

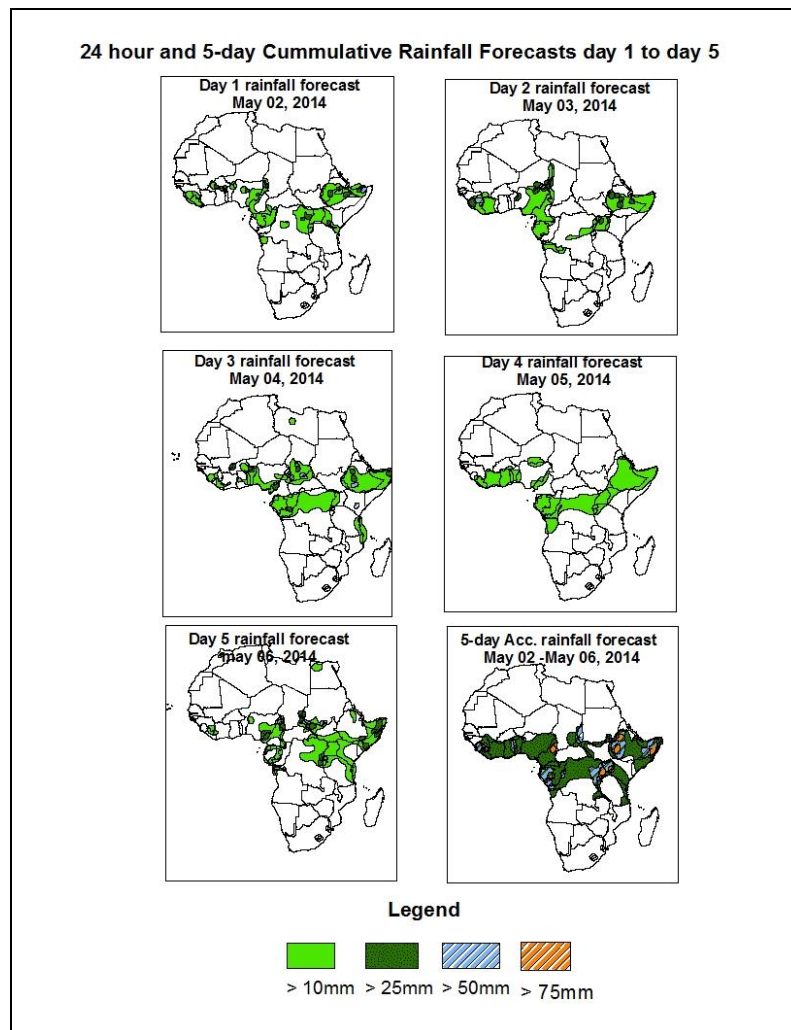


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of May 02 – 06Z of May 06, 2014. (Issued at 1600Z of May 01, 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.



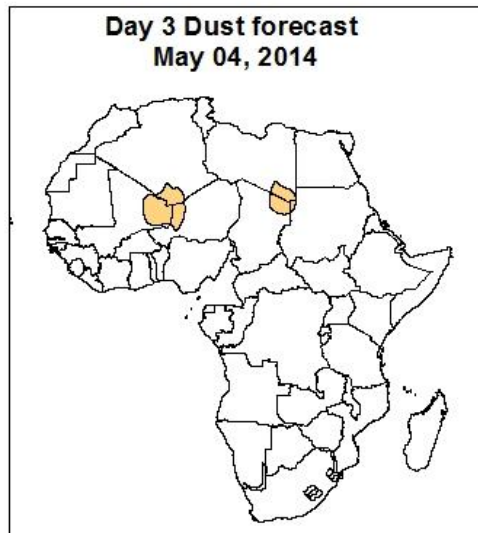
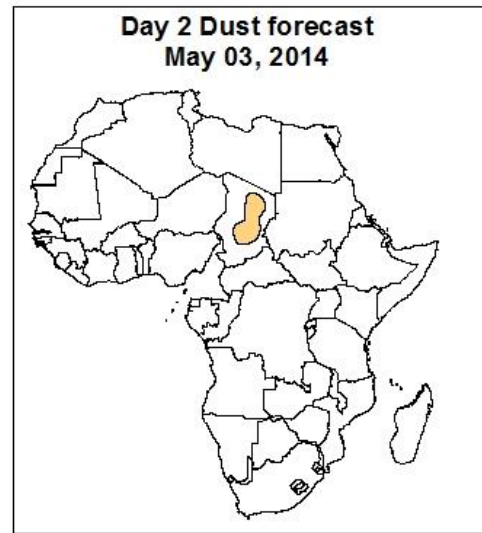
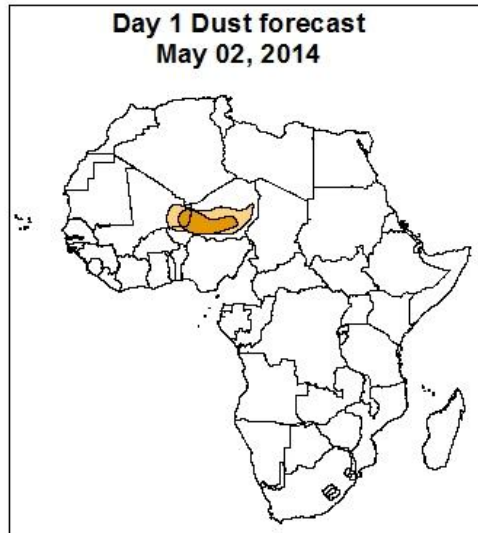
Summary

