

WTIO30 FMEE 181213

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 10/11/20202021

1.A SEVERE TROPICAL STORM 11 (GUAMBE)

2.A POSITION 2021/02/18 AT 1200 UTC:

WITHIN 40 NM RADIUS OF POINT 23.3 S / 37.6 E

(TWENTY THREE DECIMAL THREE DEGREES SOUTH AND
THIRTY SEVEN DECIMAL SIX DEGREES EAST)

MOVEMENT: SOUTH 4 KT

3.A DVORAK ANALYSIS: 3.5/3.5/S 0.0/6 H

4.A CENTRAL PRESSURE: 982 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 50 KT

RADIUS OF MAXIMUM WINDS (RMW): 37 KM

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

28 KT NE: 280 SE: 280 SW: 220 NW: 280

34 KT NE: 95 SE: 220 SW: 165 NW: 0

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

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: 2021/02/19 00 UTC: 23.9 S / 37.2 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 400 SE: 370 SW: 205 NW: 335

34 KT NE: 165 SE: 260 SW: 140 NW: 100

48 KT NE: 55 SE: 30 SW: 65 NW: 35

24H: 2021/02/19 12 UTC: 24.8 S / 36.5 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM

28 KT NE: 390 SE: 400 SW: 390 NW: 335

34 KT NE: 155 SE: 280 SW: 230 NW: 155

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

36H: 2021/02/20 00 UTC: 25.4 S / 36.2 E, VENT MAX= 070 KT, TROPICAL CYCLONE

28 KT NE: 390 SE: 400 SW: 305 NW: 335

34 KT NE: 150 SE: 280 SW: 215 NW: 155

48 KT NE: 85 SE: 65 SW: 100 NW: 100

64 KT NE: 45 SE: 35 SW: 35 NW: 75

48H: 2021/02/20 12 UTC: 26.3 S / 36.3 E, VENT MAX= 080 KT, TROPICAL CYCLONE

28 KT NE: 400 SE: 360 SW: 270 NW: 205

34 KT NE: 155 SE: 270 SW: 205 NW: 195

48 KT NE: 95 SE: 95 SW: 110 NW: 110
64 KT NE: 55 SE: 55 SW: 65 NW: 75

60H: 2021/02/21 00 UTC: 27.8 S / 36.7 E, VENT MAX= 085 KT, TROPICAL CYCLONE
28 KT NE: 415 SE: 380 SW: 270 NW: 230
34 KT NE: 155 SE: 280 SW: 205 NW: 185
48 KT NE: 95 SE: 95 SW: 110 NW: 110
64 KT NE: 65 SE: 65 SW: 65 NW: 75

72H: 2021/02/21 12 UTC: 29.3 S / 38.0 E, VENT MAX= 090 KT, INTENSE TROPICAL
CYCLONE
28 KT NE: 445 SE: 345 SW: 325 NW: 270
34 KT NE: 165 SE: 270 SW: 250 NW: 205
48 KT NE: 100 SE: 110 SW: 130 NW: 120
64 KT NE: 85 SE: 85 SW: 85 NW: 85

2.B LONGER-RANGE OUTLOOK:

96H: 2021/02/22 12 UTC: 33.4 S / 47.3 E, VENT MAX= 070 KT, TROPICAL CYCLONE
28 KT NE: 520 SE: 370 SW: 655 NW: 370
34 KT NE: 195 SE: 305 SW: 405 NW: 315
48 KT NE: 120 SE: 95 SW: 175 NW: 150
64 KT NE: 45 SE: 45 SW: 55 NW: 95

120H: 2021/02/23 12 UTC: 36.2 S / 60.2 E, VENT MAX= 035 KT, POST-TROPICAL
DEPRESSION
28 KT NE: 390 SE: 270 SW: 360 NW: 285
34 KT NE: 120 SE: 250 SW: 240 NW: 215

2.C ADDITIONAL INFORMATION:

T=CI=3.5

THE CLOUDY CONFIGURATION OF GUAMBE IN CDO IS MAINTAINED COMPARED TO THE PREVIOUS 6 HOURS AND IN THE ABSENCE OF MICROWAVE DATA LEAVES THE LOCATION OF THE CENTER UNCERTAIN. A DVORAK ANALYSIS IN CDO ALLOWS TO DEFINE A CI OF 3.5- OR EVEN 3.5. FROM THIS MORNING'S SCATSAT DATA WHICH PLEADS FOR WIND VALUES OF AROUND 45KT IN THE EASTERN SECTOR AND A SLIGHT TENDENCY TO INTENSIFY DURING THE LAST HOURS, IT IS POSSIBLE TO OPT FOR A CI OF 3.5 CLASSIFYING GUAMBE AT THE STAGE OF SEVERE TROPICAL STORM WITH MAXIMUM WINDS OF AROUND 50KT IN THE EASTERN SECTOR.

