Forecasting guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 18TH MARCH 2008

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

FORECAST DISCUSSION 14H00 EST, 18TH MARCH 2008
Valid: 00Z 19TH MARCH 2008-00Z 21ST 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 19 to 21 march 2008.

Fig.1: 24 HR RAINFALL FORECAST FOR 19TH MARCH 2008

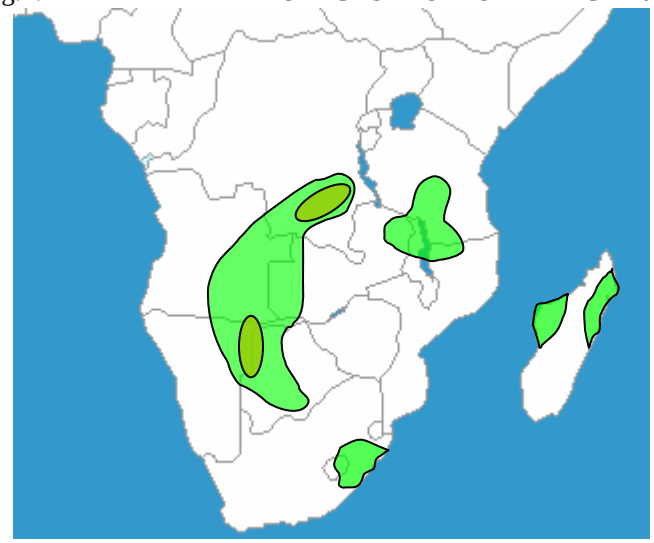


Fig.2: 24 HR RAINFALL FORECAST FOR 20TH MARCH 2008

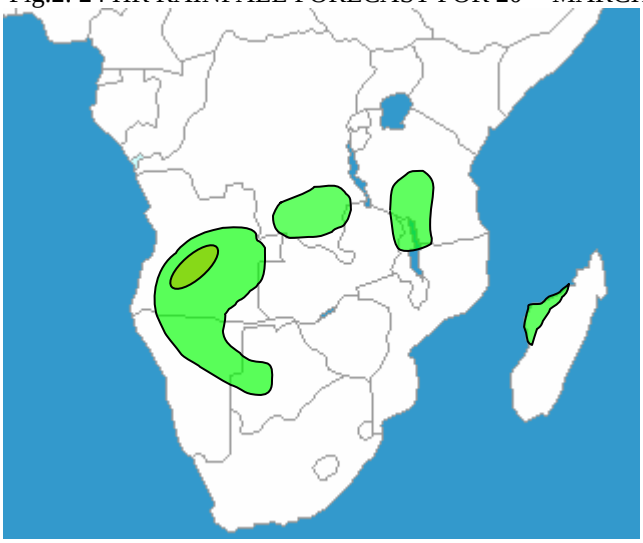
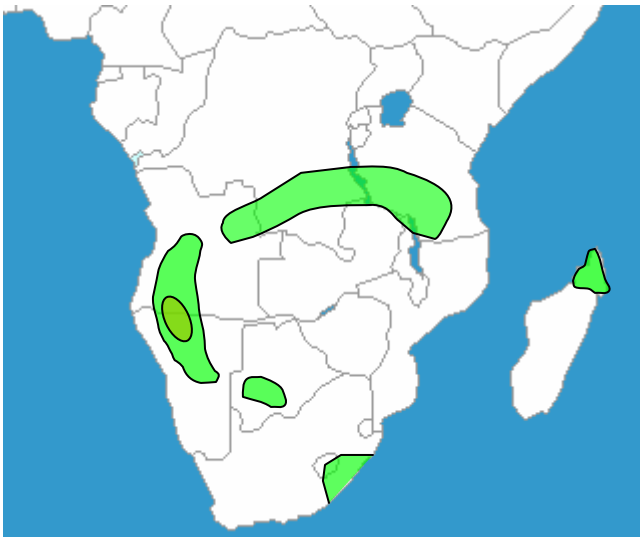


Fig.3: 24 HR RAINFALL FORECAST FOR 21ST MARCH 2008



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; 03rd FEBRUARY 2008): There is an agreement of UK MET, ECMWF and GFS models. There are no major discrepancies between them.

