



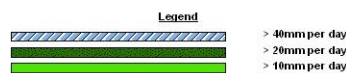
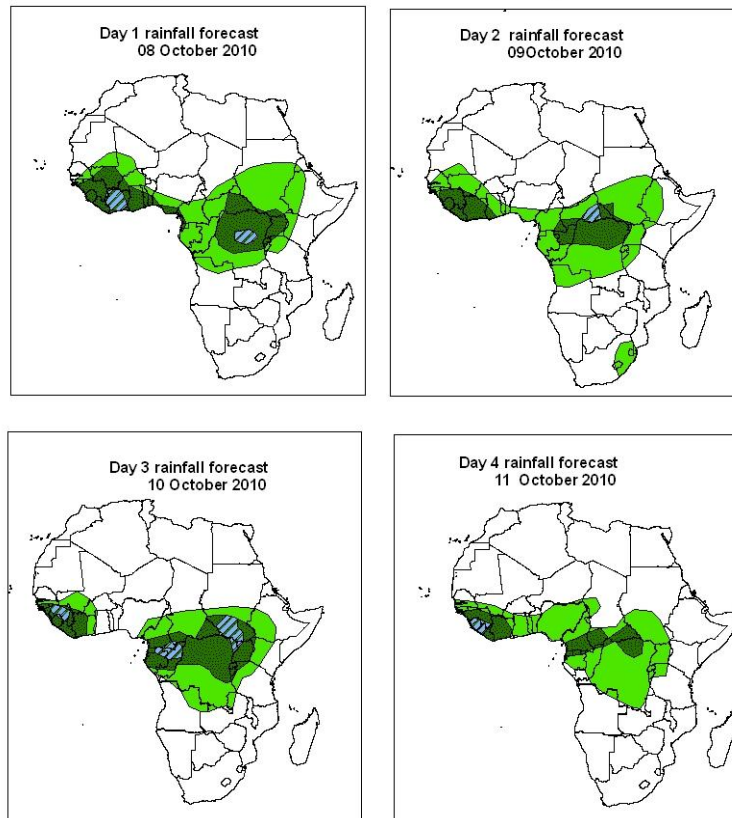
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1.0. Rainfall Forecast: Valid, 06Z of 08 OCTOBER – 06Z of 11 OCTOBER 2010, (Issued at 14:00Z of 07 OCTOBER 2010)

1.1. Twenty Four Hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of 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.

24 hour Cummulative Rainfall Forecasts day 1 through day 4
Support to the WMO/SWFDP and AMMA Projects



Summary

In the coming four days, there is an increased chance for rainfall to exceed 20mm per day over parts west Africa countries with chances of locally heavy rainfall over Ghana, Togo and Cote D'Ivoire due to localized convergences and slowly westward propagating meso-scale convection systems. However, there is a likelihood of decreasing rainfall over Nigeria, Chad and Niger. Moderate to heavy rainfall is expected over the Cameroon, Central Africa republic and Southern Sudan in the 48 to 72hours cycle. Also parts of Lake Victoria region are likely to experience rainfall in excess of 20mm..

1.2. Models Comparison and Discussion-Valid from 00Z of 06 OCTOBER 2010

A cut off low situated over Mauritania is expected to disappear quickly over the west coast of Africa in the next 24hour, before a new trough system develops during the 96hours cycle over the same area. A broad trough extending across Southern Sudan to Chad is likely to remain over the regions as predicted by GFS, ECMWF and UKMET modes in the next 72hours. The pressure associated with this trough system is between 1006 to 1009hPa according to the GFS and ECMWF models, while the UKMET model 1006 to 1010hPa during the next 72hours. The seasonal low pressure system (Meridional component of the ITCZ) over DRC has shifted slightly eastwards with a cut off low expected over DRC extending to western Tanzania including northern and western parts of the Lake Victoria Region in the next 48hours. The system is likely to deepen slightly during the next 96hours.

A frontal system is quickly moving towards south east of South Africa ahead of the slightly intensifying St, Helena High pressure system from 24 to 48hours. The St Helena High pressure system is expected to weaken and move eastward. This will allow the East African Ridge to relax significantly during the next 48 to 96 hours where its north extent will be limited to northern parts of Mozambique as predicted by GFS, ECMWF and UKMET modes. However, continental highs are still dominating the east African region.

At 850hpa, trough is situated over southern Sudan and is expected to move across Niger and Chad in 72hours. Another trough associated with strong line of convergence over Guinea is likely to bring sufficient moisture to the region in the next 24 to 48hours. Next to this system is a Cyclonic circulation over Ghana, the vicinity of Togo and Benin which is expected to move towards Cote D'Ivoire and Liberia during the next 72hours. The system is expected to remain strong during the forecast as it becomes more organized. Another convergence line oriented northeast over northeast DRC to northern Namibia is expected to be remain inclined towards the Lake Victoria region and western Tanzania extending as far as Southern Angola from 24 to 96hours.

