



Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 21st March 2007

**AFRICA DESK
CLIMATE PREDICTION CENTER
National Centers for Environmental predictions
National Weather Service
NOAA
Camp Springs MD 20746**

FORECAST DISCUSSION 14H00 EST 21st March 2007

Valid: 00Z 22nd March 2007- 00Z 24th March 2007.

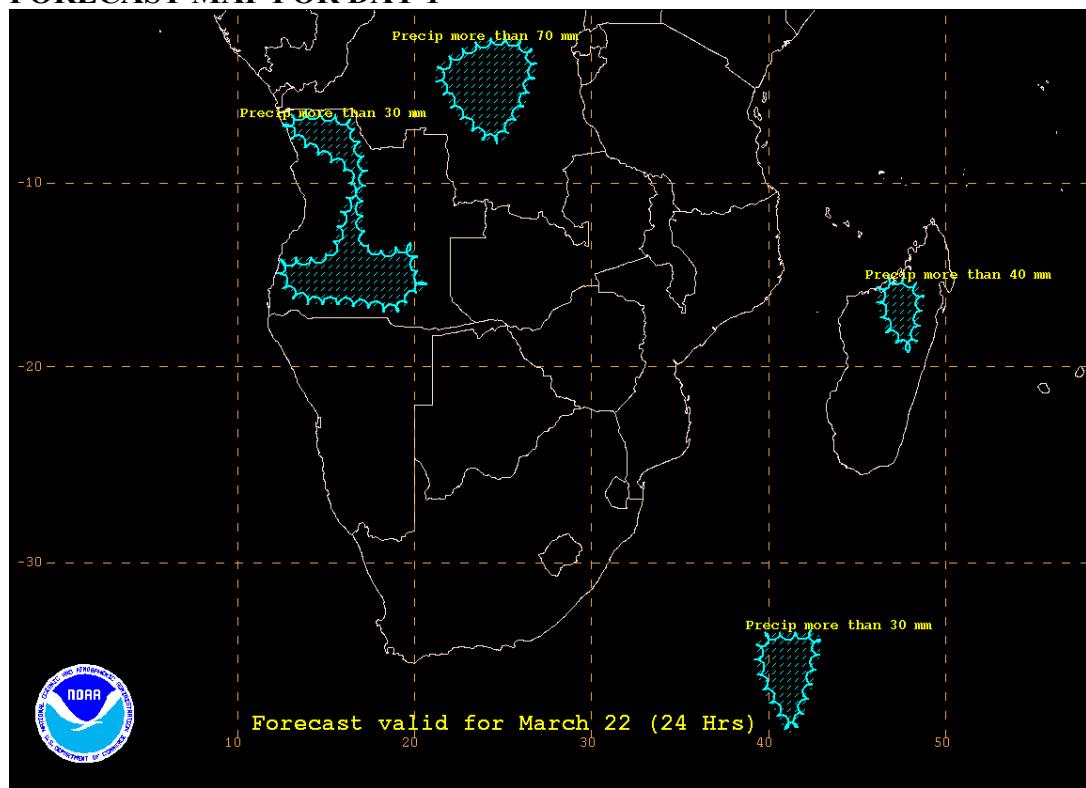
At T+24 hrs, the general flow pattern at 200hpa over Southern Africa (South of the Equator) depicted by GFS, UK-MET and ECMWF models, is a high pressure system with the center lying over Zimbabwe (19°S 29°E), causing divergence over most parts of the sub continent. There is a trough over the Atlantic Ocean (west of 10°E longitude), approaching the southwestern coast of the sub continent. Another trough is lying to the southeast of Madagascar, causing convergence over southeastern Madagascar. At T+48 hrs, anticyclonic flow prevails over most parts of the sub continent, except the southwestern part which is under convergence due to a trough. The trough to the southeast of Madagascar has slightly shifted to the east. Areas which are to the north of 5°S latitude are under convergence due to a trough. At T+72 hrs, there is no significant change in the general flow pattern, except that the trough which was over southwestern of the sub continent has weakened.

At 500mb, the Mascarene high has two cells, centered at 18°S 24°E and at 12°S 44°E , causing divergence over most parts of the sub continent. There is a trough over the Atlantic Ocean (west of 12°E longitude), approaching the southwestern coast of the sub continent. Another trough is lying over southern Madagascar, causing convergence over these areas. At T+48 hrs, the Mascarene high has three cells. One of the cells is centered at 19°S 25°E , causing divergence over most of the sub continent, the other cell is centered at 22°S 35°E causing divergence over southern and central parts of Mozambique and another cell is lying to the northeast of Madagascar. Divergence prevails over the rest of the sub continent, except over southwestern of the sub continent where there is convergence. The trough lying over southern Madagascar has gradually shifted farther east. At T+72 hrs, the trough over southwestern of the sub continent has shifted southeastward, reducing its effect over these areas. Elsewhere divergence prevails.

