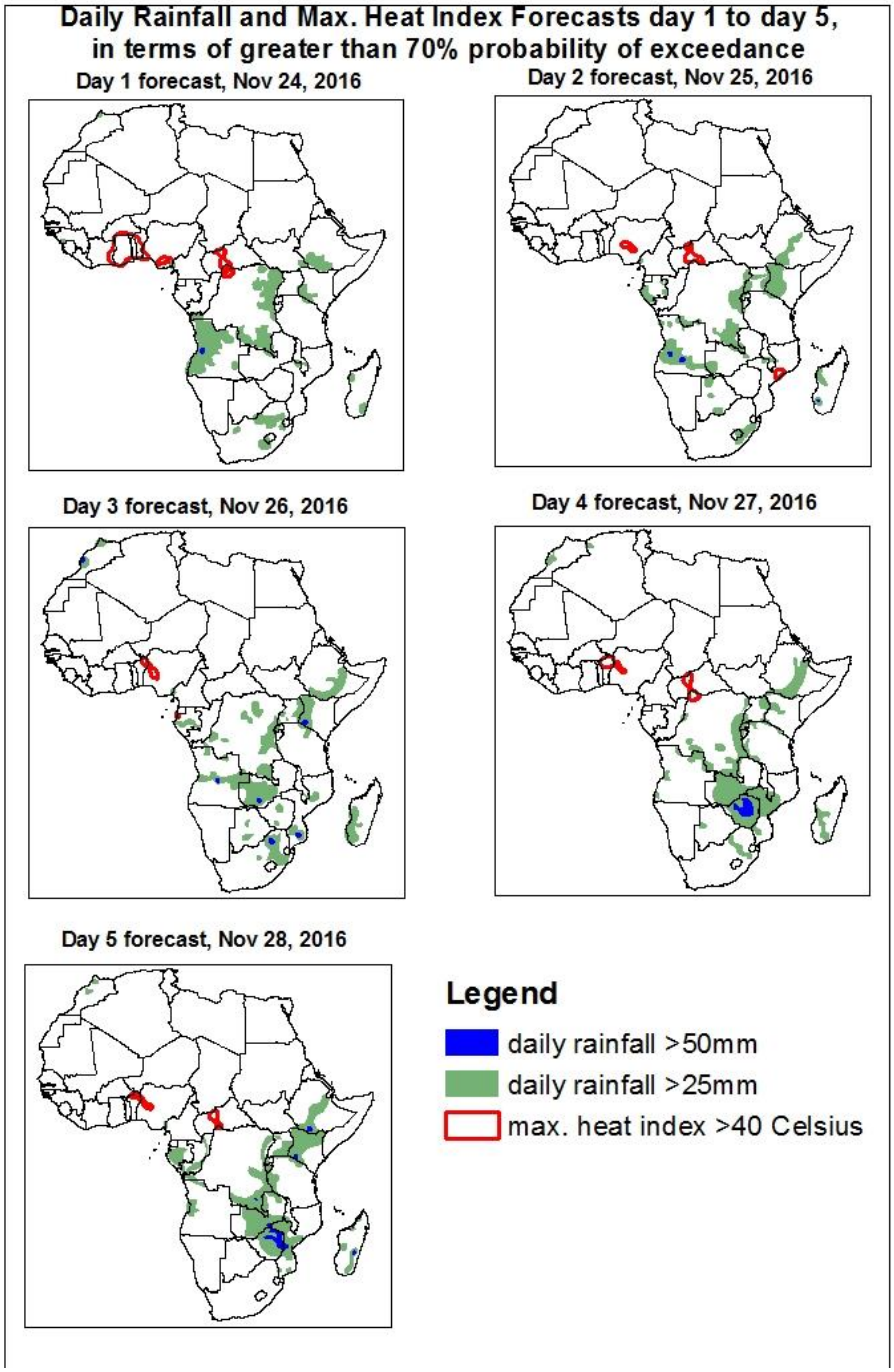
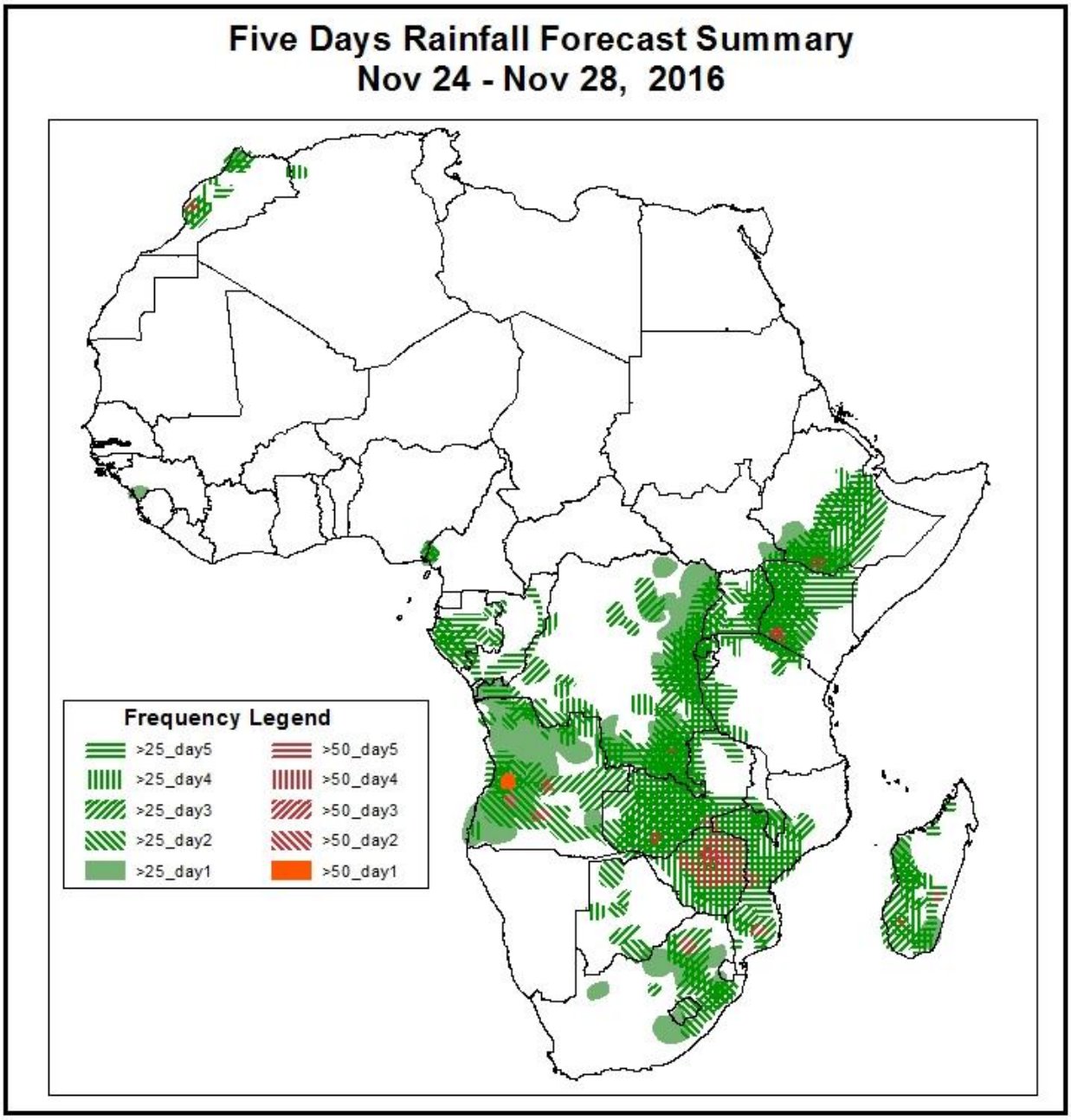
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on Nov 23, 2016)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Nov 24– Nov 28, 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.



