



Forecast Guidance for Africa

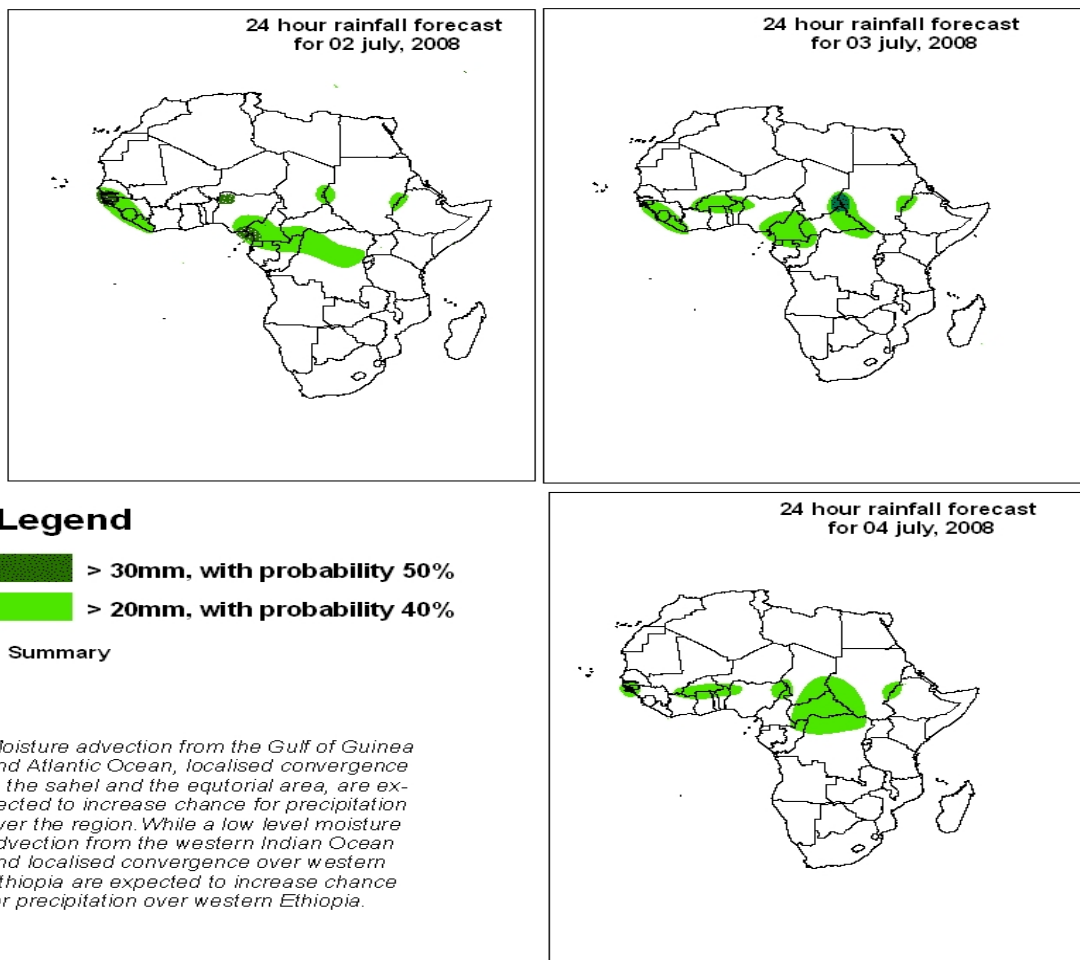
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

FORECAST DISCUSSION 14H00 EST, 01 JULY 2008

Valid: 00Z 02 - 04 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; 01 July 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 and converge over the Sahel and central Africa with the south easterly/south westerly trades emanating from St Helena and Mascarene anticyclones. Southeasterlies from the south western Indian Ocean and Madagascar are expected to turn into south westerlies along the coast of Somalia. 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 similar to that of the previous day, but the St Helena anticyclone and the cyclonic trough in the Atlantic Ocean will move to the east and occupy part of Namibia and south Africa.

T+72h, north western Africa will be dominated by an anticyclonic system centered along the northern coast of Morocco and over Tunisia, while the St Helene anticyclone and the trough to the east 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 African with north easterlies on the equator ward side is expected to be covered by an anticyclonic flow pattern southern Africa will be dominated by an anticyclonic circulation with a westerly wave to the south.

T+48h, westerly waves are expected to prevail pole ward of both the subtropical anticyclones over the Sahel and southern Africa, while easterlies will prevail on the equator ward side however, the subtropical anticyclone over southern Africa is expected to move eastwards over to Tanzania, northern Mozambique and western Indian Ocean.

T+72h, a similar flow pattern will prevail to that of the previous day. However, the subtropical anticyclone southern Africa will extend zonal from the Atlantic Ocean to the western Indian Ocean.

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 equator ward 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 subtropical anticyclone over north Africa is expected to relax.

T+72h, the circulation system is expected to be similar to that at T+24h and T+48h, but the cyclonic vortex is expected to close to southern Africa.

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