



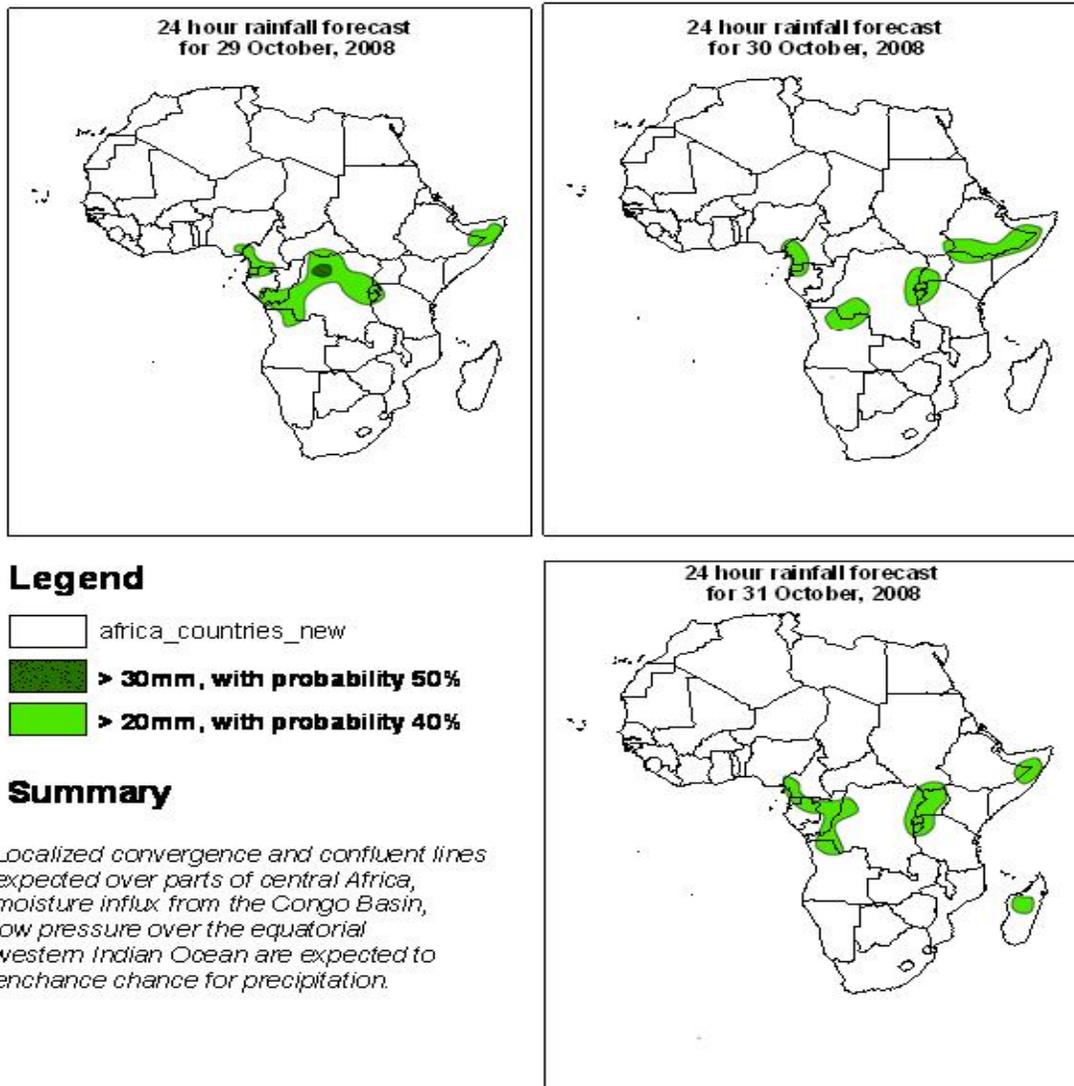
Forecast Guidance for Africa

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

FORECAST DISCUSSION 14H00 EST, 28th OCTOBER, 2008
Valid: 00Z 29th OCTOBER – 31st OCTOBER, 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; 29th October, 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, the Saharan anticyclonic circulation system will dominate the flow over much of North and West Africa. A trough will affect the flow over western Maghreb. Cyclonic vortices are likely to develop off the coast of Mauritania and over northern Somalia. Localized convergence is expected to occur over western DRC, the Lake Victoria region and over southern Angola. Confluent flows are expected to occur over western Cameroon, southwestern Ethiopia onto southeastern Sudan, parts of southeastern DRC and over northern Namibia. Conversely, localized divergence will occur over southern Sudan, central DRC and over the coast of Tanzania. Much of Southern Africa will be under the influence of an anticyclonic circulation system, while mid-latitude troughs will affect the flow over southwestern South Africa and over the Mozambique Channel with a cut off anticyclonic circulation between.

