

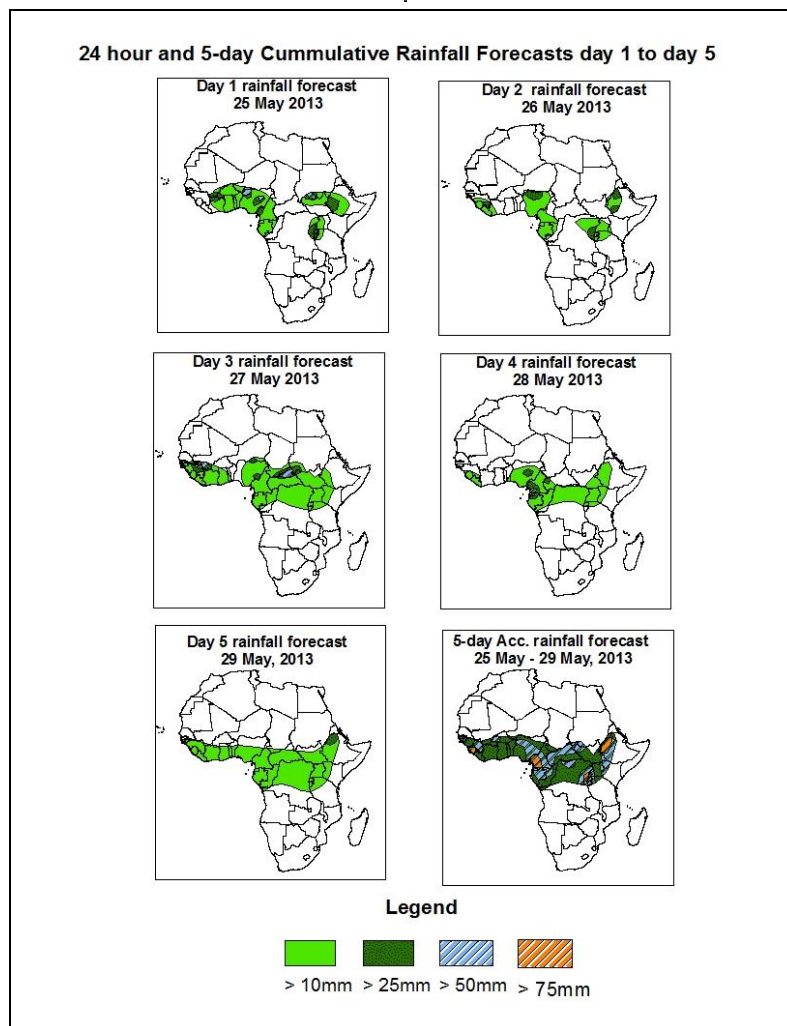


# NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

## 1.0. Rainfall Forecast: Valid 06Z of 25 May – 06Z of 29 May, 2013. (Issued at 1430Z of 24 May 2013)

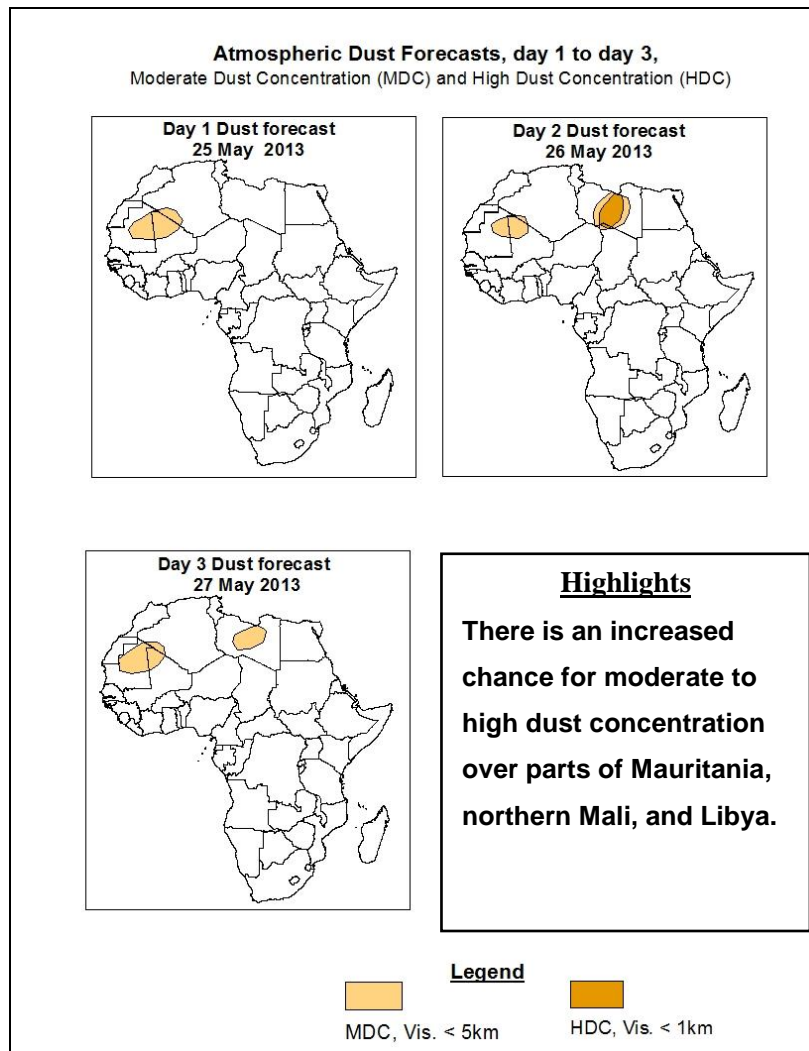
### 1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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, active monsoon flow across West Africa, seasonal wind convergences over central African region and 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, western Burkina Faso, Nigeria, Cameroon, Gabon, Congo, CAR, parts of DRC, Uganda, western Kenya, South Sudan and Ethiopia.*



## 1.2. Model Discussion: Valid from 00Z of 24 May 2013

*Model comparison (Valid from 00Z;24 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 St. Helena High Pressure System over southeast Atlantic Ocean is expected to remain weak during the forecast period. Its central pressure value is expected remain below 1021hpa according to the GFS model and below 1020hpa according to the UKMET and the ECMWF models.

The Mascarene high pressure system over southwestern Indian Ocean is expected to weaken gradually while shifting eastwards through 24 to 96 hours. Its central pressure value is expected to decrease from about 1025hpa to 1021hpa, according to the GFS

model, from about 1024hpa to 1019hpa according to the ECMWF model and from 1024hpa to 1021hpa 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 1005hpa to 1002hpa according to the GFS model, from about 1007hpa to 1004hpa according to the ECMWF model and from about 1006hpa to 1003hpa according to the UKMET model. The seasonal lows across South Sudan and the neighboring areas are also expected to deepen slightly with central pressure values becoming as low as 1003hpa according to the GFS model, as low as 1004hpa according to the ECMWF model as low as 1001hpa according to the UKMET model.

At the 850hpa level, broad and zonal wind convergence is expected to dominate the flow across the Gulf of Guinea, central Africa, Sudan and Ethiopia. The wind speed associated with the cross-equatorial flow from the Indian Ocean exceeds 20kts over the GHS region and the adjacent areas of the Indian Ocean, slightly weakening towards end of the forecast period. Seasonal lower level wind convergences are expected to remain active near the Congo Air Boundary (CAB) area during 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 stronger winds covering more areas towards end of the forecast period.

In the next five days, active monsoon flow across West Africa, seasonal wind convergences over central African region and 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, western Burkina Faso, Nigeria, Cameroon, Gabon, Congo, CAR, parts of DRC, Uganda, western Kenya, South Sudan and Ethiopia.

