



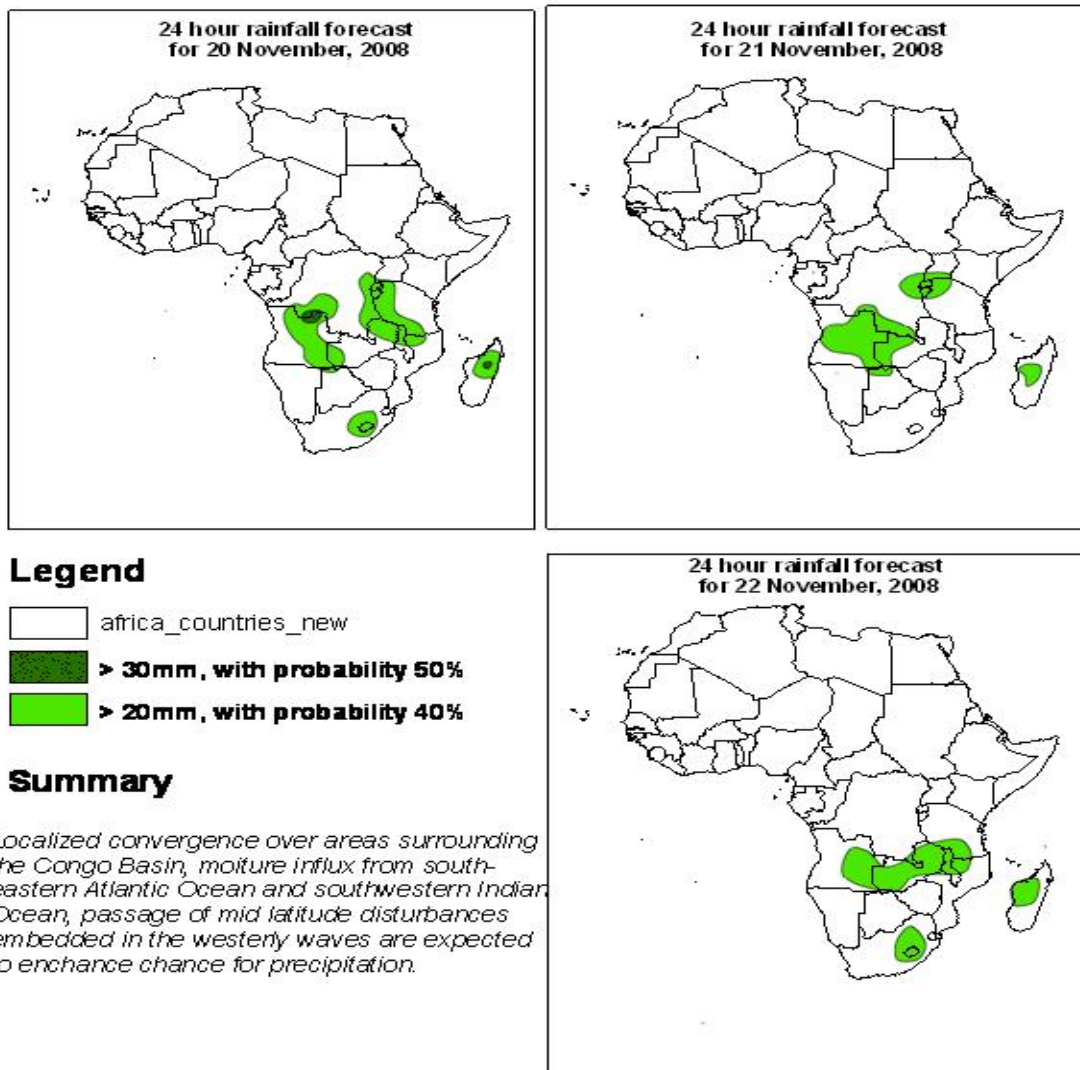
Forecast Guidance for Africa

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

FORECAST DISCUSSION 14H00 EST, 19th NOVEMBER, 2008
Valid: 00Z 20th NOVEMBER – 22nd 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; 20th 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 Saharan anticyclonic circulation system will dominate the flow over much of North Africa, however closed cyclonic circulations will affect much of Morocco, Western Sahara and northwestern Mauritania, and also over southern Algeria and northern Mali. Localized convergence is expected to occur over the central sector of DRC, western Tanzania, northwestern Zambia, the northern Mozambique Channel, northern and southern Namibia. Confluent flows are expected to occur over southeastern Chad, western DRC, southern Angola, southwestern Zambia and over northwestern Mozambique. Conversely, localized divergence will occur over eastern Ethiopia and over southern DRC. Much of Southern Africa will be under the influence of the St. Helena anticyclonic circulation system merged with the Mascarene High, to the South of which a westerly wave will dominate.

