

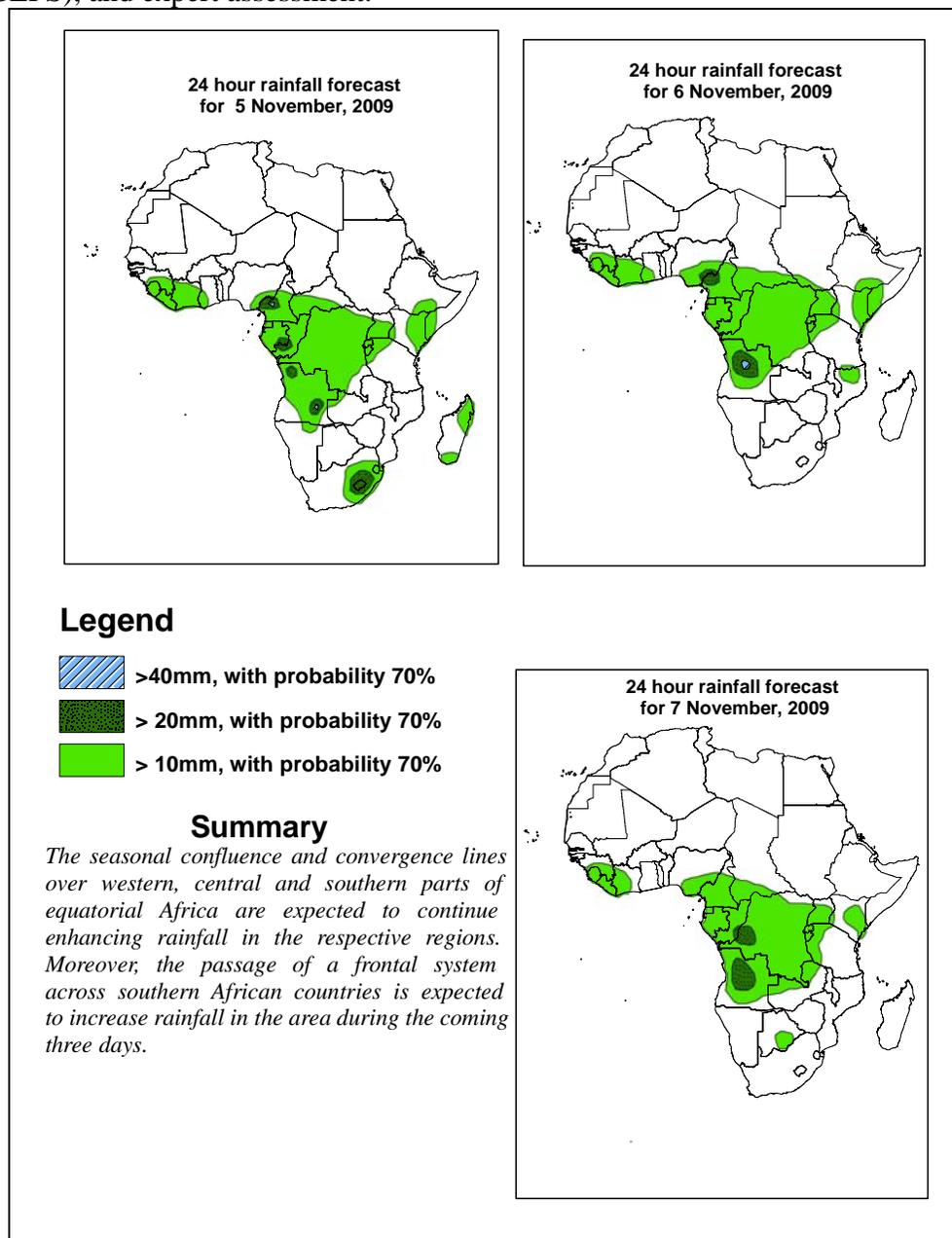


## NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

### 1. Forecast Discussion: Valid, 06Z of 05 November – 06Z of 07 November 2009, (Issued at 14:00EST Of 04 November 2009)

#### 1.1. 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.



## **1.2. Model discussion**

*Model comparison (Valid from 00Z; 05, NOVEMBER, 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).*

### **1.3. Flow at 850hPa**

**T+24h:** The seasonal convergence and confluence lines are expected to get enhanced over northern Gabon, DRC and Zambia. Besides the moist easterlies over East African countries are expected to continue dominating the flow in the region. On the other hand, a westerly trough associated with mid-latitude frontal system is expected to move towards Namibia across western parts of South Africa.

**T+48h:** The convergence and confluence lines over equatorial and southern African countries are expected to persist, while the westerly trough over South Africa is expected to move slightly to the east.

**T+72h:** The seasonal convergence and confluence lines are expected to get enhanced over western and central parts of equatorial Africa. On the other hand, a deep trough in the westerlies is expected to dominate the flow over southeast Atlantic Ocean and the adjacent areas of southwestern parts of Africa.

