

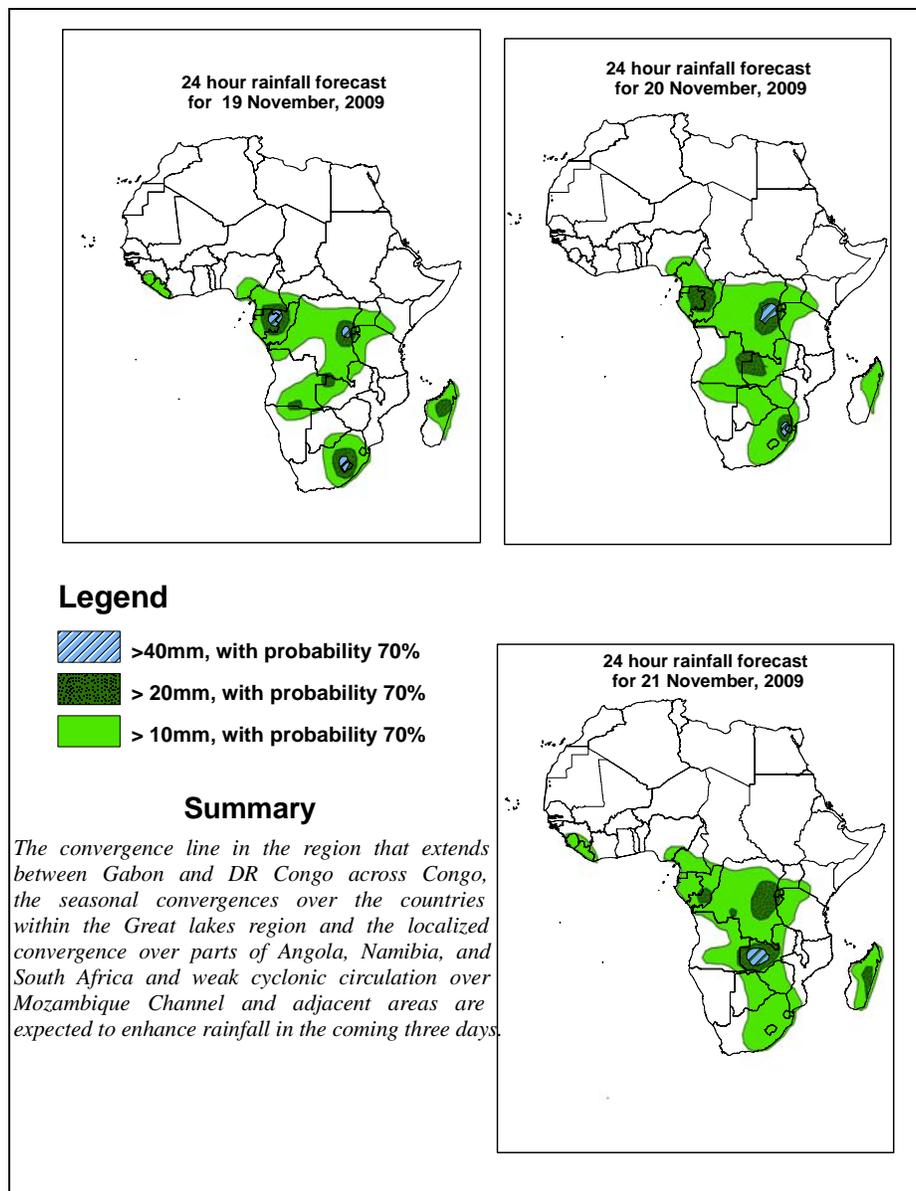


## NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

### 1. Forecast Discussion: Valid, 06Z of 19 November – 06Z of 21 November 2009, (Issued at 14:00EST Of 18 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; 19, 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 that extends between Gabon and DR Congo across Congo. Moreover, the seasonal convergences over the countries within the Great lakes region and the localized convergence over parts of Angola, Namibia, and South Africa are expected to continue influencing the rainfall activity in the regions. On the other hand, a weak cyclonic circulation is expected to develop over Mozambique Channel and adjacent areas of western Madagascar.

**T+48h:** The convergence line over western and central parts of equatorial Africa is expected to be limited over Gabon and adjacent areas of Congo. Moreover, the seasonal convergences over the countries within the Great lakes region and the localized convergence over parts of southern African countries is expected to persist, while the cyclonic circulation over Mozambique Channel and adjacent areas of western Madagascar is expected to fill up .

**T+72h:** The convergence line over western parts of equatorial Africa is expected to weaken, while the seasonal convergences over the countries within the Great lakes region is expected to persist. On the other hand, a confluence line is expected to develop over Zambia, while a weak convergence is expected along Mozambique Channel.

