

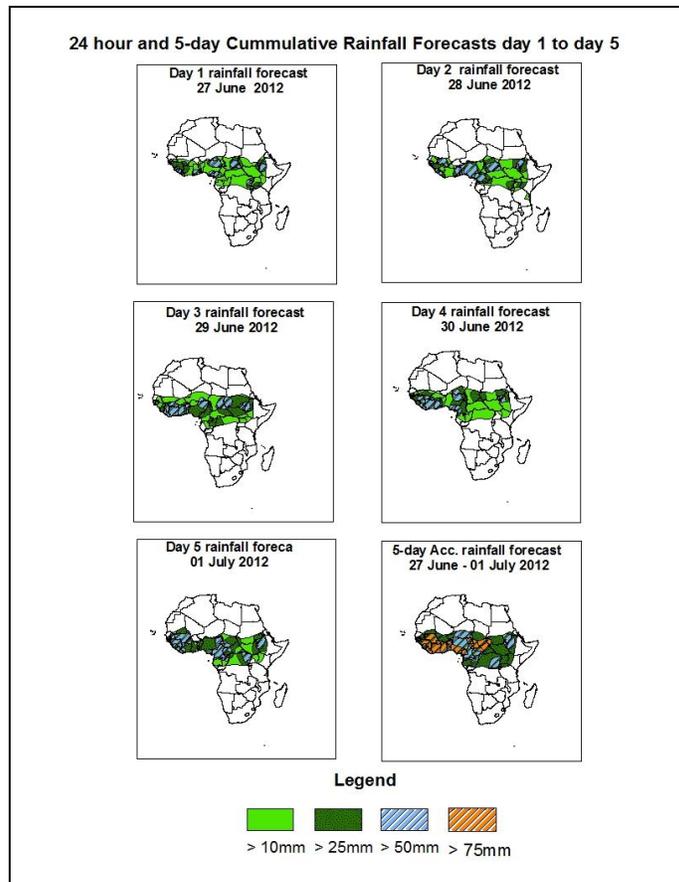


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of June, 27th – 06Z of July, 01st 2012. (Issued at 13:00Z of June, 26th 2012)

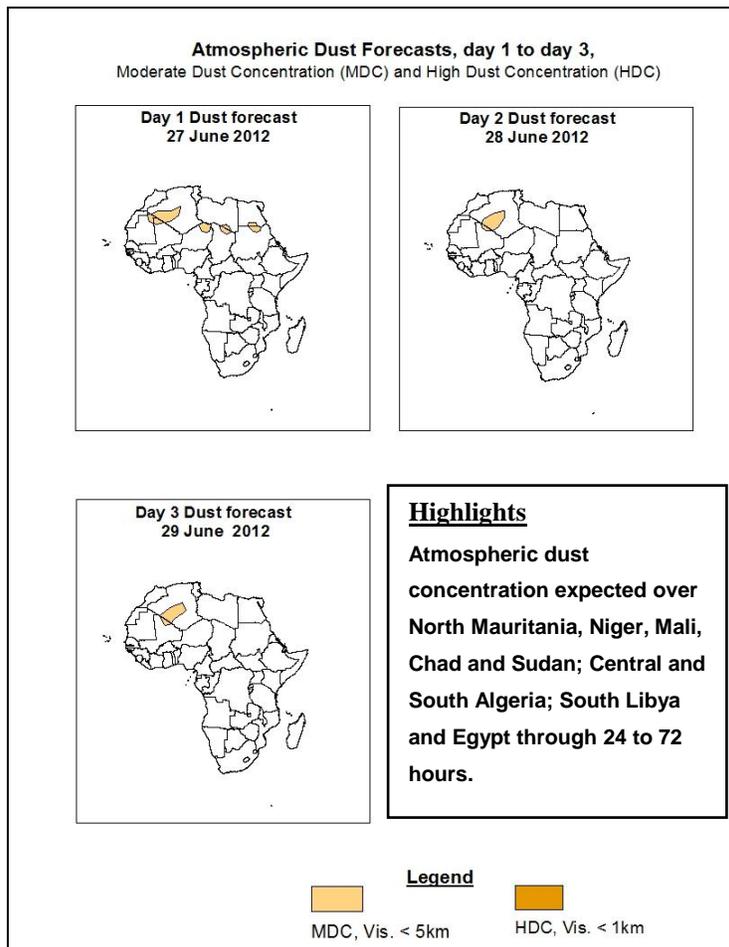
1.1. Twenty Four Hour Cumulative Rainfall Forecasts

