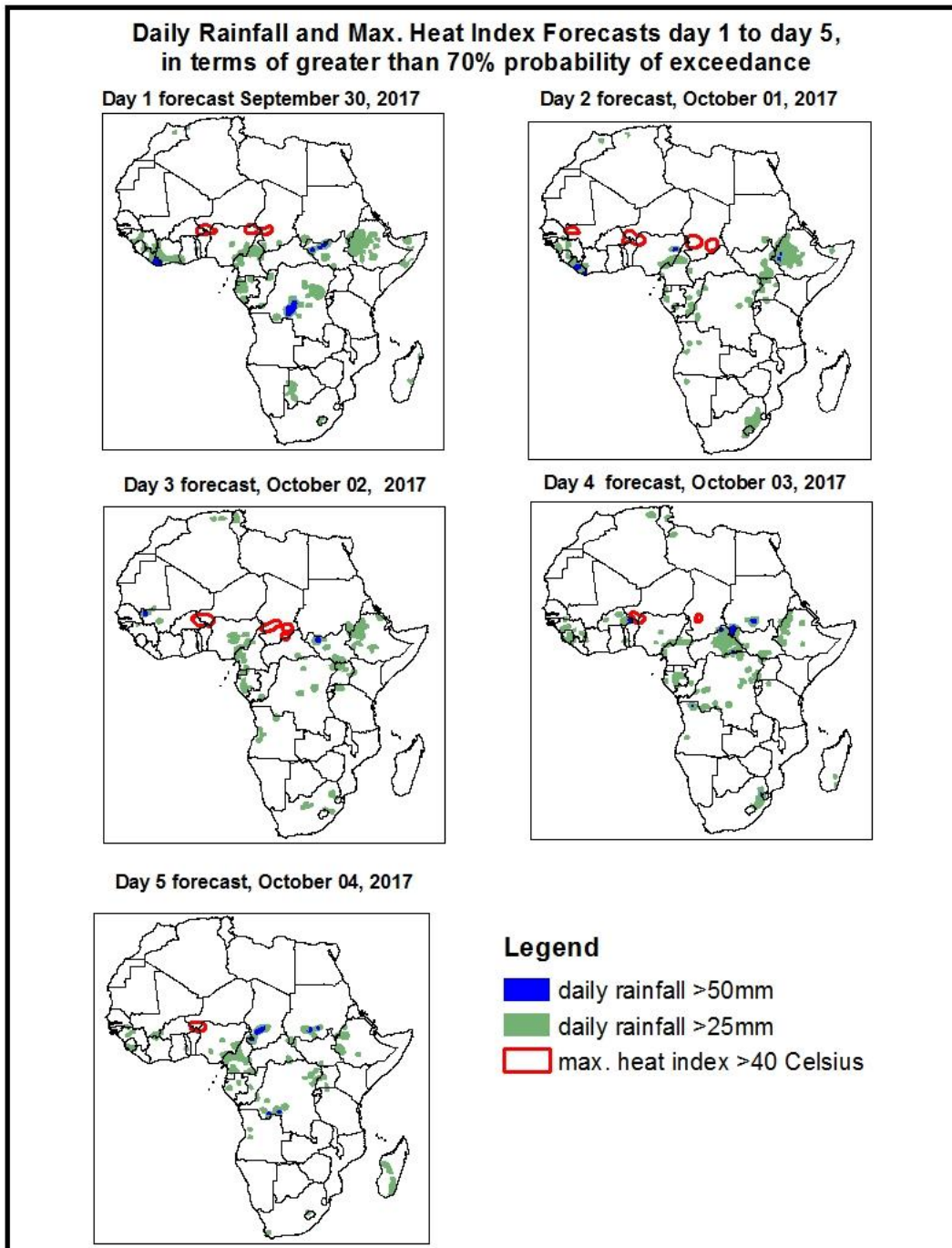


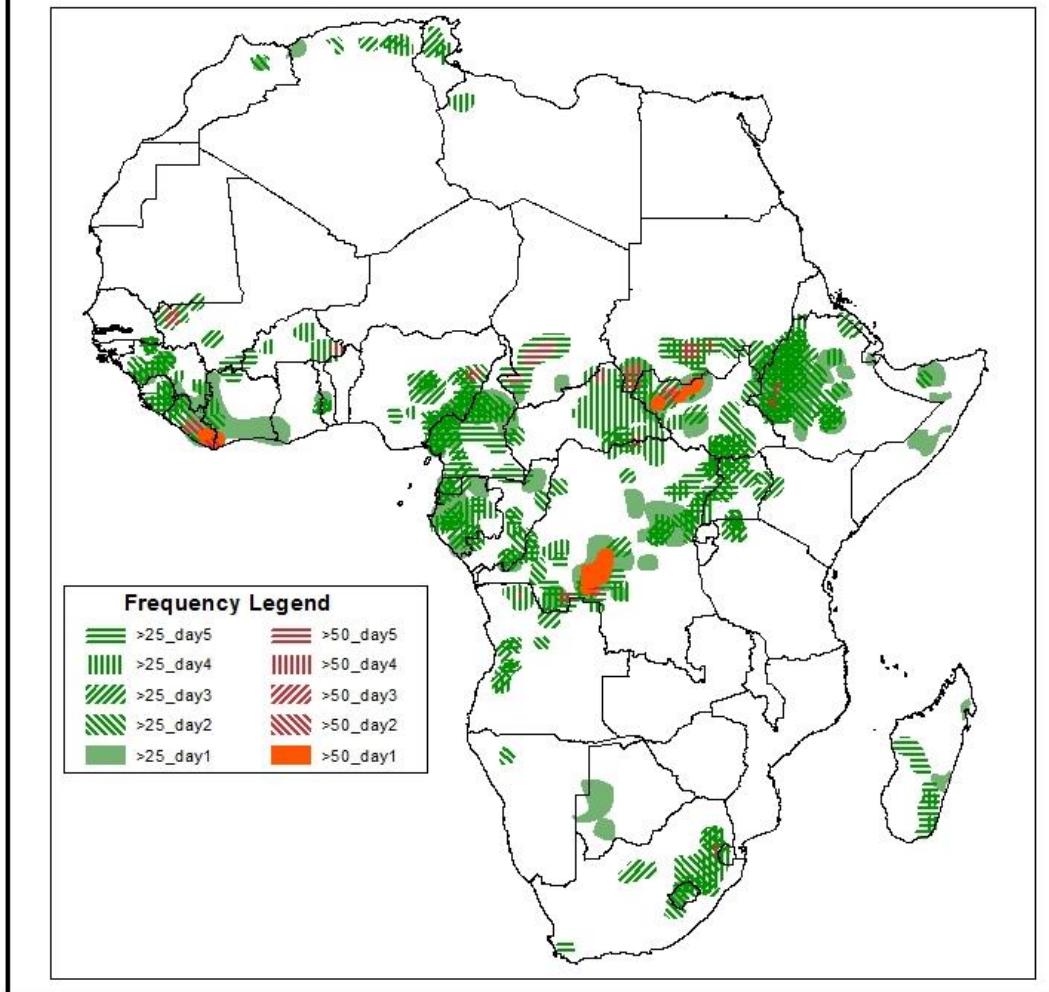
**1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on Sept 29, 2017)**

**1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Sep 30. –Oct 04, 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 September 30 - October 04 2017.

