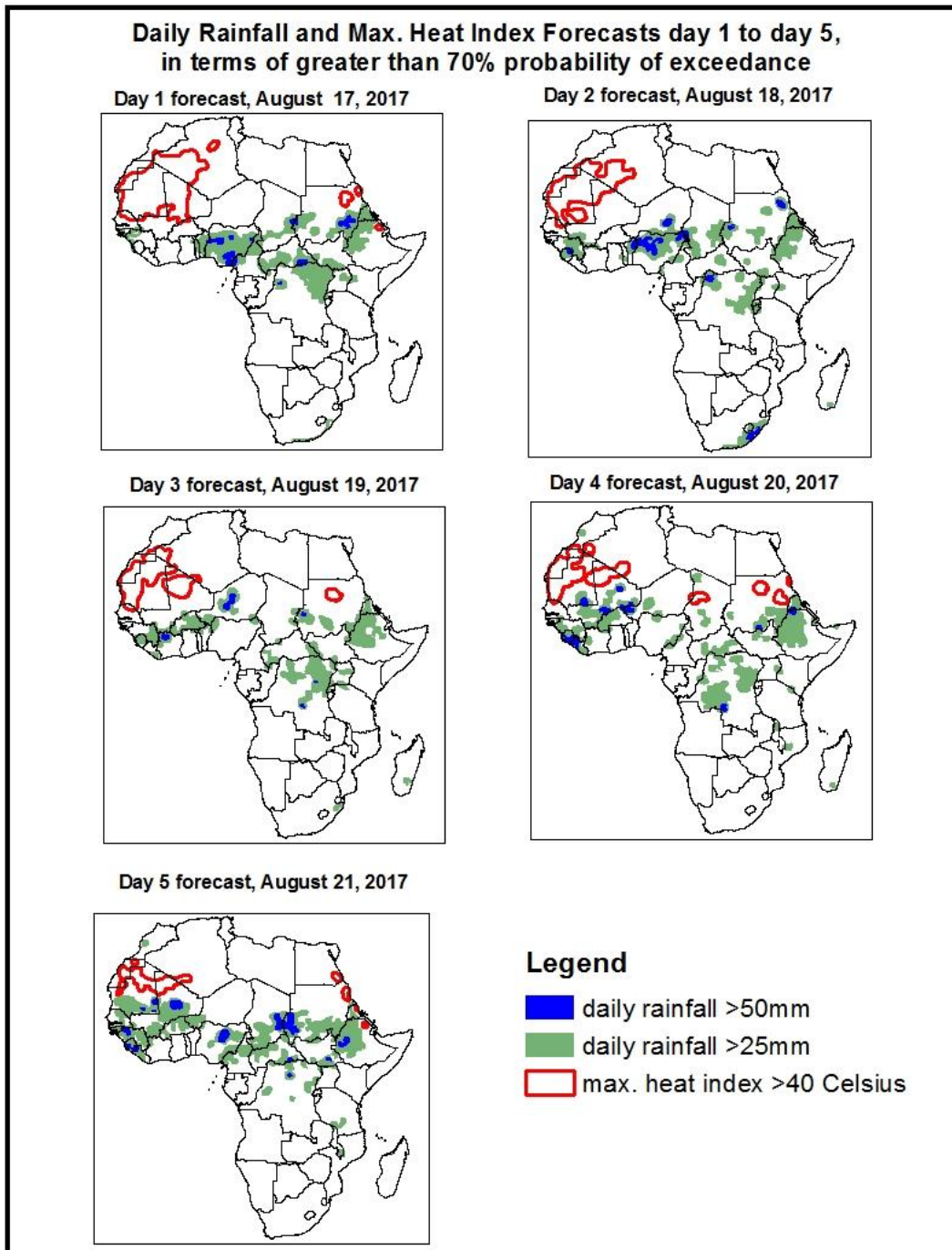


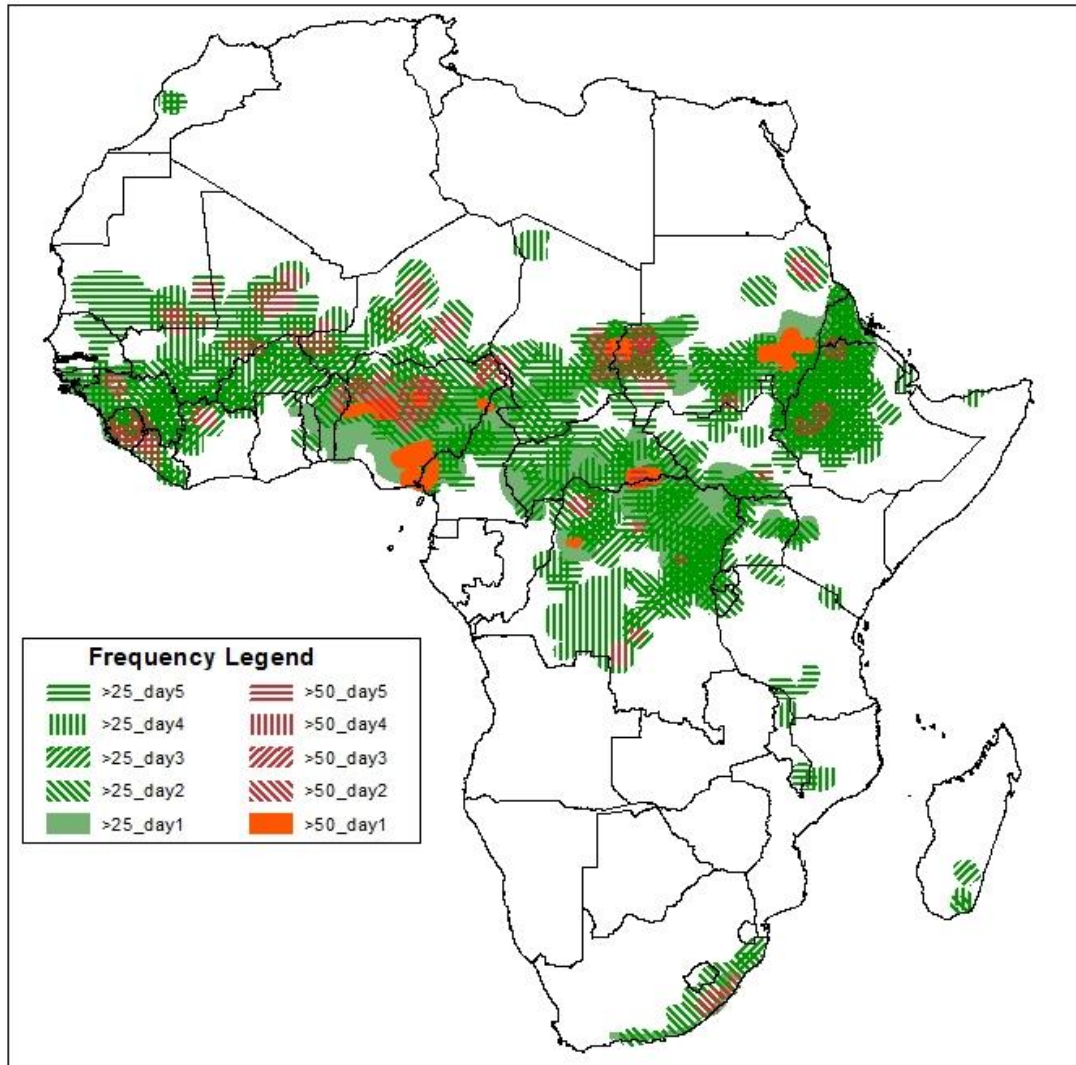
**1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on August 16, 2017)**

**1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: August 17–21 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 17-21 2017