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 very active TEJ and the pronounced AEW propagation will enhance rainfall activities over portion of West and South Sahel Region; Part of Guinea Gulf Countries and Central Africa.



1.3. Model Discussion: Valid from 00Z of June, 26th 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 Chad and Sudan.

According to GFS model, a thermal low over West, Central and North Mauritania (1009hpa) in 24 hours is expected to slightly increase to 1010hpa through in 48 hours and tends to gradually decrease from 1008hpa to 1003hpa within 72 to 96 hours, then increases to 1005hpa in 120 hours. The second low over North Mali and South Algeria (1009hpa) in 24 hours is expected to decrease from 1006hpa to 1002hpa through 48 to 72 hours and tends to increase from 1003hpa to 1004hpa within 96 to 120 hours. The third low over North Chad and Niger (1007hpa) in 24 hours is expected to gradually decrease from 1005hpa to 1003hpa through 48 to 120 hours; while the low over North Sudan (1006hpa) in 24 hours is expected to gradually decrease to 1003hpa within 48 to 96 hours, and then slightly increases to 1004hpa in 120 hours.

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

The UKMET model shows a thermal low over West, Central and North Mauritania (1008hpa) within 24 to 96 hours is expected to decrease to 1006hpa in 120 hours. The second low over South Algeria and North Mali (1009hpa) in 24 hours is expected to gradually decrease from 1006hpa to 1001hpa through 48 to 120 hours. The third low over North Niger and Chad (1007hpa) in 24 hours is expected to gradually decrease from 1006hpa to 1002hpa within 48 to 120 hours; while the low over North Sudan (1008hpa) in 24 hours is expected to decrease to 1004hpa 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 1029hpa in 24 hours locate at latitude 35°S is expected to slightly increase its core value to 1030hpa in 48 hours by maintaining almost the same position and tends to gradually decrease from 1029hpa to 1024hpa through 72 to 120 hours by maintaining almost the same position at latitude 30°S. According to the ECMWF model, the central pressure value of 1028hpa in 24 hours and locate at latitude 30°S is expected to increase its core value to 1030hpa in 48 hours and tends to gradually decrease from 1029hpa to 1026hpa by maintaining almost the same position at latitude 30°S within 72 to 120hours. Lastly, according to the GFS model, the central pressure value of 1029hpa in 24 hours and locates at latitude 30°S is expected is expected to increase its core value to 1031hpa in 48 hours and tends to gradually decrease from 1030hpa to 1025hpa by maintaining almost the same position at latitude 30°S through 72 to 120hours.

According to the GFS model, the Azores high pressure system over North Atlantic Ocean with its central pressure value of 1024hpa in 24 hours locates at longitude 40°W is expected to gradually decrease its core value from 1028hpa to 1025hpa by

maintaining almost the same position at longitude 40°W within 48 to 96hours, then tends to slightly increase to 1026hpa in 120 hours by shifting eastwards (from 40°W to 30°W). According to the ECMWF model, the central pressure value of 1024hpa in 24 hours locates at longitude 40°W is expected to gradually increase its core value from 1028hpa to 1031hpa by maintaining almost the same position at longitude 40°W within 48 to 72hours and by shifting eastwards (from 40°W to 35°W) through 96 to 120 hours. Lastly, according to the UKMET model, the central pressure value of 1024hpa in 24 hours locates at longitude 40°W is expected to gradually increase its core value from 1028hpa to 1030hpa by maintaining almost the same position at longitude 40°W within 48 to 96hours and by shifting eastwards (from 40°W to 35°W) in 120 hours.

