

WTIO30 FMEE 291338 RSMC / TROPICAL CYCLONE CENTER / LA REUNION TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 1/14/20242025 1.A VERY INTENSE TROPICAL CYCLONE 14 (COURTNEY)

2.A POSITION 2025/03/29 AT 1200 UTC: WITHIN 20 NM RADIUS OF POINT 18.5 S / 90.2 E (EIGHTEEN DECIMAL FIVE DEGREES SOUTH AND NINETY DECIMAL TWO DEGREES EAST) MOVEMENT: SOUTH-WEST 10 KT

3.A DVORAK ANALYSIS: 7.0/7.0/D 1.0/12 H

4.A CENTRAL PRESSURE: 929 HPA 5.A MAX AVERAGE WIND SPEED (10 MN): 120 KT RADIUS OF MAXIMUM WINDS (RMW): 15 KM

6.A EXTENSION OF WIND BY QUADRANTS (KM): 28 KT NE: 155 SE: 260 SW: 240 NW: 140 34 KT NE: 110 SE: 150 SW: 130 NW: 100 48 KT NE: 75 SE: 95 SW: 80 NW: 75 64 KT NE: 45 SE: 55 SW: 55 NW: 45

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: 2025/03/30 00 UTC: 19.9 S / 88.8 E, VENT MAX= 110 KT, INTENSE TROPICAL CYCLONE 28 KT NE: 195 SE: 285 SW: 215 NW: 150 34 KT NE: 110 SE: 155 SW: 150 NW: 95 48 KT NE: 55 SE: 95 SW: 85 NW: 65 64 KT NE: 45 SE: 45 SW: 55 NW: 45

24H: 2025/03/30 12 UTC: 21.6 S / 88.1 E, VENT MAX= 095 KT, INTENSE TROPICAL CYCLONE 28 KT NE: 205 SE: 270 SW: 215 NW: 150 34 KT NE: 120 SE: 150 SW: 150 NW: 85 48 KT NE: 55 SE: 85 SW: 75 NW: 45 64 KT NE: 45 SE: 45 SW: 45 NW: 35

36H: 2025/03/31 00 UTC: 22.9 S / 88.1 E, VENT MAX= 070 KT, TROPICAL CYCLONE 28 KT NE: 230 SE: 280 SW: 240 NW: 185 34 KT NE: 130 SE: 155 SW: 155 NW: 110 48 KT NE: 55 SE: 85 SW: 75 NW: 55 64 KT NE: 45 SE: 35 SW: 45 NW: 45

48H: 2025/03/31 12 UTC: 23.8 S / 88.3 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM 28 KT NE: 230 SE: 315 SW: 240 NW: 155 34 KT NE: 130 SE: 175 SW: 150 NW: 100 48 KT NE: 55 SE: 75 SW: 85 NW: 0

60H: 2025/04/01 00 UTC: 24.7 S / 88.5 E, VENT MAX= 045 KT, POST-TROPICAL DEPRESSION 28 KT NE: 205 SE: 315 SW: 260 NW: 165 34 KT NE: 110 SE: 185 SW: 155 NW: 100

72H: 2025/04/01 12 UTC: 25.2 S / 88.1 E, VENT MAX= 045 KT, POST-TROPICAL DEPRESSION 28 KT NE: 0 SE: 325 SW: 335 NW: 155 34 KT NE: 0 SE: 195 SW: 175 NW: 95

2.B LONGER-RANGE OUTLOOK: 96H: 2025/04/02 12 UTC: 25.2 S / 85.7 E, VENT MAX= 035 KT, REMNANT LOW 28 KT NE: 0 SE: 205 SW: 260 NW: 0 34 KT NE: 0 SE: 0 SW: 140 NW: 0

120H: 2025/04/03 12 UTC: 25.5 S / 80.5 E, VENT MAX= 025 KT, REMNANT LOW

2.C ADDITIONAL INFORMATION: T=CI=7.0-

TROPICAL SYSTEM COURTNEY FORMED IN THE AUSTRALIAN AREA OF RESPONSIBILITY SINCE MARCH 22ND AND WAS NAMED BY THE AUSTRALIAN BUREAU OF METEOROLOGY ON TUESDAY MARCH 25TH. THE SYSTEM HAS SINCE BENEFITED FROM FAVORABLE ENVIRONMENTAL CONDITIONS FOR ITS DEVELOPMENT WHILE MOVING WESTWARDS, REACHING TROPICAL CYCLONE STAGE ON THURSDAY MARCH 27TH, THEN INTENSE TROPICAL CYCLONE ON FRIDAY MARCH 28TH AT 12UTC.

