

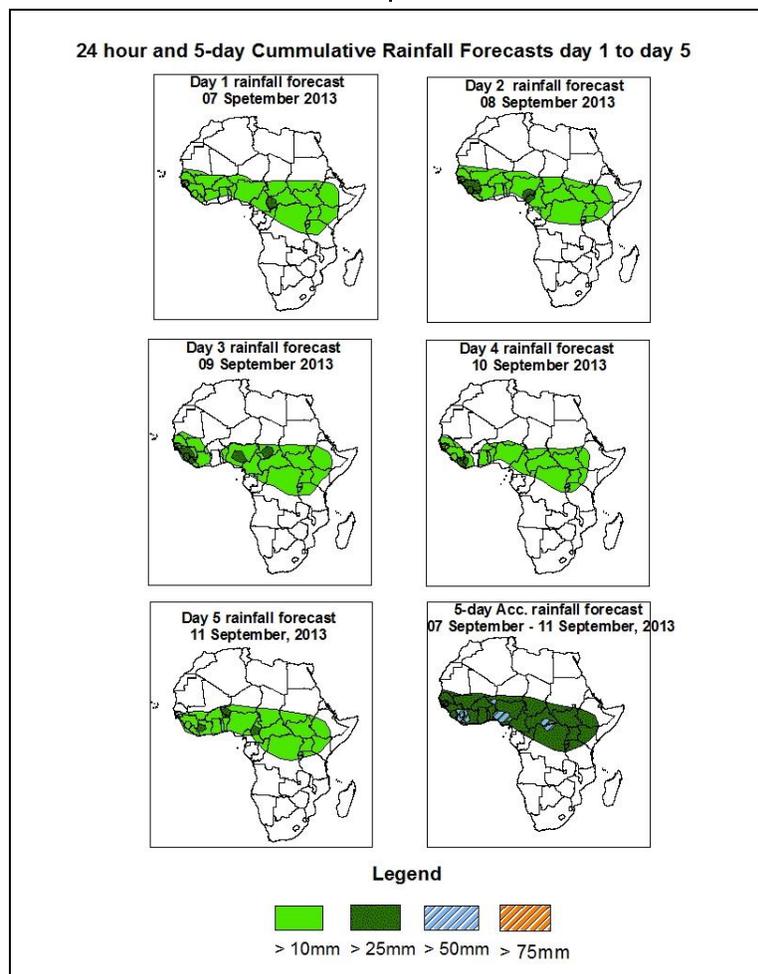


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 07 September – 06Z of 11 September, 2013. (Issued at 1530Z of 06 September 2013)