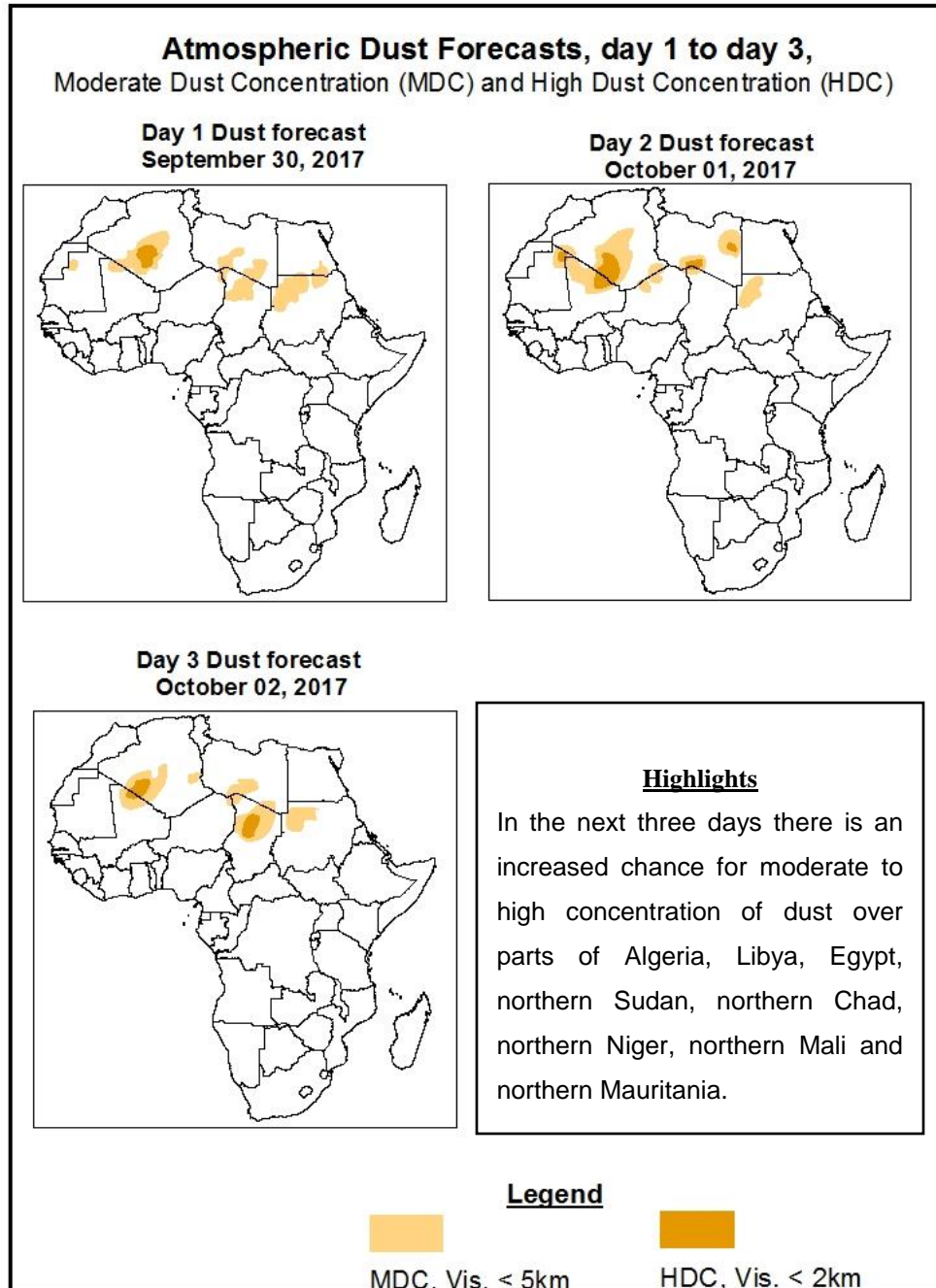


### Highlights

In the next five days, a 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 over Angola to DRC and traversing through Uganda then to the South Sudan 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 Guinea, Sierra Leone, Liberia, southern Mali, western Burkina Faso, northern Algeria, eastern Nigeria, Cameroon, Equatorial Guinea, parts of Gabon, eastern Congo, eastern CAR, parts of DRC, southern Sudan, South Sudan, northern Angola, Lesotho, parts of South Africa, western Ethiopia and parts of Madagascar.

## 1.2. Atmospheric Dust Concentration Forecasts (valid: Sep 30. – Oct 02, 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: Sep 30 – Oct 04, 2017**

The Azores High Pressure system over the North Atlantic Ocean is expected to gradually intensify from its central pressure value of 1027hpa to 1034hpa in the next 72hours and then slightly weaken to 1033hpa towards the end of the forecast period.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to weaken from its central pressure value of 1027hpa to 1026hpa in the next 48hours and then later gradually intensifies to 1032hpa towards the end of the forecast period.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to gradually weaken from its central pressure value of 1030hpa to 1029hpa in the next 48hours and then intensify to 1034hpa towards the end of the forecast period.

The heat low over western Sahel is expected to deepen from its value of 1008hpa in the next 24hours to 1007hpa and then maintain this value towards the end of the forecast period.

Over the central Sahel, the heat low is expected to maintain its value of 1009hpa in the next 24hours and then thereafter gradually deepen again to 1006hpa towards the end of the forecast period.

Over the Sudan area, the heat low is expected to fill up from its value of 1006hpa in the next 48hours to 1009hpa and then maintain this value towards the end of the forecast period.

At 925hPa, there is a convergence over West Africa and the Sudan area with vortices developing and spreading over the regions which are dominated by the continental winds and are moving westward towards the end of the forecast period.

Another convergence is established over the Angola traversing through the DRC to South Sudan which remains quasi-stationary towards the end of the forecast period.

