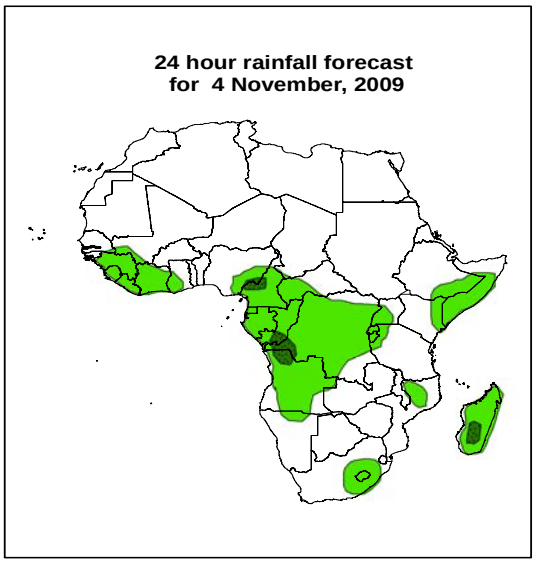
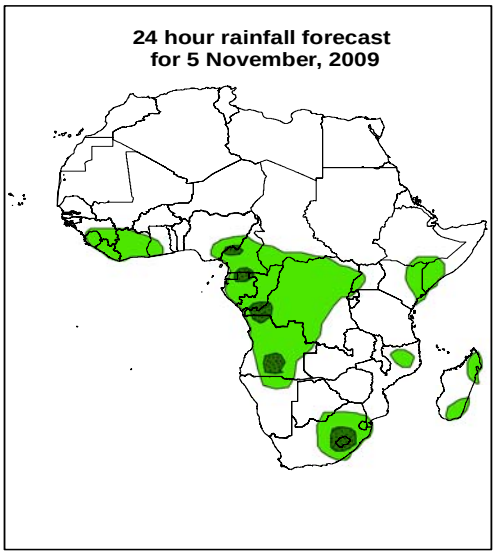
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Forecast Discussion: Valid, 06Z of 04 November – 06Z of 06 November 2009, (Issued at 14:00EST 0f 03 November 2009)

1.1. Twenty Four Hour Cumulative Rainfall Forecasts

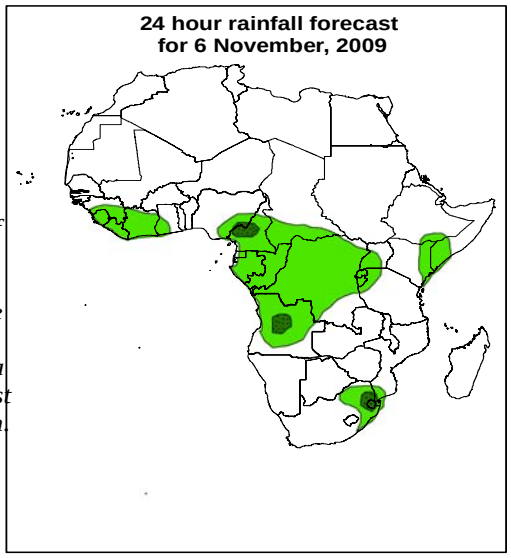
The forecasts are expressed in terms of probability of precipitation (POP) exceedence based on the NCEP, UK Met Office and the ECMWF NWP outputs, the NCEP global ensemble forecasts system (GEFS), and expert assessment.





Legend

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



Summary

The localized convergence over western parts of equatorial Africa, South Africa and the seasonal convergence over the CAB region are expected to continue influencing the rainfall pattern in the respective regions. Moreover, the moderate rainfall over southern Somalia and eastern Kenya is expected to continue due to the persistent moist easterlies coming from western Indian Ocean.

1.2. Model discussion

Model comparison (Valid from 00Z; 04, 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^oS and 10^oN).

1.3. Flow at 850hPa

T+24h: The localized convergence over western parts of equatorial Africa, South Africa and the seasonal convergence over the CAB region are expected to continue influencing the rainfall pattern in the respective regions. Moreover, the moderate rainfall over southern Somalia and eastern Kenya is expected to continue due to the persistent moist easterlies coming from western Indian Ocean. On the other hand, a trough in the westerlies is expected to extend towards southern Madagascar.

T+48h: The localized convergence over western parts of equatorial Africa, Angola, South Africa and the seasonal convergence over the CAB region are expected to be persistent in the regions. Moreover, the moderate rainfall over southern Somalia and eastern Kenya is expected to continue due to the persistent moist easterlies coming from western Indian Ocean. On the other hand, a trough in the westerlies is expected to extend towards southern parts of South Africa and Madagascar.

