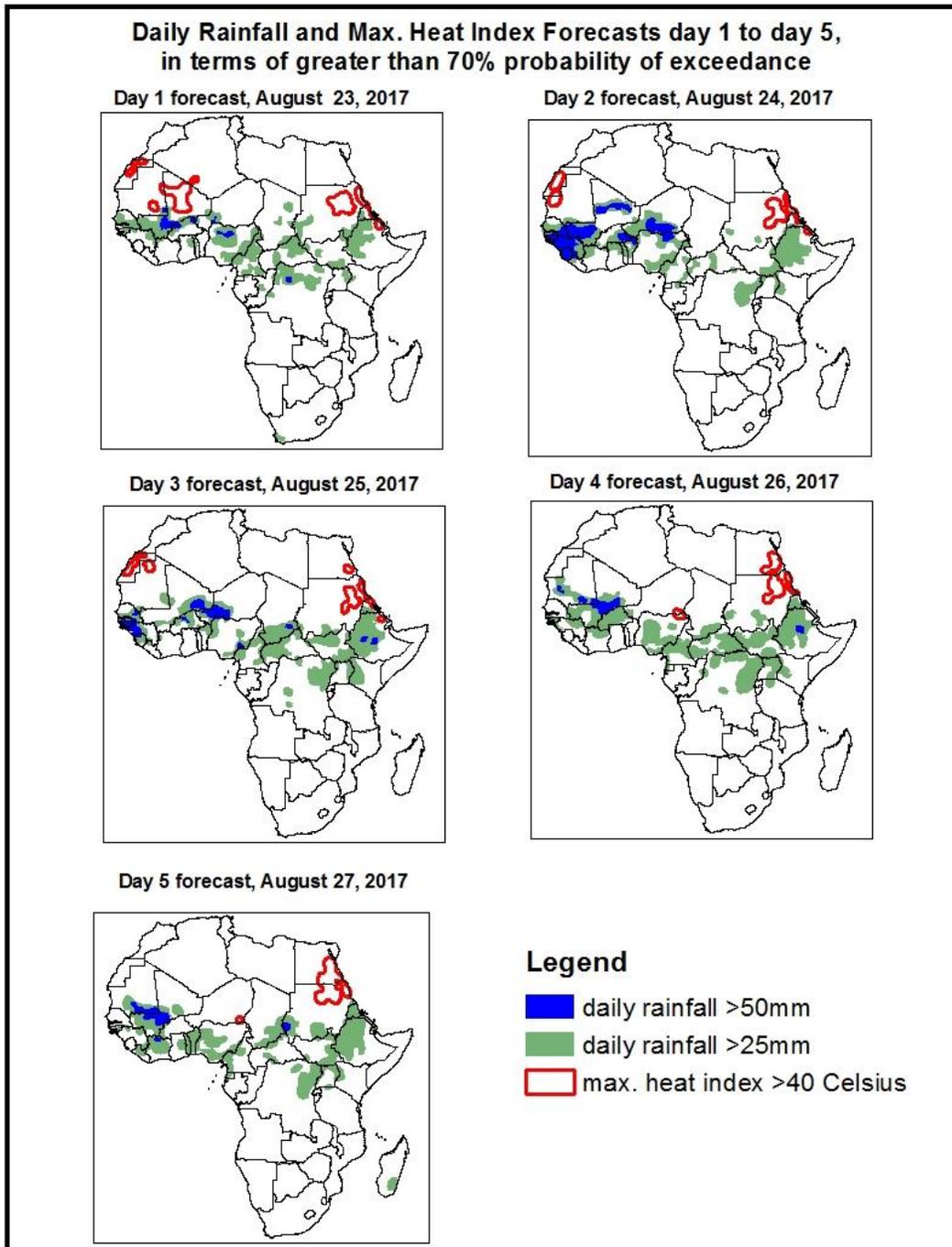


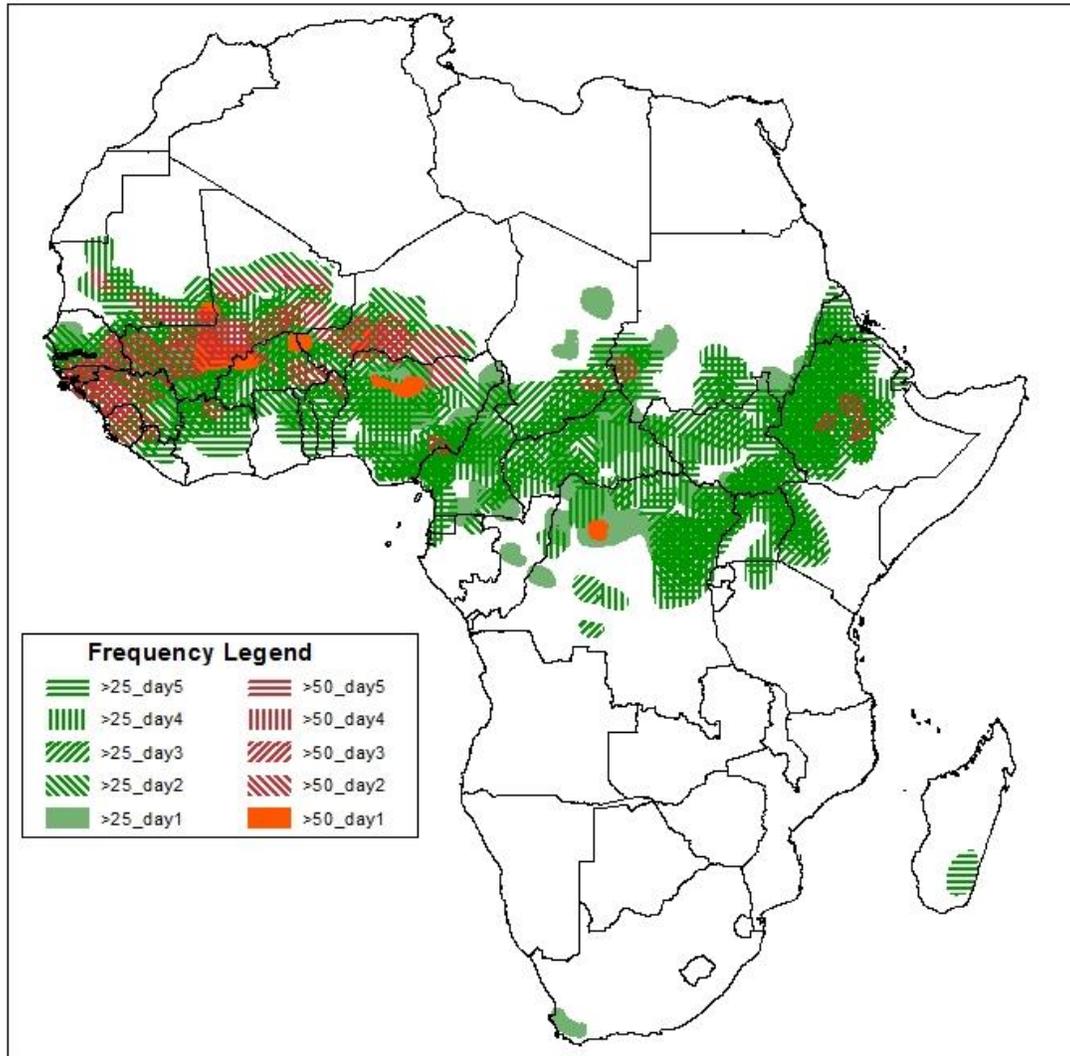
**1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on August 22, 2017)**

**1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: August 23–27 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 23-27 2017

