



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

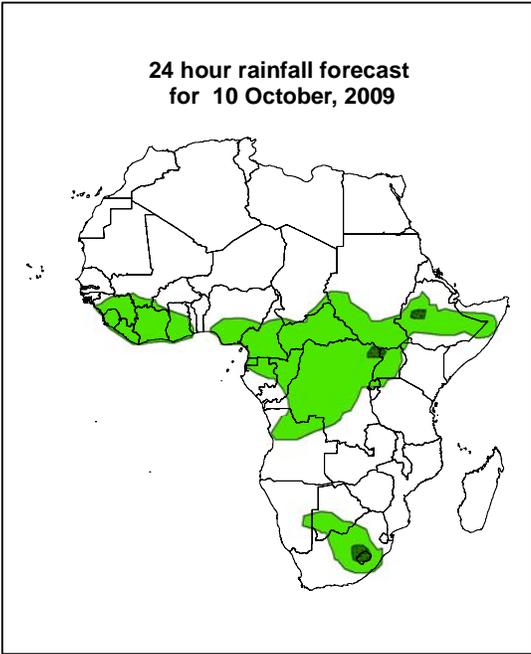
FORECAST DISCUSSION 14H00 EST, 09 OCTOBER, 2009

Valid: 00Z 10 October – 12 October, 2009

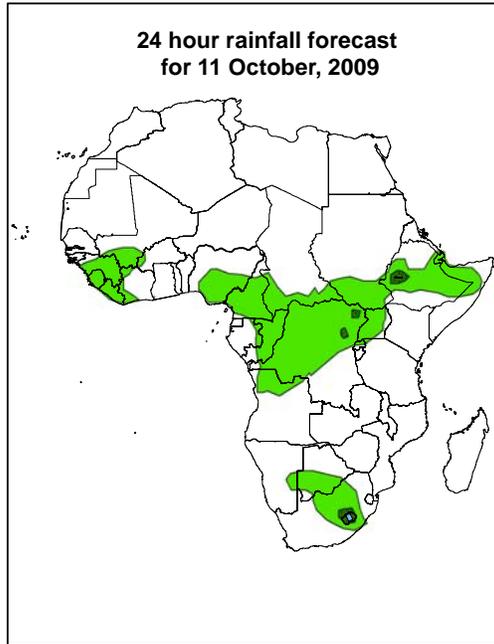
1. Twenty Four Hour Cumulative Rainfall Forecasts

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

**24 hour rainfall forecast
for 10 October, 2009**



**24 hour rainfall forecast
for 11 October, 2009**



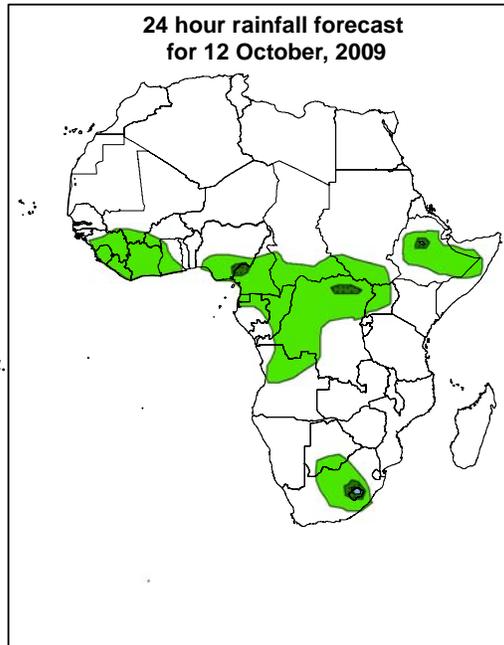
Legend

-  > 40mm, with probability 70%
-  > 20mm, with probability 70%
-  > 10mm, with probability 70%

Summary

The convergence associated with Congo Air Boundary is expected to continue enhancing rainfall portions of DRC, parts of Uganda and Southwest Ethiopia. On the other hand, the passage of a mid-latitude frontal system is expected to enhance precipitation over southern Africa.

**24 hour rainfall forecast
for 12 October, 2009**



2. Model discussion

Model comparison (Valid from 00Z; 09, OCTOBER, 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. Weather assessment for the previous day (09 October 2009): During the previous day, moderate to heavy rainfall events were observed over Northern Cameroon, parts of Congo and Nigeria, Northern parts of Central Africa, Eastern and Southern DR Congo, northern Angola, Northern and Southwestern Ethiopia and Lake Victoria basin.

2.2. Weather assessment for the current day (10 October 2009): Intense clouds are observed over southern Burkina Faso, northern Ghana, portions of the Gulf of Guinea countries, southern Sudan and southwest Ethiopia, Northern Angola, much of Uganda and DR Congo.

2.3. Flow at 850hPa

T+24h: The persistence of convergence lines extending from Mali to Chad and then from Congo DR, Angola, Namibia and South Africa respectively, are expected to dominate the flow over the regions. Another convergence associated with Congo air mass is expected persist over Uganda, Rwanda, Burundi and western Tanzania. A weak cyclonic circulation is expected over Gabon and its adjoining areas.

T+48h: The convergence and confluence lines associated with equatorial trough are expected to persist extending from Mali to Eritrea. On the other hand, a ridge associated with the Mascarene anticyclone is extending towards southern Africa. The cyclonic circulation over Gabon is expected to weaken while drifting towards the west. The convergence lines over Congo air boundary area and southwestern Africa are expected to persist. On the other hand a closed cyclonic circulation is expected to develop over western Namibia.

T+72h: The convergence and confluence lines associated with the equatorial trough are expected to persist over Central, western and Eastern Africa. The ridge associated with the Mascarene anticyclone is extending towards southern Africa. The Cyclonic circulation over Namibia is expected to move eastward and merge with mid-latitude frontal system across south Africa.

2.3.2 Flow at 700hPa

T+24h: Zonal easterly flow is expected to dominate the flow over the tropical African region with a weak trough axis extending towards southern Nigeria.

T+48h: A trough associated with the weak easterly wave is expected to move westward, while weakening.

T+72h: The zonal easterly flow is expected to persist over tropical African region.

2.3.3 Flow at 500hPa

T+24h: A closed cyclonic circulation within mid-latitude westerlies is expected over southeast Atlantic Ocean, southwest of South Africa.

T+48h: the cyclonic circulation over Southeast Atlantic is expected to move eastwards approaching the western coast of South Africa.

T+72h: The cyclonic circulation over southeast Atlantic is expected to move further to the east with its trough extending towards South Africa.

2.3.4 Flow at 200hPa

T+24h: The flow associated with upper tropospheric ridge is expected to continue dominating the flow over much of Tropical Africa, while a mid-latitude trough is expected over southeast Atlantic Ocean, off the coast of South Africa and Namibia.

T+48h: The mid-latitude trough in the westerlies is expected to move slightly towards the western coast of South Africa, while deepening.

T+72h: The mid-latitude westerly trough is expected to move further to the east with its trough axis reaching South Africa.

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