

WTIO30 FMEE 220726  
RSMC / TROPICAL CYCLONE CENTER / LA REUNION  
TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 1/12/20212022

1.A TROPICAL DISTURBANCE 12

2.A POSITION 2022/04/22 AT 0600 UTC:  
WITHIN 30 NM RADIUS OF POINT 13.5 S / 43.0 E  
(THIRTEEN DECIMAL FIVE DEGREES SOUTH AND  
FORTY THREE DECIMAL ZERO DEGREES EAST)  
MOVEMENT: WEST 12 KT

3.A DVORAK ANALYSIS: 1.5/1.5/D 1.0/24 H

4.A CENTRAL PRESSURE: 1007 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 25 KT  
RADIUS OF MAXIMUM WINDS (RMW): NIL

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

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1009 HPA / 600 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2022/04/22 18 UTC: 13.6 S / 41.6 E, VENT MAX= 030 KT, TROPICAL DEPRESSION  
28 KT NE: 0 SE: 110 SW: 0 NW: 0

24H: 2022/04/23 06 UTC: 14.6 S / 40.7 E, VENT MAX= 030 KT, OVERLAND DEPRESSION  
28 KT NE: 0 SE: 110 SW: 0 NW: 0

36H: 2022/04/23 18 UTC: 15.8 S / 40.0 E, VENT MAX= 035 KT, OVERLAND DEPRESSION  
28 KT NE: 0 SE: 110 SW: 0 NW: 0  
34 KT NE: 0 SE: 75 SW: 0 NW: 0

48H: 2022/04/24 06 UTC: 17.0 S / 39.6 E, VENT MAX= 035 KT, MODERATE TROPICAL  
STORM  
28 KT NE: 95 SE: 110 SW: 0 NW: 0  
34 KT NE: 65 SE: 75 SW: 0 NW: 0

60H: 2022/04/24 18 UTC: 17.6 S / 39.4 E, VENT MAX= 040 KT, MODERATE TROPICAL  
STORM  
28 KT NE: 100 SE: 110 SW: 0 NW: 0  
34 KT NE: 75 SE: 75 SW: 0 NW: 0

72H: 2022/04/25 06 UTC: 18.3 S / 39.2 E, VENT MAX= 045 KT, MODERATE TROPICAL

## STORM

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

34 KT NE: 85 SE: 75 SW: 0 NW: 0

### 2.B LONGER-RANGE OUTLOOK:

96H: 2022/04/26 06 UTC: 19.6 S / 39.9 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 130 SE: 110 SW: 95 NW: 100

34 KT NE: 100 SE: 85 SW: 65 NW: 75

48 KT NE: 65 SE: 65 SW: 45 NW: 55

120H: 2022/04/27 06 UTC: 21.0 S / 43.1 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM

28 KT NE: 150 SE: 110 SW: 0 NW: 0

34 KT NE: 120 SE: 75 SW: 0 NW: 0

### 2.C ADDITIONAL INFORMATION:

T=CI=1.5+

SINCE LAST WEEK, A LARGE LOW-PRESSURE AREA NEAR THE EQUATOR, INITIALLY LOCATED NORTH OF THE GREAT MASCARENES, IS FOLLOWED BY THE RSMC THROUGH THE ZCIT BULLETIN. THIS LARGE AREA OF LOW PRESSURE HAS PROGRESSIVELY SHIFTED DURING THE LAST 48 HOURS, NORTH OF THE MOZAMBIQUE CHANNEL, FAVORING LOCALLY INTENSE PRECIPITATIONS BETWEEN THE NORTH OF MADAGASCAR AND THE COMORO ARCHIPELAGO. IN THIS CONTEXT AND DURING THE LAST 24 HOURS, A WEAK CLOCKWISE CIRCULATION CENTER WITH A POORLY DEFINED LLC, HAS GRADUALLY CONSOLIDATED GIVEN THE LAST SATELLITE IMAGERIES (CONVENTIONAL AND MICROWAVE). INDEED, WE NOTE SINCE LAST NIGHT A SLIGHT GAIN OF ORGANIZATION OF THE LOW LAYERS ON THE LAST 2232Z AMSR2 SWATHS AND THE 0327Z / 0137Z SSMIS PASSES. WE ALSO NOTICE AN INCREASING INTENSIFICATION OF THE CONVECTIVES PUFFS NEAR THE CENTER, TAKING NEAR 06Z A CURVED BAND PATTERN.

THE INITIAL INTENSITY OF THIS SYSTEM IS FIXED AT 25KT (WITH PEAKS AT 30 KT IN THE SOUTHERN SEMICIRCLE), ACCORDING TO DVORAK'S ESTIMATION AND IN VIEW OF THE 0230Z HY-2B.