THIS SATURDAY, AS IT KEPT MOVING WEST-SOUTH-WEST THEN SOUTH-WEST, IT APPROACHED THE 90TH MERIDIAN, WHICH IT WILL CROSS THIS EVENING, THUS ENTERING THE SOUTH-WEST INDIAN OCEAN BASIN. LA REUNION RSMC IS NOW TAKING OVER FROM THE AUSTRALIAN BOM FOR OPERATIONAL MONITORING OF COURTNEY.

COURTNEY'S EYE PATTERN HAS IMPROVED OVER THE COURSE OF THE DAY, WITH SUBJECTIVE DVORAK ANALYSIS NEAR 6.0 THIS MORNING, CLIMBING BETWEEN 6.5 AND 7.0 THIS AFTERNOON. THE FINAL T-NUMBER IS THUS ESTIMATED AT 7.0- A 12UTC, BEARING IN MIND THAT THE METEOSAT PARALLAX EFFECT COULD LEAD TO SOME SLIGHT UNDERESTIMATION. SUCCESSIVE MICROWAVE IMAGES (GPM AT 0442Z, GCOMW AT 0730Z, F18 AT 1008Z) HAVE SHOWN A VERY SOLID AND RATHER COMPACT CONVECTIVE CORE. THESE ELEMENTS LEAD US TO ESTIMATE COURTNEY'S INTENSITY AT 120 KT, PLACING IT AT VITC STAGE, SLIGHTLY ABOVE OBJECTIVE ADT/AIDT ESTIMATES OF 130 KT (1MIN WINDS). AT 12UTC, THE CYCLONE'S CENTER WAS STILL AT 90.2E. IT SHOULD CROSS THE 90TH MERIDIAN BETWEEN 13 AND 14UTC. IN TERMS OF TRACK FORECAST, DUE TO A RIDGE OF MID TO UPPER TROPOSPHERE TO THE SOUTHEAST AND THEN EAST, COURTNEY HAS BEGUN A SOUTHWESTERLY TURN THIS SATURDAY EVENING. ITS MOVEMENT SHOULD THEN CURVE SOUTHWARDS ON SUNDAY, ALSO ATTRACTED BY AN UPPER-LEVEL TROUGH CIRCULATING TO THE SOUTH-WEST AND THEN SOUTH OF THE SYSTEM. AS THE SYSTEM WEAKENS FROM MONDAY ONWARDS, THE STEERING FLOW SHOULD MOVE DOWN INTO THE MID-LEVELS AND THEN INTO THE LOWER LAYERS. ON MONDAY, COURTNEY SHOULD MOVE VERY SLOWLY WITHIN A BAROMETRIC COL SITUATION AT 700HPA, THEN THE MOVEMENT SHOULD RESUME WESTWARDS FROM TUESDAY ONWARDS, AS THE REMNANT LOW BECOMES EMBEDDED WITHIN THE TRADE WIND FLOW ALONG THE NORTH SIDE OF THE LOW-LEVEL SUBTROPICAL ANTICYCLONE.

IN TERMS OF INTENSITY, COURTNEY SHOULD REMAIN VERY INTENSE THIS SATURDAY NIGHT THANKS TO EXCELLENT UPPER-LEVEL DIVERGENCE FAVORED BY THE ESTABLISHMENT OF AN OUTFLOW CHANNEL TO THE SOUTH OF THE SYSTEM AHEAD OF A DISTANT UPPER-LEVEL TROUGH, COMBINED WITH GOOD OCEAN HEAT CONTENT. NEVERTHELESS, THE NORTHERLY THEN NORTHWESTERLY WIND SHEAR SHOULD GRADUALLY INCREASE FROM SUNDAY, THROUGH INTERACTION WITH THIS TROUGH, WHICH SHOULD INITIATE A WEAKENING TREND. IN ADDITION, THE SYSTEM'S SOUTHWARD MOVEMENT WILL TAKE IT OVER LOWER ENERGY CONTENT SURFACE WATERS, ALSO CONTRIBUTING TO WEAKENING. COURTNEY IS THEREFORE EXPECTED TO WEAKEN BELOW TROPICAL CYCLONE STAGE BEFORE MONDAY MORNING. FROM MONDAY ONWARDS, IN A HIGHLY SHEARED ENVIRONMENT, COURTNEY COULD LOSE SOME OF ITS TROPICAL FEATURES, AND CONVECTION IS LIKELY TO WEAKEN, CAUSING IT TO EVOLVE INTO A POST-TROPICAL SYSTEM AND THEN INTO A REMNANT LOW LACKING DEEP CONVECTION NEAR THE CENTER. GALE-FORCE WINDS AND THEN NEAR-GALE-FORCE WINDS SHOULD PERSIST IN THE SOUTHERN SEMI-CIRCLE DUE TO PRESSURE GRADIENT EFFECT UNTIL WEDNESDAY, BEFORE THE SYSTEM DISSIPATES MORE CLEARLY OVER THE FOLLOWING DAYS.

COURTNEY DOES NOT THREATEN ANY INHABITED LAND.