

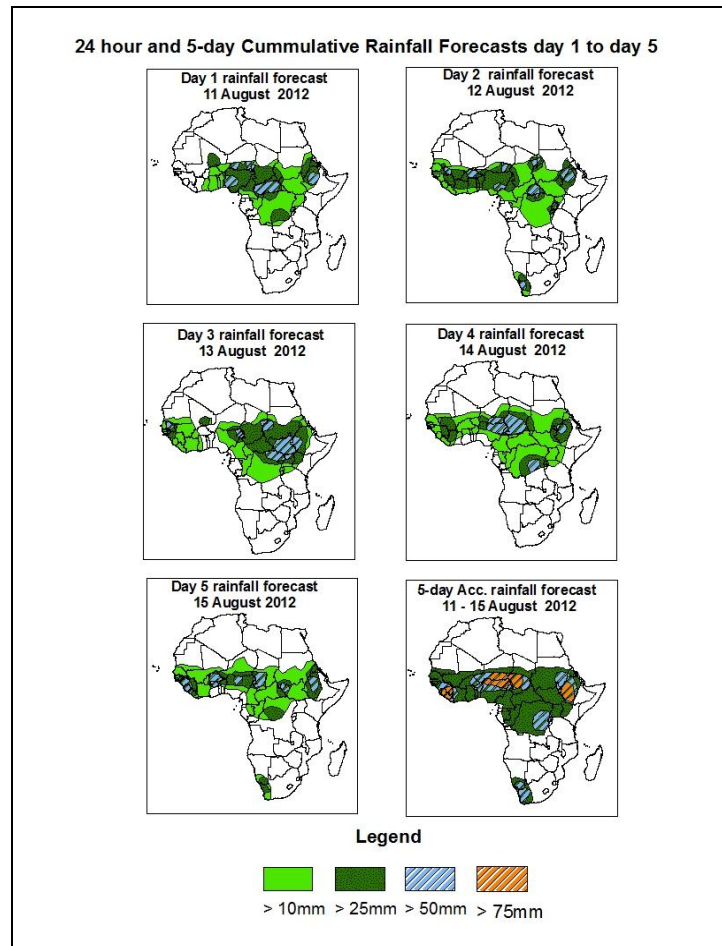


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of August 11th – 06Z of August, 15th 2012. (Issued at 13:00Z of August, 10th 2012)

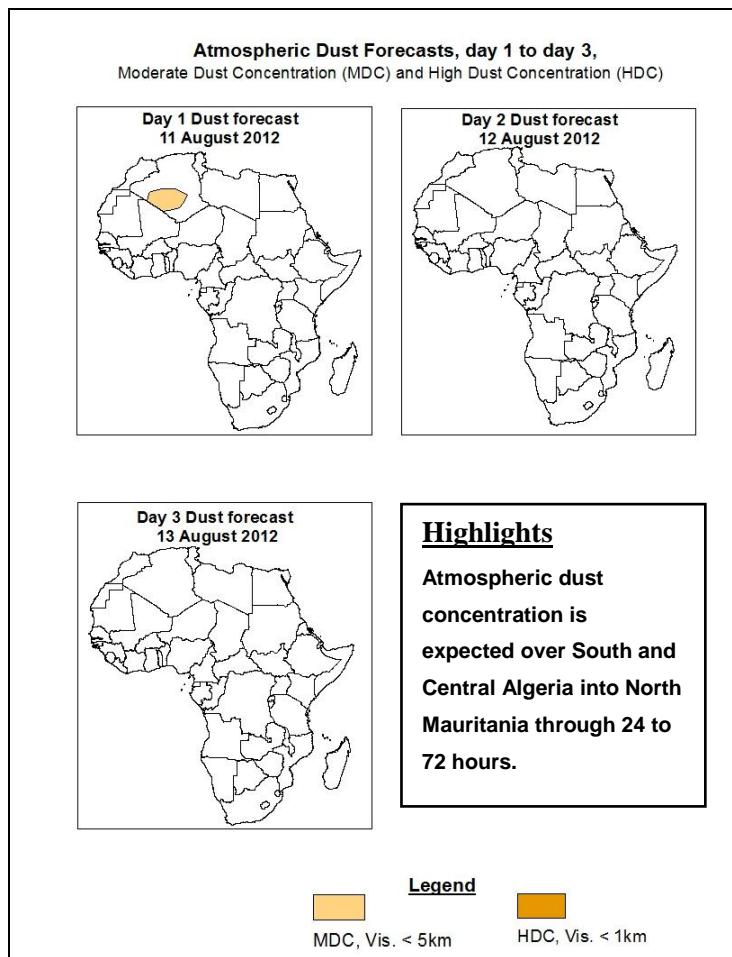
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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 10°E and 20°N with moderate to strong monsoon depth within 24 to 120 hours; Also the TEJ, AEJ and the AEW propagation with 850 to 700hpa vortices are expected to enhance rainfall activities over parts of South Sudan Republic, Cameroon and Nigeria; South Chad; portions of the Sahel Region, Sierra Leone and Guinea Conakry; Northern Guinea Gulf Countries; part of Central African Republic; West and North Ethiopia.



