

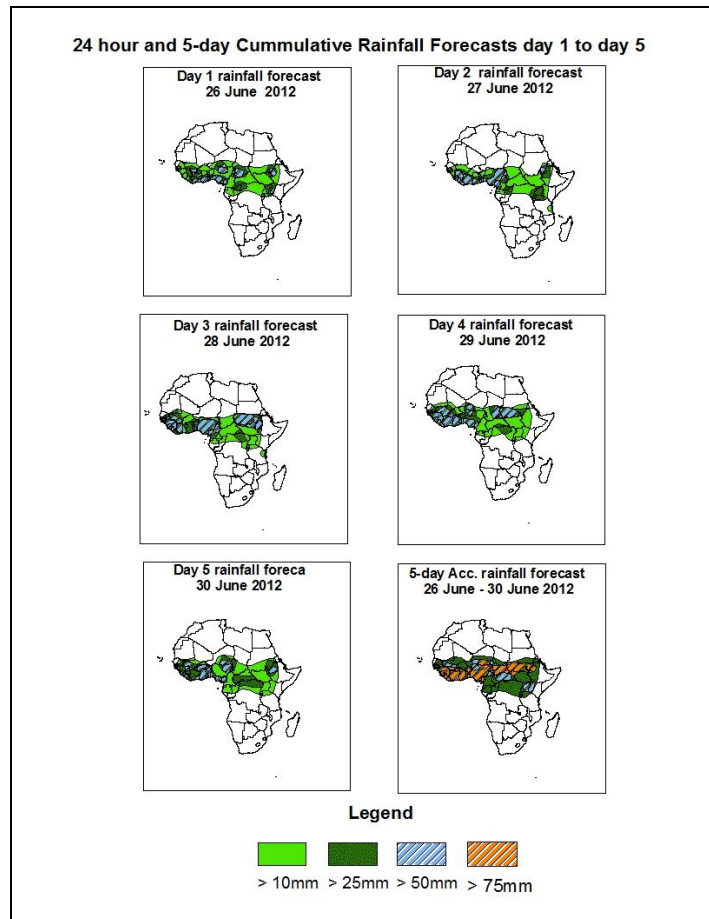


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 26 June – 06Z of 30 June 2012, (Issued at 13:00Z of 25th June 2012)

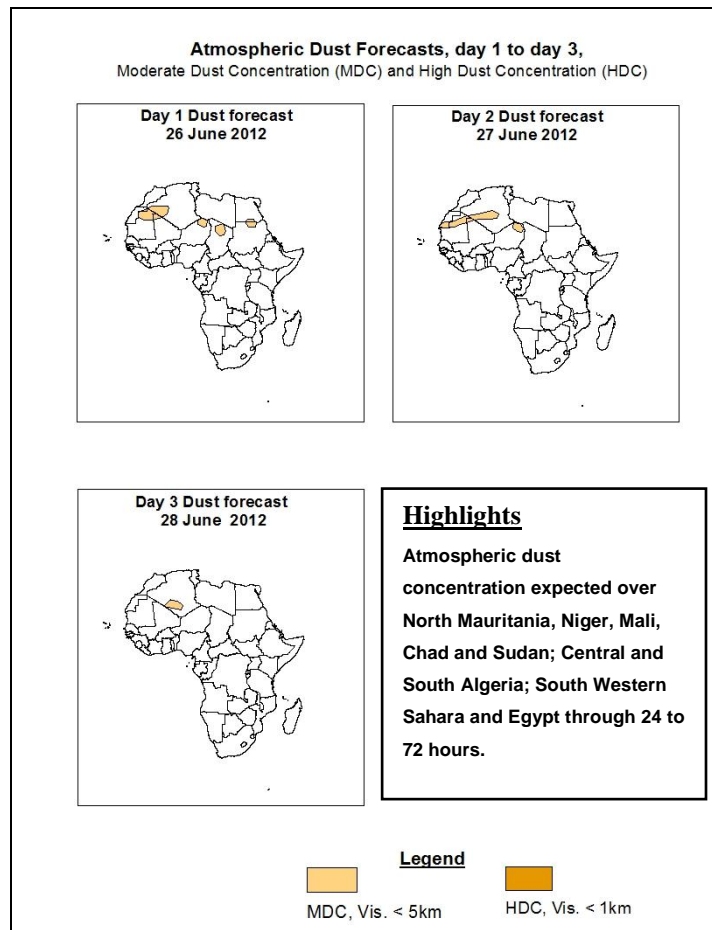
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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 17°E and 22°N with moderate to strong monsoon depth within 24 to 120 hours; Also the active TEJ and the pronounced AEW propagation will enhance rainfall activities over portion of Western Sahel Region; Part of Guinea Gulf Countries and Central Africa.



