

WTIO30 FMEE 170628

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 7/7/20202021

1.A MODERATE TROPICAL STORM 7 (ELOISE)

2.A POSITION 2021/01/17 AT 0600 UTC:

WITHIN 20 NM RADIUS OF POINT 12.6 S / 62.4 E

(TWELVE DECIMAL SIX DEGREES SOUTH AND
SIXTY TWO DECIMAL FOUR DEGREES EAST)

MOVEMENT: WEST 8 KT

3.A DVORAK ANALYSIS: 2.5/2.5/D 0.5/6 H

4.A CENTRAL PRESSURE: 995 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 35 KT

RADIUS OF MAXIMUM WINDS (RMW): NIL

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

28 KT NE: 185 SE: 425 SW: 425 NW: 270

34 KT NE: 0 SE: 150 SW: 185 NW: 110

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1005 HPA / 900 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2021/01/17 18 UTC: 13.1 S / 59.9 E, VENT MAX= 035 KT, MODERATE TROPICAL
STORM

28 KT NE: 165 SE: 345 SW: 270 NW: 110

34 KT NE: 85 SE: 165 SW: 110 NW: 45

24H: 2021/01/18 06 UTC: 13.8 S / 57.0 E, VENT MAX= 040 KT, MODERATE TROPICAL
STORM

28 KT NE: 205 SE: 325 SW: 260 NW: 165

34 KT NE: 95 SE: 150 SW: 130 NW: 95

36H: 2021/01/18 18 UTC: 14.6 S / 54.3 E, VENT MAX= 040 KT, MODERATE TROPICAL
STORM

28 KT NE: 185 SE: 335 SW: 295 NW: 155

34 KT NE: 85 SE: 155 SW: 130 NW: 100

48H: 2021/01/19 06 UTC: 15.4 S / 52.7 E, VENT MAX= 045 KT, MODERATE TROPICAL
STORM

28 KT NE: 215 SE: 305 SW: 215 NW: 155

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

60H: 2021/01/19 18 UTC: 15.6 S / 51.4 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM
28 KT NE: 165 SE: 215 SW: 195 NW: 100
34 KT NE: 75 SE: 95 SW: 95 NW: 85
48 KT NE: 35 SE: 30 SW: 65 NW: 35

72H: 2021/01/20 06 UTC: 15.5 S / 50.0 E, VENT MAX= 035 KT, OVERLAND DEPRESSION
28 KT NE: 110 SE: 150 SW: 85 NW: 140
34 KT NE: 45 SE: 55 SW: 20 NW: 130

2.B LONGER-RANGE OUTLOOK:

96H: 2021/01/21 06 UTC: 17.2 S / 45.9 E, VENT MAX= 020 KT, OVERLAND DEPRESSION

120H: 2021/01/22 06 UTC: 19.9 S / 41.4 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM
28 KT NE: 400 SE: 380 SW: 220 NW: 95
34 KT NE: 155 SE: 205 SW: 110 NW: 55

2.C ADDITIONAL INFORMATION:

T=CI=2.5

OVER THE LAST 6 HRS, CONVECTION MAINTAINED WELL OVER THE CIRCULATION CENTER. THE INFLUENCE OF THE UPPER EASTERLY SHEAR REMAINS CLEAR AS THE MAIN CONVECTIVE ACTIVITY IS ONLY LOCATED ON THE WESTERN SEMI-CIRCLE WHILE DRY AIR IS OCCUPYING THE EASTERN SEMI-CIRCLE. HOWEVER, THE LAST 37GHZ MW IMAGES AVAILABLE (AMSUB 0507Z, SSMIS 0031Z) SUGGEST AN IMPROVEMENT IN THE LOW-LEVEL INNER STRUCTURE WITH RELATIVELY INTENSE RAINBANDS BEGINNING TO WRAP AROUND THE NORTHERN SEMI-CIRCLE. BASED ON THE 0350Z ASCAT-A WIND SCATT DATA WHICH REVEALED GALE FORCE WINDS WITHIN THE SOUTH-WESTERN QUARANT, MAURITIUS MET SERVICE HAS NAMED THE SYSTEM ELOISE AT 05Z. CURRENT INTENSITY IS THUS SLIGHTLY ABOVE THE RSMC DVORAK ESTIMATE.

OVER THE NEXT FEW DAYS THE ENVIRONMENTAL CONDITIONS REMAIN MIXED. THE EASTERLY SHEAR REMAINS OMNIPRESENT WITH MID-TROPOSPHERE DRY AIR LOCATED IN THE EASTERN EDGE OF THE CIRCULATION, WHILE THE UPPER DIVERGENCE REMAINS GOOD IN THE NORTHWESTERN QUADRANT. IN THIS CONTEXT, A SLOW INTENSIFICATION OF THE SYSTEM IS EXPECTED IN AGREEMENT WITH MOST NUMERICAL GUIDANCE. TUESDAY, THE PACE OF INTENSIFICATION COULD INCREASE A BIT BEFORE LANDFALL AS THE UPPER SHEAR CONSTRAINT BEGINS TO EASE OFF. AS A QUICKER MOTION THAN ANTICIPATED COULD DECREASE THE EFFECTS OF THE SHEAR CONSTRAINT, THE DEGREE OF CONFIDENCE IN THIS INTENSITY PREDICTION IS LOW.

THE SYSTEM IS EXPECTED TO CONTINUE IN A GENERAL WESTERLY DIRECTION UNDER THE INFLUENCE OF THE LOW TO MID SUBTROPICAL LOW RIDGE WHICH REMAINS SOUTH OF THE MASCARENES ISLANDS UNTIL MONDAY. THEN, A TROUGH IS EXPECTED TO CIRCULATE ON THE SOUTH OF MADAGASCAR, CAUSING A WEAKNESS IN THE HIGH PRESSURE BELT. THE TRACK SHOULD BEND WEST-SOUTHWESTWARD, AND ELOISE SHOULD MAKE LANDFALL ON THE EASTERN MADAGASCAN COAST.

IT IS TOO EARLY TO PINPOINT LOCATION AND INTENSITY AT LANDFALL BUT THERE

IS A RISK OF STRONG WINDS, FLOODS AND STORM SURGE OVER SOME COASTAL AREAS OF EASTERN MADAGASCAR MAINLY BETWEEN SAMBAVA TO THE NORTH AND TAMATAVE TO THE SOUTH. A LANDFALL AT TROPICAL CYCLONE INTENSITY IS POSSIBLE.

FRIDAY, ELOISE SOULD COME BACK OVER SEA ON THE MOZAMBIQUE CHANNEL. A NEW INTENSIFICATION PHASE IS AWAITED WITHIN CONDUCTIVE ENVIRONMENTAL CONDITIONS.