

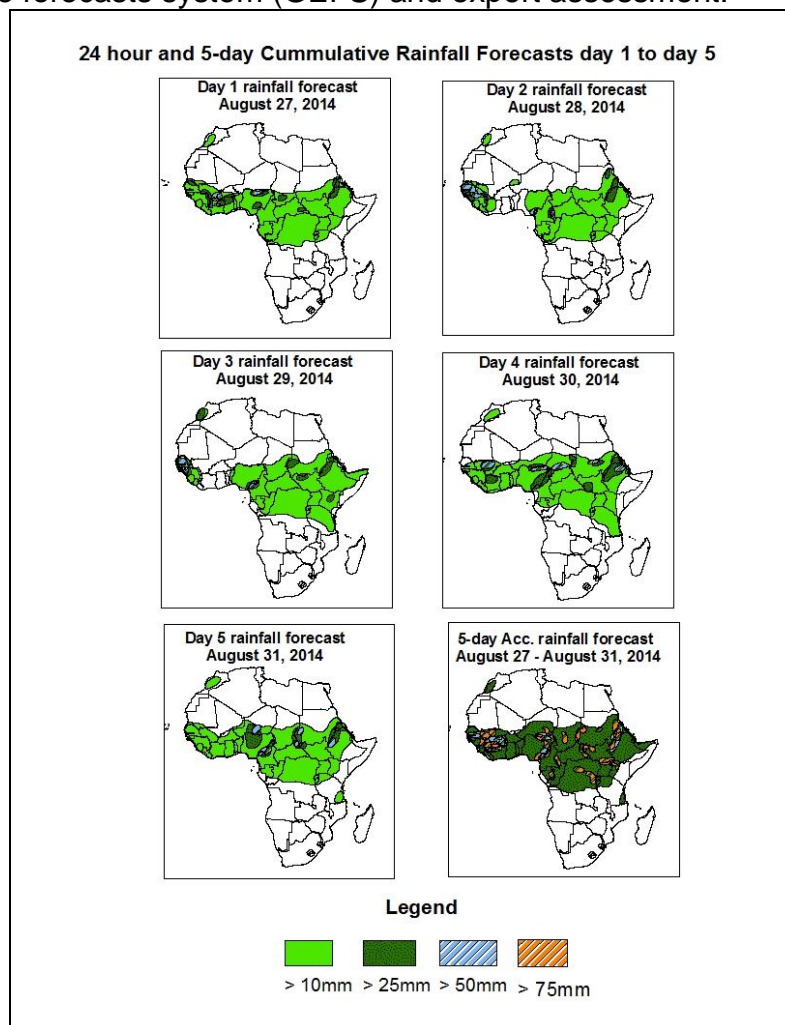


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall Forecast: Valid 06Z of August 27 – 06Z of August 31, 2014. (Issued at 1800Z of August 26, 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.

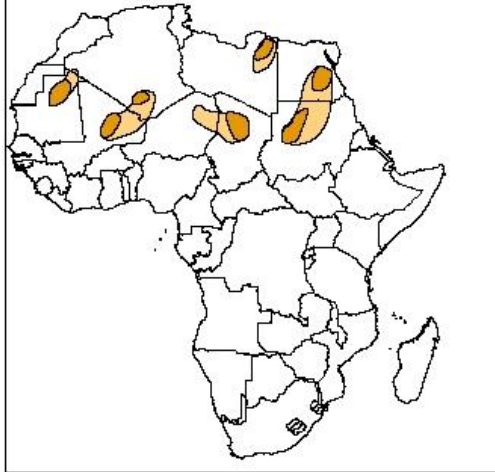


Summary

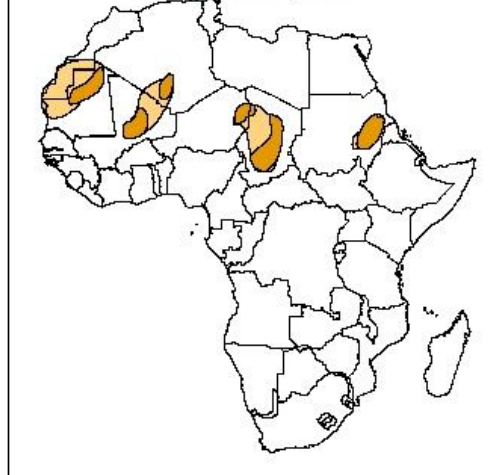
In the next five days, the monsoon flow from the Atlantic Ocean with its associated convergence across the southern Sahel, localized wind convergences over Ethiopia, DRC, Uganda, and the neighboring areas, and westward propagating cyclonic circulation across West Africa are expected to enhance rainfall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

