

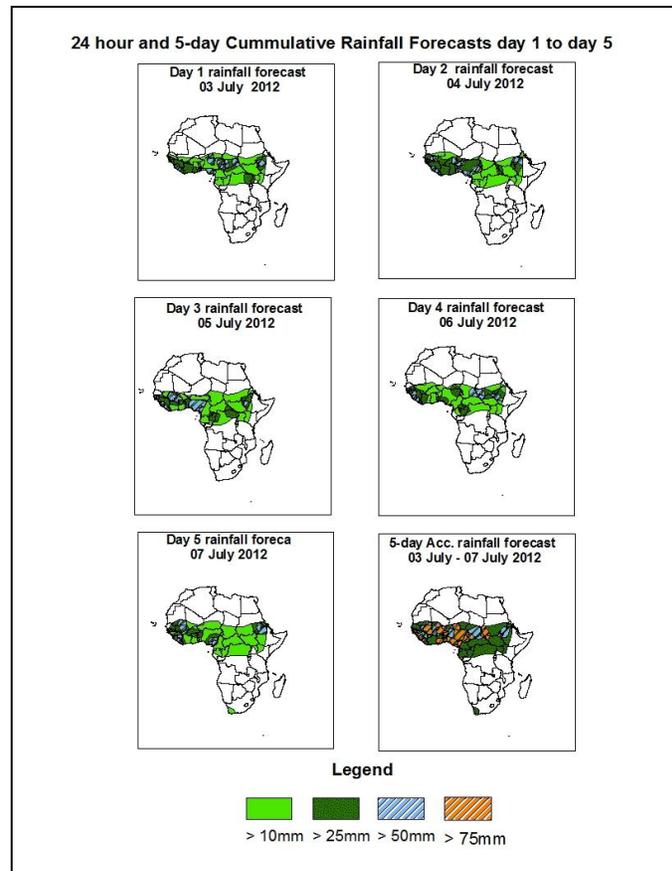


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of July, 03rd – 06Z of July, 07th 2012. (Issued at 13:00Z of July, 02nd 2012)

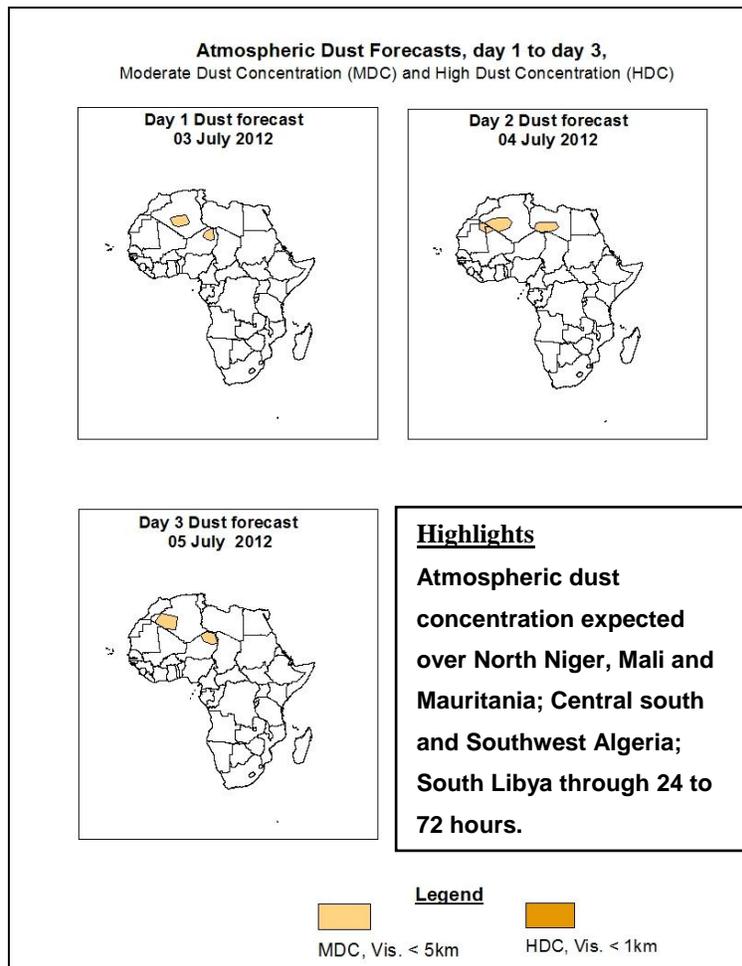
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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, ITD is expected to fluctuate between 18°E and 22°N with moderate to strong monsoon depth within 24 to 120 hours; Also the very active TEJ and the pronounced AEW propagation and 850 to 700hpa vortices are expected to enhance rainfall activities over West Ethiopia; portion of Sahel Region, Central Africa and Guinea Gulf Countries.



