



Forecast Guidance for Africa

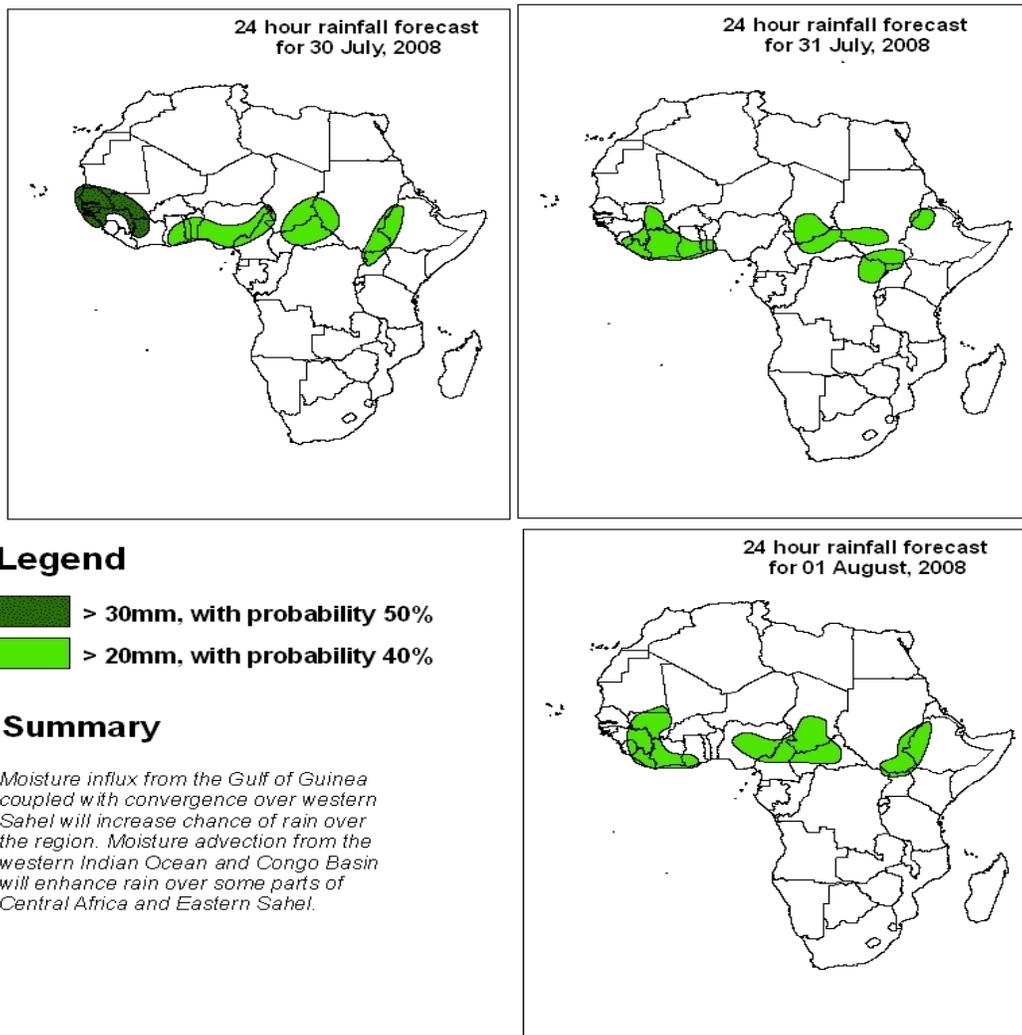
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

FORECAST DISCUSSION 14H00 EST, 29 JULY 2008

Valid: 00Z 30 JULY – 01 AUGUST, 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 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 with a trough along the coast of Morocco and northerlies on the eastern part of Egypt. Another anticyclonic circulation is expected to develop over Liberia and cause northerlies along the Gulf of Guinea coast from Liberia to Benin and southerlies to the west that will feed into a cyclonic vortex off the coast of Gambia and Senegal. The Sahel region up to Ethiopia and including northern Congo, DRC and Uganda are expected to experience cyclonic vortices and isolated convergence lines. Southern Africa is expected to be influenced by the Mascarene and St Helene subtropical anticyclones which will merge, while a westerly is expected to dominate the southern part.

T+48h, the flow pattern is expected to be similar to that of the previous day; The trough along the coast of Morocco is expected to fill; and the cyclonic vortex over western Sahel is expected to move westward into the Atlantic Ocean. A convergence line is expected to develop along the coast of Angola.

T+72h, the flow pattern is expected to remain as that of the previous day, but, a cyclonic vortex will develop over eastern Cote D'Ivoire; and the Azores anticyclone is expected to extend southwards. The westerlies to the south will encroach into the western part of South Africa and develop a trough overland.

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 northeastern Libya. Kenya and Somalia are expected to be under the influence of a trough. While St Helene anticyclone is expected to influence a large part of southern Africa with a westerly flow pattern to the south that will develop a trough in the Mozambique Channel across southern Tanzania to southeastern DRC.

T+48h, the flow pattern is expected to be similar to that of the previous day, but the trough over northeastern Libya is expected to fill up, while the St Helene anticyclone is expected to extend to the Indian Ocean and narrowing the trough over Madagascar and northern Mozambique.

T+72h, no much change is expected from the flow of the previous day, except the trough over northeastern Libya is expected to penetrate and move westward, while the trough along the northern coast of Mozambique will be split into a cyclonic vortex overland and trough to the east of Madagascar.

2.3. Flow at 200hPa:

T+24h, an extensive upper level anticyclonic flow pattern will prevail over much of northern Africa, except over Tunisia, Algeria and Morocco which are expected to be influenced by a westerly wave. Easterlies will dominate equator-ward of the subtropical anticyclones, and a westerly wave is expected to prevail over southern Africa with the trough over southern Mozambique and Zimbabwe.

T+48h, the flow pattern will remain quasi-stationary, i.e. similar to the previous day. But the trough is expected to retreat northwards and dominate over Tunisia.

T+72h, the wind flow pattern is expected to remain as that of the previous day. The trough over Tunisia is expected to deepen and move to western Algeria. But the St Helene anticyclone will occupy much of the land and separate from the Mascarene anticyclone.

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