



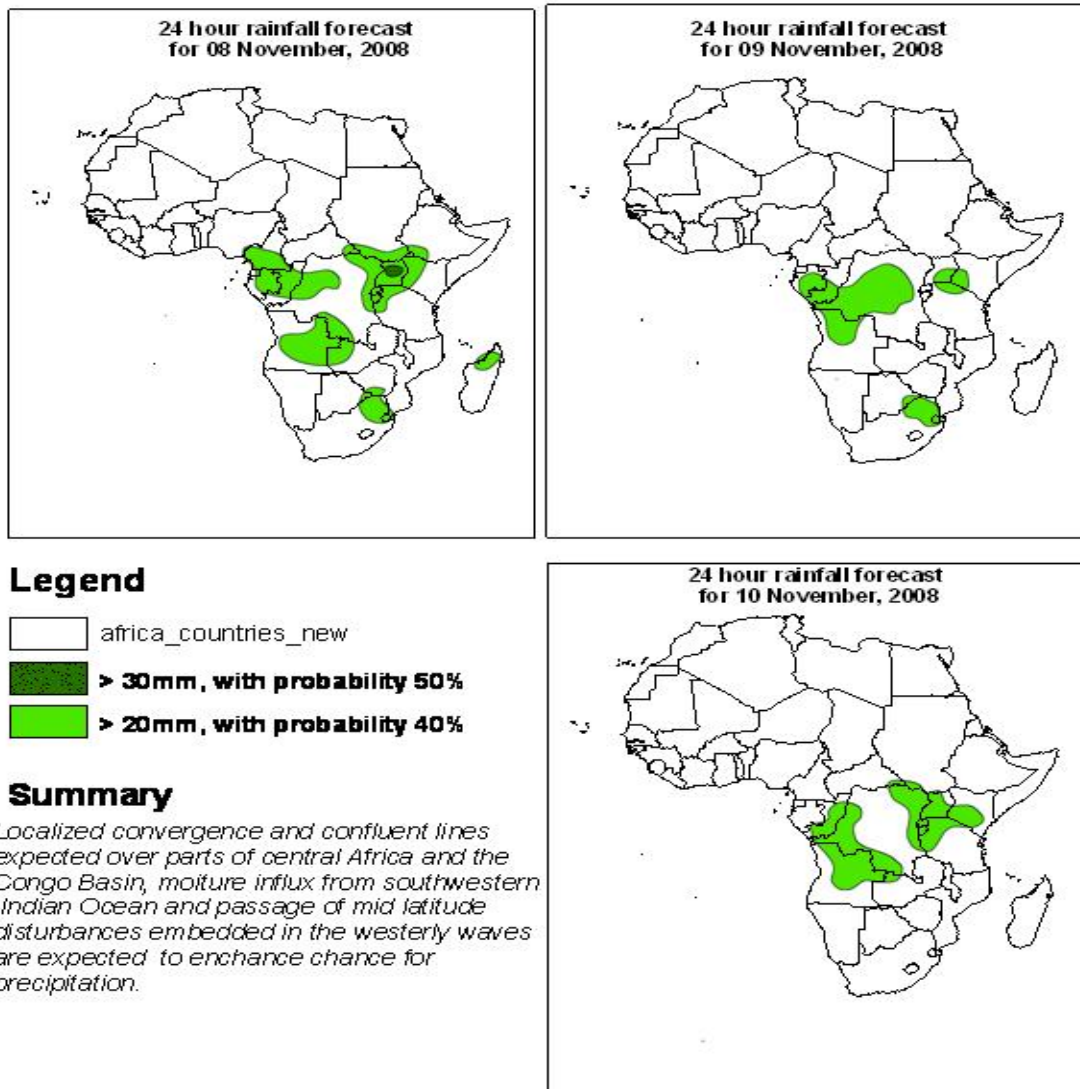
Forecast Guidance for Africa

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

FORECAST DISCUSSION 14H00 EST, 07th NOVEMBER, 2008
Valid: 00Z 08th NOVEMBER – 10th 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; 08th 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 weak trough will be featured over northern Morocco, while another one will affect southern Algeria and northeastern Mali. Localized convergence is likely to occur over western Sudan, central Congo, northwestern Tanzania, eastern Angola, northern and western Zambia and over northern Madagascar. Confluent flows are expected to occur over southern Chad, western Ethiopia, southeastern Sudan, southern Cameroon, eastern DRC, northern and southwestern Angola, northern Botswana and over southern Mozambique. On the other hand, localized divergence is expected to occur over eastern Sudan and over southern Nigeria. Much of Southern Africa will be under the influence of the St. Helena anticyclonic circulation. A cyclonic vortex is likely to develop over the central Channel of Mozambique. To the south, a westerly wave will prevail with a deep trough towards the Mozambique Channel.