1.3. Model Discussion: Valid from 00Z of July, 02nd 2012.

According to the GFS, ECMWF and UKMET models the heat lows are expected to deepen through 48 to 120 hours over Mauritania, Algeria, Mali, Niger, and Chad, then maintains almost its core value within 24 to 120 hours over Sudan.

According to GFS model, a thermal low over West, Central and North Mauritania (1008hpa) in 24 hours is expected to decrease its core value to 1004hpa through 48 to 120 hours. The second low over North Mali and South Algeria (1004hpa) within 24 to 48 hours is expected to increase from 1003hpa to 1002hpa through 72 to 96 hours and tends to slightly increase to 1003hpa in 120 hours. The third low over North Chad and Niger (1004hpa) within 24 to 72 hours is expected to increase to 1005hpa through 96 to 120 hours; while the low over North Sudan (1004hpa) in 24 hours is expected to maintain almost its core value through 48 to 120 hours.

The ECMWF model shows a thermal low over West, Central and North Mauritania (1008hpa) in 24 hours is expected to decrease from 1005hpa to 1004hpa through 48 to 96 hours and tends to slightly increase to 1005hpa in 120 hour. The second low over South Algeria and North Mali (1005hpa) within 24 to 48 hours is expected to decrease to 1004hpa through 72 to 96 hours and tends to slightly increase to 1004hpa in 120 hours. The third low over North Niger and Chad (1006hpa) in 24 hours is expected to maintain almost its core value within 48 to 120 hours; while the low over North Sudan (1006hpa) in 24 hours is also expected to maintain almost its core value a within 48 to 120 hours.

The UKMET model shows a thermal low over West, Central and North Mauritania (1008hpa) in 24 hours is expected to gradually decrease its core value from 1006hpa to 1001hpa through 48 to 120 hours. The second low over South Algeria and North Mali (1003hpa) in 24 hours is also expected to gradually decrease from 1002hpa to 1001hpa within 48 to 120 hours. The third low over North Niger and Chad (1006hpa) in 24 hours is expected to decrease to 1004hpa through 48 to 120 hours; while the low over North Sudan (1004hpa) in 24 hours is expected to maintain almost its core value a within 48 to 120 hours.

According to the UKMET model, the St. Helena High pressure system over South Atlantic Ocean with a core value of 1027hpa in 24 hours locates at latitude 40°S is expected to slightly decrease to 1026hpa in 48 hours by shifting northwards (from latitude 40°S to 30 °S) and tends to gradually increase from 1029hpa to 1033hpa by moving to the north (from latitude 40°S to 30 °S) through 72 to 120 hours.

According to the ECMWF model, the central pressure value of 1026hpa within 24 to 48 hours and locate between latitude 40°S and 30°S is expected to gradually increase its core value from 1027hpa to 1030hpa through 72 to 120 hours by shifting southwards (from 30°S to 35°S) and northwards (from 35°S to 30°S).

Lastly, according to the GFS model, the central pressure value of 1026hpa within 24 to 48 hours and locate between latitude 40°S and 30°S is expected to gradually increase its core value from 1028hpa to 1032hpa through 72 to 120 hours by shifting southwards (from 30°S to 35°S) and northwards (from 35°S to 30°S).

