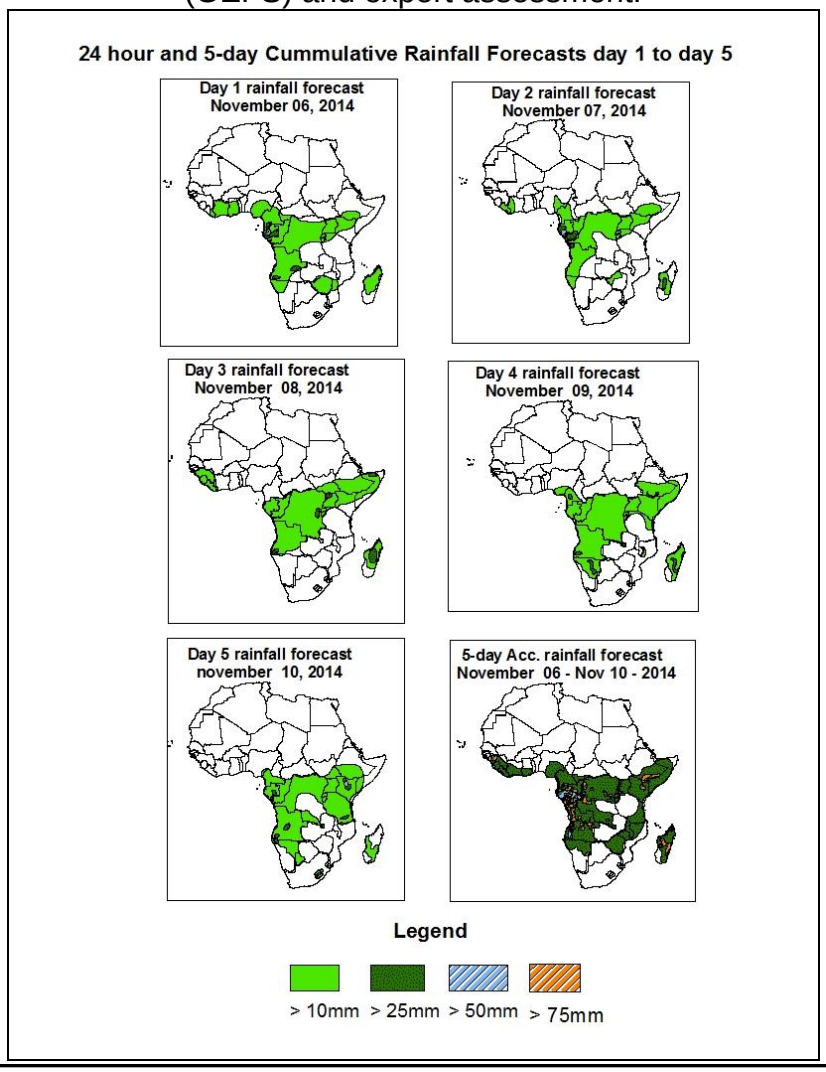
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall Forecast: Valid 06Z of November 6 – 06Z of November 10, 2014. (Issued at 1800Z of November 05, 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.

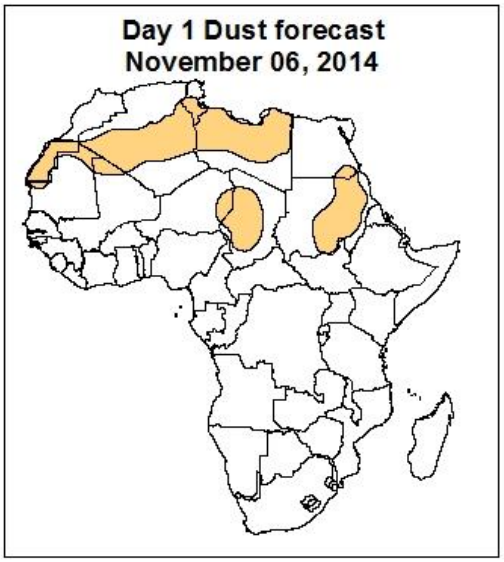


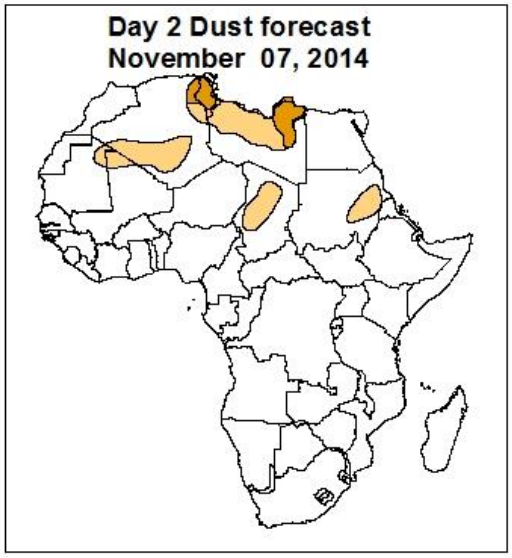
Summary

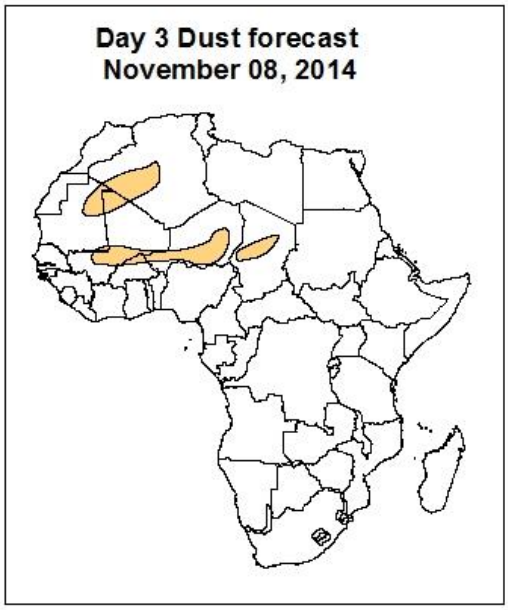
In the next five days, seasonal wind convergence over southern Ethiopia, DRC, Angola, Gabon and Congo are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to heavy rainfall over Congo-Brazzaville, Equatorial Guinea, Gabon, portions of DRC, Angola and local areas in southern Ethiopia, Tanzania and Zimbabwe, 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, northern Mauritania, Sudan, Mali, Niger, Algeria, Libya and Chad.

