

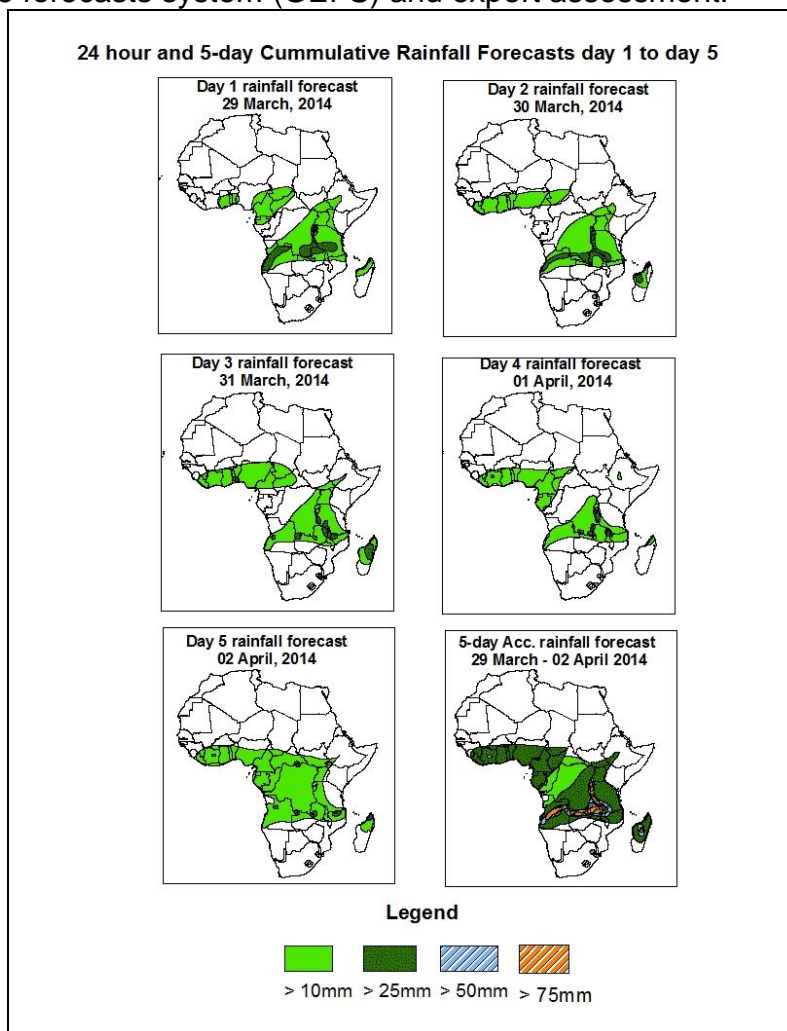


# NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

## 1.0. Rainfall Forecast: Valid 06Z of 29 March – 06Z of 02 April, 2014. (Issued at 1600Z of 28 March 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/GFS and UK Met Office NWP outputs, and the NCEP global ensemble forecasts system (GEFS) and expert assessment.



### Summary

In the coming five days, lower-tropospheric wind convergences across the gulf of guinea, East and Central countries are expected to persist and hence continued moderate rains over Cameroon, Gabon, Angola, Equatorial Guinea, Tanzania, DRC, Uganda, Congo Brazzaville, parts of Bissau Guinea, Liberia, Ivory Coast, Ghana, Togo, Benin, Nigeria and Madagascar. Dry conditions are expected to persist over Namibia, Zimbabwe, Mozambique, Botswana and most parts of South Africa.

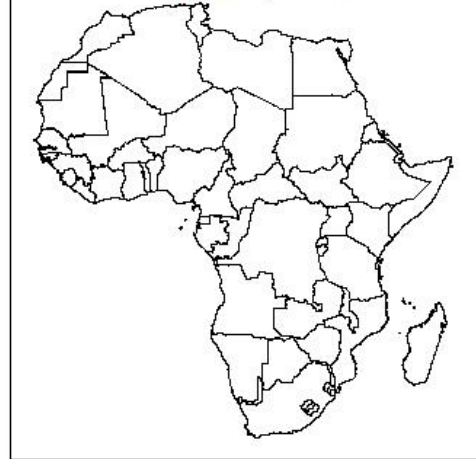
## 1.2. Atmospheric Dust Forecasts: Valid 29 March – 31 March 2014

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

**Day 1 Dust forecast**  
29 March, 2014



**Day 2 Dust forecast**  
30 March, 2014



**Day 3 Dust forecast**  
31 March, 2014



**Highlights**

**There is an increased chance for moderate to high dust concentration over Algeria, Libya, Mali, and Niger.**

**Legend**



MDC, Vis. < 5km



HDC, Vis. < 1km

### **1.3. Model Discussion: Valid from 00Z of 29 March 2014**

*Model comparison (GFS and UKMET Valid from 00Z: 29 March 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.*

The St. Helena High Pressure System is expected to intensify its central pressure value between 1024Hpa to 1032Hpa. This will result in continued dry conditions over Botswana, Namibia and South Africa and parts over Angola for the forecast period.

According to both the GFS and UKMET model, the Mascarene High Pressure System is expected to intensify its central pressure value between 1018Hpa and 1033Hpa. However the tropical depression over the channel will tend to reduce rains over Ethiopia and Tanzania. Continued dry condition is expected over Zimbabwe, Botswana, Mozambique and parts over Zambia and South Africa for the forecast period.

At 850Hpa level, Moderate to strong convergence is expected to persist throughout the forecast period over Democratic Republic of Congo (DRC), Angola, and parts of South Sudan, South Chad, Gabon Center African Republic Zambia and Tanzania.

At 500Hpa level, troughs associated with mid-latitude frontal system persist and are expected to result in some tropical, extra-tropical interactions bringing rains over Bissau Guinea, Liberia, Burkina Faso, Ivory Coast, Ghana, Togo, Benin, over South Sudan, South Chad, and Nigeria for most part of the forecast period.

At 200hpa level, the sub-tropical Westerly Jet mainly (with wind speed >70 knots and <130 knots), extending between Mauritania, Algeria, Libya and Egypt, and across, Mali, Niger, Chad, Western Sahara, persist during the forecast period. In the south, the sub-tropical westerly Jet (with speed >70 knots and <90 knots) is expected over South Africa, Indian and Atlantic Ocean.

In the coming five days, lower-tropospheric wind convergences across the gulf of guinea, East and Central countries are expected to persist and hence continued moderate rains over Cameroon, Gabon, Angola, Equatorial Guinea, Tanzania, DRC, Uganda, Congo Brazzaville, parts of Bissau Guinea, Liberia, Ivory Coast, Ghana, Togo, Benin, Nigeria and Madagascar. Dry conditions are expected to persist over Namibia, Zimbabwe, Mozambique, Botswana and most parts of South Africa.

## **2.0. Previous and Current Day Weather Discussion over Africa**

**(27 March 2014 – 28 March 2014)**

### **2.1. Weather assessment for the previous day (27 March 2014)**

During the previous day, moderate rainfall was observed over Angola, DRC, Tanzania, and parts of Cameroon, Gabon, Congo Brazzaville, Nigeria, Ethiopia and Kenya.

### **2.2. Weather assessment for the current day (28 March 2014)**

Intense clouds are observed over parts of Gulf of Guinea, East, Central and Southern Africa countries as well as Madagascar.