T+72h: The localized convergence over western parts of equatorial Africa, Angola, South Africa and the seasonal convergence over the CAB region are expected to persist. On the other hand, a trough in the westerlies over southern South Africa and Madagascar are expected to move slightly to the east.

1.4. Flow at 500hPa

T+24h: In the northern hemisphere a mid-latitude westerly trough is expected to dominate the flow over northeast African countries, while the southern hemisphere westerly trough extends northward across Madagascar.

T+48h: The northern hemisphere mid-latitude westerly trough is expected to persist over northeast Africa, while the trough over South Africa and Madagascar is expected to move slightly to the east.

T+72h: The northern hemisphere mid-latitude westerly trough is expected to weaken over northeast Africa, while the trough over South Africa and Madagascar is expected to strengthen while extending towards the eastern coast of Africa.

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1.5. Flow at 200hPa

T+24h: The wind associated with sub-tropical westerly is expected to extend in the region between Morocco and Persian Gulf with a zone of maximum speed located over Egypt and Libya.

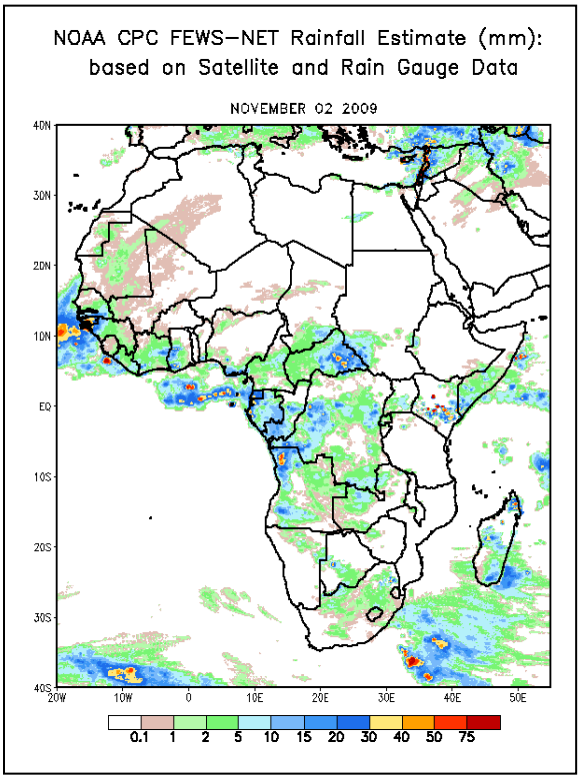
T+48h: The zone of maximum wind associated with sub-tropical westerly jets in the northern hemisphere is expected to weaken while in southern hemispheres it is expected to strengthen while shifting slightly to the east.

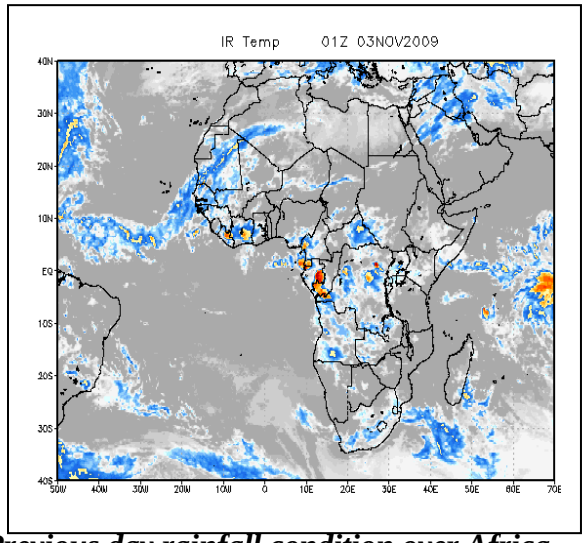
T+72h: No significant change is expected in the main flow pattern.

2. Previous and Current Day Weather Discussion over Africa (02-03 November 2009)

2.1. Weather assessment for the previous day (02 November 2009): During the previous day, moderate to heavy rainfall events were observed over parts of Gambia, Guinea, Sierra Leone, Liberia, southern Mali, Gulf of Guinea, southern Nigeria, Central Africa Rep., southwestern Sudan, Congo, DR Congo, Angola, Zambia, South Africa and Mozambique. .

2.2. Weather assessment for the current day (03 November 2009): Intense clouds are observed over parts of Mauritania, Cote D'Ivoire, Gabon, Central Africa Rep., Congo, DR Congo, Angola and South Africa.





Previous day rainfall condition over Africa (Left) based on the NCEP CPCE/RFE and current day cloud cover (up) based on IR Satellite image

Authors: *Anthony Twahirwa (Rwanda Meteorological Services)*
Chali Debele (National Meteorological Agency of Ethiopia and African desk)

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