

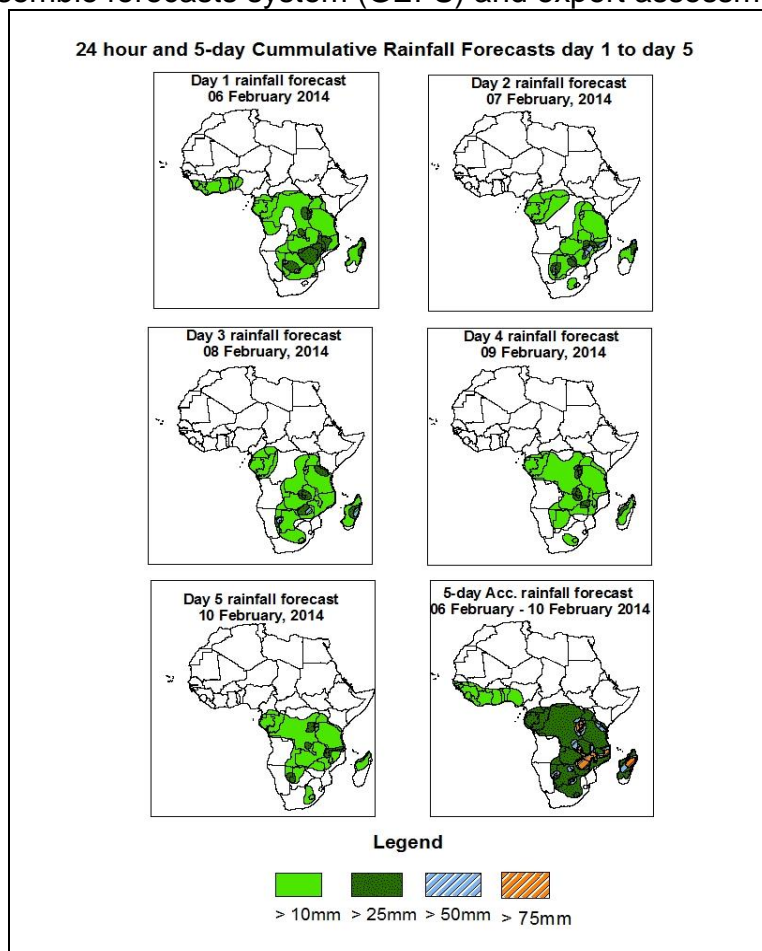


# NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

## 1.0. Rainfall Forecast: Valid 06Z of 06 February – 06Z of 10 February, 2014. (Issued at 1800Z of 05 February 2014)

### 1.1. Twenty Four Hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of 75% probability of precipitation (POP) exceeded, based on the NCEP, UK Met Office and the ECMWF NWP outputs, the NCEP global ensemble forecasts system (GEFS) and expert assessment.

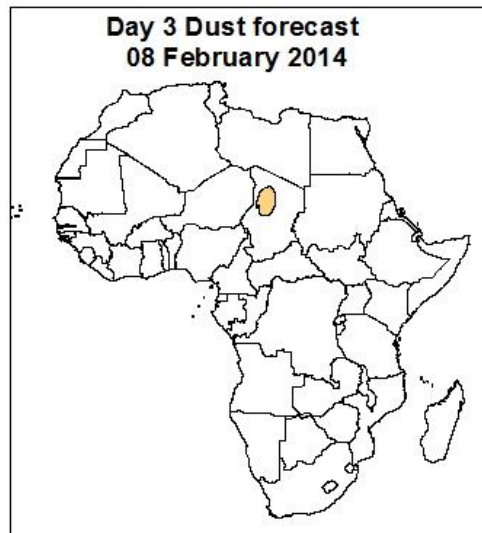
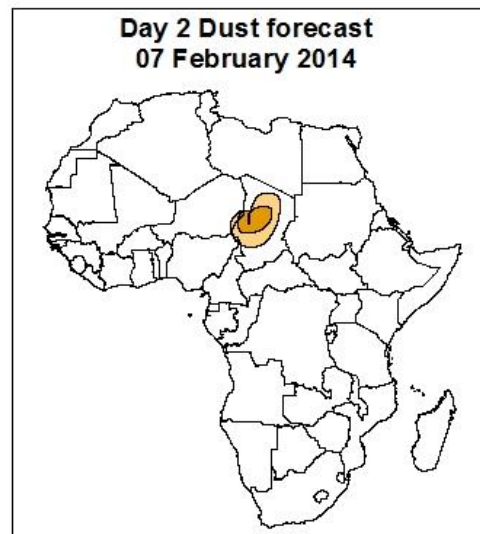
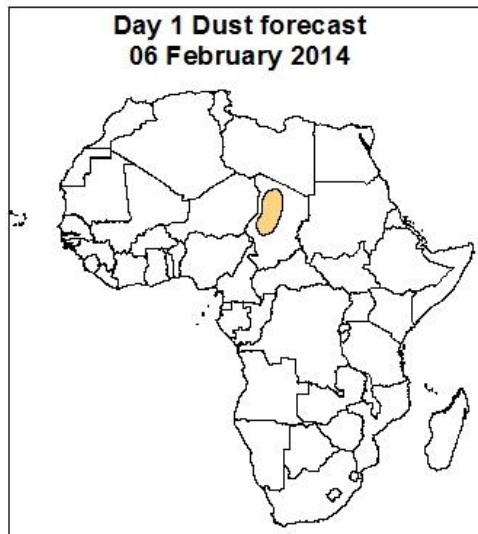


