



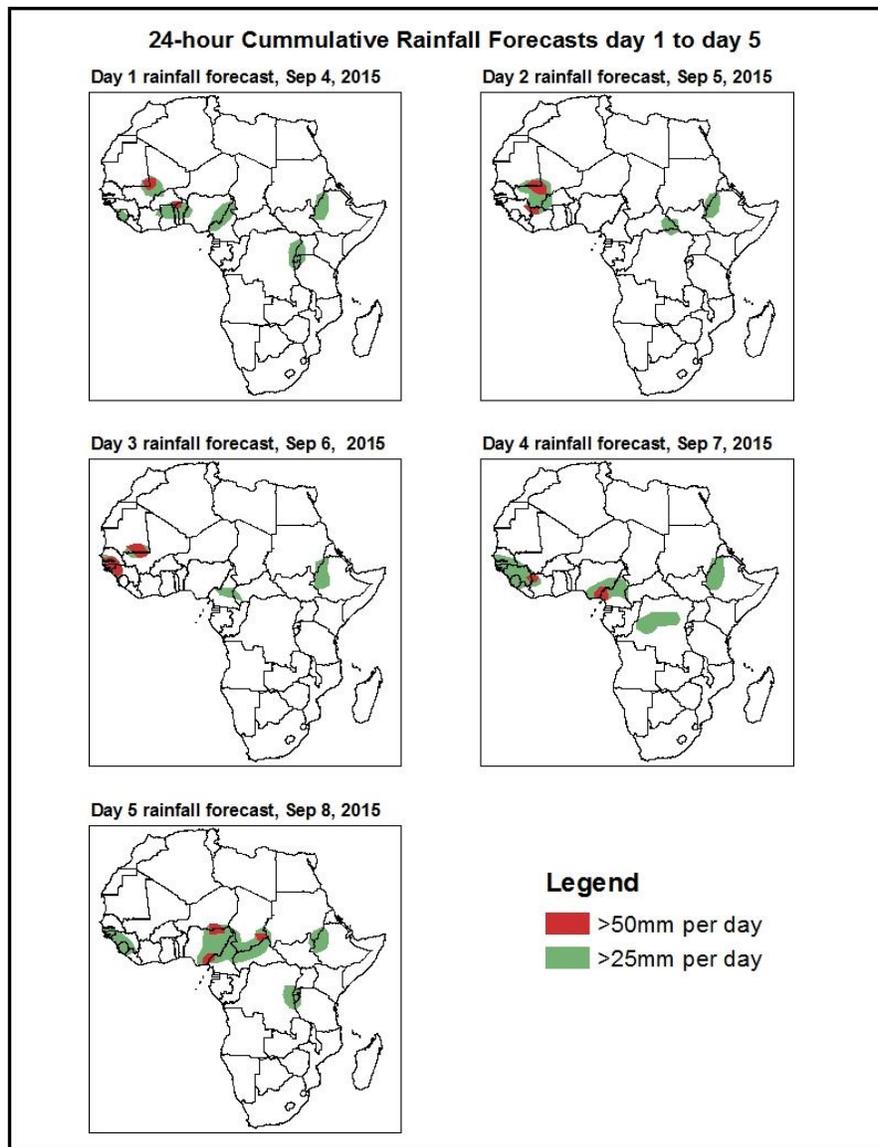
# NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

