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WTIO30 FMEE 180631
RSMC / TROPICAL CYCLONE CENTER / LA REUNION
TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 9/11/20202021
1.A MODERATE TROPICAL STORM 11 (GUAMBE)

2.A POSITION 2021/02/18 AT 0600 UTC:
WITHIN 20 NM RADIUS OF POINT 22.5 S / 37.9 E
(TWENTY TWO DECIMAL FIVE DEGREES SOUTH AND
THIRTY SEVEN DECIMAL NINE DEGREES EAST)
MOVEMENT: SOUTH-EAST 4 KT

3.A DVORAK ANALYSIS: 3.5/3.5/D 0.5/12 H

4.A CENTRAL PRESSURE: 985 HPA
5.A MAX AVERAGE WIND SPEED (10 MN): 45 KT
RADIUS OF MAXIMUM WINDS (RMW): 46 KM

6.A EXTENSION OF WIND BY QUADRANTS (KM):
28 KT NE: 240 SE: 230 SW: 150 NW: 260
34 KT NE: 205 SE: 130 SW: 75 NW: 240

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: 2021/02/18 18 UTC: 23.4 S / 37.4 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM
28 KT NE: 270 SE: 305 SW: 120 NW: 130
34 KT NE: 215 SE: 155 SW: 100 NW: 75
48 KT NE: 75 SE: 65 SW: 45 NW: 55

24H: 2021/02/19 06 UTC: 24.3 S / 36.7 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM
28 KT NE: 285 SE: 400 SW: 150 NW: 140
34 KT NE: 215 SE: 230 SW: 140 NW: 95
48 KT NE: 85 SE: 75 SW: 45 NW: 55

36H: 2021/02/19 18 UTC: 25.0 S / 36.1 E, VENT MAX= 065 KT, TROPICAL CYCLONE
28 KT NE: 285 SE: 335 SW: 240 NW: 100
34 KT NE: 205 SE: 220 SW: 185 NW: 75
48 KT NE: 85 SE: 85 SW: 75 NW: 65
64 KT NE: 55 SE: 75 SW: 65 NW: 55

48H: 2021/02/20 06 UTC: 25.7 S / 36.1 E, VENT MAX= 075 KT, TROPICAL CYCLONE
28 KT NE: 295 SE: 370 SW: 250 NW: 110
34 KT NE: 205 SE: 240 SW: 220 NW: 100
48 KT NE: 110 SE: 110 SW: 95 NW: 65

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

60H: 2021/02/20 18 UTC: 27.0 S / 36.3 E, VENT MAX= 080 KT, TROPICAL CYCLONE
28 KT NE: 305 SE: 305 SW: 215 NW: 205
34 KT NE: 205 SE: 215 SW: 185 NW: 150
48 KT NE: 95 SE: 95 SW: 85 NW: 85
64 KT NE: 55 SE: 75 SW: 65 NW: 55

72H: 2021/02/21 06 UTC: 28.6 S / 37.0 E, VENT MAX= 085 KT, TROPICAL CYCLONE
28 KT NE: 325 SE: 305 SW: 285 NW: 260
34 KT NE: 205 SE: 230 SW: 230 NW: 175
48 KT NE: 120 SE: 120 SW: 100 NW: 95
64 KT NE: 75 SE: 95 SW: 65 NW: 55

2.B LONGER-RANGE OUTLOOK:
96H: 2021/02/22 06 UTC: 31.0 S / 41.7 E, VENT MAX= 080 KT, TROPICAL CYCLONE
28 KT NE: 445 SE: 390 SW: 240 NW: 270
34 KT NE: 285 SE: 315 SW: 230 NW: 175
48 KT NE: 140 SE: 150 SW: 100 NW: 120
64 KT NE: 100 SE: 95 SW: 95 NW: 55

120H: 2021/02/23 06 UTC: 33.9 S / 51.3 E, VENT MAX= 040 KT, POST-TROPICAL DEPRESSION
28 KT NE: 490 SE: 415 SW: 270 NW: 270
34 KT NE: 315 SE: 360 SW: 260 NW: 175

2.C ADDITIONAL INFORMATION:
T=CI=3.5-

DURING THE LAST 6 HOURS, THE CLOUDY CONFIGURATION OF THE GUAMBE HAS CONCENTRATED NEAR THE CENTER, LEAVING A CDO PATTERN BETTER DEFINED THAN BEFORE. AS THE CONVECTIVE BAND IN THE EASTERN SECTOR HAS WEAKENED, IT SEEMS THAT THE LOW-LEVEL CIRCULATION IS CONCENTRATED AROUND THE CENTER, SUGGESTING AN INTENSIFICATION. THE LAST MICROWAVE DATA OF 0212UTC STILL SHOWS A SOUTH-EASTWARD MOVEMENT, BUT THE LOCALIZATION OF THE CENTER IN A CDO PATTERN REMAINS DELICATE. IN TERMS OF DVORAK ANALYSIS, A VALUE OF 3.5- STILL LEAVES GUAMBE AT THE STAGE OF A MODERATE TROPICAL STORM WITH MAXIMUM WINDS OF AROUND 45KT.

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 NEAR EQUATORIAL RIDGE. AS THE SUBTROPICAL RIDGE IS EXPECTED TO RECONSTITUTE AND THUS DEFINE THE MAIN FLOW, THE GUAMBE TRACK WILL BE ORIENTED MORE TOWARDS THE SOUTH AND THEN SOUTHWEST ON THE WESTERN SIDE OF THIS RIDGE. THE DIFFERENT GUIDANCES AGREE ON THE GENERAL ORIENTATION OF THE TRACK ALTHOUGH SOME MODELS BRING GUAMBE CLOSER TO THE MOZAMBICAN COAST. THIS VIEW IS LESS PRESENT WITH THE RECENT MODELS, A PHILOSOPHY THAT RSMC FOLLOWS BY DISTANCING A LITTLE BIT THE RECENT TRACK. AT THE END OF THE WEEK, THE PRESENCE OF A DEEP MID-LATITUDE TROUGH TO THE SOUTH OF THE CANAL SHOULD FAVOR AN EVACUATION OF GUAMBE TOWARDS THE SOUTHEAST.

THE ENVIRONMENT OF GUAMBE IS RATHER FAVORABLE TO A REGULAR INTENSIFICATION, ONLY THE CONVERGENCE OF LOW LEVELS IS STILL LIMITING. GRADUALLY, A FIRST SLOW AND THEN MORE FRANK INTENSIFICATION OF THE SYSTEM IS EXPECTED. THESE FAVORABLE CONDITIONS, COMBINED WITH 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 A MID-LATITUDE TROUGH, THE NORTHWESTERN SECTOR SHEAR COULD GRADUALLY STRENGTHEN AND ADVECT DRY AIR INTO THE INNER CORE OF THE SYSTEM, LEADING TO ITS WEAKENING. THE INCREASINGLY RAPID SPEED OF MOVEMENT OF THE SYSTEM IN THE DIRECTION OF 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 MOZAMBICAN 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 100 MM IN 24 HOURS ARE POSSIBLE ON THESE SECTORS. ALTHOUGH THE STRONGEST WINDS ASSOCIATED WITH GUAMBE SHOULD MAINLY BE LOCATED IN THE EASTERN SEMICIRCLE OF THE SYSTEM, STRONG WINDS OF UP TO 100 KM/H IN GUSTS ARE POSSIBLE FROM THURSDAY EVENING OR FRIDAY MORNING. THE RISK OF STORM SURGE IS GLOBALLY LOW IN THE AREA 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 SYSTEM'S TRACK WOULD THREATEN MORE DIRECTLY INHAMBANE.