



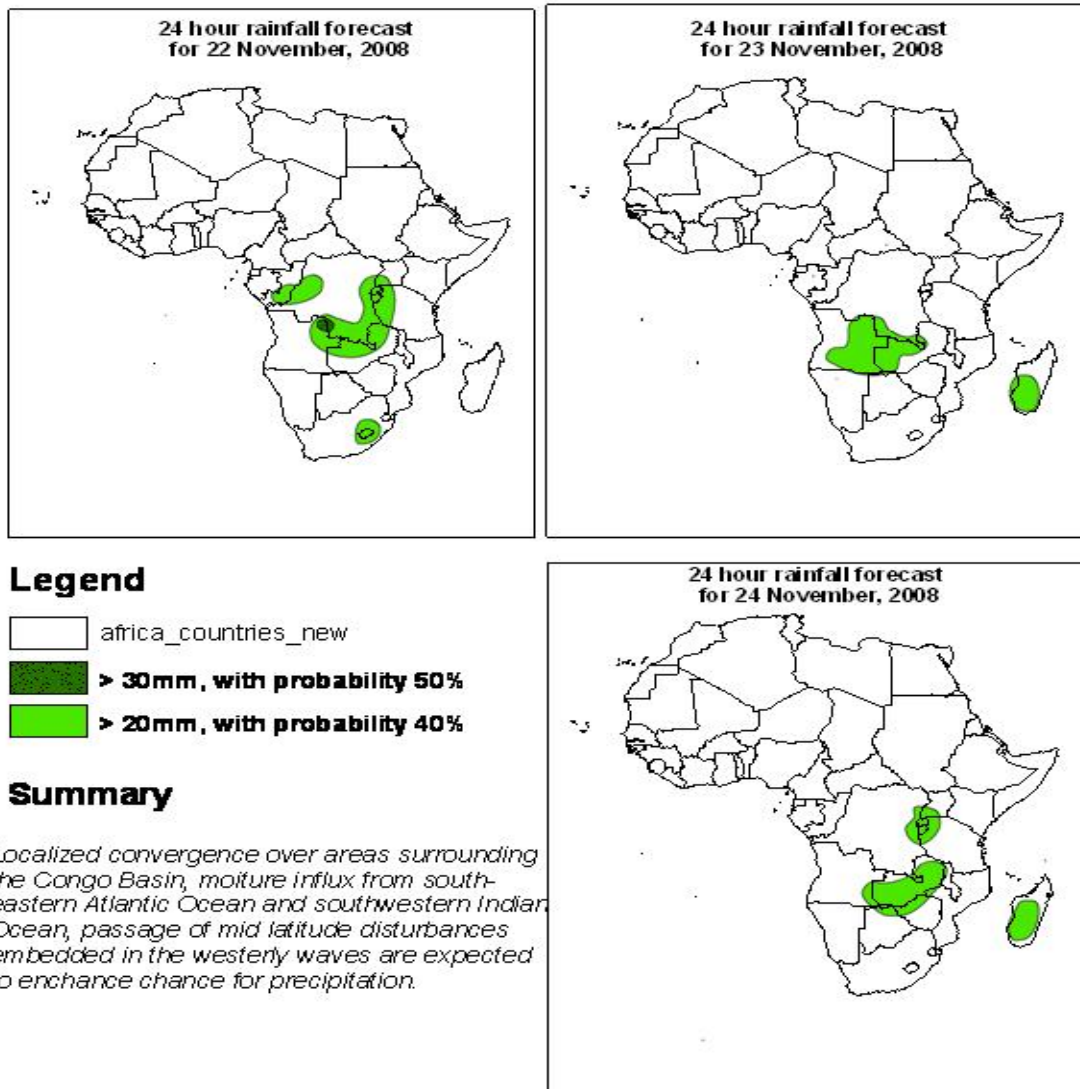
Forecast Guidance for Africa

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

FORECAST DISCUSSION 14H00 EST, 21st NOVEMBER, 2008
Valid: 00Z 22nd NOVEMBER – 24th 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; 22nd 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 Africa is expected to be dominated by the Saharan anticyclonic circulation system. A closed cyclonic circulation will be featured over Western Sahara and northwestern Mauritania, while a trough from the Mediterranean Sea will affect northeastern Algeria, Tunisia and northwestern Libya. An anticyclonic vortex is likely to develop over the western sector of DRC. Localized convergence is expected to occur over central Angola and northern Zambia. Confluent flows are expected to occur over central Cameroon, northeastern CAR, southern Ethiopia, northern and western Tanzania, western Zambia, northern Mozambique and over northern Namibia. On the other hand, diffluent flows will be featured over southern Sudan, southern DRC and over the central coast of Mozambique. Much of Southern Africa will be under the influence of the St. Helena and Mascarene anticyclonic circulation systems. To the South, a westerly wave will prevail with a trough over the southern sector of South Africa.

