

WTIO30 FMEE 091317

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

0.A WARNING NUMBER: 18/9/20182019

1.A INTENSE TROPICAL CYCLONE 9 (GELENA)

2.A POSITION 2019/02/09 AT 1200 UTC:

WITHIN 20 NM RADIUS OF POINT 18.7 S / 60.4 E
(EIGHTEEN DECIMAL SEVEN DEGREES SOUTH AND
SIXTY DECIMAL FOUR DEGREES EAST)
MOVEMENT: EAST-SOUTH-EAST 17 KT

3.A DVORAK ANALYSIS: 6.5/6.5/D 0.5/6 H

4.A CENTRAL PRESSURE: 942 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 110 KT
RADIUS OF MAXIMUM WINDS (RMW): 19 KM

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

28 KT NE: 310 SE: 190 SW: 230 NW: 300
34 KT NE: 220 SE: 130 SW: 140 NW: 140
48 KT NE: 90 SE: 70 SW: 80 NW: 80
64 KT NE: 60 SE: 60 SW: 60 NW: 60

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1007 HPA / 600 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS:

12H: 2019/02/10 00 UTC: 20.1 S / 63.0 E, VENT MAX= 100 KT, INTENSE TROPICAL
CYCLONE

24H: 2019/02/10 12 UTC: 21.4 S / 65.3 E, VENT MAX= 090 KT, INTENSE TROPICAL
CYCLONE

36H: 2019/02/11 00 UTC: 22.7 S / 67.5 E, VENT MAX= 080 KT, TROPICAL CYCLONE

48H: 2019/02/11 12 UTC: 23.8 S / 69.5 E, VENT MAX= 070 KT, TROPICAL CYCLONE

60H: 2019/02/12 00 UTC: 24.3 S / 71.5 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

72H: 2019/02/12 12 UTC: 24.1 S / 73.0 E, VENT MAX= 045 KT, MODERATE TROPICAL
STORM

2.B LONGER-RANGE OUTLOOK:

96H: 2019/02/13 12 UTC: 23.9 S / 75.8 E, VENT MAX= 035 KT, MODERATE TROPICAL
STORM

120H: 2019/02/14 12 UTC: 24.4 S / 78.8 E, VENT MAX= 030 KT, FILLING UP

2.C ADDITIONAL INFORMATION:

T=CI=6.5-

BE CAREFUL, GELENA IS AN EXTREMELY DANGEROUS CYCLONE HEADING TOWARDS RODRIGUES! UNCERTAINTIES IN THE FORECAST MAY STILL ALLOW A DIRECT IMPACT ON RODRIGUES. ANYWAY, IN THE CURRENT STATE OF THE FORECAST, THE STRONGEST WIND AREA IS EXPECTED TO BE LESS THAN 30KM FROM THE RODRIGUE COASTS NEXT NIGHT OR VERY EARLY TOMORROW MORNING. THIS IS A VERY SERIOUS SITUATION AND THE INHABITANTS OF RODRIGUES ARE INVITED TO CLOSELY MONITOR THE PROGRESS OF GELENA THROUGH THE NEXT WARNINGS AND PRODUCTS FROM MAURITIUS METEOROLOGICAL SERVICES.

THE EYE PATTERN CONTINUES TO IMPROVE ON THE LATEST IMAGES WITH COLDER CLOUD TOPS SURROUNDING THE EYE. THE ESTIMATED INTENSITY IS INCREASED TO 110 KT BASED ON THE LATEST DVORAK ANALYSES OF 6.5-.

THE MOVEMENT OF GELENA REMAINS CONTROLLED BY THE DEEP UPPER-TO-MID LEVELS TROUGH LOCATED SOUTH OF THE MASCAREIGNES, ACCOMPANIED BY A STRENGTHENING NEAR EQUATORIAL RIDGE IN THE NORTH-EAST. THESE TWO SYNOPTIC FEATURES ARE FUNNELING THE TRACK AND PROVIDE GOOD CONFIDENCE FOR THE NEXT TWO DAYS. GELENA MAINTAINS AN EAST-SOUTHEAST TRACK THAT SHOULD REMAIN FAST UNTIL TOMORROW AND BRING IT IN THE IMMEDIATE VICINITY OF RODRIGUES. THIS MOVEMENT SHOULD GRADUALLY SLOW DOWN AS IT MOVES WESTWARDS FROM SUNDAY ONWARDS DUE TO THE BLOCKING EFFECT OF THE HIGH PRESSURES THAT ARE DEVELOPING FURTHER SOUTH. FROM MONDAY THERE IS A LOT MORE SPREAD IN THE GUIDANCE IN RELATIONSHIP WITH THE RATE OF WEAKENING. THE CURRENT TRACK LIES MORE CLOSER TO THE GFS SOLUTION AT THE INITIAL STAGE AND THEN IS CLOSE TO THE MULTI-ENSEMBLE LATER IN THE FORECAST PERIOD.

THE CURRENT RAPID MOTION OF GELENA ALLOW IT TO ESCAPE THE HARMFUL EFFECTS OF AN INCREASE OF THE SHEAR AT PRESENT TIME. GIVEN THE CURRENT TREND, SOME ADDITIONAL STRENGTHENING IS LIKELY TODAY BEFORE A WEAKENING TREND THAT SHOULD START LATER TONIGHT AND TOMORROW.

A SIGNIFICANT SWELL EVENT ACCOMPANIES THE INTENSE TROPICAL CYCLONE GELENA: WAVES OF SIGNIFICANT HEIGHTS OF NEARLY 5M AND AN ANOMALOUS SEA LEVEL RISING OF UP TO 2 METERS ARE EXPECTED OVER SOME EXPOSED AREAS OF RODRIGUES.