

WTIO30 FMEE 150058

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 11/3/20242025

1.A SEVERE TROPICAL STORM 3 (BHEKI)

2.A POSITION 2024/11/15 AT 0000 UTC:

WITHIN 20 NM RADIUS OF POINT 11.2 S / 75.9 E  
(ELEVEN DECIMAL TWO DEGREES SOUTH AND  
SEVENTY FIVE DECIMAL NINE DEGREES EAST)  
MOVEMENT: SOUTH-SOUTH-WEST 6 KT

3.A DVORAK ANALYSIS: 3.5/3.5/D 1.0/24 H

4.A CENTRAL PRESSURE: 985 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 50 KT  
RADIUS OF MAXIMUM WINDS (RMW): NIL

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

28 KT NE: 110 SE: 185 SW: 215 NW: 140  
34 KT NE: 75 SE: 75 SW: 95 NW: 95  
48 KT NE: 0 SE: 0 SW: 50 NW: 45  
64 KT NE: 0 SE: 0 SW: 0 NW: 0

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1008 HPA / 900 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2024/11/15 12 UTC: 12.4 S / 74.8 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM  
28 KT NE: 110 SE: 240 SW: 240 NW: 130  
34 KT NE: 85 SE: 150 SW: 120 NW: 95  
48 KT NE: 45 SE: 65 SW: 65 NW: 55

24H: 2024/11/16 00 UTC: 13.5 S / 73.4 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM  
28 KT NE: 130 SE: 260 SW: 250 NW: 120  
34 KT NE: 95 SE: 155 SW: 120 NW: 85  
48 KT NE: 45 SE: 75 SW: 65 NW: 55

36H: 2024/11/16 12 UTC: 14.4 S / 71.8 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM  
28 KT NE: 140 SE: 240 SW: 250 NW: 130  
34 KT NE: 95 SE: 150 SW: 120 NW: 85  
48 KT NE: 45 SE: 75 SW: 65 NW: 55

48H: 2024/11/17 00 UTC: 15.3 S / 70.3 E, VENT MAX= 070 KT, TROPICAL CYCLONE  
28 KT NE: 150 SE: 240 SW: 250 NW: 150  
34 KT NE: 100 SE: 150 SW: 120 NW: 100

48 KT NE: 55 SE: 75 SW: 65 NW: 55  
64 KT NE: 45 SE: 45 SW: 45 NW: 35

60H: 2024/11/17 12 UTC: 15.9 S / 69.2 E, VENT MAX= 075 KT, TROPICAL CYCLONE  
28 KT NE: 175 SE: 240 SW: 250 NW: 155  
34 KT NE: 110 SE: 150 SW: 130 NW: 100  
48 KT NE: 55 SE: 75 SW: 65 NW: 55  
64 KT NE: 45 SE: 45 SW: 55 NW: 45

72H: 2024/11/18 00 UTC: 16.4 S / 68.3 E, VENT MAX= 075 KT, TROPICAL CYCLONE  
28 KT NE: 185 SE: 270 SW: 250 NW: 165  
34 KT NE: 110 SE: 165 SW: 140 NW: 110  
48 KT NE: 55 SE: 75 SW: 75 NW: 65  
64 KT NE: 45 SE: 45 SW: 55 NW: 45

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

96H: 2024/11/19 00 UTC: 17.0 S / 66.8 E, VENT MAX= 065 KT, TROPICAL CYCLONE  
28 KT NE: 215 SE: 285 SW: 250 NW: 155  
34 KT NE: 120 SE: 175 SW: 150 NW: 110  
48 KT NE: 75 SE: 75 SW: 75 NW: 65  
64 KT NE: 55 SE: 55 SW: 55 NW: 55

120H: 2024/11/20 00 UTC: 17.4 S / 63.6 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM  
28 KT NE: 205 SE: 280 SW: 240 NW: 140  
34 KT NE: 100 SE: 175 SW: 140 NW: 85  
48 KT NE: 60 SE: 70 SW: 70 NW: 60

#### 2.C ADDITIONAL INFORMATION:

T=CI=3.5-

OVER THE LAST 6 HOURS, CONVECTION HAS REMAINED STRONG CLOSE TO BHEKI'S CENTER, WITH VERY COLD TOPS AND A WELL-DEFINED CDO. A BUOY (5601690) LIKELY REACHED THE SYSTEM'S INNER CORE, AND MEASURED A PRESSURE OF 986HPA AT 00Z. BASED ON THE IMPROVEMENT OF CLOUD PATTERN AND THIS OBSERVATION, BHEKI HAS BEEN UPGRADED TO SEVERE TROPICAL STORM 50KT. NEVERTHELESS, THE LATEST MICROWAVE PASSES, NOTABLY THE 1955Z AMSR2, SHOW A SIGNIFICANT INTRUSION OF DRY AIR INTO THE EASTERN SEMICIRCLE AND SUGGEST THE PRESENCE OF A TILT. THESE FEATURES APPEAR TO BE RELATED TO THE PRESENCE OF A NORTHEASTERLY SHEAR. THE CIMSS MIDSHEAR ANALYSIS SUGGESTS A 15 TO 20KT SHEAR.

LITTLE CHANGE IN THE TRACK FORECAST. WITH THE STRENGTHENING OF THE RIDGE TO THE SOUTHEAST, THE SYSTEM SHOULD ACCELERATE WITH A MORE SOUTHWESTWARD MOTION TODAY. ON SUNDAY AND MONDAY, BHEKI SHOULD TEMPORARILY BUMP INTO ANOTHER RIDGE TO THE SOUTHWEST, CAUSING A SLOWDOWN. LATER, UNDER THE INFLUENCE OF A RIDGE TO THE SOUTH AND A LOWERING OF ITS STEERING FLOW, BHEKI MAY RESUME A FASTER, MORE WESTWARD COURSE. THERE IS BROAD CONSENSUS ON THIS SCENARIO, BUT THERE IS NEVERTHELESS A RELATIVELY SIGNIFICANT SPREAD BETWEEN THE MAIN MODELS (IFS / GFS / ...) AND THEIR ENSEMBLES, FROM TUESDAY. THE PRESENT FORECAST REMAINS IN LINE WITH THE EUROPEAN ENSEMBLE MEAN AND AIFS.

IN TERMS OF INTENSITY, THE SHORT-TERM FORECAST REMAINS RATHER UNCERTAIN, DUE TO THE PRESENCE OF THE NORTHERLY TO NORTHEASTERLY CONSTRAINT UP TO TONIGHT. THE DRY INTRUSION COULD LIMIT THE DEVELOPMENT OF BHEKI. IN ITS LATEST RUN, HAFS EVEN SUGGESTS A WEAKENING UNLIKE THE OTHER GUIDANCE (NOTABLY IFS). FROM SATURDAY, THE SYSTEM SHOULD REGAIN FAVORABLE CONDITIONS WITH SUFFICIENT OCEANIC POTENTIAL TO REACH TROPICAL CYCLONE STRENGTH. EARLY NEXT WEEK, THE DEVELOPMENT OF A WESTERLY SHEAR COULD LEAD TO A WEAKENING.

IT'S STILL TOO EARLY TO PREDICT ANY POTENTIAL IMPACT ON INHABITED LAND, BUT RODRIGUES INHABITANTS ARE INVITED TO MONITOR THE SYSTEM'S EVOLUTION.