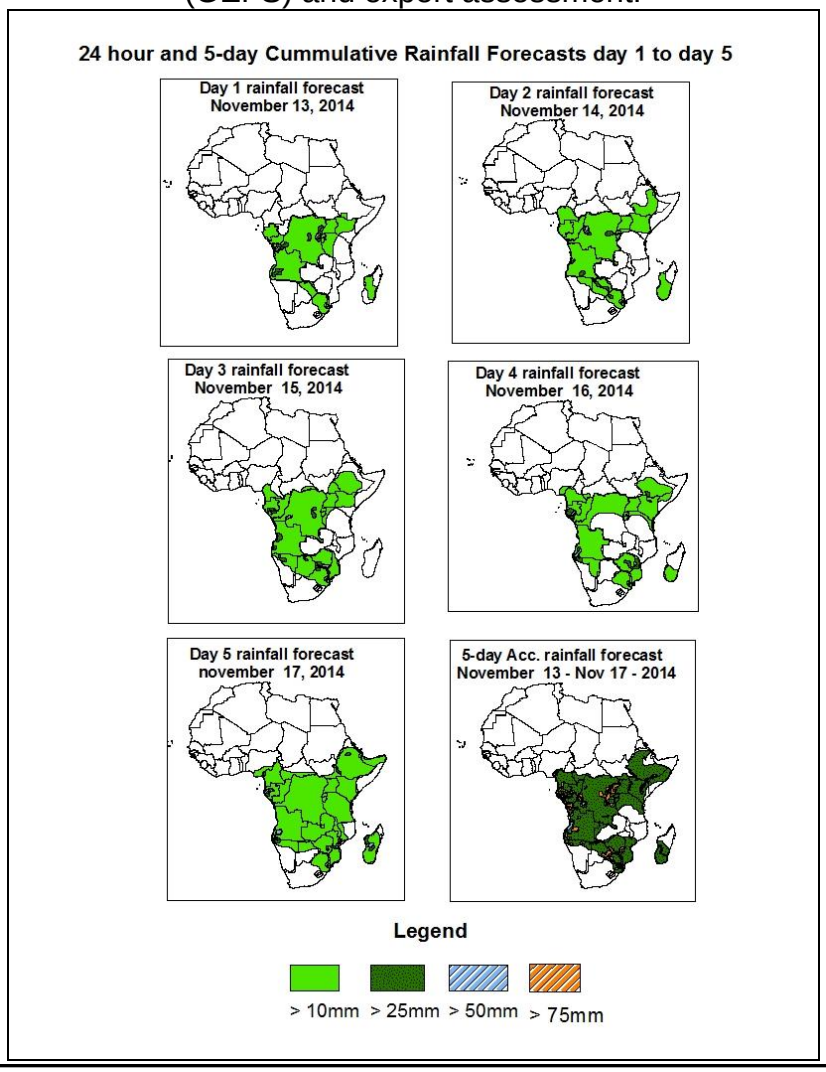
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall Forecast: Valid 06Z of November 13 – 06Z of November 17, 2014. (Issued at 1800Z of November 12, 2014)

1.1. Twenty Four Hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of 75% probability of precipitation (POP) exceeded, based on the NCEP/GFS and the NCEP global ensemble forecasts system (GEFS) and expert assessment.

