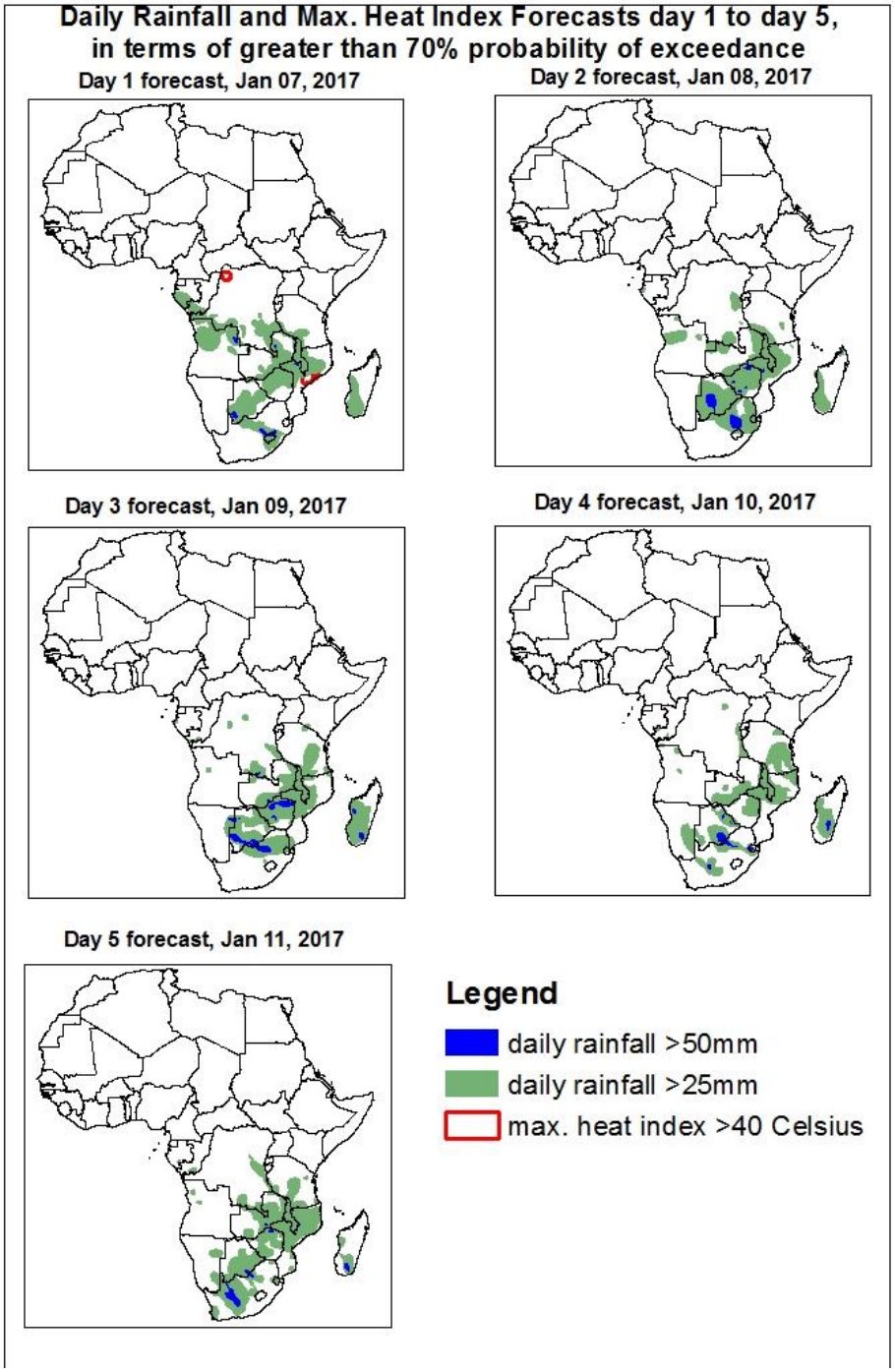
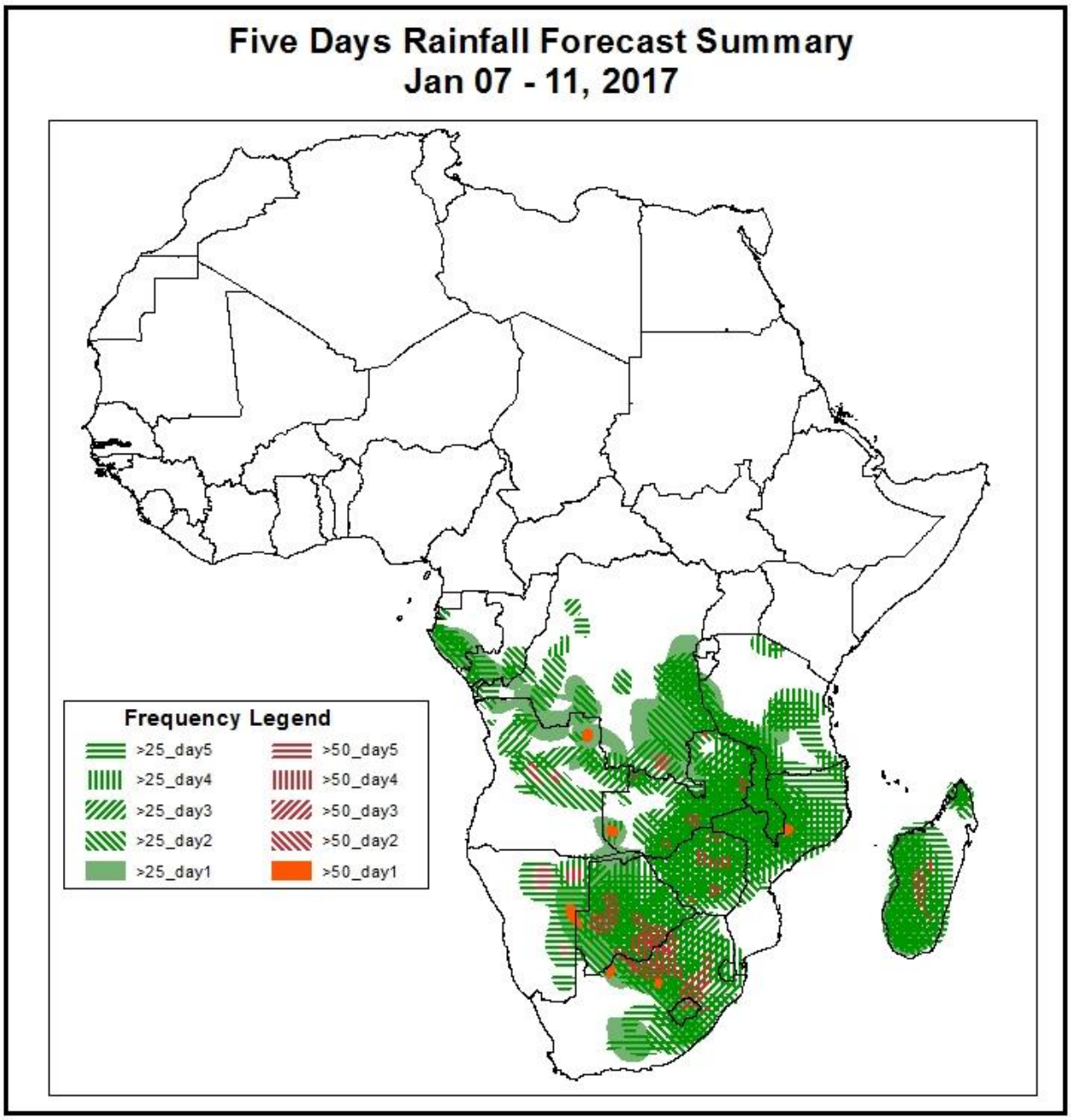
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on Jan 06, 2017)

