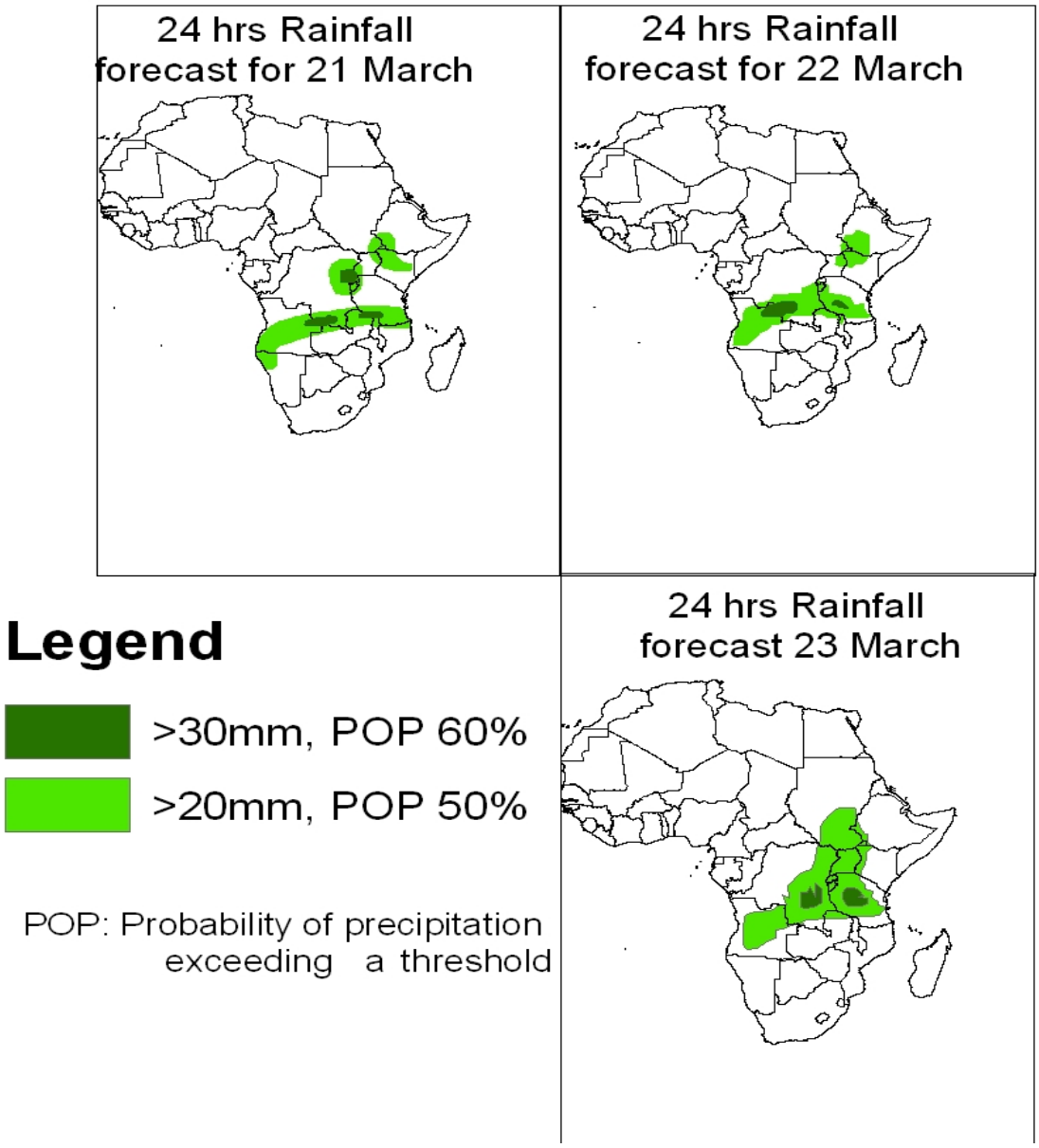
Forecasting guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

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

FORECAST DISCUSSION 14H00 EST, 20TH MARCH 2008
Valid: 00Z 21ST MARCH 2008-00Z 23RD 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 figure, for the dates of 21 to 23 march 2008.