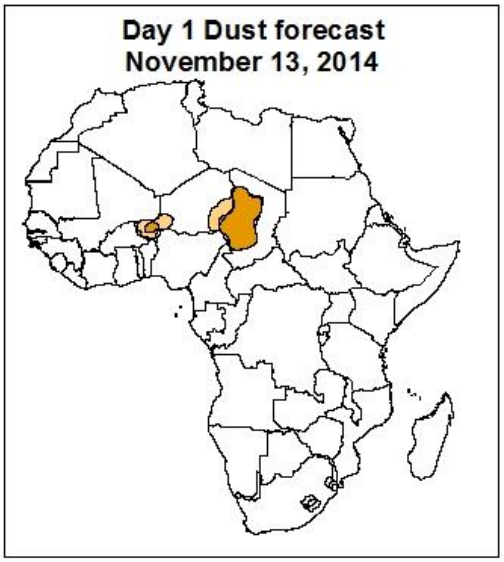


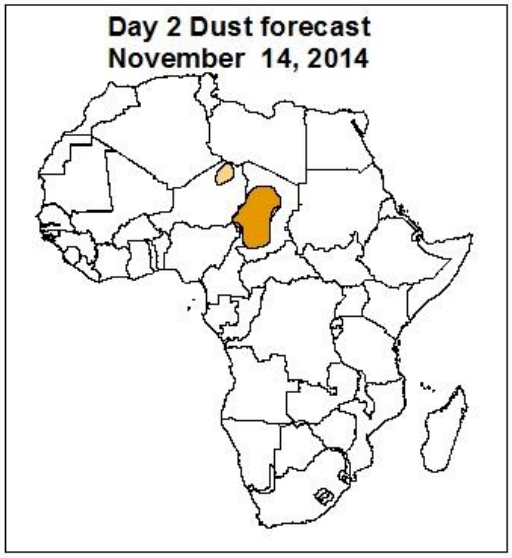
Summary

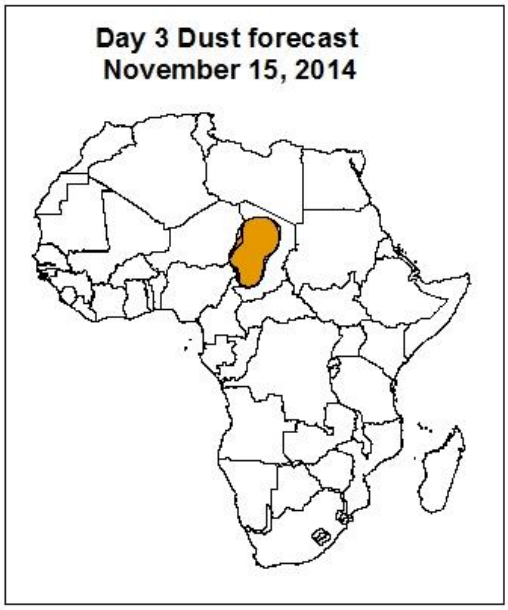
In the next five days, lower-level wind convergence over Gabon and the neighboring areas, seasonal wind convergences over the Lake Victoria region and Angola, and eastward propagating frontal system across Southern Africa are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to heavy rainfall over Gabon, Congo-Brazzaville, Equatorial Guinea, Angola, DRC, Zimbabwe, portions of Cameroon, the Lake Victoria region and Madagascar, local areas in South Africa, Southern CAR and northern Namibia.

Atmospheric Dust Forecasts, day 1 to day 3,

Moderate Dust Concentration (MDC) and High Dust Concentration (HDC)







Highlights

There is an increased chance for moderate to high dust concentration over Niger and Chad.

Legend

MDC, Vis. < 5km

HDC, Vis. < 1km

1.2. Model Discussion: Valid from 00Z of November 12, 2014

The Azores high pressure system over the Northeast Atlantic Ocean is expected to strengthen with its central pressure value increasing from 1020hpa to 1022hpa, through 24 to 72 hours, and it maintains with its central pressure value of about 1022hpa through 72 to 96hours, and expected to re-strengthen towards end of the forecast period, with its central pressure value increasing to 1025hpa, according to the GFS model.

The St Helena high pressure system over the Southeast Atlantic Ocean is expected to strengthen with its central pressure value increasing from 1025hpa to 1037hpa, through 24 to 96 hours, and then expected to weaken, with its central pressure value decreasing from 1037hpa to 1035hpa, through 96 to 120 hours, according to the GFS model.

The Mascarene high pressure system over the southwestern Indian Ocean is expected to strengthen with its central pressure value increasing from 1024hpa to 1037hpa, through 24 to 96 hours, and then expected to weaken towards end of the forecast period, with its central pressure value decreasing to 1035hpa, according to the GFS model.

