

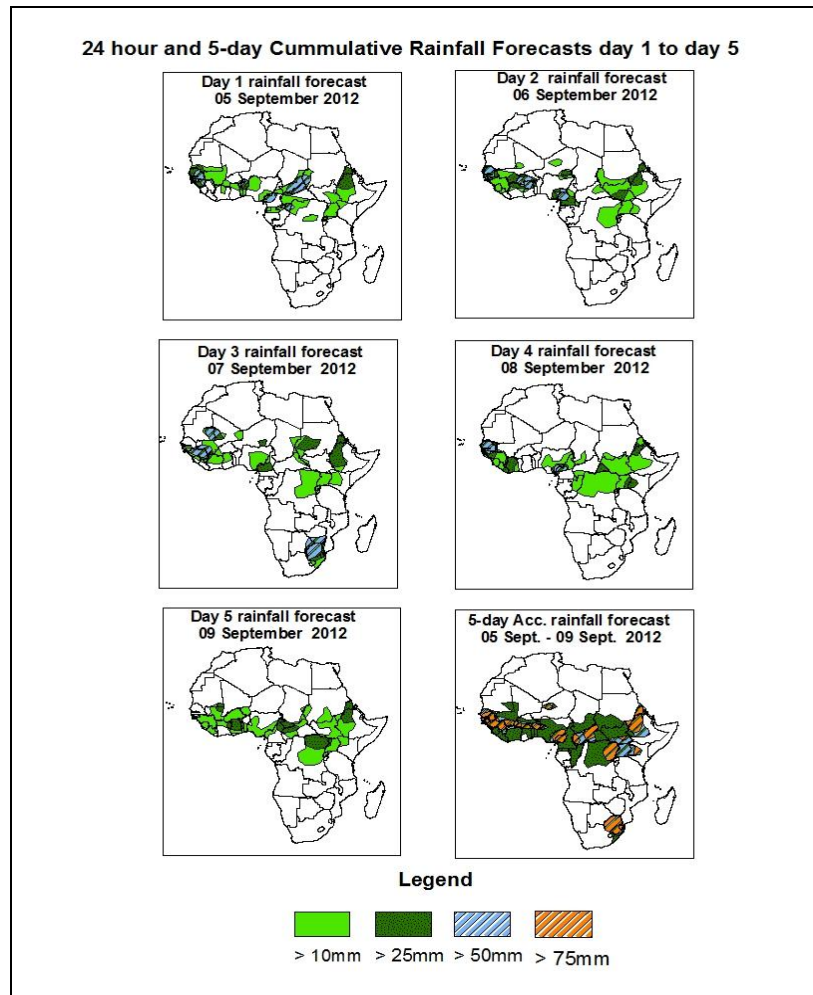


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of September 05th – 06Z of September, 09th 2012. (Issued at 13:00Z of September 04th 2012)

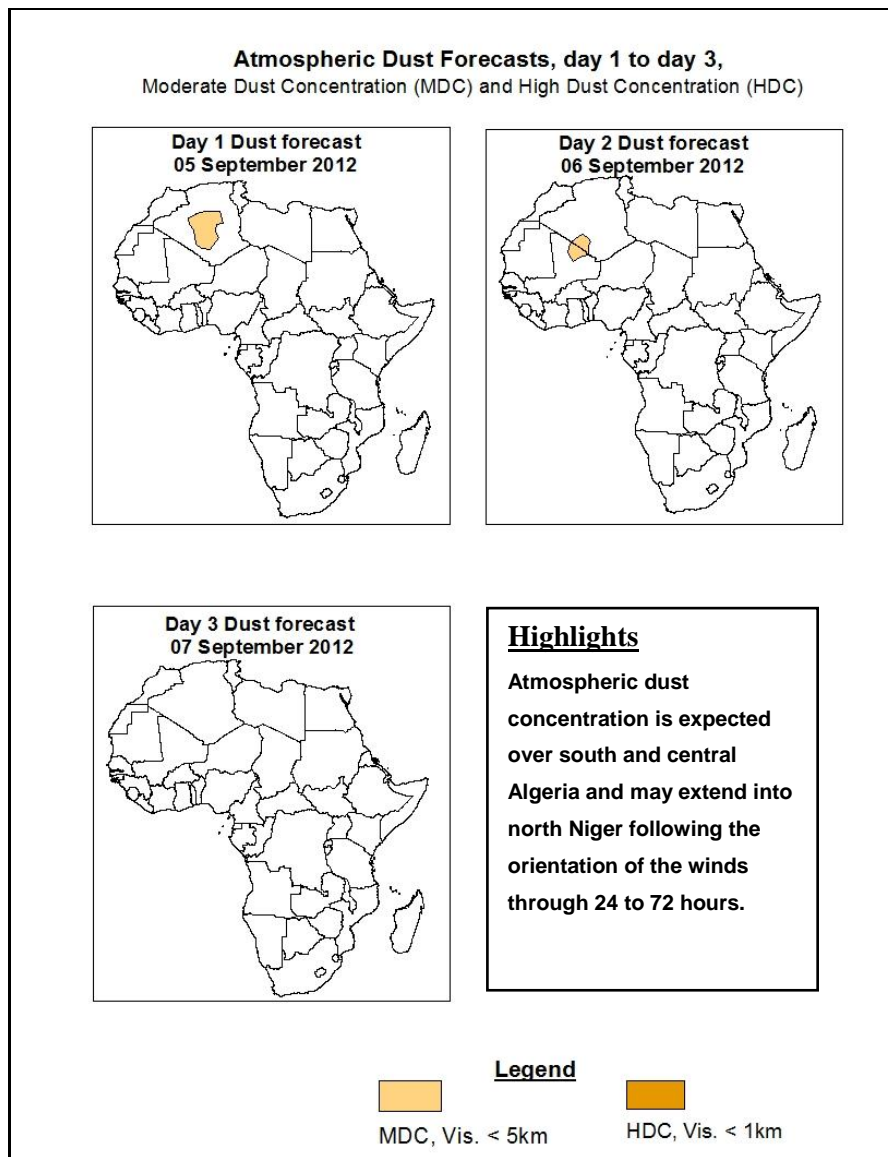
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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 09°N and 23°N with moderate to strong monsoon depth within 24 to 120 hours; also the TEJ, AEJ and the AEW propagation with vortices within the 850 to 700hpa pressure level fields are expected to enhance rainfall activities over parts of South Sudan Republic, Cameroon, Nigeria, South Chad, the Sahel Region, Sierra Leone, Guinea Conakry, the Northern Guinea Gulf Countries, Central African Republic and Ethiopia.



