

WTIO30 FMEE 070741

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 3/13/20212022

1.A MODERATE TROPICAL STORM 13 (KARIM)

2.A POSITION 2022/05/07 AT 0600 UTC:

WITHIN 30 NM RADIUS OF POINT 7.9 S / 89.3 E

(SEVEN DECIMAL NINE DEGREES SOUTH AND

EIGHTY NINE DECIMAL THREE DEGREES EAST)

MOVEMENT: SOUTH-SOUTH-EAST 5 KT

3.A DVORAK ANALYSIS: 2.5/2.5/D 0.5/6 H

4.A CENTRAL PRESSURE: 995 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 35 KT

RADIUS OF MAXIMUM WINDS (RMW): NIL

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

28 KT NE: 165 SE: 110 SW: 0 NW: 150

34 KT NE: 95 SE: 0 SW: 0 NW: 95

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1006 HPA / 900 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2022/05/07 18 UTC: 8.7 S / 89.8 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM

28 KT NE: 155 SE: 405 SW: 270 NW: 215

34 KT NE: 120 SE: 155 SW: 120 NW: 165

24H: 2022/05/08 06 UTC: 9.9 S / 90.1 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM

28 KT NE: 205 SE: 405 SW: 305 NW: 270

34 KT NE: 150 SE: 165 SW: 155 NW: 185

36H: 2022/05/08 18 UTC: 11.1 S / 90.5 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 205 SE: 325 SW: 345 NW: 215

34 KT NE: 150 SE: 110 SW: 150 NW: 140

48 KT NE: 55 SE: 95 SW: 75 NW: 35

48H: 2022/05/09 06 UTC: 12.2 S / 91.0 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 165 SE: 305 SW: 260 NW: 165

34 KT NE: 120 SE: 110 SW: 65 NW: 110

48 KT NE: 35 SE: 0 SW: 45 NW: 35

60H: 2022/05/09 18 UTC: 14.1 S / 91.6 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM

28 KT NE: 130 SE: 350 SW: 220 NW: 130

34 KT NE: 95 SE: 140 SW: 85 NW: 100

72H: 2022/05/10 06 UTC: 15.5 S / 92.3 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM

28 KT NE: 195 SE: 280 SW: 270 NW: 130

34 KT NE: 130 SE: 110 SW: 85 NW: 100

## 2.B LONGER-RANGE OUTLOOK:

96H: 2022/05/11 06 UTC: 19.0 S / 94.9 E, VENT MAX= 035 KT, REMNANT LOW

28 KT NE: 165 SE: 280 SW: 280 NW: 280

34 KT NE: 100 SE: 250 SW: 155 NW: 185

120H: 2022/05/12 06 UTC: 17.2 S / 94.8 E, VENT MAX= 030 KT, REMNANT LOW

28 KT NE: 0 SE: 205 SW: 240 NW: 185

## 2.C ADDITIONAL INFORMATION:

T=CI=2.5+

DURING THE LAST 6 HOURS, THE CLOUD PATTERN HAS IMPROVED WITH THE FORMATION OF A MORE COMPACT CONVECTION BURST WEST OF THE CENTER AND A MORE SYMMETRIC STRUCTURE. THE ASCAT PASSES OF 0230Z AND 0330 SHOW WINDS OF 35KT ON THE NORTHERN PART OF THE SYSTEM WITH A CIRCULATION WHICH TENDS TO IMPROVE (EVEN IF STILL SLIGHTLY ELONGATED). THE DVORAK ANALYSIS IN SHEARED CONFIGURATION IS ESTIMATED AT 2.5+. WITH THE CONFIRMATION OF THE ASCAT THE SYSTEM HAS BEEN NAMED AT 0700Z AS A MODERATE TROPICAL STORM KARIM.

THIS SYSTEM SHOULD FOLLOW A SOUTH-SOUTH-EASTWARD TRACK FOR THE NEXT FEW DAYS, BOTH UNDER THE DYNAMICS OF THE EQUATORIAL WESTERLY WIND BURST AND ON THE EDGE OF A RIDGE LOCATED TO THE EAST OF THE SYSTEM, THEN ALSO ATTRACTED BY A MID-TROPOSPHERIC TROUGH APPROACHING FROM THE SOUTHWEST FROM MONDAY. FROM TUESDAY, THERE IS STRONG DISPERSION AMONG AVAILABLE MODEL OUTPUT, THE FUTURE TRACK DEPENDING ON HOW INTENSE THE SYSTEM WILL BE AT THIS TIME AND BECAUSE OF POTENTIALLY CONTRADICTORY STEERING FLOWS : THE SYSTEM COULD BE EITHER DRIVEN SOUTH-EASTWARDS BY THE MID-TROPOSPHERIC TROUGH (IF THE SYSTEM KEEPS GOOD INTENSITY) OR MOVE BACK NORTHWESTWARDS THEN WESTWARDS ON THE NORTHERN SIDE OF A SUBTROPICAL LOW-TROPOSPHERE HIGH (IF THE SYSTEM WEAKENS). THE CMRS TRACK IS REVISED SLIGHTLY EASTERN THAN THE PREVIOUS ONE, RELYING MORE ON THE IFS MODEL WHICH BETTER LOCATED THE POSITION AT ANALYSIS. THE SYSTEM SHOULD ENTER THE AUSTRALIAN ZONE OF RESPONSIBILITY, EAST OF 90°, DURING NEXT NIGHT OR EARLY SUNDAY MORNING, BUT WITH A TIMING STILL UNCERTAIN.

IN TERMS OF INTENSITY, THE SYSTEM BENEFITS FROM A RELATIVELY CONDUCTIVE ENVIRONMENT IN THE SHORT-TERM DEVELOPMENT. WITH ITS SOUTHSOUTHEASTWARD MOVEMENT, VERTICAL WIND SHEAR SHOULD EASE A BIT THIS SATURDAY. WITH VERY GOOD UPPER DIVERGENCE (SOUTHWARD OUTFLOW CHANNEL), A SUFFICIENTLY HUMID ENVIRONMENT AND GOOD SURFACE

CONVERGENCE, KARIM SHOULD CONTINUE TO INTENSIFY IN THE NEXT FEW HOURS AND POSSIBLY REACH THE STAGE OF A STRONG TROPICAL STORM BETWEEN SUNDAY AND MONDAY. FROM TUESDAY, INCREASING NORTH-WESTERLY SHEAR AND MID-LEVEL DRY AIR INTRUSION, RELATED TO THE APPROACH OF A TROUGH TO THE SOUTHWEST OF THE SYSTEM, SHOULD WEAKEN IT.

THIS SYSTEM DOES NOT POSE ANY THREAT TO INHABITED LANDS.