



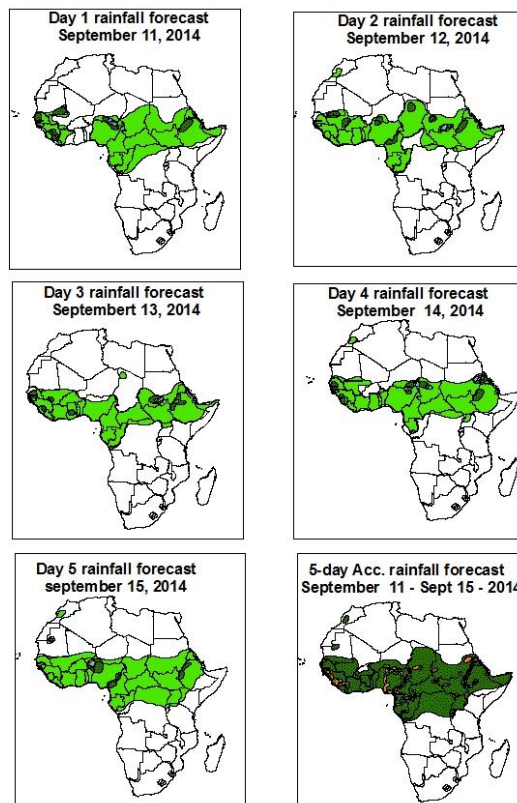
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall Forecast: Valid 06Z of September 11 – 06Z of September 15, 2014. (Issued at 1800Z of September 10, 2014)

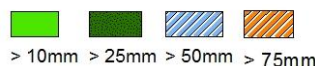
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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.

24 hour and 5-day Cumulative Rainfall Forecasts day 1 to day 5



Legend

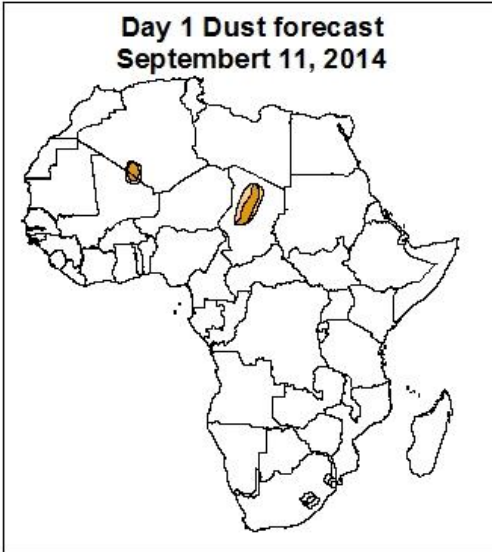


Summary

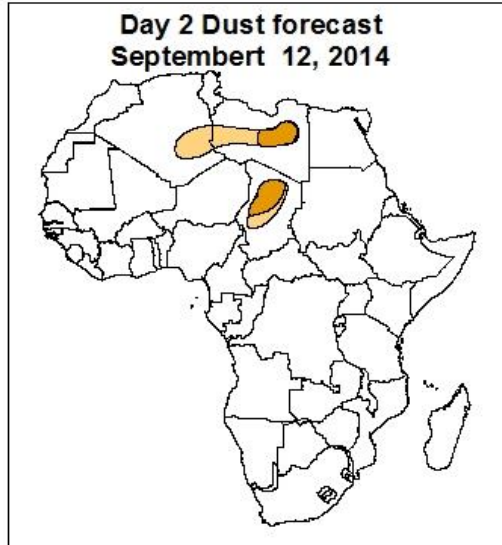
In the next five days, the monsoon flow from the Atlantic Ocean with its associated convergence across the southern Sahel, localized wind convergences over Ethiopia, DRC and Uganda and the neighboring areas, and active easterly wave activity across West Africa are expected to enhance rainfall in their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

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

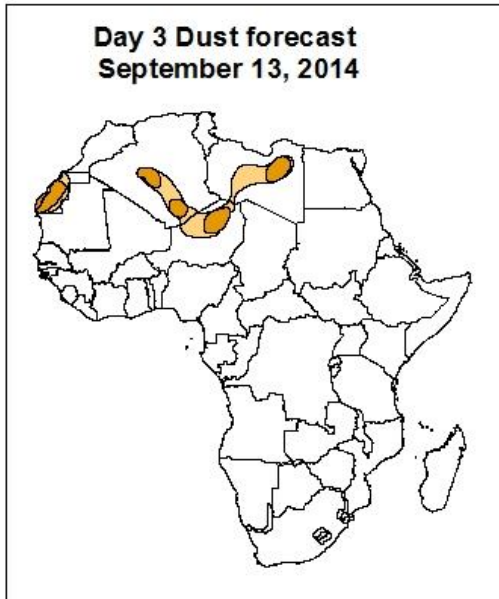
Day 1 Dust forecast
September 11, 2014



Day 2 Dust forecast
September 12, 2014



Day 3 Dust forecast
September 13, 2014



Highlights

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

Legend



MDC, Vis. < 5km



HDC, Vis. < 1km

1.2. Model Discussion: Valid from 00Z of September 10, 2014

The Azores high pressure system over the Northeast Atlantic Ocean is expected to weaken from 24 to 72 hours with its central pressure value decreasing from about 1030hpa in 24 hours to 1022hpa in 72 hours, and it intensifies from 72 hours to 96 hours, with its central pressure value increasing from about 1022hpa in 72 hours to 1031hpa in 96 hours, and then it is expected to according to weaken from 96 to 120 hours with its central pressure value decreasing from about 1031hpa in 96 hours to 1030hpa in 96 hours, the GFS model.

