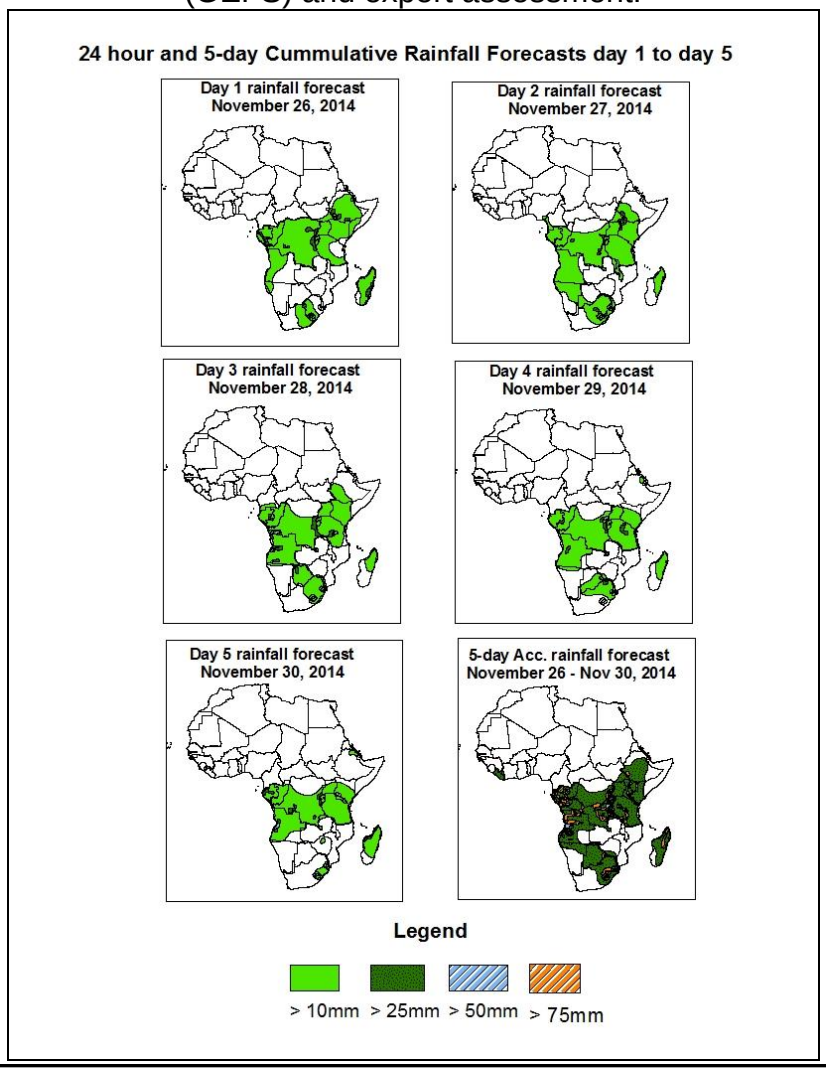
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall Forecast: Valid 06Z of November 26 – 06Z of November 30, 2014. (Issued at 1800Z of November 25, 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.

