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METEO FRANCE
Toujours un temps d'avance

WTIO30 FMEE 300718

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

0.A WARNING NUMBER: 10/14/20132014

1.A INTENSE TROPICAL CYCLONE 14 (HELLEN)

2.A POSITION 2014/03/30 AT 0600 UTC:

WITHIN 10 NM RADIUS OF POINT 14.4 S / 44.3 E

(FOURTEEN DECIMAL FOUR DEGREES SOUTH AND FORTY FOUR DECIMAL THREE DEGREES EAST)

MOVEMENT : SOUTH-SOUTH-EAST 4 KT

3.A DVORAK ANALYSIS: 6.0/6.0/D 3.0/24 H

4.A CENTRAL PRESSURE: 948 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 105 KT

RADIUS OF MAXIMUM WINDS (RMW) :19 KM

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

28 KT NE: 170 SE: 150 SW: 130 NW: 110

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

48 KT NE: 50 SE: 50 SW: 50 NW: 50

64 KT NE: 40 SE: 40 SW: 40 NW: 40

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1008 HPA / 500 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION : DEEP

1.B FORECASTS:

12H: 2014/03/30 18 UTC: 14.8 S / 44.7 E, MAX WIND=105 KT, INTENSE TROPICAL CYCLONE

24H: 2014/03/31 06 UTC: 15.1 S / 44.9 E, MAX WIND=085 KT, TROPICAL CYCLONE

36H: 2014/03/31 18 UTC: 15.4 S / 44.8 E, MAX WIND=060 KT, SEVERE TROPICAL STORM

48H: 2014/04/01 06 UTC: 15.7 S / 44.1 E, MAX WIND=050 KT, SEVERE TROPICAL STORM

60H: 2014/04/01 18 UTC: 16.1 S / 43.1 E, MAX WIND=040 KT, MODERATE TROPICAL STORM

72H: 2014/04/02 06 UTC: 16.6 S / 41.8 E, MAX WIND=035 KT, MODERATE TROPICAL STORM

2.B LONGER-RANGE OUTLOOK :

96H: 2014/04/03 06 UTC: 17.1 S / 40.3 E, MAX WIND=035 KT, MODERATE TROPICAL STORM

120H: 2014/04/04 06 UTC: 17.1 S / 37.8 E, MAX WIND=020 KT, INLAND

2.C ADDITIONAL INFORMATION:

T=CI=6.0+

HELLEN HAS UNDERGO AN ASTOUNDING RAPID INTENSIFICATION OVER THE LAST 24 HOURS THAT BRINGS THE SYSTEM FROM A MODERATE TROPICAL STORM TO AN INTENSE TROPICAL CYCLONE. THE SYSTEM SHOW THIS MORNING AN IMPRESSIVE SATELLITE PRESENTATION WITH A STILL IMPROVING EYE PATTERN. THE CURRENT ESTIMATION OF THE INTENSITY IS BASED ON MANUAL DVORAK ESTIMATES WITH A 3 HR AVERAGE AT 6.15 IN GOOD AGREEMENT WITH THE NESDIS ADT AT 6.1 AT 0600Z.

THE SYSTEM IS LYING UNDER AN UPPER LEVEL RIDGE AXIS ALOFT. VERTICAL WINDSHEAR IS WEAK (5M/S ACCORDING TO CIMSS AT 1800Z) AND UPPER LEVEL DIVERGENCE IS GOOD MAINLY POLEWARD IN RELATIONSHIP WITH A WESTERLY SUBTROPICAL JET EXISTING SOUTH OF 18S. UNDER THE STEERING INFLUENCE OF THE MID-LEVELS RIDGE LOCATED NORTHWARD, HELLEN WILL KEEP ON TRACKING SLOWLY SOUTH-EASTWARDS DURING THE NEXT 6 HOURS BEFORE BEING WITHIN A TOO SLOW STEERING ENVIRONMENT THAT SHOULD LEAD TO A QUASI-STAT MOTION. THEREFORE, THE MAX INTENSITY COULD BE REACHED WITHIN THE NEXT 6H TO 12 H WITH A MAX AT 110 TO POTENTIALLY 115 KT. A WEAKENING TREND INITIATED BY INDUCED COLD SST MAY TAKEN PLACE AFTER THAT TIME. THE INTENSITY FORECAST REMAINS UNCERTAIN ACCORDING TO THE SMALL SIZE OF THE SYSTEM AND ITS SENSIBILITY TO THE VARIATION OF THE ENVIRONMENTAL CONDITIONS.

SUNDAY NIGHT, THE MID-TROPOSPHERIC NEAR-EQUATORIAL RIDGE IS EXPECTED TO WEAKEN. HELLEN IS THEREFORE EXPECTED TO SLOW DOWN CLEARLY. ON AND AFTER MONDAY, HELLEN SHOULD RE-CURVE WESTWARDS THEN SOUTH-WESTWARDS UNDER THE STEERING INFLUENCE OF THE SUBTROPICAL RIDGE REBUILDING SOUTHWARD. HELLEN SHOULD KEEP ON TRACKING ON THIS WEST-SOUTH-WEST PATH UP TO ITS LANDFALL WEDNESDAY NIGHT OR THURSDAY ON THE MOZAMBICAN COASTLINES IN THE AREA OF QUELIMANE.

IT IS NOT TOTALLY EXCLUDED THAT SYSTEM GET MORE CLOSER TO MADAGASCAR THAN THE MENTIONED FORECAST. SOME AVAILABLE NWP MODELS SUGGEST A TRACK CLOSE TO MAHAJONGA OR BESALAMPY COASTLINES.

GIVEN THE VICINITY OF THE COMOROS ARCHIPELAGO AND MAYOTTE, THE INHABITANTS OF THIS ISLANDS SHOULD CLOSELY MONITOR THE PROGRESS OF THIS SYSTEM. THE INHABITANTS OF THE NORTH-WESTERN COASTS OF MADAGASCAR SHOULD ALSO MONITOR THE PROGRESS OF THIS SYSTEM.