

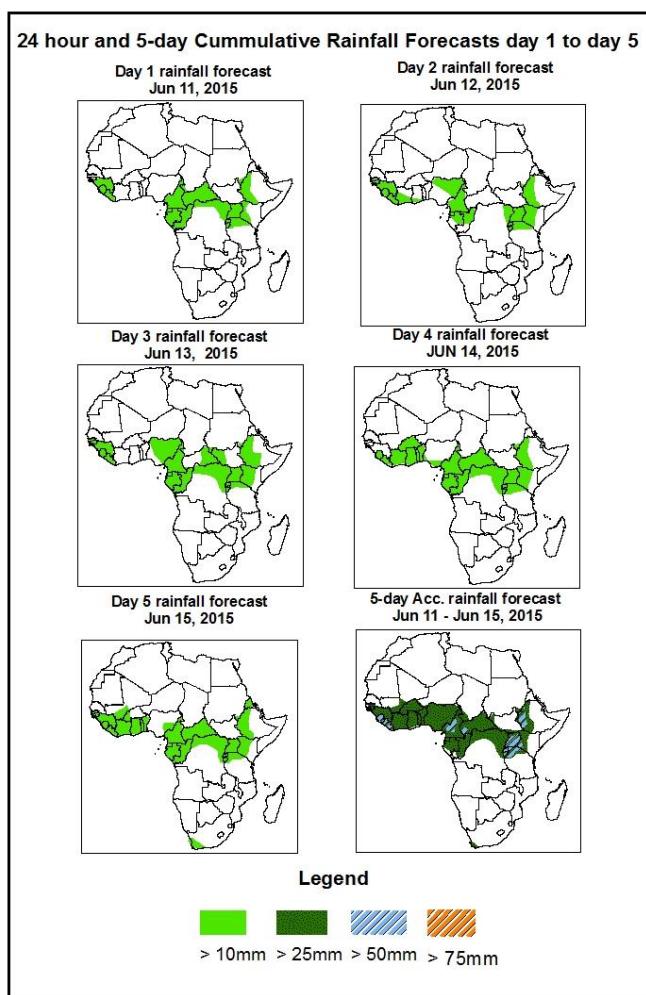


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall Forecast: Valid 06Z of Jun 11 – 06Z of Jun 15, 2015. (Issued at 1500Z of Jun 11, 2015)

1.1. Twenty Four Hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of high probability of precipitation (POP), based on the NCEP/GFS and the NCEP global ensemble forecasts system (GEFS) and expert assessment.



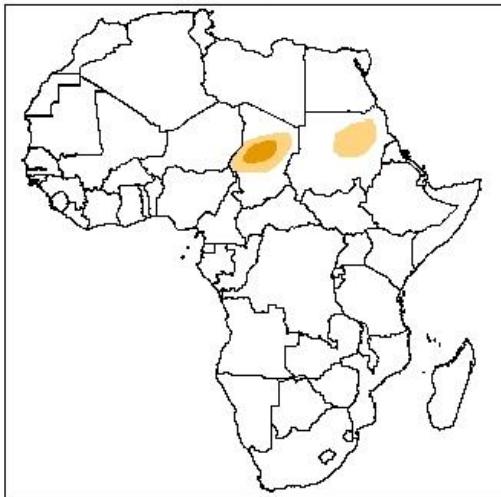
Summary

In the next five days, the monsoon flow from the Atlantic Ocean and its associated convergence across West and Central Africa, combined with westward propagating convective systems across the central Africa, southern Sahel, and the Gulf of Guinea countries, and active lower level wind convergences across northern DRC and parts of the Greater Horn of Africa are expected to enhance rainfall in their respective regions. Thus, There is an increased a chance for heavy rainfall over Liberia, Sierra Leon, Guinea, Ghana, Cameroon, Rwanda, Uganda, and Ethiopia.

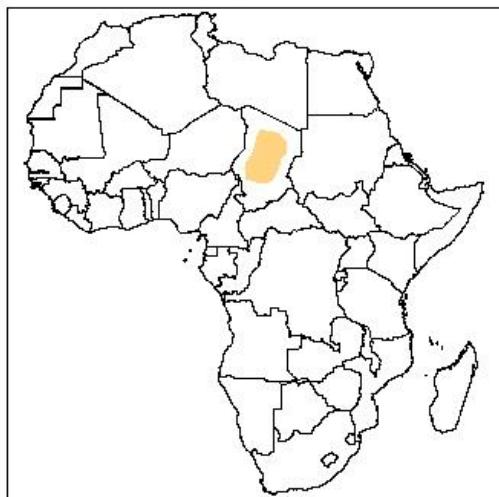
Atmospheric Dust Forecasts, day 1 to day 3,

