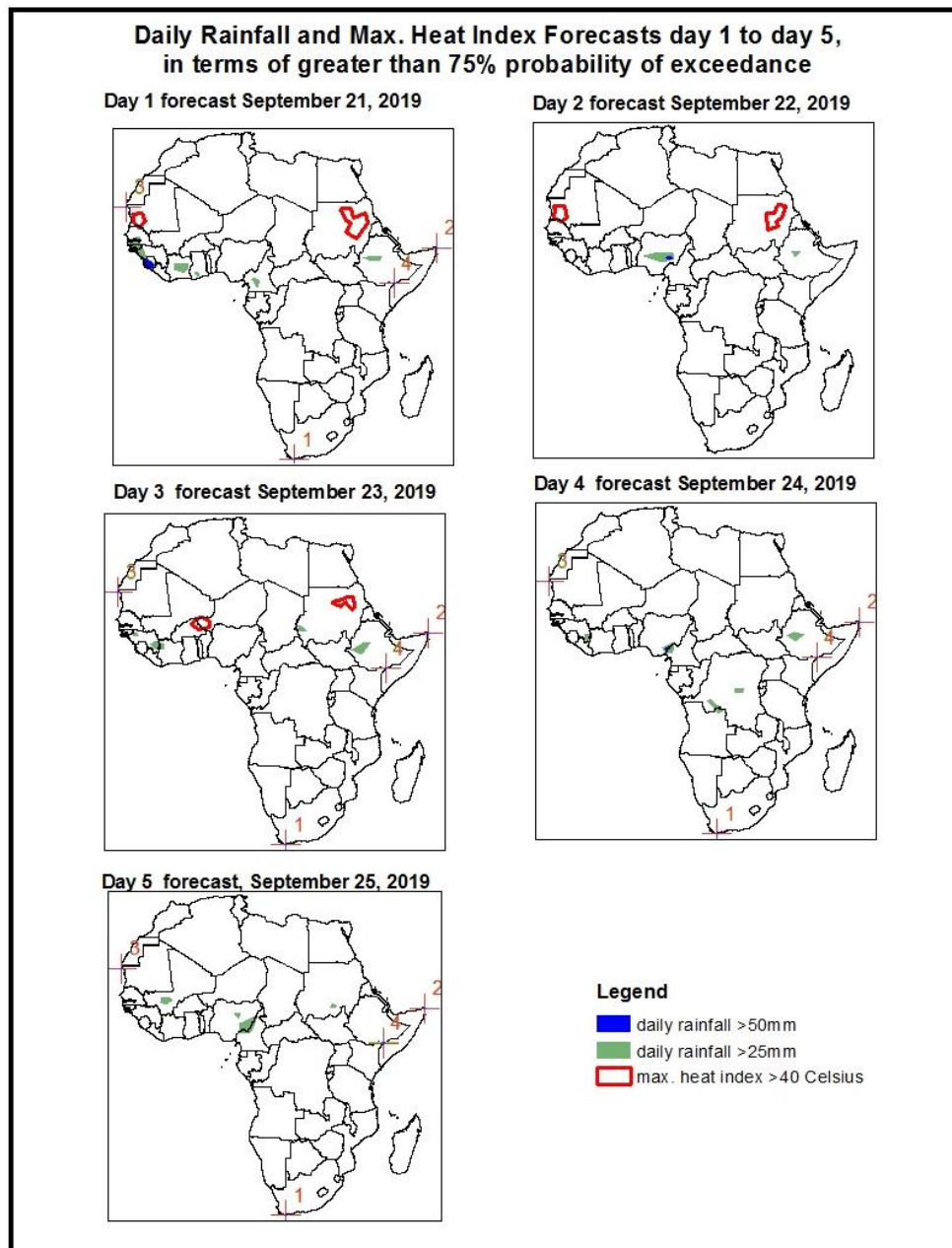


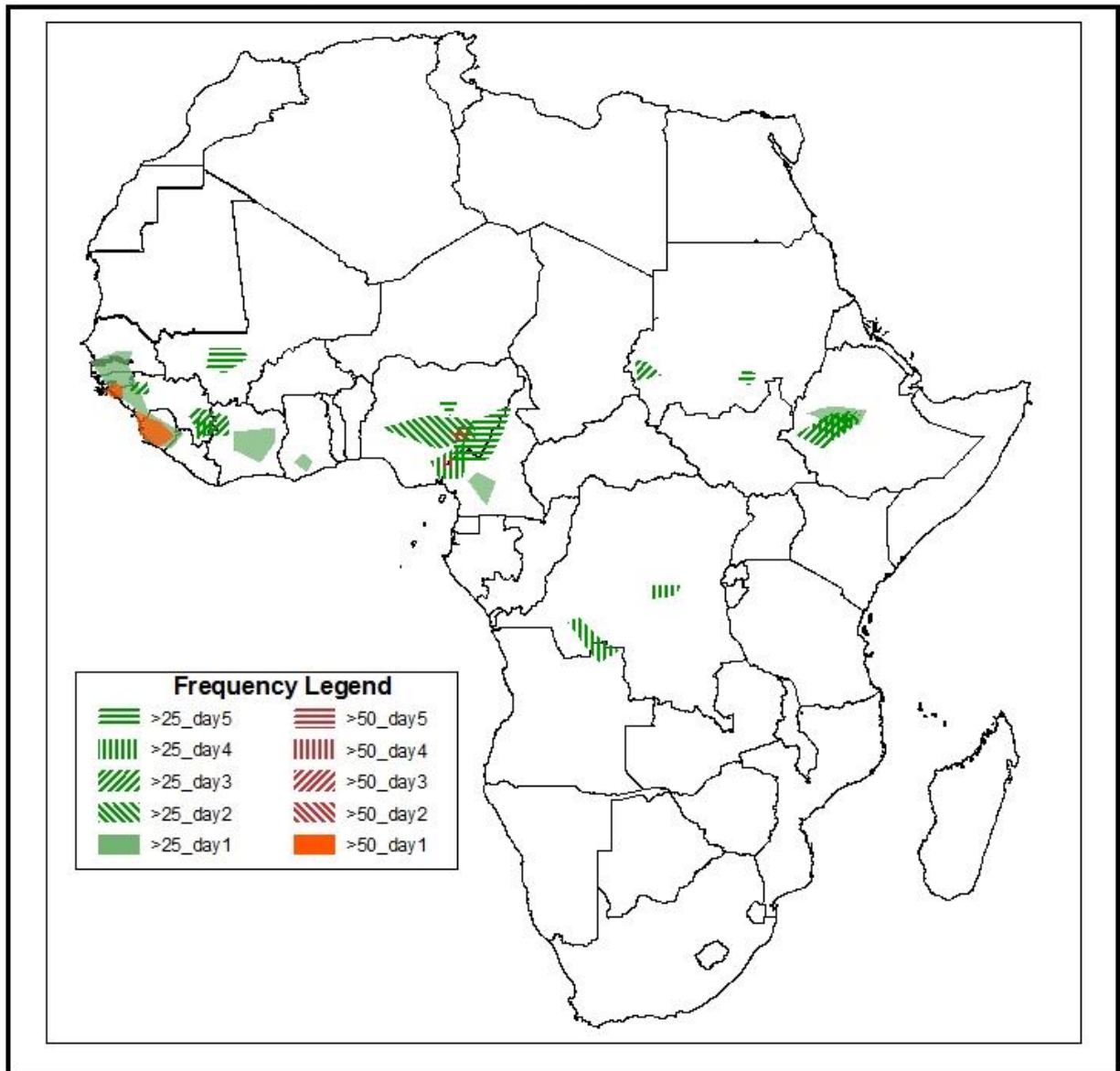
1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on September 20, 2019)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: 21 – 25 September, 2019)