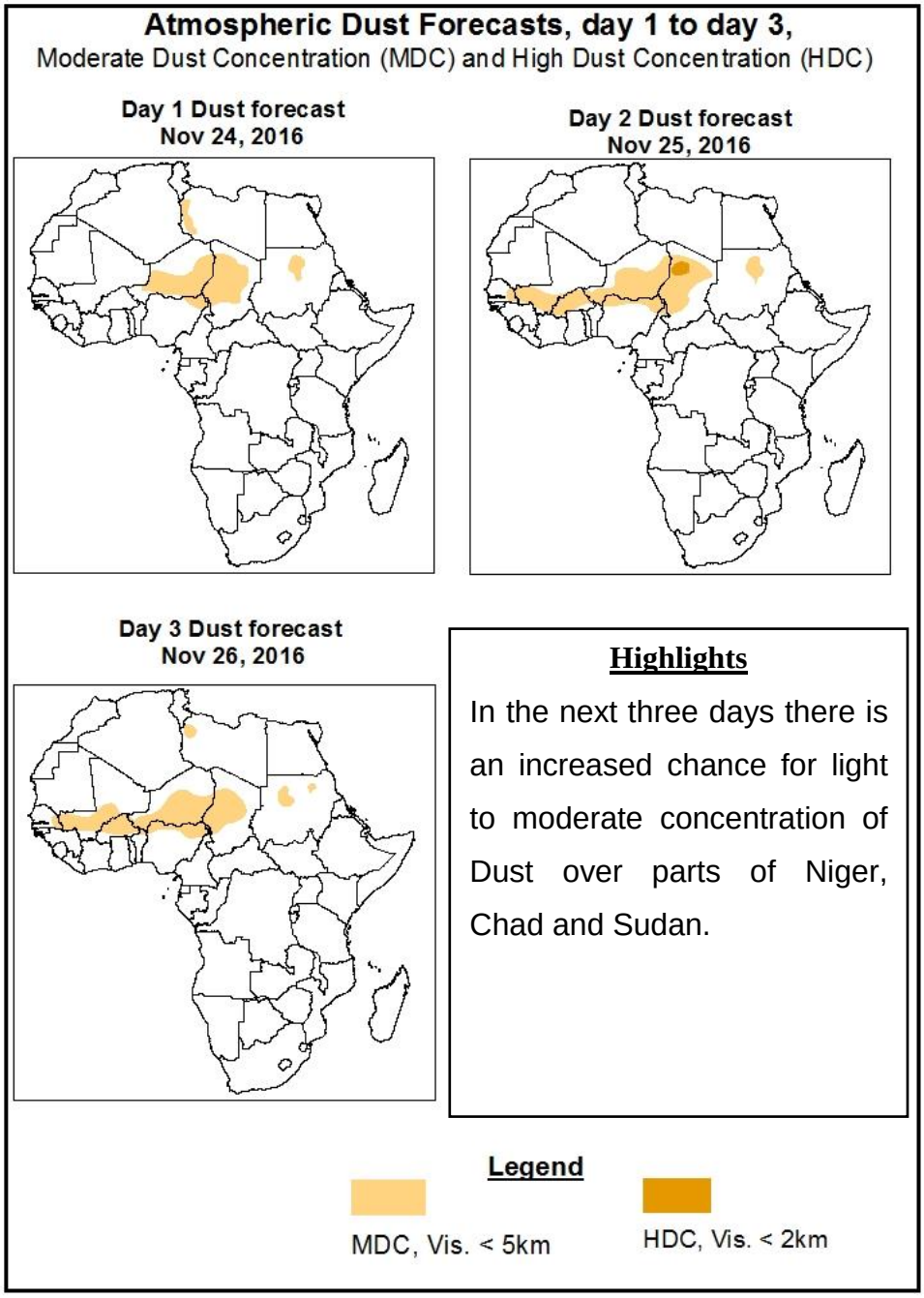


Highlights

In the next five days, lower level wind convergences in CAR, Angola, Eastern DRC, Zambia, Zimbabwe, Greater Horn of Africa, and eastward propagating frontal system across South Africa are expected to enhance rainfall in their respective regions. Therefore, there is an increased chance for two or more days of light to moderate rainfall over portion of Zambia and Zimbabwe, local area of Morocco, Gabon, Angola, DRC, Uganda, Kenya, Ethiopia, Rwanda, Burundi, Mozambique, South Africa and Madagascar.

