

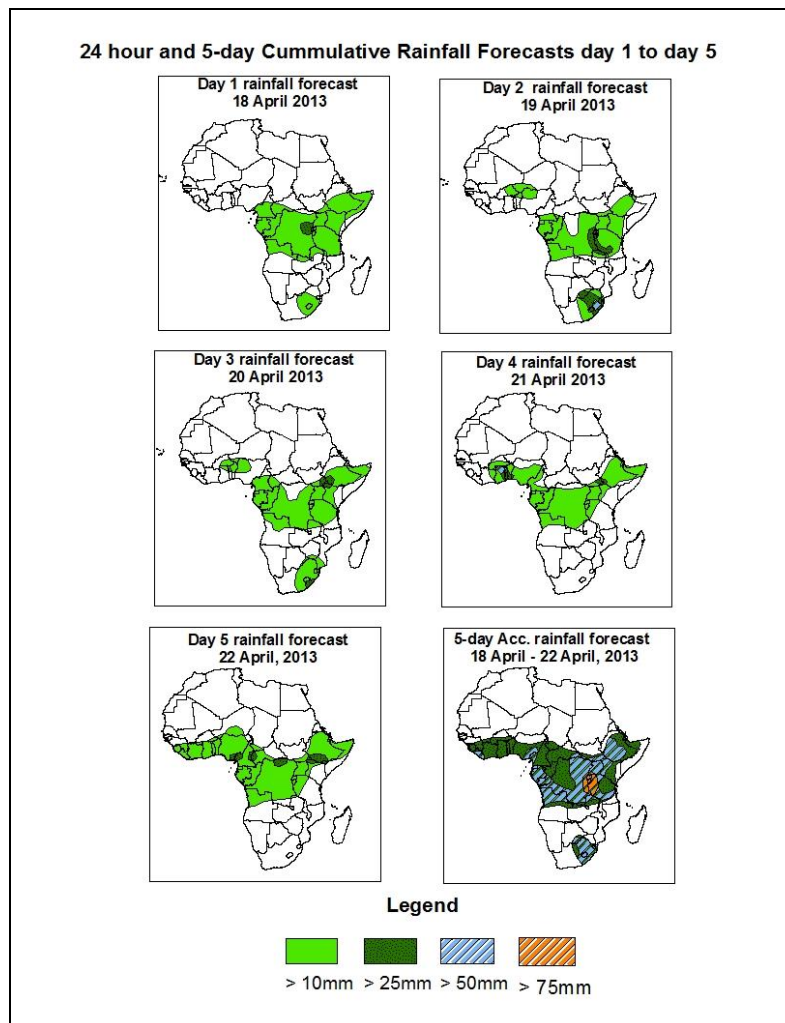


# NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

## 1.0. Rainfall Forecast: Valid 06Z of 18 April – 06Z of 22 April, 2013. (Issued at 16:30Z of 17 April 2013)

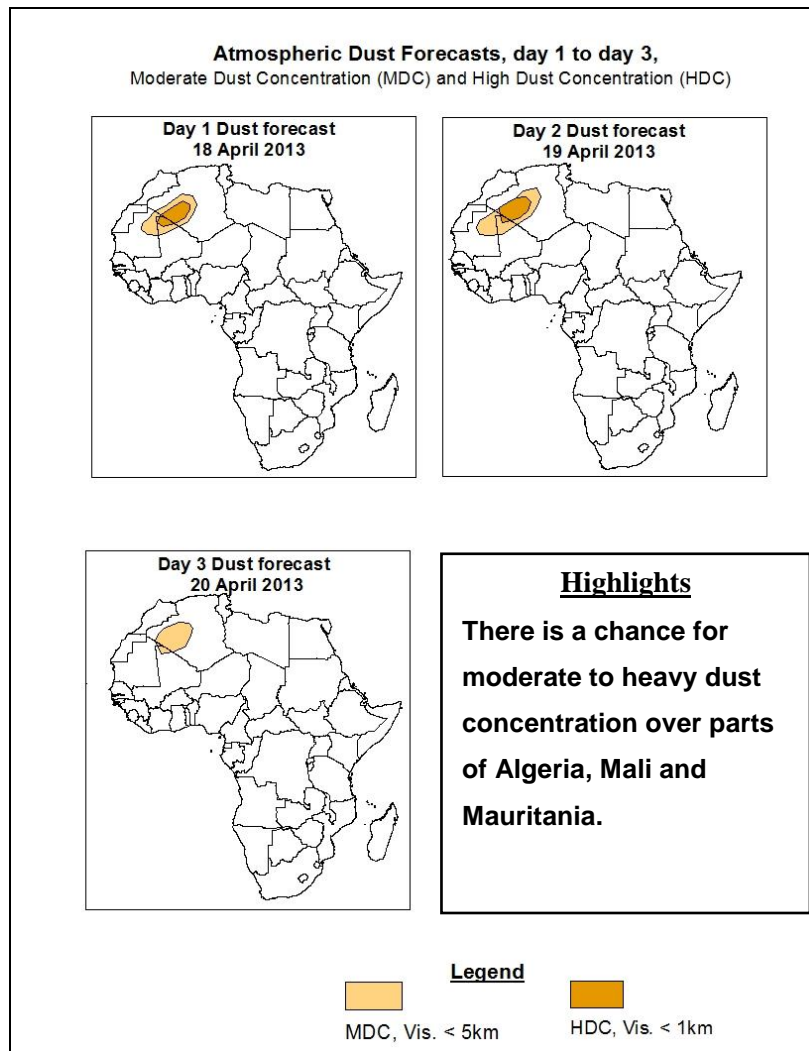
### 1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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, seasonal convergence near the Congo Air Boundary (CAB) and the Horn of Africa regions, and onshore winds from the Atlantic Ocean and their associated convergence are expected to enhance rainfall in their respective regions. Hence, there is an increased chance for moderate to heavy rainfall over portions of the Gulf of Guinea, western Equatorial Africa, northern Angola, parts of DRC, Rwanda, Burundi, Uganda, Tanzania, Kenya, parts of Ethiopia and South Africa.*



## 1.2. Model Discussion: Valid from 00Z of 17 April 2013

*Model comparison (Valid from 00Z; 16 April, 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 maintain moderate intensity while shifting eastwards through 24 to 72 hours. Its central pressure value is expected to remain about 1027hpa, according to the GFS model, about 1026hpa according to the ECMWF model and from about 10226hpa to 1027hpa according to the UKMET model.

