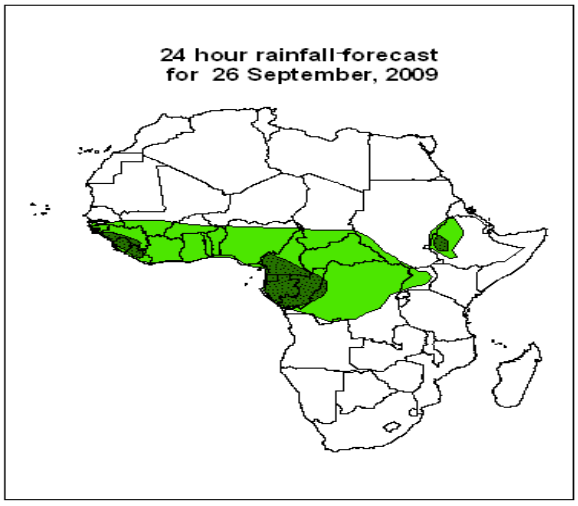
Forecast Guidance for Africa

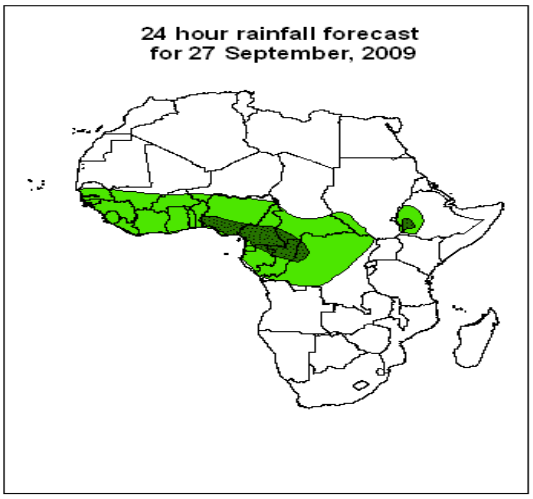
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative.

FORECAST DISCUSSION 14H00 EST, 25 SEPTEMBER, 2009
Valid: 00Z 26 SEPTEMBER – 28 SEPTEMBER, 2009

1. Twenty Four Hour Cumulative Rainfall Forecasts

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





Legend

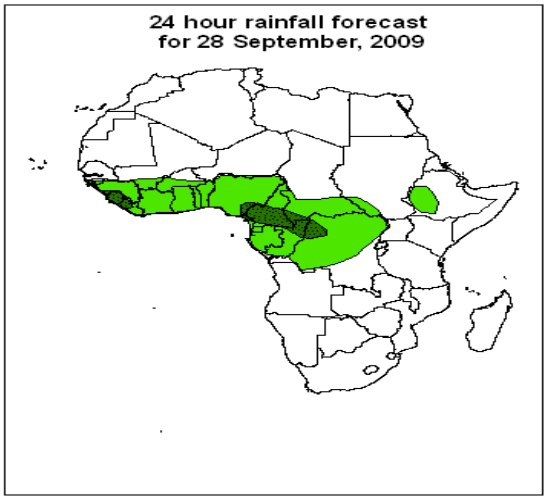
africa_countries_new

> 20mm, with probability 70%

> 10mm, with probability 70%

Summary

In the southern hemisphere, the peripheral winds of the sub-tropical anticyclone systems are expected to converge over the Congo Air boundary Region. In the northern hemisphere, localized convergence and confluence lines are expected to persist over southern Mali, Nigeria, Chad, Sudan and DR Congo The area with 5-30% probability of having rainfall exceediig 5mm is in green and in blue the area with a probality more than 30%.



2. Model discussion

Model comparison (Valid from 00Z; 25 SEPTEMBER, 2009): all the three models are in general agreement especially with respect to the positioning of large scale features, however, the UK model tends to give lower values than both the GFS and ECMWF models especially in the Equatorial region (10^oS and 10^oN).

2.1. Weather assessment for the previous day (24 September 2009): During the previous day, enhanced rainfall activity was observed over southern Mali, Senegal, western Nigeria, Benin, Togo, southeastern Sudan, western Ethiopia and Central African Republic.

2.1.1. Conditions of the current day (25 September 2009): Intense Clouds are observed over southern Mali, Nigeria, Guinea, southern Chad and Central African Republic.

2.2.1 Flow at 850hPa

T+24h: In the southern hemisphere, the peripheral winds of the sub-tropical anticyclone systems are expected to converge over the Congo Air Boundary Region. In the northern hemisphere, localized convergence and confluence lines are expected to persist over southern Mali, Nigeria, Chad, Sudan and DR Congo.

T+48h: In the southern hemisphere, the Mascarene anticyclone is expected to weaken, while the St Helena anticyclone is expected to shift slightly westwards. In the northern hemisphere, the localized confluence and convergent lines are expected to maintain their previous day position.

T+72h: In the southern hemisphere, the Mascarene Anticyclone is expected to weaken further, while the St Helena Anticyclone is expected to shift further westwards. In the northern hemisphere, no significant change is expected in the main flow pattern.

2.2.2 Flow at 700hPa

T+24h: The axis of a trough associated with an easterly wave is expected across the costal areas of West Africa.

T+48h: The wave is expected to move westwards into eastern Atlantic.

T+72h: A new trough in the easterlies is expected to develop over Mali..

2.2.3 Flow at 500hPa

T+24h: A mid-tropospheric zonal easterly flow is expected to dominate the flow over tropical Africa.

T+48h: The mid-tropospheric easterly flow is expected to be persistent over tropical Africa.

T+72h: The mid-tropospheric flow is expected to have a weak disturbance over Mali.

2.2.4 Flow at 200hPa

T+24h: The flow associated with the upper level easterly flow is expected to be dominant over much of the tropical Africa.

T+48h: The flow associated with the upper level subtropical anticyclonic system is expected to be persistent over equatorial Africa.

T+72h: No significant change in the main flow pattern.

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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.