

WTIO30 FMEE 121347

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

0.A WARNING NUMBER: 1/11/20212022

1.A SUBTROPICAL DEPRESSION 11 (ISSA)

2.A POSITION 2022/04/12 AT 1200 UTC:
WITHIN 30 NM RADIUS OF POINT 30.8 S / 31.6 E
(THIRTY DECIMAL EIGHT DEGREES SOUTH AND
THIRTY ONE DECIMAL SIX DEGREES EAST)
MOVEMENT: SOUTH 9 KT

3.A DVORAK ANALYSIS: NIL

4.A CENTRAL PRESSURE: 997 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 40 KT
RADIUS OF MAXIMUM WINDS (RMW): NIL

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

28 KT NE: 110 SE: 370 SW: 260 NW: 110

34 KT NE: 75 SE: 185 SW: 130 NW: 75

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1009 HPA / 300 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2022/04/13 00 UTC: 32.0 S / 31.6 E, VENT MAX= 045 KT, SUBTROPICAL DEPRESSION
28 KT NE: 155 SE: 360 SW: 260 NW: 130
34 KT NE: 120 SE: 195 SW: 165 NW: 95

24H: 2022/04/13 12 UTC: 33.0 S / 32.5 E, VENT MAX= 045 KT, SUBTROPICAL DEPRESSION
28 KT NE: 185 SE: 350 SW: 260 NW: 130
34 KT NE: 140 SE: 205 SW: 175 NW: 95

36H: 2022/04/14 00 UTC: 33.1 S / 35.0 E, VENT MAX= 040 KT, SUBTROPICAL DEPRESSION
28 KT NE: 215 SE: 345 SW: 260 NW: 130
34 KT NE: 155 SE: 205 SW: 175 NW: 95

48H: 2022/04/14 12 UTC: 33.9 S / 37.8 E, VENT MAX= 035 KT, POST-TROPICAL
DEPRESSION
28 KT NE: 240 SE: 345 SW: 260 NW: 130
34 KT NE: 185 SE: 215 SW: 185 NW: 95

60H: 2022/04/15 00 UTC: 35.9 S / 40.9 E, VENT MAX= 030 KT, EXTRATROPICAL
DEPRESSION
28 KT NE: 295 SE: 260 SW: 150 NW: 185

72H: 2022/04/15 12 UTC: 39.1 S / 45.9 E, VENT MAX= 030 KT, EXTRATROPICAL DEPRESSION
28 KT NE: 315 SE: 220 SW: 0 NW: 185

2.B LONGER-RANGE OUTLOOK:
NIL

2.C ADDITIONAL INFORMATION:

A LOW HAS FORMED AND PROGRESSIVELY DEEPEDED SINCE MONDAY EVENING ON THE SOUTHEAST COAST OF SOUTH AFRICA, INITIATED BY BAROCLINIC INTERACTION WITH AN UPPER TROUGH APPROACHING FROM THE WEST AND A MOISTURE-FED WARM AIR PLUME IN THE LOW LEVELS. BANDS OF HEAVY RAINFALL AND THUNDERSTORMS HAVE PROGRESSIVELY ORGANIZED AND CAUSED SIGNIFICANT FLOODING IN THE AREA BETWEEN PORT EDWARD AND DURBAN. WITH THE SHIFT OF THE LOW'S CENTER OVER RELATIVELY WARM OCEANIC WATERS (SST CLOSE TO 25C), AND THANKS TO A RELATIVE DECREASE OF WIND SHEAR FAVORED BY THE LLC GETTING CLOSER TO UNDER THE UPPER TROUGH'S CORE, CONVECTION HAS BECOME MORE INTENSE AND MORE SYMMETRICAL SINCE THIS TUESDAY MORNING, ORGANIZING IN CLOUD BANDS WRAPPING AROUND A HOT SPOT ON SATELLITE IMAGERY. A 0340Z SMAP PASS INDICATED A STILL ASYMMETRICAL STRUCTURE WITH WINDS CLOSE TO 40 KT LIMITED TO THE SOUTHERN SEMICIRCLE, BUT THE ASCAT PASSES AT 0642Z AND 0735Z SHOW A MORE SYMMETRICAL STRUCTURE WITH WINDS OF 35 TO 40 KT IN SEVERAL QUADRANTS OF THE CIRCULATION, ALONG WITH STRUCTURAL IMPROVEMENT ON SATELLITE IMAGES AROUND 06Z. THESE OBSERVATIONS INDICATE AN EVOLUTION OF THE LOW INTO A SUBTROPICAL SYSTEM (SYMMETRICAL WARM CORE UP TO THE MID-TROPOSPHERE) AND ALREADY REACHING THE NAMING STAGE. THE RSMC IS THEREFORE STARTING TO MONITOR SYSTEM NUMBER 11-20212022 WHICH HAS BEEN NAMED "ISSA" AT 11UTC BY THE METEOROLOGICAL SERVICE OF MADAGASCAR. ON THE LAST IMAGES, DESPITE THE DISAPPEARANCE OF THE HOT SPOT WHICH WAS TEMPORARILY VISIBLE LATE MORNING, CONVECTION REMAINS VIGOROUS NEAR THE CENTER.

THE INITIAL MOVEMENT OF ISSA IS SOUTHWARD, ON THE EASTERN EDGE OF A LOW TO MID TROPOSPHERE TROUGH. FROM WEDNESDAY AFTERNOON, THE EASTWARD SWING OF THE MID-TROPOSPHERE TROUGH SHOULD CARRY THE SYSTEM EASTWARD UNTIL THURSDAY MORNING BEFORE A SOUTHEASTWARD TURN AS IT IS GRADUALLY ABSORBED BY A MID-LATITUDE TROUGH.

THE SYSTEM SHOULD CONTINUE TO INTENSIFY BY WEDNESDAY DUE TO DECREASING WIND SHEAR ENABLED BY THE POSITIONING OF THE CENTER ALMOST DIRECTLY UNDER THE UPPER TROUGH. SST BETWEEN 24 AND 25 DEGREES COMBINED WITH THE COOL UPPER AIR ASSOCIATED WITH THE TROUGH SHOULD FAVOR ACTIVE CONVECTION AND A FAIRLY MATURE SUBTROPICAL SYSTEM. FROM WEDNESDAY NIGHT INTO THURSDAY, WITH THE EASTWARD SHIFT OF THE TROUGH, DRY AIR INTRUSION AND INCREASING MID-SHEAR SHOULD GRADUALLY ATTACK THE SYSTEM'S WARM CORE AND MAKE IT MORE ASYMMETRICAL WHILE GRADUALLY WEAKENING WHILE CIRCULATING OVER INCREASINGLY COLD SST WITH THE SYSTEM'S TRACKING TOWARDS THE EXTRATROPICS.

EXPECTED IMPACTS ON INHABITED LANDS (SOUTH AFRICA) :

- HEAVY RAINFALL STILL POSSIBLE TONIGHT ON THE SOUTHEAST COAST OF SOUTH AFRICA ALREADY AFFECTED BY SIGNIFICANT ACCUMULATIONS (ALREADY 300 MM IN 24 HOURS HAVE BEEN RECORDED IN SEVERAL PLACES BETWEEN PORT EDWARD AND DURBAN, AND FURTHER 80-150 MM COULD ADD TO THIS LOCALLY) BEFORE GRADUAL IMPROVEMENT FROM WEDNESDAY.
- GUSTS UP TO 80-100 KM/H NEAR THE COASTS IN THE NEXT FEW HOURS BEFORE THE SYSTEM MOVES FURTHER OFFSHORE ON WEDNESDAY.
- VERY ROUGH SEA OFFSHORE.