

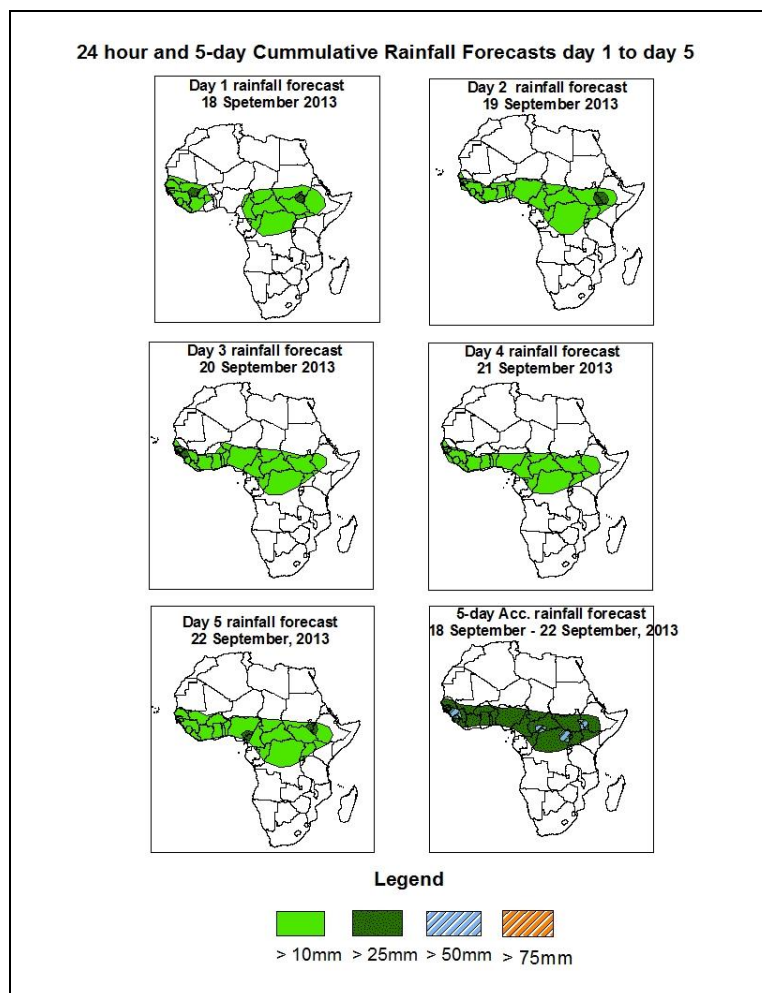


NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid 06Z of 18 September – 06Z of 22 September, 2013. (Issued at 1530Z of 17 September 2013)

1.1. Twenty Four Hour Cumulative Rainfall Forecasts

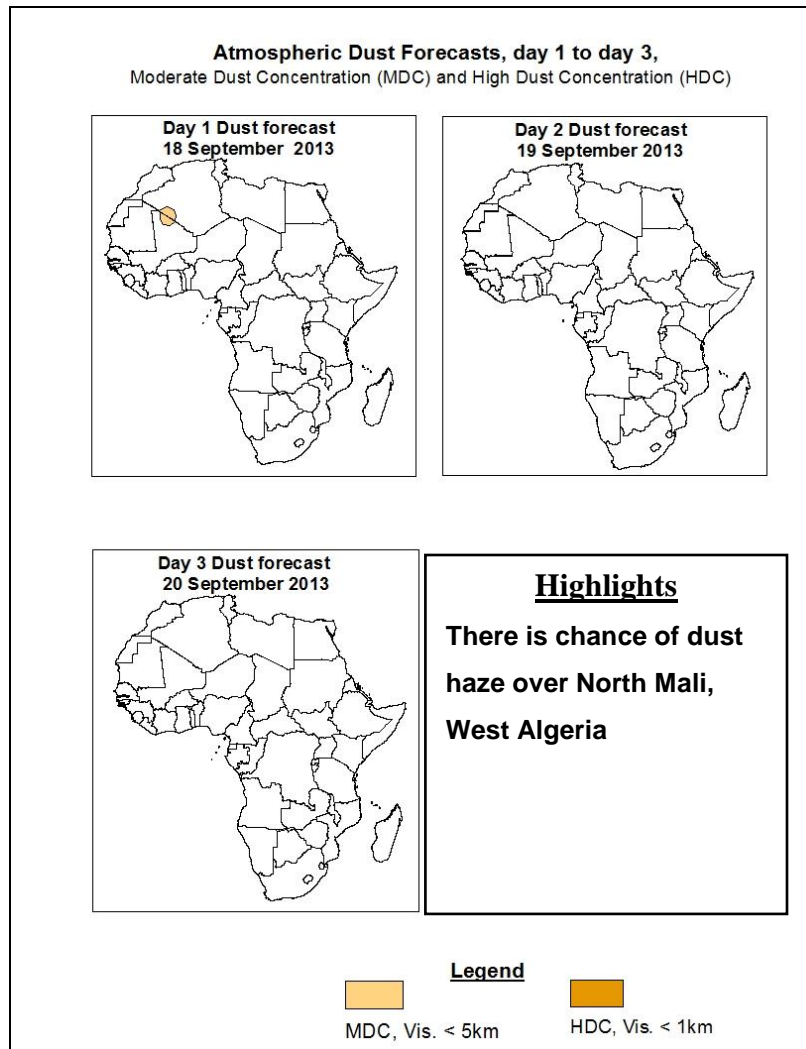
The forecasts are expressed in terms of 75% probability of precipitation (POP) exceeded, based on the NCEP, UK Met Office and the ECMWF NWP outputs, the NCEP global ensemble forecasts system (GEFS) and expert assessment.



