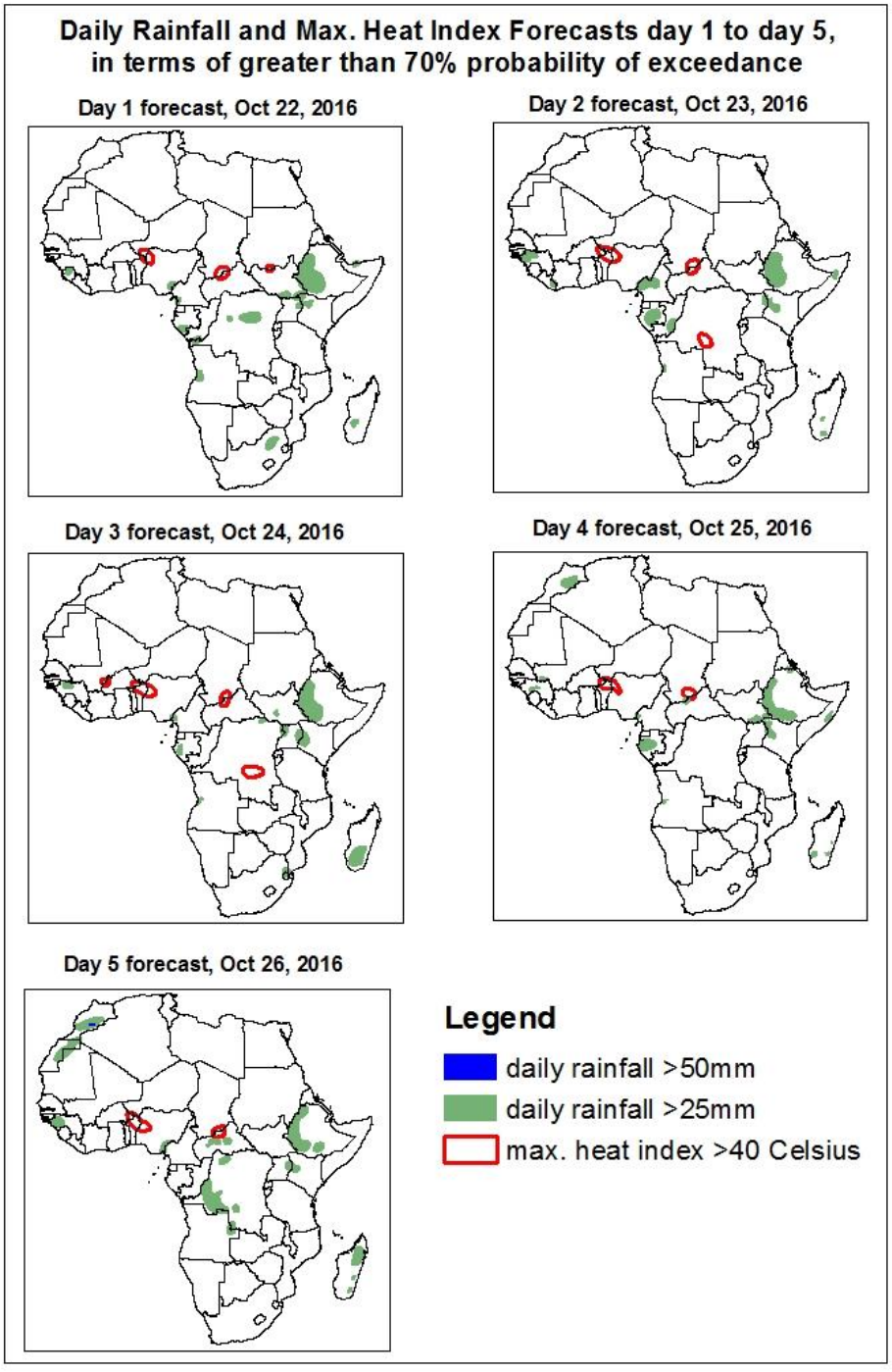
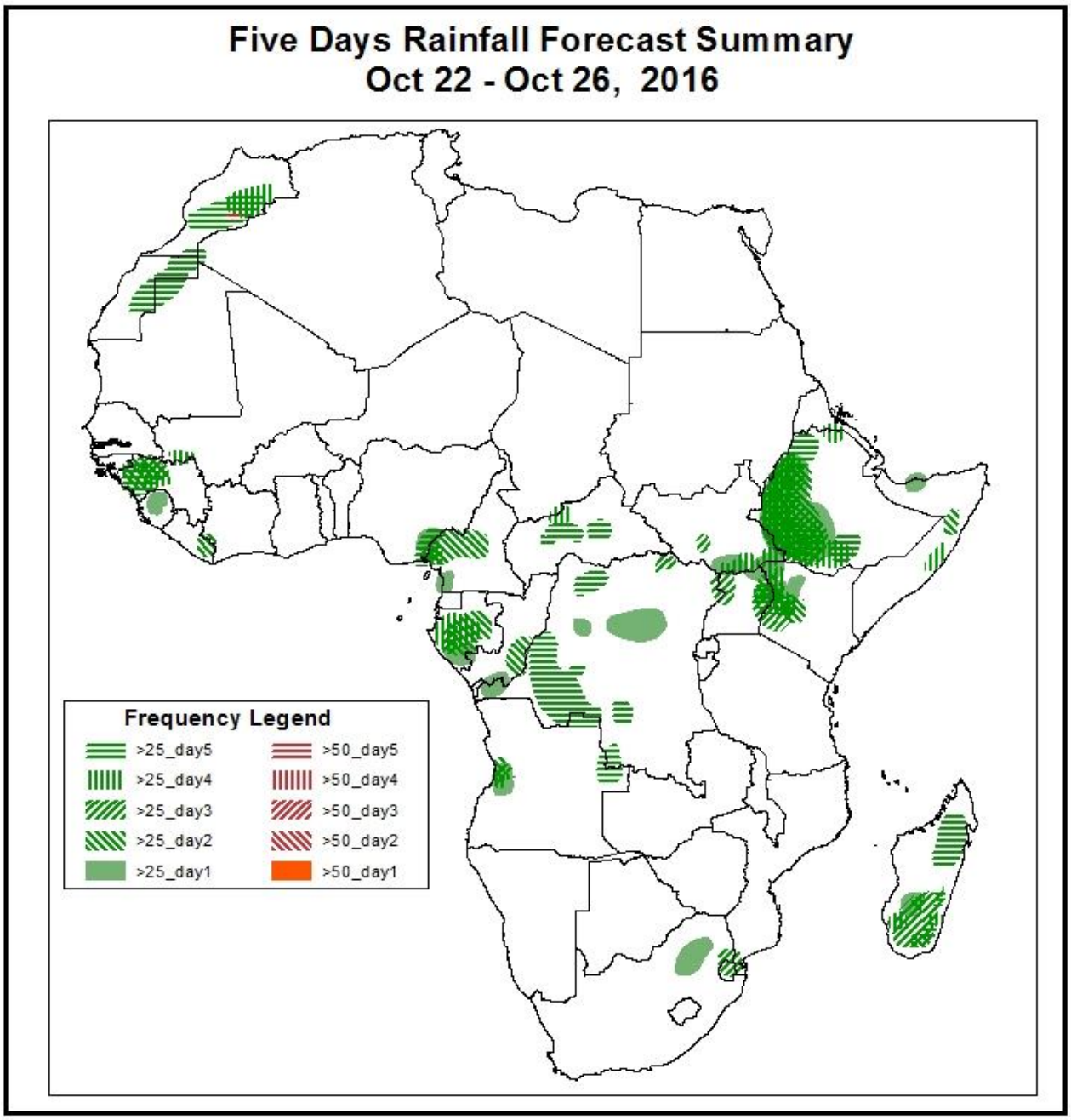
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on Oct 21, 2016)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Oct 22– Oct 26 2016)

