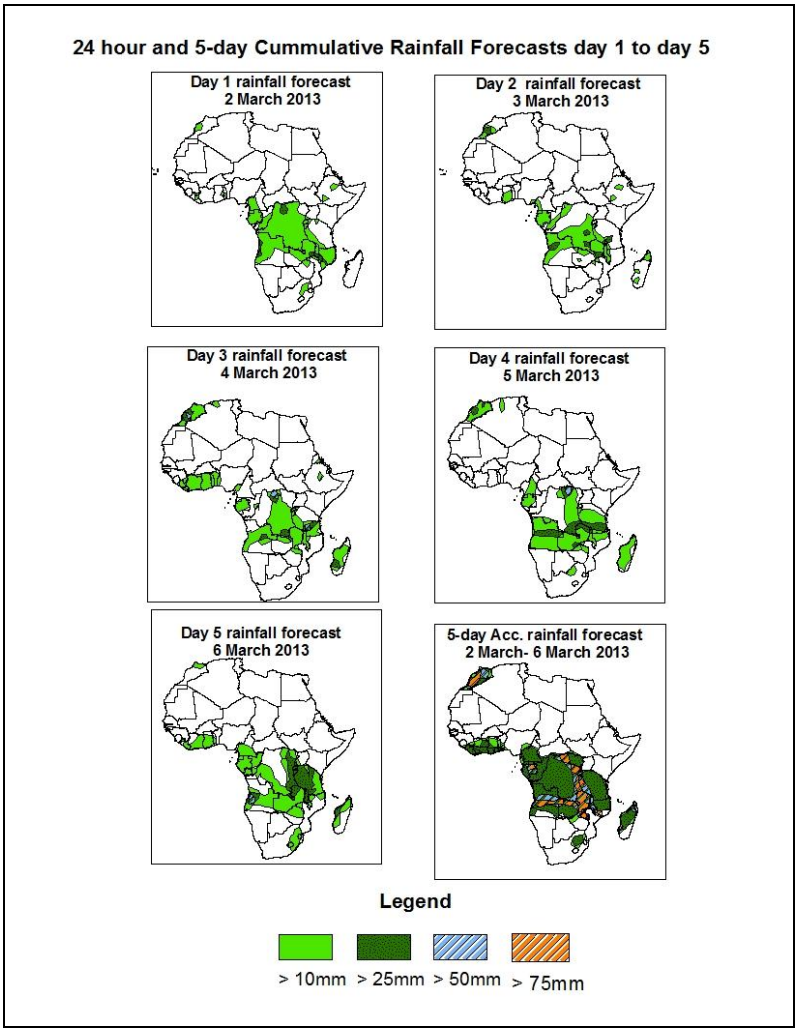
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 2 March – 06Z of 6 March 2013. (Issued at 16:00Z of 1 March 2013)