1.3. Model Discussion: Valid from 00Z of June, 25th 2012.

According to the GFS, ECMWF and UKMET models the heat lows are expected to fill up over Mauritania, Algeria, Mali, Niger Chad and Sudan through 24 to 72 hours; while they are expected to deepen within 96 to 120 hours.

According to GFS model, a thermal low over West, Central and North Mauritania (1006hpa) in 24 hours is expected to increase from 1008hpa to 1010hpa through 48 to 72 hours and tends to decrease from 1006hpa to 1004hpa within 96 to 120 hours. The second low over North Mali and South Algeria (1005hpa) in 24 hours is expected to increase to 1008hpa in 48 hours and tends to decrease from 1006hpa to 1004hpa through 72 to 120 hours. The third low over North Chad and Niger (1005hpa) in 24 hours is expected to slightly increase to 1006hpa in 48 hours and tends to decrease from 1005hpa to 1003hpa within 72 to 120 hours; while the low over North Sudan (1005hpa) in 24 hours is expected to slightly increase to 1006hpa in 48 hours, then

decreases from 1004hpa to 1003hpa through 72 to 96 hours and tends to slightly increase to 1004hpa in 120 hours.

The ECMWF model shows a thermal low over West, Central and North Mauritania (1008hpa) in 24 hours is expected to gradually increase from 1009hpa to 1010hpa within 48 to 96 hours and tends to decrease to 1008hpa in 120 hours. The second low over South Algeria and North Mali (1007hpa) in 24 hours is also expected to increase to 1010hpa in 48 hours and tends to decrease from 1008hpa to 1005hpa through 72 to 120 hours. The third low over North Niger and Chad (1009hpa) in 24 hours is expected to slightly increase to 1010hpa in 48 hours, and then decreases from 1008hpa to 1006hpa within 72 to 120 hours; while the low over North Sudan (1008hpa) through 24 to 72 hours is expected to decrease to 1006hpa within 96 to 120 hours.

The UKMET model shows a thermal low over West, Central and North Mauritania (1006hpa) in 24 hours is expected to increase to 1008hpa in 48 hours and tends to slightly decrease to 1006hpa in 72 hours, then slightly increases to 1008hpa through 96 to 120 hours. The second low over South Algeria and North Mali (1006hpa) in 24 hours is expected to increase to 1009hpa in 48 hours and tends to decrease from 1006hpa to 1002hpa within 72 to 120 hours. The third low over North Niger and Chad (1007hpa) through 24 to 48 hours is expected to gradually decrease from 1005hpa to 1004hpa within 72 to 120 hours; while the low over North Sudan (1007hpa) through 24 to 48 hours is expected to decrease to 1004hpa within 72 to 120 hours.