The forecasts are expressed in terms of high probability of precipitation (POP), valid 06Z to 06Z, and exceedance probability of maximum heat index ($>40^{\circ}\text{C}$), based on the NCEP/GFS and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



Five Days Rainfall Forecast Summary September 21 - September 25, 2019

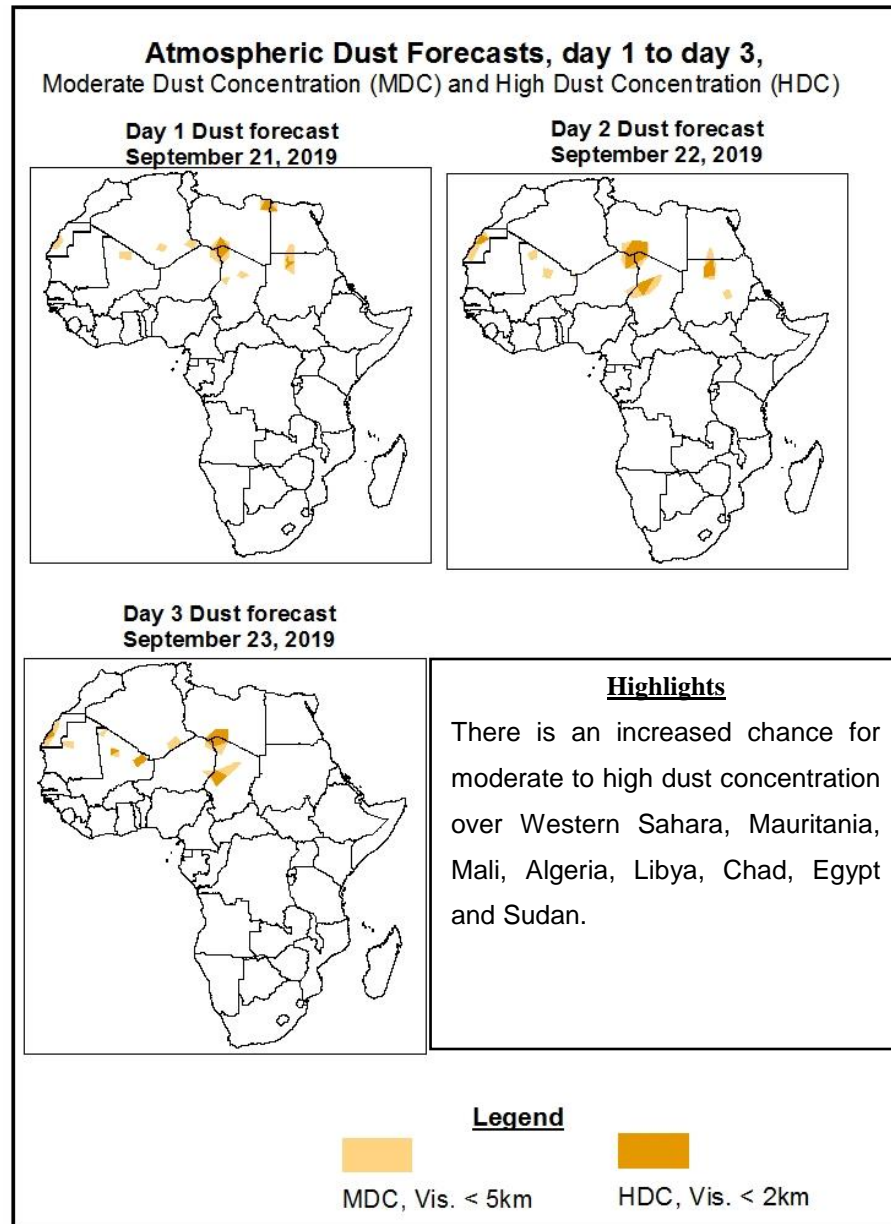


Highlights

- The monsoon flow from the Atlantic Ocean with its associated lower-level convergence, and westward propagating meso-scale convective systems are expected to enhance rainfall over portions of Western Africa, Central Africa countries and Eastern Africa.
- At least 25mm for two or more days is likely over Sierra Leone, portions of Guinea, Southern Senegal, Gambia, Guinea-Bissau, Central of Mali, Central of Cote D'Ivoire, Southern Ghana, portions of Nigeria, Eastern Cameroon, Southern South Sudan, Eastern Ethiopia and Portions of DRC.
- There is an increased chance for daily rainfall to exceed 50mm over Southern Sierra Leone, portions of Guinea and Western Nigeria.
- There is an increased chance for daily maximum heat index to exceed 40°C over, Eastern Mauritania, Sudan, Niger, portions of Burkina Faso.

1.2. Atmospheric Dust Concentration Forecasts (valid: 21 Sept – 23 Sept 2019)

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: 21 September – 25 September 2019

The Azores High Pressure system over the Northeast Atlantic is expected to slightly strengthen, with its central pressure value increasing from 1023hPa to 1025hPa during the forecast period.

The St. Helena High Pressure system over Southeast Atlantic Ocean is expected to strengthen while shifting eastward with its central pressure value increasing from 1030hPa to 1038hPa during the forecast period.

The Mascarene High Pressure system over Southwest Indian Ocean is expected to strengthen while shifting eastward, with its central pressure value increasing from 1030hPa to 1034hPa during the forecast period.

Thermal low across the Sahel region is expected to deepen with its central pressure value decreasing from 1010hPa to 1008hPa during the forecast period.