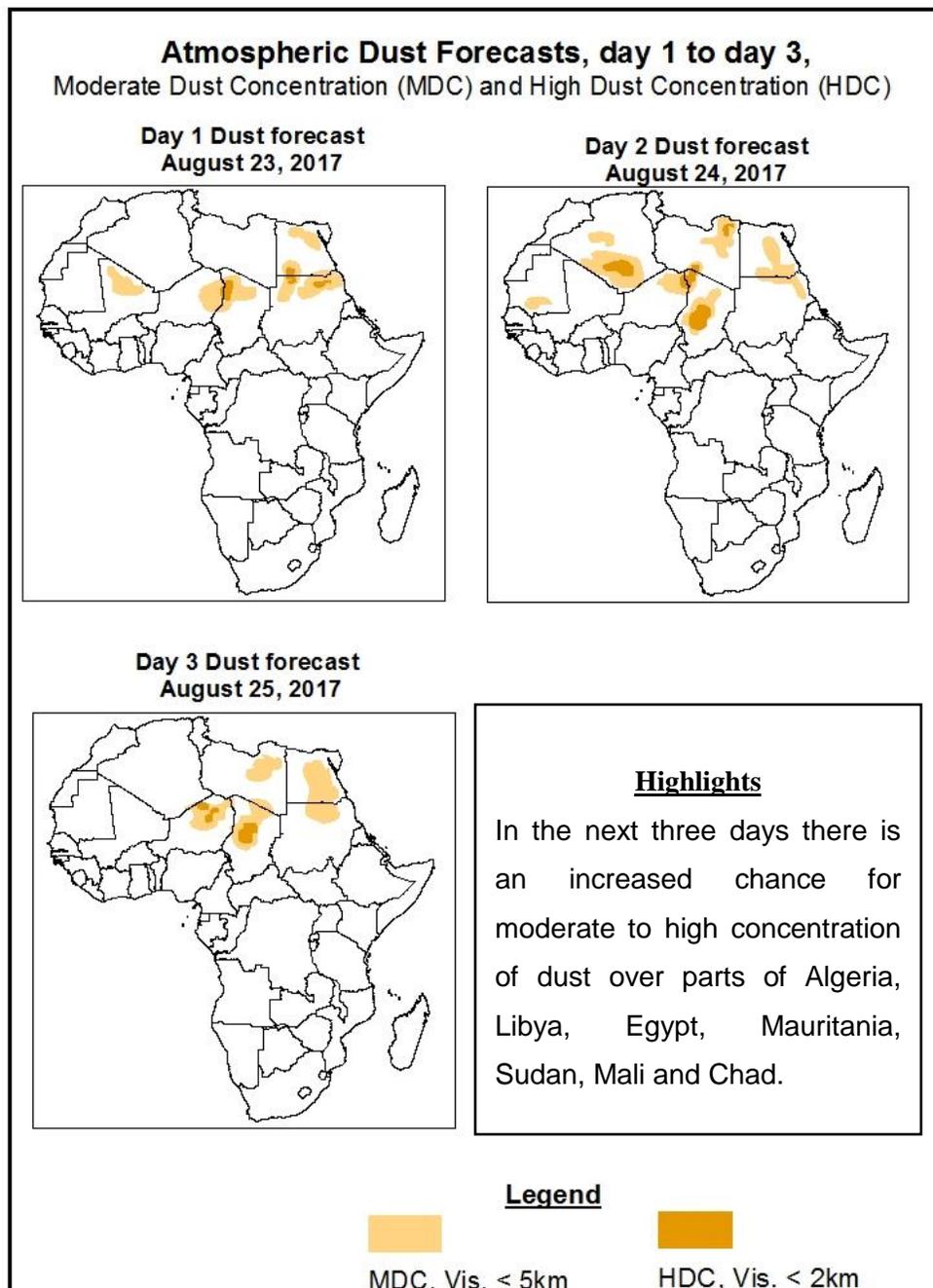


### **Highlights**

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 upper level divergence is expected to enhance rainfall over many places in West and Central African countries. Active lower-level convergence near the Lake Victoria region, South Sudan and Ethiopia is also expected to enhance rainfall in the region. As a result, there is an increased chance for two or more days of moderate to heavy rainfall over many places in Senegal, Guinea Bissau, Guinea, Sierra Leone, Northern Cote D'Ivoire, Burkina Faso, southern Mauritania, Mali, southern Niger, northern Togo, Nigeria, southern Chad, Cameroon, CAR, northern DRC, southern Sudan, South Sudan and Ethiopia.