### Summary

Mascarene high pressure system is expected to intensify with its central pressure increasing from 1028 hpa to 1034. However it remains far south, reducing its influence over the continent resulting into diffuse rains over most parts. However it is expected to push some rains slightly north into Uganda and some parts of Kenya. St. Helena High Pressure System is expected to maintain its central pressure value between 1019hpa and 1021 hpa. This will result into continued dry spell over the western parts of Angola, Namibia and South Africa during the forecast period. However eastern parts of Namibia and Botswana are expected to continue receiving moderate rains. Parts of Liberia, Sierra Leone, Benin, Togo, Ghana, Ivory Coast, Burkina Faso and Niger are expected to receive some rainfall during the first half of the forecast period as a result of expected extra-tropical- Tropical interactions.

## 1.2. Atmospheric Dust Forecasts: Valid 06 February - 08 February 2014

**Atmospheric Dust Forecasts, day 1 to day 3,**  
Moderate Dust Concentration (MDC) and High Dust Concentration (HDC)



**Highlights**  
There is an increased  
chance for moderate  
dust over Chad



## **1.2. Model Discussion: Valid from 00Z of 05 February 2014**

*Model comparison (GFS and UKMET Valid from 00Z: 05 February 2014) shows general agreement in terms of depicting positions of the northern and southern hemisphere sub-tropical highs, while they showed slight differences in depicting their intensity.*

According to both the GFS model and the UKMET model, St. Helena High Pressure System is expected to maintain its central pressure value between 1019hpa and 1021 hpa. This will result into continued dry spell over the western parts of Angola, Namibia and South Africa during the forecast period. Eastern part of Namibia and Botswana are expected to continue receiving moderate rains.

According to both the GFS model and the UKMET model, the Mascarene high pressure is expected to Intensify with its central pressure increasing from 1028 hpa to 1034. However it remains far south, reducing its influence over the continent resulting into diffuse rains over most parts. However it is expected to push some rains slightly north into Uganda and some parts of Kenya.

At 850hpa level, Moderate to strong convergence is still expected over Democratic Republic of Congo (DRC), Gabon, Congo Brazzaville, Central African Republic (CAR) , Cameroon, Namibia, Botswana, Uganda, Zambia, Angola, Tanzania, Malawi, Mozambique, and Madagascar. During the forecast period, moderate to severe weather is expected over these areas as shown by the rainfall map above.

At 500hpa level, troughs associated with mid-latitude frontal systems persist during the first part of the forecast period. The systems are expected to influence some isolated rains over Liberia, Sierra Leone, Benin, Togo, Ghana, Ivory Coast, Burkina Faso and Niger during the first half of the forecast period.

At 200hpa level, the sub-tropical Westerly Jet mainly (with wind speed >70 knots and <150 knots), extending between Senegal, Mauritania, Algeria, and Egypt, and across, Mali, Algeria, Niger, Chad, Libya and Northern Sudan persist during the forecast period. Winds of over 150 Knots are also expected over Egypt. In the south, the sub-tropical

westerly Jet (with 70 to 90kts wind speed) is occasionally expected over South Africa and the Indian Ocean.

Therefore, the Mascarene high pressure is expected to Intensify with its central pressure increasing from 1028 hpa to 1034. However it remains far south, reducing its significant influence resulting into diffuse rains over most parts. However it is expected to push some rains slightly north into Uganda and some parts of Kenya. St. Helena High Pressure System is expected to maintain its central pressure value between 1019hpa and 1021 hpa. This will result into continued dry spell over the western parts of Angola, Namibia and South Africa during the forecast period. However eastern parts of Namibia and Botswana are expected to continue receiving moderate rains. Parts of Liberia, Sierra Leone, Benin, Togo, Ghana, Ivory Coast, Burkina Faso and Niger are expected to receive some rainfall during the first half of the forecast period as a result of expected extra-tropical- Tropical interactions.

## 2.0. Previous and Current Day Weather Discussion over Africa (04 February 2014 – 05 February 2014)

### 2.1. Weather assessment for the previous day (04 February 2014)

During the previous day, moderate to heavy rainfall was observed over DRC, Tanzania, Zambia, Malawi, Zimbabwe, Mozambique, Madagascar, Namibia, South Africa and Botswana.

### 2.2. Weather assessment for the current day (05 February 2014)

Intense clouds were observed over, Gabon, Congo Brazzaville, Central African Republic, DRC, Angola, Zambia, Malawi, Tanzania, Uganda, Zimbabwe, Mozambique, Madagascar, South Africa, Namibia and Botswana.