According to the GFS model, the Azores high pressure system over North Atlantic Ocean with its central pressure value of 1029hpa in 24 hours and locates at longitude 30°W is expected to gradually increase its core value from 1030hpa to 1032hpa within 48 to 120 hours by shifting westwards (from 30°W to 35°W).

According to the ECMWF model, the central pressure value of 1028hpa in 24 hours and locates at longitude 35°W is expected to increase its core value to 1030hpa by shifting westwards to longitude 40°W in 48 hours and eastwards to longitude 30°W through 72 to 120 hours.

Lastly, according to the UKMET model, the central pressure value of 1029hpa in 24 hours and locates at longitude 35°W is expected to gradually increase its core value from 1030hpa to 1031hpa by moving westwards to longitude 40°W in 48 hours and eastwards to longitude 30°W within 72 to 120 hours.

At 925hpa level, zone of moderate dry Northerly and Northeasterly winds (20 to 50kts) are expected to prevail over North Niger, Mali and Mauritania; Central south and Southwest Algeria; South Libya through 24 to 120 hours.

At the 850hpa level, a lower tropospheric wind convergence associated with significant West African Monsoon inflow and depth between latitude 16°N 20°N is expected to prevail over parts of Sudan, Cameroon, Chad, Central African Republic and Western Africa through 24 hours to 120 hours. Vortices are expected over Central and West Mauritania; Central Niger; South Chad; part of Central African Republic, Nigeria and Cameroon; North Cote d'Ivoire; West Mali and Burkina Faso. The convergence associated with the meridional arm of the ITCZ is located over part of South Sudan Republic; North Democratic Republic of Congo; West Uganda; East and South Central African Republic within 24 hours to 120 hours.

At 700hpa level, the African Easterly Jet (AEJ) with a core of 20 to 40 knots is expected over part of North Senegal; South Mauritania and West Mali through 48 to 72 hours. However very pronounce African Easterly Waves propagating westwards is expect to

affect portion of Guinea Gulf Countries; part of Central African Republic and Sahel Region within 24 to 120 hours.

At 500hpa level, a wave is expected to affect South Chad; South and West Niger, Mali and Burkina Faso; part of Central African Republic, Cameroon, Cote d'Ivoire and Nigeria Mauritania through 24 to 120 hours.

At 150mb, the Tropical Easterly Jet with a maximum core of 30 to 60 Knots will affect Southern Chad and Sudan; Part of Guinea Gulf Countries and Central African Republic through 24 to 120 Hours. Easterly winds flow will also affect most part of Sahel Region.

In the next five days, ITD is expected to fluctuate between 18°E and 22°N with moderate to strong monsoon depth within 24 to 120 hours; Also the very active TEJ and the pronounced AEW propagation and 850 to 700hpa vortices are expected to enhance rainfall activities over West Ethiopia; portion of Sahel Region, Central Africa and Guinea Gulf Countries.

Atmospheric dust concentration expected over North Niger, Mali and Mauritania; Central south and Southwest Algeria; South Libya through 24 to 72 hours.

