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

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

2.A POSITION 2023/02/23 AT 1800 UTC:
WITHIN 30 NM RADIUS OF POINT 19.4 S / 70.9 E
(NINETEEN DECIMAL FOUR DEGREES SOUTH AND
SEVENTY DECIMAL NINE DEGREES EAST)
MOVEMENT: SOUTH-SOUTH-WEST 10 KT

3.A DVORAK ANALYSIS: 4.0/4.0/S 0.0/6 H

4.A CENTRAL PRESSURE: 986 HPA
5.A MAX AVERAGE WIND SPEED (10 MN): 60 KT
RADIUS OF MAXIMUM WINDS (RMW): 22 KM

6.A EXTENSION OF WIND BY QUADRANTS (KM):
28 KT NE: 150 SE: 155 SW: 150 NW: 155
34 KT NE: 85 SE: 75 SW: 75 NW: 85
48 KT NE: 45 SE: 35 SW: 40 NW: 45
64 KT NE: 0 SE: 0 SW: 0 NW: 0

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: 2023/02/24 06 UTC: 21.1 S / 69.8 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM
28 KT NE: 165 SE: 215 SW: 140 NW: 100
34 KT NE: 95 SE: 130 SW: 100 NW: 65
48 KT NE: 35 SE: 55 SW: 45 NW: 45

24H: 2023/02/24 18 UTC: 22.8 S / 68.8 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM
28 KT NE: 155 SE: 220 SW: 120 NW: 95
34 KT NE: 85 SE: 130 SW: 75 NW: 65

36H: 2023/02/25 06 UTC: 24.5 S / 67.5 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM
28 KT NE: 165 SE: 185 SW: 150 NW: 95
34 KT NE: 85 SE: 120 SW: 95 NW: 65

48H: 2023/02/25 18 UTC: 25.4 S / 66.4 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM
28 KT NE: 165 SE: 205 SW: 165 NW: 95

34 KT NE: 85 SE: 140 SW: 95 NW: 65

60H: 2023/02/26 06 UTC: 26.3 S / 65.2 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM
28 KT NE: 165 SE: 195 SW: 130 NW: 95
34 KT NE: 75 SE: 140 SW: 85 NW: 65

72H: 2023/02/26 18 UTC: 27.1 S / 64.0 E, VENT MAX= 040 KT, POST-TROPICAL DEPRESSION
28 KT NE: 165 SE: 165 SW: 120 NW: 110
34 KT NE: 75 SE: 120 SW: 0 NW: 65

2.B LONGER-RANGE OUTLOOK:
96H: 2023/02/27 18 UTC: 28.0 S / 63.2 E, VENT MAX= 045 KT, POST-TROPICAL DEPRESSION
28 KT NE: 175 SE: 165 SW: 150 NW: 110
34 KT NE: 75 SE: 120 SW: 85 NW: 65

120H: 2023/02/28 18 UTC: 27.5 S / 62.9 E, VENT MAX= 045 KT, POST-TROPICAL DEPRESSION
28 KT NE: 215 SE: 205 SW: 165 NW: 100
34 KT NE: 100 SE: 150 SW: 110 NW: 65

2.C ADDITIONAL INFORMATION:
T=CI=4.0+

ENALA HAS KEPT A CDO PATTERN WITH STILL VIGOROUS CONVECTION NEAR THE CENTER. THE EVENING ASCAT PASSES CONFIRM THAT THE CENTER IS STILL WELL PLACED UNDER THE CONVECTIVE CLOUD MASS AND INDICATE WINDS AT 50/55KT (REAL WINDS ARE THUS HIGHER). A 1343Z SMAP PASS MEASURED WINDS AT 65KT. ENALA IS THUS AT THE LIMIT BETWEEN SEVERE TROPICAL STORM STAGE AND TROPICAL CYCLONE STAGE. THE INTENSITY HAS BEEN LEFT AT 60KT AT 18UTC, BUT FURTHER DATA ANALYSIS SEEMS TO INDICATE WINDS CLOSER TO 65KT FOR 12 AND 18UTC. THE MAXIMUM ANALYZED INTENSITY OF ENALA WILL THEREFORE BE REVISED TO 65KT (T4.5-) IN THE NEXT BEST-TRACK UPDATE. ENALA HAS PROBABLY REACHED ITS PEAK. NORTHWESTERLY WIND SHEAR IS INCREASING, BUT HAS BEEN COMPENSATED FOR THE MOMENT BY THE SYSTEM'S FORWARD MOTION AT ABOUT 10KT. THE 1310Z SSMIS-F16 MICROWAVE IMAGE SHOWS A SLIGHT DETERIORATION OF THE CENTRAL CORE ON ITS NORTH-WEST SIDE COMPARED TO THE 1108 SSMIS-F18.

ENALA'S SOUTH-SOUTHWESTWARD TRACK SHOULD CONTINUE UNTIL SATURDAY, GUIDED BETWEEN THE HIGH SUBTROPICAL GEOPOTENTIALS LOCATED EAST OF THE SYSTEM ON THE ONE HAND, AND A WEAK MID-TROPOSPHERE TROUGH THAT FAVORS THE SOUTHWARD DESCENT OF THE SYSTEM, ON THE OTHER HAND. THIS WEEKEND, WHILE THE SYSTEM WEAKENS, THE STEERING FLOW SHOULD MOVE DOWN TO LOWER LEVELS AND DRIVE THE SYSTEM A BIT MORE TO THE SOUTH-WEST AT FIRST. ON MONDAY, CONTRADICTORY STEERING FLOWS SHOULD SLOW ENALA'S MOVEMENT AND THE FORECAST UNCERTAINTY INCREASES FROM THERE ON.

FROM FRIDAY AND ESPECIALLY SATURDAY, INCREASING NORTH-WESTERLY WIND

SHEAR ASSOCIATED WITH THE UPPER TROUGH SHOULD CAUSE DRY AIR INTRUSIONS, SO THAT A MORE OR LESS RAPID WEAKENING IS EXPECTED DURING THE WEEKEND. GUIDANCE TEND TO DISAGREE ABOUT THIS WEAKENING. THE SHEAR ASSOCIATED WITH THE TROUGH THEN THE PASSAGE OF THE LOW UNDER THE TROUGH AS WELL AS A DECREASE OF THE OCEANIC POTENTIAL COULD MAKE THE SYSTEM LOSE SOME OF ITS TROPICAL CHARACTERISTICS BUT ALSO MAINTAIN A LITTLE ITS INTENSITY.

ENALA DOES NOT POSE ANY THREAT TO INHABITED LANDS.