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

0.A WARNING NUMBER: 10/10/20222023
1.A TROPICAL CYCLONE 10 (FABIEN)

2.A POSITION 2023/05/15 AT 1200 UTC:
WITHIN 20 NM RADIUS OF POINT 5.7 S / 77.7 E
(FIVE DECIMAL SEVEN DEGREES SOUTH AND
SEVENTY SEVEN DECIMAL SEVEN DEGREES EAST)
MOVEMENT: WEST-SOUTH-WEST 9 KT

3.A DVORAK ANALYSIS: 4.5/4.5/D 1.0/18 H

4.A CENTRAL PRESSURE: 982 HPA
5.A MAX AVERAGE WIND SPEED (10 MN): 65 KT
RADIUS OF MAXIMUM WINDS (RMW): 37 KM

6.A EXTENSION OF WIND BY QUADRANTS (KM):
28 KT NE: 165 SE: 165 SW: 195 NW: 175
34 KT NE: 100 SE: 100 SW: 100 NW: 100
48 KT NE: 65 SE: 65 SW: 60 NW: 65
64 KT NE: 35 SE: 35 SW: 35 NW: 35

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1009 HPA / 500 KM
8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):
12H: 2023/05/16 00 UTC: 6.5 S / 76.4 E, VENT MAX= 075 KT, TROPICAL CYCLONE
28 KT NE: 130 SE: 220 SW: 175 NW: 150
34 KT NE: 100 SE: 85 SW: 100 NW: 85
48 KT NE: 65 SE: 65 SW: 55 NW: 65
64 KT NE: 35 SE: 45 SW: 45 NW: 45

24H: 2023/05/16 12 UTC: 7.7 S / 75.2 E, VENT MAX= 085 KT, TROPICAL CYCLONE
28 KT NE: 140 SE: 250 SW: 205 NW: 140
34 KT NE: 110 SE: 110 SW: 120 NW: 95
48 KT NE: 65 SE: 75 SW: 65 NW: 75
64 KT NE: 45 SE: 55 SW: 55 NW: 45

36H: 2023/05/17 00 UTC: 8.6 S / 74.4 E, VENT MAX= 090 KT, INTENSE TROPICAL CYCLONE
28 KT NE: 150 SE: 270 SW: 230 NW: 140
34 KT NE: 110 SE: 120 SW: 155 NW: 95
48 KT NE: 65 SE: 75 SW: 65 NW: 65
64 KT NE: 45 SE: 55 SW: 55 NW: 45

48H: 2023/05/17 12 UTC: 9.2 S / 74.0 E, VENT MAX= 095 KT, INTENSE TROPICAL CYCLONE
28 KT NE: 150 SE: 270 SW: 230 NW: 155
34 KT NE: 110 SE: 120 SW: 150 NW: 100
48 KT NE: 65 SE: 75 SW: 65 NW: 65
64 KT NE: 55 SE: 55 SW: 55 NW: 45

60H: 2023/05/18 00 UTC: 9.6 S / 73.7 E, VENT MAX= 095 KT, INTENSE TROPICAL CYCLONE
28 KT NE: 150 SE: 270 SW: 220 NW: 155
34 KT NE: 110 SE: 130 SW: 150 NW: 100
48 KT NE: 65 SE: 75 SW: 75 NW: 65
64 KT NE: 55 SE: 55 SW: 55 NW: 45

72H: 2023/05/18 12 UTC: 10.0 S / 73.2 E, VENT MAX= 090 KT, INTENSE TROPICAL CYCLONE
28 KT NE: 150 SE: 260 SW: 215 NW: 155
34 KT NE: 110 SE: 120 SW: 150 NW: 110
48 KT NE: 65 SE: 75 SW: 75 NW: 65
64 KT NE: 55 SE: 55 SW: 55 NW: 45

2.B LONGER-RANGE OUTLOOK:
96H: 2023/05/19 12 UTC: 10.4 S / 72.6 E, VENT MAX= 080 KT, TROPICAL CYCLONE
28 KT NE: 165 SE: 280 SW: 240 NW: 185
34 KT NE: 120 SE: 130 SW: 165 NW: 130
48 KT NE: 75 SE: 85 SW: 75 NW: 75
64 KT NE: 55 SE: 55 SW: 55 NW: 55

120H: 2023/05/20 12 UTC: 10.5 S / 71.7 E, VENT MAX= 070 KT, TROPICAL CYCLONE
28 KT NE: 155 SE: 240 SW: 240 NW: 185
34 KT NE: 120 SE: 100 SW: 155 NW: 130
48 KT NE: 70 SE: 70 SW: 70 NW: 70
64 KT NE: 60 SE: 60 SW: 60 NW: 50

2.C ADDITIONAL INFORMATION:
FT=CI=4.5-

IN THE LAST 6 HOURS, FABIEN HAS KEPT A CLOUDY CONFIGURATION IN CDO WITH AN INTENSIFIED CONVECTION. THE LAST VISIBLE IMAGES SHOW THE FIRST SIGNS OF AN EYE, AN EYE STRUCTURE ALREADY PRESENT ON THE GCOM MICROWAVE PASS AROUND 0900Z, DESPITE THE STILL VISIBLE EFFECTS OF THE MODERATE EASTERLY SHEAR, WHICH IS TRANSLATED BY A TILT BETWEEN 37GHZ AND 85GHZ.

IN THE NEXT FEW DAYS, THE SYSTEM SHOULD MOVE GENERALLY SOUTHWESTWARD UNDER THE EFFECT OF A SUBTROPICAL RIDGE LOCATED TO THE SOUTHEAST. FROM THE MIDDLE OF THE WEEK, MORE CONTRADICTORY STEERING FLOWS DRIVEN BY THE NEAR-EQUATORIAL RIDGE AND THE SUBTROPICAL RIDGES SHOULD CAUSE A CLEAR SLOWING DOWN OF ITS MOVEMENT, ACCOMPANIED BY AN INCREASE IN THE UNCERTAINTY ON THE TRACK, AS SHOWN BY THE DISPERSION OF THE OVERALL FORECAST. THE CMRS FOLLOWS A COMPROMISE BETWEEN EUROPEAN AND AMERICAN MODELS. THE SYSTEM IS EXPECTED TO

REMAIN OFF THE EASTERN CHAGOS ARCHIPELAGO WITH NO DIRECT THREAT TO OTHER INHABITED ISLANDS IN THE BASIN.

IN TERMS OF INTENSITY, DESPITE THE PERSISTENCE OF A MODERATE SHEAR IN THE SHORT TERM, THE ENVIRONMENT WILL BECOME PROGRESSIVELY MORE FAVORABLE TO THE DEVELOPMENT OF THE SYSTEM FROM THIS MONDAY, WITH THE DECREASE OF THE SHEAR, THE IMPROVEMENT OF THE CONVERGENCE OF LOW LAYERS EQUATORIAL COAST AND THE MAINTENANCE OF A GOOD DIVERGENCE OF ALOFT, AND EVEN THE INCREASE OF THE ENERGETIC POTENTIAL FROM WEDNESDAY.
THE RSMC FORECAST FORECAST THUS ENVISAGES AN INTENSIFICATION LEADING PROBABLY TO AN INTENSE TROPICAL CYCLONE IN THE MIDDLE OF THE WEEK, WHICH IS SUGGESTED BY MOST OF THE MODELS, WITH NEVERTHELESS A NOTABLE DIVERGENCE ON THE CHRONOLOGY OF THE INTENSIFICATION (EARLIER INTENSIFICATION FOR GFS, WHICH IS A LITTLE BETTER WEDGED THAN IFS IN THE INITIAL STATE).