

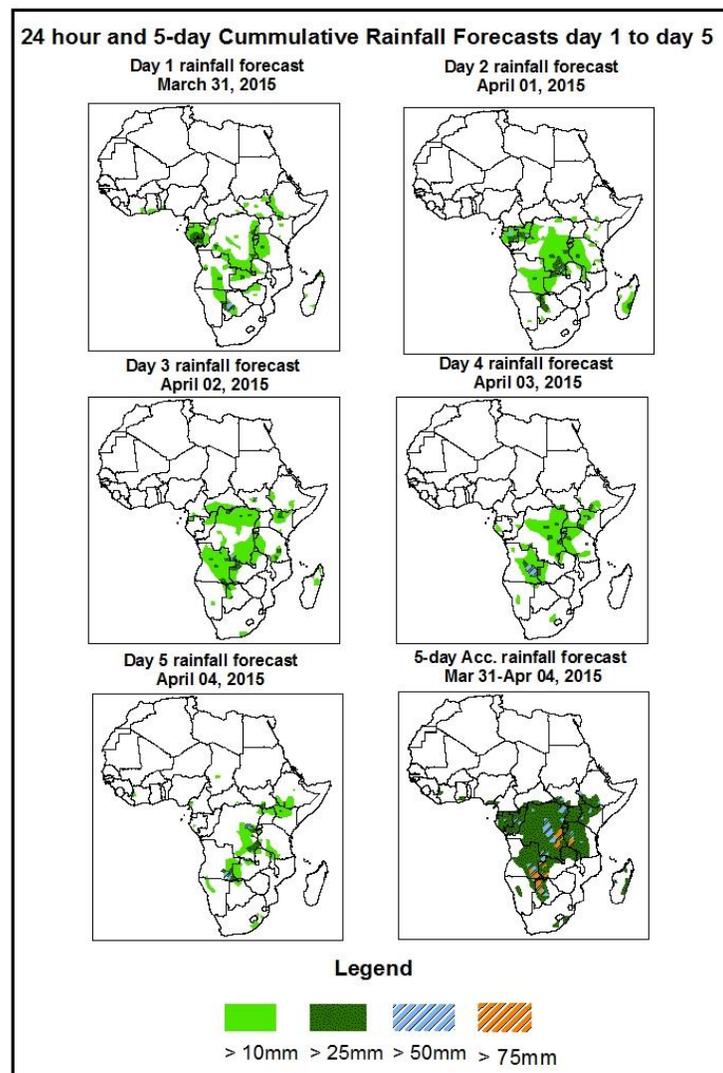


# NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

## 1. Rainfall Forecast: Valid 06Z of March 31 – 06Z of April 04, 2015. (Issued at 1830Z of March 30, 2015)

### 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 the NCEP global ensemble forecasts system (GEFS) and expert assessment.