THE SYSTEM REMAINS UNDER THE INFLUENCE OF OPPOSITE DIRECTIONAL FLOWS: A SOUTHEASTERLY FLOW GENERATED BY SUBTROPICAL GEOPOTENTIAL HIGHS AND A NORTHWESTERLY FLOW GENERATED BY A RIDGE NEAR THE EQUATOR. THE SUBTROPICAL RIDGE IS RECONSTITUTING ITSELF AND TAKES CONTROL OF THE GUAMBE TRACK AS SHOWN BY THE CURRENT SOUTHWARD MOVEMENT. THEREAFTER, THE TRACK OF GUAMBE WILL BE ORIENTED MORE TOWARDS THE SOUTHWEST ON THE WESTERN SIDE OF THIS RIDGE. THE DIFFERENT GUIDANCES ARE MORE AND MORE IN AGREEMENT ON THE GENERAL ORIENTATION OF THE TRACK, THE OPTICS OF AN APPROACH OF THE MOZAMBIKAN COASTS BEING LESS PRESENT. THE PRESENT RSMC FORECAST FOLLOWS THIS PHILOSOPHY. AT THE END OF THE WEEK, THE PRESENCE OF A DEEP MID-LATITUDE TROUGH SOUTH OF THE CANAL SHOULD FAVOR A SOUTH-EASTWARD EVACUATION OF GUAMBE BUT THE

CHRONOLOGY ON THIS ACCELERATION REMAINS UNCERTAIN BETWEEN THE MODELS FROM SUNDAY ON.

THE ENVIRONMENT OF GUAMBE IS RATHER FAVORABLE TO A REGULAR INTENSIFICATION, ONLY THE CONVERGENCE OF LOW LEVELS IS STILL LIMITING. NO CHANGE IN TERMS OF INTENSITY FORECAST: A SLOWER AND THEN MORE INTENSE INTENSIFICATION OF THE SYSTEM IS EXPECTED. THESE FAVORABLE CONDITIONS ASSOCIATED WITH A SUFFICIENT OCEANIC POTENTIAL EVEN AT THESE LATITUDES, SHOULD ALLOW GUAMBE TO REACH THE STAGE OF A TROPICAL CYCLONE OR EVEN AN INTENSE TROPICAL CYCLONE. AT THE END OF THE FORECAST PERIOD, ON THE EDGE OF THE MID-LATITUDE TROUGH, THE NORTHWESTERN SECTOR SHEAR COULD GRADUALLY STRENGTHEN LEADING TO THE WEAKENING OF THE SYSTEM. AS FOR THE TRACK, THE SPEED OF MOVEMENT OF THE SYSTEM, WHICH IS INCREASINGLY RAPID IN THE DIRECTION OF THE SHEAR, MAINTAINS AN UNCERTAINTY ON THE TIMING OF THE WEAKENING. AT THE END OF THE PERIOD A POST-TROPICAL EVOLUTION IS POSSIBLE DEPENDING ON THE DEGREE OF INTERACTION WITH THE SUBTROPICAL JET.

EVEN IF THE PRESENT FORECAST IS A LITTLE FURTHER AWAY FROM THE MOZAMBIKAN COAST THAN THE PREVIOUS FORECAST, GUAMBE MAY SIGNIFICANTLY AFFECT THE WEATHER CONDITIONS IN SOUTHERN MOZAMBIQUE, ESPECIALLY ON FRIDAY AND SATURDAY BETWEEN VILANKULO IN THE NORTH AND XAI-XAI IN THE SOUTH. HEAVY RAINS THAT CAN REACH AND LOCALLY EXCEED 150 MM IN 24 HOURS ARE POSSIBLE ON THESE SECTORS. STRONG WINDS THAT CAN REACH 100 KM/H IN GUSTS ON THE COAST ARE POSSIBLE FROM FRIDAY. THE RISK OF STORM SURGE IS GLOBALLY LOW IN THE SECTOR SINCE IN THE WORST CASE SCENARIO, IT IS ESTIMATED AT 1M (INFERIOR TO 50 CM IN THE MOST PROBABLE SCENARIO). IT COULD BE MORE SIGNIFICANT IF THE TRACK OF THE SYSTEM WOULD THREATEN MORE DIRECTLY INHAMBANE.