

WTIO30 FMEE 260043

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 19/13/20182019

1.A INTENSE TROPICAL CYCLONE 13 (JOANINHA)

2.A POSITION 2019/03/26 AT 0000 UTC:

WITHIN 20 NM RADIUS OF POINT 18.9 S / 63.7 E

(EIGHTEEN DECIMAL NINE DEGREES SOUTH AND
SIXTY THREE DECIMAL SEVEN DEGREES EAST)

MOVEMENT: SOUTH-EAST 6 KT

3.A DVORAK ANALYSIS: 5.5/5.5/D 0.5/24 H

4.A CENTRAL PRESSURE: 948 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 95 KT

RADIUS OF MAXIMUM WINDS (RMW): 37 KM

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

28 KT NE: 360 SE: 500 SW: 440 NW: 200

34 KT NE: 200 SE: 310 SW: 260 NW: 150

48 KT NE: 150 SE: 150 SW: 150 NW: 110

64 KT NE: 100 SE: 100 SW: 100 NW: 80

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1006 HPA / 1100 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS:

12H: 2019/03/26 12 UTC: 19.7 S / 64.5 E, VENT MAX= 095 KT, INTENSE TROPICAL
CYCLONE

24H: 2019/03/27 00 UTC: 20.3 S / 65.4 E, VENT MAX= 100 KT, INTENSE TROPICAL
CYCLONE

36H: 2019/03/27 12 UTC: 20.8 S / 66.2 E, VENT MAX= 095 KT, INTENSE TROPICAL
CYCLONE

48H: 2019/03/28 00 UTC: 21.4 S / 66.7 E, VENT MAX= 090 KT, INTENSE TROPICAL
CYCLONE

60H: 2019/03/28 12 UTC: 22.2 S / 67.2 E, VENT MAX= 080 KT, TROPICAL CYCLONE

72H: 2019/03/29 00 UTC: 23.3 S / 67.9 E, VENT MAX= 070 KT, TROPICAL CYCLONE

2.B LONGER-RANGE OUTLOOK:

96H: 2019/03/30 00 UTC: 26.0 S / 69.7 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

120H: 2019/03/31 00 UTC: 28.4 S / 69.9 E, VENT MAX= 045 KT, POST-TROPICAL
DEPRESSION

2.C ADDITIONAL INFORMATION:

T=CI=5.5+

ON EIR IMAGERY, VERY COLD CLOUD TOPS HAS CONTINUED OVERNIGHT AROUND AN EYE WITH FLUCTUANT DEFINITION (AND HAS RECENTLY BECOME ILL DEFINED). SSMI IMAGERY AT 2237Z SHOW THAT THE INNER CORE HAS IMPROVED COMPARED TO YESTERDAY EVENING. THE FINAL INTENSITY IS SET AT 95 KT BASED ON 3HRS AVERAGE RAW DT AT 5.7. THIS IS SLIGHTLY BELOW THE SATCON OBJECTIVE ESTIMATES THAT IS DEEMED TO HIGH DUE TO THE ADT, BUT IS CLOSE TO A NPP-ATMS SOUNDER ESTIMATES OF 104 KT (VENTS 1-MIN) AT 2104Z.

JOAHNINHA FOLLOWS AN IRREGULAR TRACK TOWARDS THE SOUTH-EAST (LONG TREND HEADING) WITH NOW AGAIN A MORE SOUTHWARDS TREND SINCE 18Z. THIS PATTERN IS LIKELY DUE TO A COMPLEX MID-LEVEL STEERING ENVIRONMENT WITH A NEAR EQUATORIAL RIDGE (NER) LOCATED TO THE NORTH-EAST, THAT HAVE A WESTWARD EXTENSION THAT ALLOW SOME TEMPORARILY MORE EASTWARDS COMPONENT. A WEAK SUBTROPICAL RIDGE (STR) LOCATED TO THE SOUTH IS LIKELY THE REASON OF THE CURRENT SLOW MOTION. AS THE NER MOVE WESTWARDS AND THE STR EASTWARDS, A GENERAL SLOW AND IRREGULAR SOUTH-EASTWARDS TRACK IS STILL EXPECTED WITHIN THE NEXT FEW DAYS. THERE IS SOME LARGER THAN USUAL SPREAD AMONGST THE GUIDANCE THAT IS PARTLY DUE TO POOR INITIALIZATION IN POSITION FROM SOME USUAL RELIABLE MODELS (IFS NOTICEABLY). THE FORECAST LIES CLOSE TO THE CONSENSUS MADE BY THE US AND UK MODELS THAT WAS THE BEST PERFORMERS SO FAR WITH JOANINHA.

ACCORDING TO CIMSS DATA, THE GENERALLY WESTERLY DEEP LAYERS SHEAR HAS SLOWLY START TO INCREASE SINCE THE PAST 24 HOURS ALTHOUGH STILL BEING LOW TO MODERATE. THIS SLIGHTLY DETRIMENTAL CONDITIONS ARE CURRENTLY OFFSET BY ENHANCED UPPER LEVEL POLEWARDS DIVERGENCE AND GOOD OCEANIC CONTAIN. THE INTENSITY FORECAST IN THE NEXT 24 HOURS LIES TOWARD THE HWRF SOLUTION AND THEN IS CLOSE TO ICNW AFTER THAT TIME. FROM WEDNESDAY, THE WESTERLY SHEAR IS FORECAST TO INCREASE IN ASSOCIATION WITH A DRYER ENVIRONMENT AND A DECREASE OF THE OCEANIC POTENTIAL THEREFORE A GRADUAL WEAKENING TREND SHOULD START BY THAT TIME. BY THE END OF THE WEEK, JOANINHA MAY INTERACT WITH AN APPROACHING UPPER LEVEL TROUGH FROM THE SOUTH-WEST AND COULD START AN EXTRATROPICAL PROCESS.

JOANINHA WILL MAKE ITS CLOSEST POINT APPROACH TO THE NORT-EAST OF RODRIGUES LATER TODAY (DURING THE MORNING OR AROUND NOON) AS A VERY DANGEROUS TROPICAL CYCLONE AND AT A DISTANCE LESS THAT 100 KM. GUSTS EXCEEDING 120 KM/H ARE FELT SINCE SEVERAL HOURS OVER THE ISLAND WITH NOW HURRICANE FORCE WINDS (10-MIN WIND SPEED AT 65 KT) RECORDED AT PLAINE CORAIL. THIS SEVERE CONDITIONS ARE EXPECTED TO MAINTAIN MOST OF THE DAY WITH STILL SOME WORSENING POSSIBLE WITHIN THE NEXT HOURS. A 50CM TO 1M STORM SURGE IS FORECAST OVER EXPOSED AREAS OVER THE EASTERN AND SOUTHERN SHORELINES. THIS PREDICTION DOES NOT TAKE INTO ACCOUNT THE WAVE SET-UP OR THE EFFECTS RELATED TO THE LAGOON. THEREFORE THE INHABITANTS ARE INVITED TO CLOSELY MONITOR THE PROGRESS OF JOANINHA AND FOLLOW THE INSTRUCTIONS PROVIDED BY LOCAL AUTHORITIES.