

WTIO30 FMEE 231315

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 8/1/20212022

1.A TROPICAL DEPRESSION 1

2.A POSITION 2022/01/23 AT 1200 UTC:

WITHIN 30 NM RADIUS OF POINT 15.3 S / 44.1 E

(FIFTEEN DECIMAL THREE DEGREES SOUTH AND  
FORTY FOUR DECIMAL ONE DEGREES EAST)

MOVEMENT: WEST-NORTH-WEST 11 KT

3.A DVORAK ANALYSIS: 1.5/1.5/D 0.5/6 H

4.A CENTRAL PRESSURE: 999 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 30 KT

RADIUS OF MAXIMUM WINDS (RMW): NIL

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

28 KT NE: 220 SE: 165 SW: 185 NW: 185

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1007 HPA / 900 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2022/01/24 00 UTC: 15.8 S / 42.2 E, VENT MAX= 035 KT, MODERATE TROPICAL  
STORM

28 KT NE: 240 SE: 280 SW: 250 NW: 195

34 KT NE: 100 SE: 150 SW: 140 NW: 95

24H: 2022/01/24 12 UTC: 15.9 S / 39.5 E, VENT MAX= 030 KT, TROPICAL DEPRESSION

28 KT NE: 0 SE: 260 SW: 0 NW: 0

36H: 2022/01/25 00 UTC: 16.0 S / 37.0 E, VENT MAX= 030 KT, OVERLAND DEPRESSION

28 KT NE: 0 SE: 315 SW: 0 NW: 0

48H: 2022/01/25 12 UTC: 16.2 S / 35.0 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

60H: 2022/01/26 00 UTC: 16.2 S / 33.8 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

72H: 2022/01/26 12 UTC: 16.2 S / 32.5 E, VENT MAX= 020 KT, OVERLAND DEPRESSION

2.B LONGER-RANGE OUTLOOK:

96H: 2022/01/27 12 UTC: 16.6 S / 29.2 E, VENT MAX= 015 KT, FILLING UP

120H: 2022/01/28 12 UTC: 17.0 S / 25.8 E, VENT MAX= 015 KT, REMNANT LOW

## 2.C ADDITIONAL INFORMATION:

T=CI=1.5

DURING THE LAST SIX HOURS, THE CLOUD PATTERN OF THE SYSTEM HAS IMPROVED, FOLLOWING ITS ENTER OVER THE MOZAMBIQUE CHANNEL. THE TOP OF THE CONVECTIVE BANDS HAVE COOLED DOWN IN THE WESTERN AND NORTHERN SEMICIRCLE OF THE SYSTEM, AND THE LOW CLOUDS ARE ADOPTING MORE CURVATURE NEAR THE CENTER, WHICH REMAINS ALMOST EXPOSED AT 12Z, CLOSE TO THE CONVECTION BURSTS. THE IMPROVEMENT OF THE INTERNAL STRUCTURE TENDS TO ASSERT ITSELF AS SHOWN BY THE 0931Z GMI MICROWAVE IMAGE. IN THE LACK OF OBJECTIVE DATA ON THE ESTIMATE OF THE WIND INTENSITIES, BUT GIVEN THE GLOBAL IMPROVEMENT OF THE CLOUD PATTERN, THE INTENSITY IS ESTIMATED AT 30 KNOTS, AT THE STAGE OF TOPICAL DEPRESSION.

THE SYSTEM IS CURRENTLY TRACKING NORTHWESTWARD UNDER THE EFFECT OF A LOW-LEVEL EASTERLY FLOW GENERATED BY THE HIGH GEOPOTENTIALS OF THE LOW AND MIDDLE TROPOSPHERE STRENGTHENING SOUTH OF THE MOZAMBIQUE CHANNEL. NEXT WEEK, THE SYSTEM WILL HEAD TOWARDS THE MOZAMBIKAN COASTS, WHICH IT WILL REACH ON MONDAY MIDDAY. THEN, WITH THE SHIFT OF THE HIGH GEOPOTENTIALS TO THE SOUTHEAST OF MADAGASCAR, THE STEERING FLOW WILL TAKE A SLIGHT EAST-SOUTHEAST COMPONENT, TAKING THE SYSTEM LONGER INLAND FROM MOZAMBIQUE. THEN THE REMNANT LOW WILL TRACK NEAR SOUTHERN MALAWI AND NORTHERN ZIMBABWE BY MIDWEEK. THE CMRS FORECAST IS BASED ON A CONSENSUS BETWEEN THE BEST AVAILABLE GUIDANCE, WHOSE DISPERSION IS LOW COMPARED TO PREVIOUS NWP DATA, INDUCING A FAIRLY GOOD CONFIDENCE ON THE TRACK LEADING TO MOZAMBIQUE. HOWEVER, THIS CONFIDENCE IS LESS STRONG BY TUESDAY IN THE SOUTH OF MALAWI.