In the next five days, West African Monsoon flow with lower tropospheric wind convergence across the Gulf of Guinea region associated with Congo Air Mass, localized wind converges in north eastern part of the continent and winds across the South eastern coast are expected to enhance rainfall across respective regions.

In general, there is an increased chance for moderate to heavy rainfall over portions of Liberia, Sierra Leone, Cote D'Ivoire, Ghana, Togo, Benin, Nigeria, South Sudan, Cameroun, Democratic Republic of Congo, Uganda, Burundi, Rwanda, Ethiopia, Great Horn of Africa, part of Kenya, coast of Tanzania

1.2. Atmospheric Dust Forecasts: Valid May 02– May 04 2014

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
dust concentration over
Algeria, Mali, Niger,
Chad and Libya

Legend



MDC, Vis. < 5km



HDC, Vis. < 1km

1.3. Model Discussion: Valid from 00Z of May 01, 2014

Model comparison (GFS and UKMET Valid from 00Z: May 01, 2014) shows general agreement in terms of depicting positions of the northern and southern hemisphere subtropical highs, while they showed slight differences in depicting their intensity.

The Azores high pressure system in Northeastern Atlantic Ocean is expected to intensify while shifting eastwards through 24 to 72 hours and then weaken through 72 to 120 hours for GFS. Its central pressure value is expected to increase from about 1025hpa to 1027hpa and weaken to 1023hpa according to GFS

The heat lows over Algeria is expected to deepen from 48 to 72 hours and fill in for the rest of the forecast period. Angola and Congo coast are expected to deepen from 72 to 120 hours. The lowest central values are expected to vary between 1001 to 1010hpa for GFS model.

The St. Helena High Pressure System in southern Atlantic Ocean is expected to intensify through 24 to 120 hours while shifting eastwards. Its central pressure value is expected to increase from about 1023hpa to 1030hpa according to both GFS model.

The Mascarene high pressure system in southwestern Indian Ocean is expected to intensify its central pressure value for the 24 to 48 hours and weaken through 48 hours and intensify again through 48 to 120 hours for GFS model. Its central pressure value is around 1030hpa to 1034hpa according to the GFS model

At 925Hpa level, Moderate to strong convergence is expected to persist throughout the forecast period over the Sahel region, Great Horn of Africa region, the Nile River, Central African region and the Congo Coast,

At 850Hpa level, mid tropospheric wind convergence associated with West African Monsoon is expected to remain active over the Sahel region, the coast of Cameroun and Central African region, Horn of Africa region. A low level convergence is expected to prevail over Great Horn of Africa Region and over the Nile region throughout the forecast region.

At 500Hpa level, a mid-latitude trough westerly flow is expected to prevail across Northeast Africa leading to interactions between extra-tropical and tropical weather systems.

At 200hpa level, winds with strong speed associated with the Northern hemisphere subtropical Westerly Jet mainly is to remain relatively weak across the subtropical latitudes during the forecast period

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2.0. Previous and Current Day Weather Discussion over Africa

(April 30, 2014 – May 01, 2014)

2.1. Weather assessment for the previous day (April 30, 2014)

During the previous day, moderate to heavy rainfall was observed over Ghana, Nigeria, Cameroun, Equatorial Guinea, DRC, South Sudan and Ethiopia

2.2. Weather assessment for the current day (May 01, 2014)

Intense clouds are observed over local areas in the Gulf of Guinea coast, Liberia, Burkina Faso, Togo, Nigeria, Cameroun, Congo Brazzaville, Equatorial Guinea, Angola, Democratic Republic of Congo, Chad, South Sudan, Ethiopia and Uganda