Legend

MDC, Vis. < 5km

HDC, Vis. < 1km

1.2. Model Discussion: Valid from 00Z of November 05, 2014

The Azores high pressure system over the Northeast Atlantic Ocean is expected to maintain through 24 to 120 hours, with its central pressure value of about 1028hpa, according to the GFS model.

The St Helena high pressure system over the Southeast Atlantic Ocean is expected to maintain through 24 to 48 hours, with its central pressure value of about 1032hpa, and it intensifies through 48 to 96 hours, with its central pressure increasing from 1032hpa to 1034hpa, and then expected to weaken through 96 to 120hours, with its central pressure decreasing from 1034hpa to 1033hpa, according to the GFS model.

The Mascarene high pressure system over the southwestern Indian Ocean is expected to strengthen through 24 to 48 hours, with its central pressure value increasing from 1027hpa to 1029hpa, and it weakens through 48 to 72 hours, with its central pressure decreasing from 1029hpa to 1025hpa, and then expected to re-strengthen towards end of the forecast period with its central pressure value increasing to 1028hpa, according to the GFS model.

The east African ridge across southeastern and eastern Africa is expected strengthen gradually, with the 1016hpa isobar reaching the latitudes of Kenya.

At 925Hpa level, dry northeasterly to easterly wind (>25kts) is expected to prevail across Western Sahara, Mauritania, northern Sudan, Libya, Chad, Niger, Algeria, northern Mauritania and Mali though 24 to 48 hours. The intensity of the wind is expected to weaken across many of these places, while it is expected to remain strong across Mauritania and Chad through 72 to 120 hours.

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. Strong wind convergence is expected to prevail over Angola and the neighboring places.

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

In the next five days, seasonal wind convergence over southern Ethiopia, DRC, Angola, Gabon and Congo are expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to heavy rainfall over Congo-Brazzaville, Equatorial Guinea, Gabon, portions of DRC, Angola and local areas in southern Ethiopia, Tanzania and Zimbabwe, northern Namibia.

2.0. Previous and Current Day Weather Discussion over Africa

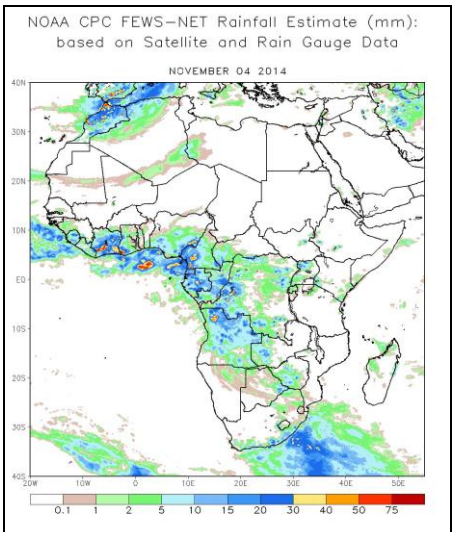
(November 04, 2014 – November 05, 2014)

2.1. Weather assessment for the previous day (November 04, 2014)

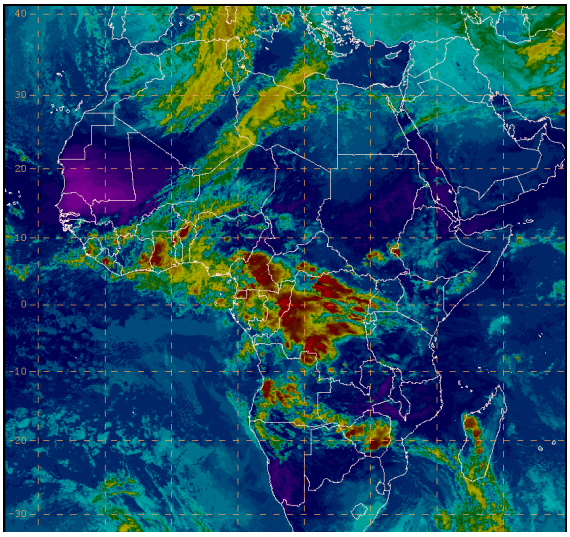
During the previous day, moderate to heavy rainfall was observed over Sierra Leone, Burundi, Rwanda, Gabon, Congo-Brazzaville, DRC, Angola, Ivory Coast, Togo, Ghana, Liberia, portions of Guinea-Conakry, Benin, Nigeria, Cameroon, CAR, Uganda, Zambia, Botswana, Zimbabwe and South Africa, local areas in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

2.2. Weather assessment for the current day (November 05, 2014)

Intense clouds are observed over portions of Cameroon, DRC, CAR, Congo-Brazzaville, Ghana and Zimbabwe, local areas in Gabon, Ivory Coast, Angola, Madagascar, Nigeria, Sierra Leone, Liberia and Guinea-Conakry, northern Togo, Benin, southern Sudan, western Uganda.



IR Satellite Image (valid 1730 Z of November 05, 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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