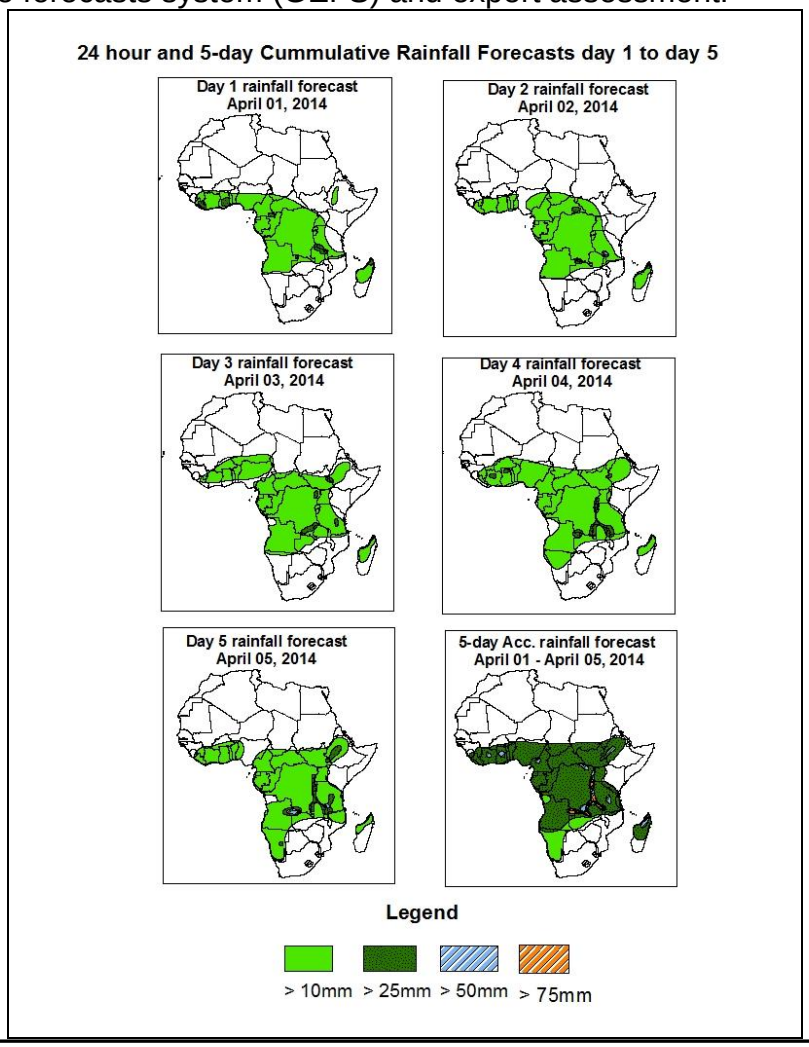
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of April 01 – 06Z of April 05, 2014. (Issued at 1600Z of March 31, 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 UK Met Office NWP outputs, and the NCEP global ensemble forecasts system (GEFS) and expert assessment.

