

WTIO30 FMEE 140710

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 8/3/20242025

1.A MODERATE TROPICAL STORM 3 (BHEKI)

2.A POSITION 2024/11/14 AT 0600 UTC:

WITHIN 30 NM RADIUS OF POINT 10.2 S / 75.8 E

(TEN DECIMAL TWO DEGREES SOUTH AND  
SEVENTY FIVE DECIMAL EIGHT DEGREES EAST)

MOVEMENT: SOUTH-WEST 4 KT

3.A DVORAK ANALYSIS: 3.0/3.0/D 0.5/6 H

4.A CENTRAL PRESSURE: 999 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 40 KT

RADIUS OF MAXIMUM WINDS (RMW): 46 KM

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

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

34 KT NE: 95 SE: 95 SW: 140 NW: 100

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1009 HPA / 1100 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2024/11/14 18 UTC: 11.1 S / 75.5 E, VENT MAX= 045 KT, MODERATE TROPICAL  
STORM

28 KT NE: 120 SE: 230 SW: 205 NW: 100

34 KT NE: 85 SE: 120 SW: 0 NW: 65

24H: 2024/11/15 06 UTC: 12.3 S / 74.9 E, VENT MAX= 045 KT, MODERATE TROPICAL  
STORM

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

34 KT NE: 95 SE: 140 SW: 95 NW: 65

36H: 2024/11/15 18 UTC: 13.5 S / 73.8 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 155 SE: 270 SW: 230 NW: 110

34 KT NE: 100 SE: 140 SW: 140 NW: 65

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

48H: 2024/11/16 06 UTC: 14.3 S / 72.3 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM

28 KT NE: 175 SE: 280 SW: 285 NW: 150

34 KT NE: 110 SE: 150 SW: 150 NW: 95

48 KT NE: 45 SE: 55 SW: 45 NW: 0

60H: 2024/11/16 18 UTC: 15.1 S / 71.0 E, VENT MAX= 065 KT, TROPICAL CYCLONE  
28 KT NE: 185 SE: 260 SW: 250 NW: 140  
34 KT NE: 110 SE: 140 SW: 150 NW: 85  
48 KT NE: 45 SE: 65 SW: 45 NW: 45  
64 KT NE: 30 SE: 45 SW: 35 NW: 35

72H: 2024/11/17 06 UTC: 15.8 S / 69.6 E, VENT MAX= 070 KT, TROPICAL CYCLONE  
28 KT NE: 195 SE: 270 SW: 250 NW: 155  
34 KT NE: 120 SE: 150 SW: 155 NW: 95  
48 KT NE: 55 SE: 75 SW: 65 NW: 45  
64 KT NE: 45 SE: 45 SW: 35 NW: 30

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

96H: 2024/11/18 06 UTC: 16.6 S / 67.4 E, VENT MAX= 080 KT, TROPICAL CYCLONE  
28 KT NE: 205 SE: 270 SW: 220 NW: 155  
34 KT NE: 120 SE: 150 SW: 150 NW: 95  
48 KT NE: 55 SE: 75 SW: 65 NW: 45  
64 KT NE: 30 SE: 45 SW: 35 NW: 30

120H: 2024/11/19 06 UTC: 17.1 S / 65.6 E, VENT MAX= 065 KT, TROPICAL CYCLONE  
28 KT NE: 185 SE: 280 SW: 230 NW: 140  
34 KT NE: 100 SE: 155 SW: 150 NW: 85  
48 KT NE: 60 SE: 70 SW: 60 NW: 40  
64 KT NE: 40 SE: 40 SW: 40 NW: 30

