

WTIO30 FMEE 201221

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 22/5/20212022

1.A INTENSE TROPICAL CYCLONE 5 (EMNATI)

2.A POSITION 2022/02/20 AT 1200 UTC:

WITHIN 20 NM RADIUS OF POINT 17.6 S / 55.3 E

(SEVENTEEN DECIMAL SIX DEGREES SOUTH AND
FIFTY FIVE DECIMAL THREE DEGREES EAST)

MOVEMENT: WEST-SOUTH-WEST 6 KT

3.A DVORAK ANALYSIS: 5.5/5.5/D 0.5/12 H

4.A CENTRAL PRESSURE: 948 HPA

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

RADIUS OF MAXIMUM WINDS (RMW): 37 KM

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

28 KT NE: 445 SE: 445 SW: 390 NW: 335

34 KT NE: 220 SE: 280 SW: 260 NW: 185

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

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

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1004 HPA / 1100 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2022/02/21 00 UTC: 18.0 S / 53.9 E, VENT MAX= 105 KT, INTENSE TROPICAL
CYCLONE

28 KT NE: 415 SE: 490 SW: 425 NW: 370

34 KT NE: 240 SE: 285 SW: 285 NW: 230

48 KT NE: 120 SE: 120 SW: 130 NW: 120

64 KT NE: 75 SE: 95 SW: 85 NW: 75

24H: 2022/02/21 12 UTC: 18.6 S / 52.4 E, VENT MAX= 100 KT, INTENSE TROPICAL
CYCLONE

28 KT NE: 400 SE: 500 SW: 405 NW: 335

34 KT NE: 220 SE: 295 SW: 280 NW: 220

48 KT NE: 120 SE: 120 SW: 130 NW: 110

64 KT NE: 75 SE: 95 SW: 85 NW: 75

36H: 2022/02/22 00 UTC: 19.4 S / 50.6 E, VENT MAX= 095 KT, INTENSE TROPICAL
CYCLONE

28 KT NE: 400 SE: 535 SW: 325 NW: 305

34 KT NE: 220 SE: 325 SW: 240 NW: 205

48 KT NE: 120 SE: 110 SW: 120 NW: 130
64 KT NE: 75 SE: 95 SW: 85 NW: 85

48H: 2022/02/22 12 UTC: 20.2 S / 49.0 E, VENT MAX= 100 KT, INTENSE TROPICAL CYCLONE

28 KT NE: 390 SE: 480 SW: 185 NW: 215
34 KT NE: 215 SE: 285 SW: 140 NW: 150
48 KT NE: 95 SE: 100 SW: 95 NW: 120
64 KT NE: 65 SE: 95 SW: 55 NW: 65

60H: 2022/02/23 00 UTC: 21.4 S / 46.8 E, VENT MAX= 040 KT, OVERLAND DEPRESSION

28 KT NE: 390 SE: 510 SW: 100 NW: 240
34 KT NE: 215 SE: 305 SW: 75 NW: 175

72H: 2022/02/23 12 UTC: 23.3 S / 44.4 E, VENT MAX= 030 KT, OVERLAND DEPRESSION

28 KT NE: 270 SE: 455 SW: 380 NW: 280

2.B LONGER-RANGE OUTLOOK:

96H: 2022/02/24 12 UTC: 26.6 S / 41.3 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM

28 KT NE: 360 SE: 480 SW: 325 NW: 305
34 KT NE: 175 SE: 315 SW: 205 NW: 205

120H: 2022/02/25 12 UTC: 30.4 S / 40.4 E, VENT MAX= 045 KT, POST-TROPICAL DEPRESSION

28 KT NE: 465 SE: 500 SW: 425 NW: 455
34 KT NE: 230 SE: 335 SW: 325 NW: 280

2.C ADDITIONAL INFORMATION:

T=CI=5.5+

DURING THE LAST 6 HOURS, THE EYE OF EMNATI HAS BECOME PROGRESSIVELY BETTER DEFINED, AND WARMER.

THESE SIGNS OF INTENSIFICATION REFLECT THE ONGOING DECREASE OF THE SHEAR, (ONLY 5/10KT ACCORDING TO THE LAST CIMSS ANALYSIS).

