



Forecast Guidance for Africa

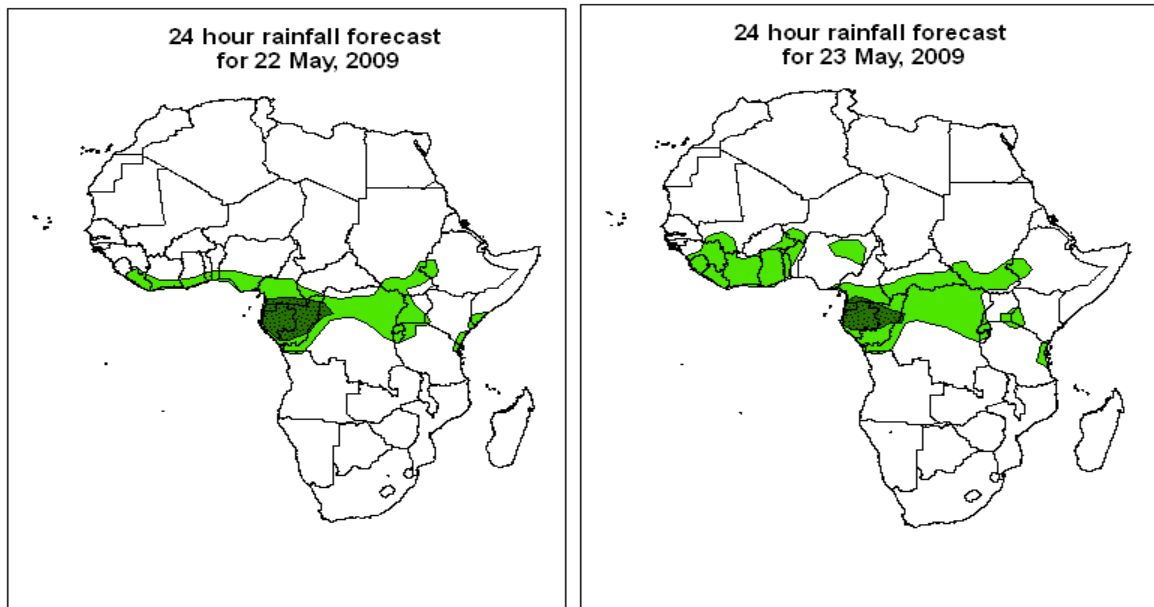
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative.

FORECAST DISCUSSION 14H00 EST, 21 MAY, 2009




Valid: 00Z 22 MAY – 24MAY, 2009

1. Twenty Four Hour Cumulative Rainfall Forecasts

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

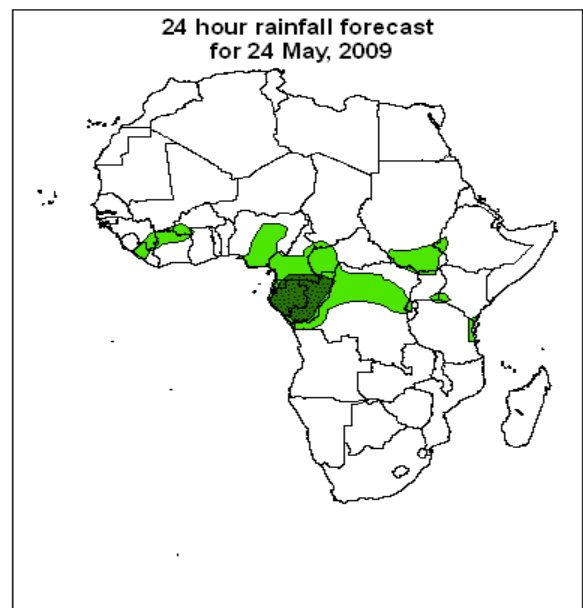


Legend

-  africa_countries_new
-  > 30mm, with probability 50%
-  > 20mm, with probability 40%

Summary

The Saharan anti-cyclonic system is expected to influence the flow in Northern and Northwestern Africa; while the cross equatorial flow is expected to continue influencing the flow over eastern Africa and the horn of Africa region. Localized convergence and confluences lines over Gulf of Guinea extending into Congo basin, in association with moisture flux from Southwest Indian and Atlantic oceans are expected to enhance chance for precipitation.



2. Model discussion

Model comparison (Valid from 00Z; 21 May, 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. Flow at 850hPa

T+24h: In the northern hemisphere, the Saharan anti-cyclonic system is expected to influence the flow in Northern and Northwestern Africa; while the cross equatorial flow is expected to continue influencing the flow over eastern Africa and the horn of Africa region. Localized convergence and confluent lines are expected over the Gulf of Guinea region, Cameroun, Central African Republic, northern DR Congo, southern Sudan and southern Ethiopia. In the southern hemisphere, subtropical anti-cyclonic systems are expected to intensify and expand over much of southern Africa; while a trough associated with the westerly wave over southeast Atlantic Ocean is expected to extend northwards up to 20°S latitude.

T+48h: In the northern hemisphere, the significant features are expected to maintain their previous day position. Localized convergence and confluent lines are expected to maintain their previous day positions. In the southern hemisphere, the significant features are expected to maintain their previous day positions; however the trough associated with the westerly wave over southeast Atlantic is expected to move slightly eastwards.

T+72h: In the northern hemisphere, a slight contraction of the Saharan anti-cyclone is expected on the Atlantic side and its expected to continue influencing the flow over North Africa. The localized convergence and confluent lines are expected to maintain their previous day positions. In southern Africa, the Mascarene anti-cyclonic system is expected to weaken, while another trough associated with the westerly wave is expected to develop over southwestern Indian Ocean.

2.2. Flow at 500hPa

T+24h: In the northern hemisphere, a two-way trough system associated with the westerly wave is expected over North Africa and northeast Atlantic Ocean, creating a shortwave flow pattern over northern Africa. A closed cyclonic system is expected to persist over the Gulf of Aden region. In the southern hemisphere, the development of a feeble trough over southeast Atlantic Ocean and a ridge over southwest Indian Ocean is expected to create a disturbed flow pattern of the westerlies.

T+48h: In the northern hemisphere the flow is expected to be more similar to the previous day; however the trough over North Africa is expected to take a southwest-northeast orientation. In the southern hemisphere, the mid latitude cyclonic systems are expected to be suppressed, giving way to a more zonal flow pattern of the westerlies.

T+72h: In the northern hemisphere the flow is expected to be more similar to the previous day; however the troughs associated with the westerly wave are expected to move slightly eastwards. In the southern hemisphere, the flow is expected to be more similar to the previous day.

2.3. Flow at 200hPa

T+24h: In the northern hemisphere, troughs associated with the westerly wave are expected to persist over the Mediterranean Sea and northeast Atlantic Ocean, creating a disturbed flow pattern of the westerlies over North Africa. In the southern hemisphere, the flow is expected to take a generally zonal pattern.

T+48h: The flow is similar to that of the previous day in both the northern and the southern hemispheres.

T+72h: The troughs associated with the westerly wave in the northern hemisphere are expected to be slightly suppressed and a more zonal flow pattern of the westerlies is expected over northwestern Africa. In the southern hemisphere, a generally zonal flow pattern of the westerlies is expected to persist.

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