## 1.2. Atmospheric Dust Concentration Forecasts (valid: August 23-25, 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 23-27 2017***

The Azores High Pressure system over the North Atlantic Ocean is expected to weaken slightly from its central pressure value of 1022hPa after 24hours to 1021hpa. Thereafter, it gradually intensifies to1028hpa towards the end of the forecast period.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to intensify from its central pressure value of 1034hpa to 1037hpa after 24hours. Then after 72hours it weakens to 1036hpa and towards the end of the forecast period weakens again to 1034hpa.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to slightly intensify from its central pressure value of 1034hpa to 1035hpa in the next 24hours and then goes back to its initial value of 1034hpa after 72hours and maintains the value towards the end of the forecast period. However, the center is farther east in the Indian Ocean.

The heat low over western Sahel is expected to fill up from its value of 1005hpa in the next 48hours to 1008hpa and then gradually deepens again to 1006hpa towards the end of the forecast period. Over the central Sahel, the heat low is expected to deepen from its value of 1008hpa to 1006hpa and maintains this value until towards the end of the forecast period it slightly fill up to 1007hpa. Over the Sudan area, the heat low is expected to gradually fill up from 1003hpa to 1005hpa towards the end of the forecast period.

At 925hPa, there is an influx of moist south westerlies into West Africa with series of vortices spreading over the region with the trough line extending to the coast. Another convergence over DRC with the trough line extending to Lake Victoria towards the north east direction and propagating eastward. The dry north easterlies propagating from the subtropical high pressure over North Africa will gradually suppress the south westerlies over West Africa in the next 48hours which will result to the increased spreading and transport of the dust over Algeria, Libya, Egypt and the northern parts of Mauritania, Mali, Chad and Sudan.

At 850hPa, there is a cyclonic circulation over West Africa with series of vortices which are of predominantly a continental flow resulting from the intensification of the subtropical high pressure into the West Africa. The convergence zone over central and some parts of east Africa is intensifying and continually developing resulting from the passage of the mid latitude trough all through the forecast period.

At 700hPa, there is the divergence of an easterly flow from the subtropical high pressure system over West Africa to its coast to the end of the forecast period. Divergence over central, eastern to the southern part of Africa is predominant all through 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 upper level divergence is expected to enhance rainfall over many places in West and Central African countries. Active lower-level convergence near the Lake Victoria region, South Sudan and Ethiopia is also expected to enhance rainfall in the region. As a result, there is an increased chance for two or more days of moderate to heavy rainfall over many places in Senegal, Guinea Bissau, Guinea, Sierra Leone, Northern Cote D'Ivoire, Burkina Faso, southern Mauritania, Mali, southern Niger, northern Togo, Nigeria, southern Chad, Cameroon, CAR, northern DRC, southern Sudan, South Sudan and Ethiopia.

## 2.0. Previous and Current Day Weather over Africa

### 2.1. Weather assessment for the previous day (August 21, 2017)

Moderate to locally heavy rainfall was observed over parts of southern Senegal, Gambia, Guinea, Guinea Bissau, Sierra Leone, Burkina Faso, southern Mali, south western Niger, Nigeria, southern Chad, Cameroon, CAR, northern DRC, southern Sudan, south Sudan and northern Ethiopia.

### 2.2. Weather assessment for the current day (August 22, 2017)

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