## 1. Rainfall and Dust Concentration Forecasts

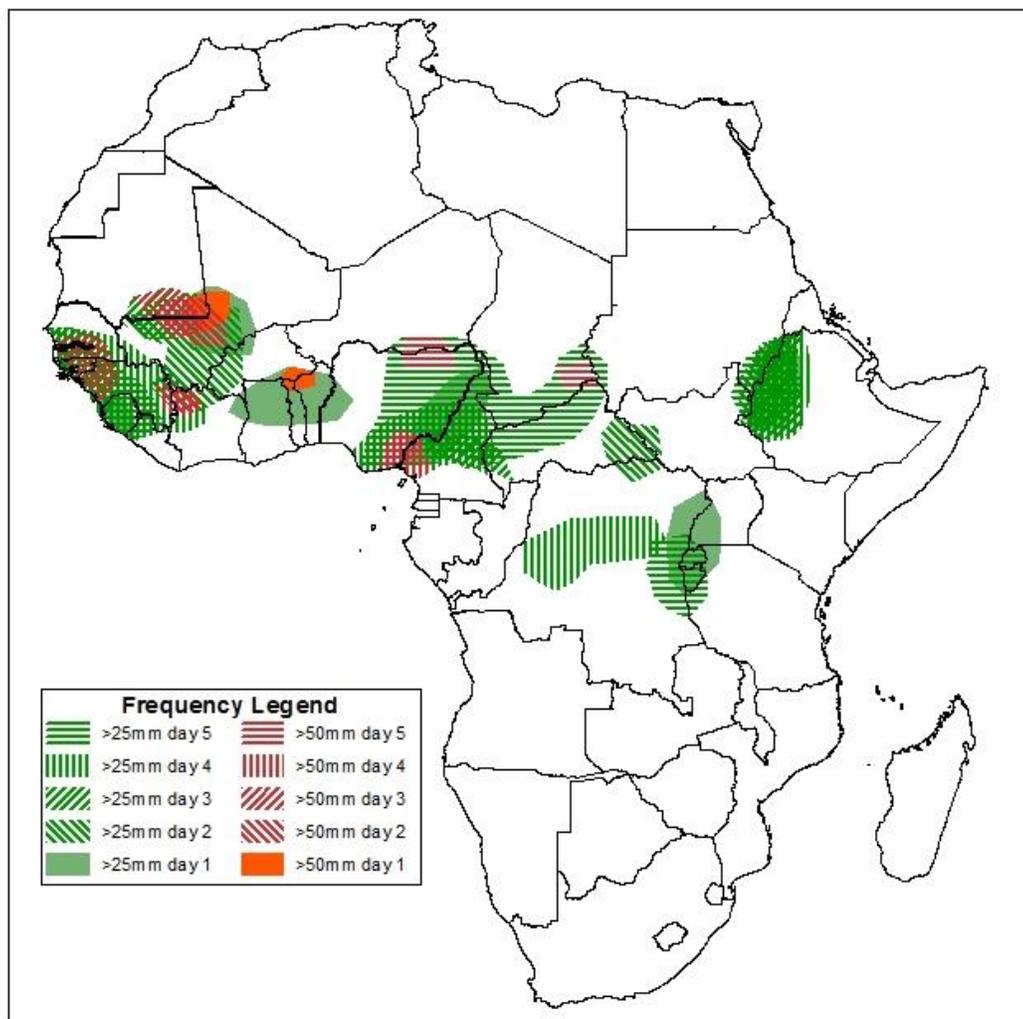
Valid: 06Z of Sep 4 – 06Z of Sep 8 2015. (Issued on September 3, 2015)

### 1.1. 24-hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of high probability of precipitation (POP), based on the NCEP/GFS, ECMWF and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



