

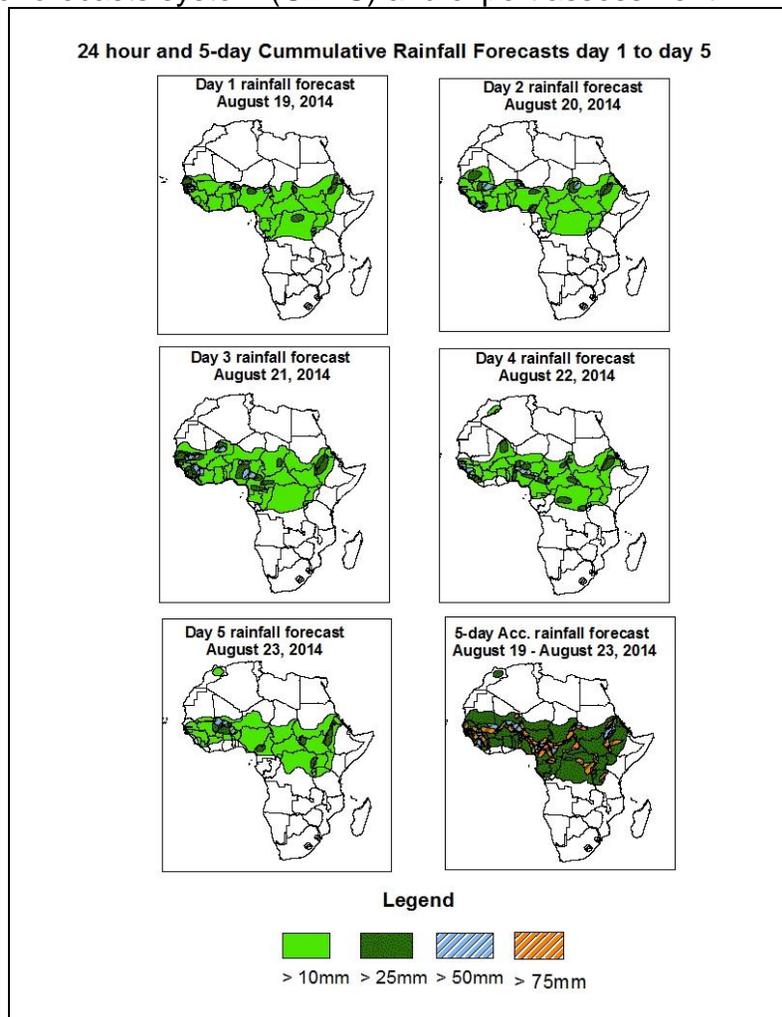


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall Forecast: Valid 06Z of August 19 – 06Z of August 23, 2014. (Issued at 1800Z of August 19, 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 UK Met Office NWP outputs, and the NCEP global ensemble forecasts system (GEFS) and expert assessment.

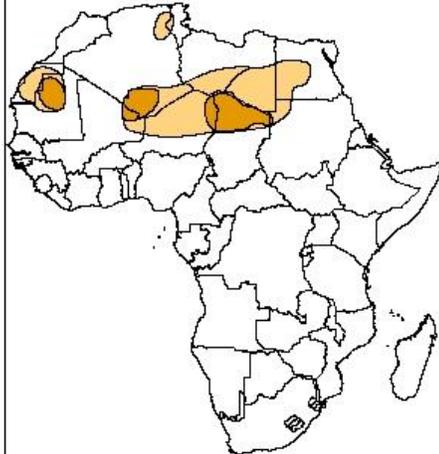


Summary

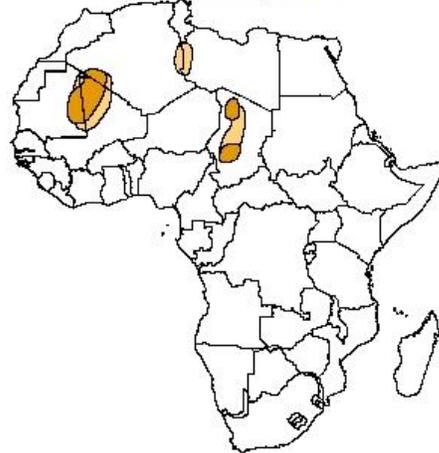
In the next five days, the monsoon flow from the Atlantic Ocean with its associated convergence across the Sahel region, localized wind convergences over Ethiopia, DRC, Uganda, and the neighboring areas, and westward propagating cyclonic circulation across West Africa are expected to enhance rainfall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

