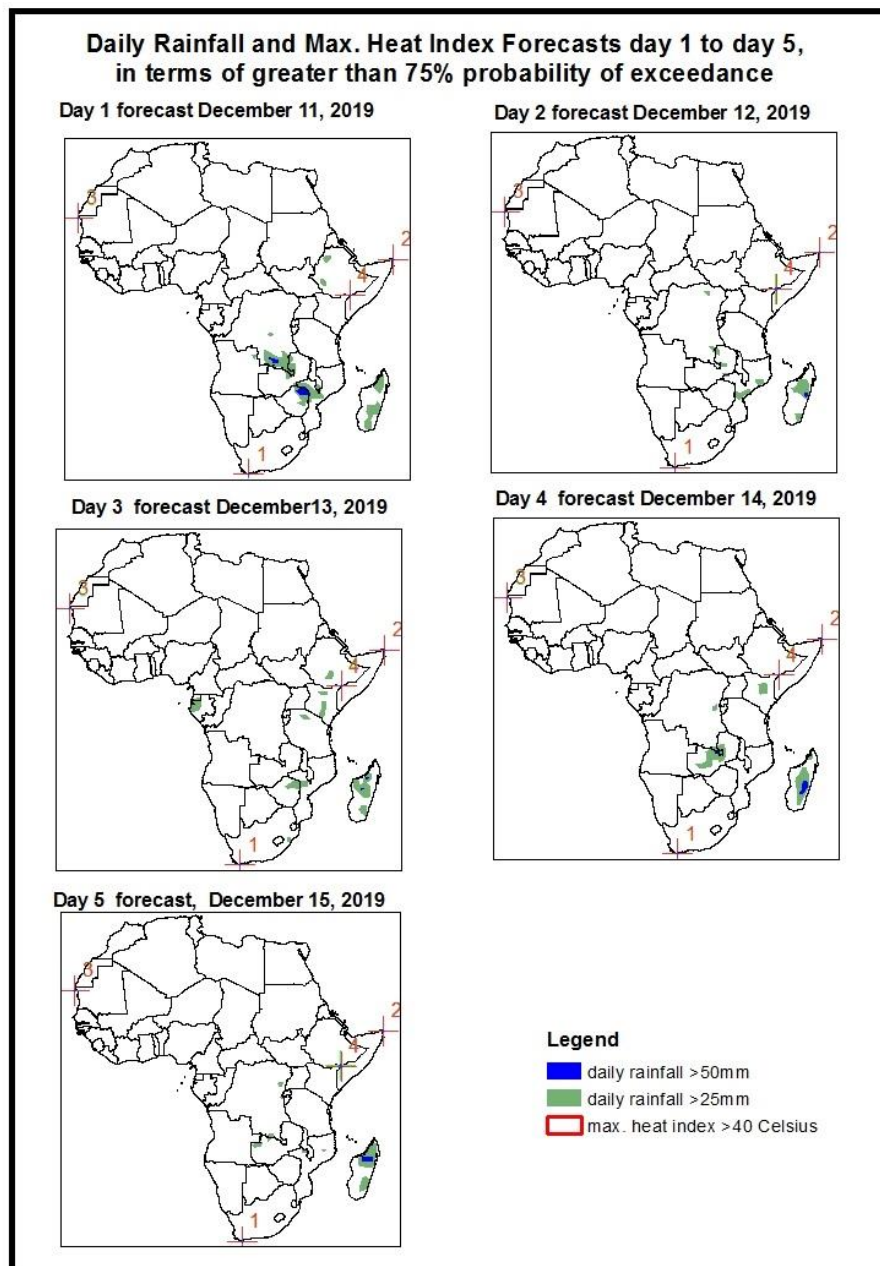


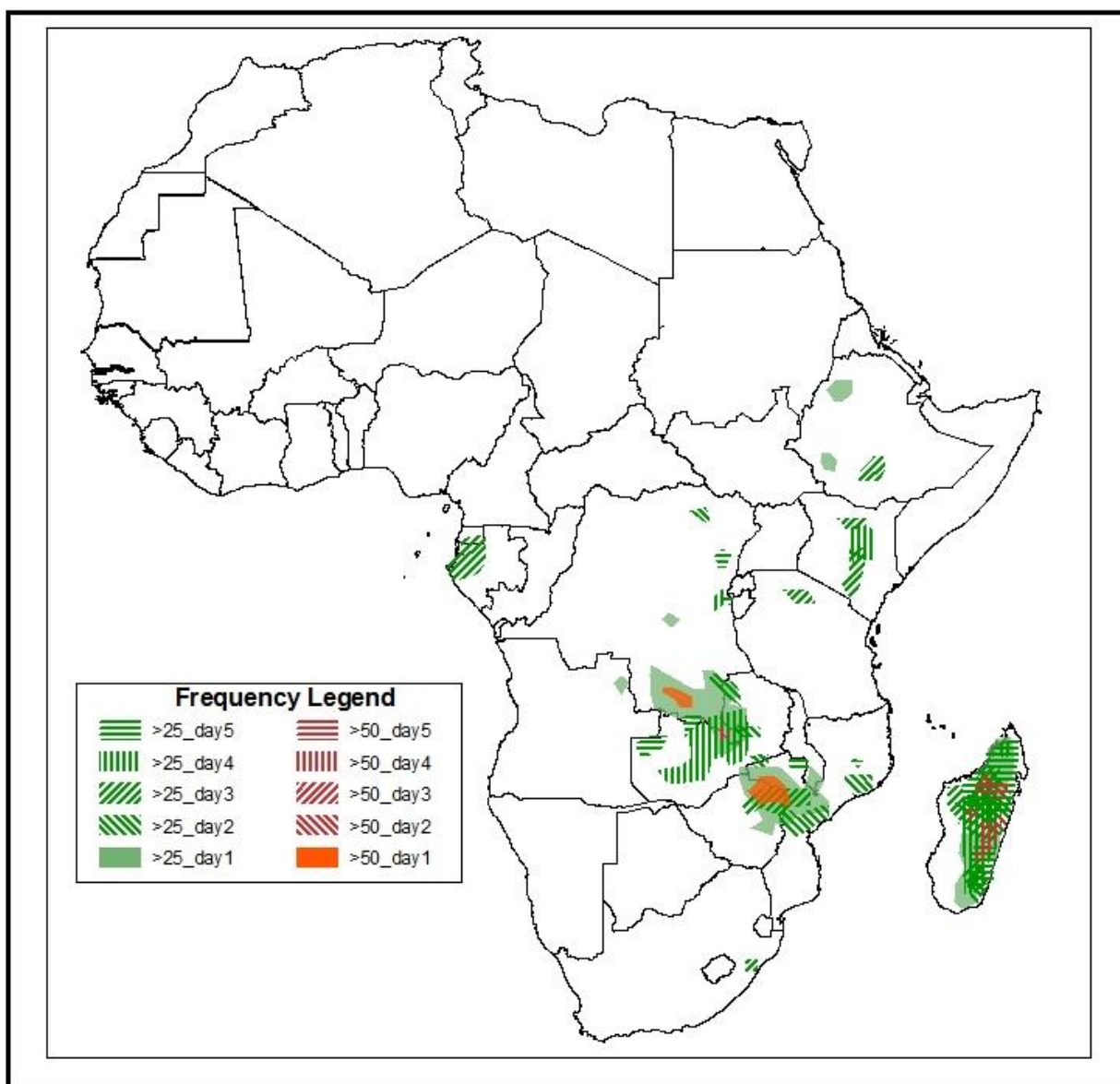
1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on December 10, 2019)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: 11 December – 15 December, 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 December 11 - December 15, 2019

