

WTIO30 FMEE 030713

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

0.A WARNING NUMBER: 14/1/20172018

1.A MODERATE TROPICAL STORM 1 (AVA)

2.A POSITION 2018/01/03 AT 0600 UTC:

WITHIN 20 NM RADIUS OF POINT 15.2 S / 53.0 E

(FIFTEEN DECIMAL TWO DEGREES SOUTH AND FIFTY THREE DECIMAL ZERO
DEGREES EAST)

MOVEMENT : SOUTH-EAST 5 KT

3.A DVORAK ANALYSIS: 2.5/2.5/D 1.0/24 H

4.A CENTRAL PRESSURE: 993 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 35 KT

RADIUS OF MAXIMUM WINDS (RMW) :56 KM

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

28 KT NE: 190 SE: 110 SW: 110 NW: 190

34 KT NE: 70 SE: 0 SW: 0 NW: 90

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1006 HPA / 1000 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION : DEEP

1.B FORECASTS:

12H: 2018/01/03 18 UTC: 16.6 S / 52.5 E, MAX WIND=040 KT, MODERATE TROPICAL
STORM

24H: 2018/01/04 06 UTC: 17.1 S / 51.4 E, MAX WIND=045 KT, MODERATE TROPICAL
STORM

36H: 2018/01/04 18 UTC: 17.3 S / 50.3 E, MAX WIND=050 KT, SEVERE TROPICAL STORM

48H: 2018/01/05 06 UTC: 17.9 S / 49.2 E, MAX WIND=050 KT, OVERLAND DEPRESSION

60H: 2018/01/05 18 UTC: 18.8 S / 48.6 E, MAX WIND=035 KT, OVERLAND DEPRESSION

72H: 2018/01/06 06 UTC: 19.6 S / 48.5 E, MAX WIND=035 KT, OVERLAND DEPRESSION

2.B LONGER-RANGE OUTLOOK :

96H: 2018/01/07 06 UTC: 22.1 S / 48.3 E, MAX WIND=035 KT, MODERATE TROPICAL
STORM

120H: 2018/01/08 06 UTC: 25.5 S / 47.5 E, MAX WIND=035 KT, MODERATE TROPICAL
STORM

2.C ADDITIONAL INFORMATION:

FT=CI=2.5+

OVER THE LAST 6 HOURS, CONVECTION MAINTAINED NEAR THE CENTER WITH COLD CLOUD TOPS. LAST MICROWAVE DATA (F16 0031Z AND WINDSAT 0217Z) CONFIRM A GAIN IN ORGANISATION. 0517Z ASCAT SWATH SHOW THE EXISTENCE OF GALE FORCE WINDS IN THE NORTHERN SEMI-CIRCLE. THUS, THE SYSTEM WAS NAMED AVA BY MALAGASY METEOROLOGICAL SERVICE AT 06Z.

OVER THE LAST HOURS, THE SYSTEM SLOWED DOWN AND ORIENTED TEMPORARILY SOUTHWARDS, PROBABLY BECAUSE OF A FLAT LOW CIRCULATING SOUTH OF MADAGASCAR AND WEAKENING THE STEERING FLOW DRIVEN BY THE RIDGE AXED OVER THE CENTRAL PART OF THE BASIN. FROM TOMORROW, THE AVAILABLE GUIDANCE IS IN GOOD AGREEMENT TO FORECAST A SOUTH-WESTWARD TRACK. A LANDFALL OVER THE MALAGASY COASTLINE, NEAR NORTH OF TAMATAVE IS NOW LIKELY DURING THURSDAY TO FRIDAY NIGHT. THEN, AVA BEHAVIOR IS UNCERTAIN AND WILL DEPEND ON ITS WEAKENING WHILE MOVING INLAND. THE LOW MAY COME BACK OVER THE OCEAN, MOVING SOUTHWARD, DUE A TROUGH PASSING AT SOUTH.

ENVIRONMENTAL CONDITIONS ARE RATHER CONDUCTIVE FOR AN INTENSIFICATION UP TO THE LANDFALL. AVA SEEMS TO BE UNDERGOING A WEAK EAST-SOUTHEASTERLY VERTICAL WIND SHEAR, THAT WILL LIKELY REMAIN FOR THE FOLLOWING DAYS, THEREFORE LIMITATING THE INTENSIFICATION RATE. SEVERE TROPICAL STORM STATUS IS FORECAST TO BE REACH. DURING THE WEEK-END, THE INTENSITY OF THE SYSTEM AT THE TIME OF ITS POSSIBLE RETURN OVER SEA IS STILL UNCERTAIN. A POLAR UPPER TROUGH IS LIKELY TO INCREASE VERTICAL SHEAR AT LEAST TEMPORARILY, SO PREVENTING FROM A SIGNIFICANT DEEPENING.

THE PERIPHERAL THUNDERSTORMS BANDS ASSOCIATED TO THE SYSTEM ARE BEGINNING TO AFFECT THE WEATHER ON THE MALAGASY COASTLINES AND ON THE MASCARENES ARCHIPELAGO.