

WTIO30 FMEE 030035

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 17/1/20232024

1.A MODERATE TROPICAL STORM 1 (ALVARO)

2.A POSITION 2024/01/03 AT 0000 UTC:

WITHIN 30 NM RADIUS OF POINT 21.9 S / 49.3 E

(TWENTY ONE DECIMAL NINE DEGREES SOUTH AND

FORTY NINE DECIMAL THREE DEGREES EAST)

MOVEMENT: EAST-SOUTH-EAST 13 KT

3.A DVORAK ANALYSIS: 3.5/3.5/D 1.0/6 H

4.A CENTRAL PRESSURE: 990 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 45 KT

RADIUS OF MAXIMUM WINDS (RMW): 65 KM

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

28 KT NE: 185 SE: 185 SW: 110 NW: 110

34 KT NE: 150 SE: 150 SW: 65 NW: 65

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1006 HPA / 700 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2024/01/03 12 UTC: 23.1 S / 51.1 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM

28 KT NE: 130 SE: 195 SW: 120 NW: 0

34 KT NE: 65 SE: 140 SW: 0 NW: 0

24H: 2024/01/04 00 UTC: 24.5 S / 53.0 E, VENT MAX= 035 KT, POST-TROPICAL DEPRESSION

28 KT NE: 130 SE: 165 SW: 155 NW: 0

34 KT NE: 0 SE: 140 SW: 85 NW: 0

36H: 2024/01/04 12 UTC: 26.2 S / 56.0 E, VENT MAX= 035 KT, POST-TROPICAL DEPRESSION

28 KT NE: 175 SE: 390 SW: 285 NW: 0

34 KT NE: 95 SE: 285 SW: 165 NW: 0

48H: 2024/01/05 00 UTC: 27.9 S / 59.2 E, VENT MAX= 030 KT, EXTRATROPICAL DEPRESSION

28 KT NE: 165 SE: 295 SW: 220 NW: 0

60H: 2024/01/05 12 UTC: 28.6 S / 61.9 E, VENT MAX= 030 KT, EXTRATROPICAL

DEPRESSION

28 KT NE: 140 SE: 230 SW: 270 NW: 0

2.B LONGER-RANGE OUTLOOK:

NIL

2.C ADDITIONAL INFORMATION:

PT=CI=3.5-

CONVECTIVE ACTIVITY HAS BEEN MAINTAINED OVER THE LAST 6 HOURS AT SEA, LEAVING A CLOUDY CONFIGURATION IN CDO MOST PROBABLY GENERATED BY THE PRESENCE OF LAND. AN ANALYSIS OF INTENSITY IN THIS CDO CONFIGURATION WOULD GIVE AN ESTIMATE OF 3.5, I.E. A STRONG TROPICAL STORM THRESHOLD. HOWEVER, FOLLOWING DVORAK'S CONSTRAINTS AND TAKING INTO ACCOUNT THE PROBABLE INFLUENCE OF THE EARTH ON THE CONVECTIVE ACTIVITY, WHICH IS VERY MARKED IN THE SOUTH-EASTERN SECTOR OF THE SYSTEM, IT IS PREFERABLE TO LIMIT OURSELVES TO A VALUE OF 3.5-. ALVARO IS THEREFORE CLASSIFIED AS A MODERATE TROPICAL STORM. THE GCOM PASS OF 2223UTC IMPROVES THE LOCATION OF THE CENTER AND VALIDATES THE MODERATE TROPICAL STORM THRESHOLD DUE TO THE ABSENCE OF AN EYE.

LITTLE CHANGE IN TERMS OF TRACK, AS ALVARO FOLLOWS THE DIRECTIONAL FLOW INDUCED BY THE RIDGE OF HIGH PRESSURE STRENGTHENING TO THE NORTH OF THE MASCARENE ISLANDS. ALVARO CONTINUES TO FOLLOW A GENERAL SOUTHEASTERLY TRACK AT SEA. THIS TRACK WILL REMAIN FAIRLY CONSTANT, ALTHOUGH SPEED COULD BE A LITTLE MORE MARKED IN THE FINAL STAGES.

BACK OVER THE WARM WATERS OF THE INDIAN OCEAN, ALVARO IS SHOWING A FAIRLY STRONG REINTENSIFICATION PHASE OVER A SHORT PERIOD (12H AT MOST), BENEFITING FROM GOOD ALTITUDE DIVERGENCE ON THE SOUTHEAST COAST. NEVERTHELESS, THE PERSISTENCE OF MODERATE TO STRONG WESTERLY SHEAR (MORE IN THE SOUTHERN SECTOR OF THE SYSTEM) SHOULD LIMIT THE POTENTIAL FOR DEVELOPMENT. THE CURRENT FORECAST IS FOR A PEAK AT THE MODERATE TROPICAL STORM STAGE, ALTHOUGH THE STRONG TROPICAL STORM THRESHOLD COULD BE REACHED VERY TEMPORARILY. THEREAFTER, AS IT INTERACTS WITH STRONG UPPER-LEVEL WINDS AND DRY AIR INTRUSION, ALVARO WILL GRADUALLY LOSE ITS TROPICAL CHARACTERISTICS AS IT CONTINUES ITS SOUTHWARD TRACK.

IMPACTS ON MADAGASCAR :

- WIND GUSTS OF UP TO 100KM/H ARE STILL EXPECTED UNTIL THE END OF THE NIGHT IN THE PROVINCE OF FIANARANTSOA, PARTICULARLY ALONG THE COAST.
- HEAVY PRECIPITATION IS STILL EXPECTED OVER FIANARANTSOA PROVINCE, WITH ACCUMULATIONS RANGING FROM 100 TO 300MM OVER THE NEXT 24 HOURS.
- THE SEA WILL BE MODERATE TO ROUGH BETWEEN MAHANORO AND TAOLAGNARO, WITH WAVES OF 4 TO 5M UNTIL TOMORROW WEDNESDAY.