

WTIO30 FMEE 181851

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 7/5/20222023

1.A SEVERE TROPICAL STORM 5 (CHENESO)

2.A POSITION 2023/01/18 AT 1800 UTC:

WITHIN 20 NM RADIUS OF POINT 13.6 S / 51.7 E

(THIRTEEN DECIMAL SIX DEGREES SOUTH AND

FIFTY ONE DECIMAL SEVEN DEGREES EAST)

MOVEMENT: WEST 10 KT

3.A DVORAK ANALYSIS: 4.0/4.0/D 2.0/24 H

4.A CENTRAL PRESSURE: 985 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 55 KT

RADIUS OF MAXIMUM WINDS (RMW): 20 KM

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

28 KT NE: 165 SE: 130 SW: 220 NW: 205

34 KT NE: 130 SE: 110 SW: 110 NW: 165

48 KT NE: 0 SE: 0 SW: 40 NW: 75

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1006 HPA / 600 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2023/01/19 06 UTC: 14.3 S / 50.2 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM

28 KT NE: 175 SE: 205 SW: 240 NW: 175

34 KT NE: 130 SE: 120 SW: 140 NW: 110

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

24H: 2023/01/19 18 UTC: 15.3 S / 48.9 E, VENT MAX= 035 KT, OVERLAND DEPRESSION

28 KT NE: 185 SE: 215 SW: 250 NW: 175

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

36H: 2023/01/20 06 UTC: 15.9 S / 48.4 E, VENT MAX= 030 KT, OVERLAND DEPRESSION

28 KT NE: 280 SE: 260 SW: 0 NW: 240

48H: 2023/01/20 18 UTC: 16.6 S / 47.8 E, VENT MAX= 030 KT, OVERLAND DEPRESSION

28 KT NE: 280 SE: 260 SW: 0 NW: 240

60H: 2023/01/21 06 UTC: 17.3 S / 47.2 E, VENT MAX= 030 KT, OVERLAND DEPRESSION

28 KT NE: 280 SE: 260 SW: 0 NW: 240

72H: 2023/01/21 18 UTC: 18.1 S / 46.9 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

2.B LONGER-RANGE OUTLOOK:  
NIL

2.C ADDITIONAL INFORMATION:  
T=CI=4.0

DURING THE LAST 6 HOURS, CHENESO HAS CONTINUED TO INTENSIFY WITH AN INTERMITTENT HOT SPOT AND THE DEVELOPMENT OF VERY STRONG CONVECTIVE ACTIVITY IN THE NORTHERN SEMICIRCLE. THE MICROWAVE IMAGERY COLLECTED SINCE 12Z SHOWS THAT AN INTERNAL CORE IS BUILDING UP. THE INTENSITY OF THE SYSTEM IS ESTIMATED AT 55 KT IN AGREEMENT WITH A T4.0 WHICH CAN BE ESTIMATED SUBJECTIVELY AND A VMAX OF 54 KT SEEN BY THE SMAP PASS OF 1432Z.

CHENESO IS SLOWING DOWN ITS WESTWARD MOVEMENT ON THE NORTHERN EDGE OF THE SUBTROPICAL HIGHS LOCATED IN THE SOUTH. FROM TOMORROW, A MID-TROPOSPHERE BAROMETRIC COLLAR IS BUILDING SOUTH OF THE MASCAREIGNES AND A NEAR EQUATORIAL RIDGE IS BUILDING NORTHEAST OF THE SYSTEM. A SUBTROPICAL RIDGE OF HIGH PRESSURE REMAINS OVER THE SOUTH OF THE MOZAMBIQUE CHANNEL. THIS PATTERN IS FAVORABLE TO A GRADUAL SOUTHWARD TURN WITH AT A SLOWER SPEED OF MOVEMENT. THERE IS A LITTLE MORE UNCERTAINTY THAN NORMAL ON THE EXACT LOCATION AND TIMING OF THE LANDFALL WITH SOME DISCREPANCIES AMONG THE GUIDANCE. THE PRESENT FORECAST DELAYS A LITTLE THE LANDING WHICH SHOULD BE DONE IN THE MORNING.

