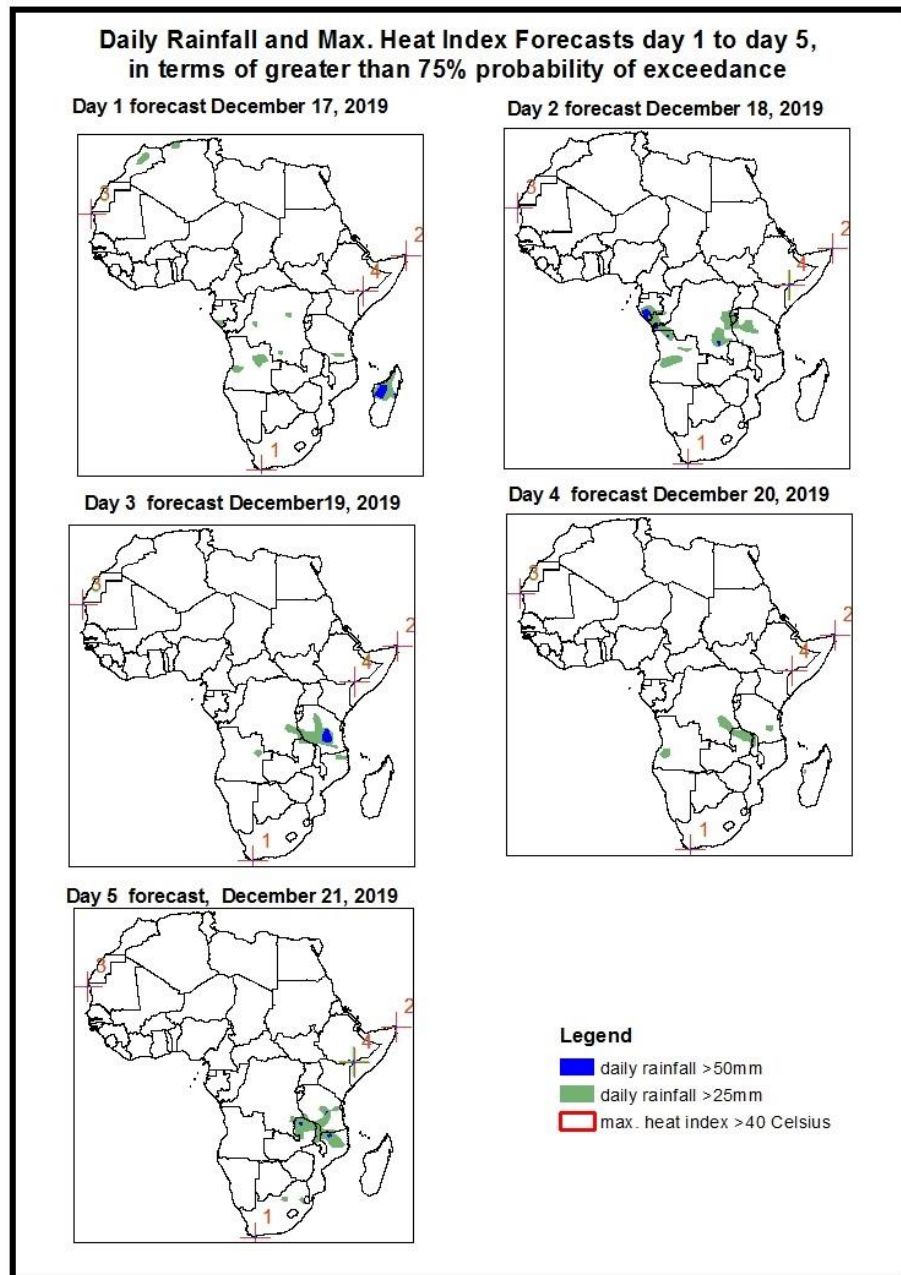


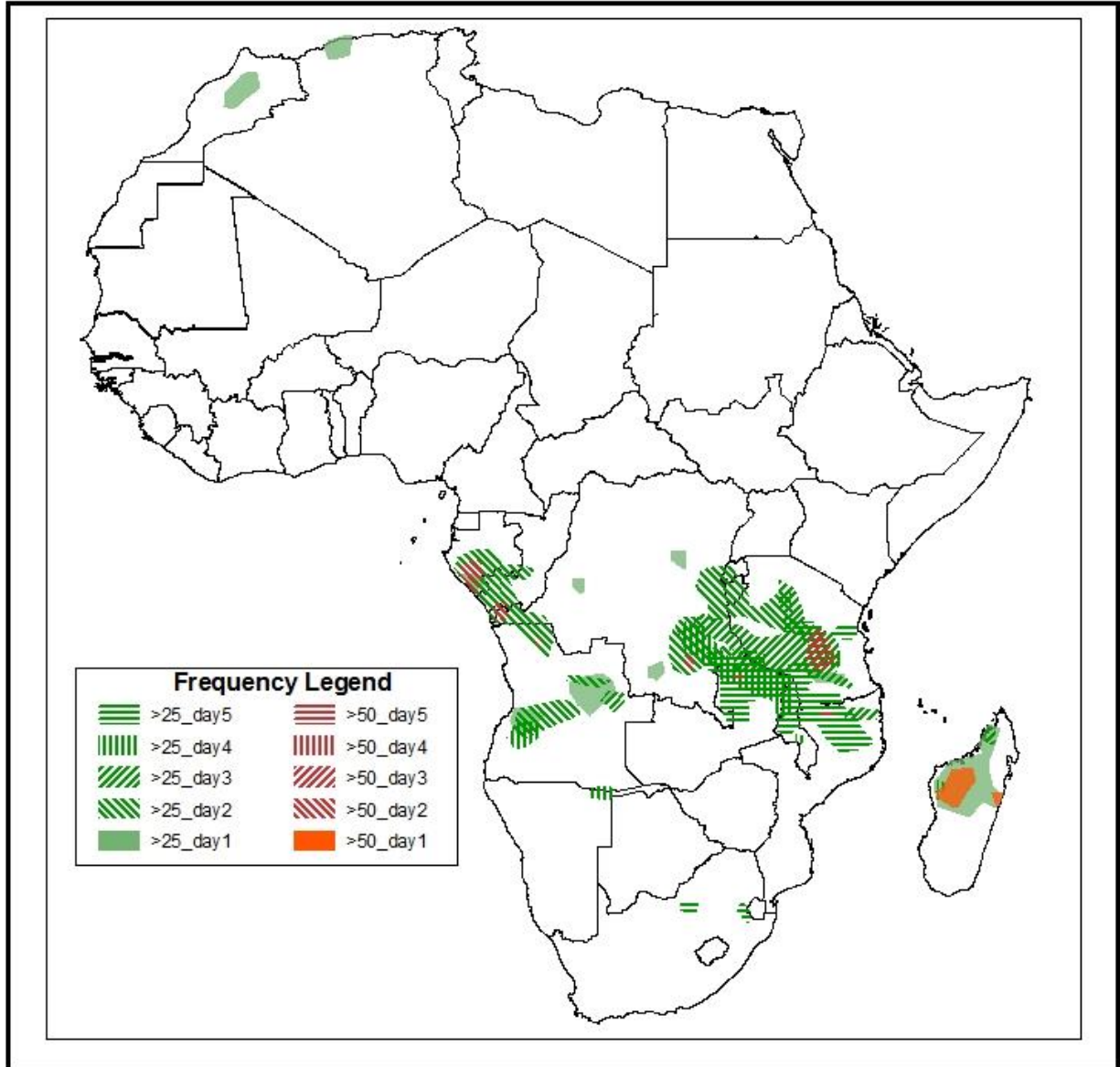
1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on December 16, 2019)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: 17 December – 21 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°C), based on the NCEP/GFS and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