1.3. Model Discussion: Valid from 00Z of August, 10th 2012.

According to the GFS, ECMWF and UKMET models the heat lows are expected to deepen, remain quasi-stationary, and then fill up and vice versa through 24 to 120 hours over Mauritania, Mali, Algeria, Niger, Chad and Sudan.

According to the GFS model, a thermal low over North and Eastern Mauritania (1008hpa) in 24 hours is expected to decrease its core value to 1006hpa in 48 hours, and tends to increase from 1006hpa to 1008hpa within 72 to 96 hours, thereafter decrease to 1006hpa in 120 hours. The second low over South Algeria; North Mali (1008hpa) in 24 hours is expected to decrease its core value to 1007hpa through 48 to 72 hours, then slightly decrease to 1006hpa in 96 hours, and finally decrease to 1003hpa over central Mali, in 120 hours. The third low over North Chad and Niger (1005hpa) within 24 to 96 hours is expected to fluctuate up and down back to 1005hpa

and slightly increase to 1007hpa in 120 hours; while the low over North Sudan (1004hpa) in 24 hours is expected to decrease to 1003hpa through 48 to 72 hours, thereafter maintain its core value at 1003hpa within 96 to 120 hours.

The ECMWF model shows a thermal low over North Mauritania (1010hpa) in 24 hours is expected to maintain the 1010hpa pressure value through 48 to 120 hours. The second low over South Algeria; North and Western Mali (1009hpa) in 24 hours is expected to decrease its core value to 1008hpa in 48 hours, and to slightly increase to 1009hpa in 72 hours and thereafter steadily decrease to 1006hpa within 96 to 120 hours. The third low over North Chad and Niger (1008hpa) in 24 hours is expected to increase its core value to 1010hpa through 48 to 72 hours and thereafter maintain same core value up to 120 hours; while the low over North Sudan (1006hpa) in 24 hours is expected to maintain almost the same core value through 48 to 120 hours.

The UKMET model shows a thermal low over North and Central Mauritania (1010hpa) in 24 hours is expected to significantly decrease its core value to 1006hpa in 48 hours, and is expected to maintain almost the same core value through 72 to 120 hours. The second low over North and Central Mali (1007hpa) in 24 hours is expected to decrease its core value to 1006hpa through 48 to 72 hours, and down to 1003hpa in 120 hours. The third low over North Chad and Niger (1006hpa) in 24 hours is expected to maintain its core value at 1006hpa from 48 to 120hours; while the low over North Sudan (1006hpa) in 24 hours is expected to significantly decrease from 1006hpa to 1003hpa, thereafter maintain its core value at 1003hpa through 48 to 120 hours.

According to the UKMET model, the St. Helena High pressure system over South Atlantic Ocean with a core value of 1031hpa in 24 hours locates at latitude 30°S is expected to increase its core value to 1045hpa by moving southward to around latitude 40°S in 72 hours, and tends to gradually decrease its cores value to 1041hpa by moving slightly northwards from latitude 35°S to 32°S within 96 to 120 hours.

According to the ECMWF model, the central pressure value of 1031hpa in 24 hours locates at latitude 32°S is expected to increase its core value to 1042hpa by moving southwards to around latitude 45°S in 72 hours, and tends to decrease its cores value to 1040hpa while still moving northwards to latitude 40°S in 96 hours and thereafter

decrease its core value to 1039hpa as it continues its northwards movement to latitude 35°S in 120 hours.