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

**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 across southern African countries.

**T+48h:** The westerly troughs in both hemispheres are expected to persist with no significant change in the position of the axes.

**T+72h:** The westerly troughs in both hemispheres are expected to move slightly 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 across South Africa.

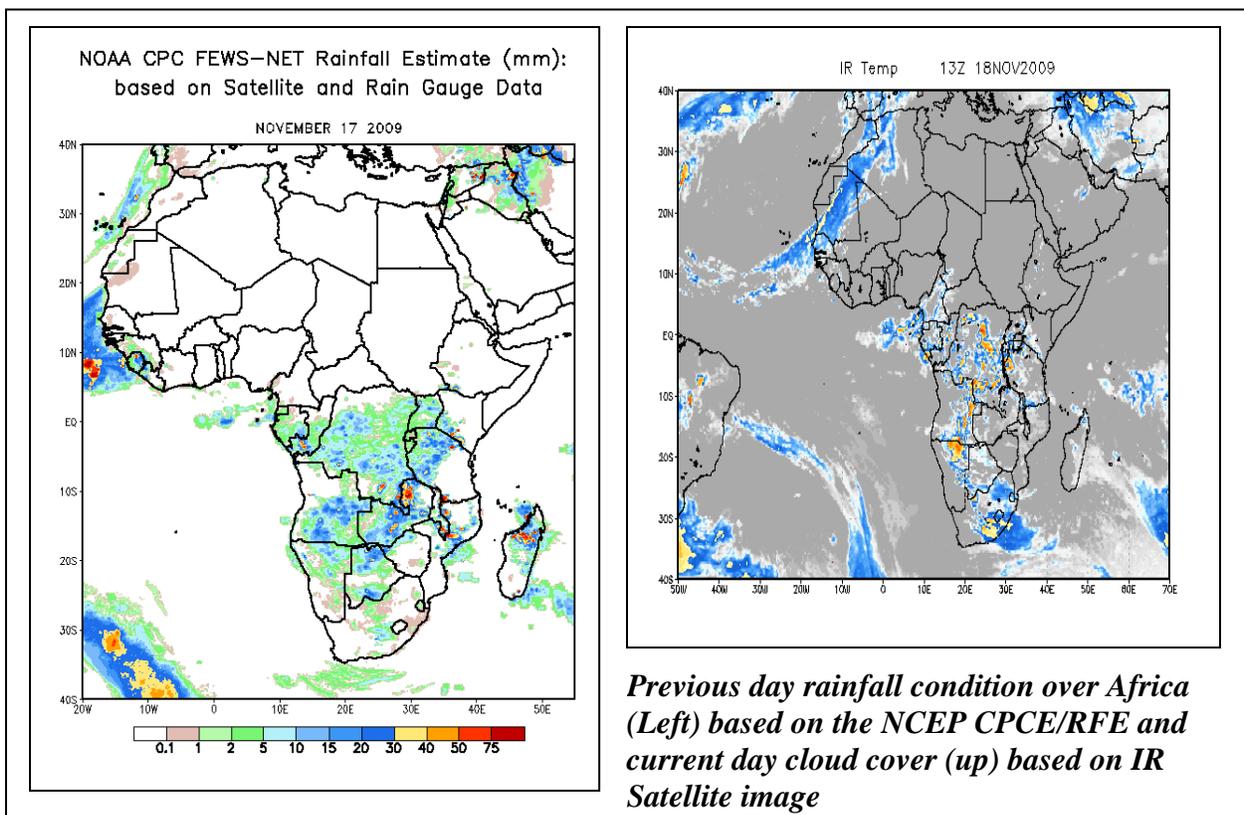
**T+48h:** The westerly troughs in both hemispheres are expected to deepen over their previous day positions.

**T+72h:** The westerly troughs in both hemispheres are expected to move towards east while filling up.

## 2. Previous and Current Day Weather Discussion over Africa (17-18 November 2009)

**2.1. Weather assessment for the previous day (17 November 2009):** During the previous day, moderate to heavy rainfall events were observed over parts of Congo, DR Congo, Great lakes region, southeastern Angola, Zambia, northern Namibia, Botswana, northern Zimbabwe, southern Mozambique, South Africa and southern Madagascar.

**2.2. Weather assessment for the current day (18 November 2009):** Intense clouds are observed over parts of Gabon, Congo, DR Congo, eastern Angola, northeastern Namibia, southwestern Botswana, Zambia, South Africa, Rwanda, Burundi, southwestern Uganda, and western Tanzania.



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