2: MODELS DISCUSSION:

Models comparison (Valid from 00Z; 20th MARCH 2008): There is an agreement of UK MET, ECMWF and GFS models about a scenario over the subcontinent. There major discrepancies between them is concerning 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 anticylonic flow pattern is expected to prevail over a large area of the eastern part of the subcontinent (southern Mozambique, Zimbabwe, southern Zambia, eastern Botswana and South Africa) due to influence of the St. Helena high pressure system. A low pressure area is expected to dominate over west Angola and a trough over southern Namibia is expected to develop that will cause convergence in the area. A low pressure area associated with a tropical disturbance is expected to dominate over the Indian Ocean

and northeast Madagascar, that will cause a southeasterly flow over northern Mozambique.

T+48h, the St. Helena high pressure system is expected to split into two parts, one, to the western part of the subcontinent and the other will be centered to the eastern part of the subcontinent with a northerly ridge into southern Tanzania. The low pressure area over western Angola and the trough over Namibia are expected to prevail and cause localized convergence over eastern Namibia, Angola and DRC while the low pressure area over the Indian Ocean and Madagascar is expected to prevail and cause convergence over central Tanzania.

T+72, the low pressure area over western Angola is expected to prevail and the trough over Namibia to fill allowing the two St. Helena high pressures centers to join and therefore influence the southern and eastern part of the subcontinent. The low pressure area over the Indian Ocean is expected to prevail.

FLOW AT 500MB

T+24h, a frontal system is expected to dominate to the southeast of South Africa over the Indian Ocean. It will be associated with a weak trough over the Mozambique Channel while a low pressure area associated with a tropical disturbance is expected do dominate over the Indian Ocean to the northeast of Madagascar with an imbedded high pressure system to the east of Madagascar. A low pressure area is expected to prevail over northeastern Angola and will contribute to convective activity over there. A mid-level high pressure system is expected to dominate over most of the subcontinent; Namibia, Botswana, Zimbabwe, southern and western Mozambique, Zambia and southeastern Angola, South Africa, reducing convective activity over these areas.

T+48h, a high pressure area associated with St. Helena high is expected to shift southwestward, causing a low pressure system to dominate over the northern part of the subcontinent (over northern Zambia, western Tanzania, DRC, and northern Angola) and convective activity to develop. A trough system is expected to prevail over the Mozambique Channel with a slight broadening over central Mozambique, Malawi and central Zambia. It will cause a diffluent flow pattern over northern Mozambique and southern Tanzania. A low pressure area associated with a tropical disturbance is expected to prevail over the Indian Ocean to the northeast of Madagascar.

T+72h, the high pressure over the subcontinent is expected to extend to the south and north. A wide area of low pressure is expected to prevail over northern Angola and DRC, with a mid-level trough dominating over the Mozambique Channel to southern Madagascar and a ridge from eastern Madagascar to eastern Tanzania. This system will cause isolated convergence over a large area. A low pressure area associated with a tropical disturbance is expected to prevail over the Indian Ocean to the northeast of Madagascar. This system will be blocked by a high pressure to the its southeast.

FLOW AT 200MB

T+24h, an extensive upper level high pressure is expected to dominate over the central part of the subcontinent from the Atlantic Ocean to the Indian Ocean with centers over western Namibia, Zimbabwe, and a trough extending from southern Madagascar through to northern Mozambique. This system is expected to cause a strong westerly flow to the

south and an easterly flow over DRC and north Tanzania, and isolated convergence with possibly of convection over western Tanzania, central Mozambique and central to western Madagascar.

T+48h, the trough over the Mozambique Channel is expected to divide the extensive high pressure into two parts, one to the west and the other to the east of the subcontinent and cause divergent flow over DRC and Tanzania.

T+72h, the two high pressure centers are expected to prevail together with the trough across the southern Madagascar to the northern Mozambique causing convergence over central Madagascar.

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