T+48, the Saharan anticyclonic circulation is expected to intensify. The trough over northern Morocco will weaken and retreat northwards, while the one over southern Algeria will remain in the same position. A cyclonic vortex is likely to develop over central DRC. Convergence is expected to occur over central Nigeria, central Cameroon and over southeastern Angola. Confluent flows are expected to occur over southern Chad, southeastern Sudan, southeastern Ethiopia, western Tanzania, western Angola, western Zambia and over northwestern Mozambique. Divergence will be featured over southeastern DRC and over central Angola. The flow over much of Southern Africa will be dominated by the St. Helena Anticyclonic circulation system except for southern Madagascar which will be affected by a trough in a westerly wave.

T+72, the flow over much of North Africa will be similar to that of the previous day. The trough over southern Algeria is likely to strengthen and remain in the same position. The cyclonic vortex over central DRC is expected to strengthen and move westwards to eastern Congo. A cyclonic vortex is likely to develop off the coast of Gabon. Convergence is expected to occur over central Cameroon, southeastern Uganda, southeastern DRC and over the western sector of Angola. Confluent flows are likely to occur over southeastern Sudan, western DRC, southwestern Zambia and over southeastern Namibia. On the other hand, divergence will be featured over western Ethiopia and over northeastern Angola. Much of Southern Africa is expected to be under the influence of the St. Helena and Mascarene anticyclonic circulations. A trough in a westerly wave will affect the southern sector of South Africa, while a closed cyclonic circulation is expected to affect the southern Mozambique Channel and southeastern parts of Madagascar.

2.2. Flow at 500hPa:

T+24, a westerly wave will dominate the flow over much of North Africa, to the South of which a sub-tropical anticyclonic circulation system will prevail. Localized convergence is expected to occur over southern Congo, eastern DRC, and over northern Tanzania. Confluent flows will be featured over southwestern Cameroon, northwestern and southeastern DRC, northern Zambia and over northern Mozambique. Divergence will be featured over central DRC and over the coast of Kenya. Much of Southern Africa will be

dominated by the St. Helena anticyclonic circulation system, whereas the northern sector of Madagascar will be affected by the Mascarene Anticyclone, while a westerly wave is expected to dominate the southern sectors.

T+48, a westerly wave with an embedded trough over northeastern Morocco and western Algeria will dominate the flow over much of North Africa. The sub-tropical anticyclonic circulation will prevail to the South. Convergence is expected to occur over central Nigeria, southwestern Congo and over the central sector of DRC. Confluent flows are likely to occur over northeastern Gabon, northern Tanzania, western Angola and over northwestern Mozambique onto northeastern Zambia. Divergence is expected to occur over northeastern CAR and over northern DRC. Much of Southern Africa will be under the influence of the St. Helena ridge, and the eastern sector of Madagascar will be affected by a trough in the westerly wave.

T+72, the trough over Morocco and Algeria is likely to strengthen and move westwards to northwestern Libya. A Sub-tropical anticyclonic circulation system will dominate the flow over the rest of North Africa. A cyclonic vortex is likely to develop over the western Gulf of Guinea states, while an anticyclonic vortex will be featured off the southern coast of Somalia. Convergence is expected to occur over the eastern sector of DRC. Confluent flows are expected to occur over southeastern Nigeria, northeastern Gabon, southwestern Congo, southwestern Uganda and over northwestern Angola. Diffluent flows are likely to occur over northwestern and southern DRC. The flow over much of Southern Africa will be dominated by a merger of St. Helena and Mascarene anticyclonic circulations with a westerly wave to the south.

2.3. Flow at 200hPa:

T+24h, a westerly wave will dominate the flow over the Maghreb region including Egypt, to the south of which an anticyclonic circulation system will prevail. Convergence is likely to occur over eastern Angola. Confluent flows will be featured over southwestern Niger, southern Chad and over southwestern Uganda. Divergence is likely to occur over eastern Uganda and over eastern DRC. The flow over the northern sector of Southern Africa will be dominated by an anticyclonic circulation, while a westerly wave will affect the southern sector.

T+48h, a westerly wave will dominate the flow over Northern Africa. A trough in the westerly wave will affect the tip of Somalia. To the South, an anticyclonic circulation system will prevail. Confluent flows are expected to occur over southeastern Mali, southern Ethiopia onto northeastern Kenya, southern DRC and over eastern Angola. Divergence is likely to occur over western Congo and over eastern DRC. The northern sector of Southern Africa will be under the influence of an anticyclonic circulation, while the southern sector is likely to be dominated by a westerly wave.

T+72h, a westerly wave will prevail over North Africa and the trough over the tip of Somalia is likely to strengthen and move southwards to central Somalia. An anticyclonic circulation is expected to dominate the flow to the South. Confluent flows will be featured over central Chad and over southern Ethiopia. Divergence is likely to occur over eastern DRC and over northern Tanzania. The flow over much of Southern Africa is expected to be dominated by an anticyclonic circulation except for the southern sector and the Southwest Indian Ocean which will be under the influence of a westerly wave.

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