

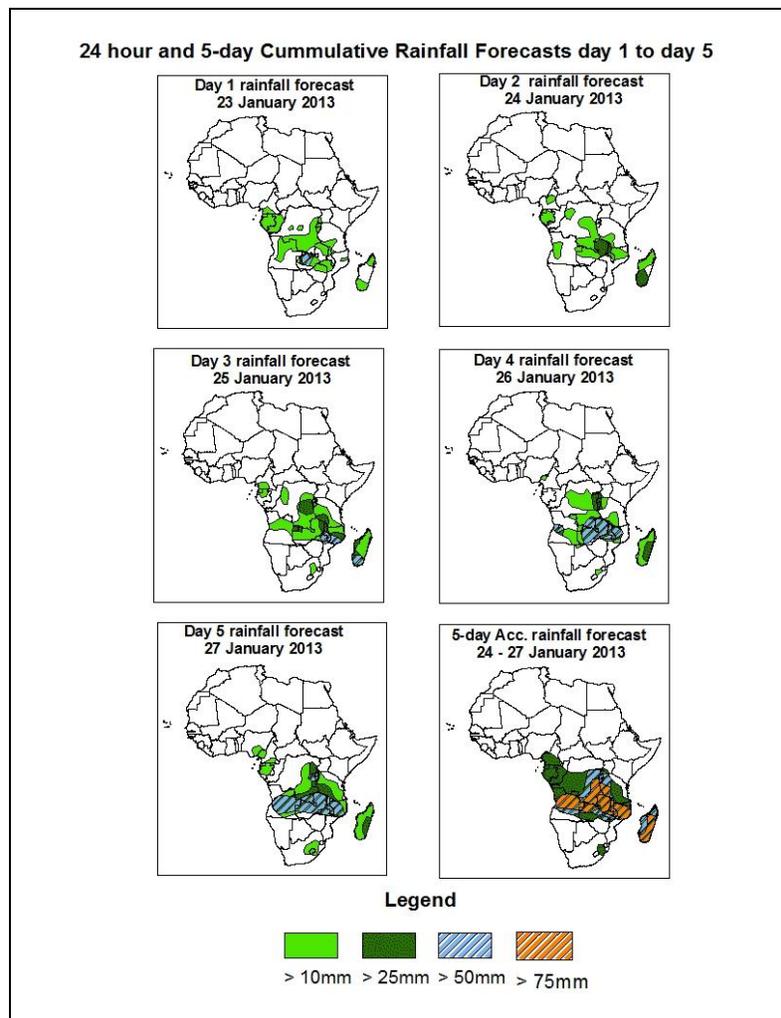


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 23 January – 06Z of 27 January 2013. (Issued at 17:00Z of 22 January 2013)

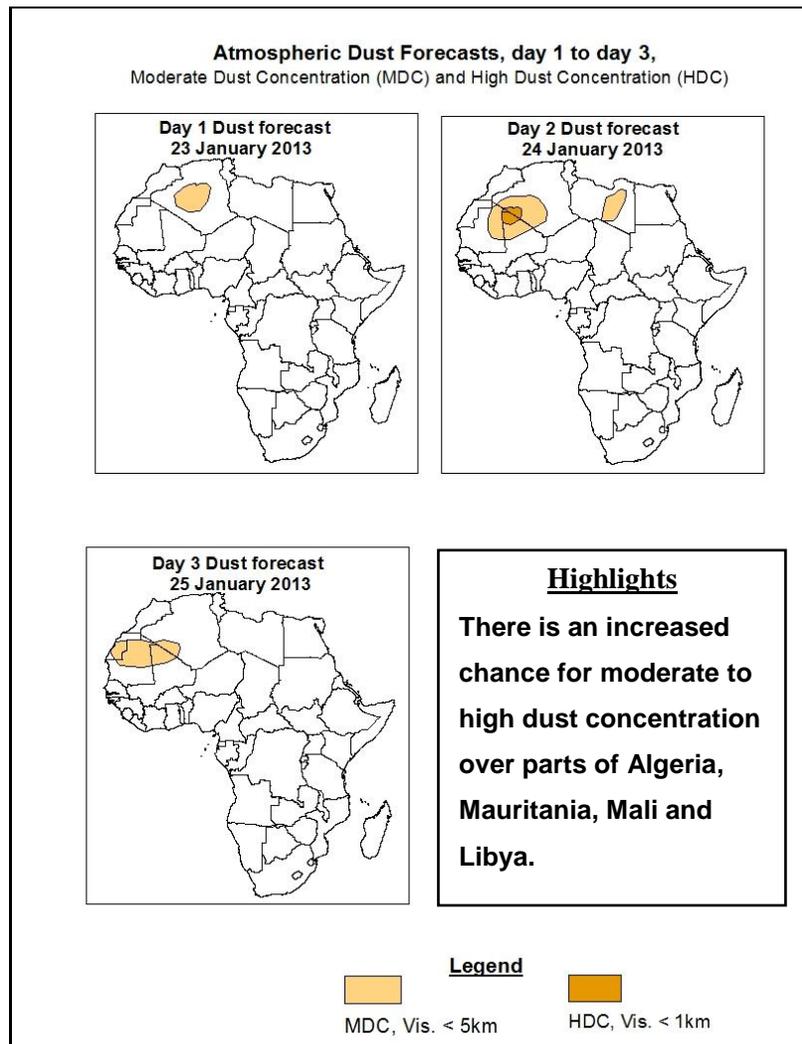
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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, moderate low level convergence over Angola, DRC, Zambia, Malawi, Kenya and Tanzania, and an active low system over Mozambique Channel is expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to heavy rainfall over local areas over parts of Angola, central region of Mozambique, parts of DRC, Tanzania, Zambia and Malawi and Madagascar.