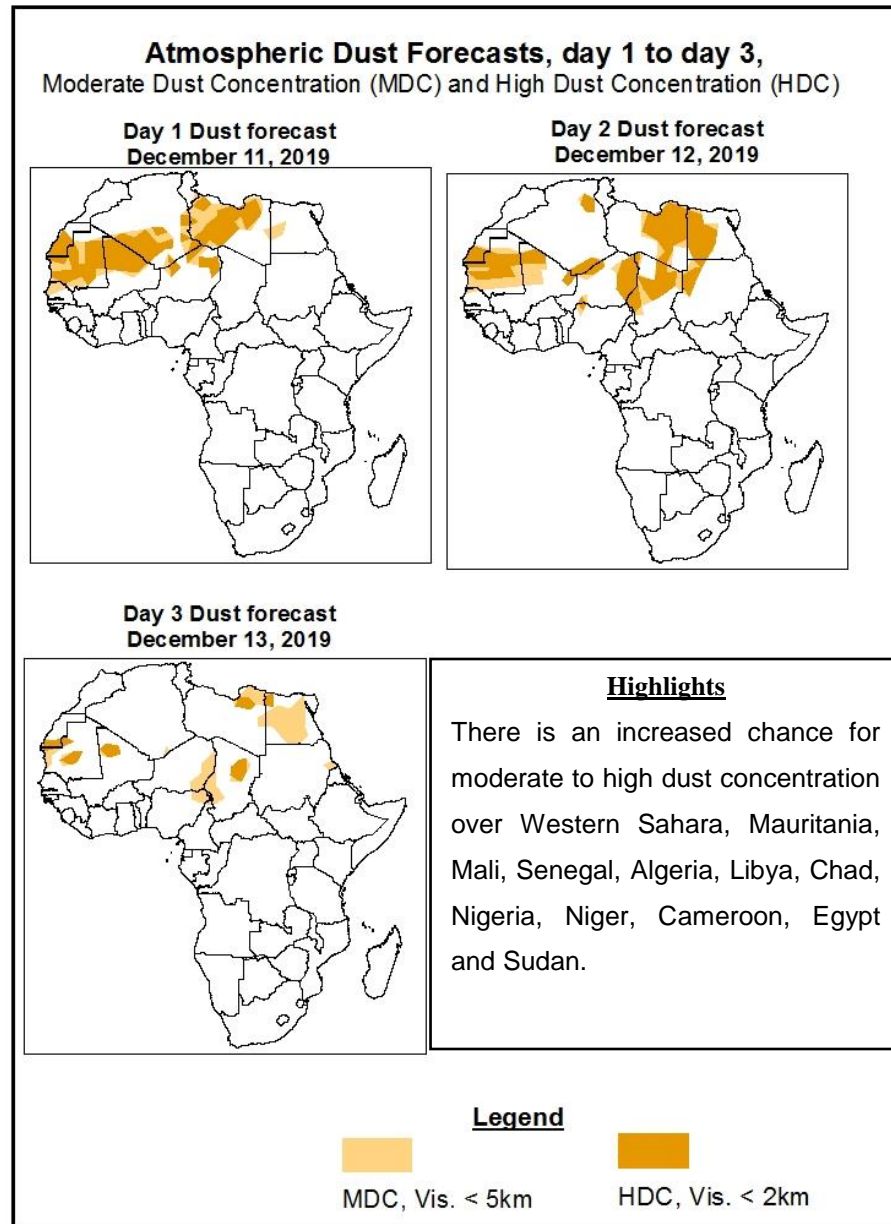


Highlights

- Strong lower-level wind convergences over the eastern portions of Southern Africa and Madagascar are expected to enhance rainfall over Southeastern Africa.
- At least 25mm for two or more days is likely over portions of Gabon, Equatorial Guinea, DRC, Zimbabwe, South Africa, Mozambique, Madagascar, Zambia, Tanzania, Kenya and Ethiopia.
- There is an increased likelihood for daily rainfall to exceed 50mm over local areas in DRC, Zambia, Zimbabwe, Mozambique and Madagascar.

1.2. Atmospheric Dust Concentration Forecasts (valid: 11 Dec – 13 Dec 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: 11 December – 15 December 2019

The Azores High Pressure system over the Northeast Atlantic is generally expected to remain strong even though it is will weaken while shifting eastwards with its central pressure value decreasing from 1043hPa to 1035hPa during the forecast period.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to intensify while shifting eastwards with its central pressure value increasing from 1016hPa to 1027hPa during the forecast period.

The Mascarene High Pressure system over Southwest of Indian Ocean is expected to intensify while shifting eastwards with its central pressure value increasing from 1023hPa to 1034hPa during the first four days of the forecast period and then its central pressure value will drop slightly to 1032hPa during the last day of the forecast period.

The relatively strong Arabian Ridge is expected to remain active during the forecast period and hence, it will have a significant impact on the weather across most parts of northeastern Africa and Great Horn of Africa.

At 925-hPa level, moist southwesterly flow from the Atlantic Ocean with its low-level convergence is expected to prevail across the Gulf of Guinea, southern Sahel regions and most neighboring areas of Central, western equatorial and southwestern Africa. On the other hand, the combination of southeasterly, easterly and northeasterly flow from the Indian Ocean with their low-level convergences is expected to prevail across most parts of the Greater Horn of Africa, parts of Central and southern Africa.

At 850-hPa level, strong dry northerly flow is expected remain active and prevail across southern Sahel countries. On the other hand, meridional and seasonal wind convergence is expected to remain active across the Lake Victoria region, Congo Basin and the neighboring areas of Central Africa, southern Cameroon, Gabon, Angola, CAR and South Sudan during the forecast period. Converging winds over Kenya, Tanzania, Uganda, DRC, Burundi, Rwanda, Ethiopia, South Sudan, Mozambique, Malawi, Zimbabwe, Zambia, Angola, Namibia,

Botswana, Lesotho and South Africa; these are likely to maintain the occasional enhanced to moderate precipitation over these areas.

