

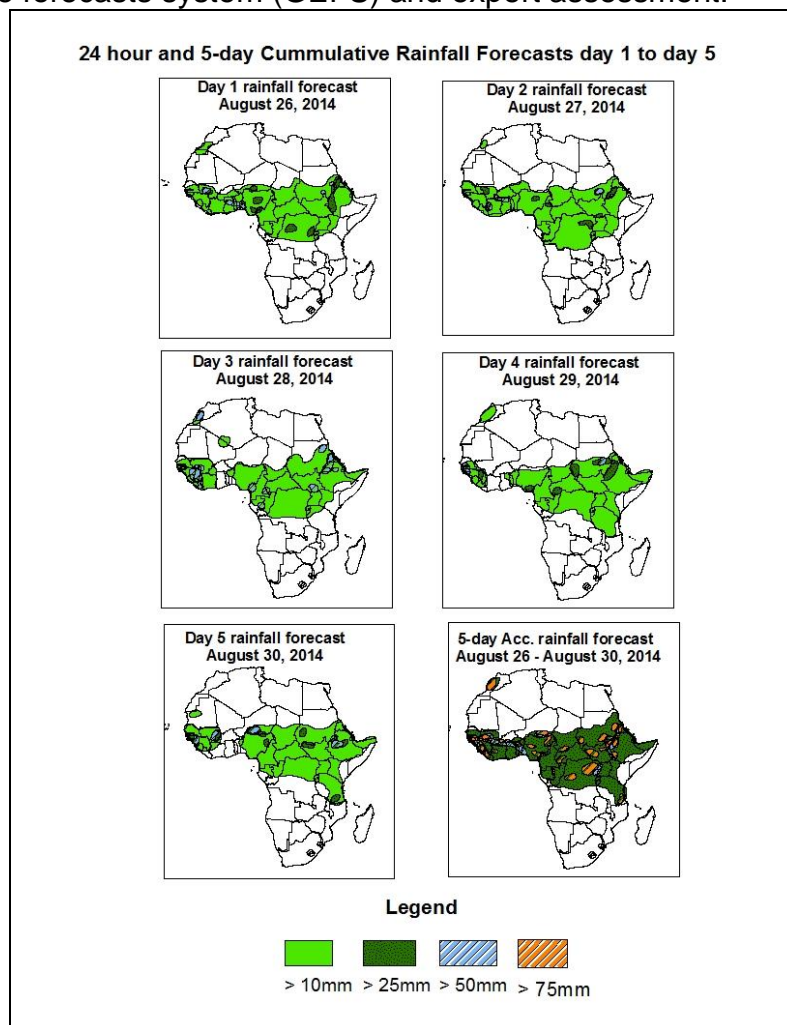


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall Forecast: Valid 06Z of August 26 – 06Z of August 30, 2014. (Issued at 1800Z of August 25, 2014)

1.1. Twenty Four Hour Cumulative Rainfall Forecasts

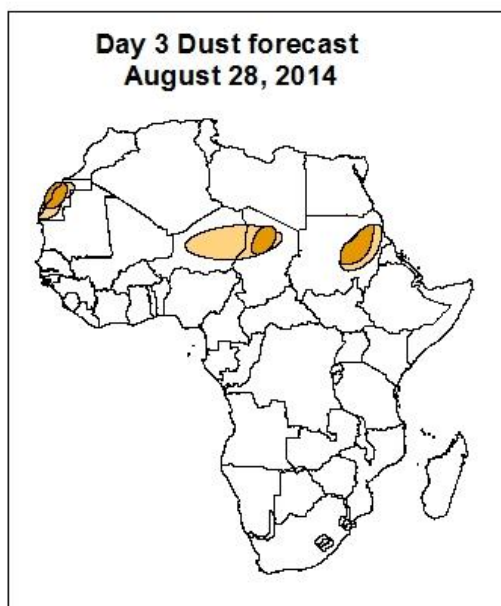
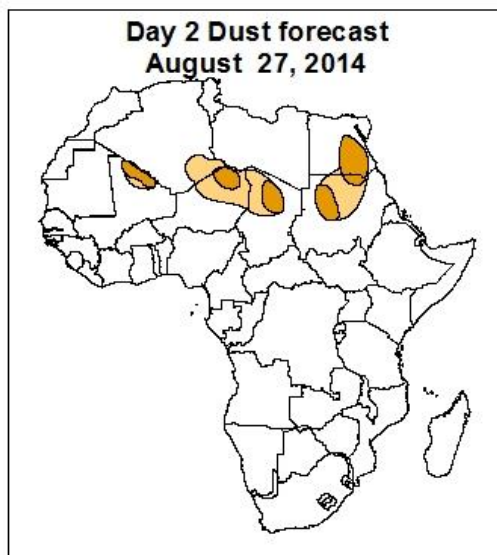
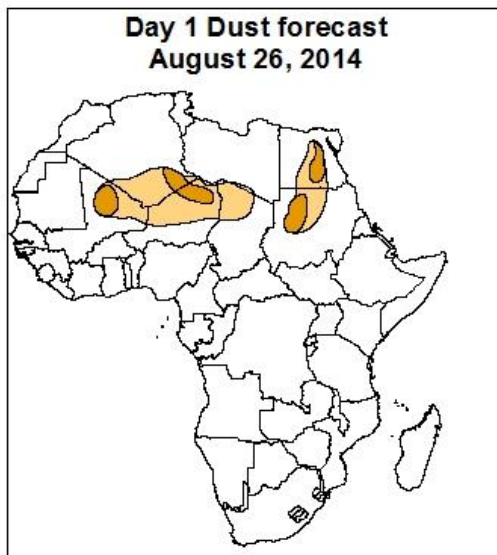
The forecasts are expressed in terms of 75% probability of precipitation (POP) exceeded, based on the NCEP/GFS and UK Met Office NWP outputs, and the NCEP global ensemble forecasts system (GEFS) and expert assessment.