T+48, the flow over much of North Africa will be similar to that of the previous day. The closed cyclonic circulation over Western Sahara is likely to strengthen and expand northeastwards to Morocco and northwestern Algeria, while the trough over northeastern Algeria and Tunisia will expand southeastwards to central Libya. The anticyclonic vortex over the western sector of DRC is expected to remain in the same position. Localized convergence is likely to occur over southwestern Tanzania, central Angola, the border between southern Angola and northern Namibia and over central South Africa. Confluent flows are expected to occur over southwestern Ethiopia, northern Tanzania, southern Angola and over southwestern Zambia. Divergence will be featured over eastern Zimbabwe. Diffluent flows are expected to occur over southern Sudan and over eastern Tanzania. The flow over much of Southern Africa will be dominated by the St. Helena and Mascarene anticyclonic circulation systems with a westerly wave to the South.

T+72, the closed cyclonic circulation over Western Sahara is expected to weaken and retreat southwestwards but still affect southern Western Sahara, while the trough over northeastern Algeria and Tunisia is likely to deepen and expand southwestwards to central Algeria.. To the South, the Saharan anticyclonic circulation system will continue to prevail. The anticyclonic vortex over western DRC is likely to intensify and remain in the same position. Convergence is expected to occur over eastern DRC, western Tanzania and over southeastern Angola. Confluent flows are likely to occur over southeastern Sudan, northern Tanzania, western Zambia and over eastern Namibia. On the other hand, divergence will be featured over southeastern Zimbabwe. Diffluent flows are expected to occur over eastern Sudan. Much of Southern Africa will be under the influence of the St. Helena and Mascarene anticyclonic circulations. To the South, a westerly wave will prevail.

2.2. Flow at 500hPa:

T+24, a westerly wave will dominate the flow over much of North Africa with a closed cyclonic circulation featured over Morocco, while a weak trough from the Mediterranean Sea will affect Tunisia. To the South, the Saharan anticyclonic circulation system will prevail. A cyclonic vortex is likely to develop over eastern Angola. Convergence is expected to occur over western DRC. Confluent flows will be featured over southwestern

CAR, central Congo, eastern DRC, northern Tanzania and over western Namibia. Diffluent flows are expected to occur over southwestern Somalia. Much of Southern Africa will be dominated by an anticyclonic circulation with a westerly wave to the South.

T+48, a westerly wave will dominate the flow over much of North Africa. The closed cyclonic circulation over Morocco will remain in the same position, while the trough over Tunisia will weaken and retreat northwards. To the South, a sub-tropical anticyclonic circulation will prevail. A closed cyclonic circulation will affect the eastern sector of Angola. Convergence will be featured over western DRC, northwestern Angola and over central Tanzania. Confluent flows are likely to occur over northwestern Zambia, southeastern Tanzania and over northeastern Namibia. Diffluent flows are expected to occur over eastern DRC. Much of Southern Africa will be under the influence of the St. Helena anticyclonic circulation system. To the South, a westerly wave will prevail.

T+72, the closed cyclonic circulation over Morocco is expected to weaken and move eastwards to northern Algeria. A Sub-tropical anticyclonic circulation system will dominate the flow over the rest of North Africa. Convergence will be featured over northeastern Zambia, the border between southern Angola and northern Namibia and over northeastern Zimbabwe. Confluent flows are expected to occur over the coast of Kenya, southeastern DRC, northwestern Mozambique and over western Botswana. Diffluent flows are expected to occur over eastern DRC and over central Tanzania. The flow over much of Southern Africa will be dominated by an anticyclonic circulation system. To the South, a westerly wave will prevail with a trough over southern Madagascar.

2.3. Flow at 200hPa:

T+24h, a westerly wave with two embedded troughs over western Maghreb and over eastern Ethiopia and northern Somalia will dominate the flow over much of North Africa. To the south, an anticyclonic circulation system will prevail. Confluent flows will be featured over western Cameroon, northeastern CAR and over northern Tanzania. Divergence is likely to occur over southeastern DRC and over eastern Angola. The flow over much of Southern Africa will be dominated by an anticyclonic circulation, while a westerly wave will affect the southern sector and Madagascar.

T+48h, the trough in the westerly wave over western Maghreb will move eastwards and be centered over Morocco, while the one over eastern Ethiopia is likely to weaken and retreat eastwards but still affect the tip of Somalia. To the South, an anticyclonic circulation system will prevail. Convergence will be featured over southwestern CAR and over western Zambia. Confluent flows are expected to occur over southern CAR and central DRC. Divergence is likely to occur over northern Angola. Much of Southern Africa will be under the influence of an anticyclonic circulation, while the southern sector and the southwestern Indian Ocean are likely to be dominated by a westerly wave.

T+72h, a westerly wave will prevail over North Africa and the trough over Morocco will weaken and retreat northeastwards but still affect northeastern Algeria and northern Tunisia, while the one over the tip of Somalia is likely to weaken. An anticyclonic circulation is expected to dominate the flow to the South. Confluent flows are expected to occur over eastern CAR, northern Gabon and over northwestern DRC. Divergence is likely to occur over central Angola. The flow over much of Southern Africa is expected to be dominated by an anticyclonic circulation.

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