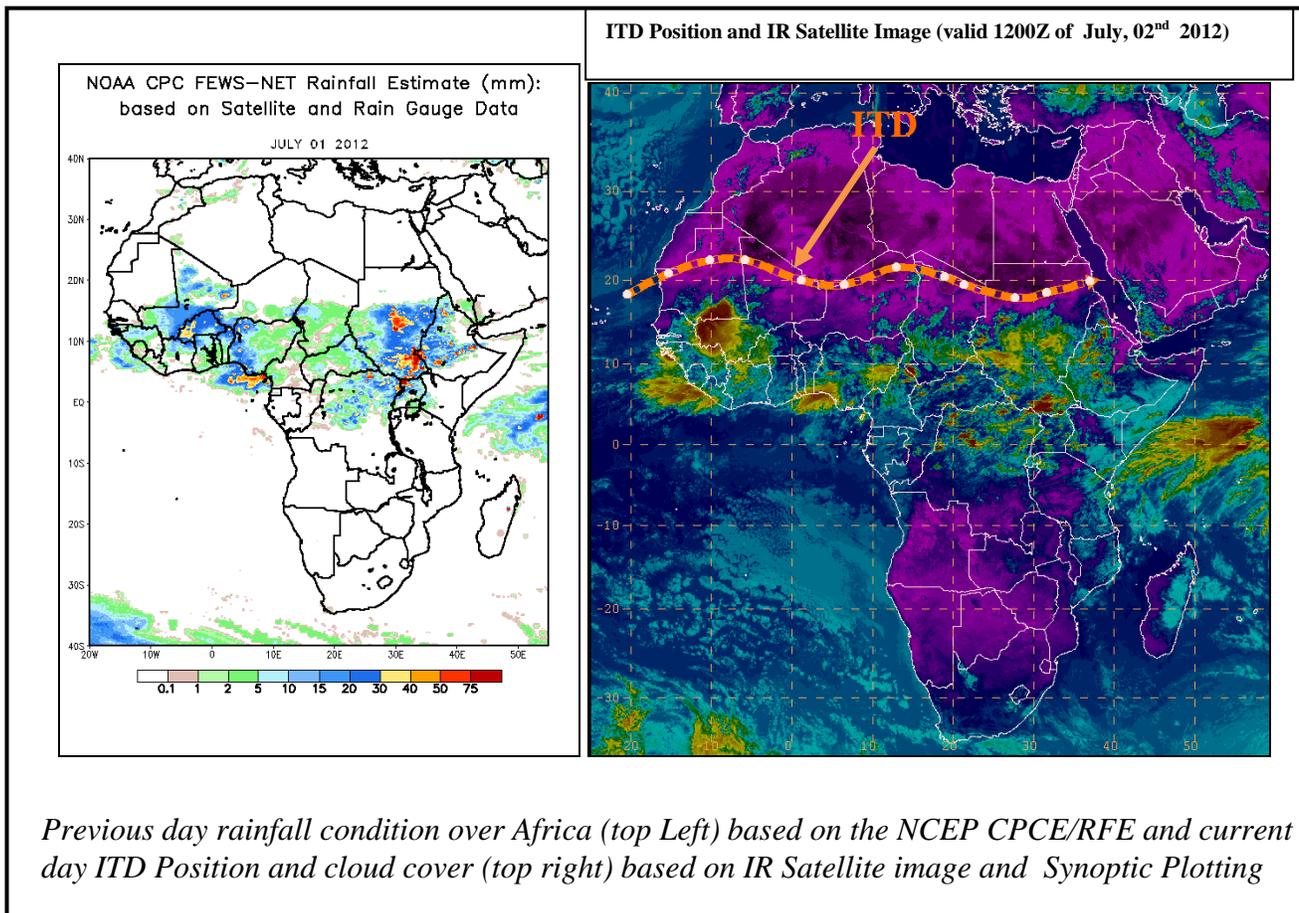
2.0. Previous and Current Day Weather Discussion over Africa (July, 01st 2012– July, 02nd 2012)

2.1. Weather assessment for the previous day (July, 01st 2012)

During the previous day, moderate to heavy rainfall was observed over part of Guinea Bissau; North and Coast Guinea Conakry; East Liberia; West Mali; part of Togo, Ghana, Cote d'Ivoire, Benin; West and South Burkina Faso; South, Central and Northwest Niger; North, east and South Nigeria; North, Central and South Cameroon; West Chad; East, Central and South Central African Republic; North and West South Sudan Republic; North and Central west Democratic Republic of Congo; Southwest Kenya; South Sudan; North Uganda and North and West Ethiopia.

2.2. Weather assessment for the current day (July, 02nd 2012)

Convective activities observed across south Mauritania; West Mali; East Senegal; Northeast and Coast Guinea Conakry; Coastal Liberia and Sierra Leone; Southwest and East Nigeria; South Togo and Benin; North Cote d`Ivoire; East and West Cameroon; South Chad; North Central African Republic; South Sudan; South and Northwest of South Sudan Republic; North Democratic Republic of Congo; Northwest Ethiopia.



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