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.



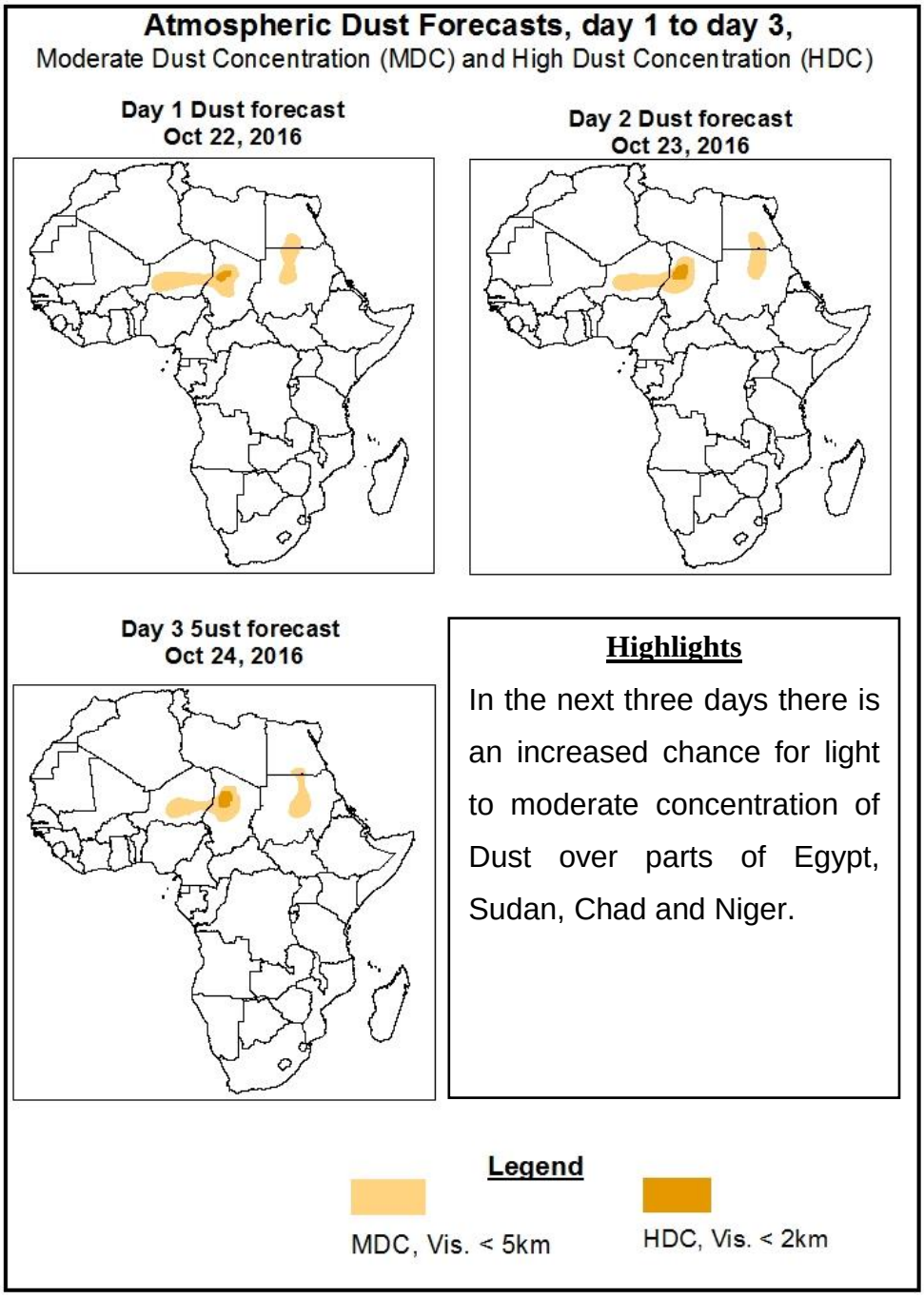


Highlights

In the next five days, lower level wind convergences across DRC and the Greater Horn of Africa are expected to enhance rainfall in their respective regions. Therefore, there is an increased chance for two or more days of moderate to heavy rainfall over local area of Western Sahara, Nigeria, Cameroon, CAR, DRC, Congo and South Africa, portions of Guinea, Gabon, Madagascar and the Greater Horn of Africa.

