

WTIO30 FMEE 291820

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 34/13/20182019

1.A SEVERE TROPICAL STORM 13 (JOANINHA)

2.A POSITION 2019/03/29 AT 1800 UTC:

WITHIN 20 NM RADIUS OF POINT 23.6 S / 68.6 E

(TWENTY THREE DECIMAL SIX DEGREES SOUTH AND  
SIXTY EIGHT DECIMAL SIX DEGREES EAST)

MOVEMENT: SOUTH-SOUTH-EAST 5 KT

3.A DVORAK ANALYSIS: 3.5/4.0/W 0.5/12 H

4.A CENTRAL PRESSURE: 976 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 60 KT

RADIUS OF MAXIMUM WINDS (RMW): 37 KM

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

28 KT NE: 370 SE: 460 SW: 460 NW: 220

34 KT NE: 280 SE: 280 SW: 280 NW: 180

48 KT NE: 200 SE: 170 SW: 180 NW: 40

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1009 HPA / 1100 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS:

12H: 2019/03/30 06 UTC: 24.8 S / 69.2 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

24H: 2019/03/30 18 UTC: 25.9 S / 69.3 E, VENT MAX= 045 KT, POST-TROPICAL  
DEPRESSION

36H: 2019/03/31 06 UTC: 26.8 S / 68.6 E, VENT MAX= 040 KT, POST-TROPICAL  
DEPRESSION

48H: 2019/03/31 18 UTC: 28.4 S / 68.3 E, VENT MAX= 035 KT, POST-TROPICAL  
DEPRESSION

60H: 2019/04/01 06 UTC: 30.1 S / 68.1 E, VENT MAX= 040 KT, POST-TROPICAL  
DEPRESSION

72H: 2019/04/01 18 UTC: 32.0 S / 68.2 E, VENT MAX= 040 KT, POST-TROPICAL  
DEPRESSION

2.B LONGER-RANGE OUTLOOK:

96H: 2019/04/02 18 UTC: 36.3 S / 68.4 E, VENT MAX= 035 KT, POST-TROPICAL  
DEPRESSION

120H: 2019/04/03 18 UTC: 43.0 S / 77.8 E, VENT MAX= 030 KT, REMNANT LOW

2.C ADDITIONAL INFORMATION:

T=3.5- CI=4.0+

THE NORTHWESTERLY UPPER CONSTRAINT IS STRONG AND ACCENTUATES THE JOANINHA'S SHEARED PATTERN. OVER THE PAST 6 HOURS, THE CENTER HAS AGAIN SLIPPED TOWARDS THE NORTHWEST EDGE OF THE STRONGEST CONVECTIVE BURSTS. THE 1718UTC ASCAT SWATH VALIDATES THIS LOCATION WITH WIND VALUES OF 55KT, WHICH CONFIRMS THE 60KT ESTIMATE MADE BY THE DVORAK ANALYSIS. JOANINHA REACHED THE THRESHOLD OF A SEVERE TROPICAL STORM.

JOANINHA CONTINUE ITS SLOWLY MOVEMENT SOUTH-SOUTHEASTWARD UNDER THE INFLUENCE OF A WEAK MID/HIGH TROPOSPHERE STEERING FLOW DRIVEN BY TWO FAR LARGE-SCALE FEATURES : THE NEAR-EQUATORIAL RIDGE IN THE NORTH-EAST AND A MID-LATITUDE TROUGH AXED OVER MADAGASCAR. SUNDAY, JOANINHA SHOULD TEMPORALLY CURVE SOUTH-SOUTHWESTWARD AS IT BUMPS INTO A STRENGTHENING RIDGE IN THE SOUTH. THIS RIDGE SHIFT EASTWARD, AND LET JOANINHA GO ON TOWARDS THE SOUTHERN LATITUDES MONDAY. THE RSMC TRACK FORECAST IS BASED ON THE US CONSENSUS GUIDANCE, WHICH HAS SHOWN BETTER PERFORMANCE IN JOANINHA'S CASE. ALTHOUGH THE ECMWF MODEL SEEMS TO BE IMPROVING ON THE LATEST ANALYSIS TIMES.

CURRENTLY SHEARED, AND FOLLOWING A MERIDIAN TRACK, JOANINHA WILL ENCOUNTER STRONG NORTHWESTERN WINDSHEAR, WHICH SHOULD SIGNIFICANTLY ACCELERATE ITS WEAKENING ALSO FAVORED BY THE LACK OF OCEANIC POTENTIAL SOUTH OF 25S. AT THE END OF SATURDAY, THE SYSTEM IS EXPECTED TO GRADUALLY LOSE ITS PURELY TROPICAL CHARACTERISTICS AS IT TRACKS UNDER THE SUBTROPICAL JET. HOWEVER, NO INTERACTION IS AWAITED WITH THE BAROCLINIC AREA, AND THE SHALLOW WARM CORE SHOULD REMAIN IN PLACE. MONDAY, THE SYSTEM SHOULD MOVE BENEATH THE TROUGH AND EXPERIENCE A WEAKENING VERTICAL WINDSHEAR, ALLOWING A SLIGHT INCREASE IN INTENSITY. THE SHALLOW CONVECTION COULD THUS STRENGTHEN WITHIN THE CIRCULATION AND SUSTAIN THE HYBRID STRUCTURE OF THE SYSTEM UNTIL TUESDAY AFTERNOON, BEFORE STARTING ITS FILLING.