



Forecast Guidance for Africa

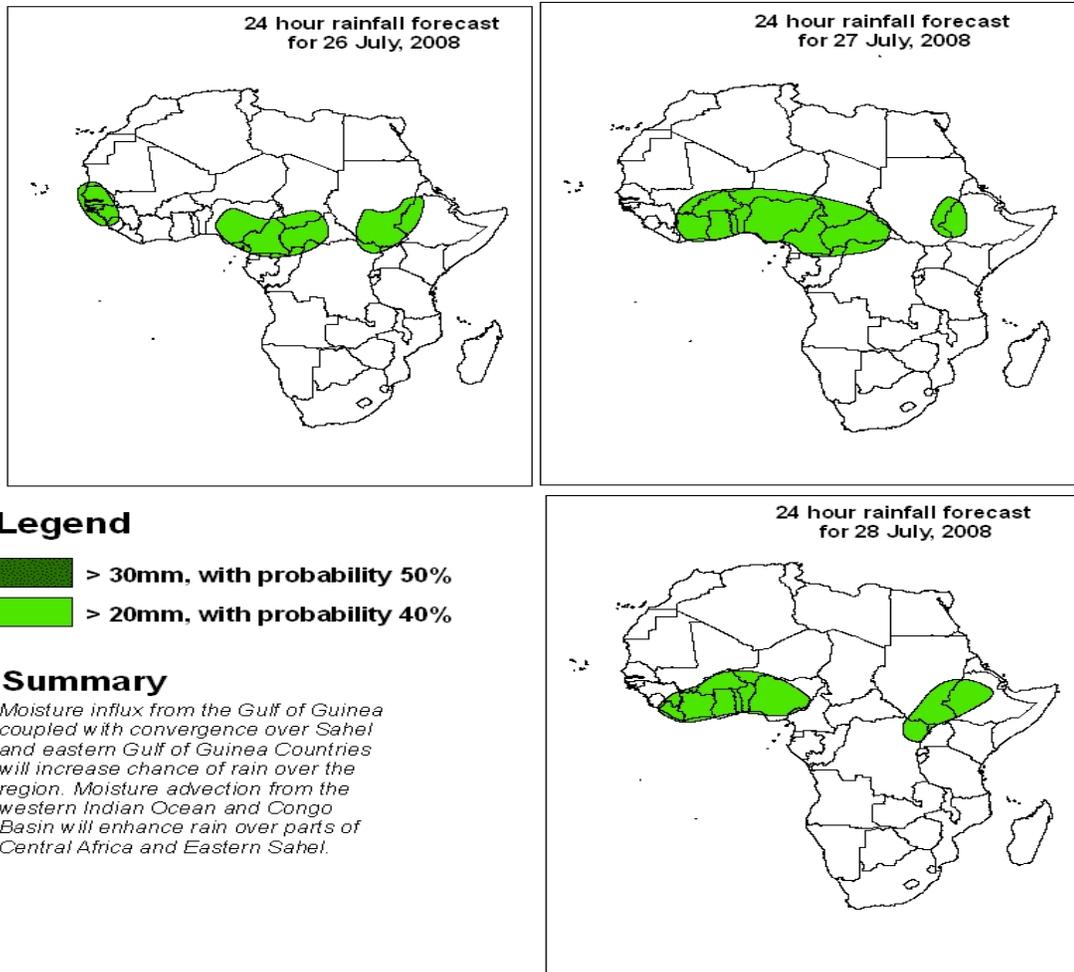
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

FORECAST DISCUSSION 14H00 EST, 25 JULY 2008

Valid: 00Z 26 – 28 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; 26 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, northern Africa is expected to be under the influence of an anticyclonic circulation, that is centered over Algeria, and another one over Sierra Leone/Liberia, that will cause northerlies along the Gulf of Guinea coast from Liberia to Benin. The Sahel region, Congo, DRC and southeastern Uganda will experience cyclonic vortices and convergences lines. 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 an embedded cyclonic system that will extend a 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 anticyclonic vortex over Sierra Leone and Liberia is expected to move westward into the Atlantic Ocean; while over southern Africa, the St Helene and Mascarene subtropical anticyclones will merge together.

T+72h, the flow pattern is expected to remain as that of the previous day. But, an anticyclonic vortex over the western Gulf of Guinea is expected to decay, instead a cyclonic vortex will develop over Ghana. The situation over southern Africa will remain quasi-stationary.

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 Libya and Egypt, while Kenya and Somalia are expected to be under the influence of a cyclonic vortices. Also featured will be a trough over Mozambique and Zimbabwe. The cyclonic vortex will develop over Angola, and the St Helene anticyclone will occupy Namibia, Botswana and northern southern Africa. However, westerly flow is expected to dominate over south southern Africa.

T+48h, the flow pattern is expected to be similar to that of the previous day; but the cyclonic vortex over Angola will decay and the St Helene anticyclone is expected to extend eastwards to Angola and Namibia; while a westerly flow is expected to dominate over south southern Africa with a trough extending from south of Madagascar through Mozambique to eastern Zambia.

T+72h, no much change is expected from the flow of the previous day except the trough over eastern Libya and Egypt is expected to relax and move westward.

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.

T+48h, the flow pattern will remain quasi-stationary, except over the southern part of Africa where the Mascarene anticyclone will extend westwards into the Atlantic Ocean pushing its center from southeastern DRC to the northern Angola.

T+72h, the wind flow pattern is expected to remain as that of the previous day. But the Mascarene anticyclone will move into the Atlantic Ocean.

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