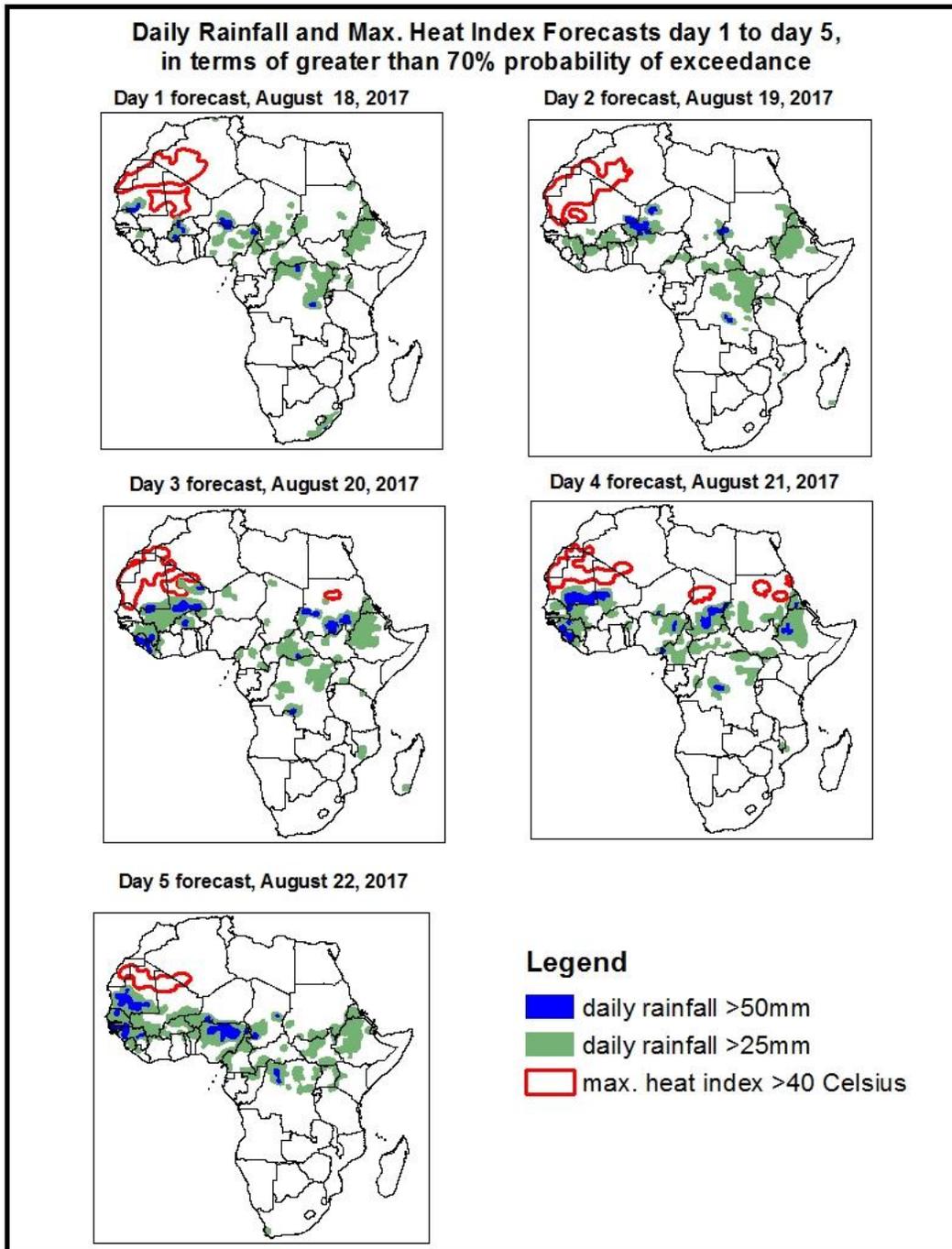


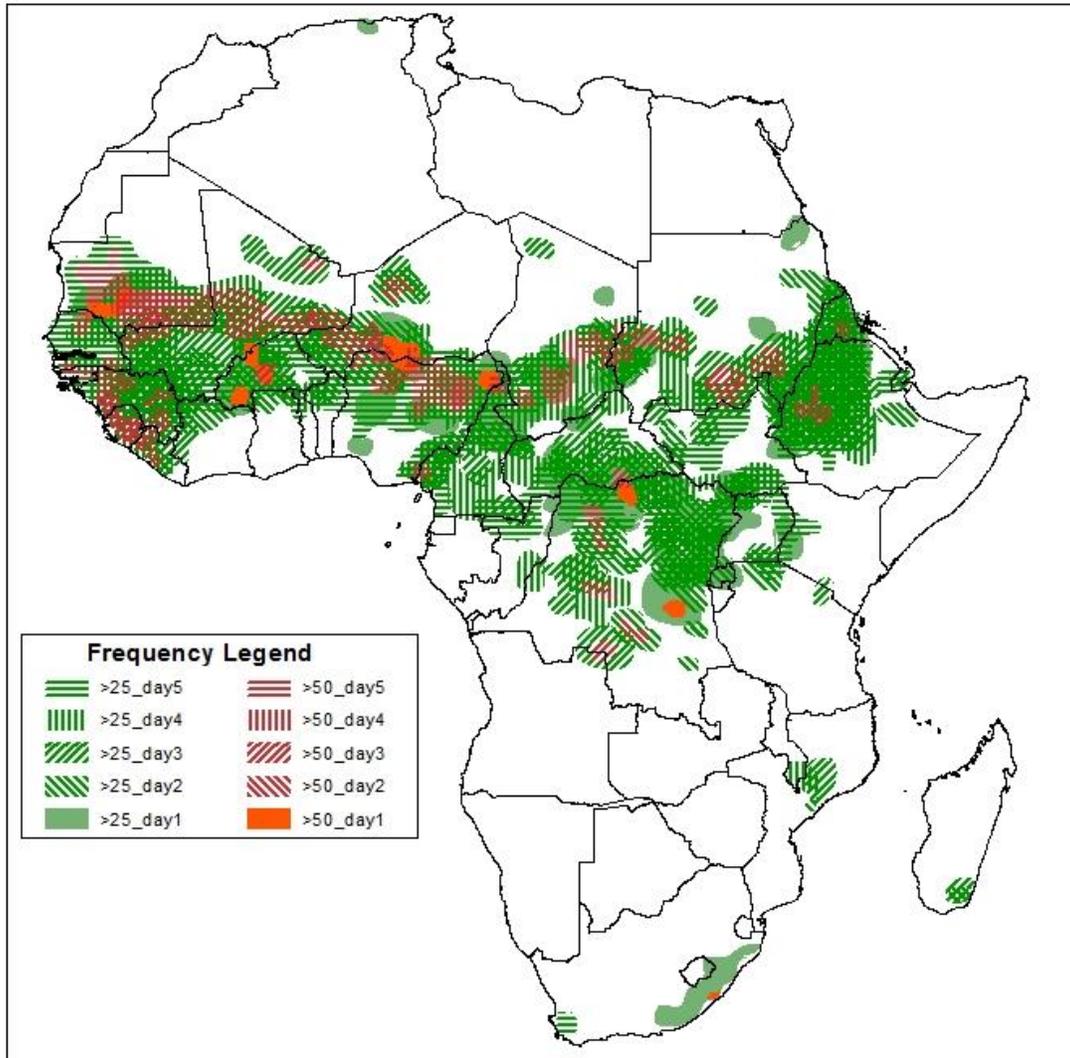
**1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on August 17, 2017)**

