

WTIO30 FMEE 121247

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

0.A WARNING NUMBER: 1/4/20212022

1.A TROPICAL DISTURBANCE 4

2.A POSITION 2022/02/12 AT 1200 UTC:

WITHIN 20 NM RADIUS OF POINT 14.0 S / 62.7 E
(FOURTEEN DECIMAL ZERO DEGREES SOUTH AND
SIXTY TWO DECIMAL SEVEN DEGREES EAST)
MOVEMENT: SOUTH-SOUTH-WEST 6 KT

3.A DVORAK ANALYSIS: 2.0/2.0/D 1.0/24 H

4.A CENTRAL PRESSURE: 1001 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 25 KT
RADIUS OF MAXIMUM WINDS (RMW): NIL

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

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1005 HPA / 800 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2022/02/13 00 UTC: 14.7 S / 61.9 E, VENT MAX= 030 KT, TROPICAL DEPRESSION
28 KT NE: 0 SE: 110 SW: 0 NW: 0

24H: 2022/02/13 12 UTC: 15.4 S / 60.1 E, VENT MAX= 035 KT, MODERATE TROPICAL
STORM

28 KT NE: 0 SE: 110 SW: 0 NW: 0
34 KT NE: 0 SE: 75 SW: 0 NW: 0

36H: 2022/02/14 00 UTC: 16.0 S / 57.7 E, VENT MAX= 040 KT, MODERATE TROPICAL
STORM

28 KT NE: 0 SE: 185 SW: 185 NW: 0
34 KT NE: 0 SE: 95 SW: 95 NW: 0

48H: 2022/02/14 12 UTC: 16.4 S / 55.0 E, VENT MAX= 045 KT, MODERATE TROPICAL
STORM

28 KT NE: 0 SE: 185 SW: 150 NW: 95
34 KT NE: 0 SE: 110 SW: 95 NW: 75

60H: 2022/02/15 00 UTC: 16.4 S / 52.9 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 95 SE: 185 SW: 150 NW: 130
34 KT NE: 75 SE: 130 SW: 110 NW: 95

48 KT NE: 55 SE: 35 SW: 35 NW: 35

72H: 2022/02/15 12 UTC: 16.3 S / 51.0 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM
28 KT NE: 110 SE: 185 SW: 185 NW: 110
34 KT NE: 95 SE: 130 SW: 130 NW: 95
48 KT NE: 55 SE: 35 SW: 35 NW: 35

2.B LONGER-RANGE OUTLOOK:

96H: 2022/02/16 12 UTC: 16.1 S / 46.0 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

120H: 2022/02/17 12 UTC: 17.6 S / 41.3 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM

28 KT NE: 155 SE: 110 SW: 0 NW: 0

34 KT NE: 120 SE: 75 SW: 0 NW: 0

2.C ADDITIONAL INFORMATION:

T=CI=2.0

DURING THE LAST 24 HOURS, A CLOSED LOW LEVEL CIRCULATION FORMED NORTH-EAST OF THE MASCARENE ISLANDS. CONVECTIVE ACTIVITY REMAINED VARIABLE WITHIN THIS CIRCULATION WITH SIGNS OF CURVATURE IN THE CLOUD PATTERN MORE OR LESS PRONOUNCED IN INFRARED. INDEED, THE 04 SYSTEM IS STILL HINDERED BY A MODERATE NORTHEASTERLY SHEAR AND A RATHER WEAK SURFACE CONVERGENCE, LIMITING THE CONVECTION ORGANIZATION. IN THE ABSENCE OF ASCAT DATA THIS MORNING, THE CURRENT INTENSITY IS UNCERTAIN. IN VIEW OF THE LAST DVORAK ANALYSIS, THE SYSTEM 04 IS CONSIDERED AS A TROPICAL DISTURBANCE WITH MAXIMUM WINDS CLOSE TO 25KT, EVEN THIS ANALYSIS COULD BE A BIT CONSERVATIVE.

SYSTEM 04 TRACK WILL BE DRIVEN BY HIGH SUBTROPICAL GEOPOTENTIALS. IT IS EVOLVING ON THE NORTH-WESTERN EDGE OF THE SUBTROPICAL RIDGE FAVORING A WEST-SOUTH-WESTERLY MOVEMENT OVER THE WHOLE PERIOD. THE MODELS ARE IN FAIRLY GOOD AGREEMENT ON THIS SCENARIO, ESPECIALLY AT SHORT RANGE. THE SYSTEM SHOULD PASS QUITE FAR AWAY (MORE THAN 300KM) FROM MAURITIUS AND REUNION ISLAND ON MONDAY. ON THE OTHER HAND, IT SHOULD PASS CLOSE TO TROMELIN ON MONDAY EVENING. A LANDING ON THE NORTH-EASTERN COAST OF MADAGASCAR IS POSSIBLE BETWEEN TUESDAY AND WEDNESDAY. HOWEVER, THE DISPERSION OF THE MODEL GUIDANCE IS QUITE IMPORTANT FROM TUESDAY MAKING STILL VERY UNCERTAIN THE LOCATION OF THIS EVENTUAL LANDING (AREA FROM MAHAVELONA TO SAMABAVA). IN THE SECOND PART OF NEXT WEEK, IN THE CASE OF A CROSSING OF MADAGASCAR, THE SYSTEM COULD EMERGE IN THE MOZAMBIQUE CHANNEL.

ON THIS TRACK, ENVIRONMENTAL CONDITIONS SHOULD PROGRESSIVELY IMPROVE. EVEN IF THE SURFACE CONVERGENCE SHOULD REMAIN WEAK ESPECIALLY ON THE NORTHERN SIDE, THE NORTHEASTERLY SHEAR SHOULD WEAKEN ESPECIALLY ON TUESDAY. THE RAPID MOVEMENT OF THE SYSTEM IN THE SAME DIRECTION AS THE SHEAR COULD ALSO LIMIT ITS DETRIMENTAL IMPACT. FINALLY, THE UPPER LEVEL DIVERGENCE SHOULD BECOME EXCELLENT IN THE WESTERN SEMICIRCLE BY WEDNESDAY. AS A CONSEQUENCE, THE PRESENT FORECAST ASSUMES A PROGRESSIVE INTENSIFICATION ACCELERATING UP TO THE LANDFALL. SYSTEM 04 MAY HIT MADAGASCAR AT THE SEVERE TROPICAL STORM

OR EVEN TROPICAL CYCLONE STAGE.

IN TERMS OF IMPACTS, CONSIDERING THE SMALL SIZE OF THE SYSTEM AND THE DISTANCE OF PASSAGE, MAURITIUS AND REUNION SHOULD BE ONLY marginally CONCERNED BY THE HEAVY RAINS AND THE STRONG WINDS RELATED TO THE SYSTEM 04. CONCERNING MADAGASCAR, IT IS STILL DIFFICULT TO ASSESS THE MAGNITUDE AND LOCATION OF THE IMPACTS. A DEGRADATION OF THE METEOROLOGICAL CONDITIONS IS EXPECTED FROM THE MONDAY TO TUESDAY NIGHT. THE INHABITANTS ARE THEREFORE ADVISED TO KEEP UPDATED ON THE NEXT FORECASTS.