

WTIO30 FMEE 241317

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

0.A WARNING NUMBER: 20/5/20222023

1.A MODERATE TROPICAL STORM 5 (CHENESO)

2.A POSITION 2023/01/24 AT 1200 UTC:

WITHIN 10 NM RADIUS OF POINT 20.0 S / 42.8 E
(TWENTY DECIMAL ZERO DEGREES SOUTH AND
FORTY TWO DECIMAL EIGHT DEGREES EAST)

MOVEMENT: EAST-SOUTH-EAST 2 KT

3.A DVORAK ANALYSIS: 3.5/3.5/D 1.5/12 H

4.A CENTRAL PRESSURE: 990 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 45 KT
RADIUS OF MAXIMUM WINDS (RMW): NIL

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

28 KT NE: 205 SE: 205 SW: 175 NW: 130

34 KT NE: 45 SE: 165 SW: 45 NW: 45

48 KT NE: 0 SE: 0 SW: 0 NW: 0

64 KT NE: 0 SE: 0 SW: 0 NW: 0

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1007 HPA / 1600 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2023/01/25 00 UTC: 20.1 S / 42.7 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 215 SE: 155 SW: 165 NW: 155

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

24H: 2023/01/25 12 UTC: 20.1 S / 42.6 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM

28 KT NE: 230 SE: 325 SW: 335 NW: 195

34 KT NE: 100 SE: 205 SW: 175 NW: 100

48 KT NE: 55 SE: 45 SW: 55 NW: 65

36H: 2023/01/26 00 UTC: 20.3 S / 42.3 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM

28 KT NE: 230 SE: 280 SW: 280 NW: 185

34 KT NE: 110 SE: 205 SW: 130 NW: 110

48 KT NE: 55 SE: 55 SW: 55 NW: 75

48H: 2023/01/26 12 UTC: 20.5 S / 42.1 E, VENT MAX= 065 KT, TROPICAL CYCLONE

28 KT NE: 270 SE: 380 SW: 325 NW: 185

34 KT NE: 130 SE: 230 SW: 205 NW: 130

48 KT NE: 65 SE: 55 SW: 65 NW: 75

64 KT NE: 35 SE: 35 SW: 35 NW: 35

60H: 2023/01/27 00 UTC: 21.1 S / 41.7 E, VENT MAX= 070 KT, TROPICAL CYCLONE
28 KT NE: 285 SE: 285 SW: 370 NW: 175
34 KT NE: 140 SE: 215 SW: 140 NW: 120
48 KT NE: 65 SE: 65 SW: 55 NW: 85
64 KT NE: 45 SE: 45 SW: 45 NW: 45

72H: 2023/01/27 12 UTC: 22.3 S / 41.0 E, VENT MAX= 080 KT, TROPICAL CYCLONE
28 KT NE: 295 SE: 370 SW: 345 NW: 205
34 KT NE: 140 SE: 240 SW: 155 NW: 150
48 KT NE: 75 SE: 75 SW: 65 NW: 95
64 KT NE: 65 SE: 55 SW: 55 NW: 55

2.B LONGER-RANGE OUTLOOK:

96H: 2023/01/28 12 UTC: 24.8 S / 40.6 E, VENT MAX= 095 KT, INTENSE TROPICAL CYCLONE
28 KT NE: 360 SE: 405 SW: 270 NW: 260
34 KT NE: 175 SE: 270 SW: 165 NW: 175
48 KT NE: 95 SE: 85 SW: 75 NW: 100
64 KT NE: 75 SE: 55 SW: 55 NW: 65

120H: 2023/01/29 12 UTC: 27.8 S / 44.3 E, VENT MAX= 080 KT, TROPICAL CYCLONE
28 KT NE: 435 SE: 350 SW: 295 NW: 305
34 KT NE: 215 SE: 250 SW: 140 NW: 205
48 KT NE: 100 SE: 80 SW: 80 NW: 100
64 KT NE: 80 SE: 60 SW: 60 NW: 60

2.C ADDITIONAL INFORMATION:

T=CI=3.5-

DURING THE LAST 6 HOURS, THE CONVECTION HAS CLEARLY STRENGTHENED AND HAS CONTINUED TO ORGANIZE ITSELF AROUND THE CENTER OF CHENESO. IT HAS BEEN ORGANIZED IN CDO AT THE BEGINNING OF THE PERIOD, AND EVEN PRESENTS IN THE VERY LAST HOURS AN EYE IN IR AND VISIBLE.

