

WTIO30 FMEE 260048

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 15/4/20202021

1.A TROPICAL DEPRESSION 4 (CHALANE)

2.A POSITION 2020/12/26 AT 0000 UTC:

WITHIN 20 NM RADIUS OF POINT 15.8 S / 53.5 E
(FIFTEEN DECIMAL EIGHT DEGREES SOUTH AND
FIFTY THREE DECIMAL FIVE DEGREES EAST)

MOVEMENT: WEST-NORTH-WEST 3 KT

3.A DVORAK ANALYSIS: 1.5/2.0/W 1.5/24 H

4.A CENTRAL PRESSURE: 1001 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: 370 SW: 0 NW: 0

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1007 HPA / 1100 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2020/12/26 12 UTC: 16.2 S / 51.6 E, VENT MAX= 030 KT, TROPICAL DEPRESSION
28 KT NE: 0 SE: 185 SW: 110 NW: 85

24H: 2020/12/27 00 UTC: 16.7 S / 49.7 E, VENT MAX= 035 KT, MODERATE TROPICAL
STORM

28 KT NE: 45 SE: 100 SW: 35 NW: 0

34 KT NE: 35 SE: 55 SW: 0 NW: 0

36H: 2020/12/27 12 UTC: 17.5 S / 47.1 E, VENT MAX= 020 KT, OVERLAND DEPRESSION

48H: 2020/12/28 00 UTC: 18.8 S / 44.7 E, VENT MAX= 020 KT, OVERLAND DEPRESSION

60H: 2020/12/28 12 UTC: 19.6 S / 43.3 E, VENT MAX= 025 KT, ZONE OF DISTURBED
WEATHER

72H: 2020/12/29 00 UTC: 19.1 S / 42.3 E, VENT MAX= 030 KT, TROPICAL DEPRESSION

28 KT NE: 110 SE: 165 SW: 0 NW: 100

2.B LONGER-RANGE OUTLOOK:

96H: 2020/12/30 00 UTC: 18.3 S / 38.1 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 75 SE: 230 SW: 110 NW: 100

34 KT NE: 65 SE: 110 SW: 100 NW: 95

48 KT NE: 55 SE: 65 SW: 65 NW: 65

120H: 2020/12/31 00 UTC: 17.8 S / 33.1 E, VENT MAX= 020 KT, OVERLAND DEPRESSION

2.C ADDITIONAL INFORMATION:

FT=1.5;CI=2.0

THE NEAR-INFRARED MSG-1 IMAGERY ALLOWED TO LOCATE FAIRLY WELL THE LOW LEVELS CENTER DURING THE NIGHT. IT WAS LOCATED ABOUT 60 MN NORTH OF THE DEEP CONVECTION. THE SCATSAT PASS OF 1630Z, NOT RECEIVED BEFORE THE PREVIOUS BULLETIN, SHOWS WINDS OF 30 KT ONLY IN THE SOUTHEAST QUADRANT. THE FINAL INTENSITY IS MAINTAINED AT 30 KT. RECENTLY THE CENTER HAS CLEARLY SLOWED DOWN ITS PROGRESSION TOWARDS THE WEST-NORTHWEST, WHILE A POWERFUL CONVECTIVE BURST IS SET UP IN THE SOUTH ASSOCIATED WITH SOME WELL DEFINED UPPER LEVELS OUTFLOW. IT IS NOT IMPOSSIBLE THAT A NEW CENTER WILL REFORM FURTHER SOUTH WITHIN THE DEEP CONVECTION OVER THE NEXT FEW HOURS.

THE SHEAR SHOULD REMAIN FAIRLY LOW DESPITE A SMALL EASTERLY CONSTRAINT. THE SYSTEM SHOULD NOW BE ABLE TO EVOLVE IN MOISTER ENVIRONMENTAL CONDITIONS IN THE MIDDLE TROPOSPHERE AND THEREFORE MORE FAVORABLE TO ITS DEVELOPMENT AS IT APPROACHES THE MALAGASY COAST.. HOWEVER, INTENSITY GUIDANCES ARE NOT KEEN ON SUGGESTING AN INTENSIFICATION OF CHALANE PRIOR TO ITS LANDFALL. THIS INTENSITY FORECAST IS THUS ASSOCIATED TO RELATIVELY HIGH UNCERTAINTY. A POSSIBLE RE-INTENSIFICATION AS A TROPICAL STORM CONTINUE TO BE REFLECTED.

NO CHANGE IN TERMS OF TRACK FORECAST : THE SYSTEM IS MOVING ON THE NORTH-WESTERN EDGE OF THE SUBTROPICAL LOW/MID-LEVEL HIGH PRESSURES.

CHALANE SHOULD THEREFORE MADE LANDFALL DURING THE NEXT 24 HOURS BETWEEN CAP EAST TO THE NORTH AND TAMATAVE TO THE SOUTH. THE MAIN DANGER ASSOCIATED WITH THIS SYSTEM IS THE HEAVY RAINS, WHICH CAN GENERATE FLASH FLOODS AND WIDESPREAD FLOODS. THESE CAN 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. THE DETERIORATION OF THE METEOROLOGICAL CONDITIONS IN THE AREA WILL OCCUR DURING THE COURSE OF THE DAY.

EARLY NEXT WEEK, THE SYSTEM SHOULD TRACK 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 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 AND THE FACT THAT THERE IS NO UNANIMITY IN THE NUMERICAL GUIDANCE TO CONSIDER STRENGTHENING IN THE CHANNEL, THERE IS NOT A STRONG DEGREE OF CONFIDENCE ASSOCIATED WITH THIS FORECAST.