According to the UKMET model, the St. Helena High pressure system over South Atlantic Ocean with a core value of 1028hpa in 24 hours locate at latitude 35°S is expected to gradually increase its core value from 1030hpa to 1032hpa by shifting northwards (from 35°S to 30°S) through 48 to 72 hours and tends to decrease from 1030hpa to 1027hpa by maintaining almost the same position at latitude 35°S through 96 to 120 hours. According to the ECMWF model, the central pressure value of 1028hpa within 24 to 48 hours and locate at latitude 30°S is expected to increase its core value to 1030hpa by maintaining almost the same position in 72 hours and tends to gradually decrease from 1029hpa to 1026hpa by maintaining almost the same position at latitude 30°S within 96 to 120hours. Lastly, according to the GFS model, the central pressure value of 1028hpa in 24 hours and locates at latitude 35°S is expected to increase its core value to 1031hpa through 48 to 72 hours by shifting northwards (from

35°S to 30°S) and tends to gradually decrease from 1030hpa to 1028hpa by maintaining almost the same position at latitude 30°S within 96 to 120hours.

According to the GFS model, the Azores high pressure system over North Atlantic Ocean with its central pressure value of 1022hpa in 24 hours locates at longitude 15°W is expected to gradually increase its core value from 1027hpa to 1030hpa and locates at longitude 45°W within 48 to 72hours, then tends to decrease from 1028hpa to 1027hpa through 96 to 120 hours by shifting eastwards (from 45°W to 40°W). According to the ECMWF model, the central pressure value of 1021hpa in 24 hours locates at longitude 45°W is expected to gradually increase its core value from 1026hpa to 1030hpa within 48 to 96 hours by shifting eastwards (from 45°W to 40°W) and tends to slightly decrease to 1029hpa by maintaining almost the same position around longitude 40°W in 120hours. Lastly, according to the UKMET model, the central pressure value of 1022hpa in 24 hours locates at longitude 45°W is expected to gradually increase its core value from 1027hpa to 1029hpa through 48 to 120 hours by shifting eastwards (from 45°W to 35°W).

At 925hpa level, zone of moderate dry Northerly and Northeasterly winds (20 to 50kts) are expected to prevail over North Mauritania, Niger, Mali, Chad and Sudan; Central and South Algeria; South Western Sahara and Egypt 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 14°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. The convergence associated with the meridional arm of the ITCZ is located over part of South Sudan Republic; North Democratic Republic of Congo, East and South Central African Republic and West Uganda within 24 hours to 120 hours.

At 700hpa level, the African Easterly Jet (AEJ) with a core of 20 to 50 knots is expected over North Nigeria, Benin, Togo and Cote d' Ivoire; West Burkina Faso; South and East Senegal; Part of Gambia and guinea Bissau; East and North Guinea Conakry. Also an African Easterly Waves propagating westwards will be affecting part of Guinea

Gulf Countries and Central African Republic; South Sudan and Chad; West and South Sahel Region through 24 to 120 hours.

At 500hpa level, a wave is expected to affect most part of Guinea Gulf Countries and Central African Republic; South Chad, South and West Sudan, South and West Sahel Region 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 part of Sahel Region.

In the next five days, ITD is expected to fluctuate between 17°E and 22°N with moderate to strong monsoon depth within 24 to 120 hours; Also the active TEJ and the pronounced AEW propagation will enhance rainfall activities over portion of Western Sahel Region; Part of Guinea Gulf Countries and Central Africa.

Atmospheric dust concentration expected over North Mauritania, Niger, Mali, Chad and Sudan; Central and South Algeria; South Western Sahara and Egypt through 24 to 72 hours.

