



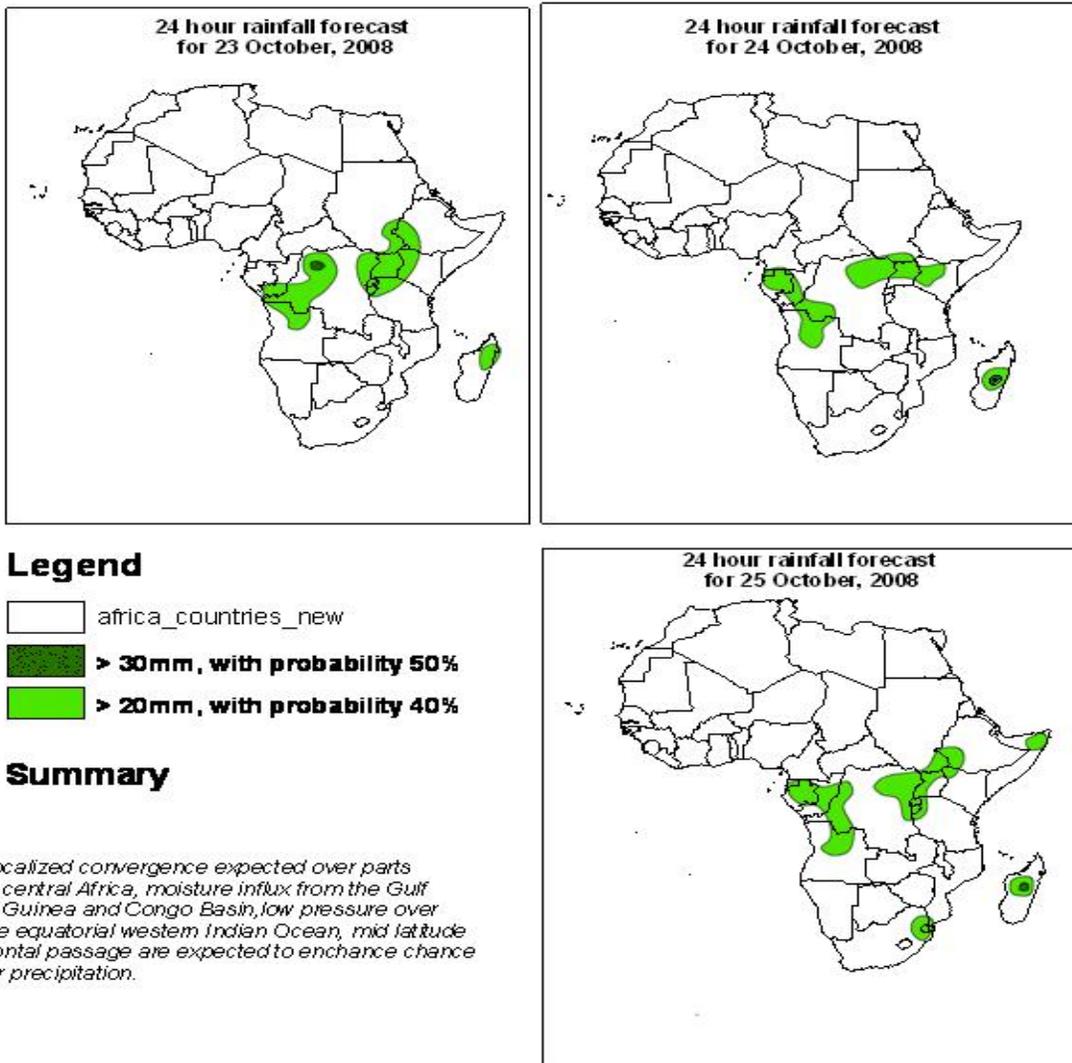
Forecast Guidance for Africa

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

FORECAST DISCUSSION 14H00 EST, 22nd OCTOBER, 2008
Valid: 00Z 23rd OCTOBER – 25th OCTOBER, 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; 23rd 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 will dominate the flow over much of North Africa, while a closed cyclonic circulation is expected to affect the flow over much of Morocco and western Algeria. A tropical Cyclone will affect the flow over northern Somalia and eastern Ethiopia. Localized convergence is expected over the Lake Victoria region and over northwestern Zambia and confluent flows over southeastern Chad, western Sudan, northeastern Congo, southeastern Angola onto northeastern Namibia and over southern Botswana. Divergence will occur over southwestern Sudan and along the coast of Tanzania. Much of Southern Africa will be dominated by the St. Helena anticyclonic system except for the area north of Madagascar which will be under the influence of a cyclonic circulation.