1.2. Atmospheric Dust Concentration Forecasts (valid: Oct 22– Oct 24 2016)

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: Oct 22–Oct 26, 2016*

The Azores High Pressure system over the North Atlantic is expected to weaken, with its value of the central pressure decreasing from 1032 hPa to 1022 hPa during the forecast period.

The St. Helena High Pressure system on the Southeast of the Atlantic Ocean is expected to also weaken, with its value of the central pressure decreasing from 1025 hPa to 1016 hPa during the forecast period.

The Mascarene High Pressure system over the Southeast Atlantic Ocean is expected to weaken, with its value of the central pressure decreasing from 1038 hPa to 1024 hPa during the forecast period.

At 925hPa, strong dry Northerly to Easterly winds may lead to light to moderate dust concentration over parts of Chad, Algeria, Sudan and Egypt.

At 850hPa level, lower level wind convergences are expected to prevail in DRC through Zambia, Central Africa and the Greater Horn of Africa.

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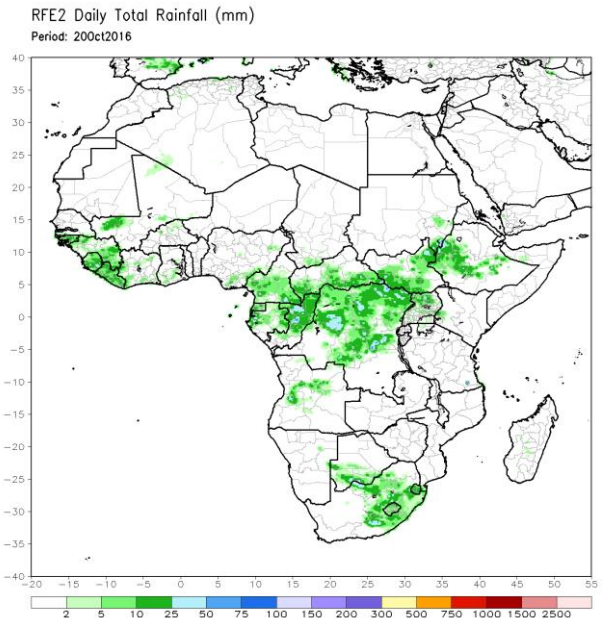
2.0. Previous and Current Day Weather over Africa

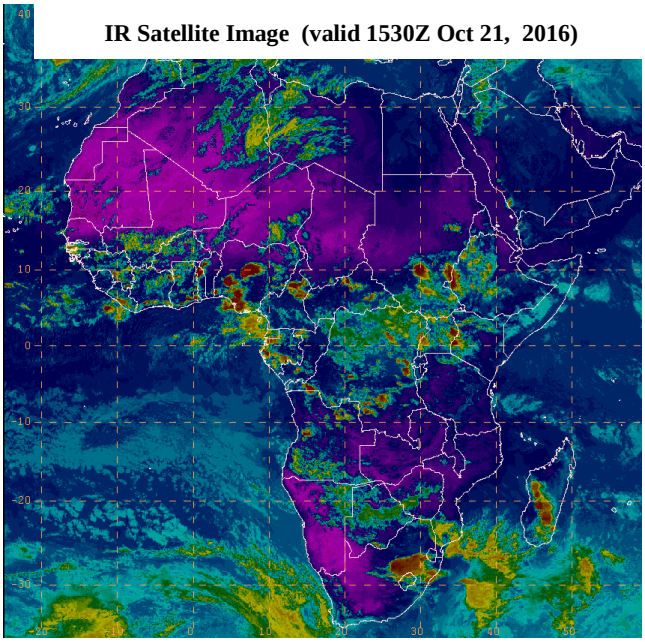
2.1. Weather assessment for the previous day (Oct 20, 2016)

Moderate to locally heavy rainfall was observed over portion of Congo, DRC, South Sudan, Uganda and Ethiopia.

2.2. Weather assessment for the current day (Oct 21, 2016**)**

Intense convective clouds are observed over in portions of DRC, South Sudan, Liberia and Ethiopia.





Previous day rainfall condition over Africa (Left) based on the NCEP CPCE/RFE and current day cloud cover (right) based on IR Satellite image.

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