

WTIO30 FMEE 021225

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 15/1/20232024

1.A OVERLAND DEPRESSION 1 (ALVARO)

2.A POSITION 2024/01/02 AT 1200 UTC:

WITHIN 30 NM RADIUS OF POINT 21.6 S / 46.6 E

(TWENTY ONE DECIMAL SIX DEGREES SOUTH AND
FORTY SIX DECIMAL SIX DEGREES EAST)

MOVEMENT: EAST 8 KT

3.A DVORAK ANALYSIS: NIL

4.A CENTRAL PRESSURE: 1003 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): 1008 HPA / 900 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2024/01/03 00 UTC: 22.1 S / 49.1 E, VENT MAX= 030 KT, TROPICAL DEPRESSION
28 KT NE: 155 SE: 230 SW: 240 NW: 120

24H: 2024/01/03 12 UTC: 23.2 S / 51.1 E, VENT MAX= 035 KT, MODERATE TROPICAL
STORM

28 KT NE: 185 SE: 260 SW: 240 NW: 140

34 KT NE: 120 SE: 140 SW: 140 NW: 85

36H: 2024/01/04 00 UTC: 24.9 S / 53.1 E, VENT MAX= 035 KT, POST-TROPICAL
DEPRESSION

28 KT NE: 205 SE: 280 SW: 240 NW: 150

34 KT NE: 130 SE: 130 SW: 0 NW: 0

48H: 2024/01/04 12 UTC: 26.7 S / 55.3 E, VENT MAX= 035 KT, POST-TROPICAL
DEPRESSION

28 KT NE: 220 SE: 405 SW: 335 NW: 0

34 KT NE: 130 SE: 130 SW: 0 NW: 0

60H: 2024/01/05 00 UTC: 28.5 S / 58.2 E, VENT MAX= 030 KT, EXTRATROPICAL
DEPRESSION

28 KT NE: 130 SE: 555 SW: 370 NW: 0

72H: 2024/01/05 12 UTC: 29.1 S / 59.9 E, VENT MAX= 030 KT, EXTRATROPICAL
DEPRESSION
28 KT NE: 0 SE: 555 SW: 370 NW: 0

2.B LONGER-RANGE OUTLOOK:
NIL

2.C ADDITIONAL INFORMATION:

ALVARO CLOUD PATTERN HAS CONTINUED TO DETERIORATE WITH AN APPARENT LOW LEVEL CIRCULATION ON SATELLITE IMAGERY DUE TO THE WINDSHEAR. DEEP CONVECTION IS ONLY PRESENT IN THE EASTERN SEMI-CIRCLE. THE LATEST OBSERVATIONS OR MODEL ANALYSES NO LONGER SUGGEST THE PRESENCE OF A NEAR GALE FORCE. THE INTENSITY IS THEREFORE MAINTAINED AT 25KT.

NO CHANGE IN TERMS OF TRAJECTORY, ALVARO IS FOLLOWING THE WESTERLY FLOW DRIVEN BY A NEAR-EQUATORIAL RIDGE LOCATED FURTHER NORTH AND A WEAK TROUGH PASSING FURTHER SOUTH. THE VORTEX SHOULD EMERGE OVER SEA ON MADAGASCAR'S EAST COAST SOUTH OF MANANJARY (FIANARANTSOA PROVINCE) THIS EVENING. THEN, DRIVEN BY THE STRENGTHENING RIDGE TO THE NORTH OF THE MASCARENES, ALVARO WILL CONTINUE ITS TRACK IN A GENERAL SOUTHEASTWARD. IT SHOULD BE NOTED THAT THERE IS STILL SOME UNCERTAINTY REGARDING ALVARO'S MOVEMENT SPEED OVER THE NEXT FEW DAYS. THE CURRENT FORECAST IS BASED ON A CONSENSUS OF THE MAIN GUIDANCE (IFS/GFS/CONW).

AS IT MOVES BACK OVER THE INDIAN OCEAN'S WARM WATERS, ALVARO COULD TEMPORARILY REINTENSIFY, BENEFITING FROM GOOD UPPER LEVEL DIVERGENCE IN THE SOUTHEAST. HOWEVER, THE PERSISTENCE OF A STRONG WESTERLY SHEAR SHOULD LIMIT THE POTENTIAL FOR DEVELOPMENT. SOME DETERMINISTIC MODELS, SUCH AS IFS AND AROME, KEEP ON SUGGESTIN AN INTENSIFICATION TO THE SEVERE TROPICAL STORM STAGE, BUT THIS SEEMS UNLIKELY GIVEN THE UNFAVORABLE ENVIRONMENT AND THE RECENT CROSSING OF MADAGASCAR. THE CURRENT FORECAST ASSUMES A PEAK AT THE MODERATE TROPICAL STORM STAGE. THEN, AS IT INTERACTS WITH STRONG UPPER WINDS, ALVARO WILL GRADUALLY LOSE ITS TROPICAL CHARACTERISTICS WHILE MOVING INTO SOUTHERN LATITUDES.

IMPACTS ON MADAGASCAR :

WIND GUSTS UP TO 100KM/H ARE EXPECTED IN FIANARANTSOA PROVINCE UNTIL LATER NIGHT, ESPECIALLY ON 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.