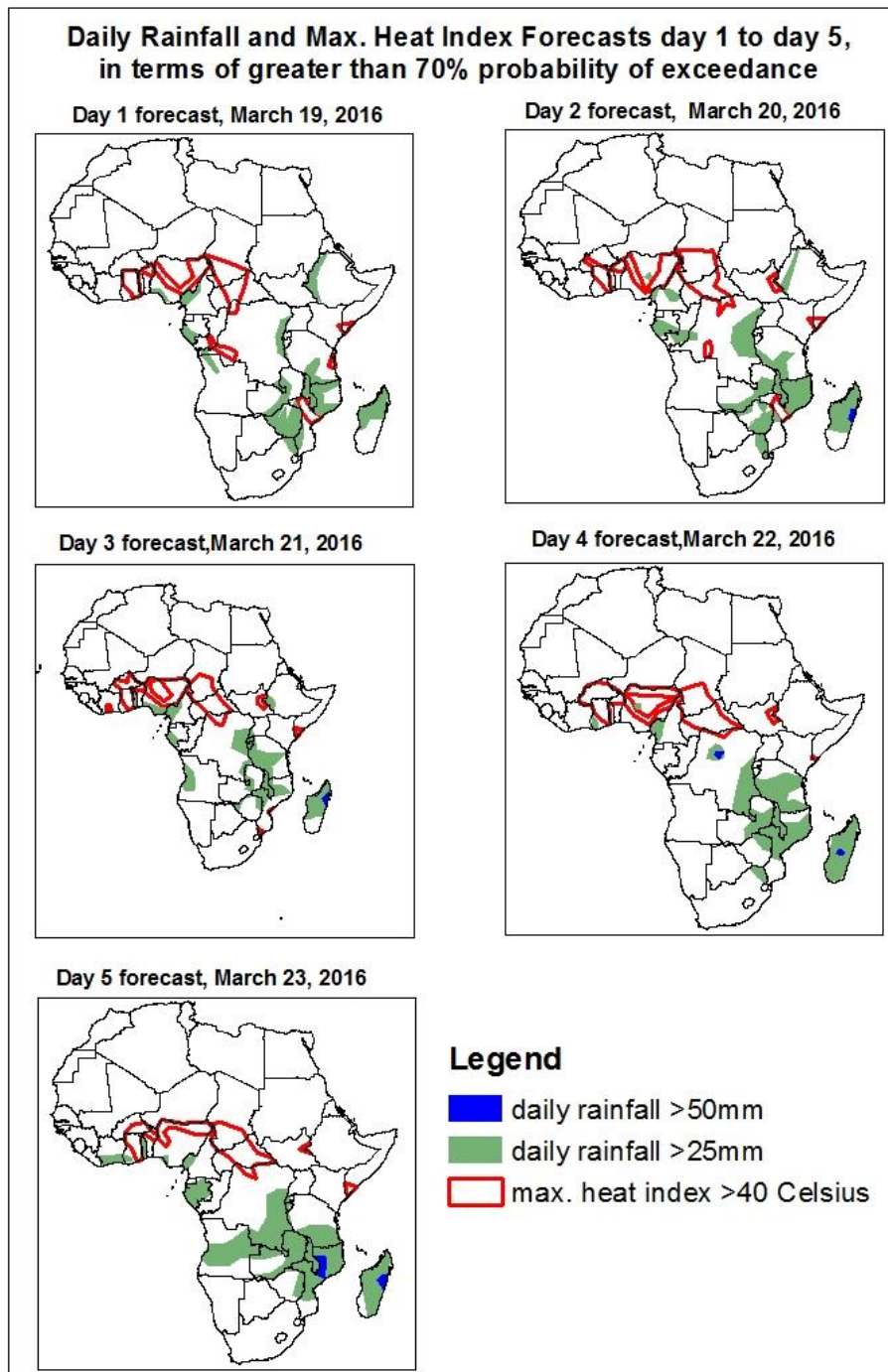


# NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

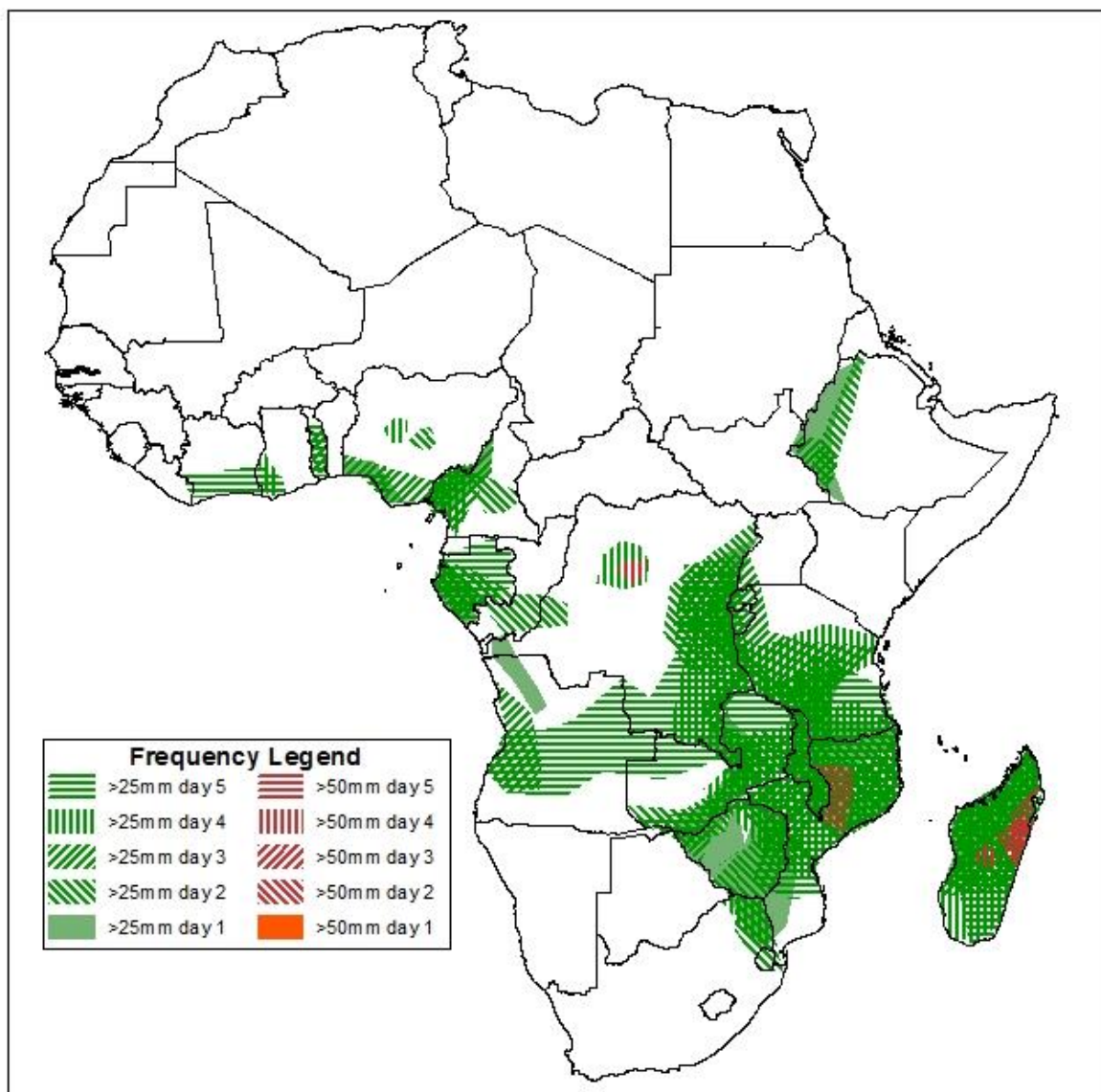
## 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on March 18, 2016)

### 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: March 19 – March 23, 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 March 19 - March 23, 2016

