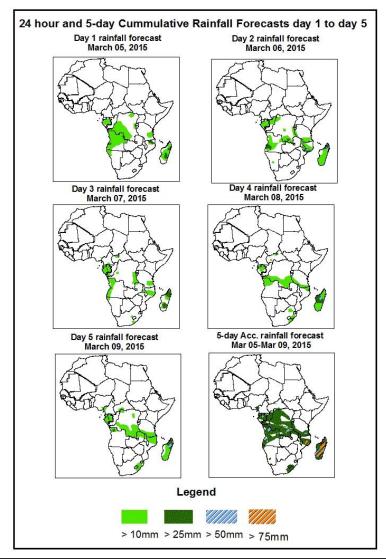


# NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall Forecast: Valid 06Z of March 05 – 06Z of March 09, 2015. (Issued at 1730Z of March 04, 2015)

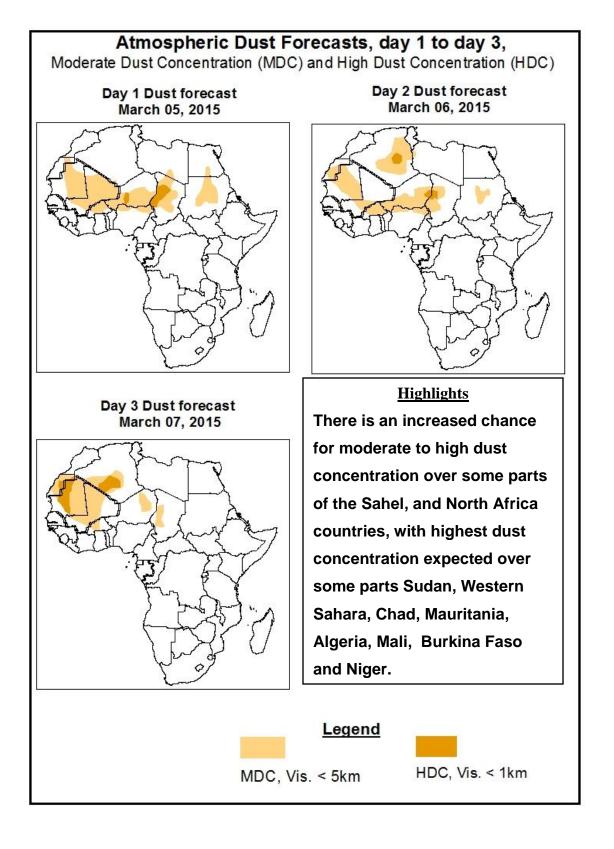
# 1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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 Angola and Mozambique is expected to enhance rainfall in these regions. There is an increased chance for heavy rainfall over DRC, Gabon, CAR, Southern Tanzania, Rwanda, Northern Mozambique, Angola and Madagascar.



#### 1.2. Model Discussion: Valid from 00Z of March 05, 2015

The Azores high pressure system over the Northeast Atlantic Ocean is expected to weaken from a central pressure value of 1042hpa in 24 hours to a central pressure value of 1038hpa during the forecast period, according to the GFS model.

The Arabian High Pressure system is expected to weaken from a central pressure value of 1025hpa in 24 hours to 1023hpa during the forecast period, according to the GFS model.

The central pressure value of the Mascarene high pressure system over the southwestern Indian Ocean is expected to intensify slightly from 1027hpa to 1028hpa during the forecast period, 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 1025hpa in 24 hours to a central pressure value of 1027hpa 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 Northcentral and Northeastern regions of Africa, while remaining moderately strong across Northwestern Africa towards end of the forecast period.

At 850Hpa level, northeasterly wind is expected to prevail across Central and East African countries during the forecast period. Wind convergences are expected to remain active in DRC, Zambia, Mozambique, CAR, South Sudan, Madagascar and Angola during the forecast period. Zonally oriented wind convergence is expected to prevail in the region.

At 700hpa level, a trough associated with mid-latitude frontal system is expected to prevail across North West Africa extending into the Sahel regions of West Africa. Divergence over Southern African countries, North easterly wind flow over east and

central Africa and a trough within the Mozambique channel 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 eastern Mediterranean Sea. Divergence over West Africa, Greater Horn of Africa and Southern African Countries and Easterlies over east and central Africa 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 Angola and Mozambique is expected to enhance rainfall in these regions. There is an increased chance for heavy rainfall over DRC, Gabon, CAR, Southern Tanzania, Rwanda, Northern Mozambique, Angola and Madagascar.

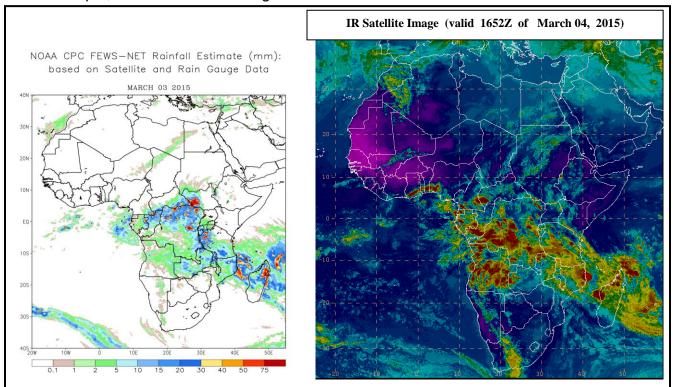
# 2.0. Previous and Current Day Weather Discussion over Africa (March 03, 2015 – March 04, 2015)

### 2.1. Weather assessment for the previous day (March 03, 2015)

Moderate to heavy rainfall were observed across Congo Brazzaville, Gabon, DRC, Angola, Malawi, Zambia, Rwanda, Burundi, Tanzania, Mozambique, South Sudan and Madagascar.

## 2.2. Weather assessment for the current day (March 04, 2015)

Intense convective deep clouds are observed over Rwanda, Cameroon, Equatorial Guinea, DRC, CAR, Southwest Nigeria, Southern Ghana, Angola, Zambia, Malawi, Mozambique, Tanzania and Madagascar.



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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