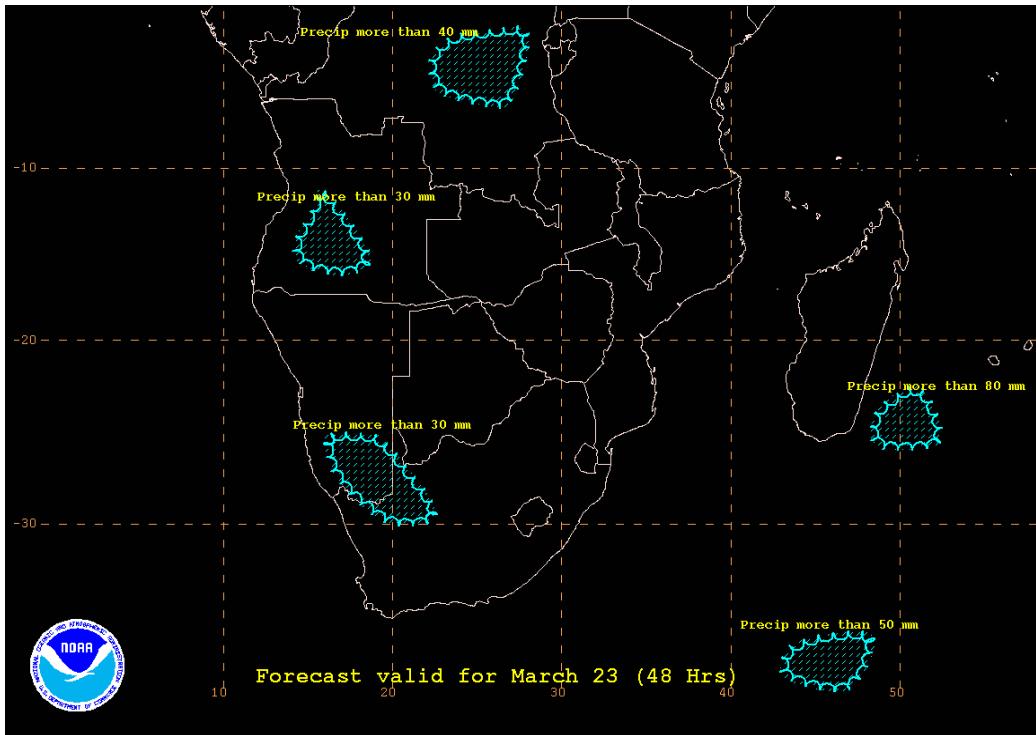
The 5700m and 5870m isolines of the 500mb heights of the GFS ensemble prediction system, at T+ 48 hrs, show a large spread up and downstream of the ensemble mean, over the continent, denoting uncertainty in the location of the feature of the high pressure system.

At 850mb, there are lows over Namibia/Botswana border, South Africa and over the coast of Angola, causing convergence over these areas. Convergence is also visible over D.R. Congo. There is another low to the southeast of the sub continent, centered at 36°S 41°E. The Mascarene high pressure system has two cells centered at 30°S 70°E and at 18°S 45°E. The cell of the Mascarene high centered at 18°S 45°E is throwing a ridge over the eastern parts of the sub continent, hence divergence over these areas. The St Helena high with two cells centered at 35°S 5°W and at 49°S 29°E is ridging into western parts of the sub continent. At T+48 hrs, the low which was to the southeast coast of South Africa has shifted southeastwards, hence convergence over southern Madagascar. Convergence over South Africa, Namibia, and Botswana and over the coast of Angola is maintained. The rest areas of the sub continent are under divergence. At T+72 hrs, the low over the coast of Angola has slightly filled up, and there is convergence over Botswana, South Africa and the coast of Namibia. Areas which are to the north of 10°S are under convergence due to a trough. Divergence prevails over the rest of the sub continent.

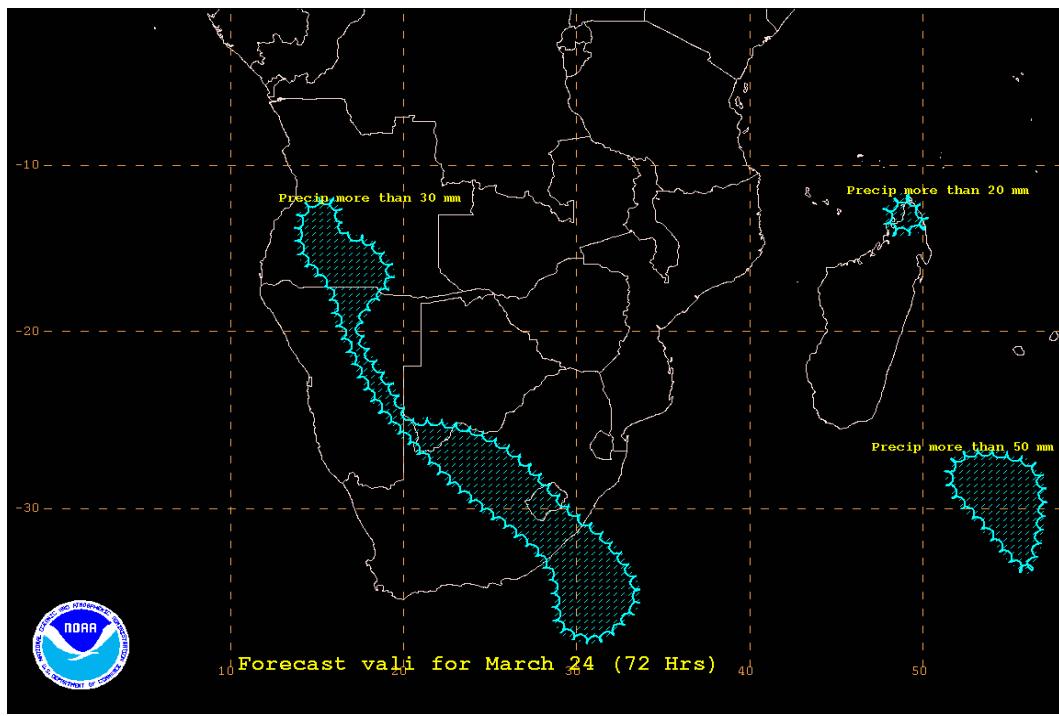
FORECAST MAP FOR DAY 1



FORECAST FOR DAY 2



FORECAST MAP FOR DAY 3



Authors:

Sérgio Buque:- Mozambique Meteorological Services and African Desk

Oliver Moses:- Botswana Meteorological Services and African Desk