

WTIO30 FMEE 181238

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 6/5/20222023

1.A MODERATE TROPICAL STORM 5 (CHENESO)

2.A POSITION 2023/01/18 AT 1200 UTC:

WITHIN 20 NM RADIUS OF POINT 13.6 S / 52.4 E

(THIRTEEN DECIMAL SIX DEGREES SOUTH AND
FIFTY TWO DECIMAL FOUR DEGREES EAST)

MOVEMENT: WEST 15 KT

3.A DVORAK ANALYSIS: 3.5/3.5/D 1.0/6 H

4.A CENTRAL PRESSURE: 992 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 45 KT

RADIUS OF MAXIMUM WINDS (RMW): 33 KM

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

28 KT NE: 130 SE: 130 SW: 220 NW: 185

34 KT NE: 0 SE: 55 SW: 85 NW: 75

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): 1006 HPA / 600 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2023/01/19 00 UTC: 13.8 S / 50.5 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM

28 KT NE: 140 SE: 175 SW: 110 NW: 150

34 KT NE: 85 SE: 75 SW: 75 NW: 85

48 KT NE: 0 SE: 0 SW: 35 NW: 45

24H: 2023/01/19 12 UTC: 14.6 S / 49.0 E, VENT MAX= 035 KT, OVERLAND DEPRESSION

28 KT NE: 0 SE: 165 SW: 130 NW: 0

36H: 2023/01/20 00 UTC: 15.1 S / 48.3 E, VENT MAX= 030 KT, OVERLAND DEPRESSION

28 KT NE: 0 SE: 140 SW: 110 NW: 0

48H: 2023/01/20 12 UTC: 16.1 S / 47.5 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

60H: 2023/01/21 00 UTC: 16.5 S / 47.1 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

72H: 2023/01/21 12 UTC: 17.1 S / 46.4 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

2.B LONGER-RANGE OUTLOOK:

96H: 2023/01/22 12 UTC: 18.9 S / 45.2 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

120H: 2023/01/23 12 UTC: 20.8 S / 44.6 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

2.C ADDITIONAL INFORMATION:

T=CI=3.5-

DURING THE LAST 6 HOURS, THE ORGANIZATION OF THE SYSTEM HAS CLEARLY IMPROVED WITH A CURVED BAND STRUCTURE THAT HAS BECOME MORE MARKED WITH DEEPER CONVECTION AND A COOLING OF THE CLOUD TOPS. IT WAS THEREFORE DECIDED, WITH THE METEOROLOGICAL SERVICE OF MADAGASCAR, TO NAME THE TROPICAL STORM CHENESO AT 09UTC. MOREOVER, THE GMI MICROWAVE IMAGE OF 1005Z CONFIRMS THE PRESENCE OF A WELL VISIBLE EYE IN 37GHZ AND A CONVECTION WHICH IS ORGANIZED AROUND THE CENTER IN 87 GHZ. CONTINUING ITS INTENSIFICATION SINCE THE NAMING, THE CMRS ESTIMATES THE MAXIMUM WINDS AT 45KT WITH A MINIMUM PRESSURE OF 992HPA. THE SECONDARY VORTEX, LOCATED AT 12.13S/56.59E ON THE VISIBLE IMAGE, HAS NOT PENALIZED THE INTENSIFICATION OF CHENESO.

CHENESO IS STILL MOVING QUITE RAPIDLY WESTWARD ON THE NORTHERN SIDE OF THE HIGH SUBTROPICAL GEOPOTENTIALS LOCATED IN THE SOUTH. THIS MOVEMENT SHOULD CONTINUE DURING THE NEXT 24 HOURS BY SLOWING DOWN GRADUALLY. FROM TOMORROW, A MID-TROPOSPHERIC BAROMETRIC COLLAR WILL SET UP SOUTH OF THE MASCARENE ISLANDS AND A RIDGE OF HIGH PRESSURE NEAR THE EQUATOR WILL BUILD UP NORTH-EAST OF THE SYSTEM. A SUBTROPICAL RIDGE IS MAINTAINED OVER THE SOUTH OF THE MOZAMBIQUE CHANNEL. THE GLOBAL MODELS ARE RATHER IN GOOD AGREEMENT ON THE ZONAL PORTION OF THE TRACK PROPOSING A LANDING ON THE NORTHEAST OF MADAGASCAR AT THE END OF WEDNESDAY NIGHT OR EARLY THURSDAY MORNING.

THE DISPERSION INCREASES RAPIDLY BEYOND THAT, 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 DAY. THIS WAS THE SCENARIO FAVORED BY THE EUROPEAN GROUP AND BY THE CMRS. THE SECOND SCENARIO IS TO CROSS MADAGASCAR AND EMERGE ON THE MOZAMBIQUE CHANNEL AT THE END OF THE TIMELINE. THIS IS THE SCENARIO CARRIED BY THE AMERICAN GROUP. FINALLY THE THIRD SCENARIO PROPOSES AN END OF LIFE OF THE SYSTEM ON MADAGASCAR.

THE PHILOSOPHY OF THE EUROPEAN GROUP SEEMS ON THE LAST RUN TO BE CLOSE TO THE PROPOSAL OF THE AMERICAN GROUP. THE CHOICE OF CMRS WAS TO GET CLOSER TO THESE PROPOSALS IN TERMS OF TRACK AND THUS TO REVISE THE TRACK FURTHER WEST WHILE STAYING ON MADAGASCAR. HOWEVER, THE UNCERTAINTY ON THE TRACK 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. THEN WITH THE INTERACTION WITH THE MADAGASCAR RELIEF, THE SYSTEM SHOULD QUICKLY WEAKEN ON THURSDAY. THE INTENSITY FORECAST IS CLOSE TO THE GUIDANCE SUGGESTING A MODERATE INTENSIFICATION, POSSIBLY REACHING THE STAGE OF A STRONG TROPICAL STORM

JUST BEFORE LANDFALL OVER MADAGASCAR.

IMPACTS ON INHABITED LANDS DURING THE NEXT 72 HOURS.

MADAGASCAR:

- HEAVY RAINS WILL CONTINUE TONIGHT OVER NORTHEASTERN MADAGASCAR AS THE SYSTEM APPROACHES. THESE HEAVY RAINS WILL THEN LAST AT LEAST UNTIL SUNDAY AND WILL SPREAD TO THE WHOLE NORTHERN PART OF THE ISLAND (NORTH OF A TAMATAVE - MAJUNGA AXIS) IN CONNECTION WITH THE ESTABLISHMENT OF A VERY ACTIVE MONSOON FLOW. CUMULATIVE RAINFALL OVER 4 DAYS EXCEEDED 250 MM OVER A LARGE PART OF THE AREA 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 SAMBAVA 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 AFFECT THE NORTH-EAST COAST OF MADAGASCAR NORTH OF CAP MASOALA FROM TONIGHT WEDNESDAY AND THEN OFF SAINTE MARIE ISLAND TOMORROW. A RISK OF COASTAL SUBMERSION IS LOCALLY POSSIBLE NEAR THE IMPACT AREA.