



Forecast Guidance for Africa

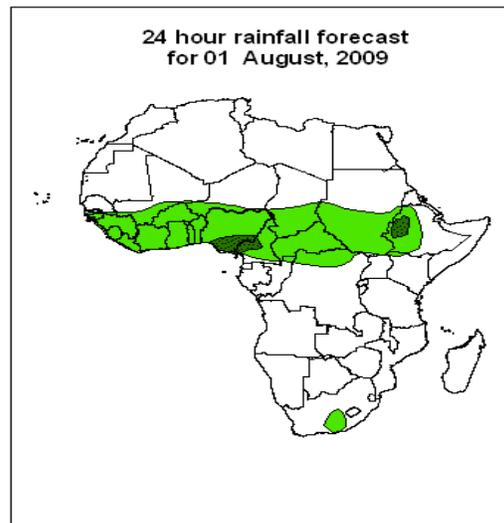
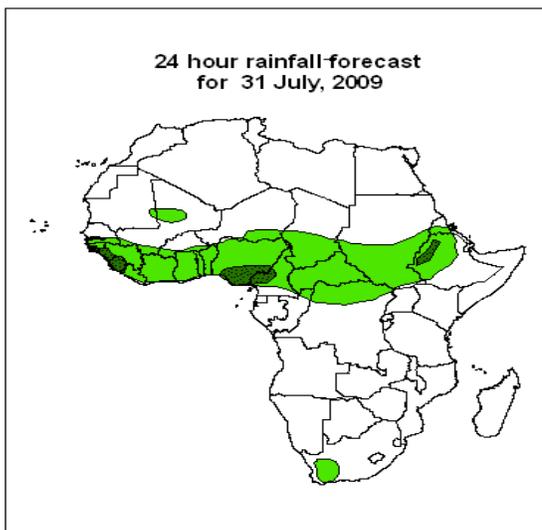
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative.

FORECAST DISCUSSION 14H00 EST, 30 JULY, 2009

Valid: 00Z 31 JULY – 02 AUGUST, 2009

1. Twenty Four Hour Cumulative Rainfall Forecasts

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

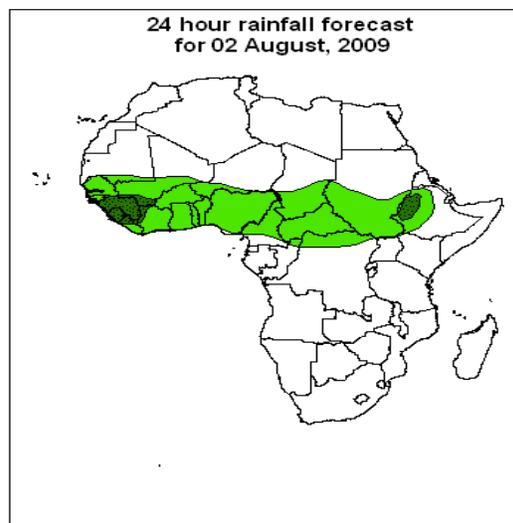


Legend

-  africa_countries_new
-  > 20mm, with probability 70%
-  > 10mm, with probability 70%

Summary

The subtropical anticyclonic system over western Indian Ocean is expected to weaken, while the St. Helena anticyclone is expected to expand eastwards over southeast Atlantic Ocean. Between these two subtropical anticyclones, westerly trough is expected to extend northwards along the western coast South Africa, Namibia and southern Angola. In the northern hemisphere, localized convergence and confluent lines are expected over Mali, Niger, Chad, Sudan, and Gulf of Eden.



2. Model discussion

Model comparison (Valid from 00Z; 30 July, 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°S and 10°N).

2.1. Flow at 850hPa

T+24h: The subtropical anticyclonic system over western Indian Ocean is expected to weaken, while the St. Helena anticyclone is expected to expand eastwards over southeast Atlantic Ocean. Between these two subtropical anticyclones, westerly trough is expected to extend northwards along the western coast South Africa, Namibia and southern Angola. In the northern hemisphere, localized convergence and confluent lines are expected over Mali, Niger, Chad, Sudan, and Gulf of Eden.

T+48h: In the northern hemisphere, the confluent lines are expected to maintain their previous day position. In the southern hemisphere the Mascarene anticyclone is expected to strengthen, while the trough in the westerlies is expected to move slightly to the east.

T+72h: In the southern hemisphere, the westerly trough is expected to weaken and to move further to the east.

2.2. Flow at 500hPa

T+24h: Westerly wave is expected to dominate the flow over southern African countries, with its trough extending northwards along the western coast of south African countries.

T+48h: with eastward propagation of the wave, the trough axis is expected to shift eastwards.

T+72h: The westerly trough is expected to move further to the east.

2.3. Flow at 200hPa

T+24h: Upper level easterly flow is expected over eastern and central African countries.

T+48h: Easterly flow is expected to be persistent over eastern and central African countries.

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

Authors:

- 1. Khalid Muwembe (UGANDA MET / Uganda and African Desk).*
- 2. Mamadou Savadogo (Direction de la MET Burkina and African Desk)*