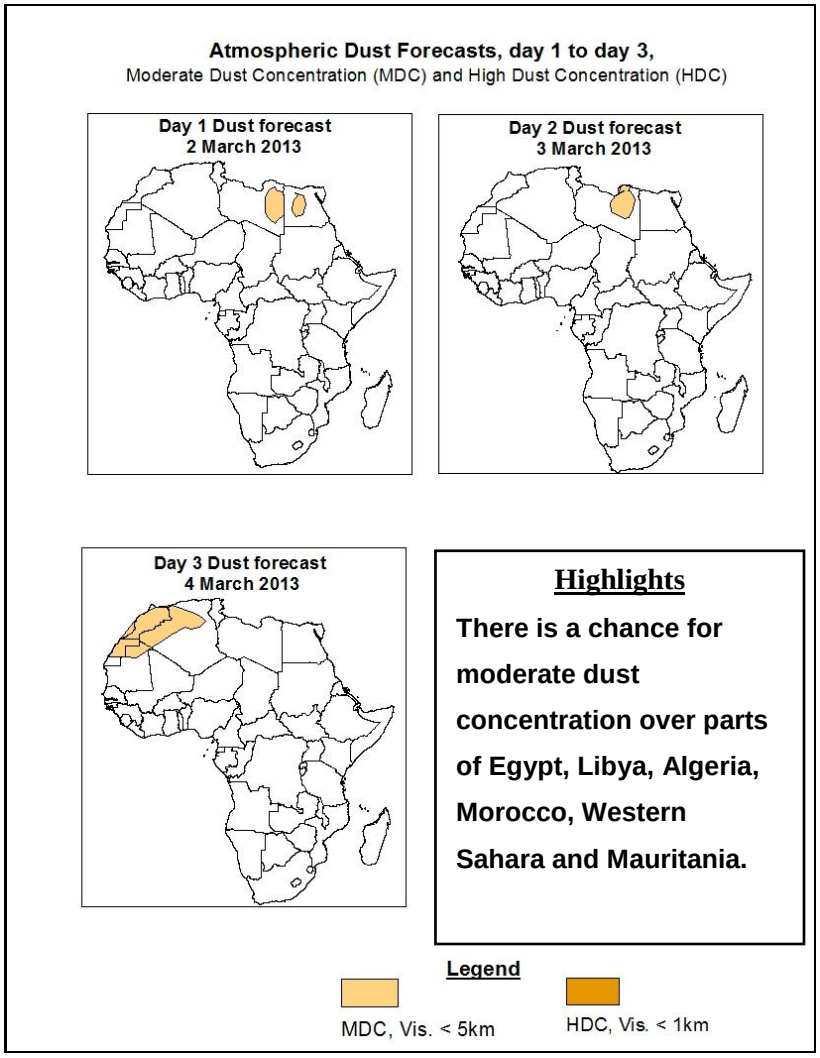
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of 75% probability of precipitation (POP) exceeded, based on the NCEP, UK Met Office and the ECMWF NWP outputs, the NCEP global ensemble forecasts system (GEFS) and expert assessment.



Summary

In the next five days, the seasonal lower level wind convergence near the CAB region is expected to continue to remain weaker as it is being affected by ridging from both the ST. Helena and Mascarene high pressure systems. Therefore, the moist lower-level winds from the Atlantic and Indian Oceans and their associated seasonal convergences are expected to maintain mainly light to moderate rainfall over parts of Gabon, DRC, Angola, Zambia, Malawi, Mozambique, and Tanzania.



1.2. Model Discussion: Valid from 00Z of 1 March 2013

Model comparison (Valid from 00Z; 1 March 2013) shows all the three models are in general agreement in terms of depicting eastward movement of the Mascarene and St Helena high pressure systems during the forecast period. However, the models show slight differences in terms of central pressure values.

In the next five days the St. Helena High Pressure System over southeast Atlantic Ocean is expected to nearly remain constant through 24 to 72 hours. The central pressure value is expected to be about 1025hpa to 1026hpa according to GFS model, about 1024hpa to 1025hpa according to ECMW and UKMET models).

The Mascarene high pressure system over southwestern Indian Ocean is also expected to weaken throughout the forecasting period, while shifting smoothly eastwards. Its

central pressure value is expected to decrease from about 1033hpa to 1023hpa, according to the GFS model, from about 1033hpa to 1024hpa according to ECMWF model and from about 1033hpa to 1024hpa according to UKMET model.

The seasonal lows across DRC, South Sudan and the neighboring areas is expected to remain weaker throughout the forecast period, with the central pressure values generally decreasing from about 1006hpa to 1005hpa according to the GFS, from about 1005hpa to 1004hpa according to the ECMWF and from about 1005hpa to 1004hpa according to the UKMET model in total agreement with all the three models.

At the 850hpa level, the seasonal lower level wind convergence near the CAB region is expected to continue to remain with weaker to moderate convergence conditions through 24 to 120 hours. Light to Moderate low level convergence is thus expected to be experienced over central and southern regions of Africa; DRC, Angola, Zambia, Mozambique and Malawi.