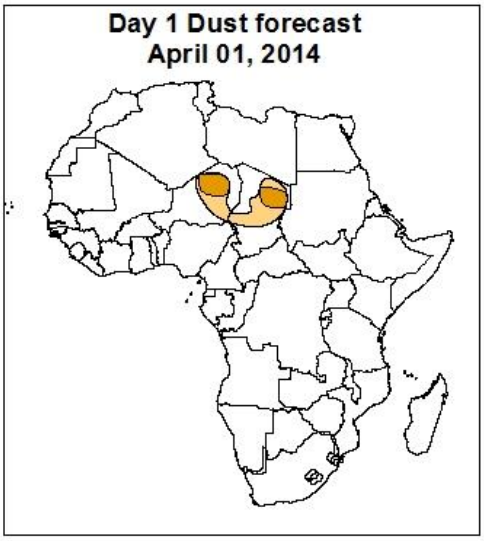


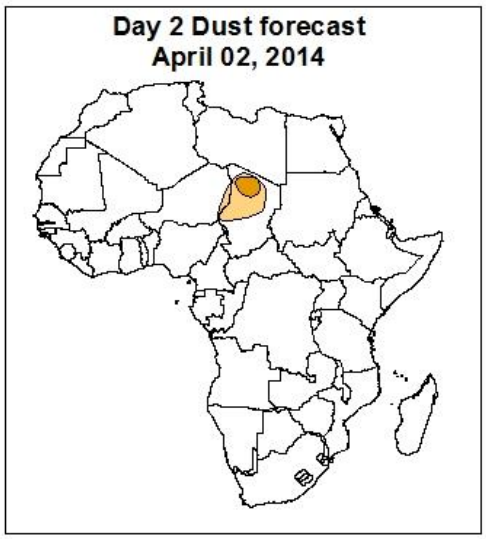
Summary

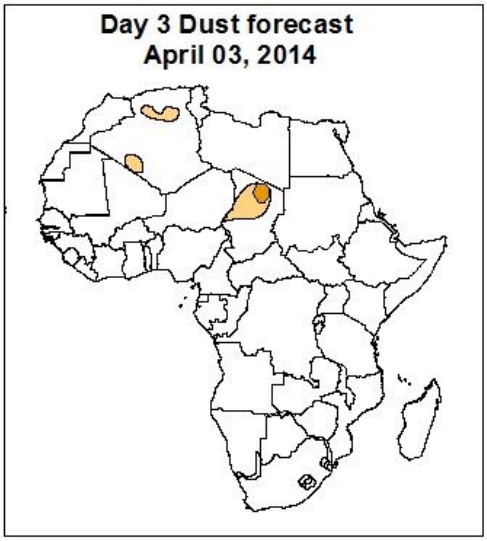
In the coming five days, lower-tropospheric wind convergences across the gulf of guinea, East and Central countries are expected to persist and hence continued moderate rains over Cameroon, Gabon, Angola, Equatorial Guinea, Tanzania, DRC, Uganda, Congo Brazzaville, parts of Zambia, Namibia, Bissau Guinea, Liberia, Ivory Coast, Ghana, Togo, Benin, Nigeria and Madagascar. Dry conditions are expected to persist over Zimbabwe, Mozambique, Botswana and South Africa.

1.2. Atmospheric Dust Forecasts: Valid April 01 – April 03 2014

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 Algeria, Niger and Chad.

Legend

MDC, Vis. < 5km

HDC, Vis. < 1km

1.3. Model Discussion: Valid from 00Z of April 01, 2014

Model comparison (GFS and UKMET Valid from 00Z: April 01, 2014*) shows general agreement in terms of depicting positions of the northern and southern hemisphere sub-tropical highs, while they showed slight differences in depicting their intensity.*

The St. Helena High Pressure System is expected to relax its central pressure value between 1030Hpa to 1025Hpa. This will result in decrease rainfall over Angola and Namibia. However will expected continued dry conditions over Botswana and South Africa for the forecast period.

According to both the GFS and UKMET model, the Mascarene High Pressure System is expected to relax its central pressure value between 1033Hpa and 1023Hpa. However the tropical depression over the channel will tend to decrease rains over Ethiopia. Continued dry condition is expected over Zimbabwe, Botswana, Mozambique and parts over Zambia and South Africa for the forecast period.

At 850Hpa level, Moderate to strong convergence is expected to persist throughout the forecast period over Democratic Republic of Congo (DRC), Angola, Tanzania Cameroon and parts of Sudan, South Chad, Center African Republic, Zambia, Congo Brazzaville, Namibia and Ethiopia.

At 500Hpa level, troughs associated with mid-latitude frontal system persist and are expected to result in some tropical, extra-tropical interactions bringing rains over Bissau Guinea, Liberia, Burkina Faso, Ivory Coast, Ghana, Togo, Benin, over South Sudan, South Chad, Nigeria and Ethiopia for most part of the forecast period.

