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

0.A WARNING NUMBER: 15/6/20202021
1.A SEVERE TROPICAL STORM 6 (DANILO)

2.A POSITION 2021/01/03 AT 1800 UTC:
WITHIN 20 NM RADIUS OF POINT 13.1 S / 75.3 E
(THIRTEEN DECIMAL ONE DEGREES SOUTH AND
SEVENTY FIVE DECIMAL THREE DEGREES EAST)
MOVEMENT: SOUTH-EAST 13 KT

3.A DVORAK ANALYSIS: 3.5/3.5/S 0.0/24 H

4.A CENTRAL PRESSURE: 987 HPA
5.A MAX AVERAGE WIND SPEED (10 MN): 55 KT
RADIUS OF MAXIMUM WINDS (RMW): 41 KM

6.A EXTENSION OF WIND BY QUADRANTS (KM):
28 KT NE: 455 SE: 85 SW: 100 NW: 230
34 KT NE: 140 SE: 45 SW: 75 NW: 150
48 KT NE: 45 SE: 0 SW: 0 NW: 45

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1004 HPA / 400 KM
8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):
12H: 2021/01/04 06 UTC: 14.8 S / 76.3 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM
28 KT NE: 240 SE: 165 SW: 155 NW: 85
34 KT NE: 110 SE: 155 SW: 75 NW: 75
48 KT NE: 75 SE: 55 SW: 55 NW: 55

24H: 2021/01/04 18 UTC: 15.8 S / 76.5 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM
28 KT NE: 230 SE: 155 SW: 140 NW: 85
34 KT NE: 100 SE: 150 SW: 55 NW: 65
48 KT NE: 65 SE: 55 SW: 45 NW: 45

36H: 2021/01/05 06 UTC: 16.4 S / 76.6 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM
28 KT NE: 250 SE: 165 SW: 175 NW: 75
34 KT NE: 110 SE: 155 SW: 65 NW: 65

48H: 2021/01/05 18 UTC: 16.9 S / 76.1 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM
28 KT NE: 215 SE: 215 SW: 195 NW: 110
34 KT NE: 85 SE: 150 SW: 120 NW: 95

60H: 2021/01/06 06 UTC: 16.8 S / 75.1 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM
28 KT NE: 220 SE: 110 SW: 165 NW: 100
34 KT NE: 85 SE: 100 SW: 95 NW: 85

72H: 2021/01/06 18 UTC: 16.5 S / 73.1 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM
28 KT NE: 205 SE: 140 SW: 140 NW: 75
34 KT NE: 85 SE: 120 SW: 85 NW: 65

2.B LONGER-RANGE OUTLOOK:
96H: 2021/01/07 18 UTC: 16.3 S / 69.0 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM
28 KT NE: 400 SE: 370 SW: 230 NW: 185
34 KT NE: 175 SE: 260 SW: 195 NW: 175

120H: 2021/01/08 18 UTC: 17.0 S / 64.3 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM
28 KT NE: 400 SE: 435 SW: 240 NW: 185
34 KT NE: 175 SE: 305 SW: 230 NW: 175
48 KT NE: 80 SE: 100 SW: 130 NW: 90

2.C ADDITIONAL INFORMATION:
T=CI=3.5

DESPITE THE FACT THAT THE CDO IS SMALLER THAN 24 HOURS AGO, IT IS STILL CHARACTERIZED BY VERY COLD TOPS WITH SOME HINT OF A WARM SPOT BY TIME. MOREOVER THE GPM OF 1320Z SHOWED THAT THE EYE STRUCTURE IS BETTER DEFINED IN BOTH 89 AND 37 GHZ WITH LESS TILT THAN BEFORE. THE MICROWAVE IMAGERY SHOWS FURTHERMORE THAT THIS EYE STRUCTURE FITS INTO A VERY SMALL CENTRAL CORE. THE INTENSITY ESTIMATE IS INCREASED TO 55 KT BASED ON THE UPPER LIMIT OF THE OBJECTIVE ESTIMATES WHICH ARE 50-55 KT.

THE INTERACTION WITH THE 05 SYSTEM INFLECTED THE SOUTHEASTWARD DISPLACEMENT OF DANILO. REINFORCED BY THE GROWING INFLUENCE OF THE EQUATORIAL RIDGE IN THE MIDDLE TROPOSPHERE PRESENT IN THE NORTHEAST OF THE SYSTEM, DANILO WILL CONTINUE TO ACCELERATE SOUTHEASTWARD.
ON MONDAY AND TUESDAY, UNDER THE INFLUENCE OF OPPOSING DIRECTIONAL FLOWS: NORTHWESTERLY FLOWS LINKED TO THE EQUATORIAL RIDGE AND SOUTHEASTERLY FLOWS LINKED TO THE SUBTROPICAL RIDGE, DANILO WILL SLOW DOWN ITS TRACK.
FROM WEDNESDAY, FOLLOWING THE DISAPPEARANCE OF THE EQUATORIAL RIDGE, DANILO SHOULD RESUME A GENERAL WESTERLY TRACK ON THE NORTH FACE OF THE SUBTROPICAL HIGH GEOPOTENTIALS OF THE LOW TO MID TROPOSPHERE.

IN TERMS OF INTENSITY, THE ENVIRONMENT IS STILL QUITE FAVORABLE DURING THE FIRST 24 HOURS. THE INTENSITY FORECAST IS FLAT DURING THIS PERIOD BUT CONSIDERING THE SMALL DIMENSIONS OF THE SYSTEM, A MORE MARKED INTENSIFICATION APPEARS TO BE A CREDIBLE ALTERNATIVE. DURING THE NIGHT FROM MONDAY TO TUESDAY, THE ENVIRONMENT DETERIORATES WITH THE PRESENCE OF A CONSTRAINT IN THE MIDDLE TROPOSPHERE, ASSOCIATED WITH A DRY ENVIRONMENT FAVORING THE INTRUSION OF DRY AIR INTO THE

CIRCULATION. DANILO SHOULD STRUGGLE TO MAINTAIN THE MODERATE TROPICAL STORM STAGE DURING THIS PERIOD.
FROM THURSDAY ONWARDS, WITH THE ACCELERATION OF THE SYSTEM UNDER THE EFFECT OF THE SUBTROPICAL RIDGE, DALINO SHOULD FIND MORE FAVORABLE ENVIRONMENTAL CONDITIONS FOR INTENSIFICATION (LOW SHEAR BELOW THE HIGH RIDGE).

ALTHOUGH THE MAJORITY OF THE GUIDANCES START ON THIS WESTWARD TRAJECTORY SCENARIO, THERE IS STILL A GREAT VARIABILITY FROM ONE SYSTEM TO ANOTHER. THERE IS THEREFORE STILL A STRONG UNCERTAINTY ON THE POTENTIAL FOR INTENSIFICATION WHICH COULD BE LESS DEPENDING ON THE LOCATION OF THE UPPER RIDGE AND THE TIMING OF THE TURN.