Summary

In the next five days, the ITD is expected to fluctuate between 16 and 19 degree north. Favorable conditions are expected to move to the south over South Sahel and North of Guinea Gulf Countries. Rainfall activities is also expected over East Africa while suppressed conditions along the Gulf of Guinea coast are expected, to slightly improve due to the south movement of ITD. Thus, there is an increased chance for moderate to heavy rainfall over North and Central Togo, North and Central Benin, North and Central Ghana and Central Nigeria, North Cote d Ivoire, Conakry Guinea, Biso Guinea, Liberia and Sierra Leone.

1.2. Atmospheric Dust Forecasts: Valid 18 - 20 September 2013



1.2. Model Discussion: Valid from 00Z of 17 September 2013

Model comparison (Valid from 00Z; 17 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 weaken during 24 to 96 hours. Its central pressure value is expected to decrease from about 1027hpa to 1025hpa according to GFS and ECMWF and from about 1028hpa to 1023hpa according to UKMET models.

The St. Helena High Pressure System over southeast Atlantic Ocean is expected to intensify during the 24 to 48 hours, its central pressure value is expected to increase

from about 1030hpa to 1043hpa according to GFS model and from about 1029hpa to 1043hpa according to ECMWF and from about 1030hpa to 1043hpa according UKMET model,

The Mascarene high pressure system over southwestern Indian Ocean is expected to weaken slightly during the 24 to 72 hours. Its central pressure value is expected to decrease from about 1027hpa to 1026hpa according to GFS and ECMWF models.

The heat lows over the central Sahel and neighboring areas are expected to deepen slightly during the forecast period according to both models, its central pressure value is expected to decrease from about 1008hpa to 1005hpa according to GFS, from about 1006hpa to 1005hpa according to UKMET model. The seasonal lows across the red sea and its neighboring areas is expected to fill up according to both models, its central pressure value is expected to increase from about 1002hpa to 1005hpa according to GFS, from about 1006hpa to 1008hpa according to ECMWF, from about 1004hpa to 1006hpa according to UKMET.

At the 850hPa level, monsoon wind flow continues to move south and it's expected to be over South Sahel, over Guinea Gulf Countries and over the Horn of Africa. The inter-tropical front is also expected to fluctuate between 16 and 19 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 and central Guinea Gulf Countries and eastern Africa.

The Frequency of African Easterly Waves (AEW) is also expected to reduce but still 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 this is 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 20 to 25kts over Sahel.

150mb, the Tropical Easterly Jet with a maximum core of 35 to 60 Knots is weakening and the main effect is restricted over Part of Ethiopia and Central African Republic through 24 to 120 Hours period. Speeds exceeding 55kts are observed over Ethiopia, eastern Sudan and Somalia during the forecast period.

In the next five days, the ITD is expected to fluctuate between 16 and 19 degree north. Favorable conditions are expected to move to the south over South Sahel and North of Guinea Gulf Countries Rainfall activities is also expected over East Africa while suppressed conditions along the Gulf of Guinea coast are expected, to slightly improve due to the south movement of ITD. Thus, there is an increased chance for moderate to heavy rainfall over North and Central Togo, North and Central Benin, North and Central Ghana and Central Nigeria, North Cote d Ivoire, Conakry Guinea, Biso Guinea, Liberia and Sierra Leone.

(16 September 2013 – 17 September 2013)

2.1. Weather assessment for the previous day (16 September 2013)

During the previous day, moderate to heavy rainfall was observed over Sudan, CAR, East DRC, North East Congo, South east Nigeria, North West Mali, South Mauritania and South Senegal, North Conakry Guinea.

2.2. Weather assessment for the current day (17 September 2013)

Central Ethiopia, Soudan, DRC, South Congo, Central Nigeria, West Senegal South East Mali.

The ITD is located at an average position of latitude 18°N over Africa.