1.3. Model Discussion: Valid from 00Z of September 04th 2012.

The heat lows over Mauritania, Mali, Algeria, Niger, Chad and Sudan are expected to fluctuate in their positions while deepening and filling up and vice versa, through 24 to 120 hours, according to the GFS model.

According to the GFS model, a thermal low over central Mauritania (1008hpa) in 24 hours is expected to increase to 1010hpa in 48 hours and tends to maintain this central value from 48 to 96 hours, before a decrease to 1008hpa in 120 hours over northern Mauritania. The second low over south Algeria and north Mali (1008hpa) in 24 hours is

expected to increase its core value to 1010hpa in 96 hours, before a decrease to 1008hpa in 120 hours over south Algeria and North Mali. The third low over north Niger and central Chad (1008hpa) in 24 hours is expected to increase to 1010hpa in 72 hours and tends to decrease to 1008hpa through 96 to 120 hours; while the low over North Sudan (1006hpa) in 24 hours is expected to maintain this central value through 48 to 72 hours before a decrease in value to 1004hpa in 96 hours and tends to increase back to 1006hpa in 120 hours.

According to the GFS model, the St. Helena High pressure system over the South Atlantic Ocean with a central value of 1028hpa in 24 hours located at latitude 30°S is expected to maintain this central value through 48 to 72 hours before an increase in its core value to 1030hpa in 96 hours and tends to decrease to 1028hpa in 120 hours while remaining quasi-stationary at latitude 30°S.

According to the GFS model, the Azores high pressure system over the North Atlantic Ocean with its central pressure value of 1030hpa in 24 hours and locates at longitude 20°W is expected to gradually decrease its core value to 1020hpa while fluctuating between longitudes 05°W and 30°W through 48 to 120 hours.

At 925hpa level, a zone of moderate dry northerly and northeasterly winds (15 to 35kts) is expected to prevail over central Algeria, north Niger and north Chad 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 09°N and 23°N is expected to prevail over parts of Mauritania, Mali, Niger, Sudan, Cameroon, Central African Republic, Chad and Western Africa through 24 hours to 120 hours. Vortices are expected over southeast Niger, coast of Mauritania, north Benin, southwest Mali, Gambia, Central African Republic and the Chad/Sudan border. The convergence associated with the meridional arm of the ITCZ is expected to oscillate between portions of South Sudan Republic; North and Central Democratic Republic of Congo; West and North Uganda; South and East Central African Republic and the Great Lake Countries through 24 hours to 120 hours.

At 700hpa level, the AEJ with a core value between 15 and over 35 knots is expected to affect parts of Mauritania, Sudan, Chad, Niger, Burkina Faso, Nigeria and Mali. Vortices are expected over parts of Burkina Faso, Nigeria and Mali. The African Easterly Waves (AEW) is also expected to propagate westwards affecting parts of Chad, Mali, Burkina Faso, Sudan, Guinea-Conakry, Nigeria, Cote d'Ivoire, Central African Republic and Cameroon within 24 to 120 hours.

At 500hpa level, a wave is expected to affect parts of Sudan, Mali, Mauritania, Nigeria, Togo, Niger, Ghana, Liberia, Cote d'Ivoire, Cameroon, Central African Republic and Burkina Faso, through 24 to 120 hours with vortices expected over southwest Burkina Faso and western Central African Republic.

At 200mb, the Tropical Easterly Jet with a maximum core of 40 to 60 Knots will affect portions of South Sudan Republic and the South Guinea Gulf Countries; parts of Ethiopia, Cameroon and Central African Republic; a slight easterly wind flow will also continue to affect most parts of West Africa, Chad, Cameroon and Sudan through 24 to 120 Hours.

