

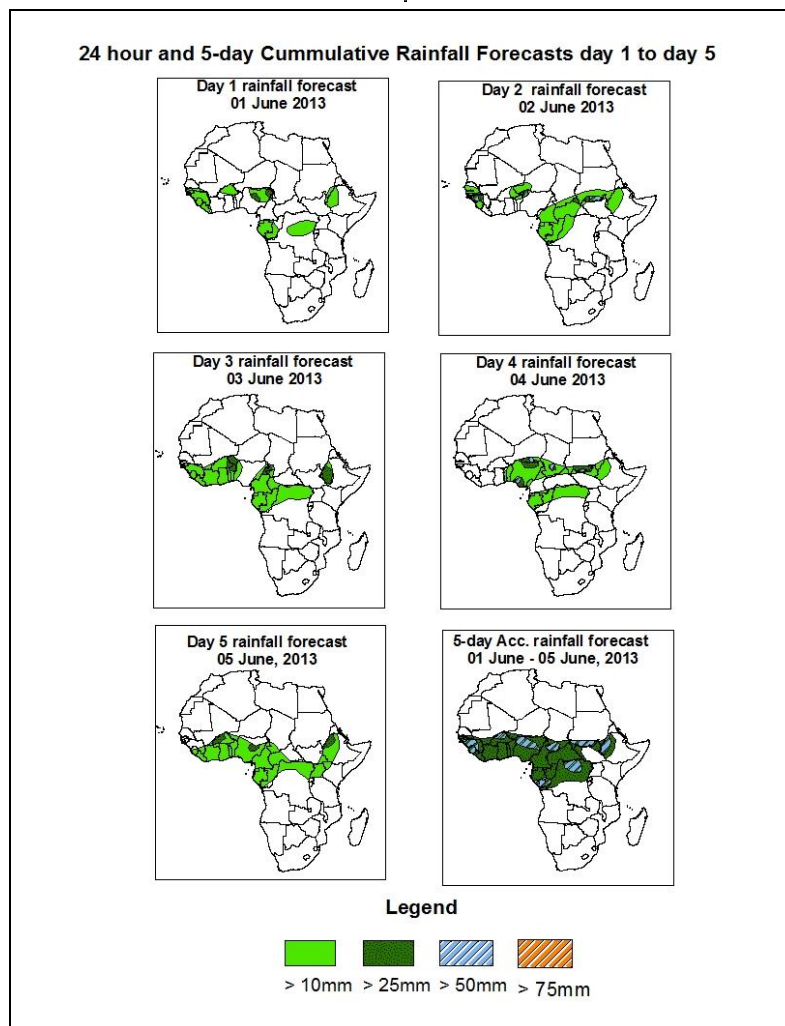


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 01 June – 06Z of 05 June, 2013. (Issued at 1500Z of 31 May 2013)

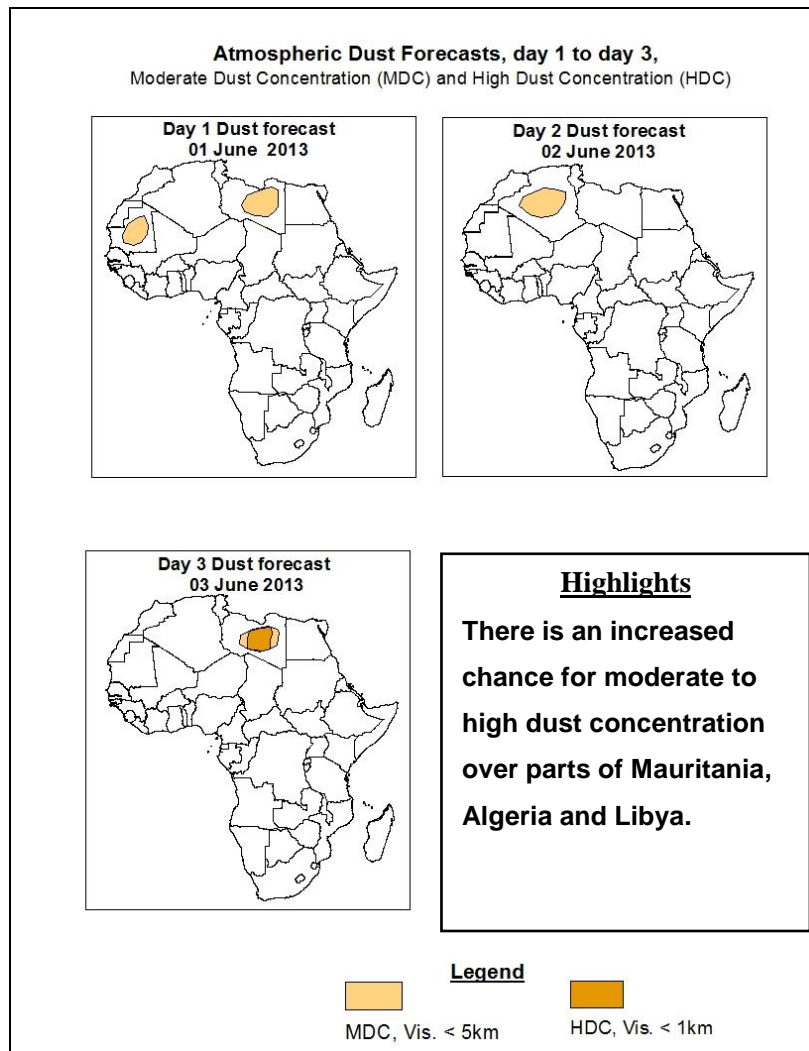
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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



