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WTIO30 FMEE 070107
RSMC / TROPICAL CYCLONE CENTER / LA REUNION
TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 2/13/20212022
1.A TROPICAL DISTURBANCE 13

2.A POSITION 2022/05/07 AT 0000 UTC:
WITHIN 30 NM RADIUS OF POINT 8.1 S / 88.5 E
(EIGHT DECIMAL ONE DEGREES SOUTH AND
EIGHTY EIGHT DECIMAL FIVE DEGREES EAST)
MOVEMENT: SOUTH 7 KT

3.A DVORAK ANALYSIS: 2.0/2.0/D 1.0/24 H

4.A CENTRAL PRESSURE: 999 HPA
5.A MAX AVERAGE WIND SPEED (10 MN): 25 KT
RADIUS OF MAXIMUM WINDS (RMW): NIL

6.A EXTENSION OF WIND BY QUADRANTS (KM):
NIL

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1006 HPA / 900 KM
8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):
12H: 2022/05/07 12 UTC: 9.3 S / 89.0 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM
28 KT NE: 205 SE: 335 SW: 280 NW: 220
34 KT NE: 95 SE: 140 SW: 140 NW: 130

24H: 2022/05/08 00 UTC: 10.1 S / 89.6 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM
28 KT NE: 185 SE: 405 SW: 315 NW: 220
34 KT NE: 110 SE: 165 SW: 165 NW: 150

36H: 2022/05/08 12 UTC: 10.7 S / 90.0 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM
28 KT NE: 205 SE: 325 SW: 305 NW: 240
34 KT NE: 110 SE: 165 SW: 150 NW: 150

48H: 2022/05/09 00 UTC: 11.7 S / 90.6 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM
28 KT NE: 220 SE: 335 SW: 295 NW: 220
34 KT NE: 100 SE: 155 SW: 130 NW: 130
48 KT NE: 0 SE: 35 SW: 35 NW: 35

60H: 2022/05/09 12 UTC: 13.0 S / 91.2 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 185 SE: 295 SW: 260 NW: 205
34 KT NE: 110 SE: 155 SW: 140 NW: 120
48 KT NE: 0 SE: 35 SW: 35 NW: 35

72H: 2022/05/10 00 UTC: 14.7 S / 91.8 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM
28 KT NE: 185 SE: 280 SW: 240 NW: 185
34 KT NE: 110 SE: 150 SW: 150 NW: 110

2.B LONGER-RANGE OUTLOOK:
96H: 2022/05/11 00 UTC: 18.4 S / 94.3 E, VENT MAX= 035 KT, REMNANT LOW
28 KT NE: 150 SE: 280 SW: 240 NW: 150
34 KT NE: 0 SE: 140 SW: 130 NW: 100

120H: 2022/05/12 00 UTC: 16.9 S / 95.0 E, VENT MAX= 035 KT, REMNANT LOW
28 KT NE: 0 SE: 260 SW: 240 NW: 185
34 KT NE: 0 SE: 120 SW: 130 NW: 130

