

WTIO30 FMEE 270008

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 19/4/20202021

1.A OVERLAND DEPRESSION 4 (CHALANE)

2.A POSITION 2020/12/27 AT 0000 UTC:

WITHIN 20 NM RADIUS OF POINT 17.8 S / 49.2 E

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

MOVEMENT: WEST-SOUTH-WEST 8 KT

3.A DVORAK ANALYSIS: NIL

4.A CENTRAL PRESSURE: 1005 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: 140 SW: 0 NW: 0

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): 1008 HPA / 600 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2020/12/27 12 UTC: 18.3 S / 47.1 E, VENT MAX= 025 KT, OVERLAND DEPRESSION

24H: 2020/12/28 00 UTC: 19.3 S / 45.1 E, VENT MAX= 020 KT, OVERLAND DEPRESSION

36H: 2020/12/28 12 UTC: 19.7 S / 43.9 E, VENT MAX= 025 KT, ZONE OF DISTURBED  
WEATHER

48H: 2020/12/29 00 UTC: 19.9 S / 42.5 E, VENT MAX= 030 KT, TROPICAL DEPRESSION

28 KT NE: 10 SE: 35 SW: 100 NW: 55

60H: 2020/12/29 12 UTC: 19.9 S / 40.7 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: 2020/12/30 00 UTC: 19.8 S / 38.3 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: 2020/12/31 00 UTC: 19.5 S / 32.4 E, VENT MAX= 030 KT, OVERLAND DEPRESSION  
28 KT NE: 55 SE: 140 SW: 85 NW: 75

2.C ADDITIONAL INFORMATION:

OVER THE LAST 6 HRS, CHALANE HAS MADE LANDFALL AND IS NOW TRACKING TO THE NORTH-WEST OF TAMATAVE. THE 1803Z ASCAT-B SWATH SHOWS A RELATIVELY ATYPICAL STRUCTURE AT THE TIME OF LANDFALL WITH AN OPENING IN THE NORTH-EASTERN QUADRANT, PROLONGATED BY A SURFACE TROUGH. THIS DATA ALSO CONFIRMED THE PRESENCE OF NEAR GALE FORCE WINDS WITHIN AT LEAST THE SOUTHEASTERN QUADRANT. THE WIND ON STE MARIE ISLAND HAS NOW VEERED NORTH-EASTERLY.

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. THUS, MORE THAN 200MM OF RAIN IS EXPECTED OVER THE NEXT 48HRS ON THE EASTERN HIGH GROUNDS OF THE COUNTRY AS WELL AS CUMULATED RAINFALL RANGING FROM 100 TO 200MM IN THE INTERIOR ALONG CHALANE'S TRACK. 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 AT FIRST (WEAK SHEAR, GOOD UPPER OUTFLOW, LOW-LEVEL NORTHERLY AND TRADE WIND FLOW FUELING A GOOD SURFACE CONVERGENCE AND HIGH OCEANIC HEAT CONTENT). 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.

LAST WARNING ISSUED ON THIS SYSTEM, BEFORE A POSSIBLE REINTENSIFICATION OVER THE MOZAMBIQUE CHANNEL.