

WTIO30 FMEE 081833

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 15/9/20182019

1.A TROPICAL CYCLONE 9 (GELENA)

2.A POSITION 2019/02/08 AT 1800 UTC:

WITHIN 20 NM RADIUS OF POINT 16.4 S / 56.1 E

(SIXTEEN DECIMAL FOUR DEGREES SOUTH AND
FIFTY SIX DECIMAL ONE DEGREES EAST)

MOVEMENT: SOUTH-EAST 11 KT

3.A DVORAK ANALYSIS: 5.5/5.5/S 0.0/6 H

4.A CENTRAL PRESSURE: NIL

5.A MAX AVERAGE WIND SPEED (10 MN): 80 KT

RADIUS OF MAXIMUM WINDS (RMW): 28 KM

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

28 KT NE: 300 SE: 200 SW: 150 NW: 220

34 KT NE: 190 SE: 150 SW: 110 NW: 150

48 KT NE: 90 SE: 90 SW: 70 NW: 80

64 KT NE: 60 SE: 60 SW: 60 NW: 60

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1005 HPA / 400 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS:

12H: 2019/02/09 06 UTC: 18.2 S / 58.4 E, VENT MAX= 095 KT, INTENSE TROPICAL
CYCLONE

24H: 2019/02/09 18 UTC: 19.7 S / 61.4 E, VENT MAX= 090 KT, INTENSE TROPICAL
CYCLONE

36H: 2019/02/10 06 UTC: 21.1 S / 63.8 E, VENT MAX= 080 KT, INTENSE TROPICAL
CYCLONE

48H: 2019/02/10 18 UTC: 22.3 S / 65.8 E, VENT MAX= 070 KT, TROPICAL CYCLONE

60H: 2019/02/11 06 UTC: 23.4 S / 67.5 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM

72H: 2019/02/11 18 UTC: 24.2 S / 69.8 E, VENT MAX= 045 KT, MODERATE TROPICAL
STORM

2.B LONGER-RANGE OUTLOOK:

96H: 2019/02/12 18 UTC: 24.7 S / 74.2 E, VENT MAX= 030 KT, FILLING UP

2.C ADDITIONAL INFORMATION:

T=CI=5.5-

OVER THE LAST 6 HOURS, MICRO WAVES DATA (SSMI 1135Z, GMP 1241Z, SSMIS 1457Z) SUGGEST THAT AN EYE REPLACEMENT CYCLE IS MODULING GELENA'S INTENSITY. GELENA'S INTENSITY HAS THUS ALREADY BEEN DECREASED OF 5KT WITHOUT WAITING FOR THE DECREASE IN CI. THE SMALL EYE PATTERN HAS BEEN MAINTAINED WITH WEAKNESSES WITHIN THE CONVECTION, WITH A COLDER EYE IN THE LAST MOMENTS.

THE CURRENT TRACK TO THE SOUTHEAST CONTINUES. THE DEEP UPPER-TO-MID LEVELS TROUGH LOCATED SOUTH OF THE MASCARENES ALONG WITH A STRENGTHENING NEAR EQUATORIAL RIDGE IN THE NORTH-EAST ARE NOW STEERING THE CYCLONE. THESE TWO SYNOPTIC FEATURES ARE FUNNELING THE TRACK AND PROVIDE GOOD CONFIDENCE FOR THE NEXT TWO DAYS. FROM MONDAY, UNDER THE INFLUENCE OF A LOW-LEVEL RIDGE CIRCULATING FROM THE WEST. THE SYSTEM SHOULD THEN RESUME AN EASTWARD TRACK WHILE WEAKENING.

DATA FROM THE OCEANIC MODEL OF MERCATOR-OCEAN SHOW THAT GELENA IS FOUND AGAIN ON WATERS WITH A HIGH OCEANIC HEAT CONTENT.

ON THIS TRACK, THE TWO UPPER LEVEL EVACUATION OUTFLOW CHANNELS DEFINE VERY FAVOURABLE ATMOSPHERIC CONDITIONS. SO ONCE ITS ERC FINISHED, GELENA SHOULD TAKE AGAIN A GOOD RATE OF INTENSIFICATION, LEADING TO THE THRESHOLD OF AN INTENSE TROPICAL CYCLONE WITH A SMALL SIZE OF THE INNER CORE STILL ALLOWS RAPID VARIATIONS OF THE INTENSITY.

A WESTERLY FLOW SHOULD STRENGTHEN ALOFT. GELENA SHOULD THUS BEGIN TO SLOWLY WEAKEN SATURDAY. HOWEVER, THE RAPID MOTION OF GELENA COULD ALLOW IT TO ESCAPE THE HARMFUL EFFECTS OF THE STRONG UPPER WINDS AT FIRST. THE BLOCKAGE BY THE RIDGE TO THE SOUTH WILL SLOW THE SYSTEM DOWN FROM SUNDAY AND GELENA WILL THEN SEE ITS INTENSITY WEAKEN MORE NOTICEABLY, BEFORE FILLING UP ON TUESDAY.

FROM TOMORROW SATURDAY, GELENA IS EXPECTED TO POSE A THREAT TO RODRIGUES AND MAURITIUS ISLAND, WITH A TRACK PASSING BETWEEN THE TWO ISLANDS. THE INHABITANTS OF THESE ISLANDS ARE INVITED TO CLOSELY MONITOR THE PROGRESS OF GELENA THROUGH THE NEXT WARNINGS. THE CYCLONIC SWELL, GENERATED BY GELENA BUT ALSO BY FUNANI TRAVELLING FURTHER AWAY, IS ALSO TO BE TAKEN INTO ACCOUNT FOR ALL THE ISLANDS IN THE AREA.