

WTIO30 FMEE 200640

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 17/11/20202021

1.A TROPICAL CYCLONE 11 (GUAMBE)

2.A POSITION 2021/02/20 AT 0600 UTC:

WITHIN 20 NM RADIUS OF POINT 25.8 S / 36.1 E

(TWENTY FIVE DECIMAL EIGHT DEGREES SOUTH AND
THIRTY SIX DECIMAL ONE DEGREES EAST)

MOVEMENT: SOUTH-SOUTH-WEST 5 KT

3.A DVORAK ANALYSIS: 4.0/4.5/W 1.0/24 H

4.A CENTRAL PRESSURE: 970 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 65 KT

RADIUS OF MAXIMUM WINDS (RMW): 19 KM

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

28 KT NE: 295 SE: 315 SW: 295 NW: 150

34 KT NE: 205 SE: 205 SW: 65 NW: 65

48 KT NE: 45 SE: 45 SW: 40 NW: 35

64 KT NE: 20 SE: 20 SW: 20 NW: 20

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1007 HPA / 800 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2021/02/20 18 UTC: 27.0 S / 36.5 E, VENT MAX= 070 KT, TROPICAL CYCLONE

28 KT NE: 325 SE: 325 SW: 240 NW: 175

34 KT NE: 195 SE: 230 SW: 175 NW: 140

48 KT NE: 110 SE: 120 SW: 100 NW: 95

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

24H: 2021/02/21 06 UTC: 28.7 S / 37.4 E, VENT MAX= 075 KT, TROPICAL CYCLONE

28 KT NE: 370 SE: 350 SW: 270 NW: 240

34 KT NE: 220 SE: 260 SW: 195 NW: 185

48 KT NE: 110 SE: 110 SW: 100 NW: 95

64 KT NE: 65 SE: 45 SW: 35 NW: 65

36H: 2021/02/21 18 UTC: 31.0 S / 40.0 E, VENT MAX= 090 KT, INTENSE TROPICAL
CYCLONE

28 KT NE: 390 SE: 325 SW: 400 NW: 315

34 KT NE: 230 SE: 250 SW: 260 NW: 230

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

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

48H: 2021/02/22 06 UTC: 33.7 S / 45.4 E, VENT MAX= 085 KT, TROPICAL CYCLONE
28 KT NE: 465 SE: 405 SW: 545 NW: 435
34 KT NE: 260 SE: 315 SW: 350 NW: 295
48 KT NE: 130 SE: 150 SW: 155 NW: 120
64 KT NE: 75 SE: 65 SW: 65 NW: 75

60H: 2021/02/22 18 UTC: 36.5 S / 53.8 E, VENT MAX= 075 KT, POST-TROPICAL
DEPRESSION
28 KT NE: 405 SE: 325 SW: 490 NW: 360
34 KT NE: 230 SE: 280 SW: 305 NW: 250
48 KT NE: 130 SE: 130 SW: 155 NW: 120
64 KT NE: 55 SE: 35 SW: 35 NW: 75

72H: 2021/02/23 06 UTC: 38.3 S / 62.0 E, VENT MAX= 060 KT, POST-TROPICAL
DEPRESSION
28 KT NE: 400 SE: 260 SW: 415 NW: 270
34 KT NE: 215 SE: 250 SW: 250 NW: 175
48 KT NE: 75 SE: 100 SW: 130 NW: 35

2.B LONGER-RANGE OUTLOOK:

96H: 2021/02/24 06 UTC: 40.7 S / 68.2 E, VENT MAX= 040 KT, EXTRATROPICAL
DEPRESSION
28 KT NE: 480 SE: 260 SW: 150 NW: 120
34 KT NE: 250 SE: 205 SW: 140 NW: 100

2.C ADDITIONAL INFORMATION:

