

WTIO30 FMEE 180631

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 14/6/20232024

1.A INTENSE TROPICAL CYCLONE 6 (DJOUNGOU)

2.A POSITION 2024/02/18 AT 0600 UTC:

WITHIN 20 NM RADIUS OF POINT 18.4 S / 75.9 E

(EIGHTEEN DECIMAL FOUR DEGREES SOUTH AND  
SEVENTY FIVE DECIMAL NINE DEGREES EAST)

MOVEMENT: EAST-SOUTH-EAST 24 KT

3.A DVORAK ANALYSIS: 5.5/5.5/S 0.0/6 H

4.A CENTRAL PRESSURE: 948 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 95 KT

RADIUS OF MAXIMUM WINDS (RMW): 31 KM

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

28 KT NE: 445 SE: 370 SW: 470 NW: 405

34 KT NE: 240 SE: 240 SW: 240 NW: 185

48 KT NE: 110 SE: 110 SW: 110 NW: 110

64 KT NE: 75 SE: 75 SW: 75 NW: 75

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1008 HPA / 1800 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2024/02/18 18 UTC: 21.2 S / 80.0 E, VENT MAX= 085 KT, TROPICAL CYCLONE

28 KT NE: 490 SE: 390 SW: 370 NW: 305

34 KT NE: 280 SE: 240 SW: 205 NW: 165

48 KT NE: 120 SE: 95 SW: 95 NW: 75

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

24H: 2024/02/19 06 UTC: 24.3 S / 84.4 E, VENT MAX= 075 KT, TROPICAL CYCLONE

28 KT NE: 530 SE: 380 SW: 400 NW: 305

34 KT NE: 295 SE: 230 SW: 230 NW: 165

48 KT NE: 120 SE: 100 SW: 95 NW: 75

64 KT NE: 75 SE: 65 SW: 65 NW: 55

36H: 2024/02/19 18 UTC: 27.2 S / 88.7 E, VENT MAX= 060 KT, POST-TROPICAL  
DEPRESSION

28 KT NE: 465 SE: 260 SW: 335 NW: 280

34 KT NE: 240 SE: 155 SW: 175 NW: 150

48 KT NE: 95 SE: 75 SW: 85 NW: 55

48H: 2024/02/20 06 UTC: 28.6 S / 94.0 E, VENT MAX= 040 KT, POST-TROPICAL DEPRESSION  
28 KT NE: 380 SE: 240 SW: 325 NW: 315  
34 KT NE: 195 SE: 140 SW: 120 NW: 165

60H: 2024/02/20 18 UTC: 28.8 S / 96.6 E, VENT MAX= 030 KT, FILLING UP  
28 KT NE: 185 SE: 215 SW: 250 NW: 150

72H: 2024/02/21 06 UTC: 28.8 S / 98.5 E, VENT MAX= 025 KT, REMNANT LOW

2.B LONGER-RANGE OUTLOOK:  
NIL

2.C ADDITIONAL INFORMATION:  
T=CI=5.5+

OVER THE LAST 6 HOURS, DJOUNGOU EYE PATTERN HAS IMPROVED SIGNIFICANTLY, WITH WARMING OF THE EYE PERSISTING SHORTLY AFTER 02UTC. THE SSMIS F17 PASS AT 0056Z SHOWS A SOLID LOW-LAYER STRUCTURE IN 37 GHZ, SLIGHTLY DECENTERED TO THE WEST WITH THE MID-TROPOSPHERE CENTER, DUE TO A MODERATE TO STRONG UPPER-LEVEL VERTICAL WIND SHEAR INCREASINGLY PRESENT FROM THE WEST (GIVEN AS 25/30 KT MINIMUM BY THE LATEST CIMMS DATA). THIS VERTICAL SHEAR IS BEGINNING TO INJECT DRY AIR INTO THE SYSTEM'S NORTHERN HALF-CIRCLE, AS SHOWN BY THE LATEST MIMIC TPW2 ANIMATIONS. DUE TO THE RAPID MOVEMENT OF THE SYSTEM, THESE STRESSES REMAIN PARTLY UNAFFECTED FOR THE TIME BEING. HOWEVER, THE LATEST MICROWAVE IMAGES SUGGEST A SLIGHT TILT BETWEEN THE LOW-LYING CENTER AND THE HIGH-ALTITUDE CENTER; AN IDEA REINFORCED (IN PART) ALSO BY THE HY-2B SCATTEROMETER PASS AT 0030Z SUPERIMPOSED ON CONVENTIONAL IMAGERY (TAKING INTO ACCOUNT THE USUAL PARALLAX OVER THE EASTERN BASIN). SUBJECTIVE DVORAK ANALYSIS AVERAGED OVER 3 HOURS GIVES A DT OF 5.5+, CLASSIFYING DJOUNGOU AS AN INTENSE TROPICAL CYCLONE. THE INTENSITY IS RAISED TO 95KT, IN LINE WITH SUBJECTIVE ANALYSES BY AMERICAN AGENCIES.

DJOUNGOU IS CONTINUING TO ACCELERATE TOWARDS THE SOUTHEAST AND THEN SOUTHEAST UNTIL MONDAY, CHANNLED BETWEEN A RIDGE OF HIGH PRESSURE TO THE EAST-NORTHEAST AND A TROUGH TO THE SOUTH. ITS MOVEMENT SHOULD SLOW DOWN FROM TUESDAY AS IT WEAKENS. IT COULD THEN LEAVE THE SOUTH-WESTERN INDIAN OCEAN BASIN AND ENTER THE AUSTRALIAN ZONE OF RESPONSIBILITY.

ENVIRONMENTAL CONDITIONS APPEAR TO BE STARTING TO DETERIORATE ON THE BASIS OF THE LATEST OBSERVATIONS. THE DETERIORATION IS SET TO ACCELERATE WITH A SIGNIFICANT DROP IN OCEANIC HEAT POTENTIAL DURING THE DAY, ACCOMPANIED BY A RAPID STRENGTHENING OF THE WEST-NORTH-WEST SHEAR AND THE ARRIVAL OF INTRUSIONS OF DRY AIR FROM THE WEST AND NORTH. THE SYSTEM SHOULD THEN GRADUALLY LOSE ITS TROPICAL CHARACTERISTICS LATE ON MONDAY, BEFORE EVOLVING INTO A REMNANT LOW BY MID-WEEK.

THIS SYSTEM DOES NOT POSE ANY THREAT TO INHABITED LAND.