At 500hpa, a trough in the mid-latitude westerly is expected dominate the flow over northern countries of Africa and Mediterranean Sea through 24 to 72 hours and an eastward propagation is expected to dominate the flow over the previously mentioned areas towards end of the forecast period. An eastward flow is expected to prevail over South Africa and the neighboring countries through most periods of the coming five days.

At 200hpa, the northern hemisphere sub-tropical westerly jet is expected to remain active through the forecast period; the core wind speed occasionally will exceed 130kts over northern African countries, the Mediterranean Sea and Cape areas of South Africa.

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2.0. Previous and Current Day Weather Discussion over Africa

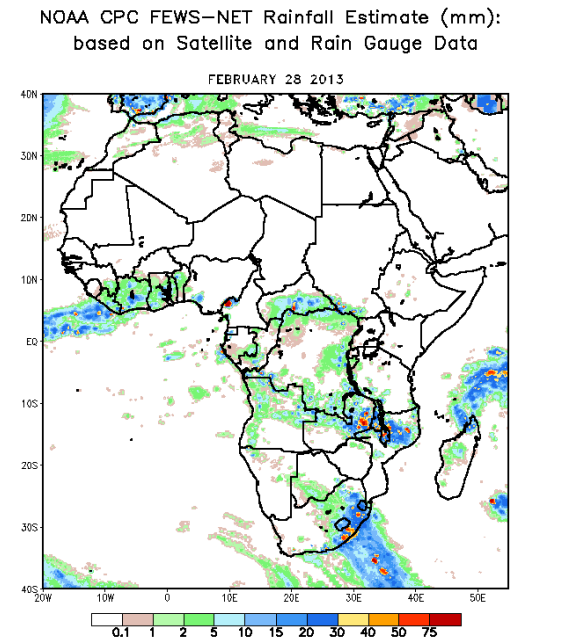
(28 February 2013 – 1 March 2013)

2.1. Weather assessment for the previous day (28 February 2013)

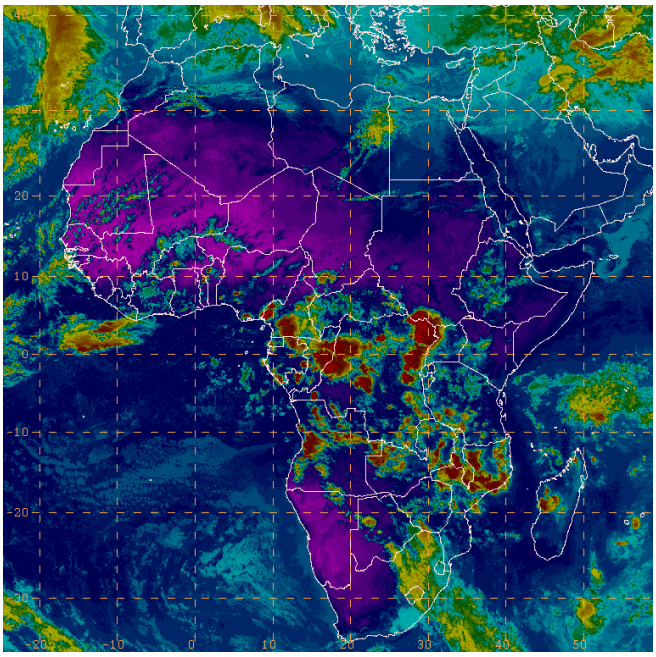
During the previous day, moderate to localized heavy rainfall was observed over parts of Mozambique, Zambia, Malawi and eastern South Africa.

2.2. Weather assessment for the current day (1 March 2013)

Intense patches of clouds are observed over parts of Cameroon, Congo, DRC, Angola, Zambia, Malawi, Tanzania, Mozambique and east of South Africa.



IR Satellite Image (valid 1652Z of 1 March 2013)



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

Author: Kameya Swaswa(Zambia)/ CPC-African Desk); kameya.swaswa@noaa.gov