The Mascarene high pressure system over southwestern Indian Ocean is also expected to intensify gradually through 24 to 72 hours while shifting eastwards. Its central pressure value is expected to increase from about 1028hpa to 1031hpa according to the GFS model, from about 1027hpa to 1031hpa according to the ECMWF and the UKMET models.

The seasonal lows across South Sudan and the neighboring areas are expected to remain moderate during the forecast period, with their central pressure values varying from 1001hpa to 1003hpa according to the GFS model, from about 1004hpa to 1005hpa according to the ECMWF model and from about 1003hpa to 1004hpa according to the UKMET model.

At the 850hpa level, lower level wind convergences near the Congo boundary region is expected to remain less active during the forecast period. The southerly flow across East Africa and its associated convergence over the Horn of Africa is expected to continue enhancing rainfall in the region during the forecast period. The seasonal monsoon flow from the Atlantic Ocean and its associated convergence is expected to enhance rainfall occasionally over portions of the Gulf of Guinea and across western parts of Equatorial Africa regions through 24 to 120 hours.

At 500hpa, a deep trough in mid-latitude westerly flow is expected to prevail across southern African countries during the forecast period.

At 200hpa, wind speed associated with the northern hemisphere sub-tropical westerly jet is expected to strengthen gradually across Northeast Africa during the forecast period.