T+48, the Saharan anticyclonic circulation system is likely to intensify. The closed cyclonic circulation over western Maghreb will slightly shift southwards, while the one over southern Algeria is expected to weaken and move northwards to central Algeria. An anticyclonic circulation will prevail over central DRC, while cyclonic vortices are likely to develop over the northern Mozambique Channel and over southwestern Madagascar. Convergence is likely to occur over western Ethiopia, western Tanzania, northern Zambia, southeastern Angola and over southeastern Namibia. Confluent flows are expected to occur over northern Tanzania, southeastern DRC, southern Angola, northwestern Zambia, northern Mozambique, eastern Madagascar and over southern Namibia. Localized divergence will be featured over eastern Ethiopia and over the central coast of Mozambique. The flow over much of Southern Africa is expected to be under the influence of the merger between the St. Helena and Mascarene anticyclonic circulation systems.

T+72, the Saharan anticyclonic circulation will continue to prevail over much of North Africa. A trough will be featured over northeastern Algeria, Tunisia and northwestern Libya. The closed cyclonic circulation over Morocco and Western Sahara is expected to move westwards, while another one will be featured over the Mozambique Channel. Anticyclonic vortices are likely to develop off the northern coast of Angola and over western DRC. Localized convergence will be featured over eastern DRC, western Tanzania, northern Zambia, southeastern Angola and over the northwestern sector of South Africa. Confluent flows are expected to occur over southeastern Sudan, northern Tanzania, and over southwestern Zambia. Localized divergence is expected to occur over northeastern DRC and over southern South Africa. Much of Southern Africa will be dominated by the St. Helena and Mascarene anticyclonic circulation systems with a westerly wave to the South and a trough over the tip of South Africa.

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 North Africa. To the South, the Saharan anticyclonic circulation system is expected to prevail. Convergence will be featured over northern DRC and over the northern sector of Angola. Confluent flows are expected to occur over northern Gabon, northeastern DRC, southern Uganda, southwestern Congo and over southern DRC. On the

other hand, divergence will be featured over southern Sudan, southeastern Angola and over eastern Namibia. The flow over Southern Africa will be dominated by the St. Helena and Mascarene anticyclonic circulation system with a westerly wave will prevail to the South.

T+48, the flow over much of North Africa will be similar to that of the previous day. The trough over western Maghreb is expected to strengthen and stretch southwestwards. Cyclonic vortices are likely to develop over northern Gabon and southern Somalia, while a closed cyclonic circulation will affect the southeastern sector of Angola. Convergence is expected to occur over northwestern DRC and over eastern Tanzania. Confluent flows will be featured over western and southeastern DRC, western Angola, northern Botswana and over northern Madagascar. On the other hand, divergence is expected to occur over northeastern DRC. The flow over much of Southern Africa will be under the influence of the St. Helena and Mascarene anticyclonic circulation systems.

T+72, the trough in the westerlies over western Maghreb is expected to strengthen and remain in the same position. To the South, the Saharan anticyclonic circulation system will prevail. The closed cyclonic circulation will move southeastwards to western Zambia and northern Botswana. Convergence is likely to occur over central DRC and eastern Tanzania. Confluent flows will be featured over western and eastern DRC, southwestern Tanzania and over northern Mozambique. Localized divergence is expected to occur over northwestern South Africa. The St. Helena and Mascarene anticyclonic circulation systems will dominate the flow over much of Southern Africa. Troughs in a westerly wave will affect the flow over the southwestern sector of South Africa and southern Madagascar.

2.3. Flow at 200hPa:

T+24h, the flow over much of North Africa will be dominated by a westerly wave in which troughs are embedded over western Maghreb and over eastern Ethiopia and parts of Somalia. To the South, an extensive upper-level anticyclonic circulation will dominate the flow. Confluent flows are expected to occur over eastern DRC, southeastern Kenya and northern Tanzania. Divergence is expected to occur over southern DRC. 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 North Africa. The trough over the western Maghreb is retreat eastwards, while the one over eastern Ethiopia will remain in the same position. Confluent flows are expected to occur over northwestern DRC and over central Zambia. Divergence is expected to occur over southeastern DRC and over eastern Angola. Much of Southern Africa will be under the influence of an anticyclonic circulation, while the southern sector and the southwestern Indian Ocean are expected to be dominated by a westerly wave.

T+72h, a westerly wave will prevail over much of North Africa. The trough over western Maghreb will stretch southwestwards, while the one over eastern Ethiopia will retreat northeastwards but still affect northern Somalia. To the South, an extensive anticyclonic circulation system will dominate the flow. Confluent flows will be featured over southern Somalia, eastern Kenya and over southern Zambia. On the other hand, Divergence is likely to occur over western Zambia. The northern sector of Southern Africa will be dominated by an anticyclonic circulation, while the southern sector including the southwestern Indian Ocean will be under the influence of a westerly wave.

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