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WTIO30 FMEE 191820
RSMC / TROPICAL CYCLONE CENTER / LA REUNION
TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 15/11/20202021
1.A TROPICAL CYCLONE 11 (GUAMBE)

2.A POSITION 2021/02/19 AT 1800 UTC:
WITHIN 20 NM RADIUS OF POINT 24.9 S / 36.3 E
(TWENTY FOUR DECIMAL NINE DEGREES SOUTH AND
THIRTY SIX DECIMAL THREE DEGREES EAST)
MOVEMENT: SOUTH-WEST 4 KT

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

4.A CENTRAL PRESSURE: 953 HPA
5.A MAX AVERAGE WIND SPEED (10 MN): 85 KT
RADIUS OF MAXIMUM WINDS (RMW): 9 KM

6.A EXTENSION OF WIND BY QUADRANTS (KM):
28 KT NE: 315 SE: 370 SW: 295 NW: 260
34 KT NE: 260 SE: 185 SW: 65 NW: 55
48 KT NE: 35 SE: 35 SW: 40 NW: 35
64 KT NE: 30 SE: 30 SW: 20 NW: 20

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1006 HPA / 700 KM
8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):
12H: 2021/02/20 06 UTC: 25.7 S / 36.0 E, VENT MAX= 090 KT, INTENSE TROPICAL CYCLONE
28 KT NE: 360 SE: 405 SW: 285 NW: 165
34 KT NE: 240 SE: 270 SW: 185 NW: 140
48 KT NE: 120 SE: 120 SW: 95 NW: 85
64 KT NE: 65 SE: 45 SW: 35 NW: 65

24H: 2021/02/20 18 UTC: 27.1 S / 36.5 E, VENT MAX= 095 KT, INTENSE TROPICAL CYCLONE
28 KT NE: 345 SE: 315 SW: 250 NW: 205
34 KT NE: 220 SE: 220 SW: 165 NW: 150
48 KT NE: 120 SE: 130 SW: 95 NW: 85
64 KT NE: 55 SE: 45 SW: 45 NW: 65

36H: 2021/02/21 06 UTC: 28.5 S / 37.0 E, VENT MAX= 095 KT, INTENSE TROPICAL CYCLONE
28 KT NE: 390 SE: 370 SW: 280 NW: 270
34 KT NE: 240 SE: 260 SW: 195 NW: 205

48 KT NE: 120 SE: 140 SW: 100 NW: 95
64 KT NE: 75 SE: 65 SW: 55 NW: 65

48H: 2021/02/21 18 UTC: 30.7 S / 39.9 E, VENT MAX= 095 KT, INTENSE TROPICAL CYCLONE
28 KT NE: 405 SE: 335 SW: 390 NW: 360
34 KT NE: 250 SE: 240 SW: 250 NW: 260
48 KT NE: 120 SE: 140 SW: 120 NW: 110
64 KT NE: 65 SE: 55 SW: 55 NW: 65

60H: 2021/02/22 06 UTC: 33.1 S / 45.0 E, VENT MAX= 090 KT, INTENSE TROPICAL CYCLONE
28 KT NE: 490 SE: 435 SW: 610 NW: 480
34 KT NE: 285 SE: 325 SW: 370 NW: 305
48 KT NE: 140 SE: 175 SW: 165 NW: 120
64 KT NE: 85 SE: 75 SW: 75 NW: 85

72H: 2021/02/22 18 UTC: 34.3 S / 50.5 E, VENT MAX= 075 KT, POST-TROPICAL DEPRESSION
28 KT NE: 455 SE: 455 SW: 480 NW: 350
34 KT NE: 240 SE: 280 SW: 325 NW: 240
48 KT NE: 130 SE: 85 SW: 100 NW: 110
64 KT NE: 65 SE: 65 SW: 65 NW: 75

