

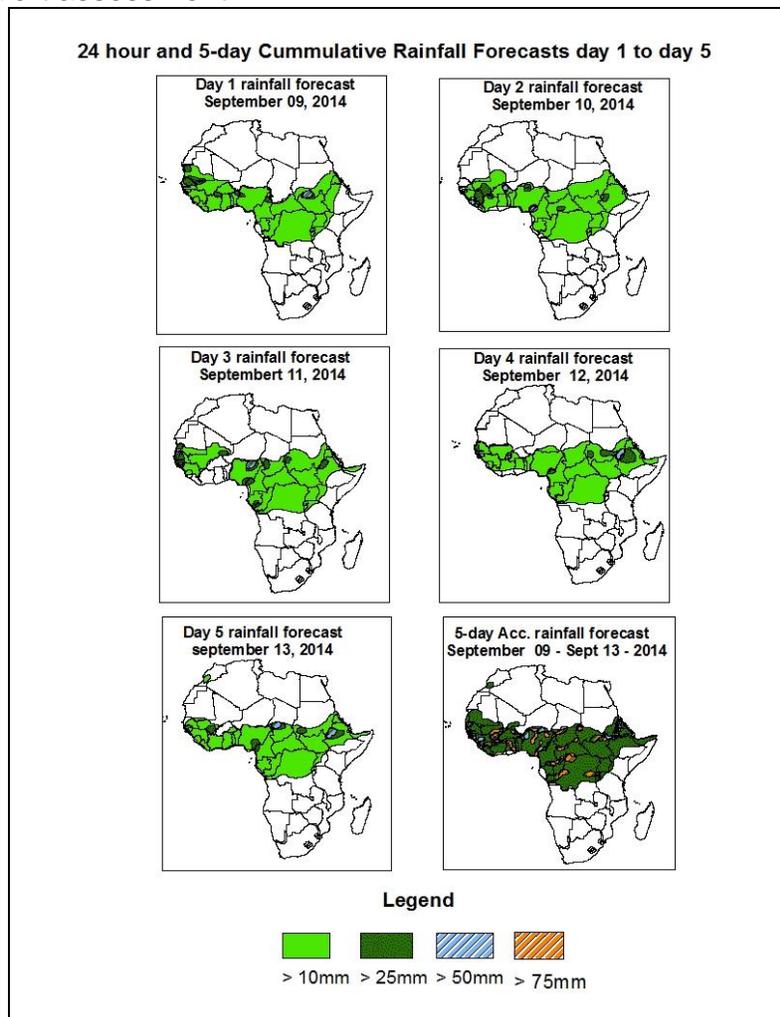


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall Forecast: Valid 06Z of September 09 – 06Z of September 13, 2014. (Issued at 1800Z of September 08, 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, the monsoon flow from the Atlantic Ocean with its associated convergence across the southern Sahel, localized wind convergences over Ethiopia, DRC and Uganda and the neighboring areas, and active easterly wave activity across West Africa are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to heavy rainfall over local areas in Mauritania and Uganda, Guinea-Conakry, Senegal, Sierra Leone, Liberia, Nigeria, Gabon, Cameroon, CAR and Eritrea, portions of DRC, Congo Brazzaville, Ghana, Ivory Coast, Chad, Mali, Sudan, Ethiopia, Benin and Togo, eastern Niger.

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

**Day 1 Dust forecast
September 09, 2014**



**Day 2 Dust forecast
September 10, 2014**



**Day 3 Dust forecast
September 11, 2014**



Highlights

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

Legend



MDC, Vis. < 5km



HDC, Vis. < 1km

1.2. Model Discussion: Valid from 00Z of September 08, 2014

The Azores high pressure system over the Northeast Atlantic Ocean is expected to intensify from 24 hours to 48 hours, with its central pressure value increasing from about 1030hpa in 24 hours to 1032hpa in 48 hours, and it weakens from 48 to 96 hours with its central pressure value decreasing from about 1032hpa in 48 hours to 1028hpa in 96 hours, and then it is expected to maintain its central pressure value of about 1028hpa through 96 hours to 120 hours, according to the GFS model.

The St Helena high pressure system over the Southeast Atlantic Ocean is expected to weaken from 24 to 120 hours, with its central pressure value decreasing from about 1032hpa in 24 hours to 1026hpa in 120 hours, according to the GFS model.

The Mascarene high pressure system over the southwestern Indian Ocean is expected to weaken from 24 to 72 hours with its central pressure value decreasing from about 1028hpa in 24 hours to 1020hpa in 72 hours, and then it is expected to intensify from 72 hours to 120 hours, with its central pressure value increasing from about 1020hpa in 72 hours to 1025hpa in 120 hours, according to the GFS model.

The central pressure value associated with the heat low in the region between western and central Sahel is expected to vary in the range between 1006hpa and 1008hpa during the forecast period. The heat low over Sudan is expected to vary in the range between 1007hpa and 1009hpa from 24 to 120 hours. The heat low across DRC is expected to vary slightly in the range between 1009hpa and 1010hpa during the forecast period, according to the GFS model.

At 925Hpa level, a zonal wind convergence is expected to prevail in the region between Mauritania and Sudan through 24 to 120 hours. Dry northeasterly winds are expected to prevail over parts of Western Sahara, border Algeria-Mali and Niger-Chad. Local wind convergences are also expected over DRC, Tanzania, Rwanda, Uganda, Burundi and Ethiopia during the forecast period.

At 850Hpa level, cyclonic circulation is expected to propagate westwards between Nigeria and Senegal through 24 to 120 hours. Local wind convergences are expected to remain active over DRC, Uganda, Rwanda, Burundi, Eritrea and Ethiopia during the forecast period.

At 700hpa level, a weak trough in the easterly flow is expected to propagate westwards between Nigeria and southern Mauritania through 24 to 120 hours.

At 500Hpa level, a zone of moderate wind (>30kts), associated with African easterly jet is expected to propagate across Niger, Burkina, Mali, Mauritania and Senegal through 24 to 120 hours.

In the next five days, the monsoon flow from the Atlantic Ocean with its associated convergence across the southern Sahel, localized wind convergences over Ethiopia, DRC and Uganda and the neighboring areas, and active easterly wave activity across West Africa are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to heavy rainfall over local areas in Mauritania and Uganda, Guinea-Conakry, Senegal, Sierra Leone, Liberia, Nigeria, Gabon, Cameroon, CAR and Eritrea, portions of DRC, Congo Brazzaville, Ghana, Ivory Coast, Chad, Mali, Sudan, Ethiopia, Benin and Togo, eastern Niger.

2.0. Previous and Current Day Weather Discussion over Africa

(September 07, 2014 – September 08, 2014)

2.1. Weather assessment for the previous day (September 07, 2014)

During the previous day, moderate to heavy rainfall was observed over local areas in Mauritania, Senegal, Sierra Leon, Guinea-Conakry, Niger, Kenya, Tanzania, Gabon, Sudan and Cameroon, Togo, Benin, Nigeria, CAR, Uganda and Eritrea, portions of Mali, Ivory Coast, Chad, Ethiopia, DRC and Congo Brazzaville.

2.2. Weather assessment for the current day (September 08, 2014)

Intense clouds are observed over portions of CAR and DRC, local areas in, Mali, Niger, Chad, Uganda Tanzania and Gabon, Guinea-Conakry, Nigeria, Sierra Leon, Cameroon and Eritrea, portions of Ghana, Togo, Benin, Congo Brazzaville, DRC, Sudan, Ethiopia and CAR, western Ivory Coast, southern Senegal and Burkina Faso.