1.2. Model Discussion: Valid from 00Z of 22 January 2013

Model comparison (Valid from 00Z; 22 January 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 coming five days the St. Helena High Pressure System over southeast Atlantic Ocean is expected to heighten slightly throughout the forecast period with its central pressure value increasing from about 1020hpa to 1025hpa, according to the GFS and the UKMET models and from about 1020hpa to 1024hpa according to the ECMWF model.

The Mascarene High Pressure System over southwestern Indian Ocean is also expected to remain with high through 24 to 96 hours with its central pressure value increasing from about 1022hpa to 1028hpa, according to the GFS model, from about 1022hpa to 1026hpa according to the ECMWF model, and from about 1022hpa to 1029hpa, according to the UKMET model. According to the GFS and the ECMWF models, a new Mascarene High Pressure System is expected to form over Southwest Indian Ocean, after cutting itself from the St. Helena High Pressure System through 96 to 120 hours. The central pressure value of the newly formed high will be about 1019hpa and about 1017hpa to 1023hpa, according to the GFS and the UKMET models, respectively.

The seasonal lows across DRC, South Sudan and the neighboring areas is expected to prevail with the central pressure value of about 1008hpa throughout the forecast period according to the GFS model. According to the ECMWF and the UKMET models the central pressure value will deepen gradually, from about 1007hpa to 1005hpa, and from 1008hpa to 1005hpa, respectively. An active low system over Mozambique Channel is expected to prevail throughout the forecast period; the central pressure value is expected to swing from about 999hpa to 997hpa according to the GFS model, from about 1003hpa to 1008hpa according to the ECMWF model and from about 1000hpa to 1001hpa according to the UKMET model.

At the 850hpa level, the seasonal lower level wind convergence near the CAB region is expected to remain active through 24 to 72 hours. Moderate low level convergence is expected to prevail active over parts of Angola, DRC, Zambia, Malawi, Kenya and Tanzania throughout the forecast period.

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 96 hours. An anti-cyclonic flow over South Africa region is expected to prevail active through 24 to 72 hours.

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 countries of Africa.

In the next five days, moderate low level convergence over Angola, DRC, Zambia, Malawi, Kenya and Tanzania, and an active low system over Mozambique Channel is expected to enhance rainfall in their respective regions. Thus, there is an increased chance for moderate to heavy rainfall over local areas over parts of Angola, central region of Mozambique, parts of DRC, Tanzania, Zambia and Malawi and Madagascar.

2.0. Previous and Current Day Weather Discussion over Africa

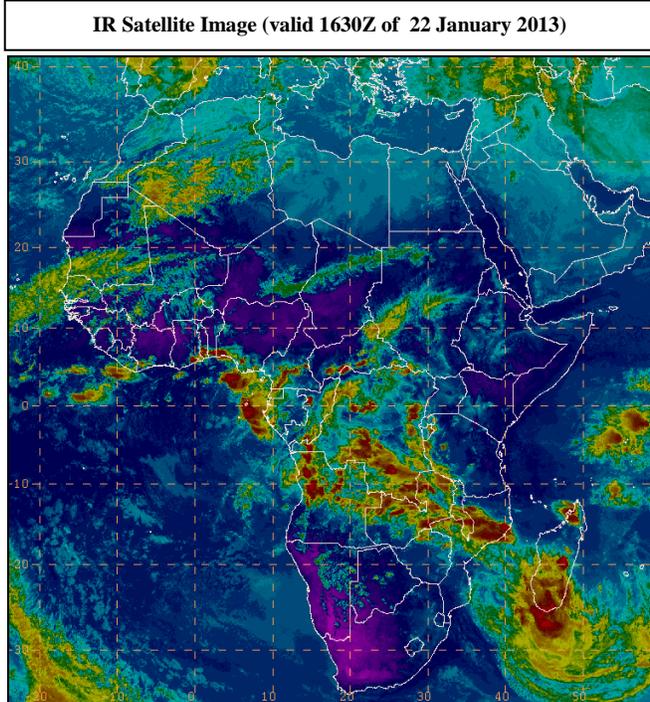
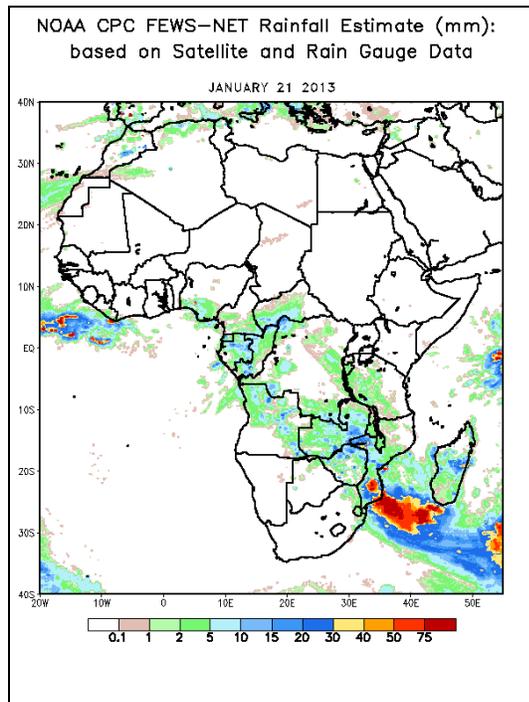
(21 January 2013 – 22 January 2013)

2.1. Weather assessment for the previous day (21 January 2013)

During the previous day, moderate to locally heavy rainfall was observed over parts of southern region of Mozambique, Zambia, Madagascar and Congo and Gabon.

2.2. Weather assessment for the current day (22 January 2013)

Intense clouds are observed over DRC, Angola, Malawi, central region of Mozambique, Gabon, Zambia, 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