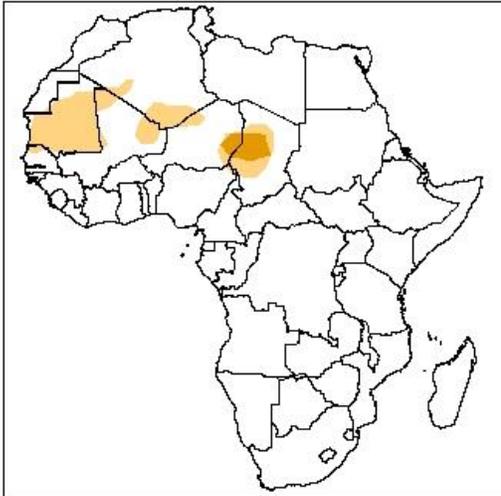


### Summary

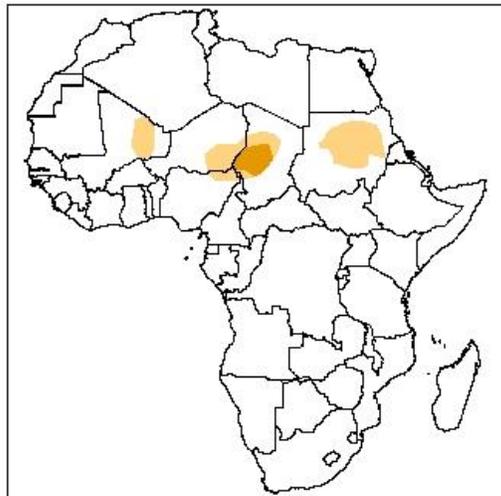
In the next five days, lower-level wind convergence in the region between CAR and Namibia is expected to enhance rainfall in these regions. There is an increased chance for heavy rainfall over Tanzania, DRC, Burundi, Zambia, Botswana and Angola.

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

**Day 1 Dust forecast**  
March 31, 2015



**Day 2 Dust forecast**  
April 01, 2015



**Day 3 Dust forecast**  
April 02, 2015



**Highlights**

There is an increased chance for moderate to high dust concentration over some parts of the Sahel, and North Africa countries, with highest dust concentration expected over some parts Mali, Sudan, Mauritania, Chad and Niger.

**Legend**



MDC, Vis. < 5km



HDC, Vis. < 1km

## **1.2. Model Discussion: Valid from 00Z of March 31, 2015**

The Azores high pressure system over the Northeast Atlantic Ocean is expected to weaken from a central pressure value of 1035hpa in 24 hours to 1030hpa in 120hours, according to the GFS model.

The Arabian High Pressure system is expected to intensify from a central pressure value of 1019hpa in 24 hours to 1022hpa in 120 hours, according to the GFS model.

The central pressure value of the Mascarene high pressure system over the southwestern Indian Ocean is expected to weaken from a value of 1030hpa in 24 hours to a value of 1022hpa in 120 hours, according to the GFS model.

The St Helena high pressure system over the Southeast Atlantic Ocean is expected to intensify from a central pressure value of 1022hpa in 24 hours to a central pressure value of 1025hpa in 120 hours, according to the GFS model.

At 925Hpa level, dry northeasterly to easterly wind (>20kts) is expected to prevail across much of the Sahel countries through 24 to 72 hours, and the intensity of the wind tends to weaken across the Northcentral and Northeastern regions of Africa, while remaining moderately strong across Northwestern Africa towards end of the forecast period.

At 850Hpa level, northeasterly wind is expected to prevail across Central and East African countries during the forecast period. Wind convergences are expected to remain active in Namibia, South Sudan, DRC, CAR and Angola during the forecast period.

At 700hpa level, a trough associated with mid-latitude frontal system is expected to prevail across Northwest Africa. Divergence over West Africa and Southern African countries, North-easterly wind flow over east and central Africa is expected to prevail during the forecast period, according to the GFS model.

At 500Hpa, a trough associated with a mid-latitude frontal system is expected to prevail across eastern Mediterranean Sea. Divergence over West Africa, Greater Horn of

Africa, Southern African Countries and Easterlies over east and central Africa will prevail in the region during the forecast period, according to the GFS model.

In the next five days, lower-level wind convergence in the region between CAR and Namibia is expected to enhance rainfall in these regions. There is an increased chance for heavy rainfall over Tanzania, DRC, Burundi, Zambia, Botswana and Angola.

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

(March 29, 2015 – March 30, 2015)

### 2.1. Weather assessment for the previous day (March 29, 2015)

Moderate to heavy rainfall were observed across Ghana, South Sudan, Uganda, Tanzania, Zambia, Zimbabwe, Botswana, Congo Brazzaville, DRC and CAR.

### 2.2. Weather assessment for the current day (March 30, 2015)

Intense convective deep clouds are observed over DRC, Ghana, Nigeria, Angola, Cameroon, Gabon, South Sudan, CAR, Botswana, Zambia and Benin.