FLOW AT 850MB

T+24h, a ridge related to the Mascarine high pressure system is expected to penetrate inland over the southeastern part of the subcontinent permitting an anticyclonic flow pattern to dominate over southern Madagascar, southern Mozambique, Zimbabwe, southern Zambia, Botswana and South Africa. A low pressure area is expected over west Angola with a trough to its south over northwestern Namibia and southern South Africa that will cause localized convergence over southeastern Angola and Namibian coast. A low pressure area is expected to dominate over northeastern Madagascar that will extend to the central Mozambique Channel.

T+48h, an anticyclonic flow pattern from both the St. Helena and Mascarine high pressure systems is expected to dominate the central part of the subcontinent (over southern Madagascar, southern Mozambique, Zimbabwe, southern Zambia, eastern Botswana and eastern South Africa) separating low pressure to the north over west Angola and over to the northeastern Madagascar and part of northern Mozambique a trough over southern South Africa. The low pressure area over western Angola is expected to cause convergence and localized convective activity over Angola.

T+72h, the St Helena high pressure system is expected to move further east and cover most of the southern subcontinent . The associated anticyclonic circulation is expected to dominate a large area of the subcontinent (i.e, from northern Namibia, southern Zambia, central Mozambique to South Africa) inhibiting convective activity over there. The low pressure areas over Angola, Madagascar, northeastern Mozambique to Tanzania are expected to prevail.

FLOW AT 500MB

T+24h, a mid-level high pressure is expected to dominate over the subcontinent with a ridge extending west/eastward through the southern Madagascar. A mid-level low

pressure area is expected to prevail over southern Angola. It will contribute to a convergence over southern Zambia and western Namibia. In general, this situation is expected to cause a decreased convective activity over a large part of the subcontinent (between 18S -30S latitudes). A mid-level low pressure area associated with a tropical disturbance is expected to be localized near 63E 8S in the Indian Ocean while a weak mid-level trough is expected to extend along the southeast coast of South Africa.

T+48h, a high pressure area is expected to prevail over a large part of the subcontinent and the mid-level low pressure area over Angola is expected to weaken and become a mid-level trough, it will cause a reduction of convective activity over there. The convergence areas over Zambia and Namibia are expected to prevail. The low pressure area over the Indian Ocean is expected to move to the north of Madagascar and deepen, this low pressure system will be associated with a trough extending northwest/southeast direction. A new mid-level trough is expected to prevail to the south of South Africa.

T+72h, a high pressure area is expected to dominate over a large part of the subcontinent, the trough system over Angola is expected to continue weakening and shift further west. The low pressure area which was north of Madagascar is expected to move southeastward and will cause a mid-level trough extending over the northern Madagascar and northern Mozambique. Another midlevel trough system is also expected over central Mozambique.

FLOW AT 200MB

T+24h, an upper level high pressure area is expected to dominate a large part of the subcontinent with divergent flow over southern Angola and northeastern Namibia. An upper level high pressure area is expected to ridge over northern Madagascar. These two systems will contribute to an easterly divergent flow over western Tanzania and DRC. An upper level trough is expected to prevail over southern South Africa.

T+48h, an upper level high pressure area is expected to continue dominating a large part of the subcontinent, but only with a divergent flow over northern Botswana. An upper level high pressure area is expected to move toward northern Madagascar. These systems will contribute to a southeasterly divergent flow over DRC. The trough system which was over southern South Africa will move further east over the Indian Ocean.

T+72h, the upper level high pressure area is expected to dominate the subcontinent with a divergent flow over northern Namibia. This system will cause a confluent southeasterly flow over DRC. A trough system is expected to prevail over central to southern Madagascar. An upper level trough system is expected to prevail to the south of South Africa.

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