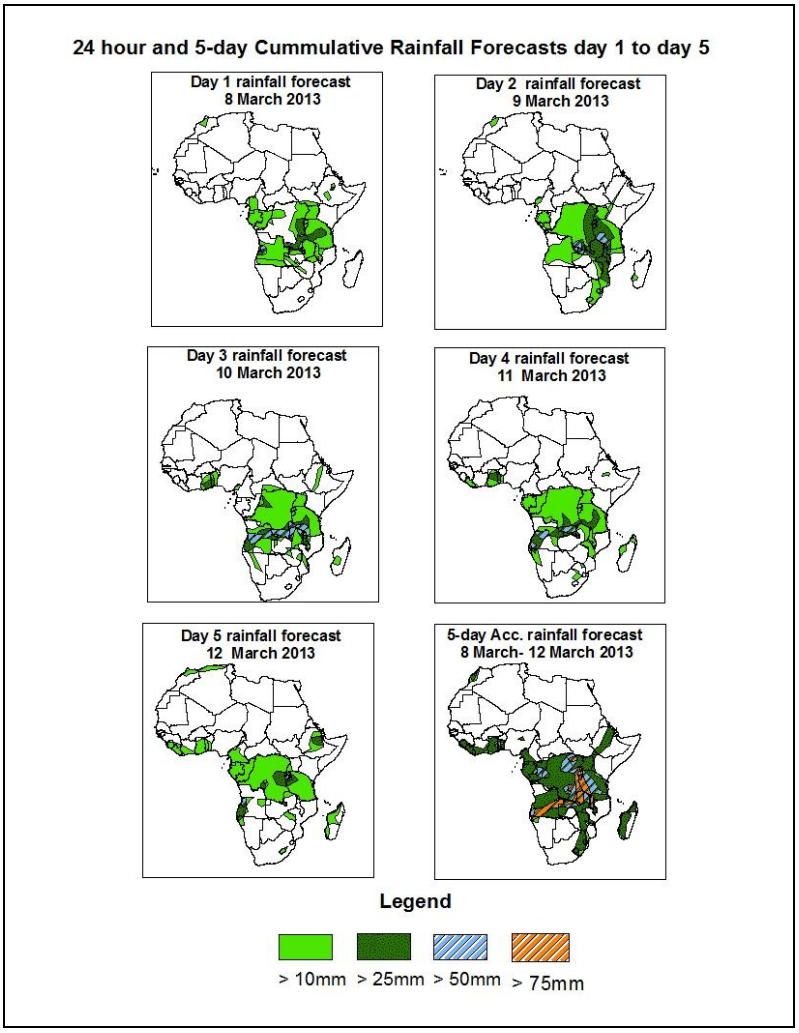
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 8 March – 06Z of 12 March 2013. (Issued at 16:00Z of 7 March 2013)

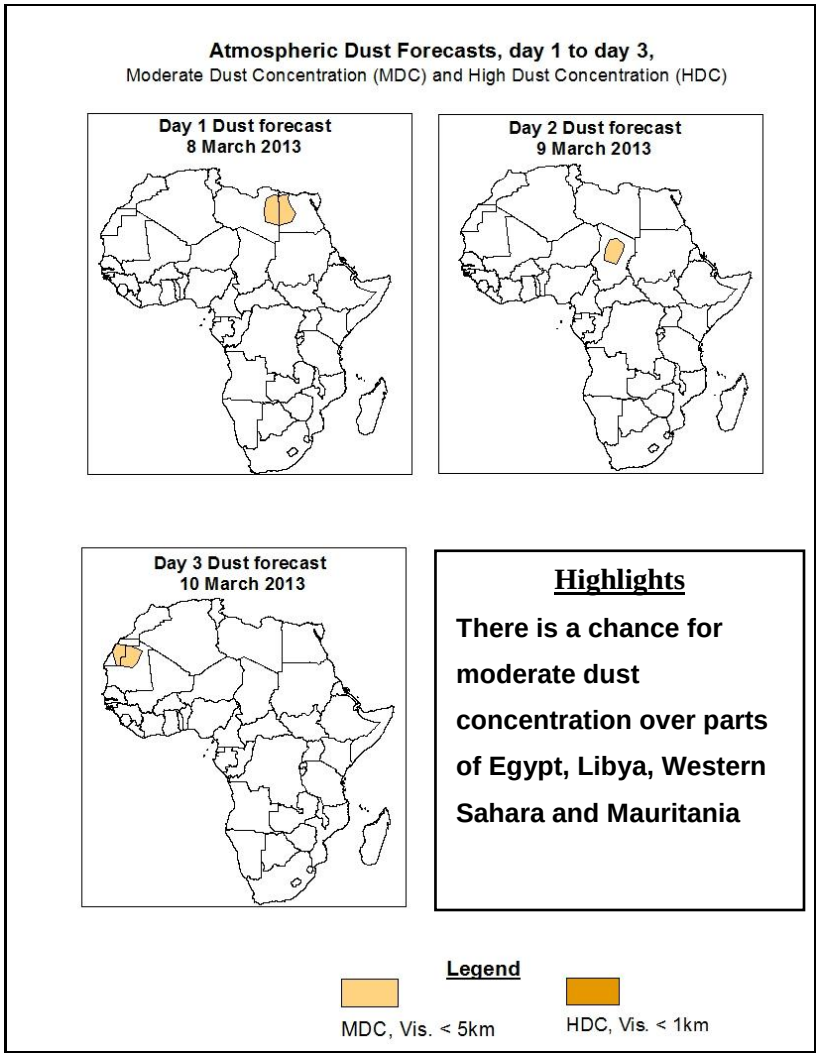
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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, active seasonal lower level wind convergence near the CAB region is expected to continue to enhance rainfall over parts of DRC and East Africa. Therefore, there is an increased chance for moderate to heavy rainfall over DRC, Rwanda, Burundi and much of Tanzania. Localized lower-tropospheric wind convergences are also expected to enhance rainfall over portions of Angola, Zambia and Malawi.