T+48, the Saharan anticyclonic system will prevail over much of North Africa. The closed cyclonic circulation over northwestern Africa will propagate southwestwards to central Western Sahara and northern Mauritania. The tropical cyclone over northern Somalia will weaken and retreat northwards. Localized convergence is likely to occur over northwestern Somalia, northeastern DRC and over the Lake Victoria region. Confluent flows are expected over western Sudan onto eastern Chad, northeastern Ethiopia, southeastern DRC and over southwestern Angola. On the other hand, divergence will occur over southern Sudan, western Cameroon and over central coast of Kenya. Much of Southern Africa will be dominated by the St. Helena and Mascarene anticyclones and a cyclonic circulation will affect northern Mozambique Channel and northeastern Madagascar with a westerly wave to the South.

T+72, the cyclonic circulation over western Maghreb will be centered over northern Algeria and propagate to central Algeria and northeastern Mali. A ridge will affect the flow over western Algeria and much of Libya. The Saharan anticyclonic circulation will prevail over the rest of North Africa. Localized convergence will occur over southeastern Mali, southeastern Chad, northeastern Ethiopia, northern DRC, the Lake Victoria region and over the border between southeastern Angola and northeastern Namibia. Confluent flows are expected over northeastern Sudan, central Ethiopia, northwestern Angola onto western DRC and over eastern Madagascar. Localized divergence is likely to occur over northeastern Angola. Much of Southern Africa will be dominated by the St. Helena anticyclonic circulation with a westerly wave to the South.

2.2. Flow at 500hPa:

T+24, the flow over much of North Africa is likely to be under the influence of the Saharan anticyclonic circulation with westerlies to the North in which is embedded a closed cyclonic circulation over much of Morocco. Another cyclonic circulation is expected to dominate the flow over eastern Ethiopia and western Somalia. Localized convergence will be featured over northeastern DRC and confluent flows over eastern Nigeria, northern DRC, northwestern Uganda, southwestern Congo and over northwestern Zambia. Conversely, a divergence is expected to occur over southeastern CAR and over southern Malawi. The flow over much of Southern Africa will be under the influence of the St.

Helena anticyclonic circulation system with westerlies to the South and a mid-latitude trough over the Mozambique Channel and southern Madagascar.

T+48, a westerly wave is expected to dominate over much of North Africa with the Maghreb region. To the South, the Sahara anticyclonic circulation is expected to dominate the flow with a cut off of a cyclonic circulation over northeastern Ethiopia and northwestern Somalia. Localized convergence is expected over central DRC and confluent flows over southern Nigeria, western Gabon, southwestern DRC, western Tanzania and over northwestern Mozambique. The flow over Southern Africa will be dominated by the St. Helena and Mascarene anticyclonic circulation. A westerly wave will affect the flow over southern South Africa and over southern Madagascar.

T+72, much of North Africa is likely to be under the influence of the Saharan anticyclonic circulation system, while the trough over Morocco in the westerlies will expand to western Algeria. Confluent flows will be featured over northern CAR, western DRC onto eastern Congo, southeastern Ethiopia, southeastern DRC onto western Zambia and over northwestern Tanzania. Localized divergence is expected to occur over southeastern Sudan, and over northeastern DRC. The St. Helena and Mascarene anticyclonic circulation will dominate the flow over Southern Africa with a westerly wave to the South.

2.3. Flow at 200hPa:

T+24h, the Maghreb region will be under the influence of a westerly wave with an embedded upper level trough over western Morocco. To the South, an extensive upper-level anticyclone circulation will dominate the flow. Confluent flows will occur over eastern Mali onto northwestern Niger, western Ethiopia, central Kenya and over northern Mozambique Channel. Divergence is expected to occur over central 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 Africa. The trough over Morocco will strengthen and propagate southeastwards. Confluent flows will be featured over northwestern Mali, southeastern Mauritania, northeastern Sudan and over southeastern DRC. Conversely, localized divergence is expected over southeastern CAR and over northeastern DRC.

T+72h, a westerly wave will prevail over the Maghreb region and the trough over Morocco will weaken and retreat northeastwards. To the South, an anticyclonic circulation system will dominate the flow. Confluent flows will be featured over The Gambia onto southern Senegal, eastern Mali, southeastern Algeria and over southwestern Sudan. On the other hand, divergence is likely to occur over northern DRC. 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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