The St Helena high pressure system over the Southeast Atlantic Ocean is expected to weaken from 24 to 72 hours, with its central pressure value decreasing from about 1030hpa in 24 hours to 1025hpa in 72 hours, and it intensifies from 72 hours to 96 hours, with its central pressure value increasing from about 1025hpa in 72 hours to 1029hpa in 96 hours, and then it is expected to maintain from 96 to 120 hours, its central pressure value of about 1029hpa, according to the GFS model.

The Mascarene high pressure system over the southwestern Indian Ocean is expected to intensify from 24 hours to 120 hours, with its central pressure value increasing from about 1022hpa in 24 hours to 1026hpa 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 1007hpa and 1008hpa during the forecast period. The heat low over Sudan is expected to vary in the range between 1007hpa and 1008hpa from 24 to 120 hours. The heat low across DRC is expected to vary slightly in the range between 1008hpa and 1009hpa 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, Libya, Algeria and Chad. Local wind convergences are also expected over DRC, Tanzania, Rwanda, Uganda, Burundi and Ethiopia during the forecast period.

At 850Hpa level, a trough in the easterly flow is expected to propagate westwards between Nigeria and Guinea Conakry-Sierra Leone through 24 to 120 hours. Local wind convergences are expected to remain active over DRC, Uganda, Burundi, Rwanda, Eritrea and Ethiopia during the forecast period.

At 700hpa level, a trough in the easterly flow is expected to propagate westwards between Nigeria and Senegal 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 Uganda, Mauritania and Chad, Guinea-Conakry, Senegal, Sierra Leone, Liberia, Nigeria, Ghana, Benin, Togo, Gabon, Cameroon, CAR and Eritrea, portions of DRC, Ivory Coast, Mali, Sudan, Ethiopia, Congo Brazzaville, eastern Niger and southern Burkina Faso.

2.0. Previous and Current Day Weather Discussion over Africa

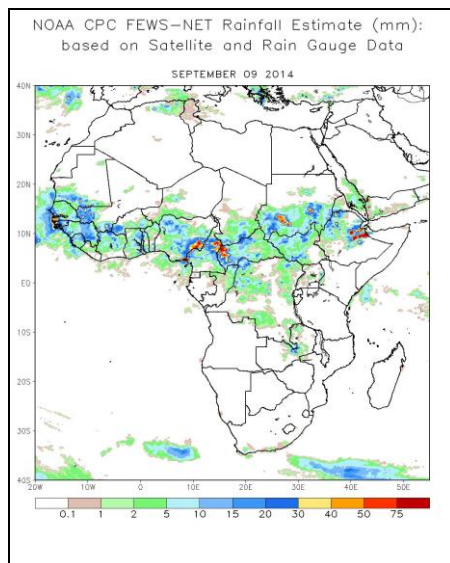
(September 09, 2014 – September 10, 2014)

2.1. Weather assessment for the previous day (September 09, 2014)

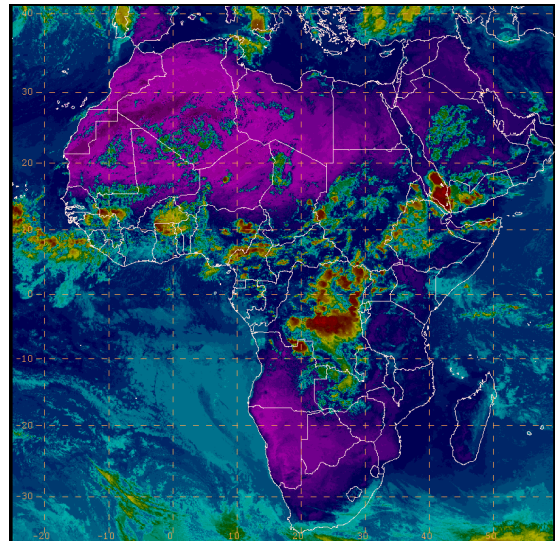
During the previous day, moderate to heavy rainfall was observed over Senegal, Sierra Leone, Nigeria, Ghana, Benin, Togo, Guinea-Conakry, Cameroon and CAR, portions of Mali, Ivory Coast, Mauritania, Liberia, Burkina Faso, Niger, Chad, Congo Brazzaville, Sudan, Ethiopia and Eritrea, local areas in DRC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

2.2. Weather assessment for the current day (September 10, 2014)

Intense clouds are observed over portions of CAR and DRC, local areas in Nigeria, CAR, Sudan, Cameroon and Uganda, portions of Eritrea, Ethiopia and DRC, eastern Burkina Faso and Chad, northern Guinea-Conakry, Togo and Ghana, central Niger, southern Mali.



IR Satellite Image (valid 1500 Z of September 10, 2014)



Previous day rainfall condition over Africa (top Left) based on the NCEP CPCE/RFE and current day cloud cover (top right) based on IR Satellite image

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