At 925Hpa level, dry northeasterly to easterly wind (>25kts) is expected to prevail across Chad, Niger and parts of Sudan during the forecast period.

At 850Hpa level, seasonal wind convergences are expected to remain active across southern Ethiopia, the Lake Victoria region, Gabon, Congo, DRC, Angola and portions of Zambia, Botswana and northern Namibia.

At 500hpa level, a trough associated with mid-latitude frontal system is expected to propagate across southern Africa during the forecast period.

In the next five days, lower-level wind convergence over Gabon and the neighboring areas, seasonal wind convergences over the Lake Victoria region and Angola, and eastward propagating frontal system across Southern Africa are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to

heavy rainfall over Gabon, Congo-Brazzaville, Equatorial Guinea, Angola, DRC, Zimbabwe, portions of Cameroon, the Lake Victoria region and Madagascar, local areas in South Africa, Southern CAR and northern Namibia.

2.0. Previous and Current Day Weather Discussion over Africa

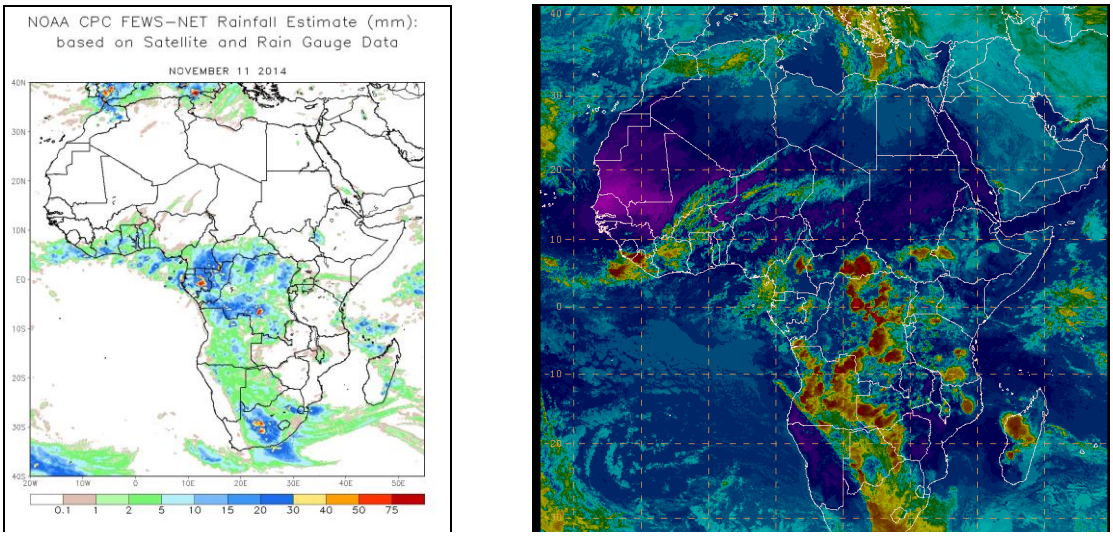
(November 11, 2014 – November 12, 2014)

2.1. Weather assessment for the previous day (November 11, 2014)

During the previous day, moderate to heavy rainfall was observed over Gabon, Angola, DRC, Congo-Brazzaville, Botswana, Ghana, Benin, Togo and Rwanda, portions of Cameroon, Madagascar, Namibia, Ivory Coast, Liberia, South Africa, Uganda, CAR and Burundi, local areas in Nigeria, Zambia, Tanzania, Kenyan, Ethiopia, South Sudan and Mozambique, southern Malawi.

2.2. Weather assessment for the current day (November 12, 2014)

Intense clouds are observed over portions of Liberia, South Africa, Angola and Zimbabwe, local areas in DRC, CAR, Botswana, Madagascar and Tanzania, southern Sierra Leone, northern Mozambique, eastern Congo-Brazzaville.



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

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