



Forecast Guidance for Africa

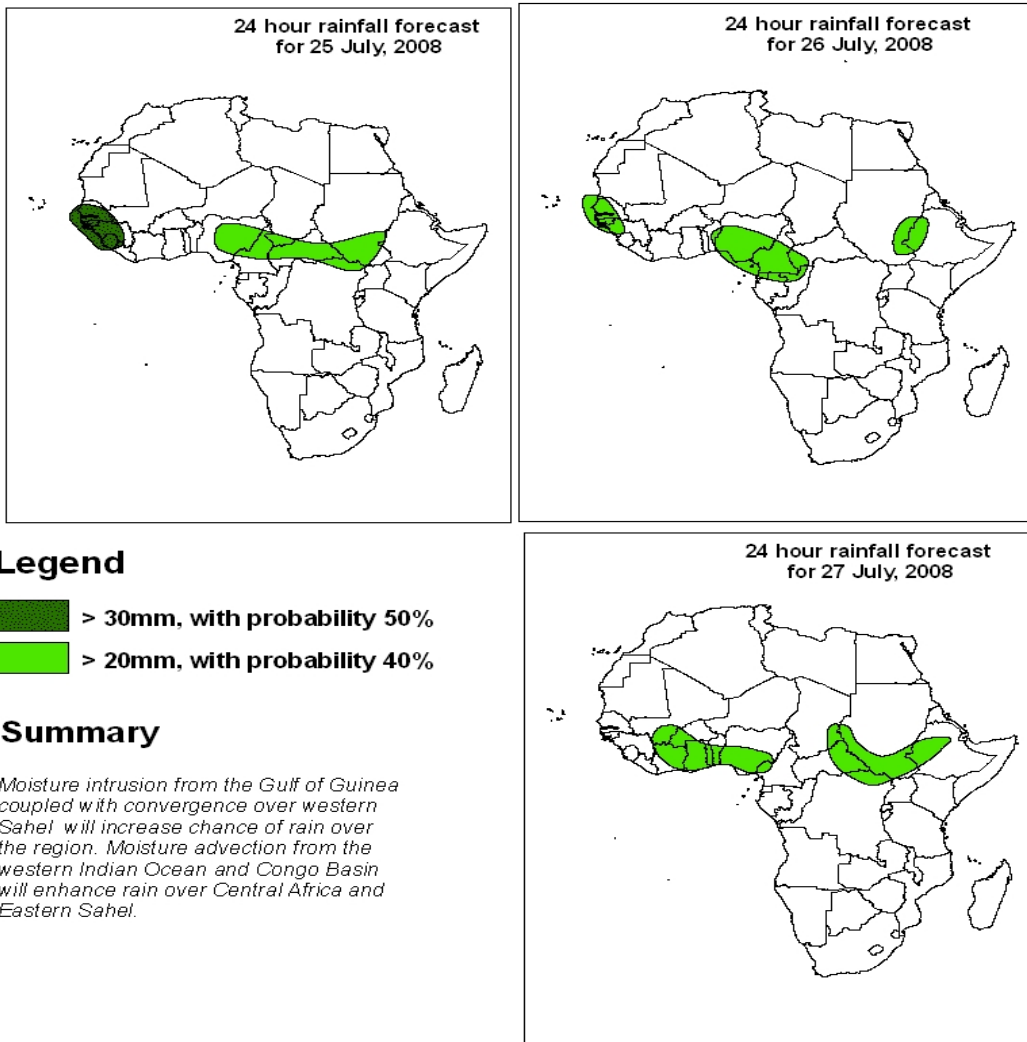
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

FORECAST DISCUSSION 14H00 EST, 24 JULY 2008

Valid: 00Z 25 – 27 JULY, 2008

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.



2. Model discussion

Model comparison (Valid from 00Z; 25 July 2008): all the three models are in general agreement especially with respect to the positioning of large scale features, however, the UK model has a tendency to give lower values than the GFS and ECMWF models in the Equatorial (10°S and 10°N) Continental Africa.

2.1. Flow at 850hPa

T+24h, a large part of northern Africa continent is expected to be under the influence of an anticyclonic circulation, with anticyclonic vortex over Cote D'Ivoire, Ghana, Togo and Benin, and convergence lines over the Sahel region, DRC and northern Angola. Southern Africa is expected to be under the influence of the Mascarene anticyclonic system that will generate southeasterlies across from Madagascar through northern Mozambique, Tanzania, Zambia, and Angola to DRC. The south eastern Atlantic is expected to be influenced by the subtropical St Helene anticyclone to the south of which will be westerlies with a cyclonic system that will form trough off the coast of Namibia and southern Africa.

T+48h, the flow pattern is expected to be similar to that of the previous day. But, the cyclonic vortex over Guinea is expected to move into the Atlantic Ocean; while over southern Africa the St Helene and Mascarene subtropical anticyclones will merge together thus squeezing the trough off the coast of Namibia and southern Africa.

T+72h, the flow pattern is expected to remain as that of the T+24h day except that the cyclonic system over the tip of southern Africa will move further eastwards to the land.

2.2. Flow at 500hPa

T+24h, an anticyclonic circulation system is expected to dominate the general flow pattern of North Africa, with a trough over eastern Egypt, while Kenya and southern Somalia are expected to be under the influence of a cyclonic vortex. Also featured will be a trough over Mozambique and Zimbabwe. The St Helene anticyclone will occupy a small area to the west of Angola; while the Mascarene anticyclone is expected to lie in a northwest - southeast orientation from Zimbabwe to north eastern southern Africa and over south of Madagascar thus influencing the flow pattern over southern Africa with westerlies to the south.

T+48h, the flow pattern is expected to be similar to that of the previous day; with the exception that, the trough over western Egypt will extended to western Libya. The St Helene and Mascarene anticyclones are expected to align in a northwest - southeast orientation across southern Africa with westerlies to the south.

T+72h, no much change is expected from the flow of the previous day except that a trough over northwestern Angola will develop into a cyclonic vortex over northern Angola.

2.3. Flow at 200hPa

T+24h, an extensive upper level anticyclonic flow pattern will prevail over much of northern Africa and the entire southern half of the African continent. Easterlies will dominate equator-ward of the subtropical anticyclones, and a westerly wave is expected to prevail over southern Africa with a deep trough axis along the Angola and Zambia boarder.

T+48h, the flow pattern will remain quasi-stationary, except over the southern part of Africa where Mascarene anticyclone will extend westwards into the Atlantic Ocean pushing the trough over Angola along with it.

T+72h, the wind flow pattern is expected to remain as that of the previous day.

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