

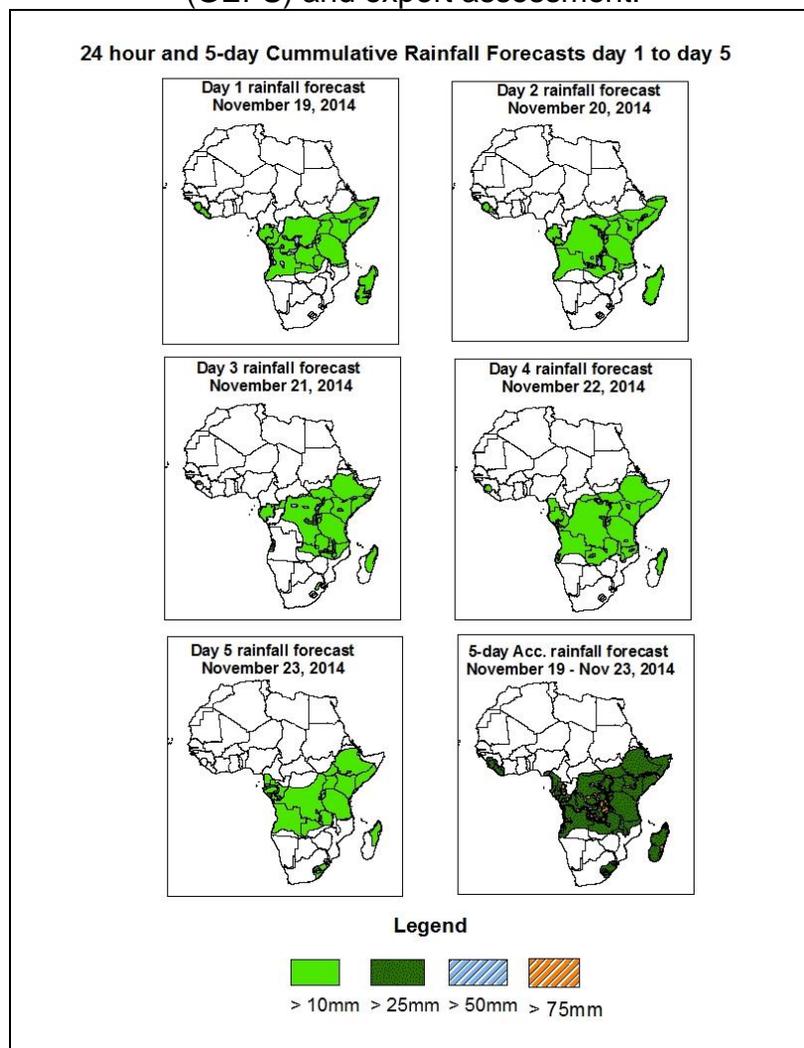


# NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

## 1. Rainfall Forecast: Valid 06Z of November 19 – 06Z of November 23, 2014. (Issued at 1800Z of November 18, 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 the NCEP global ensemble forecasts system (GEFS) and expert assessment.



### Summary

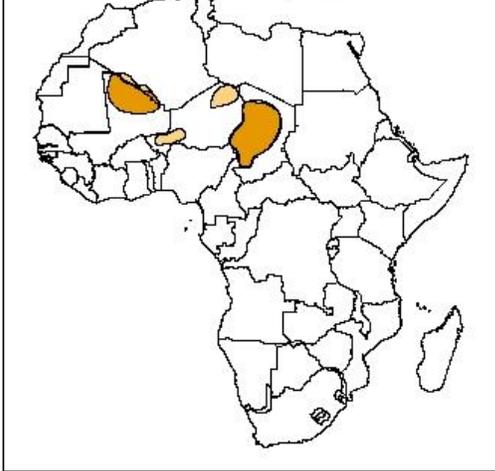
In the next five days, lower-level wind convergence over Gabon, Congo-Brazzaville and the neighboring areas, seasonal wind convergences over the Lake Victoria region, southern Ethiopia and Angola are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to heavy rainfall over Gabon, Congo-Brazzaville, Equatorial Guinea, Angola, DRC, the Lake Victoria region, and local areas in southern Ethiopia, southern Somalia and central Kenya.

