



Forecasting guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 19TH MARCH 2008

**AFRICAN DESK
CLIMATE PREDICTION CENTRE
National Centers for Environmental Predictions
National Weather Service
NOAA
Camp Spring MD 20746**

**FORECAST DISCUSSION 14H00 EST, 19TH MARCH 2008
Valid: 00Z 20TH MARCH 2008-00Z 22ND MARCH 2008**

1: 24 HR RAINFALL FORECAST

Areas showing Probability Of Precipitation (POP) exceeding thresholds of 40mm, 30mm and 20mm are shown in the following figures 1 – 3 respectively for the dates of 20 to 22 march 2008.

Fig.1: 24 HR RAINFALL FORECAST FOR 20TH MARCH 2008

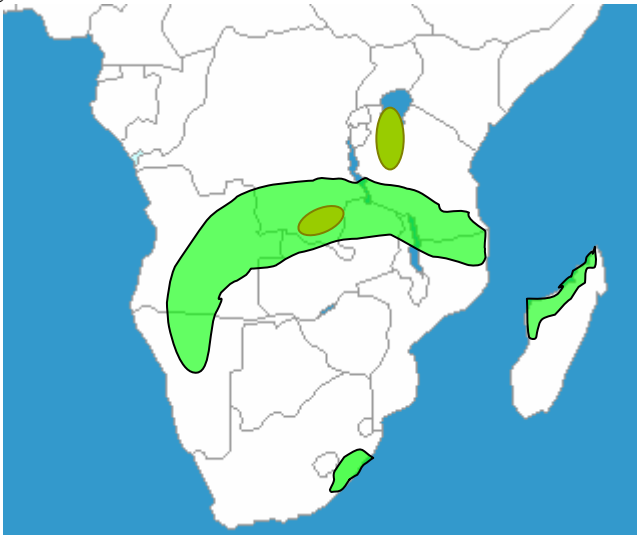


Fig.2: 24 HR RAINFALL FORECAST FOR 21ST MARCH 2008

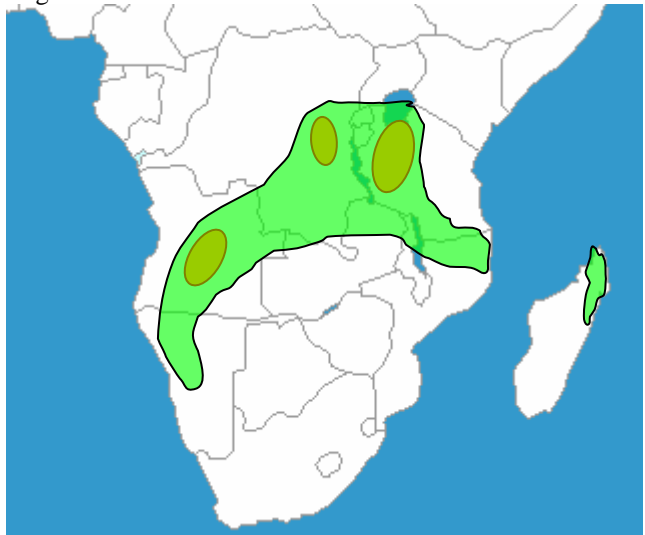
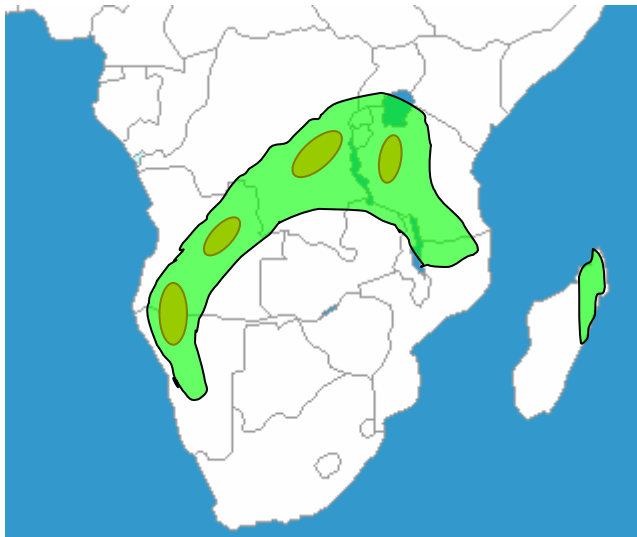


Fig.3: 24 HR RAINFALL FORECAST FOR 22ND MARCH 2008



LEGEND:

- : >40 mm, POP 70%
- : >30 mm, POP 60%
- : >20 mm, POP 50%

POP: Probability Of Precipitation exceeding a threshold

2: MODELS DISCUSSION:

Models comparison (Valid from 00Z; 19th MARCH 2008): There is an agreement of UK MET, ECMWF and GFS models. There are no major discrepancies between them, expect about the tropical disturbance over the Indian Ocean which is underestimated by GFS model, ECMWF and UKMET models predict this system to deepen under 1000hPa during the next 72hours.