T=4.0+ CI=4.5-

OVER THE LAST 6 HOURS, GUAMBE'S CLOUD PATTERN HAS EVOLVED INTO A CURVED BAND CONFIGURATION WITH 1.2 / 1.3 WRAPPING ON THE LOG10 SPIRAL. IN THE ABSENCE OF MICROWAVE IMAGERY, IT IS FOR THE MOMENT IMPOSSIBLE TO VALIDATE THE PRIVILEGED HYPOTHESIS OF AN EYEWALL REPLACEMENT CYCLE TO EXPLAIN THE WEAKENING TREND OBSERVED OVER THE PAST 12 HOURS. ON THE OTHER HAND WATER VAPOR IMAGING SUGGESTS THAT AN EASTERLY CONSTRAINT MAY EXIST. THE FINAL INTENSITY IS ESTIMATED AT 65 KT CONSIDERING A SHORT INERTIA OF THE WIND FIELD (SMALL CENTRAL CORE).

GUAMBE IS NOW TRACKING SOUTHWARD AT A QUICKER PACE. UNDER THE INFLUENCE OF A MID-LEVEL SUBTROPICAL RIDGE IN THE EAST AND A MID-LATITUDES TROUGH APPROACHING FROM THE SOUTH-WEST, GUAMBE SHOULD GRADUALLY TURN SOUTH-EASTWARD OVER THE WEEK-END. THUS, THE CYCLONE WILL STAY AWAY FROM THE MOZAMBIKAN COASTS. FROM SUNDAY, GUAMBE IS EXPECTED TO ACCELERATE SOUTH-EASTWARD AS IT EVACUATES TOWARDS THE MID-LATITUDES. THE AVAILABLE MODELS SHOW RELATIVELY LOW DISPERSION AROUND THIS SCENARIO.

GUAMBE SHOULD RESUME AN INTENSIFICATION IN THE SHORT TERM IN AN ENVIRONMENT THAT REMAINS FAVORABLE WITH A STRONG DIVERGENCE IN PARTICULAR AND A SHEAR IN THE EASTERN SECTOR REMAINING IN REASONABLE PROPORTIONS. THE OCEANIC POTENTIAL REMAINS PRESENT UNTIL ABOUT 30S.

FROM SUNDAY EVENING, THE NORTH-WESTERLY SHEAR WILL GRADUALLY INCREASE AHEAD OF THE MID-LATITUDES TROUGH AND LEAD TO THE WEAKENING OF THE SYSTEM. THE ACCELERATION OF GUAMBE IN THE SAME DIRECTION AS THE UPPER WIND PRODUCES A MODERATE UNCERTAINTY ON THE TIMING OF THE WEAKENING. AT THE END OF THE FORECAST PERIOD, A POST-TROPICAL TRANSITION IS POSSIBLE DEPENDING ON THE DEGREE OF INTERACTION WITH THE SUBTROPICAL JET.

GUAMBE IS STARTING TO MOVE AWAY FROM THE MOZAMBICAN COAST. THE WEATHER CONDITIONS IN SOUTHERN MOZAMBIQUE WILL REMAIN AFFECTED TODAY BETWEEN INHAMBANE IN THE NORTH AND XAI-XAI IN THE SOUTH BEFORE STARTING TO IMPROVE AT LATER TODAY. RAINFALL OF UP TO 50 MM AND LOCALLY 100 MM IN THE NEXT 24 HOURS IS POSSIBLE IN THESE AREAS. STRONG WINDS CAN STILL APPROACH 100 KM/H GUSTING ON THE COAST THIS MORNING BEFORE EASING OFF THIS AFTERNOON. THE CYCLONIC SWELL ASSOCIATED WITH GUAMBE WILL CONTINUE TO AFFECT THE COASTAL REGIONS OF SOUTHERN MOZAMBIQUE AND NORTHEASTERN SOUTH AFRICA THIS WEEKEND (AVERAGE HEIGHTS BETWEEN 2M50 AND 4M DEPENDING ON THE SECTOR) BEFORE EASING OFF ON SUNDAY EVENING.