THE SYSTEM IS CURRENTLY MOVING TO THE WEST-SOUTHWEST, ON THE NORTHERN EDGE OF A LARGE SUBTROPICAL RIDGE THAT HAS A SMALL WEAKNESS ON ITS WESTERN SIDE THAT WILL MAKE THE SYSTEM DIVE ON THE WESTERN COASTS OF MOZAMBIQUE, WITH A POSSIBLE LANDING ON THE PROVINCE OF NAMPULA. FROM SATURDAY ONWARDS, THE SYSTEM SHOULD EMERGE AT SEA AND THEN, WITH THE PROGRESSIVE INTENSIFICATION OF THE SYSTEM, THE DIRECTING FLOW WILL BE TAKEN OVER BY A MID-TROPOSPHERE TROUGH WHICH WILL STEER IT SOUTHWARDS, SLOWING IT DOWN TEMPORARILY, UNDER THE IMPULSE OF CONTRADICTORY FLOWS, UNTIL THE BEGINNING OF NEXT WEEK. FROM TUESDAY ONWARDS, AT THE NORTHERN EDGE OF THE TROUGH, THE SYSTEM SHOULD END UP MOVING TOWARDS THE WEST COAST OF MADAGASCAR AT THE PROBABLE STAGE OF A MODERATE TO SEVERE TROPICAL STORM. THE DETAIL OF THE TRAJECTORY BEYOND 24 HOURS REMAINS UNCERTAIN, DUE TO THE STRONG DISPERSION OF THE LAST GUIDANCE. GIVEN THE OVERALL FORECAST, IT IS NOT COMPLETELY EXCLUDED THAT THE SYSTEM WILL PASS OFF THE COAST OF MOZAMBIQUE. THIS TRAJECTORY FORECAST IS A COMPROMISE BETWEEN THE BEST AVAILABLE GUIDANCE.

IN TERMS OF INTENSITY, THE TROPICAL DISTURBANCE BENEFITS FROM A GOOD ENVIRONMENTAL ENVIRONMENT FAVOURABLE TO ITS INTENSIFICATION, WITH A WEAK WIND SHEAR, A GOOD CONVERGENCE OF THE TRADE WINDS, A STRONG OCEANIC POTENTIAL (29/30°C), AND A FAVOURABLE DIVERGENCE OF ALTITUDE ON THE POLAR SIDE IN THE EASTERN MARGIN OF A TROUGH OF MEDIUM TROPOSPHERE. THUS, IN THE SHORT TERM AN INTENSIFICATION TO THE STAGE OF TROPICAL DEPRESSION IS POSSIBLE, BEFORE A MORE MARKED INTENSIFICATION TO THE STAGE OF TROPICAL STORM DURING THIS WEEKEND. FROM TUESDAY, WITH THE APPROACH OF A MID-TROPICAL TROUGH FROM THE WEST, THE SYSTEM COULD WEAKEN TEMPORARILY, BY THE INCREASE OF AN UPPER WESTERLY CONSTRAINT INJECTING DRY AIR ABOVE THE LOW-LEVEL MINIMUM AND GRADUALLY SHIFTING THE MID-TROPICAL MOISTURE MAXIMUM TO THE EASTERN EDGE OF THE SYSTEM AT THE END OF THE PERIOD.

#### IMPACTS ON INHABITED LANDS

- GUSTS: GUSTS ARE EXPECTED DURING THE DAY OVER MAYOTTE BETWEEN 70 AND 80KM/H MAXIMUM. MORE IMPORTANT GUSTS BETWEEN 80 AND 100 KM/H MAX WILL OCCUR IN THE OPEN SEA, SOUTH OF A LINE FOMBONI/ANJOUAN. THESE GUSTS WILL QUICKLY EVACUATE DURING THE DAY BY SHIFTING TOWARDS THE COASTS OF MOZAMBIQUE.

WITH THE MOVEMENT OF THE SYSTEM, GUSTS ARE BLOWING OFF NAMPULA PROVINCE BETWEEN 70 AND 90 KM/H FROM LATE AFTERNOON, THEN SLIDING UNTIL SATURDAY BETWEEN ANGOCHE AND PEBANE.

- RAINS: DURING THE NEXT 24 HOURS, THE HEAVIEST RAINS WILL BE CONFINED TO THE COMOROS AREA AND TO THE SOUTH OF THE ARCHIPELAGO WITH AVERAGE ACCUMULATIONS OF 80 TO 150 MM, AND LOCALLY UP TO 200 MM. FROM THIS WEEKEND, THE HEAVIEST ACCUMULATIONS ARE EXPECTED ALONG THE PROVINCE OF NAMPULA BETWEEN 150 AND 250 MM ON AVERAGE ACCUMULATED BETWEEN TODAY AND SUNDAY. THE MOST IMPORTANT QUANTITIES SHOULD REMAIN AT SEA AND ALONG THE COASTS WITH MAXIMUM ACCUMULATIONS CLOSE TO 400 MM

- SEA: MODERATE TO ROUGH TODAY, BECOMING ROUGH TO VERY ROUGH THIS WEEKEND OFF NAMPULA AND ZAMBEZIA PROVINCE.