Five Days Rainfall Forecast Summary December 17 - December 21, 2019

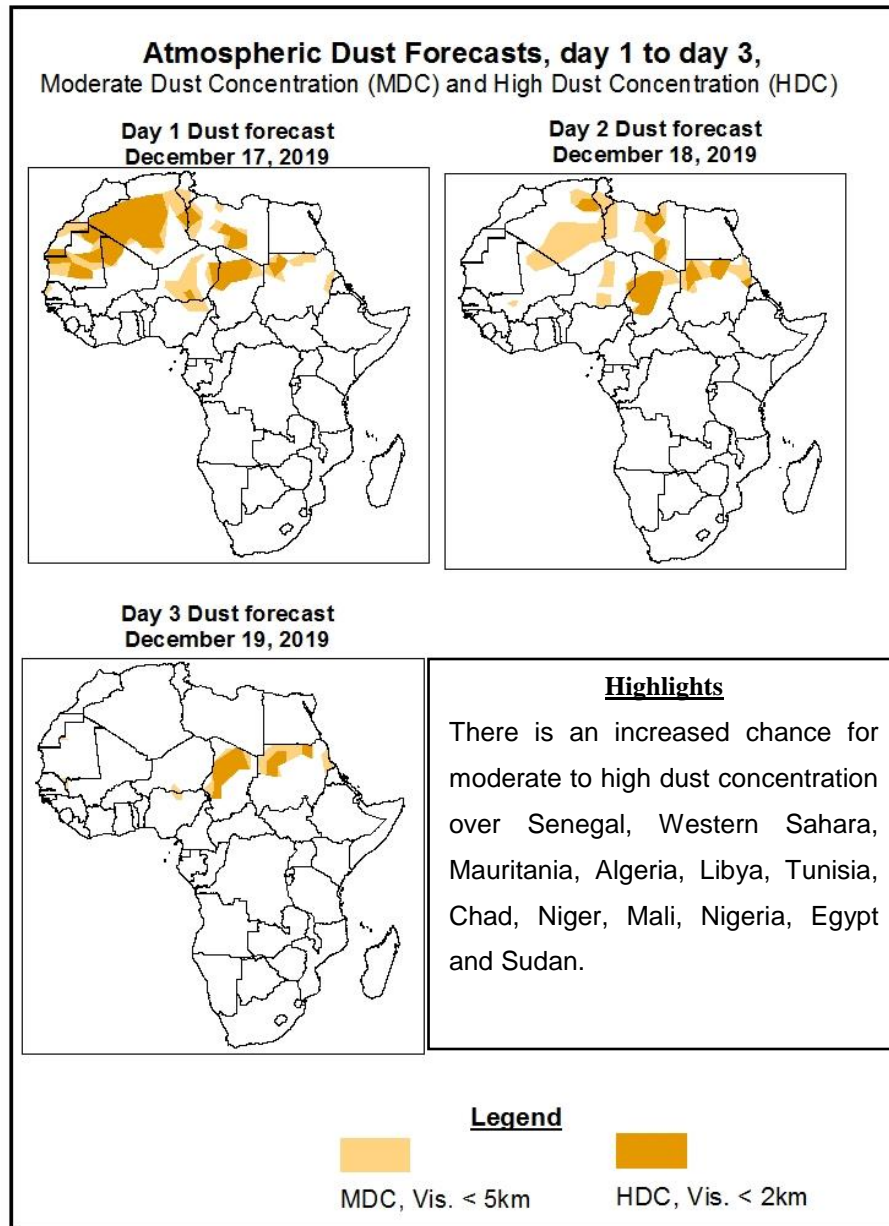


Highlights

- Westerly flow from the Atlantic Ocean with its associated lower-level convergence is expected to enhance rainfall across western equatorial Africa. Strong lower-level wind convergences are expected to enhance rainfall over Equatorial Eastern Africa and Madagascar.
- At least 25mm for two or more days is likely over portions of Gabon, Republic of Congo, DRC, Angola, Namibia, South Africa, Mozambique, Madagascar, Zambia, Malawi, Tanzania, Burundi and Rwanda.
- There is an increased likelihood for daily rainfall to exceed 50mm over local areas in Gabon, DRC, Angola, Zambia, Tanzania, Mozambique and Madagascar.

1.2. Atmospheric Dust Concentration Forecasts (valid: 17 Dec – 19 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: 17 December – 21 December 2019

The Azores High Pressure system over the Northeast Atlantic is generally expected to weaken with its central pressure value decreasing from 1028hPa to 1022hPa during the forecast period.

The St. Helena High Pressure system over the Southeast Atlantic Ocean is expected to slightly weaken while shifting eastwards with its central pressure value decreasing from 1023hPa to 1021hPa during the first two days of the forecast period and then its center is expected to start strengthening from 1021hPa to 1026hPa during the rest of the forecast period.

The Mascarene High Pressure system over Southwest of Indian Ocean is expected to slightly weaken while shifting eastwards with its central pressure value decreasing from 1023hPa to 1022hPa during the first two days of the forecast period and then its central pressure value is expected to increase from 1022hPa to 1025hPa during the third day and thereafter remains constant at 1025hPa for the rest 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 portions of the 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 northeasterly flow from the Indian Ocean with its low-level convergence is expected to prevail across most parts of the Greater Horn of Africa and parts of Central Africa whereas the combination of northeasterly, easterly and southeasterly flows from the Indian Ocean together with their low-level convergences is expected to prevail across most parts of southeastern 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 and southern Africa during the forecast period. Converging winds over Kenya, Tanzania, Uganda, Burundi, Rwanda, Ethiopia, DRC, Mozambique, Malawi, Zimbabwe, Zambia, Angola, Namibia, Botswana, South Africa and Madagascar; are likely to maintain the occasional enhanced to moderate precipitation over these areas.