1.1. Twenty Four Hour Cumulative Rainfall Forecasts

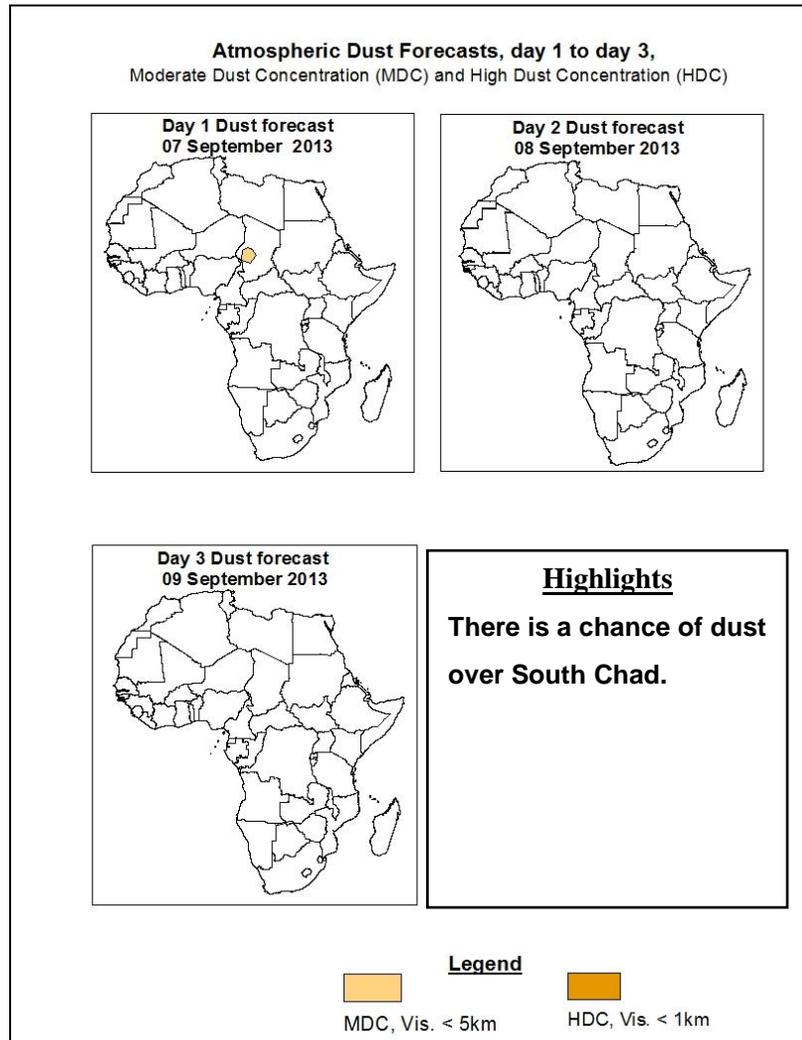
The forecasts are expressed in terms of 75% probability of precipitation (POP) exceeded, based on the NCEP, UK Met Office and the ECMWF NWP outputs, the NCEP global ensemble forecasts system (GEFS) and expert assessment.



Summary

In the next five days, the *ITD* is expected to fluctuate between 18 and 20 degree north. Favorable conditions are expected to modulate rainfall activities over South Sahel and North of Guinea Gulf Countries, while suppressed conditions along the Gulf of Guinea coast are expected, to slightly improve. Strong cross equatorial flow, with its associated convergence over the Horn of Africa is expected to increase rainfall over East Africa. Thus, there is an increased chance for moderate to heavy rainfall over North Togo, North Benin, North and South Nigeria, North Ghana, North Cote d Ivoire, Conakry Guinea, Biso Guinea, Liberia and Sierre Leone.

1.2. Atmospheric Dust Forecasts: Valid 07 - 09 September 2013



1.2. Model Discussion: Valid from 00Z of 06 September 2013

Model comparison (Valid from 00Z;06 September 2013) shows all the three models are in general agreement in terms of depicting positions of the northern and southern hemisphere sub-tropical highs, while they showed slight differences in depicting their intensity.

The Azores High Pressure System over Northeast Atlantic Ocean is expected to intensify during 24 to 72 hours period, according for at least two models. Its central pressure value is expected to increase from about 1027hpa to 1034hpa according to GFS, from about 1027hpa to 1033hpa according to ECMWF model.

The St. Helena High Pressure System over southeast Atlantic Ocean is expected to weaken during the forecast period, its central pressure value is expected to decrease from about 1040hpa to 1032hpa according to GFS model, from about 1040hpa to 1034hpa according to ECMWF model, from about 1041hpa to 1035hpa according to UKMET model.

The Mascarene high pressure system over southwestern Indian Ocean is expected to intensify slightly during 24 to 72 according to UKMET and ECMWF models. Its central pressure value is expected to increase from about 1024hpa to 1027hpa according to ECMWF model, from about 1024hpa to 1028hpa according to UKMET model.

The heat lows over the central Sahel and neighboring areas are expected to be stationary during the forecast period especially over Chad and Mali according to both models. Its value is expected to be about 1008hpa to both three models, the seasonal lows across the red sea and its neighboring areas are expected to deepen its positions during the forecast period according to both models, Its value is expected to decrease from about 1008hpa to 1004hpa according GFS model from about 1008hpa to 1006hpa according ECMWF model and from about 1006hpa to 1004hpa according to UKMET models.