Lastly, according to the GFS model, the central pressure value of 1031hpa in 24 hours locates at latitude 30°S is expected to gradually increase its core value from 1032hpa to 1042hpa by shifting southwards from latitude 30°S to 45°S through 48 to 72 hours before moving northwards to latitude 35°S with a core value of 1040hpa in 120 hours.

According to the GFS model, the Azores high pressure system over North Atlantic Ocean with its central pressure value of 1025hpa in 24 hours and locates at longitude 30°W is expected to gradually increase its core value from 1026hpa while still maintaining its position at longitude 30°W in 48 hours, and tends to steadily decrease from 1025 to 1023hpa as it shifts its position to longitude 45°W through 72 to 120 hours.

According to the ECMWF model, the central pressure value of 1025hpa in 24 hours and locates at longitude 30°W is expected to gradually increase its core value to 1026hpa while maintaining its position in 48 hours, thereafter decrease its core value from 1025hpa to 1023hpa by moving to the west from longitude 40°W to 45°W through 72 to 120 hours.

Lastly, according to the UKMET model, the central pressure value of 1025hpa within 24 and locates at longitude 30°W is expected to maintain its core value at 1025hpa by shifting west to longitude 40°W in 72 hours. Its core value will then decrease from 1024hpa to 1022hpa within 96 to 120 hours while its position will move to the east from longitude 50°W to 45°W.

At 925hpa level, zone of moderate dry northerly and northeasterly winds (20 to 50kts) are expected to prevail over South-West Algeria and North Mauritania through 24 to 72 hours.

At the 850hpa level, a lower tropospheric wind convergence associated with strong and significant West African Monsoon inflow and depth between latitude 12°N and 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 north-east

Mali; the coasts of Sierra Leone and Liberia; north, east and central Niger; East Chad; Sudan and Mauritania. The convergence associated with the meridional arm of the ITCZ is expected to oscillate between portion of South Sudan Republic; North and Central Democratic Republic of Congo; West and North Uganda; South and East Central African Republic; Great Lake Countries through 24 hours to 120 hours.

At 700hpa level, the AEJ with a core value between 30 and 40 knots is expected to affect South Algeria, Central Niger and Mauritania. The African Easterly Waves (AEW) is also expected to propagate westwards affecting parts of Niger, Mali, and Mauritania within 24 to 120 hours.

At 500hpa level, a wave is expected to affect parts of Mali, Mauritania, Sudan, Algeria and Chad, through 24 to 120 hours with no noticeable vortices over its area of influence within the forecast period.

At 150mb, the Tropical Easterly Jet with a maximum core of 30 to 65 Knots will affect portion of South Sudan Republic and South Guinea Gulf Countries; parts of Ethiopia, Cameroon and Central African Republic; Easterly wind flow will also continue to affect most part of West Africa, Chad, Cameroon and Sudan through 24 to 120 Hours.

In the next five days, ITD is expected to fluctuate between 10°E and 20°N with moderate to strong monsoon depth within 24 to 120 hours; Also the TEJ, AEJ and the AEW propagation with 850 to 700hpa vortices are expected to enhance rainfall activities over parts of South Sudan Republic, Cameroon and Nigeria; South Chad; portions of the Sahel Region, Sierra Leone and Guinea Conakry; Northern Guinea Gulf Countries; part of Central African Republic; West and North Ethiopia.

Atmospheric dust concentration is expected over South and Central Algeria into North Mauritania through 24 to 72 hours.