The dry north easterlies to easterly winds propagating from the subtropical high pressure system over North Africa sustained the spreading and transportation of the Saharan dust over Algeria, Libya, Egypt, northern Sudan, northern Chad, northern Niger, northern Mali and northern Mauritania.

At 850hPa, there is a convergence flow over West Africa and the Sudan area with pockets of vortices spreading over the regions which are dominated by the continental winds and are in continuous development with a westward propagation to the end of the forecast period.

There is another strong convergence over Angola to the DRC which traverse and extends to Burundi, Rwanda, Uganda and then to the South Sudan and moves slightly to east direction towards the end of the forecast period. Also, another low pressure system is established over southern Malawi to Swaziland with propagation towards the southwest direction to the end of the forecast period.

At 700hPa, there is the divergence of a northeasterly to easterly flow from the subtropical high pressure system over the north and West Africa to its coasts towards the end of the forecast period.

Divergence over central, eastern and the southern part of Africa predominate and persist over the regions towards the end of the forecast period.

In the next five days, a 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 over Angola to DRC and traversing through Uganda then to the South Sudan 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 Guinea, Sierra Leone, Liberia, southern Mali, western Burkina Faso, northern Algeria, eastern Nigeria, Cameroon, Equatorial Guinea, parts of Gabon, eastern Congo, eastern CAR, parts of DRC, southern Sudan, South Sudan, northern Angola, Lesotho, parts of South Africa, western Ethiopia and parts of Madagascar.



## 2.0. Previous and Current Day Weather over Africa

### 2.1. Weather assessment for the previous day (September 28, 2017)

Moderate to locally heavy rainfall was observed over northwestern western Guinea, Guinea Bissau, Sierra Leone, Liberia, Ghana, Togo, Benin, Nigeria, Cameroon, southern Chad Equatorial Guinea, Gabon, Congo, CAR, DRC, southern Sudan, northern South Sudan, northern Namibia, Rwanda, Burundi western Uganda and western Ethiopia.

### 2.2. Weather assessment for the current day (September 29, 2017)

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