1.2. Atmospheric Dust Concentration Forecasts (valid: Nov 24– Nov 26, 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: Nov 24–Nov 28, 2016*

The Azores High Pressure system over the North Atlantic Ocean is expected to weaken, with its value of the central pressure decreasing from 1030hPa to 1025hPa in the next 72 hours, the system is expected to intensify to 1034hPa during the remaining forecast period.

The St. Helena High Pressure system over the Southeast of the Atlantic Ocean is expected to weaken, with its value of the central pressure decreasing from 1022hPa to 1021hPa in the next 48 hours, intensifies to 1024hPa in the next 72 hours, and weakens to 1023hPa during the remaining 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 1028hPa to 1025hPa during the forecast period.

At 925hPa, strong dry Northerly to Easterly winds may lead from light to moderate dust concentration over parts of Mauritania, Mali, Niger, Chad, Burkina Faso, Northern Nigeria and Sudan.

At 850hPa level, lower level wind convergences are expected to prevail over CAR, DRC, Angola, Namibia, Zambia, Botswana and South Sudan.

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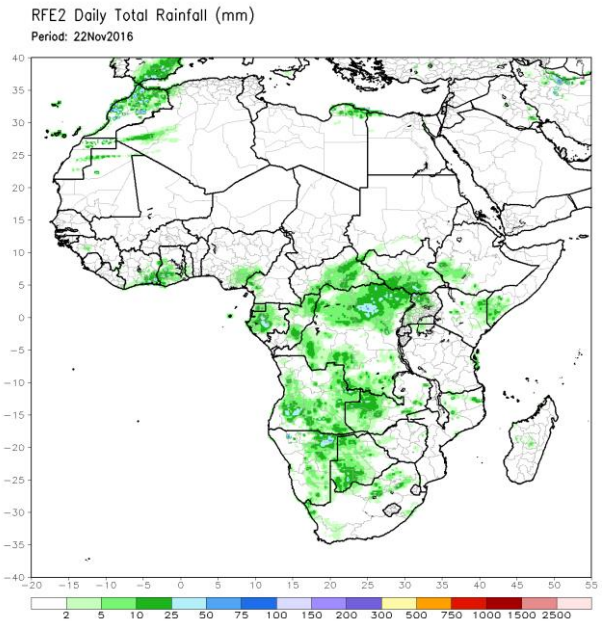
2.0. Previous and Current Day Weather over Africa

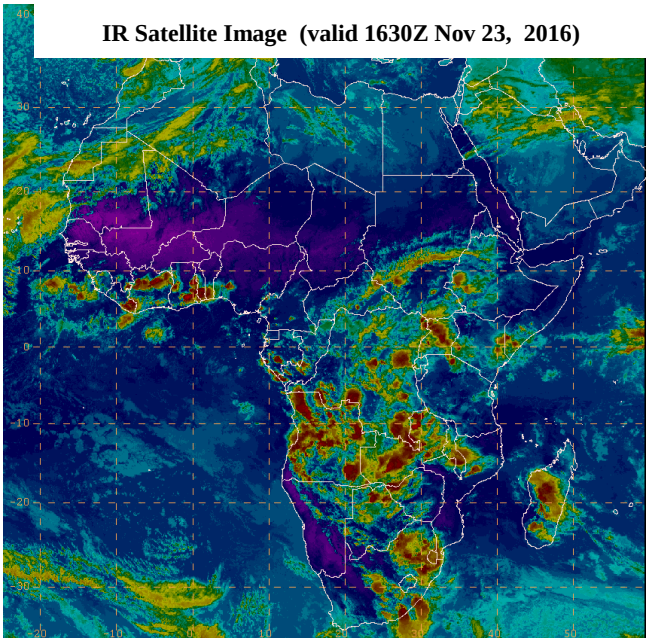
2.1. Weather assessment for the previous day (Nov 22, 2016)

Light to moderate rainfall was observed over portion of Morocco, Gabon, DRC, Angola, Namibia, Zambia and South Sudan.

2.2. Weather assessment for the current day (Nov 23, 2016**)**

Intense convective clouds are observed over portions of Liberia, Code D'Ivoire, Ghana, Togo, Benin, Nigeria, Gabon, DRC, Angola, Zambia, Botswana, Malawi, South Africa, Uganda, Mozambique and Madagascar.





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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