1.2. Model Discussion: Valid from 00Z of 7 March 2013

Model comparison (Valid from 00Z; 7 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 strengthen through 24 to 72 hours. The central pressure value is expected to increase from about 1022hpa to 1028hpa according to GFS model, about 1022hpa to 1028hpa according to ECMW and UKMET models).

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

central pressure value is expected to increase from about 1024hpa to 1035hpa, according to the GFS model, from about 1023hpa to 1034hpa according to ECMWF model and from about 1024hpa to 1034hpa according to UKMET model.

The seasonal lows across DRC, South Sudan and the neighboring areas is expected to remain moderate throughout the forecast period, with the central pressure values generally maintaining 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 remain with moderate convergence conditions over East Africa through 24 to 120 hours. Light to Moderate low level convergence is thus expected to be experienced mainly over East African regions.

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. Easterly to South easterly air flow is expected to prevail over South Africa and neighboring countries.

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 the Mediterranean Sea.

In the next five days, active seasonal lower level wind convergence near the CAB region is expected to continue to enhance rainfall over parts of DRC and East Africa. Therefore, there is an increased chance for moderate to heavy rainfall over DRC, Rwanda, Burundi and much of Tanzania. Localized lower-tropospheric wind convergences are also expected to enhance rainfall over portions of Angola, Zambia and Malawi.

2.0. Previous and Current Day Weather Discussion over Africa

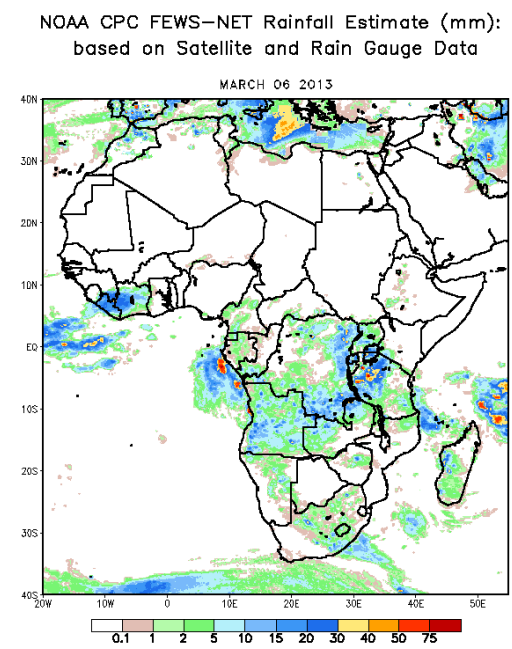
(6 March 2013 – 7 March 2013)

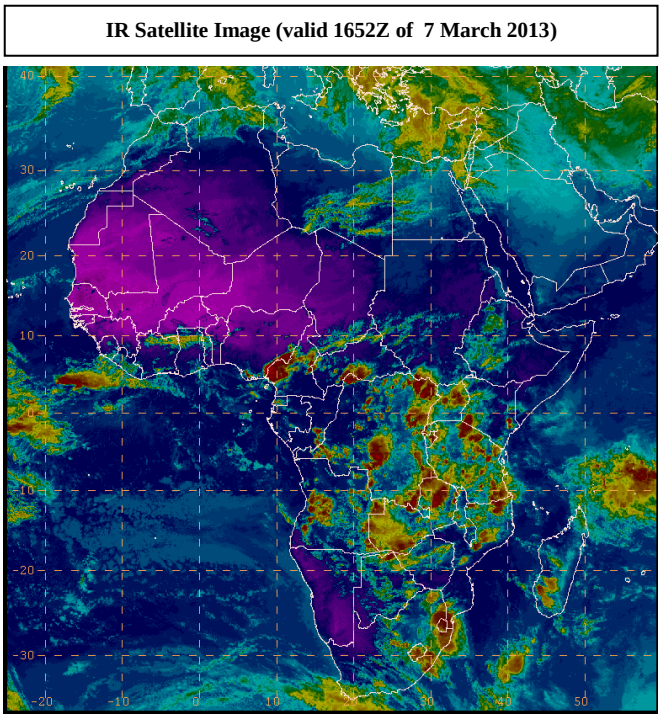
2.1. Weather assessment for the previous day (6 March 2013)

During the previous day, moderate to localized heavy rainfall was observed over parts of DRC, Angola, Zambia, Mozambique, Tanzania, Burundi, Rwanda and Uganda.

2.2. Weather assessment for the current day (7 March 2013)

Intense patches of clouds are observed over parts of Cameroon, DRC, Angola, Zambia, Tanzania and Uganda.





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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