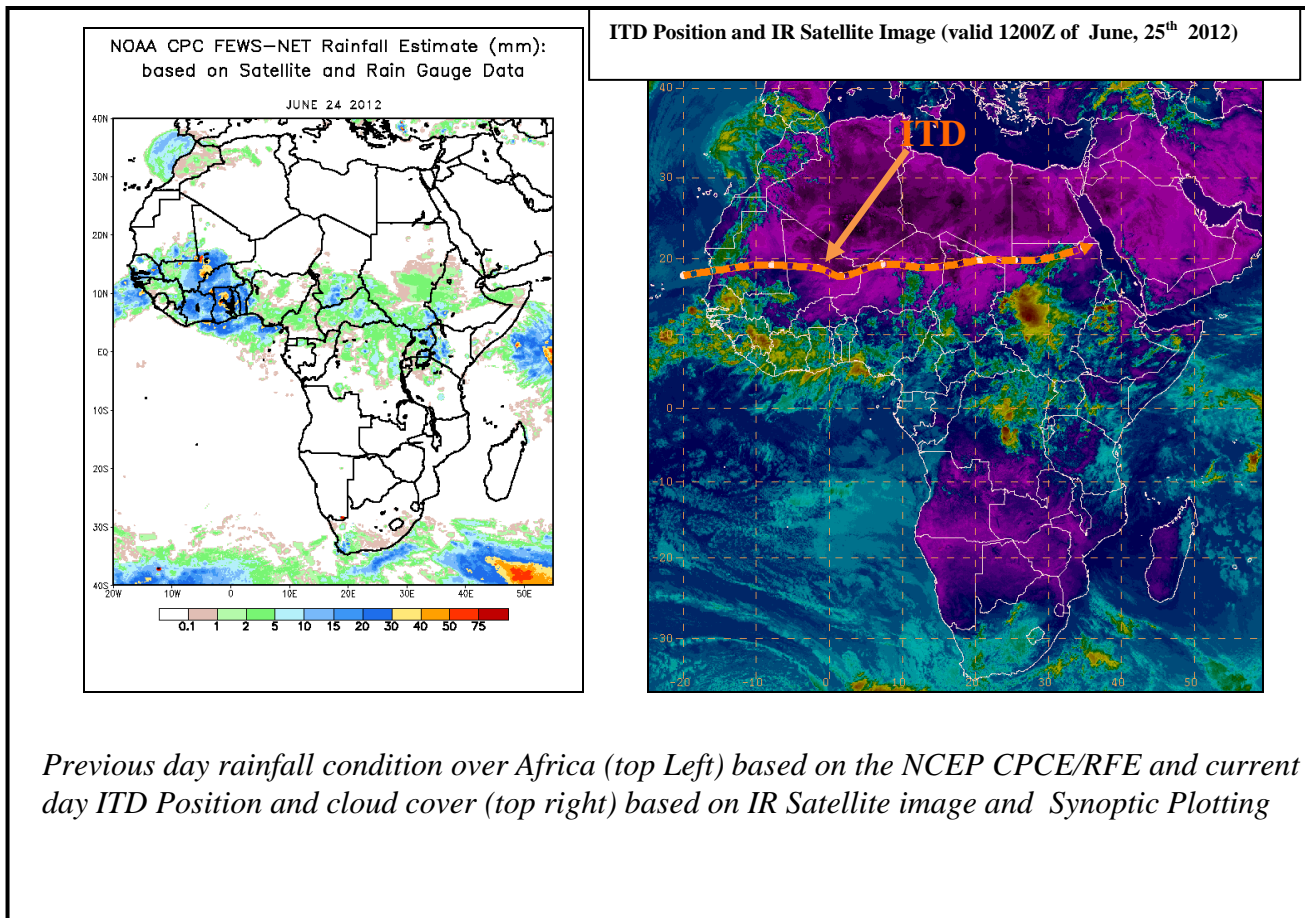
2.0. Previous and Current Day Weather Discussion over Africa (June, 24th 2012– June, 25th 2012)

2.1. Weather assessment for the previous day (June, 24th 2012)

During the previous day, moderate to heavy rainfall was observed over Southeast Senegal; South and West Mali; South Mauritania; Part of Cote d'Ivoire, Ghana, Togo, Benin and Burkina Faso; Southwest Niger; South Nigeria and Chad; Southeast South Sudan Republic; North, Central and South Central African Republic; Southwest Ethiopia; Southeast South Africa; West Kenya; East and North Uganda.

2.2. Weather assessment for the current day (June, 25th 2012)

Convective activities observed across east Senegal; East and South Guinea Conakry; North Sierra Leone and Liberia; South and West Cote d'Ivoire; South Nigeria and Benin; Central and North Democratic Republic of Congo; North of South Sudan Republic; Northwest Ethiopia; South and West Sudan.



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