At the 850hPa level, monsoon wind flow continues to dominate flow across West Africa and the Horn of Africa. The inter-tropical front is also expected to fluctuate between 18 and 20 degree north, while meridional wind convergence will dominate flow across East Africa. Suppressed rainfall along Guinea Gulf coast is expected to slightly improve as wind and surface pressure conditions gradually improve over the area during the forecast period. The frequency in number of vortices at this level and wind convergence over the region is expected to reduce over West Africa with high to moderate rainfall over north Guinea Gulf Countries.

The African Easterly Waves (AEW) is also expected to propagate westwards waves to affect part of Guinea Gulf Countries, south Sahel and portion of Central Africa within 24 to 120 hours

At 700hpa level, wind flow maintains northeasterly to easterly flow pattern between few vortices and trough lines also are expected to occur from East to west with least

intensification compare to the last week and likely to facilitate westward propagation of systems across the region during the period.

At 500hpa level, winds associated with mid-tropospheric easterly jet are expected to have common speeds of about 25 to 30kts over Sahel.

150mb, the Tropical Easterly Jet with a maximum core of 35 to 65 Knots will affect Southern Chad and South Sudan; Part of Ethiopia, Guinea Gulf Countries and Central African Republic through 24 to 120 Hours period. Speeds exceeding 60kts are observed over Ethiopia, eastern Sudan and Somalia during the forecast period.

In the next five days, the ITD is expected to fluctuate between 18 and 20 degree north. Favorable conditions are expected to modulate rainfall activities over South Sahel and North of Guinea Gulf Countries, while suppressed conditions along the Gulf of Guinea coast are expected, to slightly improve. Strong cross equatorial flow, with its associated convergence over the Horn of Africa is expected to increase rainfall over East Africa. Thus, there is an increased chance for moderate to heavy rainfall over North Togo, North Benin, North and South Nigeria, North Ghana, North Cote d Ivoire, Conakry Guinea, Biso Guinea, Liberia and Sierra Leone.

2.0. Previous and Current Day Weather Discussion over Africa

(05 September 2013 – 06 September 2013)

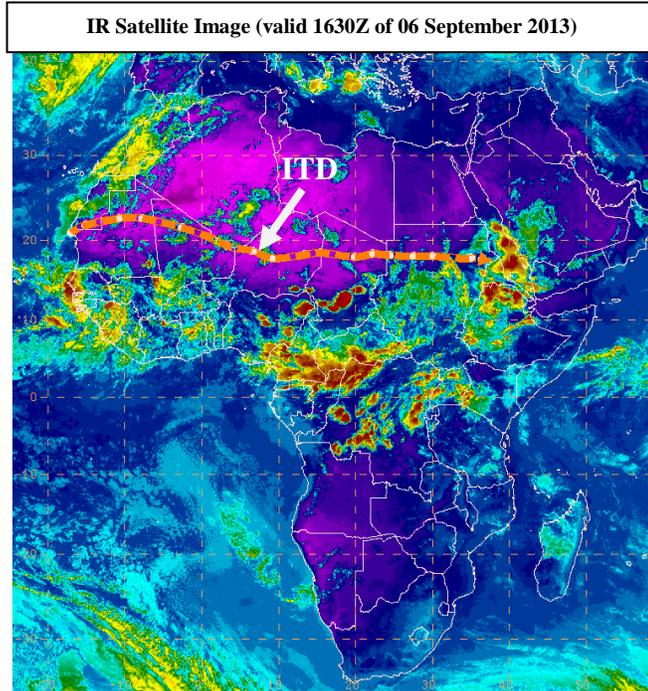
2.1. Weather assessment for the previous day (05 September 2013)

Not available.

2.2. Weather assessment for the current day (06 September 2013)

Intense clouds were observed over South Chad, South CAR, North DRC, North Ethiopia, Eritria, Conakry Guinea and Senegal.

The ITD is located at an average position of latitude 19°N over Africa.



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