T+48, the flow over North and West Africa will be similar to that of the previous day. The trough over western Maghreb is likely to strengthen and move northwards. The cyclonic vortex off the coast of Mauritania will remain quasi stationary, while the one over northern Somalia will decay. Convergence is likely to occur over northern Ethiopia, the Lake Victoria region and over southern Angola. Confluent flows are expected to occur over northern Cameroon, northern Somalia, southwestern Ethiopia, northwestern and southeastern DRC and over northern Namibia. Localized divergence will be featured over southwestern DRC and over the coast of Somalia. The flow over much of Southern Africa is expected to be under the influence a merger of the St. Helena and Mascarene anticyclones. The southeastern sector of South Africa is likely to be affected by a mid-latitude trough in the westerlies.

T+72, the Azores and the Saharan anticyclones are expected to merge and dominate the flow over much of North and West Africa. The trough over the western Maghreb is expected to weaken and remain quasi stationary. The cyclonic vortex off the coast of Mauritania will strengthen and move slightly southwestwards. Localized convergence will affect eastern Ethiopia, the Lake Victoria region and northern Namibia. Confluent flows will be featured over southwestern Chad onto northeastern Cameroon, southwestern Ethiopia, central Somalia, southwestern Kenya onto northern Tanzania and over southern sectors of Angola. Localized divergence is expected to occur over southwestern Congo and over the coast of Tanzania. Much of Southern Africa will be dominated by the St. Helena and Mascarene anticyclonic system except for the southeastern sector of South Africa which will be under the influence of a mid-latitude trough in the westerlies.

2.2. Flow at 500hPa:

T+24, a westerly wave, in which a trough is embedded over western Maghreb is expected to dominate the flow over the Maghreb region. To the South, the Sahara anticyclonic circulation system is expected to prevail over much of North and West Africa. Confluent flows are expected to occur over western Gabon, southwestern Congo, central Uganda and over northern Mozambique. On the other hand, divergence will be featured over northern Somalia. The flow over Southern Africa will be dominated by the merger between St.

Helena and Mascarene anticyclonic circulation system. A westerly wave will affect the flow over the southern sector of South Africa and part of Madagascar.

T+48, the flow over much of North and West Africa will be similar to that of the previous day. The trough over Morocco will strengthen and remain quasi stationary. Confluent flows will be featured over western Ethiopia, northwestern Congo, northern sector of DRC, southeastern Kenya and over southeastern DRC. Conversely, divergence is expected to occur over western Somalia and over northeastern Kenya. The flow over much of Southern Africa will be under the influence of the St. Helena anticyclonic circulation system. A westerly wave will affect the southern sector of South Africa and southern Madagascar.

T+72, much of North and West Africa is likely to be under the influence of the Saharan anticyclonic circulation system. To the North a westerly wave in which a trough is embedded over northern Morocco and northwestern Algeria, will prevail. A closed cyclonic circulation will affect northern sector of Somalia and eastern Ethiopia. Confluent flows will be featured over southern CAR, southern Somalia, eastern Uganda, western Zambia onto southeastern DRC and over central Angola. Localized divergence is expected to occur over the eastern sector of DRC. The St. Helena and Mascarene anticyclonic circulation systems will dominate the flow over much of Southern Africa. A westerly wave will affect the flow over the southern sector of South Africa, the southern sector of the Mozambique Channel and southern Madagascar.

2.3. Flow at 200hPa:

T+24h, the Maghreb region including Egypt will be under the influence of a westerly wave with an embedded upper level trough over northern Morocco. To the South, an extensive upper-level anticyclonic circulation will dominate the flow. Convergence is likely to occur over the Lake Victoria region. Confluent flows will be featured over northern Cote D' Ivoire onto southern Niger, northeastern Sudan, southern DRC and over northeastern Angola. Diffluent flow is expected to occur over northern Gabon and over eastern Congo. The flow over the northern sector of Southern Africa will be dominated by an anticyclonic circulation, while the southern sector will be under the influence of a westerly wave.

T+48h, a similar flow to that of the previous day will prevail over most of Northern and Southern Africa. The trough over the western Maghreb is expected to strengthen and move southwards. Convergence will be featured over central CAR. Confluent flows are expected to occur over northeastern Sudan, northern DRC, northwestern Tanzania and over the southern sector of DRC. Divergence is expected to occur over western DRC.

T+72h, a westerly wave will prevail over the Maghreb region including Egypt. The trough over Morocco will weaken and retreat northwards. An extensive anticyclonic circulation system will dominate the flow over Sahel and environs. Convergence will be featured over southeastern Ethiopia. Confluent flows are expected to occur over southwestern Sudan, northeastern Somalia, northeastern DRC, southwestern Kenya and over western Tanzania. On the other hand, Divergence is likely to occur over the western sector of DRC. The northern sector of Southern Africa will be dominated by an anticyclonic circulation, while the southern sector will be under the influence of a westerly wave.

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