In the next five days, ITD is expected to fluctuate between 09°N and 23°N with moderate to strong monsoon depth within 24 to 120 hours; also the TEJ, AEJ and the AEW propagation with vortices within the 850 to 700hpa pressure level fields 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 and may extend into north Niger following the orientation of the winds through 24 to 72 hours.

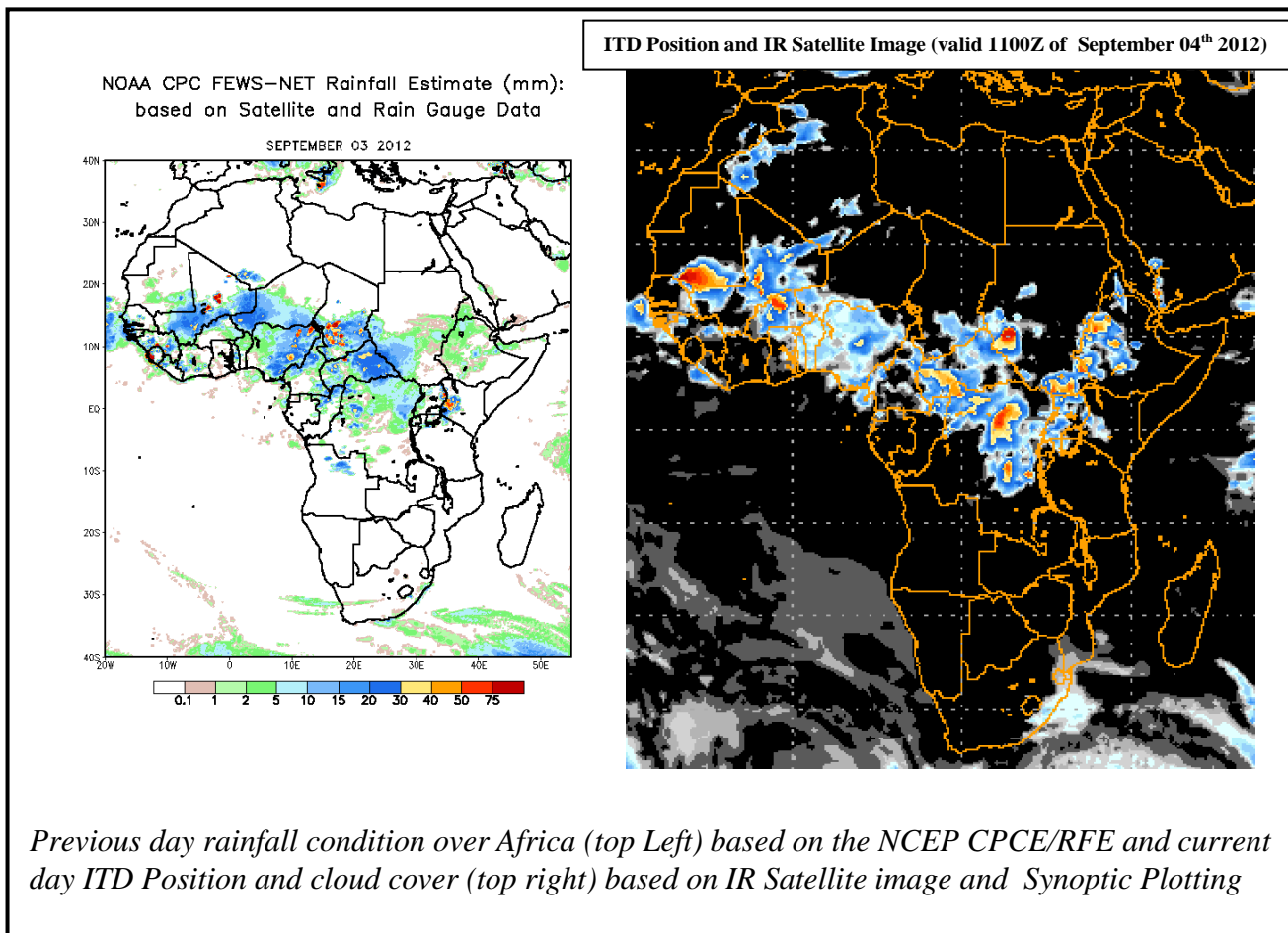
2.0. Previous and Current Day Weather Discussion over Africa (September 03rd 2012– September 04th 2012)

2.1. Weather assessment for the previous day (September 03rd 2012)

During the previous day, moderate to heavy rainfall was observed over parts of Algeria; Mauritania; south and central Mali; south-west Niger; Nigeria; south Chad; Cote d'Ivoire; Burkina Faso; Cameroon; Democratic Republic of Congo; Central African Republic and South Sudan Republic, Kenya and West Ethiopia.

2.2. Weather assessment for the current day (September 04th 2012)

Convective activities observed across parts of Mali; Nigeria; south Chad; Central African Republic; Cameroon; Democratic Republic of Congo; Sudan and South Sudan Republic; Burkina Faso; Ethiopia; Togo; Mauritania and Guinea-Conakry.



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