



Forecast Guidance for Africa

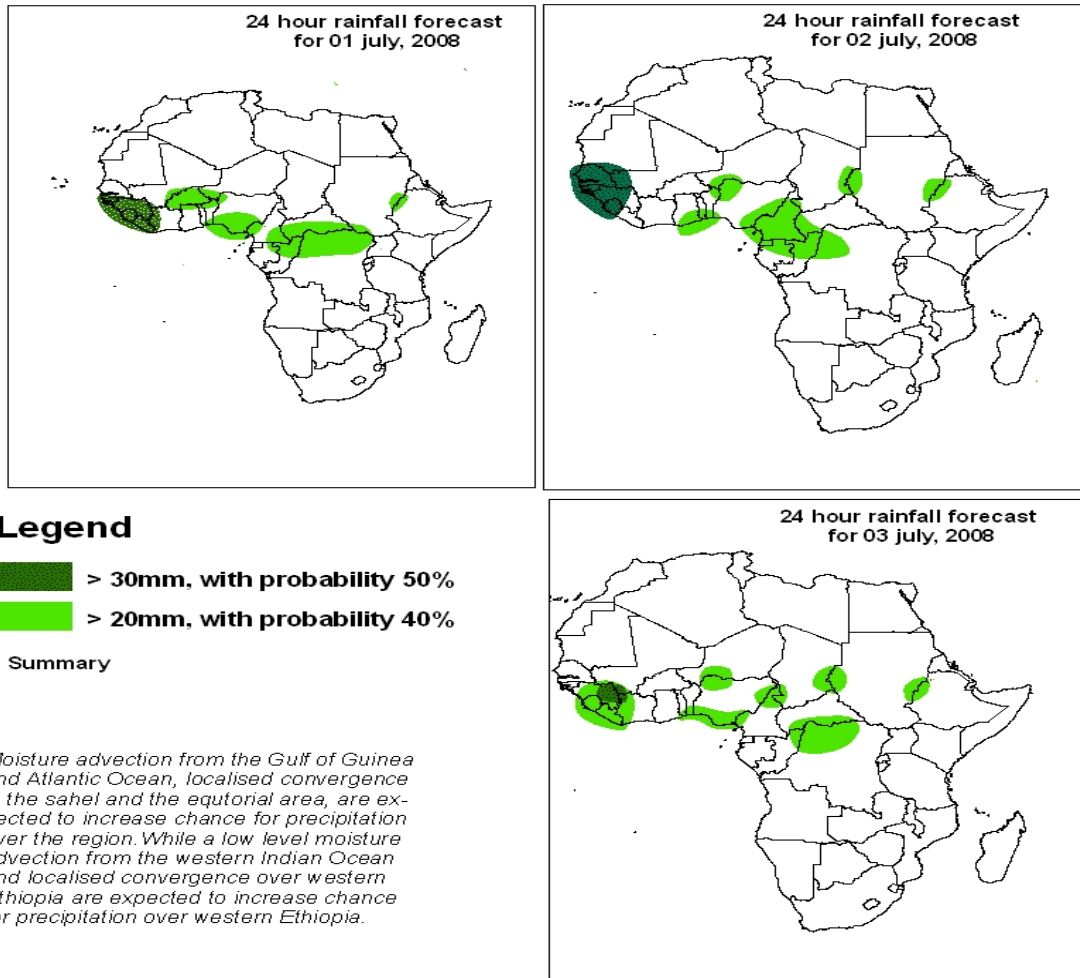
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

FORECAST DISCUSSION 14H00 EST, 30 JUNE 2008

Valid: 00Z 01 - 02 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; 30 June 2008): all the three models are in agreement especially with respect to the positioning of large scale features, although UK model gives lower values as always in the Equatorial (10°N and 10°S) Continental Africa.

2.1. Flow at 850hPa

T+24h, north easterly flow pattern is expected to dominate over a large part of North Africa that will converge over the Sahel and central Africa with the south easterlies/south westerlies trades emanating from saint Helene and Mascarene anticyclones. Southeasterlies from the south western Indian Ocean Madagascar are expected to turn into south westerlies along the coast of Somalia on crossing along equator. A westerly wave with deep troughs and ridges is expected to dominate over the area south of southern Africa.

T+48h, the flow pattern is expected to be quite similar to that of the previous date, but the St. Helene anticyclone, cyclonic trough in the Atlantic Ocean will move to the east and occupy part of Namibia and south Africa.

T+72h, the flow system over northern Africa is expected to prevail, while the St. Helene anticyclone and the trough to its eastern side will continue to move eastwards and cause the Mascarene anticyclone to move over land into southern Africa from Madagascar.

2.2. Flow at 500hPa

T+24h, a large part of northern Africa is expected to be covered by anticyclonic flow pattern and a north easterlies flow system, while southern Africa will be dominated by an anticyclonic system centered over southern Africa with a westerly flow wave pattern.

T+48h, pole ward of both the subtropical anticyclones over the Sahel and southern Africa, westerly flow wave pattern are expected to prevail, while in the equatorial side easterlies are expected to remain and strengthen.

T+72h, anticyclonic cells are expected to dominate over a large part of the African continent from north to southern Africa and while the westerly wave over southern Africa expected to move eastwards.

2.3. Flow at 200hPa

T+24h, an extensive upper level anticyclonic flow pattern is expected to prevail over a large part of Africa north of latitude 20⁰S with westerly flow pattern over Morocco, northern Algeria and Tunisia, while easterlies are expected to prevail equate wards of the subtropical anticyclones and a westerly wave pattern to the south of southern Africa.

T+48h, the flow is expected to be similar to the (T+24h) flow pattern, but a cyclonic vortex is expected to develop over southern Somalia.

T+72h, the circulation system is expected to be similar to that T+24h and T+48h but the cyclonic vortex over Somalia is expected to relax and move into the Indian Ocean.

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