Summary

In the next five days, the monsoon flow from the Atlantic Ocean with its associated convergence across the southern Sahel, 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, Liberia, southern Senegal, portions of Mali and Ivory Coast, Benin, portion of Ghana, Togo, southern Burkina Faso, eastern Niger, Nigeria, CAR, southern Chad, portions of Sudan, portions of DRC, Cameroon, northern Gabon and Congo Brazzaville, Uganda, local areas in Tanzania, western Kenya, Eritrea and western Ethiopia.

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



Highlights
There is an increased chance for moderate to high dust concentration over Western Sahara, southern Algeria, Egypt, Niger, northern Chad and Sudan.



1.2. Model Discussion: Valid from 00Z of August 25, 2014

The Azores high pressure system over the Northeast Atlantic Ocean is expected to maintain its central pressure value from about 1026hpa through 24 to 48 hours, and then it is expected to weaken from 48 to 120 hours with its central pressure value decreasing from about 1026hpa in 48 hours to 1019hpa in 120hours, according to the GFS model.

The St Helena high pressure system over the Southeast Atlantic Ocean is expected to intensify from 24 to 72 hours with its central pressure value increasing from about 1025hpa in 24hours to 1030hpa in 72 hours, and then it is expected to weaken from 72 to 120 hours with its central pressure value decreasing from about 1030hpa in 72 hours to 1023hpa in 120hours, according to the GFS model.

The Mascarene high pressure system over the southwestern Indian Ocean is expected to maintain its central pressure value from about 1023hpa in 24hours to 72 hours, and it is expected to intensify from 72 to 96 hours with its central pressure value increasing from about 1023hpa in 72hours to 1032hpa in 96 hours, and then it maintains its central pressure value from about 1032hpa in 96hours to 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 1004hpa and 1007hpa during the forecast period. The heat low over Sudan is also expected to vary in the range between 1003hpa and 1004hpa 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, Algeria, Egypt and northern Sudan. Local wind convergences are also expected over DRC, Tanzania, Uganda, Kenya and Ethiopia during the forecast period.

At 850Hpa level, cyclonic circulation is expected to propagate westwards between Chad and southern Sahel through 24 to 120 hours. Local wind convergences are expected to remain active over DRC, Uganda, Tanzania, Kenya, Burundi, Ruanda, Eritrea, and Ethiopia during the forecast period.

At 700hpa level, a deep trough in the easterly flow is expected to propagate westwards between southern Chad and Guinea-Conakry across West Africa through 24 to 120 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 Mali and southern Mauritania.

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, 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, Liberia, southern Senegal, portions of Mali and Ivory Coast, Benin, portion of Ghana, Togo, southern Burkina Faso, eastern Niger, Nigeria, CAR, southern Chad, portions of Sudan, portions of DRC, Cameroon, northern Gabon and Congo Brazzaville, Uganda, local areas in Tanzania, western Kenya, Eritrea and western Ethiopia.

2.0. Previous and Current Day Weather Discussion over Africa

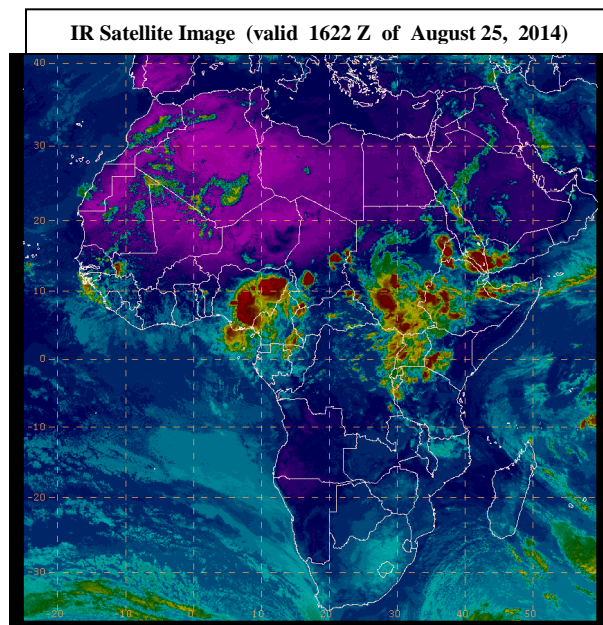
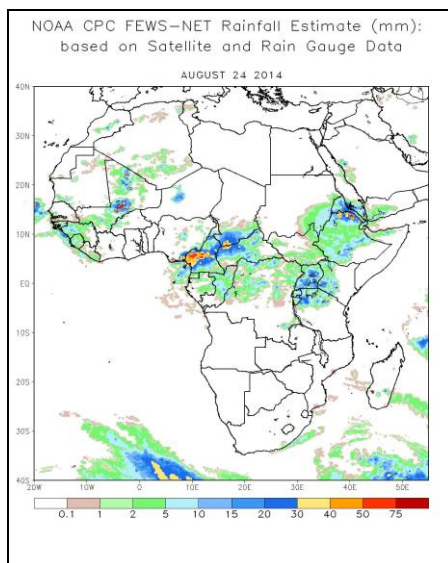
(August 24, 2014 – August 25, 2014)

2.1. Weather assessment for the previous day (August 24, 2014)

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

2.2. Weather assessment for the current day (August 25, 2014)

Intense clouds are observed over southwestern Mali, portion of Nigeria, local areas in CAR, Chad and Cameroon, northeastern RDC, local areas in Uganda, northern Tanzania, western Kenya, portion of Ethiopia and Sudan, Eritrea.



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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