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 Libya 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, East and Central Nigeria; North Benin and Togo; South and West Burkina Faso and Mali; Southwest Niger. Also a very pronounce African Easterly Waves propagating westwards is expect to affect most 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 70 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 17°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 will enhance rainfall activities over portion of West and South 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 Libya and Egypt through 24 to 72 hours.

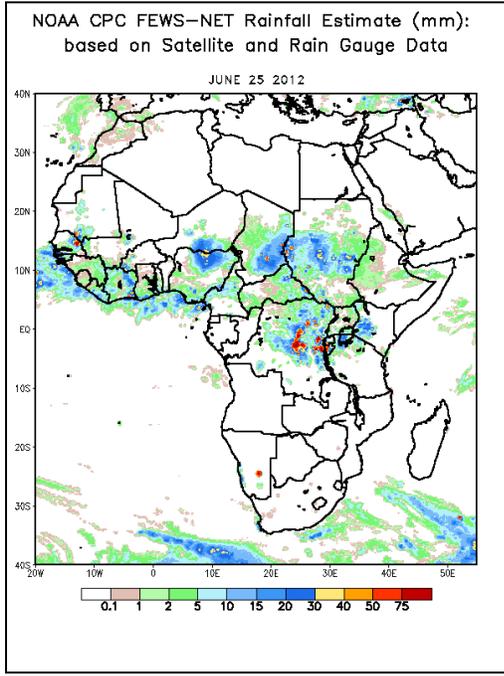
2.0. Previous and Current Day Weather Discussion over Africa (June, 25th 2012– June, 26th 2012)

2.1. Weather assessment for the previous day (June, 25th 2012)

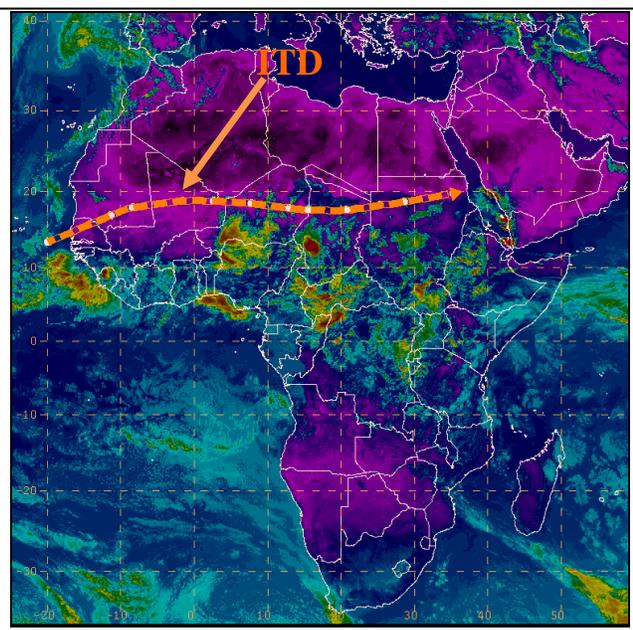
During the previous day, moderate to heavy rainfall was observed over South Mauritania; East Senegal; Southeast, North and East Cote d`Ivoire; South Ghana; Southwest Burkina Faso; South Niger; North and South Nigeria; South and East Chad; West and North South Sudan Republic; East Central African Republic; South and West Sudan; North, East and Central Democratic Republic of Congo; West Rwanda and Burundi; Southwest Kenya; North Tanzania.

2.2. Weather assessment for the current day (June, 26th 2012)

Convective activities observed across West and North Sierra Leone. North and South Nigeria; South West Niger; South Togo and Benin; Southwest Chad; North and East Cameroon; Part of Central African Republic; Northwest and East Democratic Republic of Congo; South and Central part of South Sudan Republic; West Ethiopia.



ITD Position and IR Satellite Image (valid 1200Z of June, 26th 2012)



Previous day rainfall condition over Africa (top Left) based on the NCEP CPCE/RFE and current day ITD Position and cloud cover (top right) based on IR Satellite image and Synoptic Plotting

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