

WTIO30 FMEE 261840

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 18/4/20202021

1.A TROPICAL DEPRESSION 4 (CHALANE)

2.A POSITION 2020/12/26 AT 1800 UTC:

WITHIN 30 NM RADIUS OF POINT 17.6 S / 49.8 E

(SEVENTEEN DECIMAL SIX DEGREES SOUTH AND
FORTY NINE DECIMAL EIGHT DEGREES EAST)

MOVEMENT: WEST 15 KT

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

4.A CENTRAL PRESSURE: 1000 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 30 KT

RADIUS OF MAXIMUM WINDS (RMW): NIL

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

28 KT NE: 0 SE: 150 SW: 185 NW: 150

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

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): 1005 HPA / 600 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2020/12/27 06 UTC: 18.1 S / 47.2 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

24H: 2020/12/27 18 UTC: 18.6 S / 45.1 E, VENT MAX= 020 KT, OVERLAND DEPRESSION

36H: 2020/12/28 06 UTC: 19.6 S / 43.8 E, VENT MAX= 025 KT, ZONE OF DISTURBED
WEATHER

48H: 2020/12/28 18 UTC: 20.0 S / 42.6 E, VENT MAX= 030 KT, TROPICAL DEPRESSION
28 KT NE: 10 SE: 35 SW: 100 NW: 55

60H: 2020/12/29 06 UTC: 20.1 S / 41.1 E, VENT MAX= 040 KT, MODERATE TROPICAL
STORM

28 KT NE: 45 SE: 130 SW: 100 NW: 75

34 KT NE: 35 SE: 120 SW: 55 NW: 65

72H: 2020/12/29 18 UTC: 20.3 S / 39.1 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 55 SE: 140 SW: 85 NW: 75

34 KT NE: 45 SE: 130 SW: 55 NW: 65

48 KT NE: 35 SE: 55 SW: 45 NW: 45

2.B LONGER-RANGE OUTLOOK:

96H: 2020/12/30 18 UTC: 20.7 S / 34.7 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM

28 KT NE: 55 SE: 140 SW: 85 NW: 75

34 KT NE: 45 SE: 130 SW: 55 NW: 65

48 KT NE: 35 SE: 55 SW: 45 NW: 45

2.C ADDITIONAL INFORMATION:

FT=CI=2.5

OVER THE LAST 6 HOURS, CONVECTION REMAINED STRONG OVER THE WESTERN HALF OF THE SYSTEM. SSMIS 1556Z 37GHZ IMAGE AND THE WIND GROUND OBSERVATION DATA IN STE MARIE ISLAND VEERING WESTERLY FROM 17Z STRONGLY SUGGEST THAT A NEW CIRCULATION CENTER HAS APPEARED CLOSER TO THE MAIN CONVECTION OVER THE LAST HOURS, EMERGING FROM THE ELONGATED CIRCULATION AFFECTED BY THE UNCONDUCTIVE ENVIRONMENT. MOREOVER, FROM 18Z, THE WIND HAS VEERED NORTH-NORTH-EASTERLY IN TAMATAVE. THIS SUGGEST THAT CHALANE IS ABOUT TO OR IS ALREADY MAKING LANDFALL ON THE MALAGASY COASTLINE, NEAR MAHAVELONA (FOULPOINTE) SOUTH OF STE MARIE ISLAND.

THE CURRENT INTENSITY ESTIMATE IS BASED ON DVORAK ANALYSIS IN AGREEMENT WITH AVAILABLE GROUND OBS DATA.

THIS "JUMP" MADE BY THE CIRCULATION CENTER ALLOWED THE SYSTEM TO MAKE LANDFALL EARLIER THAN ANTICIPATED. THE MAIN DANGER ASSOCIATED WITH THIS SYSTEM REMAIN THE HEAVY RAINS, WHICH CAN GENERATE FLASH FLOODS AND WIDESPREAD FLOODS. THESE OCCUR EVEN FAR FROM THE CENTER IN THE SOUTHERN SECTOR. THE INHABITANTS OF THE AREA ARE INVITED TO FOLLOW THE EVOLUTION OF THIS SYSTEM WITH THE LOCAL AUTHORITIES.

EARLY NEXT WEEK, THE SYSTEM SHOULD COME BACK OVER OPEN WATERS IN THE MOZAMBIQUE CHANNEL, WHERE ENVIRONMENTAL CONDITIONS APPEAR TO BE FAVORABLE FOR REINTENSIFICATION (WEAK SHEAR, GOOD UPPER OUTFLOW, LOW-LEVEL NORTHERLY AND TRADE WIND FLOW FUELING A GOOD SURFACE CONVERGENCE AND HIGH OCEANIC HEAT CONTENT) AT FIRST. A LOW/MID LEVEL RIDGE OCCUPYING THE SOUTHERN HALF OF THE CHANNEL SHOULD DRIVE A GENERALLY WESTWARD MOTION OF THE STORM.

GIVEN THE INITIAL STATE OF THE SYSTEM, THE UNCERTAINTY UPON THE LOCALISATION OF REENTRY OVER WATER AND THE LACK OF AGREEMENT ON THE POSSIBILITY OF REINTENSIFICATION AMONG THE AVAILABLE GUIDANCE, THERE IS NOT A STRONG DEGREE OF CONFIDENCE ASSOCIATED WITH THIS SECOND PART OF THE FORECAST.