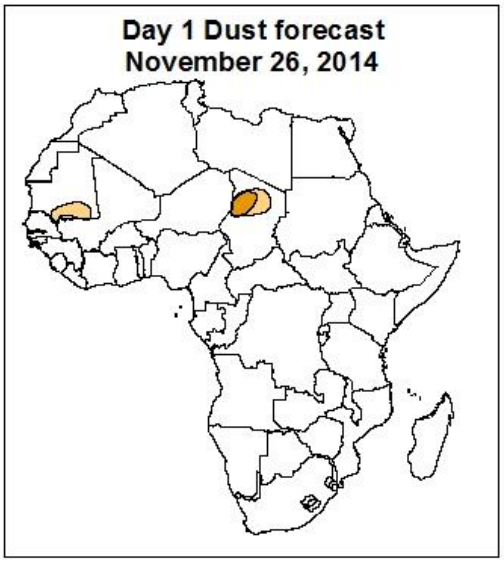


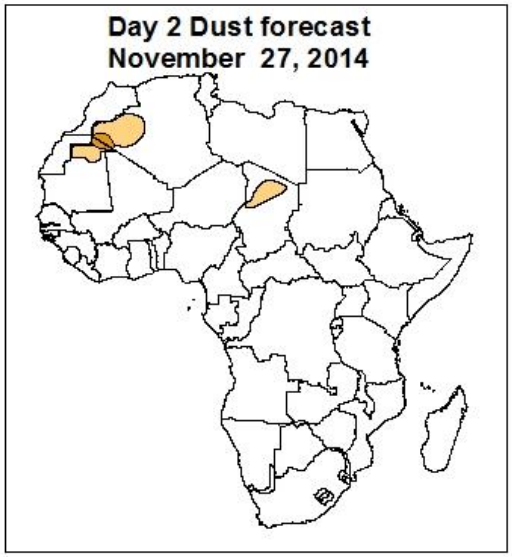
Summary

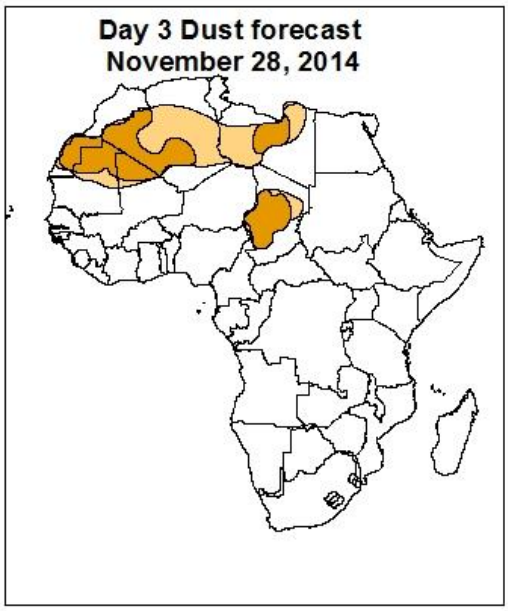
In the next five days, lower-level wind convergence over Gabon, Congo-Brazzaville and the neighboring areas, seasonal wind convergences over the Lake Victoria region, southern Ethiopia and Angola are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to heavy rainfall over Gabon, Kenya, Congo-Brazzaville, Madagascar, Equatorial Guinea, DRC, the Lake Victoria region, portions of Madagascar, Angola and South Africa local areas in Ethiopia and Botswana, southern Somalia 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 Western Sahara, Algeria, Libya, Mauritania, northern Mali and Chad.

Legend

MDC, Vis. < 5km

HDC, Vis. < 1km

1.2. Model Discussion: Valid from 00Z of November 25, 2014

The Azores high pressure system over the Northeast Atlantic Ocean is expected to weaken, with its central pressure value decreasing from 1035hpa to 1024hpa, through 24 to 96hours, and then it is expected to strengthen through 96 to 120 hours, with its central pressure value increasing from 1024hpa to 1026hpa, according to the GFS model.

The central pressure value of the St Helena high pressure system over the Southeast Atlantic Ocean is expected to strengthen gradually, with its central pressure value increasing from 1023hpa to 1030hpa during the forecast period, according to the GFS model.

The Mascarene high pressure system over the southwestern Indian Ocean is expected to weaken, with its central pressure value decreasing from 1025hpa to 1023hpa, through 24 to 48hours, and it is expected to maintain central pressure value of about 1023hpa, and then it is expected to strengthen slightly through 96 to 120hours, with its central pressure value increase from 1023hpa to 1024hpa, according to the GFS model.