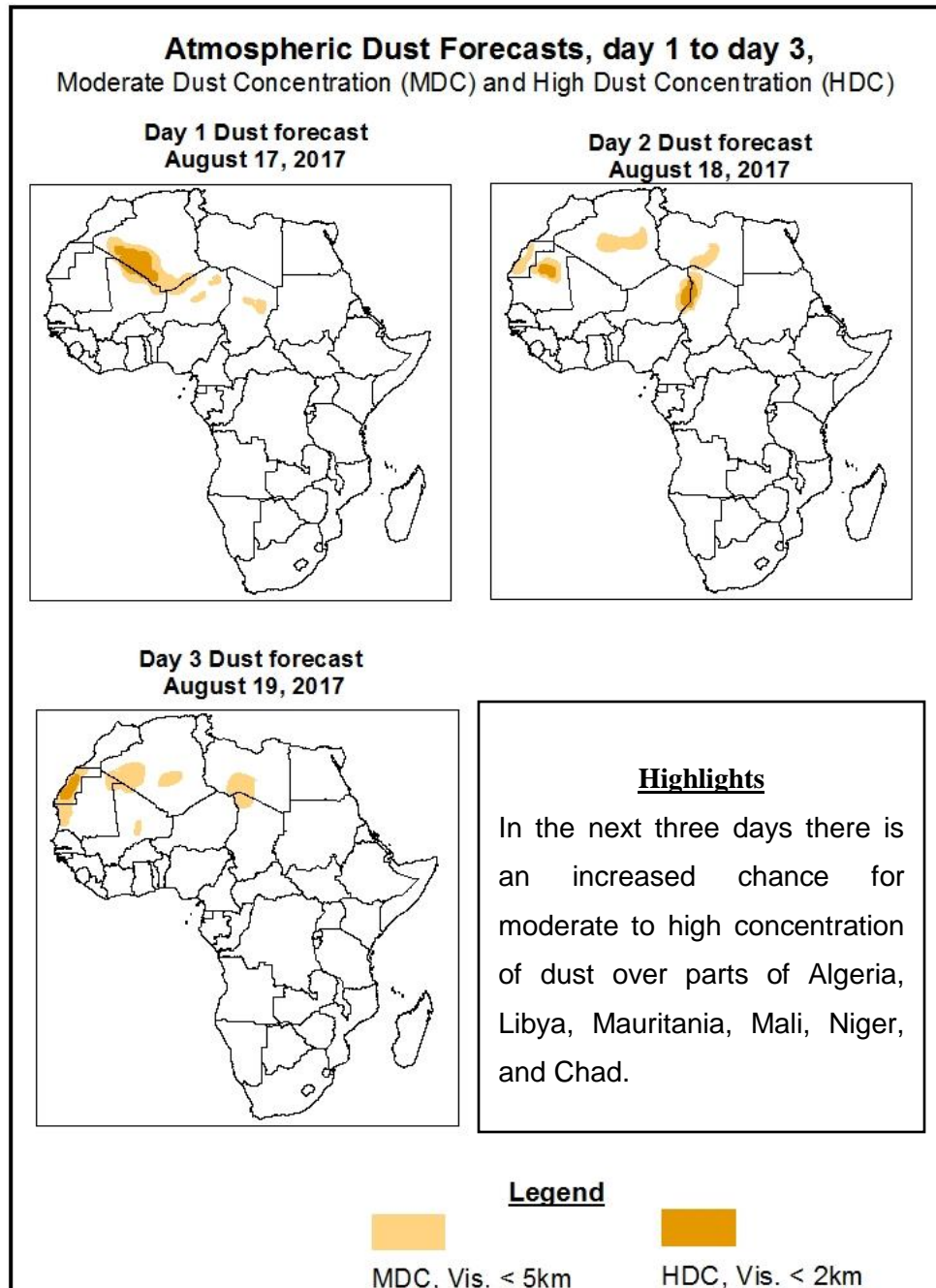


### **Highlights**

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, East and Southeastern African countries. As a result, there is an increased chance for two or more days of moderate to heavy rainfall over many places in Guinea, South Mali, Sierra Leone, North Cote D'Ivoire, southern Mauritania, Burkina Faso, Togo, southern Niger, Nigeria, southeast Chad, southern Sudan, CAR, DRC, some parts of South Africa and Ethiopia.

## 1.2. Atmospheric Dust Concentration Forecasts (valid: August 17-19, 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 17-21 2017***

The Azores High Pressure system over the North Atlantic Ocean is expected to maintain its central pressure value of 1024hPa in the next 72hours and later on weakens to 1023hpa in the next 96hours to the end of the forecast period.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to maintain its central pressure value of 1021hpa for the next 48hours. Thereafter starts to gradually intensify to 1024hpa and later 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 1040hpa to 1031hpa to the end of the forecast period.

The heat low over western Sahel is expected to maintain its value of 1003hpa in the next 72hours. It will gradually start to fill up from that 72hours to 1006hpa to the end of the forecast period. Over the central Sahel, the heat low is expected to fill up from 1006hpa to 1008hpa in the next 48hours and maintain this value towards the end of the forecast period. Over the Sudan area the heat low is expected to fill up from its value of 1004hpa in the next 48hours to 1007hpa and maintain that value to 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, and Chad.

At 850hPa, a cyclonic circulation over Sudan is expected to propagate westwards into Chad, Niger, Mali and Mauritania. Also a shear line located over northern Angola and extends to DRC, Burundi, Rwanda and Uganda moving eastward.

At 700hPa, the ridges of the subtropical high pressure system propagate and sustain eastward to the coast of West Africa in the next 48hours. Afterwards the intrusion of the mid latitude trough weakens the high pressure system to the end of the forecast period.

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, East and Southeastern African countries. As a result, there is an increased chance for two or more days of moderate to heavy rainfall over many places in Guinea, South Mali, Sierra Leone, North Cote D'Ivoire, southern Mauritania, Burkina Faso, Togo, southern Niger, Nigeria, southeast Chad, southern Sudan, CAR, DRC, some parts of South Africa and Ethiopia.

## 2.0. Previous and Current Day Weather over Africa

### 2.1. Weather assessment for the previous day (August 15, 2017)

Moderate to locally heavy rainfall was observed over parts of south Senegal, Guinea, Sierra Leone, northern Liberia, southern Mali, Cameroon, southern Chad, CAR, southern Sudan, south Sudan, northern DRC, northern Uganda, Eritrea and northern Ethiopia.

### 2.2. Weather assessment for the current day (August 16, 2017)

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

