

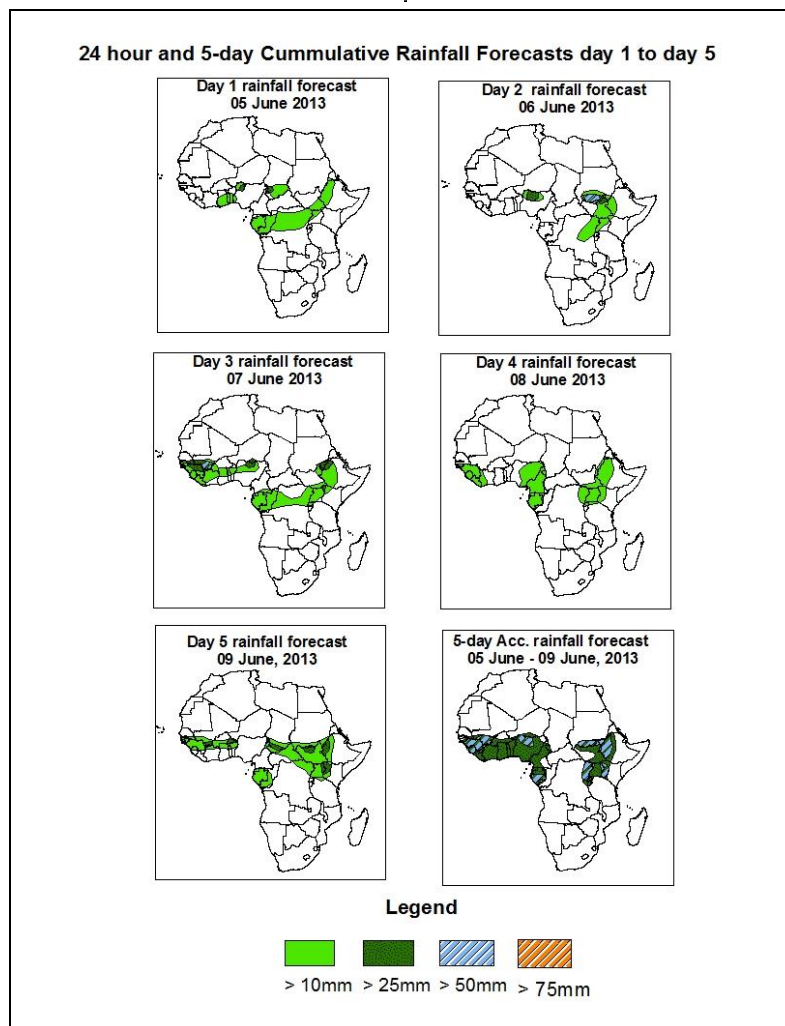


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 05 June – 06Z of 09 June, 2013. (Issued at 1830Z of 04 June 2013)

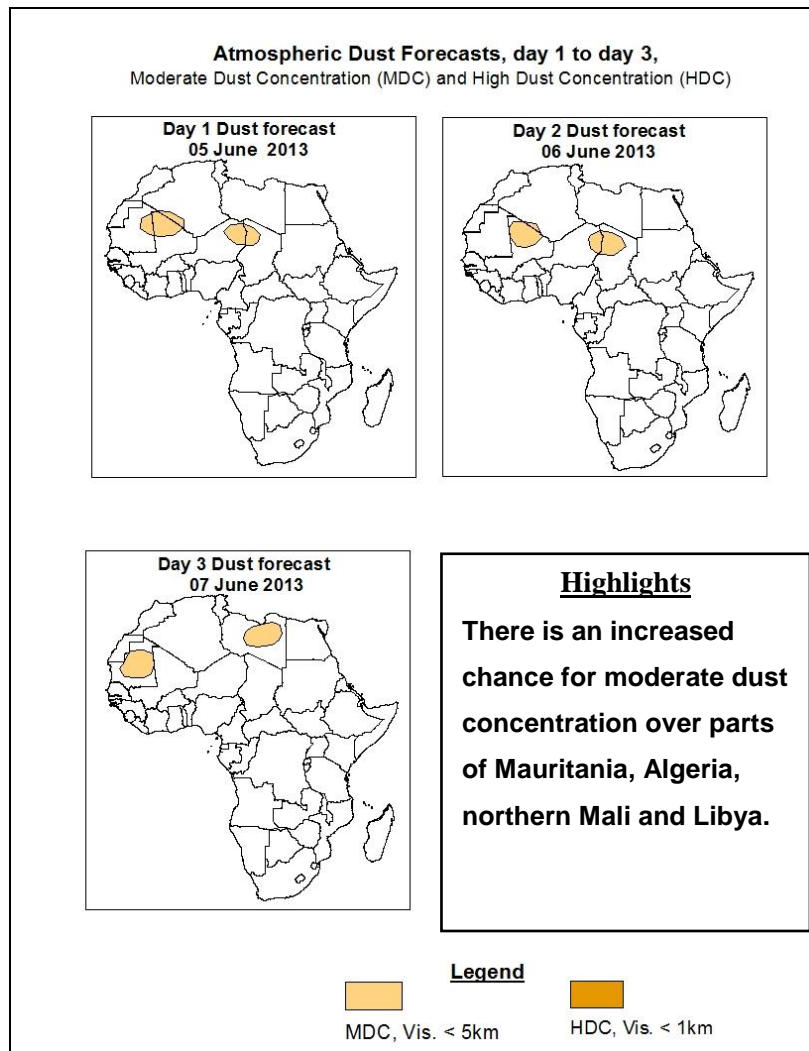
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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, the monsoon flow across West Africa and the adjacent areas of Central Africa regions, the seasonal wind convergence in CAB region, and strong cross equatorial flow, with its associated convergence over the Horn Africa 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, southern Mali, northern Nigeria, southern Chad, Congo, eastern DRC, southern Sudan, western Kenya and western Ethiopia.



