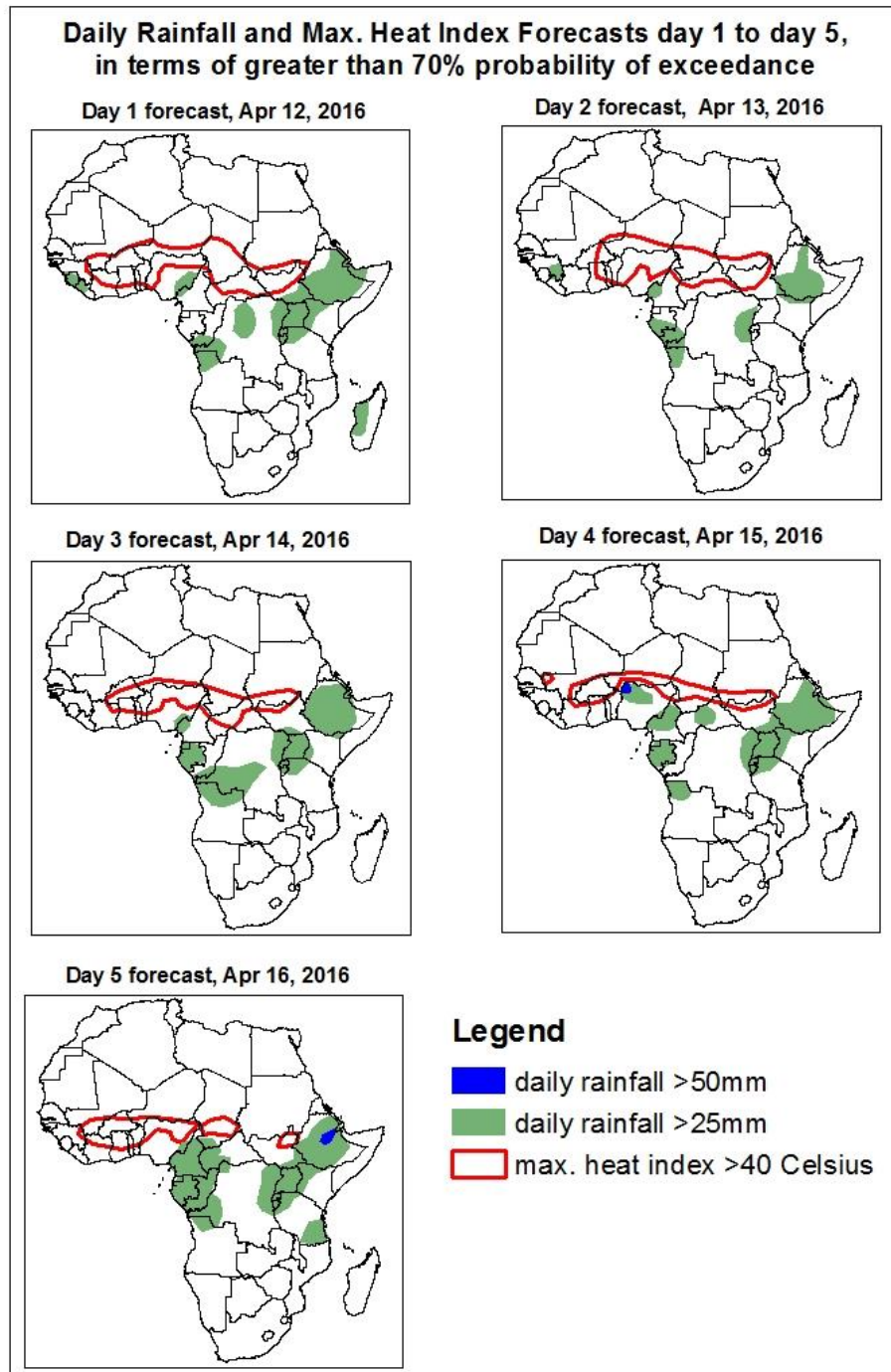


# NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

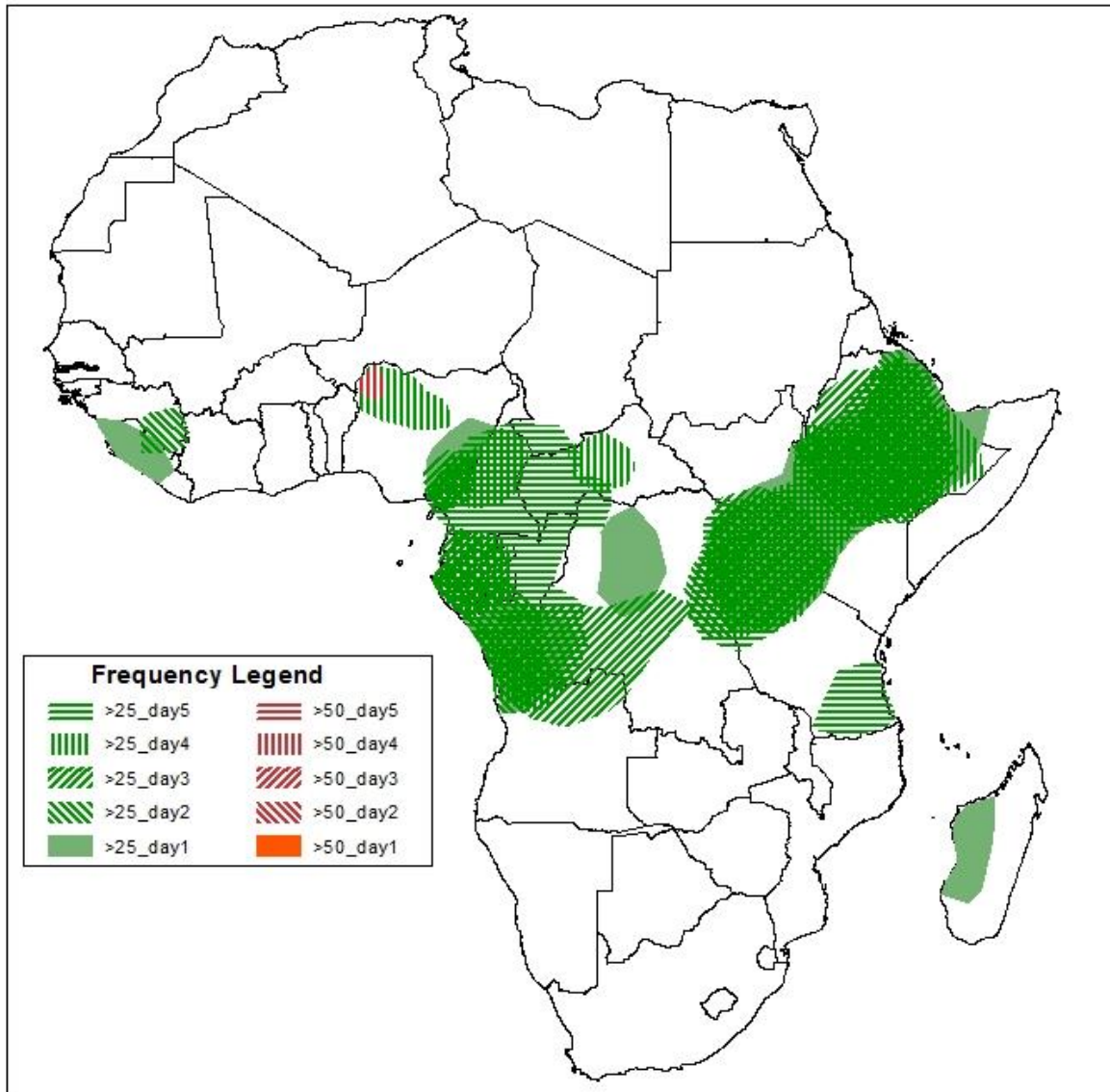
## 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on April 11, 2016)

### 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: April 12 – April 16, 2016)

The forecasts are expressed in terms of high probability of precipitation (POP) and high probability of maximum heat index, based on the NCEP/GFS, ECMWF and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



