

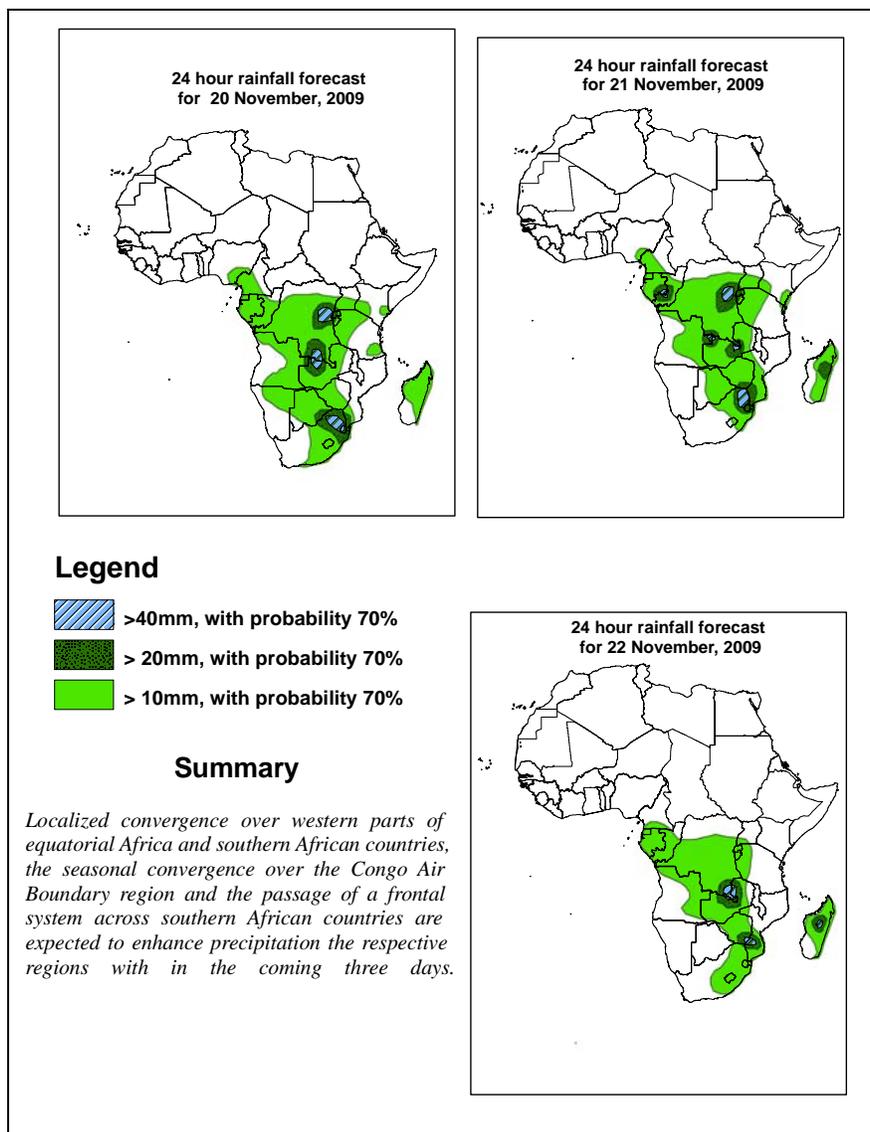


## NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

### 1. Forecast Discussion: Valid, 06Z of 20 November – 06Z of 22 November 2009, (Issued at 14:00EST Of 19 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; 20, 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:** A convergence line is expected to develop in the region bordering southern Congo and western DR Congo. On the other hand, the seasonal convergences over the countries within the Lake basin of East Africa and the localized convergence over parts of Angola, Namibia, Botswana and South Africa are expected to continue enhancing rainfall activity in the regions.

**T+48h:** The convergence line in the region bordering southern Congo and western DR Congo is expected to shift slightly to the east. On the other hand, the seasonal convergences over the countries within the Lake basin of East Africa is expected to persist, while the convergence over southern African countries is expected to get enhanced.

**T+72h:** The convergence over DR Congo is expected to retreat towards Gabon. On the other hand, the seasonal convergences over the Congo Air Boundary region is expected to persist, while the convergence over southern African countries is expected to enhance further.

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

**T+24h:** A northeast-southwest oriented trough in the westerlies is expected to extend across northeast Africa, while a southeast-northwest westerly trough in the southern hemisphere is expected to dominate the flow over southern African countries.

