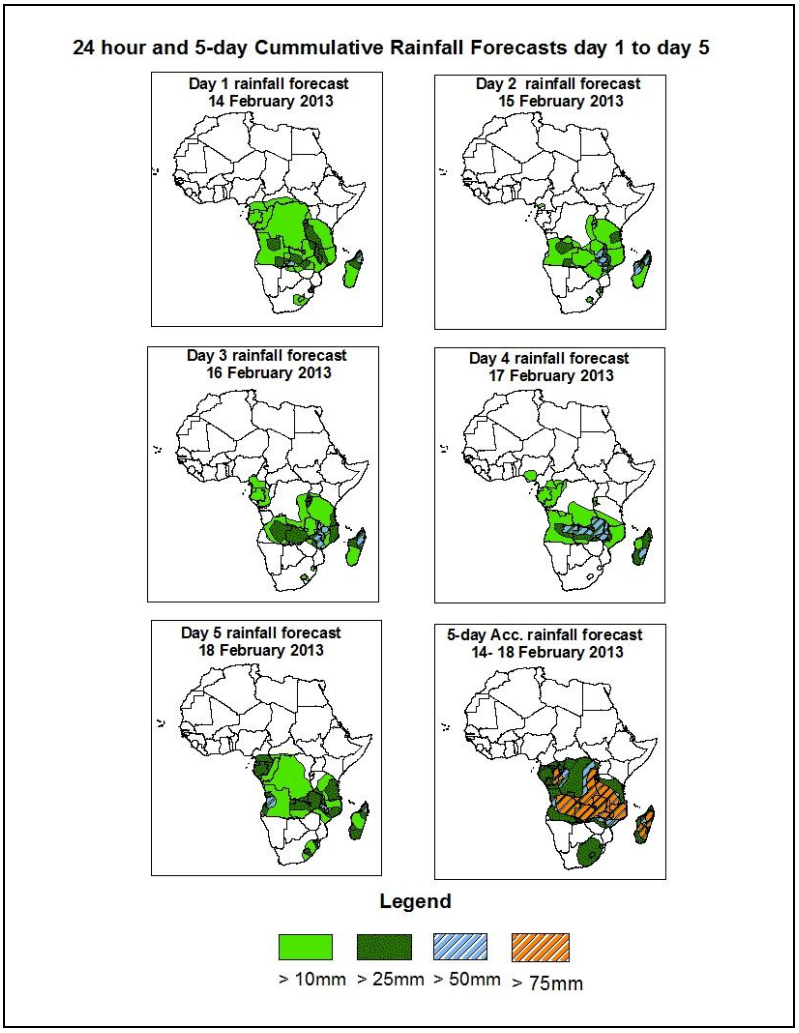
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 14 February – 06Z of 18 February 2013. (Issued at 16:00Z of 13 February 2013)

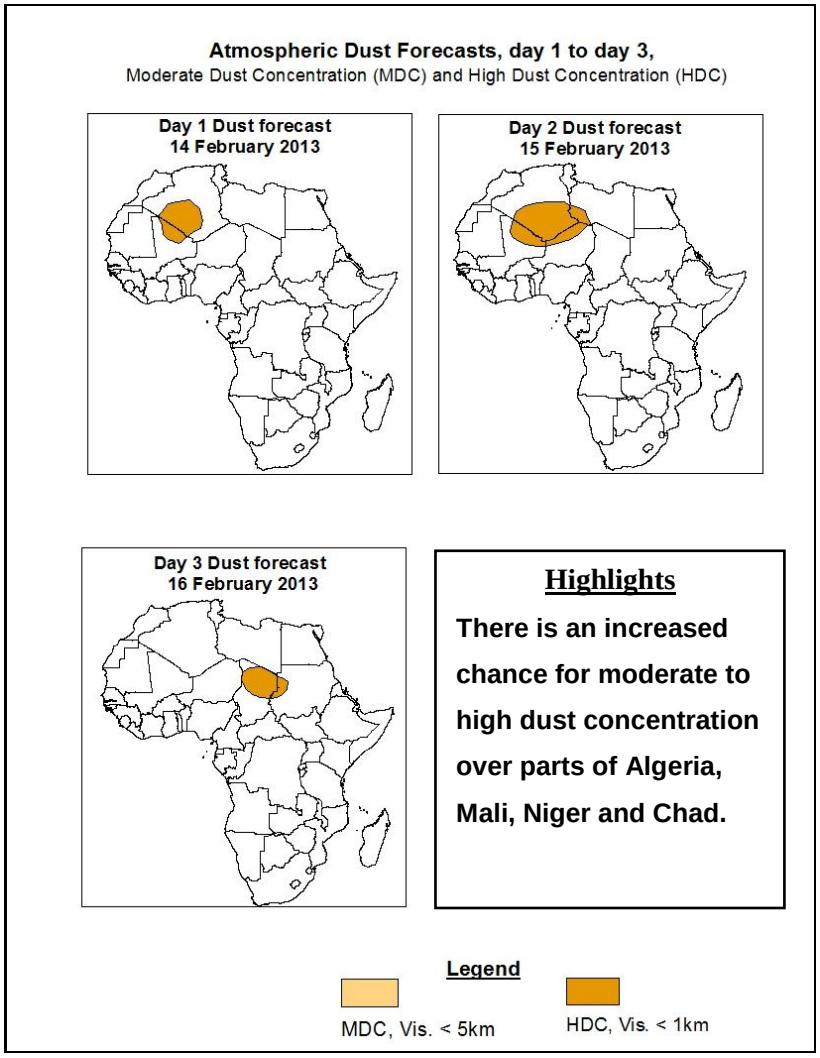
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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, low level convergence over central regions of Angola, Zambia, Mozambique, eastern DRC, Tanzania and Malawi and a low pressure system over Mozambique Channel are expected to enhance rainfall in the respective regions. Thus, there is an increased chance for moderate to heavy rainfall over parts of Angola, Zambia, Mozambique, eastern DRC, Tanzania, Madagascar and Malawi.