FLOW AT 850MB

T+24h, an anticyclonic flow pattern is expected to prevail over across the central part of the subcontinent from Namibia to the southern Madagascar due to the influence of both St. Helena and Mascarine high pressure systems, thus suppressing any convective activity over the region. These high pressure systems which will be separated by a narrow trough system from the low pressure centre over Angola through eastern Namibia and western Botswana to the trough over southern South Africa which is expected to cause convergence over central Angola, northern Namibia and southern Zambia. A low pressure system is expected to dominate over northeastern Madagascar that will cause diffluent southeastern flow over northern Mozambique and Tanzania and isolated convergence over western Tanzania and Lake Victoria basin.

T+48h, the trough area south the cape is expected to move eastward together with the Mascarine high pressure center allowing the St. Helena high pressure to dominate over southern and eastern part of the subcontinent. Both low pressure areas over Angola and northeastern Madagascar are expected to prevail.

T+72h, the trough to the south of the southern Africa is expected to move further east while a weak trough is expected to develop over southern Africa. The low pressure over Angola is expected to prevail and develop a trough southwards to Namibia, thus separating St. Helena high pressure system into two centers, one over the Atlantic and the other over the western Indian Ocean causing an anticyclonic flow to dominate over the area. However the two pressure area over Angola and its troughing southwards are expected to cause localized convergence over Angola and central Namibia.

FLOW AT 500MB

T+24h, mid-level high pressure areas are expected to prevail over western to central Namibia, Zimbabwe, throughout central Mozambique to central Madagascar. While a weak trough system will prevail over southern Zambia and over southern Angola. The combination of these systems will cause mid-level convergence over southern Zambia, northern Zimbabwe, and southeastern Angola. A mid-level low pressure area is expected to dominate over the Indian Ocean to the northeast of Madagascar. A mid-level trough associated with a front is expected to prevail over the tip of South Africa. Therefore, a westerly flow is expected to dominate over the country.

T+48h, the front system to the south of Southern Africa is expected to shift eastward. It will create a mid-level trough over the Mozambique Channel and weaken the high level pressure which was over central Mozambique and central Madagascar. An anticyclonic flow is expected to prevail over South Africa behind the frontal system. The trough system which was over southern Zambia is expected to fill up. The trough system over southern Angola is expected to shift further north and cause convergence over the northern part of the country. The mid-level low pressure area over the Indian Ocean is expected to deepen and move southeastward around the 14S latitude to the east of Madagascar.

T+72h, the mid-level low pressure area over the Indian Ocean is expected to continue moving southeastward, it will cause a convergence over the northeastern coast of Madagascar. The mid-level trough over the Mozambique Channel is expected to develop northwestward extend over northern Mozambique, Malawi, and southeastern Zambia. It will contribute to a convergence over northern Zimbabwe and central Zambia. Isolated convergent flow is expected over central to northern Tanzania, central DRC. A high pressure area is expected to continue dominating over Namibia, Botswana, southern Zimbabwe, southern Mozambique, and South Africa.

FLOW AT 200MB

T+24h, an upper level high pressure is expected to dominate the subcontinent, this system will have a center near western Botswana and ridge eastward over northern Mozambique through northern Madagascar to the Indian Ocean. This system will contribute to a southeasterly flow over the northern part of the subcontinent and a northwesterly flow over Namibia and South Africa. An upper level divergence is expected to arise over southern DRC and extreme eastern Angola. An upper level trough is expected to extend in a northwest/southeast direction over central Mozambique to southern Madagascar.

T+48h, the upper level trough over central Mozambique is expected to extend further northwest and will separate the upper level high pressure into two areas, one will dominate the subcontinent and the other will prevail over the Indian Ocean. These two systems will contribute to an easterly flow over the northern part of the subcontinent, and a westerly flow over the southern part.

T+72h, the same situation as at T+48 is expected to prevail, except for central Tanzania and southeastern DRC, where an upper level divergent flow is expected to develop.

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