### **1.4. Flow at 500hPa**

**T+24h:** An east-west oriented ridge is expected to dominate the flow over north of 10°N, while easterly flow dominates the flow over tropical Africa regions, south of the 10°N latitude. On the other hand, a westerly flow associated with mid-latitude frontal system dominates the flow over southern African countries.

**T+48h:** The ridge system over northern African countries is expected to intensify, while the westerly flow over southern African countries is expected to persist.

**T+72h:** A deep trough in the westerlies is expected to develop over southwestern Atlantic Ocean, influencing the flow over the adjoining areas of South African countries.

### **1.5. Flow at 200hPa**

**T+24h:** A trough in the westerlies is expected to extend southwards along 35°E longitude over Northeast Africa. On the other hand, a westerly trough is expected to extend northwards over southwestern Indian Ocean, across Madagascar.

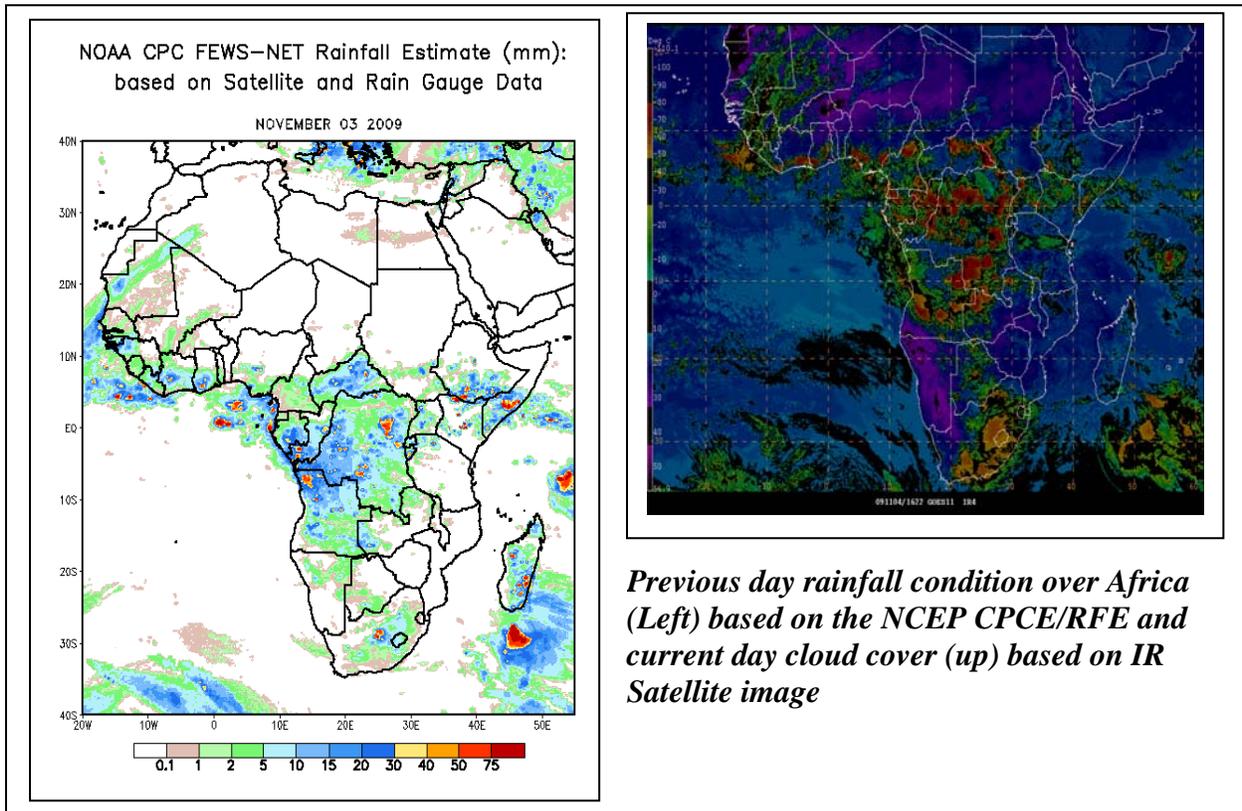
**T+48h:** The trough in the northern hemisphere is expected to persist over Northeast Africa, while the trough over southwestern Indian Ocean is expected to move slightly to the east.

**T+72h:** The westerly troughs in both hemispheres are expected to move slightly to the east.

## 2. Previous and Current Day Weather Discussion over Africa (03-04 November 2009)

**2.1. Weather assessment for the previous day (03 November 2009):** During the previous day, moderate to heavy rainfall events were observed over parts of Mauritania, Senegal, Liberia, Cote D'Ivoire, central Nigeria, southeastern Cameroon, eastern Gabon, southern Congo, DR Congo, Central Africa Rep., Angola, eastern Zambia, southern Ethiopia, Lake Victoria region, central Mozambique, South Africa and Madagascar.

**2.2. Weather assessment for the current day (04 November 2009):** Intense clouds are observed over parts of Mauritania, Cote D'Ivoire, Gabon, Central Africa Rep., Congo, DR Congo, Angola and South Africa.



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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 State.