Westerly flow from the Atlantic Ocean with its associated lower-level convergence is expected to enhance rainfall across western equatorial Africa. Strong lower-level wind convergences are expected to enhance rainfall over Equatorial Eastern Africa and Madagascar. At least 25mm for two or more days is likely over portions of Gabon, Republic of Congo, DRC, Angola, Namibia, South Africa, Mozambique, Madagascar, Zambia, Malawi, Tanzania, Burundi and Rwanda. There is an increased likelihood for daily rainfall to exceed 50mm over local areas in Gabon, DRC, Angola, Zambia, Tanzania, Mozambique and Madagascar.

2.0. Previous and Current Day Weather over Africa

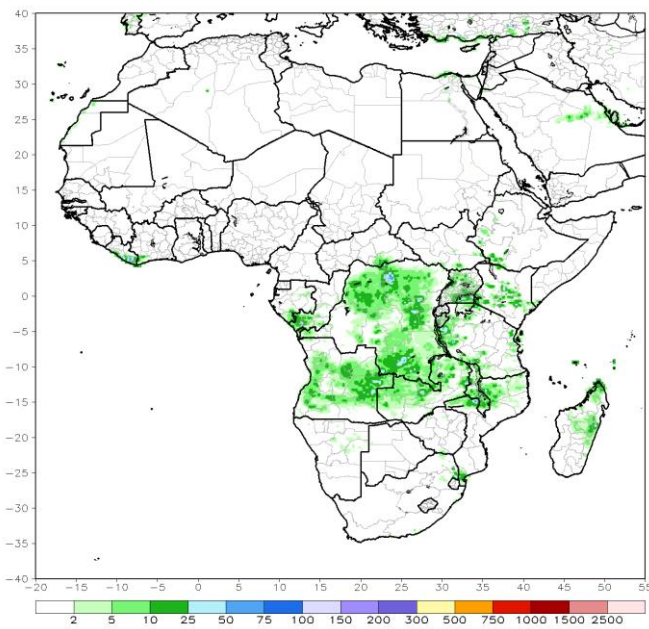
2.1. Weather assessment for the previous day (Dec 15, 2019)

Daily rainfall amount exceeded 25mm over Liberia, Republic of Congo, DRC, Uganda, Kenya, Tanzania, Malawi, Zambia, Angola, South Africa, Mozambique and Madagascar; and exceeded 50mm over Liberia, DRC, Tanzania, Mozambique and South Africa.

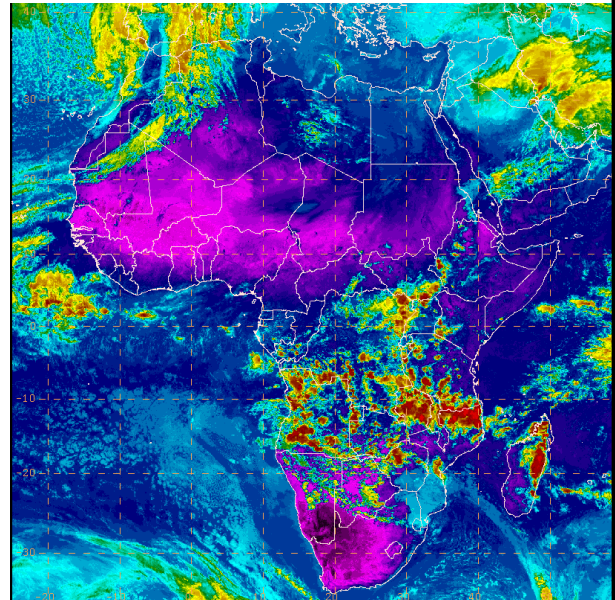
2.2. Weather assessment for the current day (Dec 16, 2019)

Deep convective clouds are observed over many places in the Greater Horn of Africa and Central Africa, and over a small portion of Southern Africa.

RFE2 Daily Total Rainfall (mm)
Period: 15Dec2019



IR Satellite Image (valid 1352 December 16, 2019)



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