## 2.0. Previous and Current Day Weather Discussion over Africa

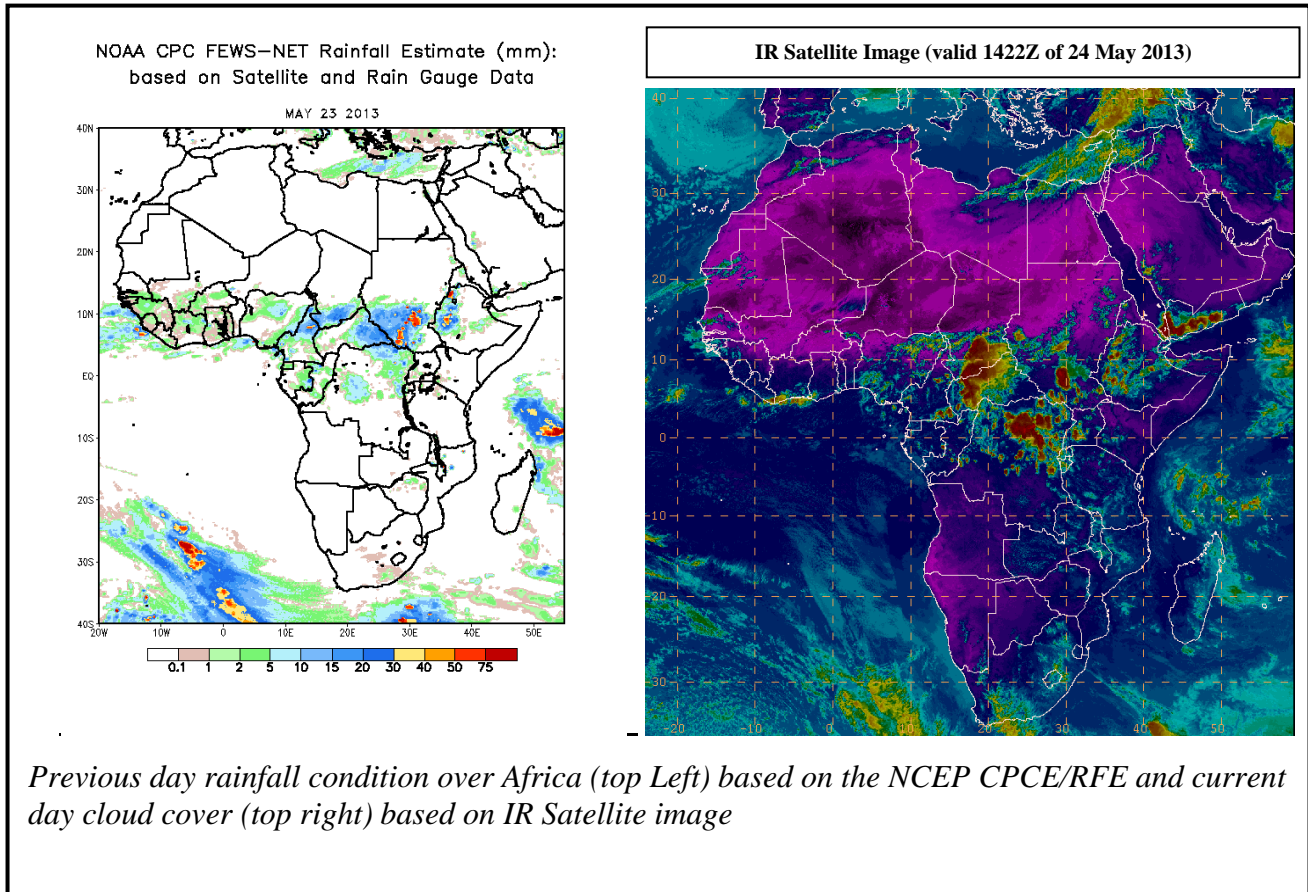
(23 May 2013 – 24 May 2013)

### 2.1. Weather assessment for the previous day (23 May 2013)

During the previous day, moderate to localized heavy rainfall was observed over parts of Nigeria, Cameroon, Gabon, Congo, CAR, DRC, south Sudan and Ethiopia.

### 2.2. Weather assessment for the current day (24 May, 2013)

Intense patches of clouds are observed over parts of Cameroon, Southern Chad, CAR, DRC, southern Sudan and Ethiopia.



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