At 200hpa level, the sub-tropical Westerly Jet mainly (with wind speed >70 knots and <130 knots), extending between Mauritania, Algeria, Libya and Egypt, and across, Mali, Niger, Chad, Western Sahara, persist during the forecast period. In the south, the sub-tropical westerly Jet (with speed >70 knots and <110 knots) is expected over South Africa, Indian and Atlantic Ocean.

In the coming five days, lower-tropospheric wind convergences across the gulf of guinea, East and Central countries are expected to persist and hence continued moderate rains over Cameroon, Gabon, Angola, Equatorial Guinea, Tanzania, DRC, Uganda, Congo Brazzaville, parts of Zambia, Namibia, Bissau Guinea, Liberia, Ivory Coast, Ghana, Togo, Benin, Nigeria and Madagascar. Dry conditions are expected to persist over Zimbabwe, Mozambique, Botswana and South Africa.

2.0. Previous and Current Day Weather Discussion over Africa

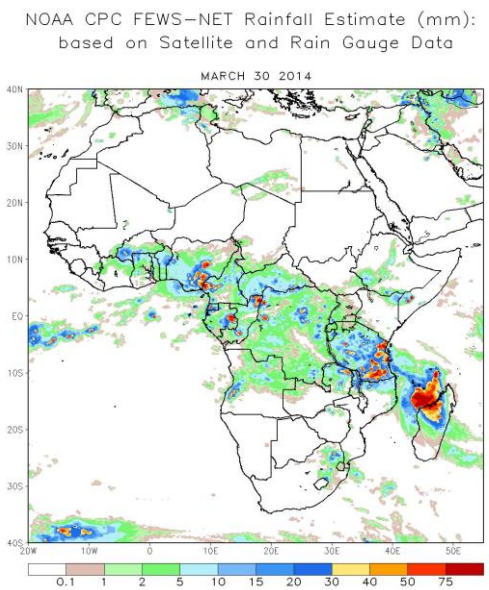
(March 30, 2014 – March 31, 2014)

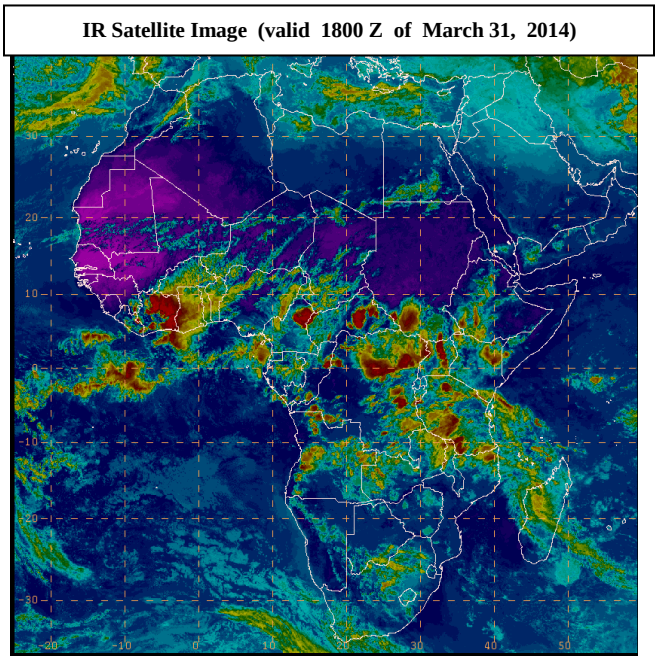
2.1. Weather assessment for the previous day (March 30, 2014)

During the previous day, moderate rainfall was observed over Angola, DRC, Tanzania, and parts of Cameroon, Gabon, Congo Brazzaville, Nigeria and Madagascar.

2.2. Weather assessment for the current day (March 31, 2014)

Intense clouds are observed over parts of Gulf of Guinea, East, Central and Southern Africa countries as well as Madagascar.





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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