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

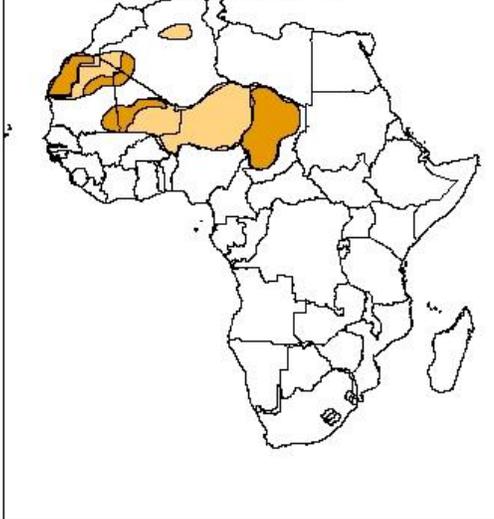
**Day 1 Dust forecast**  
November 19, 2014



**Day 2 Dust forecast**  
November 20, 2014



**Day 3 Dust forecast**  
November 21, 2014



**Highlights**

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

**Legend**



MDC, Vis. < 5km



HDC, Vis. < 1km

## **1.2. Model Discussion: Valid from 00Z of November 18, 2014**

The Azores high pressure system over the Northeast Atlantic Ocean is expected to weaken with its central pressure value decreasing from 1032hpa to 1026hpa, through 24 to 120 hours, according to the GFS model.

The St Helena high pressure system over the Southeast Atlantic Ocean is expected to weaken gradually with its central pressure value decreasing from 1034hpa to 1024hpa, through 24 to 120 hours, according to the GFS model.

The Mascarene high pressure system over the southwestern Indian Ocean is expected to strengthen while shifting eastwards, with its central pressure value expected to increase from 1021hpa to 1027hpa, through 24 to 120 hours, according to the GFS model.

The East African ridge is expected to weaken gradually, with eastward shift of the Mascarene high pressure system.

At 925Hpa level, dry northeasterly to easterly wind (>25kts) is expected to prevail across portions of Mauritania, Morocco, Western Sahara, Mali, Chad, Niger and parts of Sudan during the forecast period.

At 850Hpa level, a seasonal meridional wind convergence is expected to remain active across eastern DRC and the neighboring areas. Lower-level wind convergence is also expected to prevail over southern Ethiopia, Gabon, Congo, southern DRC, Angola and portions of Zambia, Botswana and northern Namibia.

At 500hpa level, a trough associated with mid-latitude frontal system is expected to propagate across southern Africa (with its northern extent reaching the latitudes of Zambia) through 24 to 96 hours, whereas a trough associated with mid-latitude frontal system is expected to prevail over Northeast Africa during the forecast period.

In the next five days, lower-level wind convergence over Gabon, Congo-Brazzaville and the neighboring areas, seasonal wind convergences over the Lake Victoria region,

southern Ethiopia and Angola are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to heavy rainfall over Gabon, Congo-Brazzaville, Equatorial Guinea, Angola, DRC, the Lake Victoria region, and local areas in southern Ethiopia, southern Somalia and central Kenya.

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

(November 17, 2014 – November 18, 2014)

### 2.1. Weather assessment for the previous day (November 17, 2014)

During the previous day, moderate to heavy rainfall was observed over Gabon, Angola, DRC, Congo-Brazzaville, Cameroon, Uganda, Zimbabwe, Burundi, Zambia and Rwanda, portions of Nigeria, Sierra Leone, Ivory Coast, Ghana, Liberia, Sierra Leone, Guinea-Conakry, Mozambique and Madagascar, local areas in CAR, Tanzania, Ethiopia, Kenya, South Africa, Malawi and South Sudan, northern Namibia and Botswana, southern Togo and Benin.

### 2.2. Weather assessment for the current day (November 18, 2014)

Intense clouds are observed over portions of Gabon, Angola, DRC, Congo-Brazzaville, local areas in Cameroon, Ivory Coast, Madagascar, Zambia, Nigeria and Liberia, northern Tanzania and Burundi, southwestern Rwanda and Uganda, southeastern CAR.