CHENESO SHOULD HAVE ITS TRAJECTORY DRIVEN BY A LOW TO MID TROPOSPHERIC EAST-SOUTHEAST FLOW GENERATED BY A SUBTROPICAL RIDGE LOCATED SOUTH OF THE SYSTEM. THE ACTION OF THIS RIDGE WILL HOWEVER BE COUNTERACTED BY THE PRESENCE OF A NEAR EQUATORIAL RIDGE TO THE NORTH IMPARTING A CONTRADICTIONARY WEST TO NORTH-WEST STEERING FLOW.

AS A RESULT, DURING THE NEXT TWO DAYS, THE SYSTEM SHOULD MOVE SLOWLY IN A GENERAL WESTERLY DIRECTION. AN ERRATIC TRACK, WITH POSSIBLE MOMENTS OF QUASI-STATIONARITY, ARE POSSIBLE DURING THIS PERIOD. IN THE SECOND PART OF THE WEEK, A BENDING OF THE TRAJECTORY TOWARDS THE SOUTH-WEST AND THEN THE SOUTH IS PROPOSED BY A LARGE MAJORITY OF THE ENSEMBLE AND DETERMINISTIC MODELS BUT THE TIMING AND THE DEGREE OF BENDING IS STILL VERY UNCERTAIN AT THIS STAGE.

THE DETERMINISTIC GFS AND IFS MODELS LACK STABILITY, OSCILLATING BETWEEN A SCENARIO CLOSER TO THE MALAGASY COASTS AND A SCENARIO MORE ON THE CENTER OF THE CHANNEL. THE ENSEMBLE MODELS ALWAYS PROPOSE IN A MORE STABLE WAY A WIDE RANGE OF TRAJECTORIES EXTENDING

FROM THE MALAGASY COAST TO THE CENTER OF THE CHANNEL BEYOND 48 HOURS. THE PRESENT FORECAST IS THEREFORE MAINLY BASED ON THE PE OF THESE TWO MODELS. HOWEVER, THERE IS STILL SOME UNCERTAINTY ABOUT THE TRAJECTORY.

THE SYSTEM SHOULD BE IN A GLOBALLY FAVORABLE ENVIRONMENT FROM THE ATMOSPHERIC AND OCEANIC POINT OF VIEW, EXCEPT FOR THE VERY END OF THE TIME SCALE WHERE THE TROPOSPHERE MEAN SHEAR COULD BE INCREASING. A GRADUAL INTENSIFICATION IS EXPECTED UNTIL SATURDAY.

IMPACTS ON INHABITED LANDS DURING THE NEXT 72 HOURS.

MADAGASCAR:

- IN ADDITION TO THE HEAVY RAINS THAT HAVE ALREADY FALLEN, THE RAINS WILL CONTINUE OVER THE NORTHWESTERLY AND CENTRAL WESTERN REGIONS WITH RAINFALL EXCEEDING 150 MM OVER THE PERIOD. THE CENTRAL WEST REGION WILL BE MORE CONCERNED FROM WEDNESDAY WITH ACCUMULATIONS OVER THE PERIOD THAT MAY REACH 300 TO 400 MM LOCALLY.

- AN EPISODE OF STRONG WINDS (IN THE RANGE OF GALE FORCE WINDS) IS POSSIBLE ON PARTS OF THE COAST BETWEEN MAINTIRANO AND CAPE SAINT-VINCENT FROM THIS EVENING AND FOR THE DAY OF WEDNESDAY.

- DANGEROUS SEAS (WAVES HIGHER THAN 4M) COULD AFFECT THE AREAS BETWEEN MAINTIRANO AND CAPE SAINT-VINCENT FROM WEDNESDAY, EXTENDING TO CAPE SAINT-ANDRE IN THE NORTH ON THURSDAY.