1.2. Model Discussion: Valid from 00Z of 04 June 2013

Model comparison (Valid from 00Z;04 June, 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 intensify gradually through 24 to 120 hours. Its central pressure value is expected to increase from about 1024hpa to 1036hpa through 24 to 96 hours according to the GFS model, from about 1024hpa to 1033hpa according to the ECMWF model and from about 1024hpa to 1034hpa according to the UKMET model.

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

decrease from about 1033hpa to 1027hpa according to the GFS model, from 1033hpa 1029hpa according to the ECMWF model and from 1034 to 1029hpa according to the UKMET model.

The Mascarene high pressure system over southwestern Indian Ocean is expected to maintain moderate intensity during the forecast period. Its central pressure value is expected to vary between 1022hpa to 1027hpa according to the GFS model, from between 1021hpa 1028hpa according to the ECMWF model and from 1021hpa to 1030hpa according to the UKMET model

The heat lows over the central Sahel and neighboring areas are expected to remain weak during the forecast period, with their central pressure values varying from about 1004hpa to 1006hpa according to the GFS model, from about 1004hpa to 1007hpa according to the ECMWF model and from about 1005hpa to 1006hpa according to the UKMET model. The seasonal lows across South Sudan and the neighboring areas are also expected to remain weak with central pressure values varying from 1002hpa to 1004hpa according to the GFS model, and from about 1002hpa to 1004hpa 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 Sahel region, Sudan and Ethiopia. A lower level cyclonic circulation is expected to shift westwards across the southwestern corner of West Africa through 24hours. The wind speed associated with the cross-equatorial flow from the Indian Ocean exceeds 35kts over the GHA region and the adjacent areas of the Indian Ocean.

At 700hpa level, a feeble trough in easterly flow is expected to propagate westwards across Cote D'Ivoire, Liberia, Sierra Leone, Guinea and Senegal towards end of the forecast period.

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, with the of maximum wind shifting westwards as well as covering broader areas during the forecast period.

In the next five days, the monsoon flow across West Africa and the adjacent areas of Central Africa regions, the seasonal wind convergence in CAB region, and strong cross equatorial flow, with its associated convergence over the Horn Africa 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, southern Mali, northern Nigeria, southern Chad, Congo, eastern DRC, southern Sudan, western Kenya and western Ethiopia.

2.0. Previous and Current Day Weather Discussion over Africa

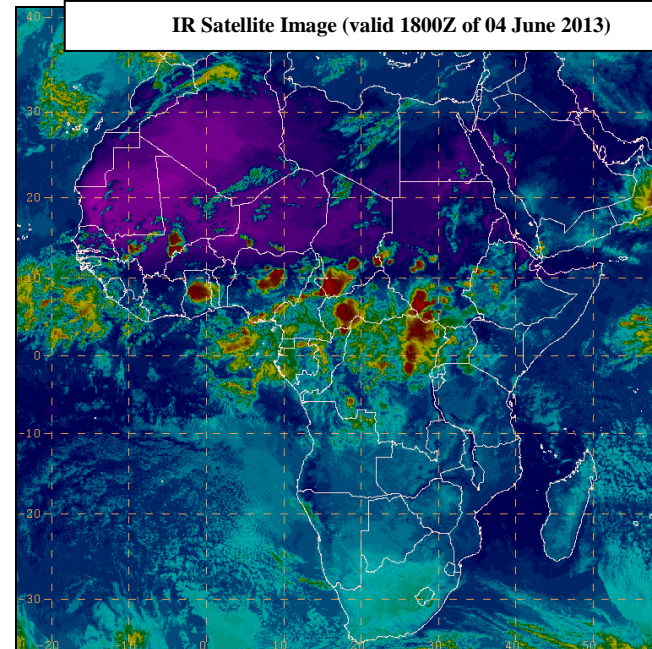
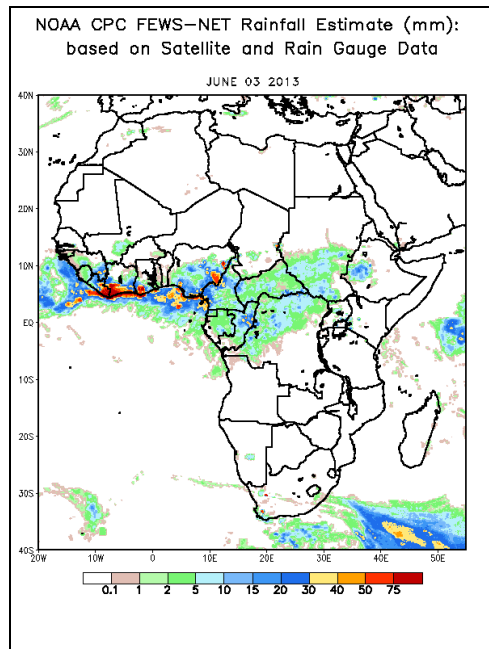
(03 June 2013 – 04 June 2013)

2.1. Weather assessment for the previous day (03 June 2013)

During the previous day, moderate to locally heavy rainfall was observed over Guinea, Liberia, southern Cote D'Ivoire, eastern Nigeria, Congo, northern DRC, Sudan and western Ethiopia.

2.2. Weather assessment for the current day (04 June, 2013)

Intense clouds were observed across portions of the Gulf of Guinea countries, Central Africa region and Sudan.



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