Summary

In the next five days, westward propagating easterly wave across coastal Gulf of Guinea region, seasonal wind convergences over parts of West and central Africa, Sudan and western Ethiopia are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to heavy rainfall over Guinea, Sierra Leone, Liberia, local areas in Burkina Faso, Nigeria, southern Chad, CAR, Congo, DRC southern Sudan, and western Ethiopia.



1.2. Model Discussion: Valid from 00Z of 31 May 2013

Model comparison (Valid from 00Z;31 May, 2013) shows all the three models are in general agreement in terms of depicting positions of the southern hemisphere subtropical highs, while they showed slight differences in depicting their intensity.

The Azores High Pressure System over Northeast Atlantic Ocean is expected to weaken gradually while shifting eastwards. Its central pressure value is expected to decrease from about 1034hpa to 1031hpa through 24 to 120 hours according to the GFS model, from about 1034 to 1032 according to the ECMWF model and from about 1035hpa to 1033hpa according to the UKMET model.

The St. Helena High Pressure System over southeast Atlantic Ocean is expected to intensify gradually during the forecast period. Its central pressure value is expected

increase from about 1023hpa to 1031hpa according to the GFS model, from 1023hpa to 1030hpa according to the ECMWF model and from 1028 to 1031hpa according to the UKMET model.

The Mascarene high pressure system over southwestern Indian Ocean is also expected to intensify through 24 to 48 hours and tends to relax towards end of the forecast period while shifting eastwards. Its central pressure value is expected to increase from about 1035hpa to 1039hpa through 24 to 48hrs according to the GFS model, from 1034hpa to 1040hpa according to the ECMWF model and from 1035hpa to 1042hpa according to the UKMET model

The heat lows over the central Sahel and neighboring areas are expected to deepen slightly, with their central values decreasing from about 1004hpa to 1002hpa according to the GFS model, from about 1006hpa to 1004hpa according to the ECMWF model and from about 1005hpa to 1003hpa according to the UKMET model. The seasonal lows across South Sudan and the neighboring areas are also expected to deepen with central pressure values becoming as low as 1002hpa according to the GFS model, and as low as 1001hpa according to the UKMET model.

At the 850hpa level, broad zonal wind convergence is expected to dominate the flow across the central and the eastern parts of the Gulf of Guinea region, central Africa, Sudan and Ethiopia. The wind speed associated with the cross-equatorial flow from the Indian Ocean exceeds 20kts over the GHA region and the adjacent areas of the Indian Ocean.

At 700hpa level, a feeble trough in easterly trough is expected to propagate westwards across Sierra Leone and Guinea through 24 to 48 hours.

At 500hpa level, wind speed associated with mid-tropospheric easterly jet exceeds 30kts over many places across the Gulf of Guinea, southern Sahel, central Africa and Sudan during the first half of the forecast period and tends to weaken towards end of the forecast period

In the next five days, westward propagating easterly wave across coastal Gulf of Guinea region, seasonal wind convergences over parts of West and central Africa, Sudan and western Ethiopia are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to heavy rainfall over Guinea, Sierra Leone, Liberia, local areas in Burkina Faso, Nigeria, southern Chad, CAR, Congo, DRC southern Sudan, and western Ethiopia.