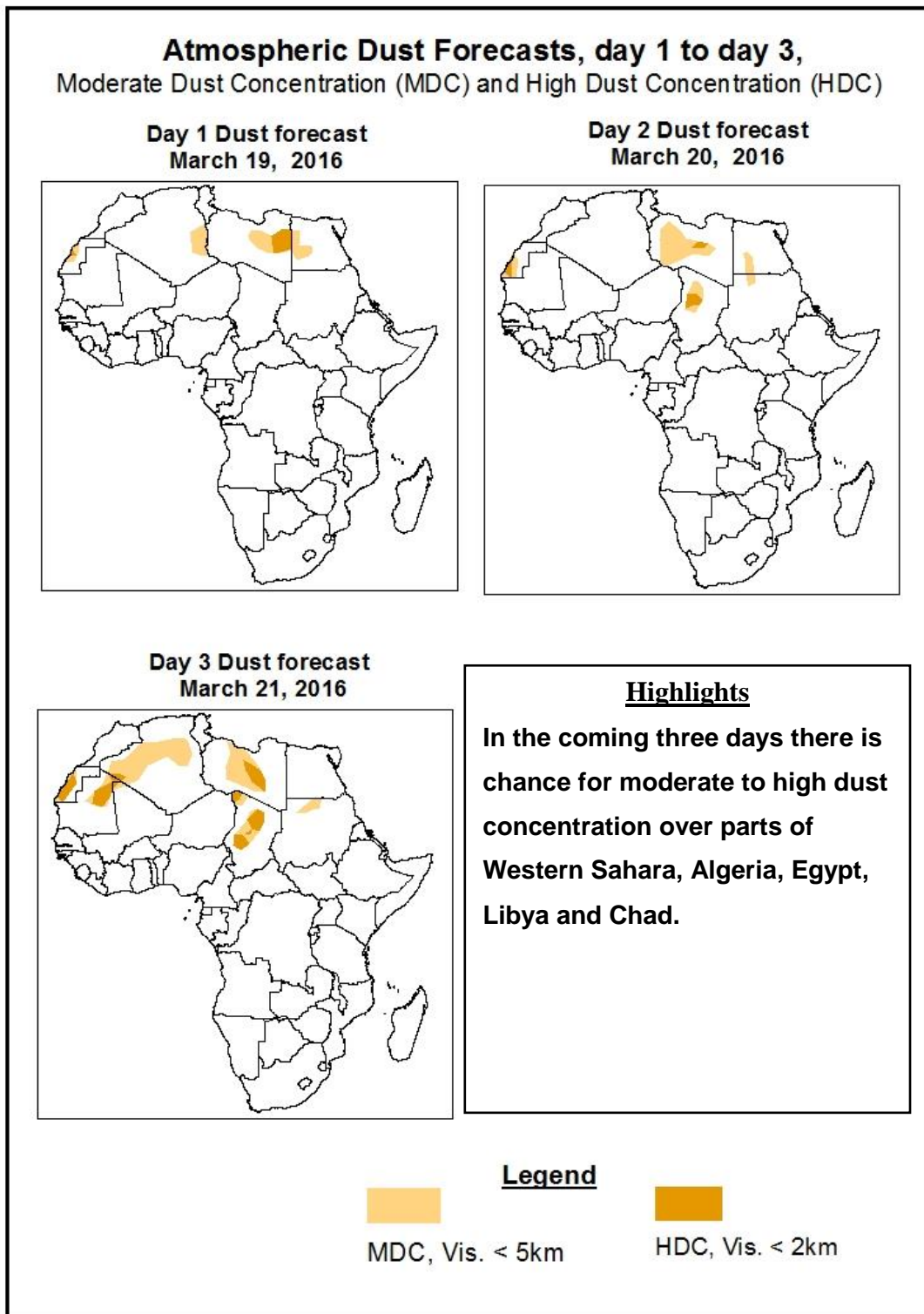


### Highlights

In the coming five days, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Cote d'Ivoire, Ghana, Benin, Southern and Central Nigeria, Cameroon, Gabon, Congo, Western and DRC, Western Ethiopia, Angola, Zambia, Tanzania, Zimbabwe, Northern Mozambique, Northern South Africa and Madagascar.

## 1.2. Atmospheric Dust Concentration Forecasts (valid: Mar 19– March 21, 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: March 19– March 23, 2016**

The central pressure value associated with the Azores high pressure system over Northeast Atlantic with an initial central pressure value of about 1024Hpa is expected to intensify to about 1031Hpa during the forecast period.

The St. Helena High pressure system over the Southeast Atlantic Ocean with an initial central pressure value of 1029Hpa is expected to intensify to 1031Hpa in the next 72Hrs. It is expected to weaken to 1029Hpa during the forecast period.

The Mascarene high pressure system over the Southwest Indian Ocean with an initial central value of 1029hPa is expected to weaken to 1026hPa in the next 24Hrs. It is expected to intensify to 1036Hpa in 72Hrs, further weakening to about 1031Hpa is expected 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 atmospheric dust concentration in some of these areas.

At 850HPa level, moist westerly flow from the Atlantic Ocean and its associated lower-level convergence is expected to prevail across the Gulf of Guinea resulting in enhanced rainfall activity in the area. A strong lower level convergence across eastern DRC and Zambia 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 Lake Victoria region will remain active 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 Cote d'Ivoire, Ghana, Benin, Southern and Central Nigeria, Cameroon, Gabon, Congo, Western and DRC, Western Ethiopia, Angola, Zambia, Tanzania, Zimbabwe, Northern Mozambique, Northern South Africa and Madagascar.

There is also an increased chance for maximum heat index values to exceed 40°C portions of portions Cote d'Ivoire, Northern Ghana, Burkina Faso, parts of Nigeria, CAR, Northern DRC, parts of South Sudan and Mozambique.

## 2.0. Previous and Current Day Weather over Africa

### 2.1. Weather assessment for the previous day (March 17, 2016)

Moderate to locally heavy rainfall was observed over portions of Liberia, Cote d'Ivoire Ghana, Benin, Southwestern Nigeria, Cameroon, portions of CAR, DRC, Northwestern Ethiopia, Angola, Zambia, Northern Mozambique, Namibia, Botswana, Zimbabwe, South Africa and Madagascar.

### 2.2. Weather assessment for the current day (March 18, 2016)

Intense convective clouds are observed across most parts of Ghana, portions of Nigeria, Cameroon, Eastern DRC, Angola, Zambia, Botswana, Zimbabwe Mozambique, and Northern Madagascar.