Moderate Dust Concentration (MDC) and High Dust Concentration (HDC)

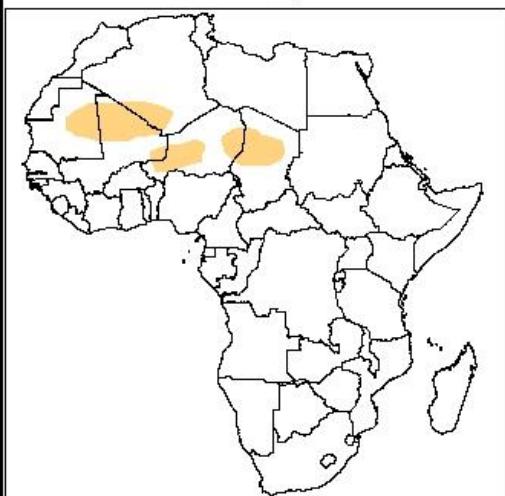
Day 1 Dust forecast
Jun 11, 2015



Day 2 Dust forecast
Jun 11, 2015



Day 3 Dust forecast
Jun 13, 2015



Highlights

There is an increased chance for moderate to high dust concentration over some parts of the Sahel and North African countries with highest dust concentrations over some parts of Chad

Legend



MDC, Vis. < 5km



HDC, Vis. < 1km

1.2. Model Discussion, Valid: June 11 – June 15, 2015

The St Helena high pressure system over the Southeast Atlantic Ocean is expected to relax gradually while shifting eastwards. Its central pressure value is expected to decrease from about 1026hpa to 1022hpa through 22 to 120 hours, according to the GFS model.

The Mascarene high pressure system in the Southwest Indian Ocean is also expected to relax gradually while shifting eastwards, with its central pressure value decreasing from about 1032hpa in 24 hours to about 1023hpa in 120 hours, according to the GFS model.

The heat lows in the region between Mali and Sudan across the Sahel region are expected to maintain average central pressure values, ranging between 1006hpa to 1008hpa during the forecast period.

The northern limit of the 1016hpa isobar associated with the East African ridge is expected to extend northwards up to the latitudes of central Kenya during the forecast period.

At 925Hpa level, the monsoon flow from the Atlantic Ocean is expected to prevail across much of the Gulf of Guinea countries, and the neighboring areas of the Southern Sahel and Central African countries. On the other hand, dry northeasterly wind (>20kts) is expected to prevail across Algeria, Libya, Egypt, northern, and northern Sudan. An east-west oriented wind convergence is expected to remain active in the region between Senegal and Sudan during the forecast period.

At 850Hpa level, east-west oriented wind convergence is expected to remain active across Guinea, Burkina Faso, northern Nigeria, northern Cameroon, CAR and Sudan. Wind convergences are also expected to remain active across northern DRC, South Sudan Republic and portions of Ethiopia during the forecast period. On the other hand, strong lower level wind associated with the Somali Jet is expected to remain along the

East Africa coast and the neighboring areas of northwestern Indian Ocean and the Arabian Sea.

At 700hpa level, northeasterly to easterly flow is expected to prevail across the Gulf of Guinea and Central Africa countries. A broad zone of strong wind (>30kts) is expected to propagate westwards in the region between Nigeria and Guinea Conakry through 24 to 72 hours.

At 500Hpa level, a zone of strong easterly flow (>50kts) is expected to prevail in the region between southern Mali and western Sudan through 72 to 120 hours.

At 150hpa, a zone of strong wind (>70kts), associated with the Tropical Easterly Jet is expected to develop across portions of the Horn of Africa region and northern Indian Ocean during the forecast period.

In the next five days, the monsoon flow from the Atlantic Ocean and its associated convergence across West and Central Africa, combined with westward propagating convective systems across the central Africa, southern Sahel, and the Gulf of Guinea countries, and active lower level wind convergences across northern DRC and parts of the Greater Horn of Africa are expected to enhance rainfall in their respective regions. Thus, There is an increased chance for heavy rainfall over Liberia, Sierra Leon, Guinea, Ghana, Cameroon, Rwanda, Uganda, and Ethiopia.

2.0. Previous and Current Day Weather Discussion over Africa

(9 – 10, Jun 2015)

2.1. Weather assessment for the previous day (June 9, 2015)

Moderate to heavy rainfall were observed across Mali, Guinea, Burkina Faso, Liberia, Ivory Coast, Benin, Ghana, Cameroon, CAR, Sierra Leon, DRC, Southern Sudan, and Ethiopia.

2.2. Weather assessment for the current day (Jun 10, 2015)

Intense convective deep clouds are observed over Congo Brazzaville, South Africa, DRC, Somalia, Southern Sudan, Uganda, and Ethiopia.