At 925Hpa level, dry northeasterly to easterly wind (>25kts) is expected to prevail across portions of northern Mauritania, Morocco, Libya, Western Sahara, Algeria, Chad, northeastern Niger and parts of Sudan during the forecast period.

At 850Hpa level, a seasonal meridional wind convergence is expected to remain active across eastern DRC and the neighboring areas. Lower-level wind convergence is also expected to prevail over southern Ethiopia, Gabon, Congo, southern 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; whereas a trough associated with mid-latitude frontal system is expected to prevail over Northeast Africa the neighboring places through 24 to 48 hours.

In the next five days, lower-level wind convergence over Gabon, Congo-Brazzaville and the neighboring areas, seasonal wind convergences over the Lake Victoria region, southern Ethiopia and Angola are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to heavy rainfall over Gabon, Kenya, Congo-Brazzaville, Madagascar, Equatorial Guinea, DRC, the Lake Victoria region, portions of Madagascar, Angola and South Africa local areas in Ethiopia and Botswana, southern Somalia and northern Namibia.

2.0. Previous and Current Day Weather Discussion over Africa

(November 24, 2014 – November 25, 2014)

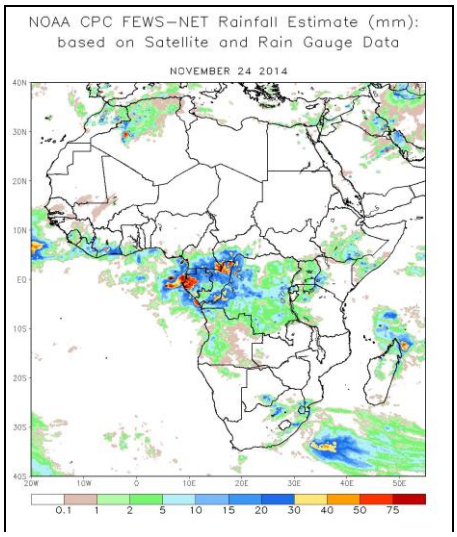
2.1. Weather assessment for the previous day (November 24, 2014)

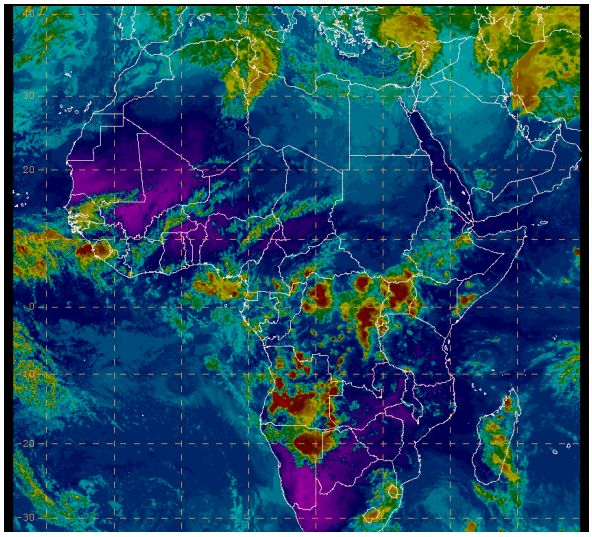
During the previous day, moderate to heavy rainfall was observed over DRC, Gabon, Uganda, Rwanda, Angola, Sierra Leone, Liberia and Congo-Brazzaville, portions of Ivory Coast, Cameroon, CAR and Tanzania, , local areas in Guinea-Conakry, Nigeria, Kenya, Madagascar, Zambia and South Africa, southern Botswana, Ghana and Somalia, northern Namibia.

2.2. Weather assessment for the current day (November 25, 2014)

Intense clouds are observed over portions of Sierra Leone, Uganda, Rwanda and Burundi, local areas in CAR, DRC, Angola and Ethiopia, northern Congo-Brazzaville, Namibia and Botswana, western Kenya, southern Zambia and Somalia.

IR Satellite Image (valid 1630 Z of November 25, 2014)





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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