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

0.A WARNING NUMBER: 8/10/20222023
1.A SEVERE TROPICAL STORM 10 (FABIEN)

2.A POSITION 2023/05/15 AT 0000 UTC:
WITHIN 20 NM RADIUS OF POINT 5.2 S / 79.4 E
(FIVE DECIMAL TWO DEGREES SOUTH AND
SEVENTY NINE DECIMAL FOUR DEGREES EAST)
MOVEMENT: WEST-SOUTH-WEST 9 KT

3.A DVORAK ANALYSIS: 4.0/4.0/D 1.0/12 H

4.A CENTRAL PRESSURE: 991 HPA
5.A MAX AVERAGE WIND SPEED (10 MN): 55 KT
RADIUS OF MAXIMUM WINDS (RMW): 33 KM

6.A EXTENSION OF WIND BY QUADRANTS (KM):
28 KT NE: 130 SE: 140 SW: 130 NW: 165
34 KT NE: 85 SE: 85 SW: 85 NW: 85
48 KT NE: 35 SE: 45 SW: 40 NW: 0

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1010 HPA / 700 KM
8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):
12H: 2023/05/15 12 UTC: 5.6 S / 77.9 E, VENT MAX= 065 KT, TROPICAL CYCLONE
28 KT NE: 120 SE: 165 SW: 150 NW: 140
34 KT NE: 95 SE: 75 SW: 75 NW: 85
48 KT NE: 55 SE: 55 SW: 55 NW: 65
64 KT NE: 35 SE: 45 SW: 45 NW: 35

24H: 2023/05/16 00 UTC: 6.3 S / 76.6 E, VENT MAX= 080 KT, TROPICAL CYCLONE
28 KT NE: 130 SE: 220 SW: 155 NW: 150
34 KT NE: 100 SE: 85 SW: 100 NW: 85
48 KT NE: 55 SE: 65 SW: 55 NW: 65
64 KT NE: 35 SE: 45 SW: 45 NW: 35

36H: 2023/05/16 12 UTC: 7.4 S / 75.5 E, VENT MAX= 090 KT, INTENSE TROPICAL CYCLONE
28 KT NE: 130 SE: 240 SW: 195 NW: 140
34 KT NE: 100 SE: 100 SW: 130 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 00 UTC: 8.2 S / 74.7 E, VENT MAX= 095 KT, INTENSE TROPICAL CYCLONE
28 KT NE: 150 SE: 240 SW: 195 NW: 150
34 KT NE: 120 SE: 110 SW: 130 NW: 100
48 KT NE: 75 SE: 75 SW: 65 NW: 65
64 KT NE: 55 SE: 55 SW: 55 NW: 45

60H: 2023/05/17 12 UTC: 8.8 S / 74.1 E, VENT MAX= 095 KT, INTENSE TROPICAL CYCLONE
28 KT NE: 140 SE: 230 SW: 205 NW: 165
34 KT NE: 110 SE: 100 SW: 140 NW: 110
48 KT NE: 65 SE: 75 SW: 65 NW: 75
64 KT NE: 55 SE: 55 SW: 55 NW: 45

72H: 2023/05/18 00 UTC: 9.3 S / 73.5 E, VENT MAX= 095 KT, INTENSE TROPICAL CYCLONE
28 KT NE: 165 SE: 280 SW: 205 NW: 165
34 KT NE: 130 SE: 140 SW: 150 NW: 110
48 KT NE: 75 SE: 75 SW: 65 NW: 75
64 KT NE: 55 SE: 55 SW: 55 NW: 55

2.B LONGER-RANGE OUTLOOK:
96H: 2023/05/19 00 UTC: 9.7 S / 72.6 E, VENT MAX= 085 KT, TROPICAL CYCLONE
28 KT NE: 155 SE: 280 SW: 270 NW: 195
34 KT NE: 130 SE: 120 SW: 140 NW: 110
48 KT NE: 75 SE: 75 SW: 65 NW: 75
64 KT NE: 45 SE: 55 SW: 55 NW: 45

120H: 2023/05/20 00 UTC: 10.0 S / 71.9 E, VENT MAX= 075 KT, TROPICAL CYCLONE
28 KT NE: 155 SE: 270 SW: 240 NW: 195
34 KT NE: 130 SE: 120 SW: 130 NW: 120
48 KT NE: 70 SE: 60 SW: 60 NW: 80
64 KT NE: 50 SE: 60 SW: 60 NW: 50

2.C ADDITIONAL INFORMATION:
FT=CI=4.0

DURING THE LAST 6 HOURS, FABIEN HAS KEPT A CDO PATTERN WITH INTENSIFYING CONVECTION. A 2030Z AMSR2 PASS STILL SHOWS THE EARLY STAGES OF AN EYE-LIKE PATTERN, ALTHOUGH SIGNS OF MODERATE EASTERLY WIND SHEAR REMAIN VISIBLE. THE 18Z BEST-TRACK INTENSITY HAS BEEN REVISED UPWARDS AFTERHAND (WINDS RAISED TO 50KT INSTEAD OF 40KT, ESPECIALLY JUSTIFIED BY ASCAT DATA). THE 00Z INTENSITY IS NOW ESTIMATED AT 55KT, BASED ON SATCON ESTIMATE AND SUBJECTIVE DVORAK ANALYSIS.

IN THE NEXT FEW DAYS THE SYSTEM SHOULD CONTINUE TO TRACK GENERALLY SOUTHWESTWARD UNDER THE EFFECT OF A SUBTROPICAL RIDGE LOCATED TO THE SOUTHEAST. FROM MID-WEEK, MORE CONTRADICTORY STEERING FLOWS DRIVEN BY A NEAR-EQUATORIAL RIDGE AND SUBTROPICAL RIDGES SHOULD CAUSE IT TO SLOW DOWN, ACCOMPANIED BY AN INCREASE IN TRACK UNCERTAINTY, AS THE ENSEMBLE FORECASTS' SPREAD SHOWS. THE RSMC FOLLOWS A COMPROMISE BETWEEN THE EUROPEAN AND AMERICAN SCENARIOS. THE SYSTEM IS EXPECTED

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

IN TERMS OF INTENSITY, DESPITE THE PERSISTENCE OF MODERATE SHEAR IN THE SHORT TERM, THE ENVIRONMENT WILL GRADUALLY BECOME MORE CONDUCIVE TO DEVELOPMENT FROM THIS MONDAY, WITH DECREASING WIND SHEAR, IMPROVED EQUATORWARD LOW-LEVEL CONVERGENCE AND GOOD UPPER DIVERGENCE. THE RSMC FORECAST THUS EXPECTS INTENSIFICATION LEADING TO TROPICAL CYCLONE STAGE THEN PROBABLY INTENSE TROPICAL CYCLONE STAGE BY MID-WEEK, AS SUGGESTED BY MOST MODELS, WITH NEVERTHELESS SOME SIGNIFICANT DIFFERENCES ON INTENSIFICATION TIMING (EARLIER INTENSIFICATION FOR GFS, WHICH SEEMS TO FIT A BIT BETTER THAN IFS WITH THE INITIAL STATE).