#### 2.C ADDITIONAL INFORMATION:

T=CI=3.0

OVER THE PAST 6 HOURS, CONVECTION AROUND THE SYSTEM HAS MOVED EVEN CLOSER TO THE CENTER AND IS BECOMING INCREASINGLY ORGANIZED. THE SSMIS F17 MICROWAVE PICTURE FROM 0110Z CONFIRMS THIS TREND AND EVEN SHOWS ALMOST A RING OF CONVECTION AROUND THE CENTER. THE VISIBLE SATELLITE IMAGE FROM 06UTC SHOWS WELL-ORGANIZED CONVECTION WITH GOOD ALTITUDE DIVERGENCE. WITH THESE ELEMENTS, THE SUBJECTIVE DVORAK ANALYSIS BASED ON THE MET ALLOWS US TO ESTIMATE THE INTENSITY OF THE MAXIMUM WINDS AT 40KT AND THEREFORE TO CLASSIFY THE SYSTEM AS A MODERATE TROPICAL STORM BEARING THE NAME BEKHI.

IN TERMS OF TRACK, LITTLE CHANGE IN THE FORECAST. WITH THE WEAKENING OF THE SUB-TROPICAL RIDGE, THE SYSTEM IS MOVING VERY SLOWLY TO THE SOUTH-SOUTHWEST. THEN, WITH THE STRENGTHENING OF THE RIDGE TO THE SOUTHEAST, THE SYSTEM SHOULD ACCELERATE WITH A MORE SOUTHWESTERLY TRACK FROM FRIDAY ONWARDS. AS THE SYSTEM IS STILL POORLY ORGANIZED, DISPERSION IS FAIRLY STRONG IN THE VERY SHORT TERM, BUT MOST MODELS SUGGEST THIS ACCELERATION AND SOUTHWESTERLY TRACK FROM FRIDAY EVENING. AT THE START OF NEXT WEEK, DISPERSION WILL BECOME STRONGER AGAIN, WITH A WEAKNESS IN THE UPPER RIDGE THAT COULD GIVE THE SYSTEM A MORE SOUTHERLY TRACK. THE TRACK FORECASTED BY RSMC IS A COMPROMISE BETWEEN THE GFS TRACK (A LITTLE FURTHER SOUTH) AND THE IFS TRACK (A LITTLE FASTER).

IN TERMS OF INTENSITY, THE EASTERLY TO NORTHEASTERLY SHEAR, THAT

CURRENTLY LIMITS THE SYSTEM'S ORGANIZATION, SHOULD GRADUALLY WEAKEN OVER THE NEXT FEW HOURS AS THE SYSTEM MOVES SOUTH-SOUTHWEST, ALLOWING IT TO INTENSIFY. WITH GOOD ENVIRONMENTAL CONDITIONS (HIGH OCEAN POTENTIAL, GOOD LOW-LEVEL CONVERGENCE, GOOD UPPER-LEVEL DIVERGENCE AND LITTLE SHEAR), THE SYSTEM SHOULD CONTINUE TO INTENSIFY. FROM FRIDAY ONWARDS, UNCERTAINTY INCREASES SHARPLY. DESPITE A TEMPORARY SHEAR STRESS, WHICH COULD TEMPORARILY CAP INTENSITY AND BRING DRIER AIR TO THE SYSTEM'S PERIPHERY. THE ACCELERATION OF MOTION IN THE DIRECTION OF THE SHEAR COULD, ON THE CONTRARY, MAINTAIN A CONTEXT FAVORABLE TO ITS INTENSIFICATION. THE PRESENT FORECAST SUGGESTS A SLOW INTENSIFICATION ON FRIDAY TO THE SEVERE TROPICAL STORM STAGE IN THE EVENING, FOLLOWED BY A MORE RAPID INTENSIFICATION TO THE TROPICAL CYCLONE STAGE ON SATURDAY EVENING OR SUNDAY MORNING. AFTER PEAKING EARLY NEXT WEEK, IT WILL BEGIN TO WEAKEN.

IT'S STILL TOO EARLY TO FORECAST POSSIBLE IMPACTS ON INHABITED LAND, BUT RODRIGUES RESIDENTS ARE INVITED TO FOLLOW THE SYSTEM'S EVOLUTION.