## Five Days Rainfall Forecast Summary Apr 12 - Apr 16, 2016

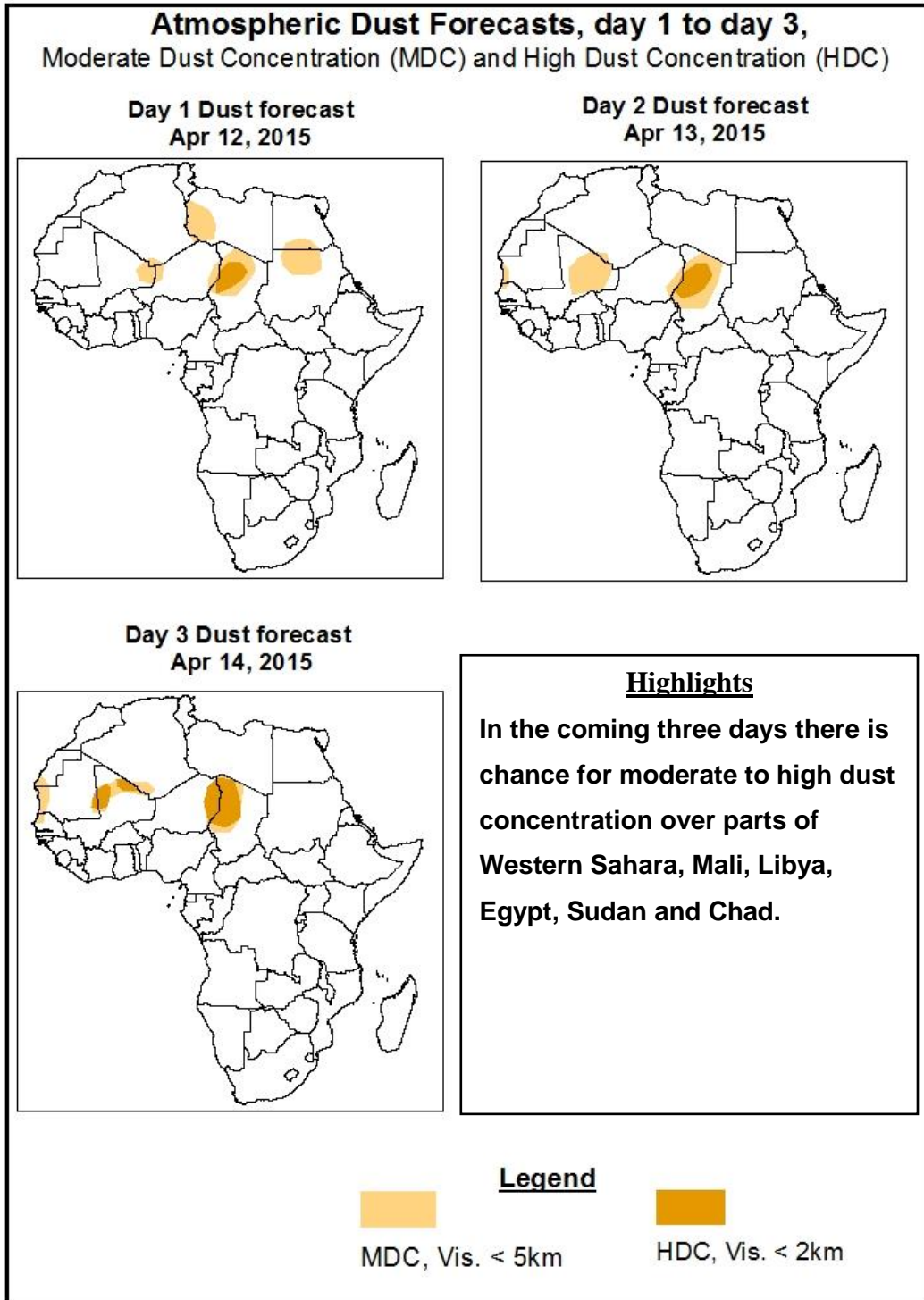


### Highlights

In the coming five days, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Liberia, Guinea, Nigeria, Cameroon, Gabon, Congo, DRC, CAR, Uganda, Rwanda, Burundi, Kenya, Ethiopia, Angola Tanzania and Western Madagascar.

**1.2. Atmospheric Dust Concentration Forecasts (valid: April 12 – April 16, 2016)**

The forecasts are expressed in terms of high probability of dust concentration, based on the Navy Aerosol Analysis and Prediction System, NCEP/GFS lower-level wind forecasts and expert assessment.



### **1.3. Model Discussion, Valid: April 12 – April 16, 2016**

The central pressure value associated with the Azores high pressure system over Northeast Atlantic with an initial central pressure value of about 1028Hpa is expected to intensify to about 1036Hpa in the next 24Hrs. It is expected to weaken to about 1029Hpa in the next 72Hrs and intensify to about 1036Hpa in the next 96Hrs.

The St. Helena High pressure system over the Southeast Atlantic Ocean with an initial central pressure value of 1020Hpa is expected to intensify to 1029Hpa in the next 72Hrs. It is expected to weaken to about 1022Hpa in the next 96Hrs.

The Mascarene high pressure system over the Southwest Indian Ocean with an initial central value of 1025hPa is expected to weaken to 1020hPa in the next 24Hrs. It is expected to intensify to about 1029Hpa during the forecast period.

At 925HPa level, dry northeasterly to easterly flow is expected to prevail across parts of the Sahel region and Northwest Africa, leading to increased atmospheric dust concentration in some of these areas.

At 850hPa level, moisture influx from Atlantic Ocean and its associated lower-level convergence is expected to prevail across coastal areas of West Africa, Gabon, and Angola, resulting in enhanced rainfall activity in the area. A strong moisture convergence across southern DRC is expected to enhance rainfall during the forecast period. Monsoon flow from the Indian Ocean across East Africa and the seasonal wind convergences across eastern DRC and the Lake Victoria region is expected to enhance rainfall in the area during the forecast period.

In the coming five days, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Liberia, Guinea, Nigeria, Cameroon, Gabon, Congo, DRC, CAR, Uganda, Rwanda, Burundi, Kenya, Ethiopia, Angola Tanzania and Western Madagascar.

There is also an increased chance for maximum heat index values to exceed 40°C portions of Mali, Burkina Faso, Ivory Coast, Ghana, Togo, Benin, Nigeria, Niger, Chad, CAR and parts of South Sudan.

## 2.0. Previous and Current Day Weather over Africa

### 2.1. Weather assessment for the previous day (April 10, 2016)

Moderate to locally heavy rainfall was observed over portions of, Liberia, Ivory Coast, Southern Nigeria, Cameroon, Gabon, Congo, DRC, Uganda, Burundi, Kenya, Ethiopia, Somali, Angola, Tanzania and NE Botswana.

### 2.2. Weather assessment for the current day (April 11, 2016)

Intense convective clouds are observed across most parts of Central Nigeria, Cameroon, Gabon, Congo, Southern Sudan, Ethiopia, DRC, Angola and Madagascar.

