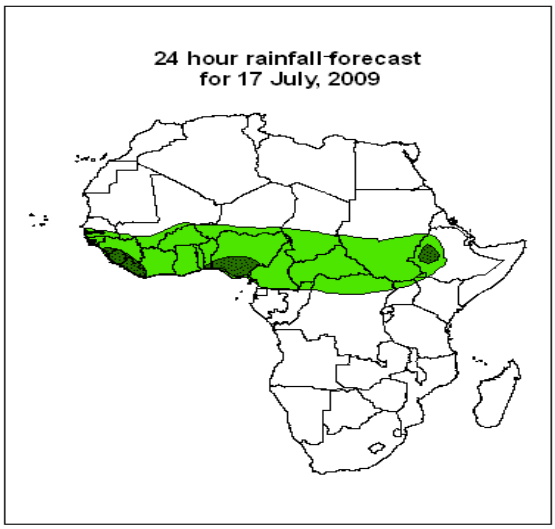
Forecast Guidance for Africa

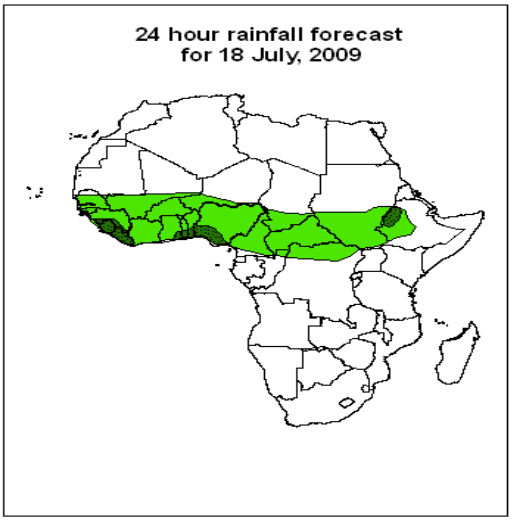
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative.

FORECAST DISCUSSION 14H00 EST, 16 JULY, 2009
Valid: 00Z 17 JULY – 19 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.



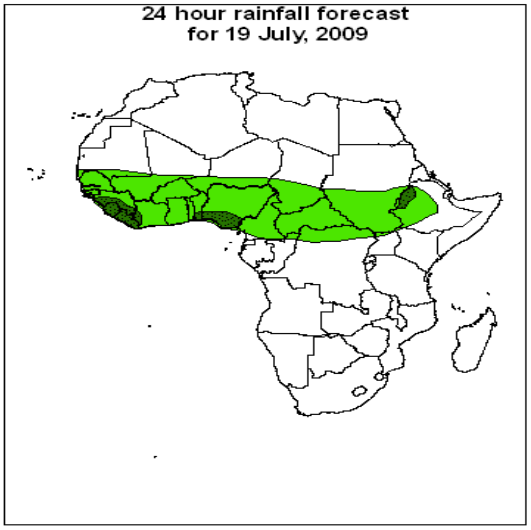


Legend

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

Summary

The Mascarene anticyclone is expected to be over Southwest Indian Ocean, east of the eastern coast of Madagascar, while the St. Helena anticyclone is expected to be centered over South Africa. In the northern hemisphere localized convergence and con fluent lines are expected to be persistent over Mali, Niger, Chad, Sudan, Northern DR Congo and Ethiopia.



2. Model discussion

Model comparison (Valid from 00Z; 15 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^oS and 10^oN).

2.1. Flow at 850hPa

T+24h: The Mascarene anticyclone is expected to be over Southwest Indian Ocean, east of the eastern coast of Madagascar, while the St. Helena anticyclone is expected to be centered over South Africa. In the northern hemisphere localized convergence and confluent lines are expected to be persistent over Mali, Niger, Chad, Sudan, Northern DR Congo and Ethiopia.

T+48h: The Mascarene Anticyclone is expected to merge with the eastward moving St Helena Anticyclone. In the northern hemisphere, the confluence lines over northern Mali are expected to extend towards Mauritania. Elsewhere they are expected to maintain their previous day position.

T+72h: In the southern hemisphere**,** the subtropical anticyclonic system is expected to expand over the southern Africa countries and the adjoining areas of the Oceans.

2.2. Flow at 500hPa

T+24h: The flow associated with monsoon flow is expected to be persistent over portions of the Horn of Africa and the adjoining areas of Arabian Sea. In southern Hemisphere, westerly trough is expected to extend northwards across eastern portions of South Africa.

T+48h: The flow associated with the monsoon flow is expected to expand further over the Horn of Africa. The westerly trough in the southern Hemisphere is expected to move eastward.

T+72h: The westerly trough is expected to move further to the east.

2.3. Flow at 200hPa

T+24h: The easterly flow over equatorial regions of Africa is expected to persist.

T+48h: No significant change is expected in the main flow pattern.

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

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