2.B LONGER-RANGE OUTLOOK:
96H: 2021/02/23 18 UTC: 37.4 S / 60.1 E, VENT MAX= 055 KT, POST-TROPICAL DEPRESSION
28 KT NE: 470 SE: 240 SW: 140 NW: 95
34 KT NE: 250 SE: 175 SW: 130 NW: 85
48 KT NE: 85 SE: 55 SW: 55 NW: 35

120H: 2021/02/24 18 UTC: 45.3 S / 75.7 E, VENT MAX= 040 KT, EXTRATROPICAL DEPRESSION
28 KT NE: 565 SE: 205 SW: 175 NW: 350
34 KT NE: 325 SE: 155 SW: 165 NW: 260

2.C ADDITIONAL INFORMATION:
T=CI=5.5-

OVER THE PAST 6 HOURS, GUAMBE HAS CLEARLY SLOWED DOWN AND MAYBE EVEN STOPPED ACCORDING TO THE LAST SAT IMAGES. THE EYE PATTERN DID NOT EVOLVE MUCH BEFORE SLIGHTLY DEGRADING ON THE LAST IMAGES. THIS DOWNGRADE OF THE CLOUD PATTERN MAY BE EXPLAINED BY THE SLOWER MOTION OF GUAMBE OVER WATERS WITH MORE LIMITED HEAT POTENTIAL THAN THE SURROUNDINGS. HOWEVER, AN OTHER HYPOTHESIS IS THE BEGINNING OF AN EYEWALL REPLACEMENT CYCLE. THE 1101Z AMSR2 89GHZ IMAGE SHOWED A CURVED CONVECTION BAND LOOSELY SPIRALING AROUND A VERY TIGHT INNER CORE. THE NEXT MW IMAGES WILL PROVIDE INFORMATION ON THE VALIDITY OF THIS POSSIBILITY. THE INTENSITY ESTIMATE IS BASED ON A 3-HRS MEAN OF THE LAST DVORAK ESTIMATES (CORRECTED FOR GUAMBE'S SMALL SIZE).

FROM TOMORROW, 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 MOZAMBICAN COASTS. FROM SUNDAY, GUAMBE IS EXPECTED TO ACCELERATE SOUTH-EASTWARD AS IT EVACUATES TOWARDS THE MID-LATITUDES, FOLLOWING A RATHER UNCERTAIN TIMING. THE AVAILABLE MODELS SHOW RELATIVELY LOW DISPERSION AROUND THIS SCENARIO.

GUAMBE COULD STILL INTENSIFY IN THE SHORT TERM WITHIN AN ENVIRONMENT THAT REMAINS FAVORABLE WITH AN ESPECIALLY STRONG UPPER DIVERGENCE. THIS WEEK-END, A LIKELY OCCURRENCE OF EYEWALL REPLACEMENT CYCLE COULD LIMIT THE INTENSITY OF GUAMBE. GIVEN THE LOW PREVISIBILITY OF SUCH A PHENOMENON, THE CURRENT INTENSITY FORECAST DO NOT ENTIRELY TAKES IT INTO ACCOUNT.
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 RATHER USUAL UNCERTAINTY ON THE TIMING OF THE WEAKENING. AT THE END OF THE FORECAST PERIOD, A POST-TROPICAL TRANSITION IS LIKELY DEPENDING ON THE DEGREE OF INTERACTION WITH THE SUBTROPICAL JET.

EVEN IF THE PRESENT FORECAST TAKES GUAMBE SLIGHTLY MORE THAN 100KM OFF THE MOZAMBICAN COAST, THE WEATHER CONDITIONS IN SOUTHERN MOZAMBIQUE WILL REMAIN HAZARDOUS THIS WEEK-END BETWEEN INHAMBANE TO THE NORTH AND XAI-XAI TO THE SOUTH. HEAVY RAINS THAT CAN REACH AND LOCALLY EXCEED 150 MM IN 24 HOURS ARE POSSIBLE IN THESE AREAS. STRONG WINDS GUSTING UP TO 100 KM/H ON THE COAST ARE LIKELY.