**1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: August 18–22 August, 2017)**

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 August 18-22 2017

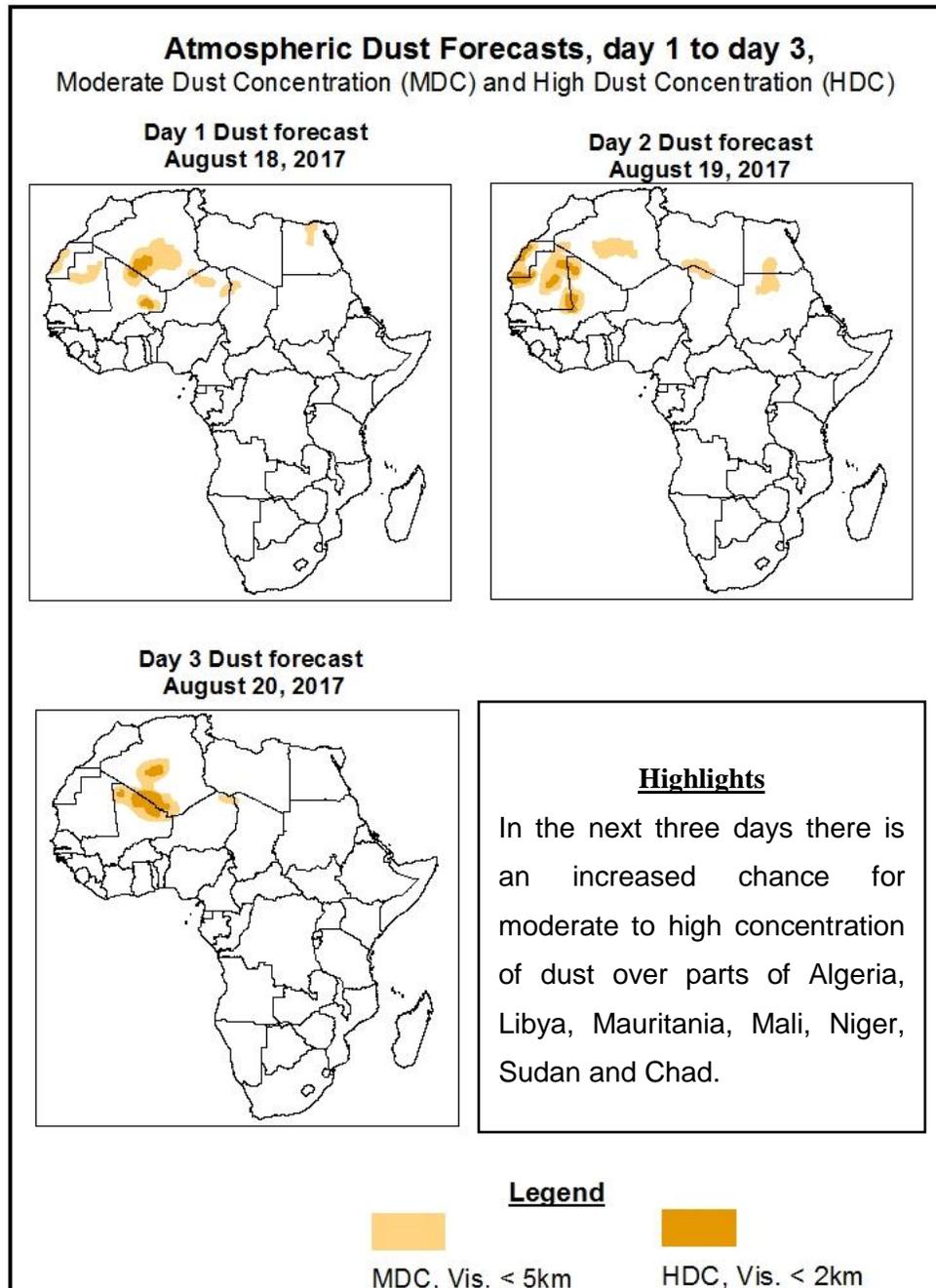


### **Highlights**

In the next five days, a strong monsoon flow from the Atlantic Ocean across West and Central Africa combined with a lower-level cyclonic circulation propagating across the Sahel countries coupled with a convergence zone over southeastern Africa which produce a shear line moving eastward and with upper level divergence is expected to enhance rainfall over many places in West, Central, and East African countries. As a result, there is an increased chance for two or more days of moderate to heavy rainfall over many places in Senegal, Gambia, Guinea Bissau, Guinea, Sierra Leone, Liberia, Northern Cote D'Ivoire, Burkina Faso, southern Mauritania, southern Mali, southern Niger, northern Nigeria, southern Chad, Cameroon, CAR, DRC, southern Sudan, South Sudan, Ethiopia and northern Eritrea.

## 1.2. Atmospheric Dust Concentration Forecasts (valid: August 18-20, 2017)

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: August 18-22 2017***

The Azores High Pressure system over the North Atlantic Ocean is expected to maintain its central pressure value of 1024hPa in the next 48hours and thereafter it drastically starts to weaken to the value of 1016hpa towards the end of the forecast period.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to gradually intensify from its central pressure value of 1022hpa to 1034hpa towards the end of the forecast period.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to weaken from its central pressure value of 1038hpa to 1028hpa towards the end of the forecast period.

The heat low over western Sahel is expected to fill up from its value of 1003hpa in the next 72hours to 1006hpa and then to 1008hpa towards the end of the forecast period. Over the central Sahel, the heat low is expected to fill up from 1007hpa to 1008hpa in the next 72hours and then returns back to its value of 1007hpa towards the end of the forecast period. Over the Sudan area the heat low is expected to maintain its value of 1007hpa in the next 96hours and then starts to fill up to 1008hpa towards the end of the forecast period.