IN TERMS OF INTENSITY, THE SYSTEM HAS FOUND MORE CONDUCTIVE ENVIRONMENTAL CONDITIONS FOR ITS DEVELOPMENT UNTIL MONDAY, THE DAY OF ITS LANDING ON THE MOZAMBIKAN COAST. IT IS CURRENTLY FINDING A STRONG OCEANIC POTENTIAL IN THE NORTH OF THE CHANNEL COMBINED WITH A GOOD CONVERGENCE OF LOW LAYERS BETWEEN THE MONSOON FLOW IN THE NORTH OF THE CHANNEL AND A SOUTHERN FLOW GOING UP IN THE SOUTHERN PART OF THE CHANNEL. IN A HUMID TROPOSPHERIC ENVIRONMENT, THIS SYSTEM SHOULD THEREFORE DEEPEN QUITE RAPIDLY. HOWEVER, THE PRESENCE OF A MODERATE SHEAR COULD SLOW DOWN THIS DEVELOPMENT, EVEN IF THE DISPLACEMENT OF THE SYSTEM AT ABOUT 10KT IN THE DIRECTION OF THE SHEAR CAN REDUCE THE EFFECTS. THUS, A RELATIVELY RAPID DEVELOPMENT IS ENVISAGED TO REACH THE MODERATE TROPICAL STORM STAGE. THE STAGE OF STRONG TROPICAL STORM JUST BEFORE THE LANDING ON THE MOZAMBIKAN COASTS IS NOT EXCLUDED, EVEN IF THIS SCENARIO IS LESS SUPPORTED BY THE LAST GUIDANCE. THIS INTENSITY PREDICTION IS THEREFORE ACCOMPANIED BY A SMALL UNCERTAINTY. ONCE ON LAND, THERE IS A FAIRLY GOOD CONFIDENCE THAT THE WINDS OF THE SYSTEM WILL PROGRESSIVELY WEAKEN, EVEN IF SUSTAINED NORTH TO NORTHWEST WINDS WILL CONTINUE TO SKIRT THE MOZAMBIKAN COAST UNTIL TUESDAY OR WEDNESDAY, QUITE FAR FROM THE CORE.

EXPECTED CONSEQUENCES ON THE INHABITED LANDS :

- MADAGASCAR : THE HEAVY RAINS ALREADY PRESENT WILL CONTINUE TODAY AND MONDAY WITH SOMETIMES VERY HEAVY ACCUMULATIONS OVER THE NORTHWEST, THE NORTH AND THE EASTERN PLATEAUS. STRONG GUSTS ARE POSSIBLE OVER THE WEST BETWEEN ANTSIRANANA AND CAP SAINT-ANDRE TODAY. THESE WILL THEN SHIFT WESTWARD TOMORROW IN THE WAKE OF THE SYSTEM.

- MOZAMBIQUE (AND NEIGHBORING COUNTRIES INLAND): COASTAL GUSTS OF MORE THAN 100 KM/H POSSIBLE TODAY AND ESPECIALLY ON MONDAY WHEN THE SYSTEM LANDS BETWEEN ANGOCHE AND MOZAMBIQUE ISLAND. SIGNIFICANT RAINFALL AMOUNTS NORTH OF QUELIMANE AT FIRST THEN FURTHER INLAND TO SOUTHERN MALAWI OVERFLOWING INTO CENTRAL MOZAMBIQUE.

- CENTRAL AND NORTHERN CANAL (JUAN DE NOVA, COMOROS ARCHIPELAGO) : POTENTIALLY SIGNIFICANT RAINY AND WINDY DEGRADATION FROM TODAY ONWARDS IN THE SOUTHWESTERN MARGIN OF THE SYSTEM AFTER ITS EXIT IN THE CANAL. RAINS COULD PERSIST IN THE BACK OF THE SYSTEM, IN CONNECTION WITH THE CIRCULATION OF RAINY BANDS IN THE WAKE OF THE SYSTEM. GUSTS COULD REACH 100 KM/H OR EVEN 110 KM/H OVER JUAN DE NOVA AND 70/80 KM/H OVER MAYOTTE. THEY WILL THEN GRADUALLY WEAKEN AS THE SYSTEM MOVES AWAY EARLY NEXT WEEK.