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

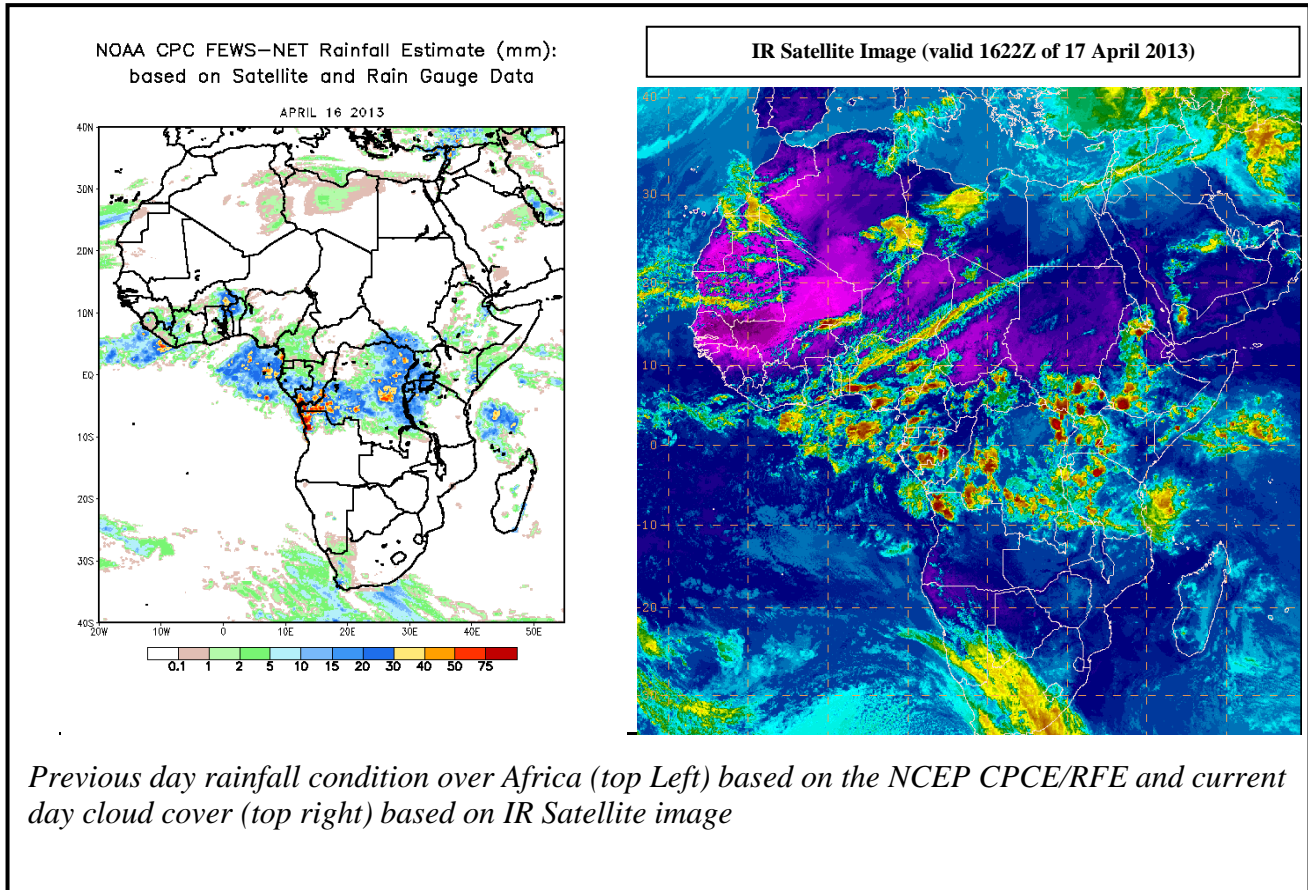
(16 April 2013 – 17 April 2013)

### 2.1. Weather assessment for the previous day (16 April 2013)

During the previous day, moderate to localized heavy rainfall was observed over parts of Burkina Faso, Cameroon, Gabon, DRC, Tanzania, Burundi, Rwanda, Kenya and Uganda.

### 2.2. Weather assessment for the current day (17 April, 2013)

Intense patches of clouds are observed over parts of Nigeria, Cameroon, Gabon, DRC, South Sudan, Tanzania, Burundi, Rwanda Kenya, Uganda, and Ethiopia.



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