At 925hPa, there is an influx of moist south westerlies into West Africa with convergence over north east Sudan with the shear line extending to Mali. The strong dry northeasterly propagation from the subtropical high pressure over North Africa results to the spreading and transport of the dust over Mauritania, Algeria, Libya and the northern parts of Mali, Niger, Chad and Sudan.

At 850hPa, a cyclonic circulation over West Africa with a big vortex which is of predominantly a continental flow is located over Chad and Niger with its trough extending up to the Gulf of Guinea is expected to propagate westwards toward the end of the forecast period. Also a shear line located over Angola and extends to southern DRC, Burundi, Rwanda and Uganda moving eastward.

At 700hPa, the subtropical high pressure system weakens and moves westward due to the intrusion of the mid latitude trough into the African continent.

In the next five days, a strong monsoon flow from the Atlantic Ocean across West and Central Africa combined with a lower-level cyclonic circulation propagating across the Sahel countries coupled with a convergence zone over southeastern Africa which produce a shear line moving eastward and with upper level divergence is expected to enhance rainfall over many places in West, Central, and East African countries. As a result, there is an increased chance for two or more days of moderate to heavy rainfall over many places in Senegal, Gambia, Guinea Bissau, Guinea, Sierra Leone, Liberia, Northern Cote D'Ivoire, Burkina Faso, southern Mauritania, southern Mali, southern Niger, northern Nigeria, southern Chad, Cameroon, CAR, DRC, southern Sudan, South Sudan, Ethiopia and northern Eritrea.

## 2.0. Previous and Current Day Weather over Africa

### 2.1. Weather assessment for the previous day (August 16, 2017)

Moderate to locally heavy rainfall was observed over parts of Gambia, Guinea, Sierra Leone, Togo Benin Nigeria, Cameroon, CAR, Sudan, south Sudan, northern DRC, northern Uganda, Eritrea, northern Ethiopia and some parts of South Africa.

### 2.2. Weather assessment for the current day (August 17, 2017)

Intense convective clouds are observed over portions of West, Central and East Africa.