2.C ADDITIONAL INFORMATION:
T=CI=2.0

A CLOCKWISE CIRCULATION HAS DEVELOPED SINCE THURSDAY OVER THE NORTHEAST OF THE BASIN, DRIVEN BY AN EQUATORIAL WESTERLY WIND BURST TRIGGERED BY VARIOUS EQUATORIAL WAVES CROSSING EACH OTHER OVER THE EASTERN INDIAN OCEAN (MJO, EQUATORIAL ROSSBY WAVE AND KELVIN WAVE), WHICH, BY THE WAY, HAS ALSO GIVEN BIRTH TO ANOTHER SYMMETRIC TWIN VORTEX IN THE NORTHERN HEMISPHERE.
OVER THE PAST 6 HOURS, CONVECTION ASSOCIATED WITH SYSTEM 13-20212022 HAS REMAINED VERY INTENSE WITH VERY COLD CLOUD TOPS (LESS THAN -85C). THE INITIALLY ASYMMETRICAL STRUCTURE HAS RECENTLY BECOME MORE SYMMETRICAL JUST BEFORE 00UTC, ESPECIALLY DUE TO A STRONG CONVECTIVE BURST ON THE NORTHERN SIDE OF THE SYSTEM. A 2218Z SSMIS-F16 MICRO-WAVE IMAGE SUGGESTS SLIGHTLY IMPROVED STRUCTURE WITH A CURVED BAND PATTERN STARTING TO FORM. ASSOCIATED DVORAK ANALYSIS GIVES A DT OF 2.0. THESE RECENT EVOLUTIONS, AS WELL AS EXTRAPOLATED ASCAT DATA FROM LAST NIGHT, HINT THAT TROPICAL DEPRESSION STAGE IS VERY CLOSE (IF NOT ALREADY REACHED), BUT WITHOUT FURTHER OBJECTIVE DATA, INTENSITY IS LEFT AT 25KT AND AT TROPICAL DISTURBANCE STAGE. IT IS NEVERTHELESS POSSIBLE THAT NEAR-GALE FORCE WINDS COULD BE PRESENT LOCALLY.

THIS SYSTEM SHOULD FOLLOW A SOUTH-SOUTH-EASTWARD TRACK FOR THE NEXT FEW DAYS, BOTH UNDER THE DYNAMICS OF THE EQUATORIAL WESTERLY WIND BURST AND ON THE EDGE OF A RIDGE LOCATED TO THE EAST OF THE SYSTEM, THEN ALSO ATTRACTED BY A MID-TROPOSPHERIC TROUGH APPROACHING FROM THE SOUTHWEST FROM MONDAY. FROM TUESDAY, THERE IS STRONG DISPERSION AMONG AVAILABLE MODEL OUTPUT, THE FUTURE TRACK DEPENDING ON HOW INTENSE THE SYSTEM WILL BE AT THIS TIME AND BECAUSE OF POTENTIALLY CONTRADICTORY STEERING FLOWS : THE SYSTEM COULD BE EITHER DRIVEN SOUTH-EASTWARDS BY THE MID-TROPOSPHERIC TROUGH (IF THE SYSTEM KEEPS GOOD INTENSITY) OR MOVE BACK NORTHWESTWARDS THEN WESTWARDS ON THE NORTHERN SIDE OF A SUBTROPICAL LOW-TROPOSPHERE HIGH (IF THE SYSTEM WEAKENS). ACCORDING TO THE MEDIAN TRACK FOLLOWED BY THE RSMC, THE

SYSTEM SHOULD CROSS INTO THE AUSTRALIAN AREA OF RESPONSIBILITY, EAST OF 90E, FROM SUNDAY OR FOLLOWING NIGHT, ALTHOUGH TIMING IS STILL VERY UNCERTAIN.

IN TERMS OF INTENSITY, THE SYSTEM BENEFITS FROM A RELATIVELY CONDUCIVE ENVIRONMENT IN THE SHORT-TERM DEVELOPMENT. WITH ITS SOUTHWARD MOVEMENT, VERTICAL WIND SHEAR SHOULD EASE A BIT THIS SATURDAY, WHICH, WITH VERY GOOD UPPER DIVERGENCE (SOUTHWARD OUTFLOW CHANNEL), A SUFFICIENTLY HUMID ENVIRONMENT AND GOOD SURFACE CONVERGENCE, SHOULD ALLOW TO REACH MODERATE TROPICAL STORM STAGE THIS SATURDAY, AND PROBABLY SEVERE TROPICAL STORM BETWEEN SUNDAY AND MONDAY. FROM TUESDAY, INCREASING NORTH-WESTERLY SHEAR AND MID-LEVEL DRY AIR INTRUSION, RELATED TO THE APPROACH OF A TROUGH TO THE SOUTHWEST OF THE SYSTEM, SHOULD WEAKEN IT.

THIS SYSTEM DOES NOT POSE ANY THREAT TO INHABITED LANDS.