## Five Days Rainfall Forecast Summary 4 - 8 September, 2015



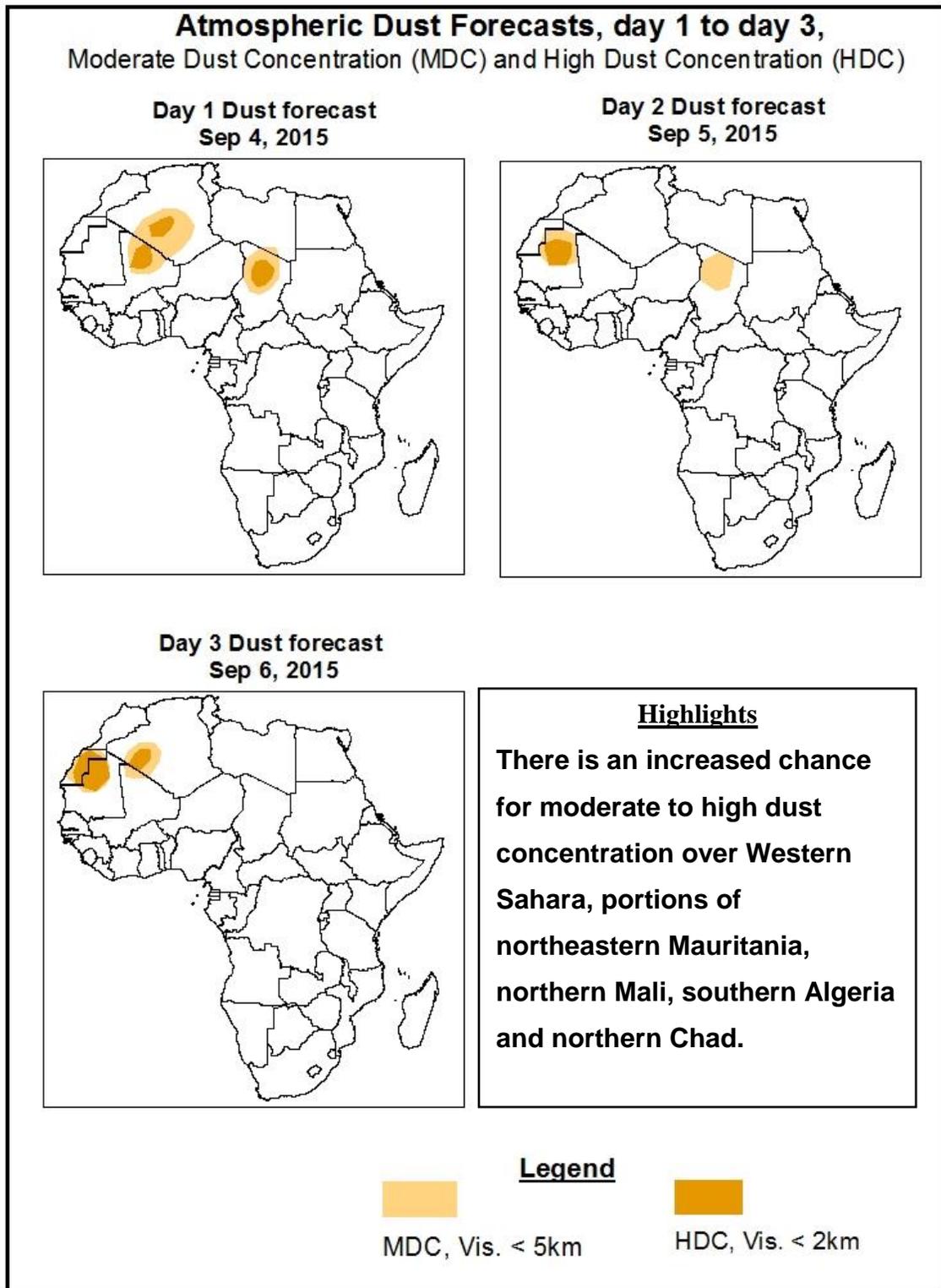
### Summary

- *In the coming five days, the seasonal monsoon systems will remain active across West and Central Africa.*
- *There is an increased chance for one or two days of heavy rainfall (>50 per day) over portions of southern Mauritania, central Mali, southern Senegal, western Guinea, northwestern Cote d'Ivoire, portions of northern Togo, northern Benin and southeastern Burkina Faso, southeastern Nigeria, southwestern Cameroon, near Nigeria/Niger border and portions of eastern Chad.*

## 1.2. Atmospheric Dust Concentration Forecasts

Valid: 12Z of Sep 4– 12Z of Sep 6, 2015

The forecasts are expressed in terms of high probability of dust concentration, based on the Navy Aerosol Analysis and Prediction System, NCEP/GFS lower-level wind forecasts and expert assessment.



### **1.3. Model Discussion, Valid: Sep 4 – Sep 8, 2015**

The Azores high pressure system over Northeast Atlantic Ocean is expected to intensify, with its central pressure value increasing from about 1029hpa to 1034hpa through 24 to 48 hours, and it tends to relax towards end of the forecast period, according to the GFS model.

The St Helena high pressure system over the Southeast Atlantic Ocean is expected to intensify slightly, with its central pressure value increasing from about 1024hpa to 1027hpa, through 24 to 120 hours.

The Mascarene high pressure system over Southwest Indian Ocean is expected to relax while shifting eastwards, with its central pressure value decreasing from about 1035hpa to 1032hpa during the forecast period, according to the GFS model.

A low over Mauritania is expected to shift westward, leaving the West Africa coast in 48 hours. Another thermal low over Niger is expected to shift towards northern Mali, while deepening. Its central pressure value is expected to decrease from 1009hpa in 48 hours to 1005hpa in 120 hours.

At 925Hpa, a cyclonic circulation over Mauritania is expected to propagate westward leaving the West Africa coast in 96hours. Zonal wind convergence is expected to prevail across the Central and eastern Sahel with embedded cyclonic circulations over Mali, Niger and Chad. Meridional wind convergence is expected to remain active in the region between southern Sudan and the Lake Victoria region during the forecast period.

At 850Hpa level, a broad area of cyclonic circulation near Burkina Faso is expected to propagate towards Mauritania during the forecast period. The seasonal monsoon trough is expected to remain active across the Sahel region, with embedded cyclonic circulations over southern Mauritania, Mali, Niger, Chad and Sudan during the forecast period.

At 700hpa level, a deep trough in the easterlies is expected to propagate westward between the longitudes of Mali/Burkina Faso and Mauritania through 24 to 96 hours, and it is expected to leave the West Africa coast towards end of the forecast period.

In the coming five days, the seasonal monsoon systems will remain active across West and Central Africa. There is an increased chance for one or two days of heavy rainfall (>50 per day) over portions of southern Mauritania, central Mali, southern Senegal, western Guinea, northwestern Cote d'Ivoire, portions of northern Togo, northern Benin and southeastern Burkina Faso, southeastern Nigeria, southwestern Cameroon, near Nigeria/Niger border and portions of eastern Chad.

## 2.0. Previous and Current Day Weather over Africa

(Valid: 2 – 3 September, 2015)

### 2.1. Weather assessment for the previous day (September 1, 2015)

Moderate to locally heavy rainfall was observed over portions of Guinea, northern Cote d'Ivoire, near Niger, Algeria/Mali border, portions of Cameroon, eastern CAR, and local areas in eastern Sudan and western Ethiopia.

### 2.2. Weather assessment for the current day (September 2, 2015)

Intense clouds are observed over local areas in West Africa, and several places in Central and East Africa.