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

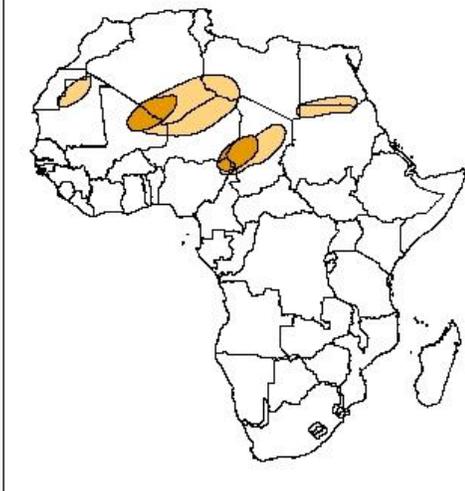
Day 1 Dust forecast
August 19, 2014



Day 2 Dust forecast
August 20, 2014



Day 3 Dust forecast
August 21, 2014



Highlights

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

Legend



MDC, Vis. < 5km



HDC, Vis. < 1km

1.2. Model Discussion: Valid from 00Z of August 18, 2014

The Azores high pressure system over the Northeast Atlantic Ocean is expected to intensify slightly with its central pressure value increasing from about 1028hpa in 24hours to 1029hpa in 48 hours, and then it is expected to weaken from 48 hours to 120 hours with its central pressure value decreasing from about 1029hpa in 48 hours to 1021hpa in 120hours, according to the GFS model.

The St Helena high pressure system over the Southeast Atlantic Ocean is expected to Weaken from 24 hours to 120 hours with its central pressure value decreasing from about 1027hpa in 24 hours to 1020hpa in 120 hours, according to the GFS model.

The Mascarene high pressure system over the southwestern Indian Ocean is also expected to weaken from 24 hours to 96 hours with its central pressure value decreasing from about 1032hpa in 24 hours to 1023hpa in 96 hours, and then its central pressure value is expected to decrease slightly from about 1023hpa in 96 hours to 1022hpa in 120hours, 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 to about 1007hpa during the forecast period. The heat low over Sudan is also expected to vary in the range between 1004hpa to 1007hpa from 24 to 120 hours. The heat low across DRC is expected to vary in the range between 1009hpa to about 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 Mauritania, Libya Egypt and northern Sudan. Local wind convergences are also expected over DRC, Tanzania, Uganda, Rwanda, Burundi Kenya and Ethiopia during the forecast period.

At 850Hpa level, a cyclonic circulation is expected to propagate westwards between Chad and the southwestern Corner of West Africa through 24 to 96 hours. Local wind convergences are expected to remain active over DRC, Uganda, Rwanda Tanzania, Eritrea, and Ethiopia during the forecast period.

At 700hpa level, a cyclonic circulation and its associated trough is expected to propagate westwards between southern Chad and southern Mauritania across West Africa through 24 to 96 hours.

At 500Hpa level, a zone of moderate wind (>30kts), associated with African easterly jet is expected to prevail over West Africa and chad with its core propagating between Niger and southern Mauritania.

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

2.0. Previous and Current Day Weather Discussion over Africa

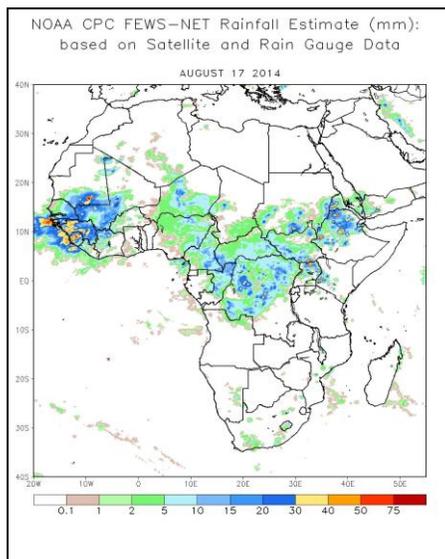
(August 17, 2014 – August 18, 2014)

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

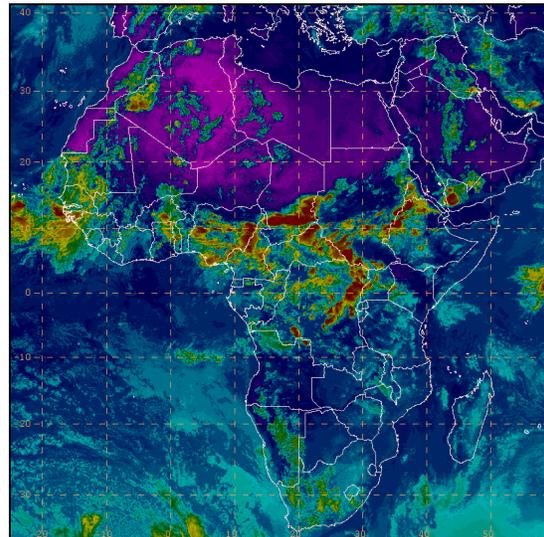
During the previous day, moderate to heavy rainfall was observed over portions of Senegal, southern Mauritania, local areas in Mali, Sierra Leon, Guinea, northwestern Ivory Coast, northern Liberia, local areas in Burkina Faso, portion of Nigeria, local areas in Niger, local areas in Chad, DRC, local areas in CAR, portions of Cameroun, northern Congo Brazzaville, portions of Sudan, local areas in Uganda, western Kenya, western Ethiopia and Eritrea.

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

Intense clouds are observed over southern Senegal, western Guinea Conakry, eastern Burkina Faso, northern Ghana, northern Togo, local areas in Nigeria, southern Chad, local areas in CAR, northern Cameroon, local areas in Sudan, local areas in DRC, northern Uganda, Eritrea and western Ethiopia.



IR Satellite Image (valid 1630 Z of August 18, 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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