LANDED SHORTLY AFTER 03UTC, OVER THE NORTH OF INHAMBANE PROVINCE, AND MORE PRECISELY NORTH OF THE TOWN OF INHASSORO, AT THE MODERATE TROPICAL STORM STAGE. THE SYSTEM'S INTERACTION WITH MOZAMBIQUE'S INLAND AREA TEMPORARILY DELAMINATED THE SYSTEM'S CLOUD PATTERN, AS SHOWN BY THE ANIMATIONS OF CONVENTIONAL SATELLITE IMAGES AND THE SSMIS-F17 MICROWAVE PASS AT 0409Z. HOWEVER, OVER THE LAST TWO HOURS, CONVECTION HAS LOCALLY STRENGTHENED OVERLAND CLOSE TO THE NORTHWEST OF THE LOW-LEVEL CLOUD CENTER. THE INTENSITY ESTIMATE IS BASED ON THE QUALITY OF THE LATEST SATELLITE OBSERVATIONS, AS WELL AS ON ANALYSES OF THE MAIN GUIDANCES. THE 45KT INTENSITY IS ALSO IN LINE WITH OBJECTIVE AMERICAN ESTIMATES. ALTHOUGH THE SYSTEM HAS LANDED, STRONG AND POSSIBLY DESTRUCTIVE WINDS REMAIN CHANNLED ALONG THE PROVINCE OF INHAMBANE.

NO CHANGE IN PHILOSOPHY REGARDING FILIPO'S TRACK. THE SYSTEM WILL HEAD A SOUTH-SOUTH-WESTWARDS THEN SOUTHWARDS ALONG THE NORTH-WESTERN EDGE OF A RIDGE OF MID-TROPOSPHERE, WHICH IS GRADUALLY SHIFTING TO THE SOUTH-EAST OF MADAGASCAR. THIS WILL TAKE IT ACROSS THE SOUTHERN INLAND AREA OF MOZAMBIQUE ON TUESDAY AND OVERNIGHT. ON WEDNESDAY, THE SYSTEM SHOULD REGAIN THE WARM WATERS OF THE MOZAMBIQUE CHANNEL, AND MOVE SOUTHEASTWARDS, ACCELERATING AS IT INTERACTS WITH THE EASTERN EDGE OF A MID-LATITUDE TROUGH. IT SHOULD THUS EVACUATE DEFINITELY TOWARDS THE SOUTHERN LATITUDES IN THE SECOND HALF OF THE WEEK.

FILIPO, WHICH HAS ONLY RECENTLY MADE LANDFALL IN AFRICA, WILL GRADUALLY LOSE ITS INTENSITY, BUT THE LOW-LEVEL CIRCULATION SHOULD HOLD UP WELL THANKS TO THE AREA'S SHALLOW RELIEF. AS FILIPO EXITS SOUTHERN MOZAMBIQUE ON WEDNESDAY, PROBABLY OFF THE COAST OF GAZA PROVINCE, INTENSIFICATION COULD RESUME FAIRLY QUICKLY, IN

A CONTEXT OF STRONG DIVERGENCE ALOFT ON THE EDGE OF A SUBTROPICAL TROUGH AND OVER COASTAL WATERS PARTICULARLY WARM NORTH OF 30°S. HOWEVER, THE RATE OF INTENSIFICATION WILL DEPEND ON THE QUALITY OF THE ORGANIZATION OF THE LOWER LAYER DURING THIS OUTFLOW, AND THE EFFECT OF THE VERTICAL WIND SHEAR ON THE STRUCTURE OF THE SYSTEM. THIS NORTHWESTERLY UPPER-LEVEL STRESS WILL INCREASE RAPIDLY FROM WEDNESDAY EVENING, WHILE ACCOMPANYING THE SYSTEM IN A SOUTHEASTERLY DIRECTION, WHICH COULD TEMPORARILY DIMINISH ITS EFFECT. HOWEVER, AS THE OCEAN HEAT POTENTIAL DIMINISHES ON THURSDAY EVENING, THE SYSTEM COULD MORE OR LESS RAPIDLY LOSE ITS TROPICAL CHARACTERISTICS. ACCORDING TO THE CURRENT INTENSITY FORECAST, FILIPO COULD PUNCTUALLY REACH THE STAGE OF A TROPICAL CYCLONE ON THURSDAY, IN A FAIRLY HEAVILY SHEARED CONTEXT, AS IT TRANSITIONS, THEN MAINTAIN SUSTAINED INTENSITY UNTIL FRIDAY AS THE SYSTEM ENTERS ITS POST-TROPICAL PHASE. AT THE END OF THE WEEK, FILIPO SHOULD ADOPT AN INCREASINGLY ASSYMETRICAL LOW-LEVEL STRUCTURE, ASSOCIATED WITH A THINNER WARM CORE, AS IT MOVES TOWARDS SOUTHERN LATITUDES.

IMPACTS EXPECTED ON INHABITED INLAND AREA IN THE NEXT 72 HOURS :  
MOZAMBIQUE :

- WINDS: PRESENCE OF GALE FORCE WINDS ALONG THE COAST OF INHAMBANE PROVINCE TODAY, SLIDING FURTHER SOUTH ON WEDNESDAY, ALONG GAZA AND MAPUTO PROVINCES, AS THE SYSTEM MOVES INLAND. IMPROVEMENT EXPECTED LATE AFTERNOON/EVENING WEDNESDAY.
- RAINFALL: 100-150 MM IN 48 HOURS OVER THE PROVINCES OF INHAMBANE, GAZA AND MAPUTO.
- WAVES BETWEEN 4 AND 6 M OFF INHAMBANE PROVINCE SLIDING SOUTH, UNTIL WEDNESDAY EVENING.
- PROBABLE SURGE BETWEEN 100 AND 150 CM SOUTH OF THE LANDFALL AREA BETWEEN INHASSORO AND VILANCULOS, POTENTIALLY ASSOCIATED WITH MARINE SUBMERSION, SOUTH OF VILANCULOS.

ESWATINI AND EXTREME EAST OF SOUTH AFRICA :

- HEAVY RAIN IS POSSIBLE, BUT IS HIGHLY DEPENDENT ON THE SYSTEM'S FINAL TRAJECTORY. ACCORDING TO THE CURRENT CMRS FORECAST, RAINFALL TOTALS ARE LIKELY TO REMAIN BELOW 100 MM.