Strong lower-level wind convergences over the eastern portions of Southern Africa and Madagascar are expected to enhance rainfall over Southeastern Africa. At least 25mm for two or more days is likely over portions of Gabon, Equatorial Guinea, DRC, Zimbabwe, South Africa, Mozambique, Madagascar, Zambia, Tanzania, Kenya and Ethiopia. There is an increased likelihood for daily rainfall to exceed 50mm over local areas in DRC, Zambia, Zimbabwe, Mozambique and Madagascar.

2.0. Previous and Current Day Weather over Africa

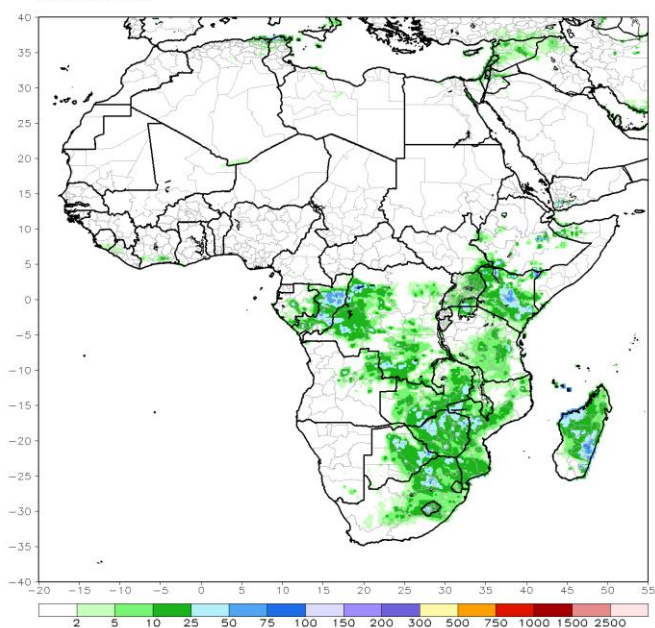
2.1. *Weather assessment for the previous day* (Dec 09, 2019)

Daily rainfall amount exceeded 25mm over Tunisia, Algeria, Gabon, Republic of Congo, DRC, Uganda, Kenya, Ethiopia, Somalia, Tanzania, Malawi, Zambia, Angola, Botswana, Zimbabwe, South Africa, Lesotho, Mozambique and Madagascar; and exceeded 50mm over South Africa, Lesotho, Botswana, Zimbabwe, Mozambique, Madagascar, Tanzania, Kenya, Ethiopia, Somalia, DRC, Republic of Congo, Algeria and Tunisia.

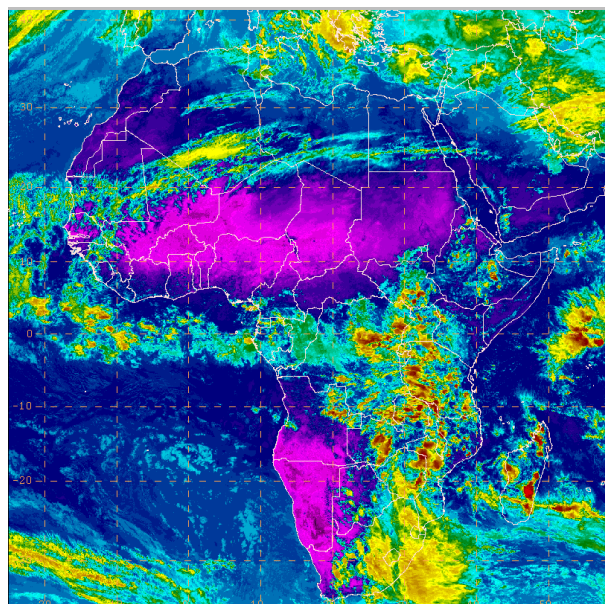
2.2. *Weather assessment for the current day* (Dec 10, 2019)

Deep convective clouds are observed over many places in the equatorial western Africa, Greater Horn of Africa, Central Africa and southeastern Africa.

RFE2 Daily Total Rainfall (mm)
Period: 09Dec2019



IR Satellite Image (valid 1352 December 10, 2019)



Author: MUSA Ssemujju (CPC-African Desk/Uganda Meteorological Service)