THE DISPERSION INCREASES RAPIDLY AFTER LANDING, WHICH MAKES THE TRACK PREDICTION AFTER LANDING PARTICULARLY UNCERTAIN. THREE SCENARIOS ARE STILL POSSIBLE. THE FIRST ONE MAKES THE SYSTEM ENTER OVER MADAGASCAR AND THEN EXIT TO THE EAST AT THE END OF THE TRAJECTORY. THE SECOND SCENARIO MAKES THE SYSTEM CROSS MADAGASCAR AND EXIT ON THE MOZAMBIQUE CANAL AT THE END OF THE FLIGHT. FINALLY THE THIRD SCENARIO PROPOSES AN END OF LIFE OF THE SYSTEM ON MADAGASCAR. THIS IS THE OPTION NOW FAVORED BY THE CMRS. HOWEVER, THE UNCERTAINTY ON THE TRAJECTORY REMAINS VERY IMPORTANT BEYOND 36H AND THE OTHER SCENARIOS ARE NOT COMPLETELY DISCARDED.

IN TERMS OF INTENSITY, DESPITE THE PRESENCE OF A MODERATE EASTERLY SHEAR IN THE NEXT FEW HOURS, THE INTENSIFICATION OF CHENESO SHOULD CONTINUE UNTIL LANDING WITH A GOOD ALTITUDE DIVERGENCE AND FAVORABLE ENVIRONMENTAL CONDITIONS. WE CAN NOT COMPLETELY EXCLUDE AN INTENSIFICATION UNTIL THE TROPICAL CYCLONE STAGE ESPECIALLY IF THE LANDFALL IS DONE A LITTLE LATER. THEN WITH THE INTERACTION WITH THE RELIEF OF MADAGASCAR, THE SYSTEM SHOULD QUICKLY WEAKEN ON THURSDAY.

IMPACTS ON THE INHABITED LANDS DURING THE NEXT 72 HOURS.

MADAGASCAR:

- HEAVY RAINS WILL CONTINUE THIS EVENING OVER NORTHEASTERN MADAGASCAR AS THE SYSTEM APPROACHES. THESE HEAVY RAINS WILL THEN

LAST AT LEAST UNTIL SUNDAY, SPREADING ON THE ONE HAND ALONG THE COAST AND MOUNTAINS OF THE CENTER EAST (WITH EASTERLY ONSHORE WINDS) AND ON THE OTHER HAND ON A GOOD PART OF NORTHWESTERN MADAGASCAR (STRONG MONSOON FLOW FEEDING THE NORTHERN PART OF THE CLOCKWISE CIRCULATION). THE EXPECTED ACCUMULATIONS OVER THE NEXT 3 DAYS EXCEED 200 MM OVER A LARGE PART OF THE CONCERNED AREAS WITH LOCALLY MORE THAN 500 MM OVER THE NORTHERN RELIEF.

- STRONG WIND CONDITIONS (GALE) ARE EXPECTED FROM TONIGHT WEDNESDAY BETWEEN SAINTE-MARIE ISLAND IN THE SOUTH AND VOHEMAR IN THE NORTH. DESTRUCTIVE WIND CONDITIONS (STORM) ARE POSSIBLE NEAR THE LANDING ZONE.

- A DANGEROUS SEA STATE WITH AVERAGE WAVES OF MORE THAN 4M WILL ALSO CONCERN THE NORTH-EAST COAST OF MADAGASCAR NORTH OF CAP MASOALA FROM TONIGHT WEDNESDAY THEN OFF SAINTE MARIE ISLAND TOMORROW. A RISK OF COASTAL SUBMERSION IS LOCALLY POSSIBLE NEAR THE LANDFALL AREA.