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

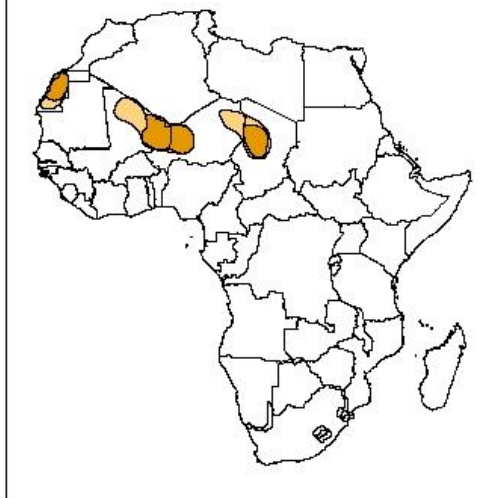
Day 1 Dust forecast
August 27, 2014



Day 2 Dust forecast
August 28, 2014



Day 3 Dust forecast
August 29, 2014



Highlights

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

Legend



MDC, Vis. < 5km



HDC, Vis. < 1km

1.2. Model Discussion: Valid from 00Z of August 26, 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 1026hpa in 24 hours to 1021hpa in 72hours, and it is expected to intensify from 72 to 96 hours with its central pressure value increasing from about 1021hpa in 72hours to 1023hpa in 96 hours, and then it maintains its central pressure value of about 1023hpa through 96hours to 120 hours, according to the GFS model.

The St Helena high pressure system over the Southeast Atlantic Ocean is expected to intensify from 24 to 48 hours with its central pressure value increasing from about 1027hpa in 24hours to 1031hpa in 48 hours, and then it is expected to weaken from 48 to 120 hours with its central pressure value decreasing from about 1031hpa in 48 hours to 1021hpa in 120hours, according to the GFS model.

The Mascarene high pressure system over the southwestern Indian Ocean is expected to weaken from 24 to 48 hours with its central pressure value decreasing from about 1025hpa in 24 hours to 1024hpa in 48hours, and it is expected to intensify slightly from 48 to 96 hours with its central pressure value increasing from about 1024hpa in 48hours to 1034hpa in 96 hours, and then it is expected to weaken from 96 to 120 hours with its central pressure value decreasing from about 1034hpa in 96 hours to 1032hpa 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 1004hpa and 1008hpa during the forecast period. The heat low over Sudan is 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 1007hpa 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, southern Algeria, Egypt and northern Sudan. Local wind convergences are also expected over DRC, Tanzania, Uganda, Burundi, Rwanda, 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, 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, portions of Senegal, portions of Mali and Ivory Coast, Benin, portion of Ghana, southern Burkina Faso, eastern Niger, Nigeria, CAR, portions of Chad, portions of Sudan, portions of DRC, Cameroon, northern Gabon and Congo Brazzaville, Uganda, local areas in Tanzania, western Kenya, Eritrea and portions of Ethiopia.

2.0. Previous and Current Day Weather Discussion over Africa

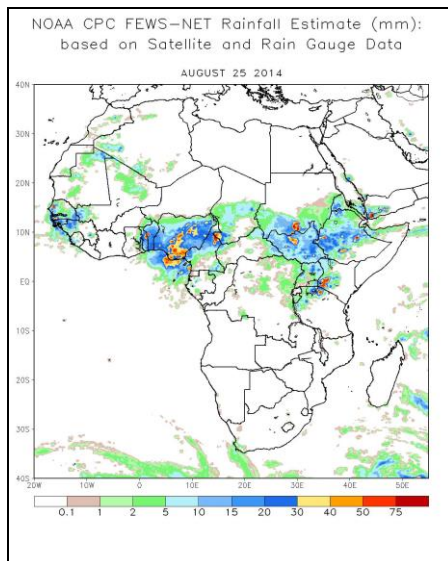
(August 25, 2014 – August 26, 2014)

2.1. Weather assessment for the previous day (August 25, 2014)

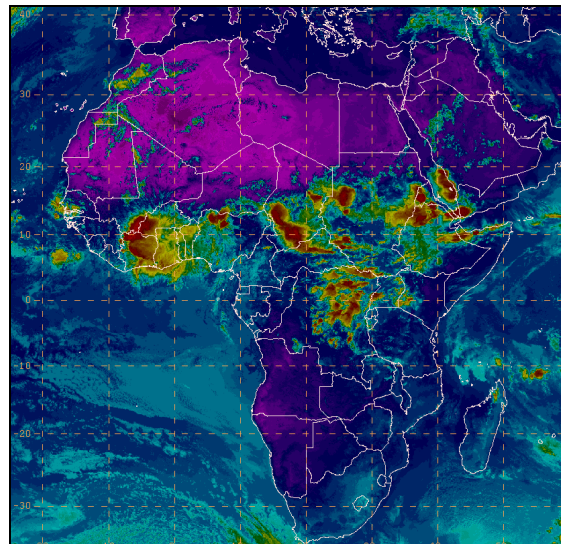
During the previous day, moderate to heavy rainfall was observed over local areas in Mauritania and Mali, Senegal, portion of Guinea Conakry, Mali, Sierra Leon, eastern Ghana, Togo, Benin, northern Burkina Faso, southern Niger, Nigeria, portions of Chad and Cameroon, local areas in DRC, Gabon and CAR, portions of Sudan, Uganda, northern Tanzania, Burundi, western Kenya, portions of Ethiopia and Eritrea.

2.2. Weather assessment for the current day (August 26, 2014)

Intense clouds are observed over western Senegal, Ivory Coast, portions of Ghana, eastern Guinea Conakry, southern Mali and Burkina Faso, northern Nigeria, local areas in CAR, Sudan and Uganda, portions of Chad, RDC and Ethiopia, western Kenya, and Eritrea.



IR Satellite Image (valid 1552 Z of August 26, 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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