

WTIO30 FMEE 221855

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 5/1/20212022

1.A OVERLAND DEPRESSION 1

2.A POSITION 2022/01/22 AT 1800 UTC:

WITHIN 40 NM RADIUS OF POINT 17.2 S / 47.2 E

(SEVENTEEN DECIMAL TWO DEGREES SOUTH AND  
FORTY SEVEN DECIMAL TWO DEGREES EAST)

MOVEMENT: WEST-NORTH-WEST 16 KT

3.A DVORAK ANALYSIS: NIL

4.A CENTRAL PRESSURE: 1003 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 20 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 / 300 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2022/01/23 06 UTC: 16.2 S / 45.2 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

24H: 2022/01/23 18 UTC: 15.6 S / 43.5 E, VENT MAX= 035 KT, MODERATE TROPICAL  
STORM

28 KT NE: 130 SE: 110 SW: 130 NW: 150

34 KT NE: 95 SE: 95 SW: 95 NW: 95

36H: 2022/01/24 06 UTC: 15.5 S / 41.5 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 220 SE: 240 SW: 220 NW: 185

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

48 KT NE: 75 SE: 75 SW: 75 NW: 75

48H: 2022/01/24 18 UTC: 15.9 S / 39.6 E, VENT MAX= 035 KT, MODERATE TROPICAL  
STORM

28 KT NE: 280 SE: 315 SW: 295 NW: 95

34 KT NE: 95 SE: 75 SW: 0 NW: 0

60H: 2022/01/25 06 UTC: 16.4 S / 37.6 E, VENT MAX= 035 KT, OVERLAND DEPRESSION

28 KT NE: 185 SE: 185 SW: 0 NW: 0

34 KT NE: 100 SE: 75 SW: 0 NW: 0

72H: 2022/01/25 18 UTC: 16.7 S / 36.2 E, VENT MAX= 030 KT, OVERLAND DEPRESSION

28 KT NE: 130 SE: 110 SW: 0 NW: 0

2.B LONGER-RANGE OUTLOOK:

96H: 2022/01/26 18 UTC: 17.2 S / 34.3 E, VENT MAX= 020 KT, OVERLAND DEPRESSION

120H: 2022/01/27 18 UTC: 17.9 S / 32.7 E, VENT MAX= 015 KT, DISSIPATING

2.C ADDITIONAL INFORMATION:

T=CI=NIL

DEPRESSION 01-20212022 MADE LANDFALL ON THE EAST COAST OF MADAGASCAR BETWEEN TOAMASINA AND SAINTE-MARIE THIS SATURDAY AT MIDDAY, BETWEEN 08 AND 09UTC, AT A STAGE OF TROPICAL DEPRESSION, VERY CLOSE TO THE TROPICAL STORM THRESHOLD. IT IS NOW TRACKING OVER LAND AND ACROSS MADAGASCAR'S MOUNTAINOUS AREAS FROM EAST TO WEST, WEAKENING A BIT, BUT ASSOCIATED CONVECTIVE ACTIVITY REMAINS SIGNIFICANT AND IS ORGANIZED IN A CURVED BAND ON SATELLITE IMAGERY WITH NEAT BANDING FEATURES, SIGN OF A WELL-PRESERVED ROTATION IN THE MID-TROPOSPHERE. THIS ALSO HELPS TO LOCALIZE THE SYSTEM'S CENTER.

SYNOPTIC CONDITIONS REMAIN UNCHANGED IN THE SHORT TERM : UNDER THE IMPULSE OF STRENGTHENING HIGH GEOPOTENTIALS LOCATED TO THE SOUTH OF THE MOZAMBIQUE CHANNEL AND UNDER THE REMOTE INFLUENCE OF A SECONDARY POLE OF VORTICITY OFF NORTH-EAST MADAGASCAR, THE SYSTEM'S TRACK REMAINS WEST-NORTHWEST DURING ITS CROSSING OF MADAGASCAR. ON SUNDAY MORNING, SYSTEM 01 SHOULD GRADUALLY EMERGE OVER THE MOZAMBIQUE CHANNEL NEAR OR IMMEDIATELY NORTH OF CAPE SAINT-ANDRE AND WEST OF MAHAJANGA. IT WILL THEN BE GUIDED BY AN EASTERLY FLOW, HEADING TOWARDS THE MOZAMBICAN COASTS WHICH IT WILL REACH ON MONDAY AFTERNOON OR EVENING. FOLLOWING THE SHIFT OF HIGH GEOPOTENTIALS TO THE SOUTHEAST OF MADAGASCAR, THE STEERING FLOW WILL TAKE AN EAST-NORTHEAST ORIENTATION FROM MONDAY EVENING ONWARDS. THE RSMC'S FORECAST IS BASED ON A COMPROMISE BETWEEN THE BEST AVAILABLE GUIDANCE. NEVERTHELESS, THERE IS STILL UNCERTAINTY ABOUT THE LANDFALL LOCATION ON MOZAMBIQUE'S COAST.

THE SYSTEM SHOULD REGAIN FAVORABLE CONDITIONS FOR DEVELOPMENT BETWEEN SUNDAY AND MONDAY WHEN IT WILL TRACK OVER THE MOZAMBIQUE CHANNEL'S WARM WATERS, WHERE IT WILL FIND HIGH OCEANIC HEAT CONTENT UNTIL MONDAY AFTERNOON. THIS OCEANIC POTENTIAL COMBINED WITH VERY GOOD LOW LEVEL CONVERGENCE BETWEEN THE MONSOON FLOW IN THE NORTH OF THE CHANNEL AND A SOUTHERN FLOW IN THE SOUTHERN PART OF THE CHANNEL, IN A MOIST TROPOSPHERIC ENVIRONMENT, SHOULD FAVOR A RATHER FAST DEEPENING. THESE CONDITIONS WILL NEVERTHELESS BE OFFSET BY THE PRESENCE OF MODERATE SHEAR. UNDER THESE CONDITIONS, THE SYSTEM IS EXPECTED TO DEVELOP QUITE RAPIDLY INTO A MODERATE TROPICAL STORM AND THEN POSSIBLY INTO A STRONG TROPICAL STORM JUST BEFORE LANDFALL ON THE MOZAMBICAN COAST. WITH A RATHER HIGH SPREAD BETWEEN VARIOUS NWP OUTPUTS, THIS INTENSITY FORECAST REMAINS RELATIVELY UNCERTAIN WITH AN INTENSITY THAT WILL ALSO DEPEND ON THE DURATION OF THE CROSSING OF THE CHANNEL.

EXPECTED CONSEQUENCES ON INHABITED LANDS :

- MADAGASCAR : HEAVY RAINFALL ALREADY PRESENT WILL CONTINUE ON SUNDAY OR EVEN MONDAY WITH SOME HIGH PRECIPITATION ACCUMULATION OVER THE NORTHWEST, NORTH AND EAST. STRONG WINDS ARE LIKELY IN THE VICINITY OF CAPE SAINT ANDRE ON SUNDAY.
- MOZAMBIQUE : GUSTS IN EXCESS OF 100 KM/H POSSIBLE ON MONDAY EVENING WHEN THE SYSTEM ARRIVES. HEAVY RAINFALL BETWEEN NAMPULA AND QUELIMANE THEN FURTHER INLAND.
- CENTRAL AND NORTHERN MOZAMBIQUE CHANNEL (JUAN DE NOVA, COMOROS ARCHIPELAGO) : POTENTIALLY SIGNIFICANTLY DISTURBED CONDITIONS (RAIN AND WIND) FROM SUNDAY ONWARDS AT THE EDGE OF THE SYSTEM.