



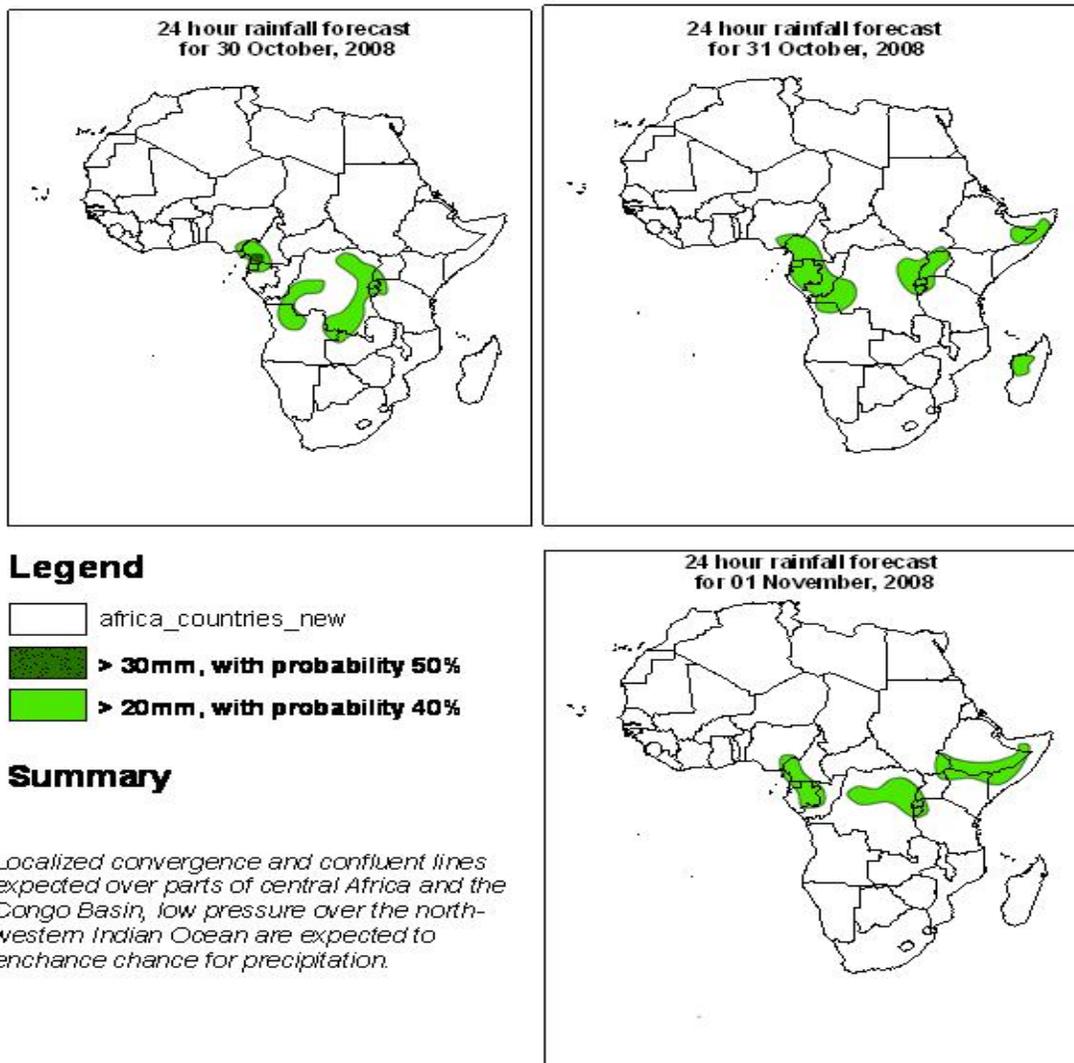
Forecast Guidance for Africa

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

FORECAST DISCUSSION 14H00 EST, 29th OCTOBER, 2008
Valid: 00Z 30th OCTOBER – 01st NOVEMBER, 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 eastern North to West Africa, with a trough over western Maghreb. A cyclonic vortex is likely to develop over central Somalia and eastern Ethiopia. Localized convergence is expected to occur over western Ethiopia, northwestern Tanzania, southeastern DRC, and over southern Angola. Confluent flows are expected to occur over northern Somalia, eastern Zambia and over eastern Angola. Conversely, localized divergence will occur over eastern Gabon, western Angola and over the coast of Tanzania. Much of Southern Africa will be under the influence of the St. Helena and Mascarene anticyclonic circulation systems, to the South of which westerlies will dominate with a mid-latitude trough affecting the flow over the southeastern sector of South Africa.

T+48, the Saharan anticyclonic circulation system is likely to intensify and prevail over much of North and West Africa merging with the Azores anticyclone. The trough over western Maghreb will expand westwards and eastwards. The cyclonic vortex over northern Somalia and eastern Ethiopia will degenerate to lines of convergence, while Convergence is also likely to occur over western DRC, the Lake Victoria region and over southern Angola. Confluent flows are expected to occur over northern Cameroon, western and eastern Ethiopia, the eastern Gulf of Guinea, south eastern DRC, and over southeastern Angola. Localized divergence will be featured over southern DRC and over the coast of Tanzania. The flow over much of Southern Africa is expected to be under the influence a merger between the St. Helena and Mascarene anticyclonic circulation systems. The southeastern and southern sectors of South Africa are likely to be affected by a mid-latitude trough in the westerlies.

T+72, the flow over much of North and West Africa will be similar to that of the previous day. The trough over the western Maghreb is expected to move westwards. Localized convergence will be featured over northeastern Ethiopia, the Lake Victoria region, southern sector of Angola, southeastern Namibia and over the southern sector of South Africa. Confluent flows are expected to occur over northern Ethiopia, southeastern Sudan, southeastern DRC, southeastern Angola and over northern Namibia. Localized divergence is expected to occur over central DRC and over northwestern Angola. Much of Southern Africa will be dominated by the St. Helena and Mascarene anticyclonic circulation system with troughs, one over southern Africa and the other to the South of Madagascar.