**T+48h:** The westerly systems in both hemispheres are expected to move slightly to the east, with trough in the southern hemisphere dominating the flow over Botswana, South Africa, eastern parts of Namibia and southern Mozambique.

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

## **1.4. Flow at 200hPa**

**T+24h:** A northeast-southwest oriented trough in the westerlies is expected over northeast Africa, while a southeast-northwest westerly trough in the southern hemisphere is expected to extend towards South Africa.

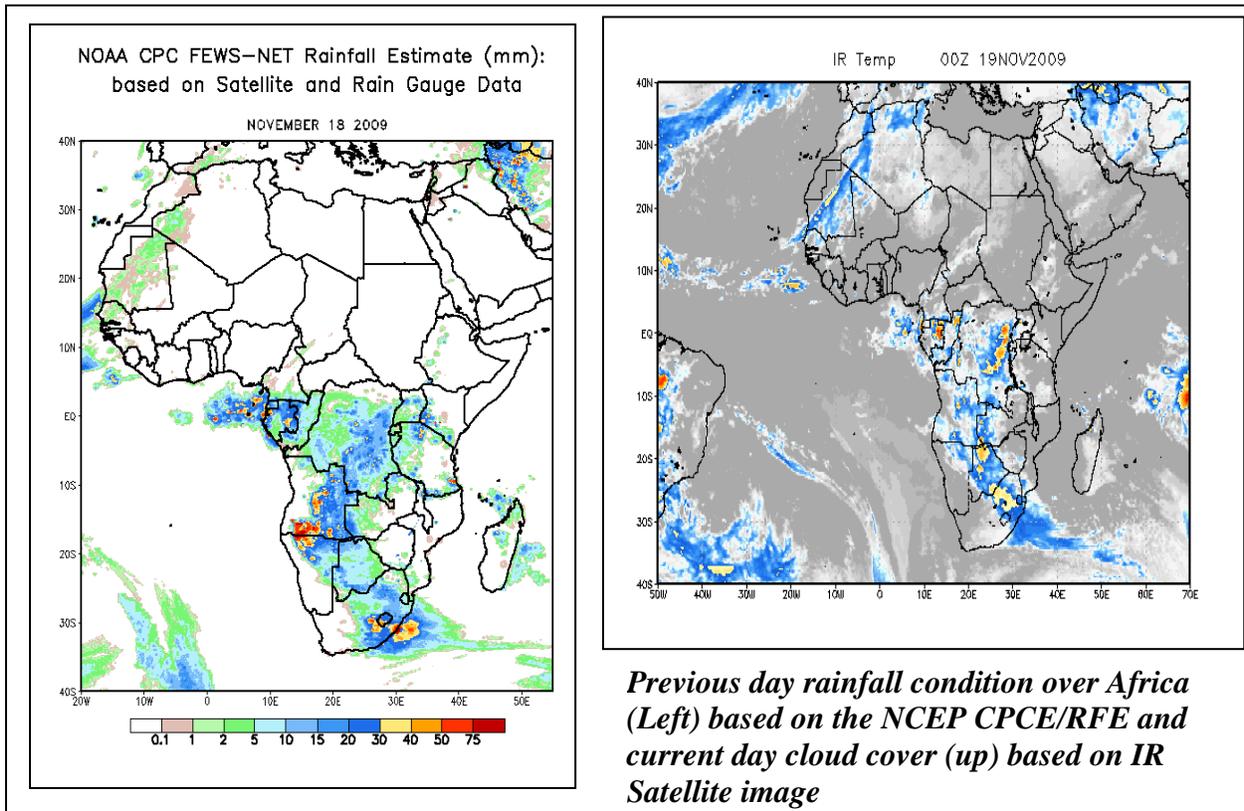
**T+48h:** The westerly troughs in both hemispheres are expected to move eastwards while filling up.

**T+72h:** The wave pattern in the westerlies is expected to weaken further in both hemispheres. .

## 2. Previous and Current Day Weather Discussion over Africa (18-19 November 2009)

**2.1. Weather assessment for the previous day (18 November 2009):** During the previous day, moderate to heavy rainfall events were observed over parts of Gabon, Congo, DR Congo, eastern Angola, western Zambia, northeastern Namibia, Botswana and eastern South Africa.

**2.2. Weather assessment for the current day (19 November 2009):** Intense clouds are observed over parts of Gabon, Congo, eastern DR Congo, eastern Angola, western Zambia, northeastern Namibia, Botswana eastern South Africa, western Rwanda and Burundi.



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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.*