1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: Jan 07 –11, 2017)

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.



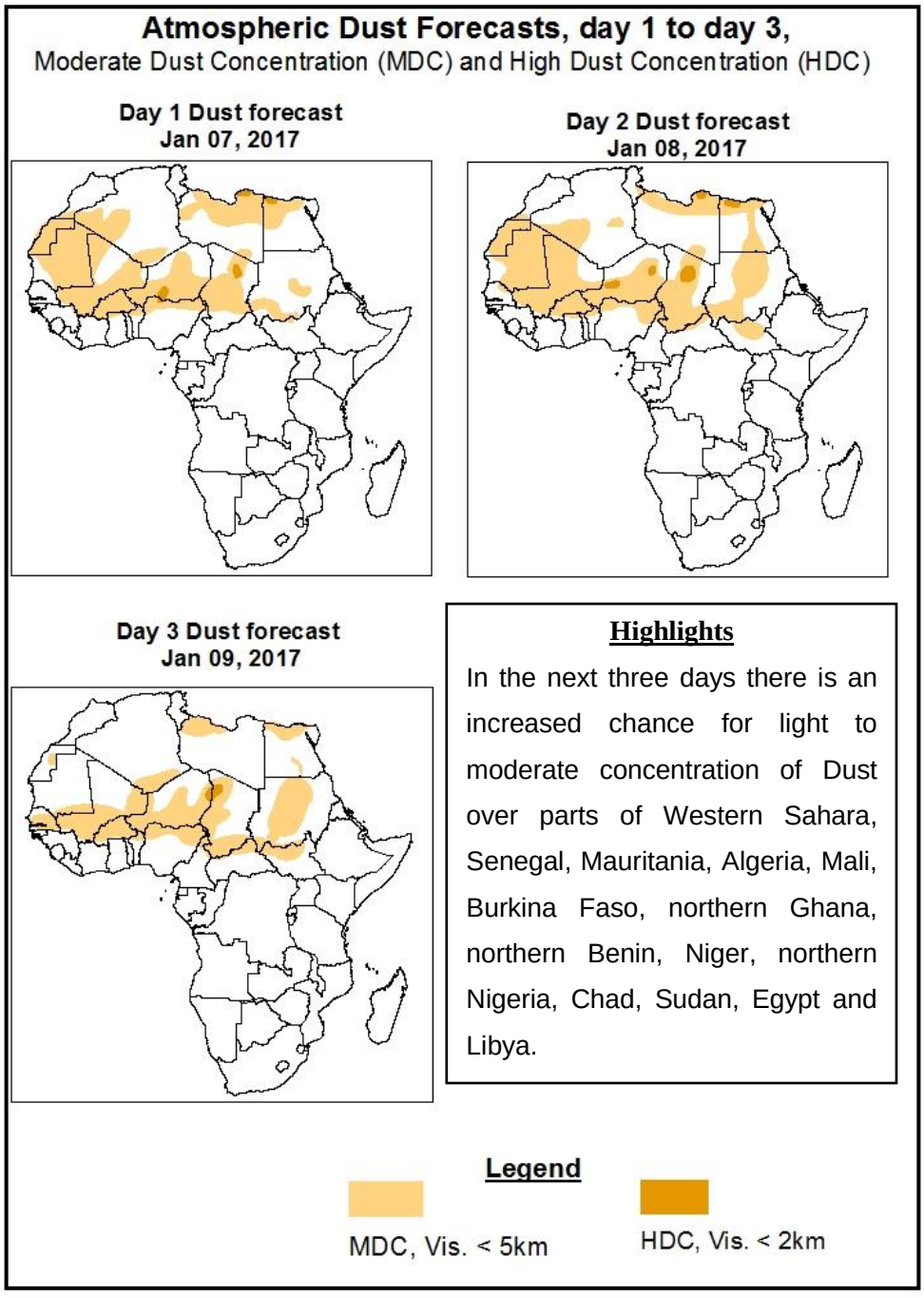


Highlights

In the next five days, lower level wind convergences across the Northern parts of the South African countries 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 portions of Zambia, Malawi, Mozambique, Botswana, Zimbabwe, South Africa, Lesotho and Madagascar, local areas of Gabon, Congo, DRC, Angola, Tanzania, Namibia and Swaziland.

1.2. Atmospheric Dust Concentration Forecasts (valid: Jan 07–09, 2017)

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: Jan 07– 11, 2017*

The Subtropical High Pressure system over Libya is expected to weaken, with its value of the central pressure decreasing from 1031hPa to 1024hPa, in the next 96 hours and intensify to 1025hPa during the remaining forecast period.

