



Forecast Guidance for Africa

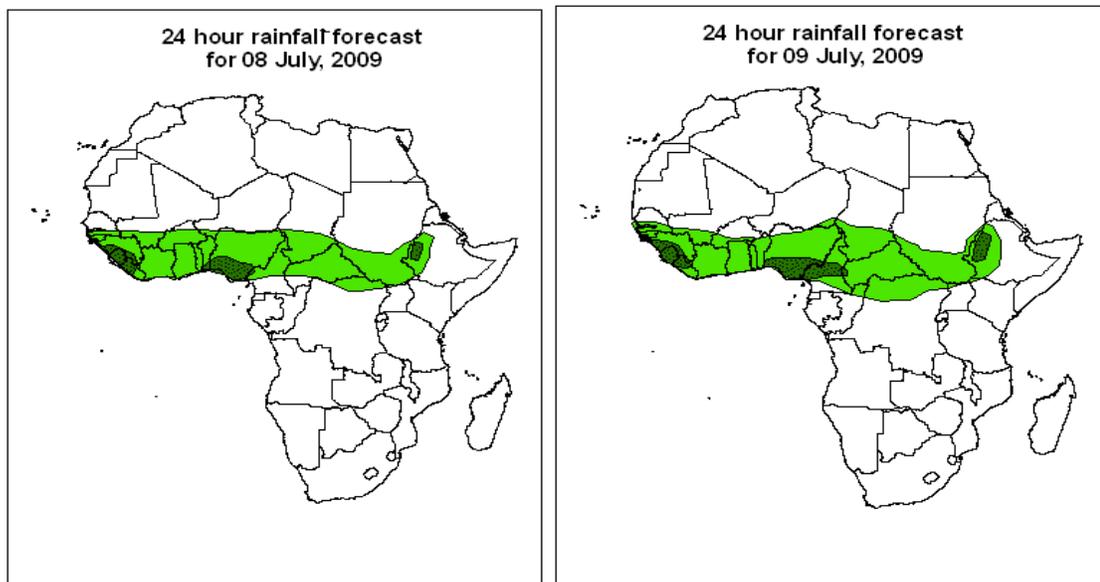
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative.

FORECAST DISCUSSION 14H00 EST, 07 JULY, 2009

Valid: 00Z 08 JULY – 10 JULY, 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.

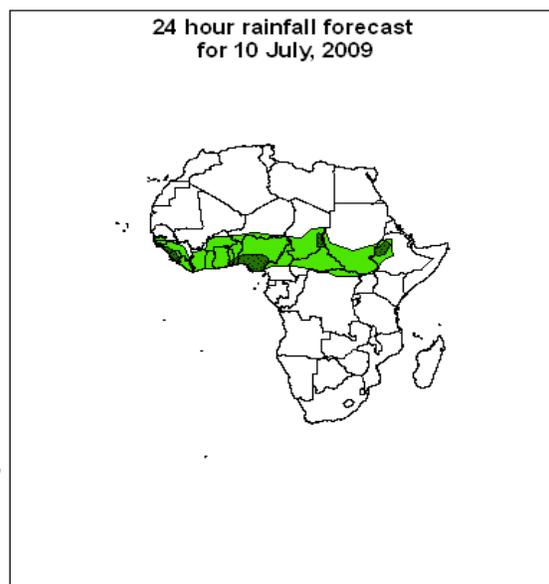


Legend

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

Summary

The Saharan anti-cyclonic system is expected to continue influencing the flow over northwestern Africa, while the persistent monsoon cross equatorial flow is expected to influence precipitation condition over eastern Africa and the horn of Africa region. Localized convergence and confluent lines are expected over the Gulf of Guinea region, southern Niger, southwestern Mali, Chad, DR Congo, Sudan and Ethiopia.



2. Model discussion

Model comparison (Valid from 00Z; 07 July, 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: The Saharan anti-cyclonic system is expected to continue influencing the flow over northwestern Africa, while the persistent monsoon cross equatorial flow is expected to influence precipitation condition over eastern Africa and the horn of Africa region. Localized convergence and confluent lines are expected over the Gulf of Guinea region, southern Niger, southwestern Mali, Chad, DR Congo, Sudan and Ethiopia. In the southern hemisphere, the subtropical anticyclone is expected to be centered over the southeastern coast of South Africa resulting in limited moisture contribution to the Indian monsoon cross equatorial flow.

T+48h: In the northern hemisphere the localized convergence lines are expected to maintain their previous position. In the southern hemisphere, the subtropical anticyclonic system is expected to extend eastwards attaining an east-west orientation. As a result of this, the peripheral winds are expected to have more easterly component.

T+72h: In the northern hemisphere the localized convergent lines over central and eastern Africa are expected to maintain their previous position. In the Southern Hemisphere, the Mascarene Anticyclone is expected to weaken slightly.

2.2. Flow at 500hPa

T+24h: In the northern hemisphere, feeble troughs associated with the westerly waves are expected over northeastern Atlantic Ocean and the Mediterranean Sea. A stretch of monsoon trough is expected between India and the horn of Africa across the Arabian Sea. In the southern hemisphere, a perturbed westerly flow is expected to be dominant over southern Africa countries and the adjoining areas of Atlantic and Indian Oceans.

T+48h: No significant change is expected is expected in both hemispheres..

T+72h: In the northern hemisphere no significant change is expected in the main flow pattern. In the southern hemisphere, the westerly trough over southern African courtiers is expected to be replaced by an anticyclonic system.

2.3. Flow at 200hPa

T+24h: The equatorial eastern and central African areas are expected to be dominated by upper level easterly flow.

T+48h: The upper level easterly flow is expected to extend towards the equatorial West African countries.

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

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