At 925-hPa level, strong dry northerly flow is expected to prevail across Northwest Africa. In other hand, moist southwesterly flow from the Atlantic Ocean is expected to prevail across the Gulf of Guinea and the Sahel regions, and the neighboring areas of Central Africa.

At 850-hPa, lower level wind divergence are expected over the Sahel region, which will reduce precipitation over these areas. Meridional wind convergence is expected to remain active in the Lake Victoria region during the forecast period.

At 700-hPa, a broad area of anticyclonic circulation is expect to remain over North Africa, and mainly easterly wind pattern is expected to be maintained, converging over Nigeria, southern Cameroon, northern Ghana, Togo and Cote d'Ivoire, southern Guinea, Sierra Leone, Liberia and others local countries of Sahel.

At 500-hPa, wind speed associated with easterly flow is expected to exceed 30kts across the some portions of western Africa, Northern Africa and southern south Africa region during the forecast period.

The monsoon flow from the Atlantic Ocean with its associated lower-level convergence, and westward propagating meso-scale convective systems are expected to enhance rainfall over portions of Western Africa, Central Africa countries and Eastern Africa. At least 25mm for two or more days is likely over Sierra Leone, portions of Guinea, Southern Senegal, Gambia, Guinea-Bissau, Central of Mali, Central of Cote D'Ivoire, Southern Ghana, portions of Nigeria, Eastern Cameroon, Southern South Sudan, Eastern Ethiopia and Portions of DRC. There is an increased chance for daily rainfall to exceed 50mm over Southern Sierra Leone, portions of Guinea and Western Nigeria. There is an increased chance for daily maximum heat index to exceed 40°C over, Eastern Mauritania, Sudan, Niger, portions of Burkina Faso.

2.0. Previous and Current Day Weather over Africa

2.1. *Weather assessment for the previous day* (Sept 19, 2019)

Daily rainfall amount exceeded 25mm over, Guinea, Guinea Bissau, Sierra Leone, Mali, Ghana, Nigeria and Cameroon and exceeded 50mm over Nigeria.

2.2. *Weather assessment for the current day* (Sept 20, 2019)

Deep convective clouds are observed over southern West Africa region, Central Africa countries and local areas in the Greater Horn of Africa.

