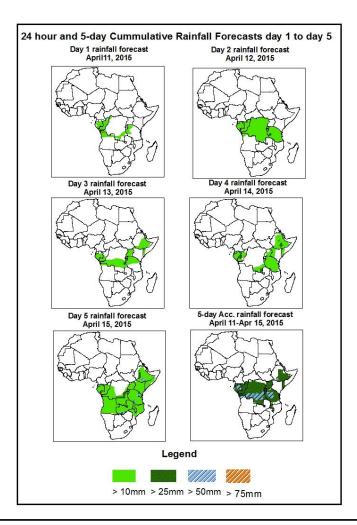


### NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

# 1. Rainfall Forecast: Valid 06Z of April 11 – 06Z of April 15, 2015. (Issued at 1800Z of April 09, 2015)

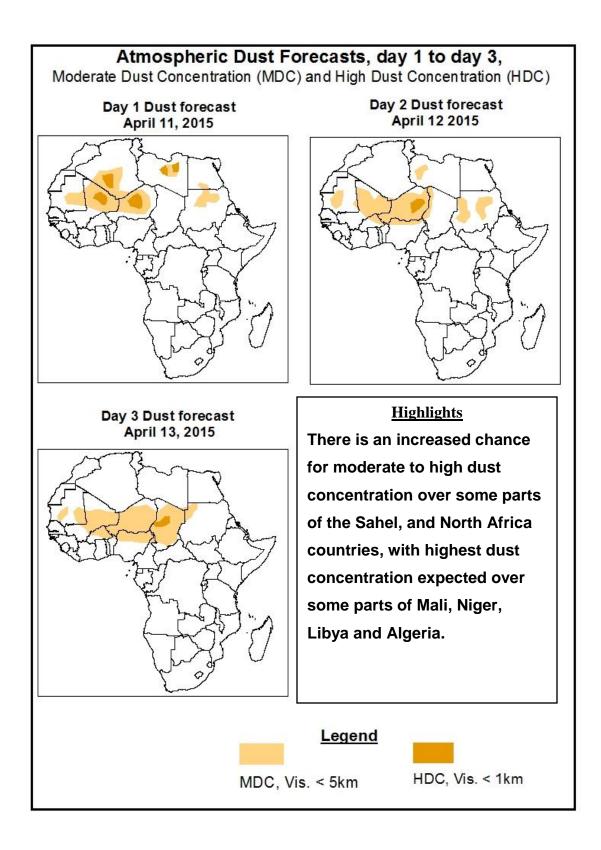
#### 1.1. Twenty Four Hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of 75% probability of precipitation (POP) exceeded, based on the NCEP/GFS and the NCEP global ensemble forecasts system (GEFS) and expert assessment.



#### Summary

In the next five days, lower-level wind convergence in the region between Cameroon and Ethiopia is expected to enhance rainfall in these regions. There is an increased chance for heavy rainfall over Tanzania, Equatorial Guinea, DRC, Southern Ethiopia and Angola.



#### 1.2. Model Discussion: Valid from 00Z of April 10, 2015

The Azores high pressure system over the Northeast Atlantic Ocean is expected to slightly intensify from a central pressure value of 1026hpa in 24 hours to 1027hpa in 120hours, according to the GFS model.

The Arabian High Pressure system is expected to weaken from a central pressure value of 1023hpa in 72 hours to 1020hpa in 96 hours according to the GFS model.

The central pressure value of the Mascarene high pressure system over the southwestern Indian Ocean is expected to weaken from a value of 1024hpa in 24 hours to a value of 1020hpa in 96 hours, according to the GFS model.

The St Helena high pressure system over the Southeast Atlantic Ocean is expected to intensify from a central pressure value of 1021hpa in 24 hours to 1032hpa in 120 hours, according to the GFS model.

At 925Hpa level, dry northeasterly to easterly wind (>20kts) is expected to prevail across much of the Sahel countries through 24 to 72 hours and the intensity of the wind tends to weaken across the North central and Northeastern regions of Africa, while remaining moderately strong across Northwestern Africa towards end of the forecast period.

At 850Hpa level, easterly wind is expected to prevail across much of African countries. Wind convergence is expected to remain active in Uganda, CAR, DRC and Mali, during the forecast period.

At 700hpa level, a trough associated with mid-latitude frontal system is expected to prevail across Northeast Africa. Divergence over West Africa and Southern African countries, convergence over DRC, Zambia and Chad. Easterly wind flow over East, Southern and central Africa is expected to prevail during the forecast period, according to the GFS model.

At 500Hpa, a trough associated with a mid-latitude frontal system is expected to prevail across the north east Africa. Divergence over West Africa and Southern of African countries. Easterly wind over east and central Africa. Convergence over Botswana, Mozambique and Zambia will prevail in the region during the forecast period, according to the GFS model.

In the next five days, lower-level wind convergence in the region between Cameroon and Ethiopia is expected to enhance rainfall in these regions. There is an increased chance for heavy rainfall over Tanzania, Equatorial Guinea, DRC, Southern Ethiopia and Angola.

# 2.0. Previous and Current Day Weather Discussion over Africa

## (April 09, 2015 – April 10, 2015)

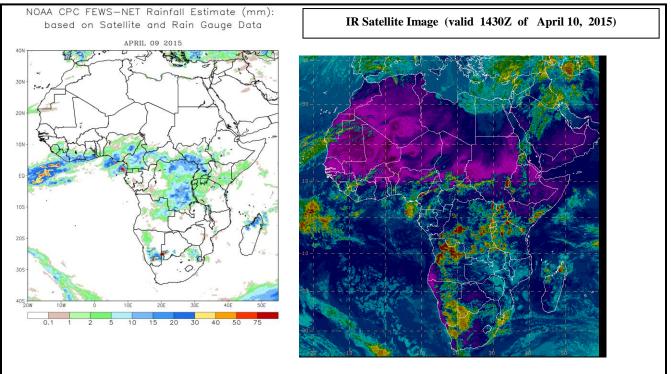
#### 2.1. Weather assessment for the previous day (April 09, 2015)

Moderate to heavy rainfall were observed across Ivory Coast, Cameroon, Zambia,

Nigeria, South Sudan, Namibia, Madagascar, DRC and CAR.

#### 2.2. Weather assessment for the current day (April 10, 2015)

Intense convective deep clouds are observed over DRC, Namibia, CAR, Angola, Tanzania, Angola, Ghana and Zambia



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

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