THE LAST AMSR2 PASS OF 0938UTC STILL SHOWS A SLIGHT TILD OF THE ALTITUDE TOWARDS THE NORTHWEST.

THE DVORAK ANALYSIS AVERAGED OVER 6H GIVES A VALUE OF 5.5+ DEFINING ESTIMATED WINDS OF ABOUT 95KT, AND THE MINIMUM STAGE OF INTENSE TROPICAL CYCLONE. EMNATI IS THUS IN PHASE OF INTENSIFICATION WITH HOWEVER SOME SIGNALS OF TRIGGERING OF CYCLE OF REPLACEMENT OF THE EYEWALL WHICH CAN MAKE THE INTENSITY VARY DOWNWARDS.

IN THE SHORT TERM, NO CHANGE IN TERMS OF EXPECTED TRAJECTORY: EMNATI CONTINUES ITS TRAJECTORY ON A GENERAL WEST-SOUTH-WEST COURSE UNDER THE EFFECT OF THE RIDGE TO THE SOUTH-EAST. THE CONSENSUS IN THE GUIDELINES IS CONFIRMED FOR A PASSAGE AT A DISTANCE OF ABOUT 350KM FROM THE ISLAND OF REUNION. THEREAFTER, A NEW RIDGE OF HIGH PRESSURE ARRIVES FROM THE SOUTH-WEST, FAVORING THE MAINTENANCE OF THE WEST-SOUTH-WEST TRACK UNTIL ITS LANDING ON MADAGASCAR, ON TUESDAY DURING THE DAY, BETWEEN MANANJARY AND VATOMANDRY. EMNATI IS EXPECTED TO CROSS THE MAINLAND AT HIGH SPEED AND EXIT INTO THE MOZAMBIQUE CHANNEL IN THE

AFTERNOON OF WEDNESDAY. ONCE ON THE SEA, EMNATI WILL TAKE A SOUTH-SOUTHWEST DIRECTION.

IN TERMS OF INTENSITY, THE ENVIRONMENTAL CONDITIONS REMAIN FAVORABLE WITH WARM WATERS, DECREASING SHEAR AND A VERY GOOD ALTITUDE DIVERGENCE. EMNATI IS NOW IN AN INTENSIFICATION PHASE LEADING IT TO THE STAGE OF INTENSE TROPICAL CYCLONE AFTER ITS PASSAGE NEAR THE MASCARENE ISLANDS. THE INTENSIFICATION COULD BE TEMPORARILY GENERATED BY THE FEATURES OF THE EYEWALL REPLACEMENT CYCLE. BUT OVERALL, EMNATI WILL INTENSIFY STEADILY UNTIL IT MAKES LANDFALL OVER MADAGASCAR, WITH ENVIRONMENTAL CONDITIONS REMAINING GOOD. ON LONGER TIME SCALES, EMNATI WILL EMERGE OVER THE MOZAMBIQUE CHANNEL MUCH WEAKENED AND WILL SLOWLY INTENSIFY AS IT TRACKS SOUTHWARD INTO A POST-TROPICAL SYSTEM BY THURSDAY.

IN TERMS OF IMPACTS, CONDITIONS CONTINUE TO DETERIORATE OVER REUNION. THE MOST PROBABLE SCENARIO GIVES GALE CONDITIONS (ASSOCIATED WITH GUSTS TO 90-100 KM/H ON SEA). AT THE MARGIN OF THE ACTIVE CORE OF THE SYSTEM, THE HEAVY RAINS WOULD BE LIMITED TO THE RELIEF AREAS. IN THE LONGER TIME SCALES, THE IMPACT AREA ON THE EAST COAST OF MADAGASCAR, EXPECTED ON TUESDAY, IS STILL QUITE UNCERTAIN, BUT THE MOST PROBABLE IMPACT AREA SEEMS TO BE BETWEEN VATOMANDRY AND MANANJARY, EVEN IF ALTERNATIVE SCENARIOS REMAIN POSSIBLE.

THE INHABITANTS OF THE MASCAREIGNES AND OF THE EAST COAST OF MADAGASCAR ARE THUS INVITED TO FOLLOW WITH ATTENTION THE EVOLUTION OF THIS SYSTEM.