



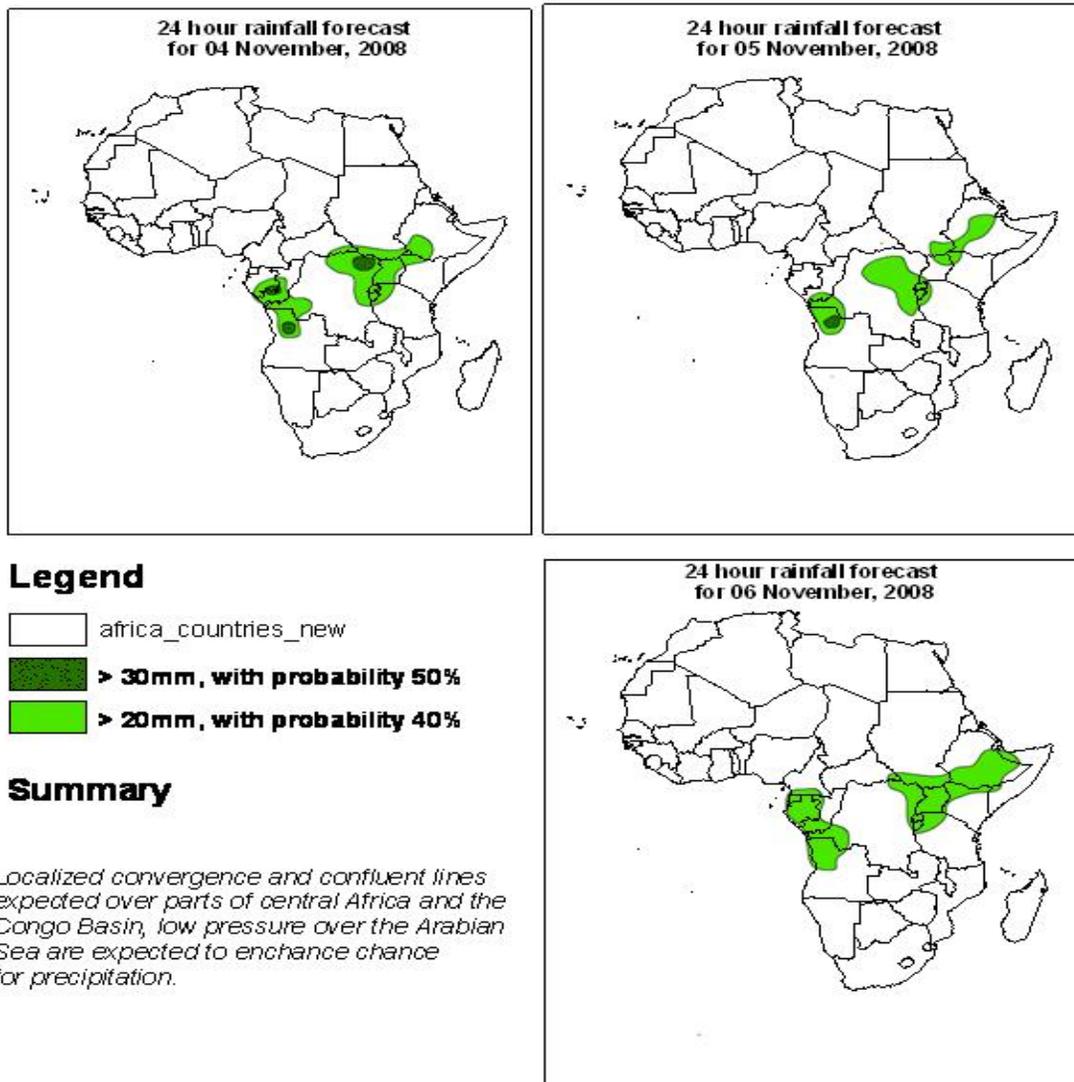
Forecast Guidance for Africa

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

FORECAST DISCUSSION 14H00 EST, 03rd NOVEMBER, 2008
Valid: 00Z 04th NOVEMBER – 06th 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; 04th November, 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 flow over much of North and West Africa is expected to be dominated by the Saharan anticyclonic circulation, while a trough will affect much of Morocco and part of Algeria. A ridge from the Azores anticyclone is likely to affect much of Western Sahara and part of Mauritania. A cyclonic vortex is expected to develop off the coast of Mauritania. Localized convergence is likely to occur over the border between eastern Chad and western Sudan, eastern DRC and over southern Angola. Confluent flows are expected to occur over northwestern Ethiopia, eastern Gabon, western DRC, northwestern Tanzania, southwestern Zambia and over northeastern Namibia. On the other hand, localized divergence is expected to occur over northeastern CAR. Diffluent flows will be featured over northwestern Mozambique. Much of Southern Africa will be under the influence of St. Helena and Mascarene anticyclonic circulation systems with a westerly wave to the South.

