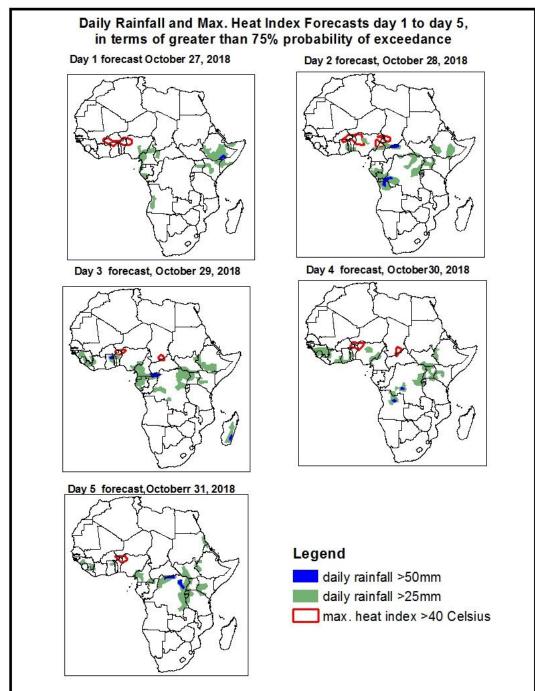
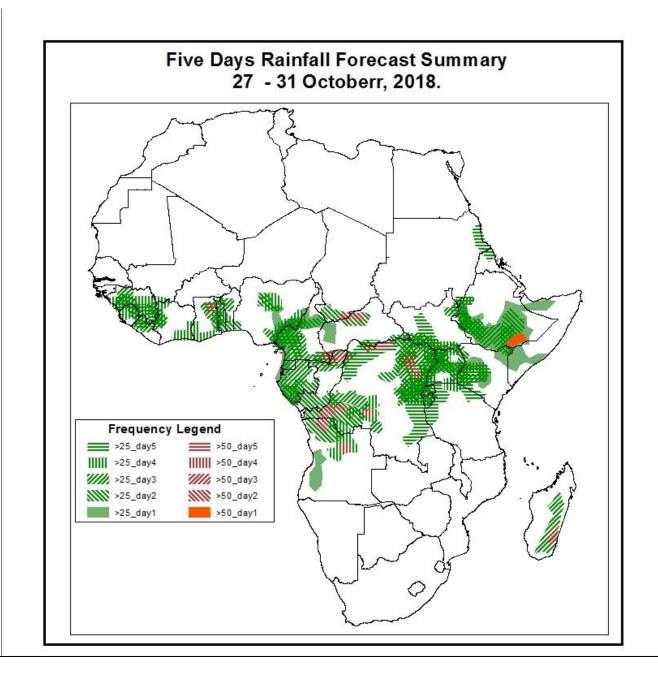
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on October 26, 2018)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Oct 27, -Oct 31, 2018)

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.

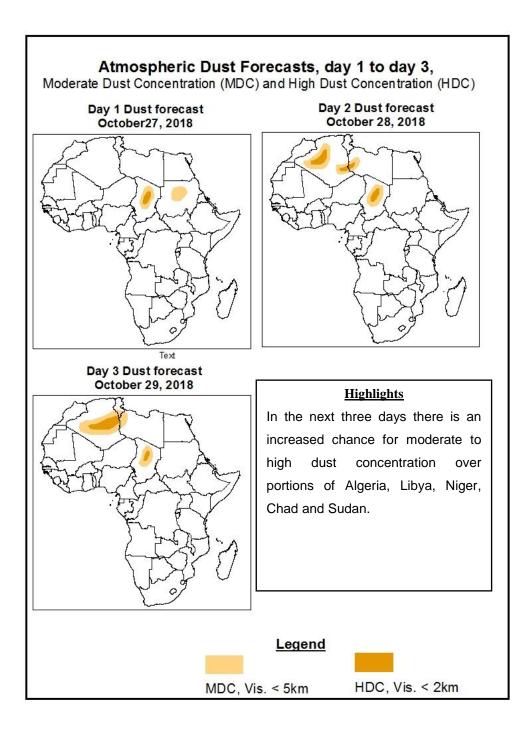




<u>Highlights</u>

- In the next five days the St Helena anticyclone is expected to strengthen leading the Congo Air Boundary (CAB) to gradually move towards the Lake Victoria region. Lower level convergence in the Greater Horn of Africa is expected to maintain moderate to localized heavy rainfall in the region during the forecast period. There is an increased chance for 2 or more days of moderate to heavy rainfall over parts of Burkina Faso, Congo DR Tanzania and Angola
- There is an increased chance for temperature heat index values to exceed 40^oC over local areas of Niger, Burkina Faso, Benin, Nigeria, Chad and Republic of Central Africa.

1.2. Atmospheric Dust Concentration Forecasts (valid: Oct 27 – October 31, 2018) 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: October 27 –31 October, 2018

The Azores High Pressure system over the North Atlantic Ocean is expected to strengthen within the 24hrs with its central pressure value expected to increase from 1034hPa to 1042hPa. It is therefore expected to reduce its strength for the rest of the forecast period. Its central pressure value is expected to decrease from 1038hPa to 1027hPa.

The St. Helena High Pressure system over the Southwest Atlantic Ocean is expected to strengthen as it progresses eastwards towards the southern sub-continent. Its central pressure value is expected to increase from 1024hPa to 1034hPa through 120hrs.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to strengthen as it progresses southeast of the Ocean through the 120hrs. Its central pressure value is expected to increase from 1033hPa to 1035hPa.

At 925hPa, strong northeasterly to easterly flow is expected to prevail over most parts of northern Africa, and some areas of the Sahel region. Southwesterly to westerly monsoon flow from the Atlantic Ocean is expected to remain weak. With the strengthening of the St Helena anticyclone the Congo Air Boundary (CAB) is expected move towards the Lake Victoria region.

At 850hPa, lower-level wind convergence of northeasterly to easterly flow and Southeasterly to easterly flow is expected to remain active during the forecast period over the Greater Horn of Africa.

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2.0. Previous and Current Day Weather over Africa

2.1. Weather assessment for the previous day (October 25, 2018)

Moderate daily rainfall was observed over portion of Western countries of central Africa and localized areas of Kenya and Tanzania.

2.2. Weather assessment for the current day (October 26, 2018)

Intense convective clouds are observed over parts of Greater Horn of Africa and Central African countries.