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, while the Saharan anticyclonic circulation system is expected to prevail over much of North and West Africa. A cyclonic vortex is likely to develop off the coast of Somalia. Confluent flows are expected to occur over western Kenya onto eastern Uganda, southern Congo and over southeastern DRC. On the other hand, divergence will be featured over southern Ethiopia. The flow over Southern Africa will be dominated by the 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 western Maghreb will move northeastwards. A closed cyclonic circulation will affect the flow over northern Somalia and eastern Ethiopia. Confluent flows will be featured over western Gabon, northwestern Tanzania, southeastern DRC, and over northern Zimbabwe. On the other hand, divergence is expected to occur over southwestern Ethiopia and over eastern Kenya. The flow over much of Southern Africa will be under the influence of the St. Helena anticyclonic circulation system with a westerly wave will to the South.

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 will prevail. The trough over the western Maghreb will weaken and retreat northwestwards. Confluent flows will be featured over southeastern Sudan, western DRC, eastern Uganda and over southeastern DRC. Localized divergence is expected to occur over the border between southeastern Ethiopia and southwestern Somalia. 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 Morocco. To the South, an extensive upper-level anticyclonic circulation will dominate the flow. Convergence is likely to occur over the western sector of DRC. Confluent flows are expected to occur over central Sudan, southeastern CAR, and over southeastern Cameroon. Divergence is expected to occur over northwestern 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 eastwards. Convergence will be featured over southeastern CAR. Confluent flows are expected to occur over western Ethiopia, southern Sudan and over southern 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 northwestwards. To the South, an extensive anticyclonic circulation system will dominate the flow around the equator with confluent flows will be featured over southeastern Nigeria, central Uganda, southern Somalia, eastern Kenya and over the southeastern sector of DRC. On the other hand, Divergence is likely to occur over northwestern Gabon. 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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