At 700Hpa, a trough system over Guinea is expected to move westwards over the Atlantic Ocean. A cyclonic circulation over Ghana consistent with the 850hPa level is expected to move towards Cote D'Ivoire and gradually exit over the west coast of Guinea. A new convergence line is expected to develop over Cameroon and Central

Africa in 24hours and then progressively move westwards. Currently the Near Equatorial Trough (NET) over the East African coast remains weak. However in the next 72 to 96hours this system is likely to start moving closer to the East African coast allowing slightly increasing cloudiness towards the region.

At 500hpa, the African Easterly Jet is expected to remain weak with its associated wind speeds remaining below 25Kts in many areas of western and central African regions.

At 200hPa, zone of strong wind (>50Kts) is expected over northern Mali extending from the Persian Gulf in the next 48hours. The strength of the Sub Tropical Jet is expected to be 70 to 90Kts during this period. On the other hand, the TEJ related strong winds are expected to remain patch and weak (25 to 30Kts) across much of the tropical African region during the forecast period.

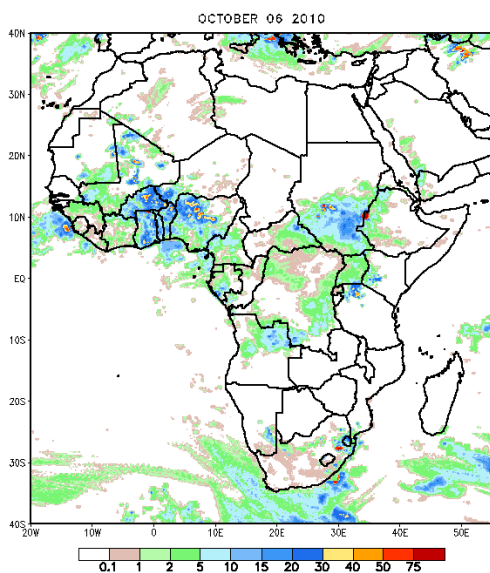
In the coming four days, there is an increased chance for rainfall to exceed 20mm per day over parts west Africa countries with chances of locally heavy rainfall over Ghana, Togo and Cote D'Ivoire due to localized convergences and slowly westward propagating meso-scale convection systems. However, there is a likelihood of decreasing rainfall over Nigeria, Chad and Niger. Moderate to heavy rainfall is expected over the Cameroon, Central Africa republic and Southern Sudan in the 48 to 72hours cycle. Also parts of Lake Victoria region are likely to experience rainfall in excess of 20mm.

2.0. Previous and Current Day Weather Discussion over Africa (06 October – 07 October 2010)

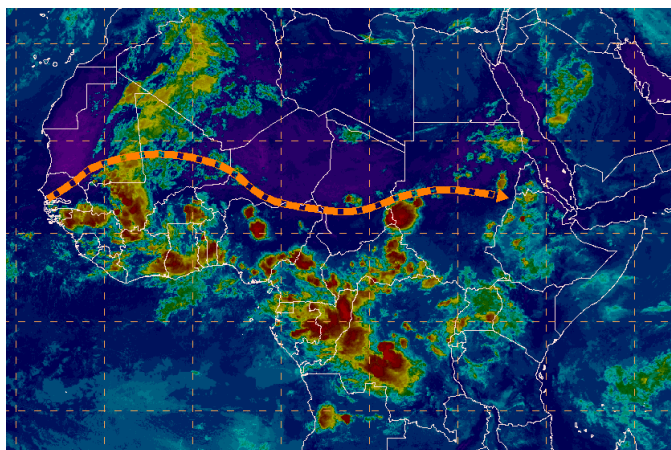
2.1. Weather assessment for the previous day (06 October 2010): During the previous day, moderate to locally heavy rainfall was observed over many places of the Gulf of Guinea and southeast Sudan, and parts of the Lake Victoria region.

2.2. Weather assessment for the current day (07 October 2010): Intense clouds are observed over much of the Gulf of Guinea countries, western parts of the Sahel region, central African countries and the Congo Air Boundary region.

NOAA CPC FEWS—NET Rainfall Estimate (mm):
based on Satellite and Rain Gauge Data



IR Satellite Image, Valid 1800Z, October 06, 2010 and
position of ITD (based on 1200Z Surface Analysis)



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

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Disclaimer: *This bulletin is for training purposes only and should be used as guidance. NOAA does not make forecasts for areas outside of the United States.*