

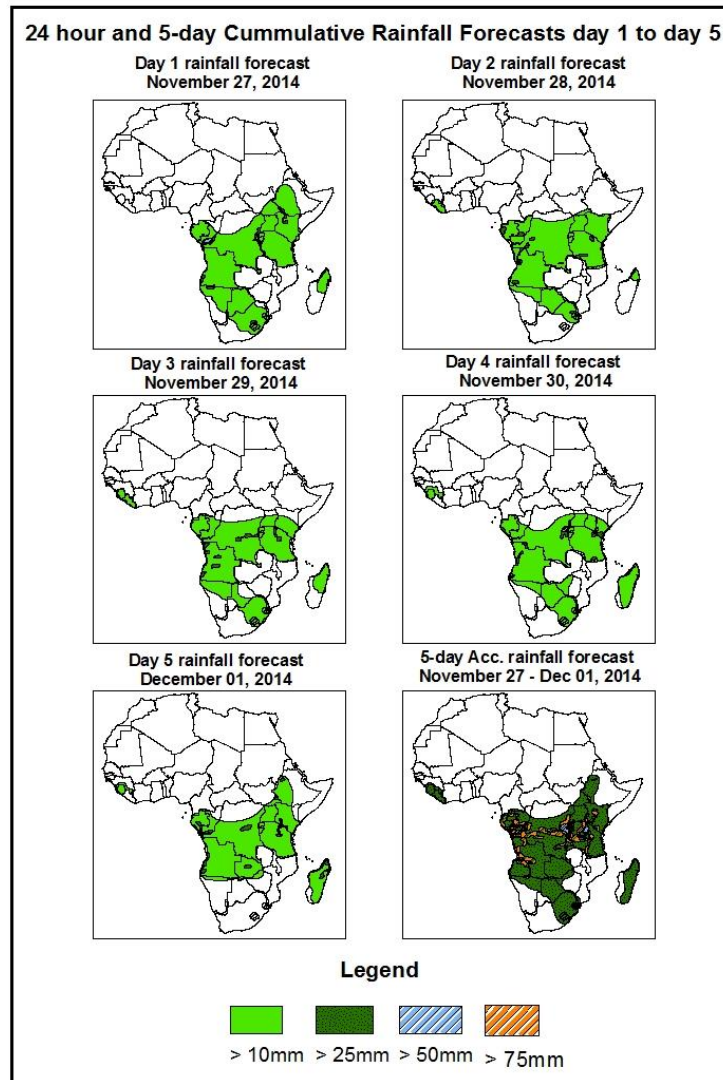


# NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

## 1. Rainfall Forecast: Valid 06Z of November 27 – 06Z of December 01, 2014. (Issued at 1800Z of November 26, 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.

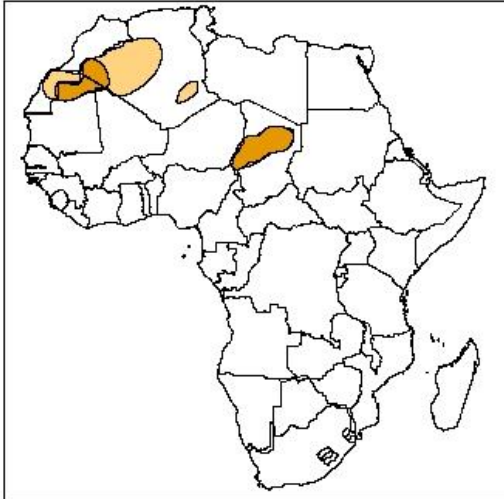


### Summary

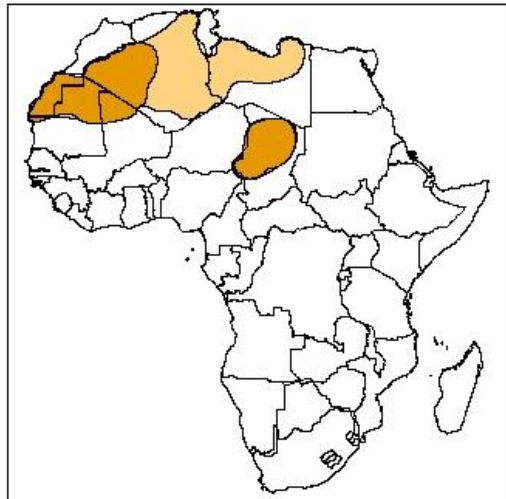
In the next five days, lower-level wind convergence over Gabon, Congo-Brazzaville and the neighboring areas, seasonal wind convergences over the Lake Victoria region, southern Ethiopia and Angola are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate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

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

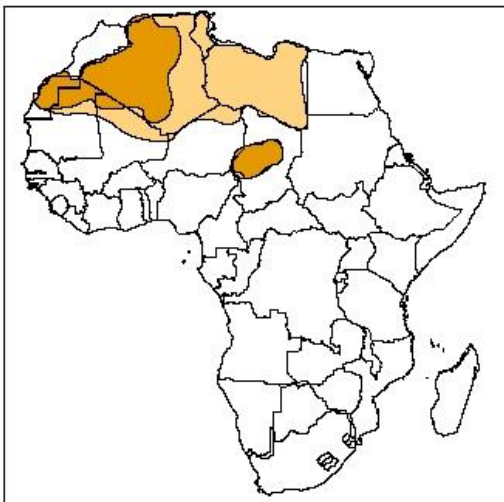
**Day 1 Dust forecast**  
November 27, 2014



**Day 2 Dust forecast**  
November 28, 2014



**Day 3 Dust forecast**  
November 29, 2014



**Highlights**

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

**Legend**



MDC, Vis. < 5km



HDC, Vis. < 1km

## **1.2. Model Discussion: Valid from 00Z of November 26, 2014**

The Azores high pressure system over the Northeast Atlantic Ocean is expected to weaken, with its central pressure value decreasing from 1032hpa to 1022hpa, through 24 to 72hours, and then it is expected to strengthen through 72 to 120 hours, with its central pressure value increasing from 1022hpa to 1033hpa, according to the GFS model.

The central pressure value of the St Helena high pressure system over the Southeast Atlantic Ocean is expected to decrease from 1025hpa to 1022hpa, through 24 to 48hours, and then it is expected to strengthen gradually through 48 to 120 hours, with its central pressure value increasing from 1022hpa to 1034hpa, according to the GFS model.

The Mascarene high pressure system over the southwestern Indian Ocean is expected to maintain its central pressure value of about 1023hpa, through 24 to 96hours, and then it is expected to weaken through 96 to 120hours, with its central pressure value decreasing from 1023hpa to 1021hpa, according to the GFS model.

At 925Hpa level, dry northeasterly to easterly wind (>25kts) is expected to prevail across portions of northern Mauritania, Morocco, Libya, Western Sahara, Algeria, Chad, northeastern 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 during the forecast period; whereas a trough associated with mid-latitude frontal system is expected to prevail over Northeast Africa the neighboring places through 24 to 48 hours.

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, the Lake Victoria region, portions of Madagascar, Kenya, DRC, local areas in Ethiopia, South Africa, Zambia and Botswana, northern Namibia.

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

(November 25, 2014 – November 26, 2014)

### 2.1. Weather assessment for the previous day (November 25, 2014)

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

### 2.2. Weather assessment for the current day (November 26, 2014)

Intense clouds are observed over portions of DRC, Angola and South Africa, local areas in Congo-Brazzaville, Gabon, Namibia, Botswana, Uganda, Tanzania and Kenya, southern Ghana, Ivory Coast and Somalia, western Ethiopia.