2.0. Previous and Current Day Weather Discussion over Africa

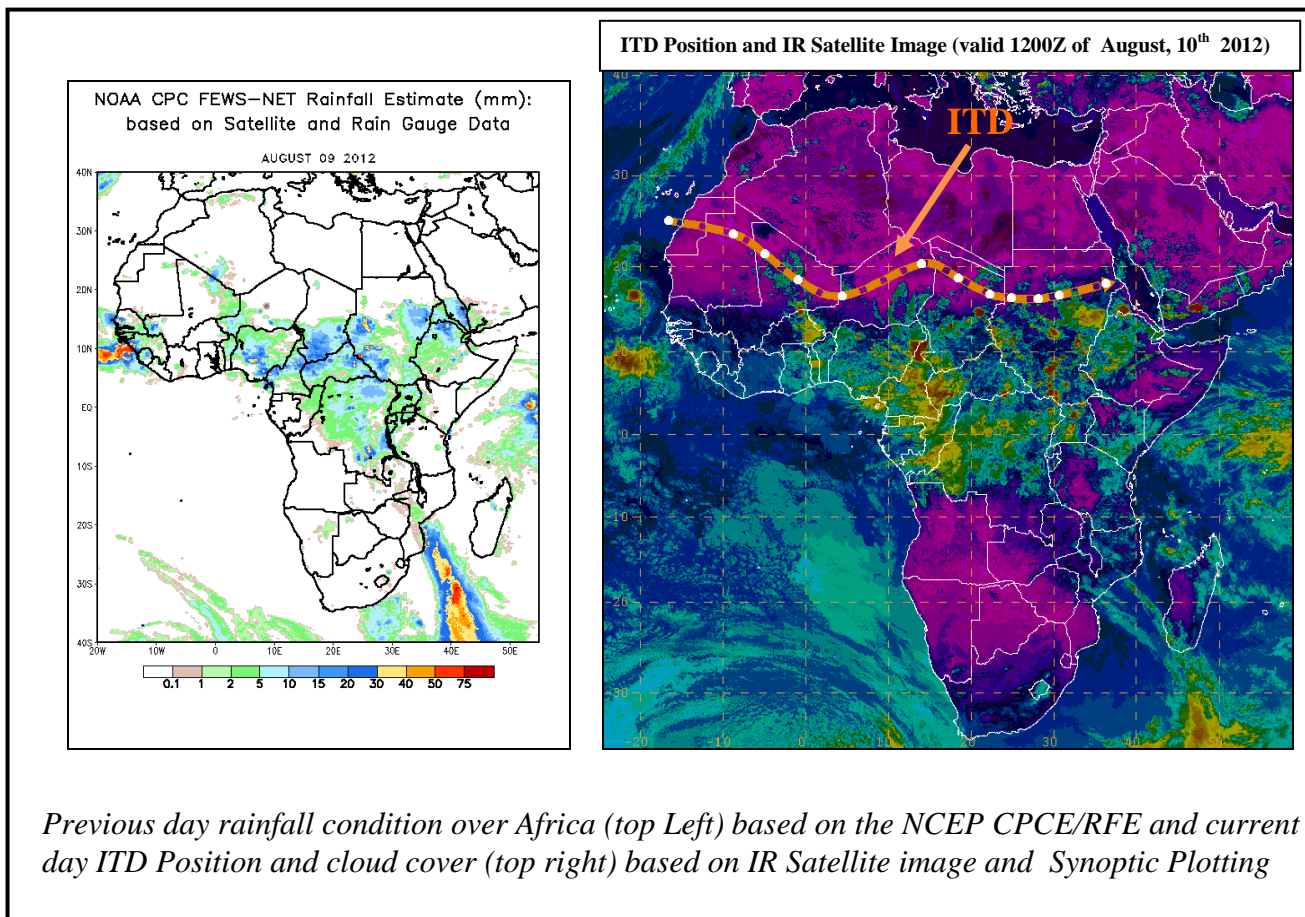
(August, 09th 2012– August, 10th 2012)

2.1. Weather assessment for the previous day (August, 09th 2012)

During the previous day, moderate to heavy rainfall was observed over North and West Guinea Conakry; South Algeria; North-West, South Mali and south Niger; south Chad; North, South and Central Nigeria; North Cameroon; eastern Democratic Republic of Congo; portions of Central African Republic and South Sudan Republic; West Ethiopia; Uganda; Democratic Republic of the Congo.

2.2. Weather assessment for the current day (August, 10th 2012)

Convective activities observed across South-East Niger; Burkina Faso; east, west and central Nigeria; west and south Chad; North and central Democratic Republic of Congo; Cameroon; central and southern Sudan Republic; northern Ethiopia; Uganda; Tanzania; Kenya; and Central African Republic.



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