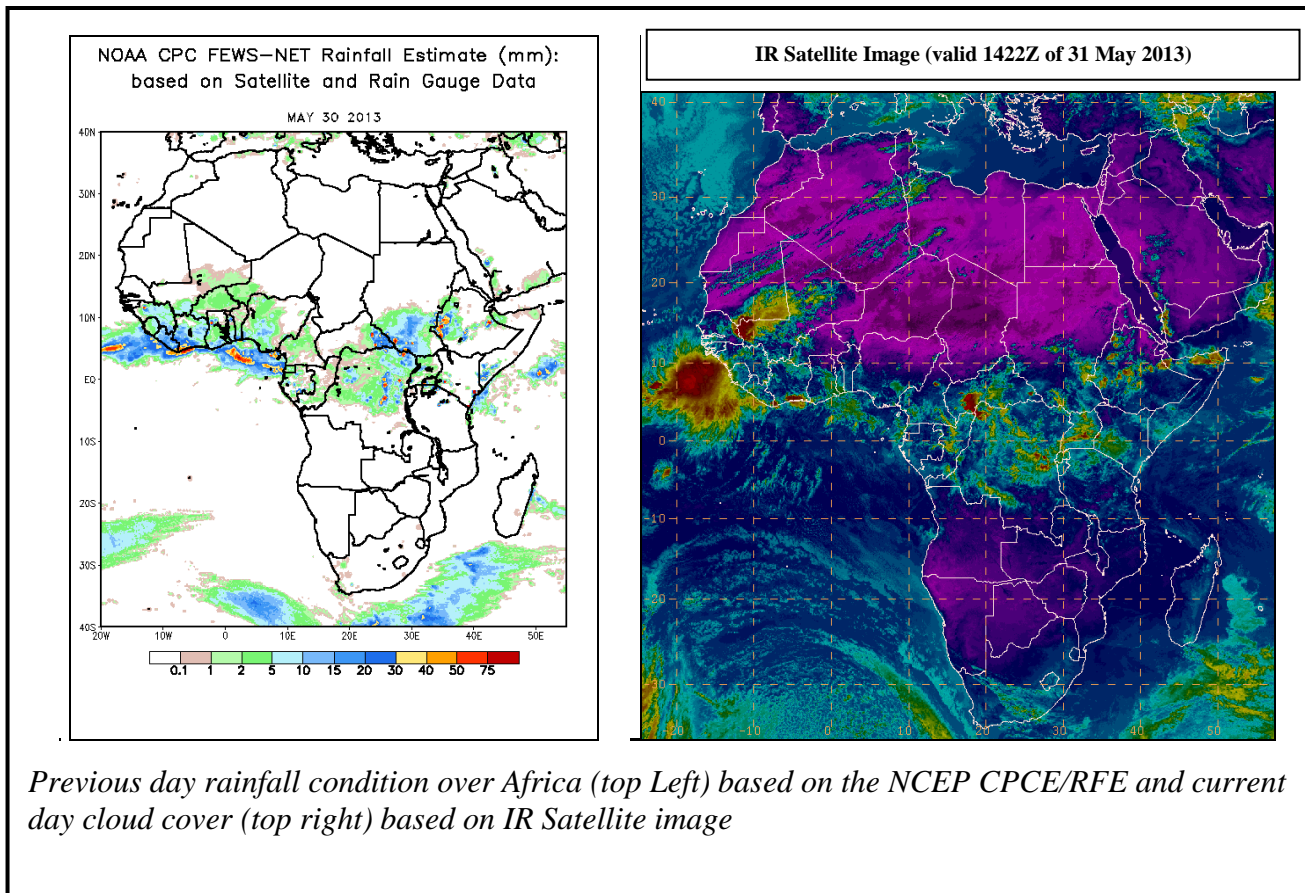
2.0. Previous and Current Day Weather Discussion over Africa (30 May 2013 – 31 May 2013)

2.1. Weather assessment for the previous day (30 May 2013)

During the previous day, moderate to localized heavy rainfall was observed over Gulf of Guinea coast, parts of CAR and DRC, South Sudan and western Ethiopia.

2.2. Weather assessment for the current day (31 May, 2013)

Intense patches of clouds are observed over southern Mauritania and the adjacent areas of Mali, CAR, portions of DRC, Uganda and local areas in Ethiopia.



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