

WTIO30 FMEE 071850

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 14/8/20182019

1.A INTENSE TROPICAL CYCLONE 8 (FUNANI)

2.A POSITION 2019/02/07 AT 1800 UTC:

WITHIN 20 NM RADIUS OF POINT 20.7 S / 67.9 E

(TWENTY DECIMAL SEVEN DEGREES SOUTH AND  
SIXTY SEVEN DECIMAL NINE DEGREES EAST)

MOVEMENT: EAST-SOUTH-EAST 10 KT

3.A DVORAK ANALYSIS: 5.5+/6.0/W -0.5/6 H

4.A CENTRAL PRESSURE: 944 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 100 KT

RADIUS OF MAXIMUM WINDS (RMW): 37 KM

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

28 KT NE: 370 SE: 280 SW: 210 NW: 240

34 KT NE: 190 SE: 190 SW: 190 NW: 210

48 KT NE: 140 SE: 140 SW: 140 NW: 140

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

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1007 HPA / 700 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS:

12H: 2019/02/08 06 UTC: 23.0 S / 69.8 E, VENT MAX= 090 KT, INTENSE TROPICAL  
CYCLONE

24H: 2019/02/08 18 UTC: 26.0 S / 72.1 E, VENT MAX= 080 KT, TROPICAL CYCLONE

36H: 2019/02/09 06 UTC: 28.4 S / 74.3 E, VENT MAX= 070 KT, TROPICAL CYCLONE

48H: 2019/02/09 18 UTC: 30.6 S / 76.6 E, VENT MAX= 065 KT, POST-TROPICAL  
DEPRESSION

60H: 2019/02/10 06 UTC: 33.5 S / 78.7 E, VENT MAX= 055 KT, POST-TROPICAL  
DEPRESSION

72H: 2019/02/10 18 UTC: 36.3 S / 80.9 E, VENT MAX= 050 KT, EXTRATROPICAL  
DEPRESSION

2.B LONGER-RANGE OUTLOOK:

96H: 2019/02/11 18 UTC: 43.1 S / 87.3 E, VENT MAX= 045 KT, EXTRATROPICAL  
DEPRESSION

2.C ADDITIONAL INFORMATION:

T=5.5+;CI=6.0+

THE 1411Z SSMIS MW IMAGES REVEALED THAT A SECOND EYEWALL WAS BUILDING AROUND THE FIRST EYEWALL. THE 1752Z AMSU IMAGE SHOWS THAT THIS OUTER EYEWALL IS NOW CLOSED. THIS SUGGESTS THAT AN EYEWALL REPLACEMENT CYCLE IS CURRENTLY MODULATING FUNANI'S INTENSITY. THUS, AS THE OUTER EYEWALL TAKES OVER IN THE NEXT HOURS, THE SYSTEM WILL WEAKEN. IN FUNANI'S CASE, KOSSIN AND SITKOWSKI (2012) MODEL SUGGEST A 10/15KT INTENSITY DECREASE OVER THE NEXT 10/15 HOURS. FUNANI'S INTENSITY HAS THUS ALREADY BEEN DECREASED OF 5KT WITHOUT WAITING FOR THE DECREASE IN CI.

NO SIGNIFICANT CHANGE IN TERMS OF FORECASTING WITH MODELS THAT GLOBALLY REMAIN IN GOOD AGREEMENT. FUNANI IS TRACKING SOUTH-EASTWARDS FOLLOWING THE SHIFT OF THE LOW/MID LEVEL RIDGE TO THE EAST AND WILL EVENTUALLY EVACUATE TOWARDS THE MID-LATITUDES. SOME SPREAD IS SUGGESTED AMONGST THE DETERMINISTIC GUIDANCE AND THE EPS MEMBERS FOR THE LATER PART OF THE FORECAST, THIS EXPLAINS A LARGER UNCERTAINTY CONE.

FUNANI BENEFITS FROM THE EXCELLENT POLEWARD UPPER LEVEL DIVERGENCE AHEAD OF THE DEEP UPPER LEVEL TROUGH. HOWEVER, THE HARMFUL EFFECTS OF THIS TROUGH, I.E. THE INCREASING WESTERLY VERTICAL WINDSHEAR, SHOULD BEGIN TO BE MORE SENSIBLE TONIGHT. FROM TOMORROW, THE SYSTEM SHOULD BEGIN TO WEAKEN SIGNIFICANTLY. MOREOVER, THE OCEANIC HEAT CONTENT IS FORECAST TO DECREASE FRIDAY, THEN BECOME INSUFFICIENT ON SATURDAY. AT THE SAME TIME, THE SYSTEM SHOULD LOOSE ITS PURELY TROPICAL CHARACTERISTICS AS IT INTERACTS WITH THE SUBTROPICAL JET. HOWEVER THE WINDS ASSOCIATED TO THE SYSTEM SHOULD REMAIN STRONG AS IT EVACUATES TOWARD THE MID-LATITUDES, THANKS TO BAROCLINIC PROCESSES.