The St. Helena High Pressure system over the Southeast of the Atlantic Ocean is expected to intensify, with its value of the central pressure increasing from 1022hPa to 1024hPa, in the next 72 hours and weaken to 1020hPa during the remaining forecast period.

The Mascarene High Pressure system over the Southwest Indian Ocean is expected to weaken, with its value of the central pressure decreasing from 1023hPa to 1020hPa, in the next 72 hours and intensify to 1025hPa during the forecast period.

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At 925hPa, strong dry Northerly to Easterly winds may lead from light to moderate dust concentration over parts of Western Sahara, Senegal, Mauritania, Algeria, Mali, Burkina Faso, northern Ghana, northern Benin, Niger, northern Nigeria, Chad, Sudan, Egypt, Libya and Tunisia.

At 850hPa level, lower level wind convergences are expected to prevail over Cameroon, Congo, CAR, DRC, Tanzania, Angola, Zambia, Botswana, Zimbabwe and Mozambique.

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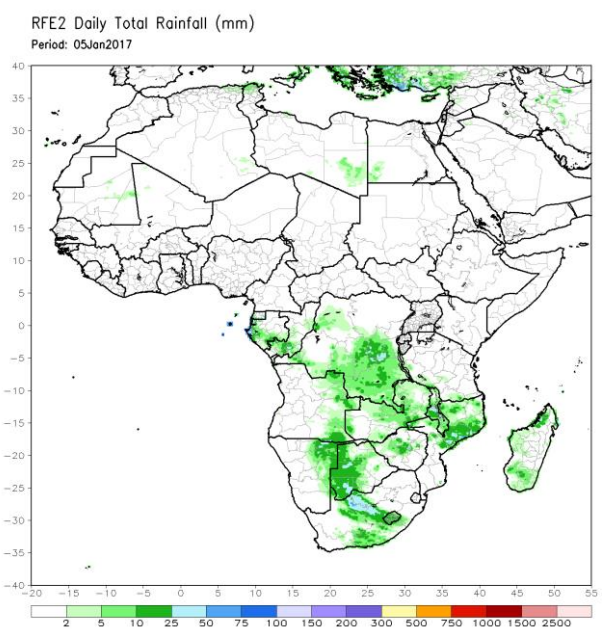
2.0. Previous and Current Day Weather over Africa

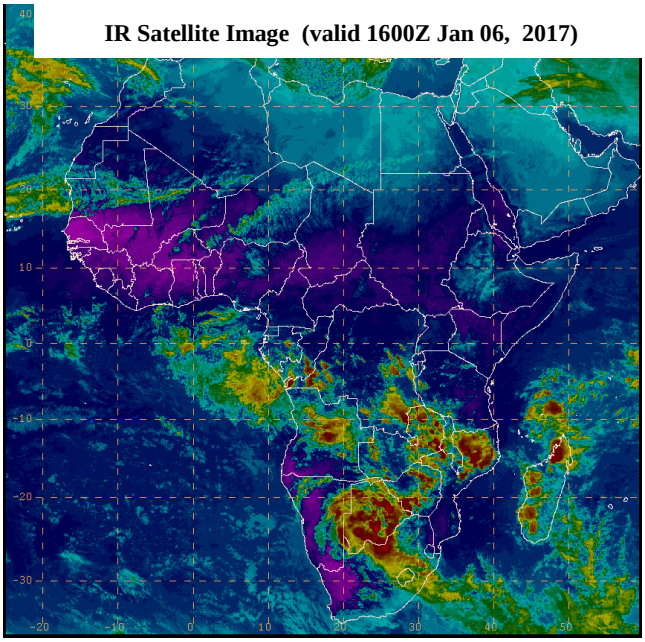
2.1. Weather assessment for the previous day (Jan 05, 2017)

Light to moderate rainfall was observed over portions of Equatorial Guinea, Gabon, Congo, DRC, Malawi, Mozambique, Namibia, Botswana, Zimbabwe, South Africa and Madagascar.

2.2. Weather assessment for the current day (Jan 06, 2017)

Intense convective clouds are observed over portions of Gabon, Congo, DRC, Tanzania, Angola, Zambia, Malawi, Mozambique, Namibia, Botswana, Zimbabwe, South Africa 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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