T+48, the Saharan anticyclonic circulation is expected to intensify. The trough over western Maghreb will remain in the same position. The ridge from the Azores anticyclone is likely to deepen and extend to northern Mali. The cyclonic vortex off the coast of Mauritania will retreat westwards. Convergence is likely to occur over southern Gabon, northern DRC and over the Lake Victoria region. Confluent flows are expected to occur over eastern Sudan, eastern Ethiopia, southern Cameroon, northwestern DRC, southern Uganda, southeastern DRC, southwestern Zambia and southern Angola onto northern Namibia. Conversely, divergence is expected over the southern DRC. Diffluent flows are likely to occur over the southern coast of Somalia. The flow over much of Southern Africa will be dominated by the St. Helena and Mascarene Anticyclonic circulation systems. To the South, a westerly wave will prevail with a cut off anticyclonic circulation.

T+72, the Azores and the Saharan anticyclonic circulations are expected to merge and dominate the flow over much of North and West Africa. The trough over western Maghreb is likely to expand eastwards to western Libya. Convergence is expected to occur over eastern Ethiopia, the eastern Gulf of Guinea, the Lake Victoria region and over western Zambia. Confluent flows are likely to occur over southwestern Ethiopia, eastern Cameroon, southeastern CAR, northern DRC and over northern Namibia. On the other hand, divergence will be featured over northwestern DRC and over northwestern Angola. Diffluent flows are expected to occur over eastern CAR. Much of Southern Africa is expected to be under the influence of the St. Helena and Mascarene anticyclonic circulation systems. A trough, in the westerlies, will affect the southeastern sector of South Africa.

2.2. Flow at 500hPa:

T+24, a westerly wave in which two troughs are embedded over western Maghreb and over part of Egypt and northern Sudan and an extensive Saharan sub-tropical anticyclonic circulation will affect the flow over much of North Africa. Convergence is likely to occur over southern Congo. Confluent flows are expected to occur over southeastern CAR, central and southeastern DRC. Divergence will be featured over the eastern sector of DRC. Much of Southern Africa will be dominated by an anticyclonic circulation system, while a westerly wave will affect southern South Africa.

T+48, the flow over much of Northern Africa will be similar to that of the previous day. The trough over western Maghreb will expand northeastwards to Tunisia, while the one over Egypt will remain in the same position. Convergence is expected to occur over southeastern Congo and over northwestern Angola. Confluent flows are likely to occur over the eastern Gulf of Guinea, southeastern Cameroon, northwestern DRC and over northern Tanzania. Diffluent flows are expected to occur over northeastern DRC. Much of Southern Africa will be under the influence of the St. Helena ridge. A westerly wave will prevail to the South.

T+72, the trough over Morocco will weaken and expand eastwards, while the one over Egypt is likely to retreat northeastwards. A Sub-tropical anticyclonic circulation system will dominate the flow over the rest of North Africa. Convergence will be featured over northwestern DRC and over southwestern Congo. Confluent flows are expected to occur over southern Sudan, southeastern Nigeria, southeastern Cameroon, southwestern CAR, northwestern Congo, western and northeastern DRC, western Tanzania, and over northern Zambia. Divergence is likely to occur over northwestern CAR. The flow over much of Southern Africa will be dominated by St. Helena ridge. A westerly wave will dominate to the South.

2.3. Flow at 200hPa:

T+24h, a westerly wave with two embedded troughs over western Maghreb and part of Egypt will dominate the flow over the Maghreb region including Egypt. To the south, an anticyclonic circulation system will prevail. Confluent flows will be featured over eastern Cameroon onto western CAR, northern DRC, northern Somalia and over northern Kenya. Divergence is likely to occur over eastern Gabon and western DRC. The flow over much of Southern Africa will be dominated by a westerly wave except for the northwestern sector which will be under the influence of an anticyclonic circulation.

T+48h, a westerly wave will dominate the flow over Northern Africa. The trough over western Maghreb will retreat northwards, while the one over Egypt will also retreat northeastwards. To the South, an anticyclonic circulation system will prevail. Confluent flows are expected to occur over western Sudan, eastern CAR and over eastern DRC. Divergence is likely to occur over northwestern DRC and over northwestern Angola. The flow over the northwestern sector of Southern Africa will be dominated by an anticyclonic circulation system, while the remaining part will be under the influence of a westerly wave.

T+72h, a westerly wave will prevail over North Africa and the upper-level trough over western Maghreb will retreat northeastwards. An anticyclonic circulation is expected to dominate the flow to the South. Confluent flows will be featured over southern Sudan, northern Tanzania and over the southeastern sector of DRC. Divergence is likely to occur over western DRC. The flow over much of Southern Africa is expected to be dominated by a mid latitude westerly wave, while the rest will be under the influence of an anticyclonic circulation system.

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