1.2. Model Discussion: Valid from 00Z of 13 February 2013

Model comparison (Valid from 00Z; 13 February 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 slightly weaken through 24 to 72 hours. The central pressure value is expected to decrease from about 1027hpa to 1023hpa according to the GFS and ECMW models and from about 1027hpa to 1024hpa according to the UKMET model.

The Mascarene high pressure system over southwestern Indian Ocean is also expected to strengthen throughout the forecasting period, while shifting smoothly eastwards. Its central pressure value is expected to increase from about 1014hpa to 1031hpa, according to the GFS model, from about 1023hpa to 1030hpa according to ECMWF model and from about 1024hpa to 1030hpa according to the UKMET model.

The seasonal lows across DRC, South Sudan and the neighboring areas is expected to remain slightly the same throughout the forecast period, with the central pressure values decreasing from about 1004hpa to 1002hpa according to the GFS, from about 1005hpa to 1003hpa according to the ECMWF and from about 1003hpa to 1002hpa according to the UKMET model. A low system over Mozambique Channel is expected to form through 48 to 72 hours with its central pressure value between 1008hpa to 1006hpa 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 remain with strong convergence conditions through 24 to 120 hours. Moderate low level convergence is also expected to be active over central regions of Angola, Zambia, Mozambique, Northern Zimbabwe 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 and Mediterranean Sea.

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there is an increased chance for moderate to heavy rainfall over parts of Angola, Zambia, Mozambique, eastern DRC, Tanzania, Madagascar and Malawi.

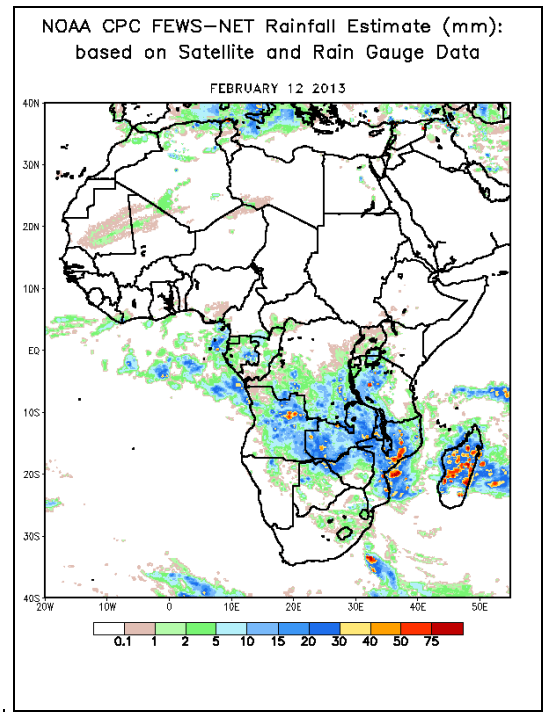
2.0. Previous and Current Day Weather Discussion over Africa (12 February 2013 – 13 February 2013)

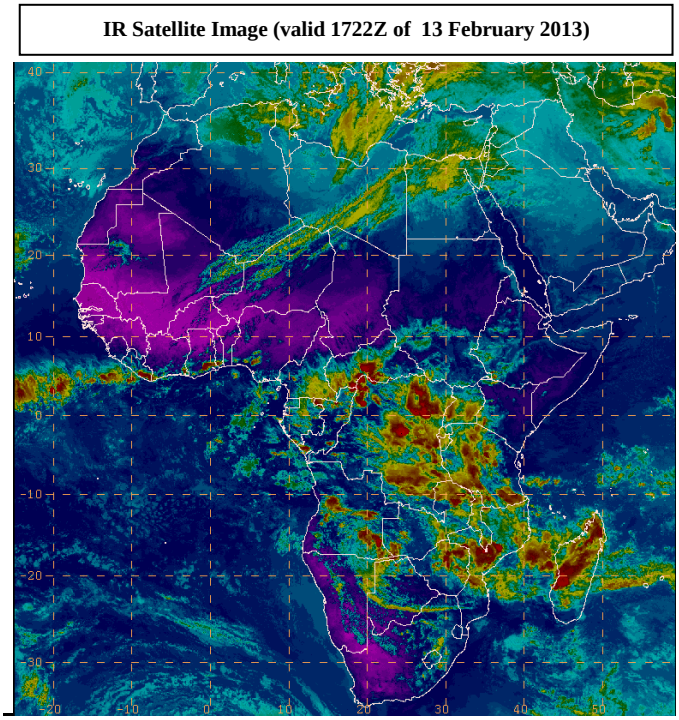
2.1. Weather assessment for the previous day (12 February 2013)

During the previous day, moderate to heavy rainfall was observed over southern DRC, Angola, Zambia, Malawi, Madagascar, Mozambique and Western regions of Tanzania and Gabon.

2.2. Weather assessment for the current day (13 February 2013)

Intense clouds are observed over DRC, Angola, eastern Zambia, Malawi, Tanzania, Mozambique, parts of eastern Zimbabwe and 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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