



**Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)**

**SHORT RANGE FORECAST DISCUSSION 14H00 EST 09<sup>th</sup> April 2007**

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

**FORECAST DISCUSSION 14H00 EST 09<sup>th</sup> April 2007**

**Valid: 00Z 10<sup>th</sup> April 2007- 00Z 12<sup>th</sup> April 2007.**

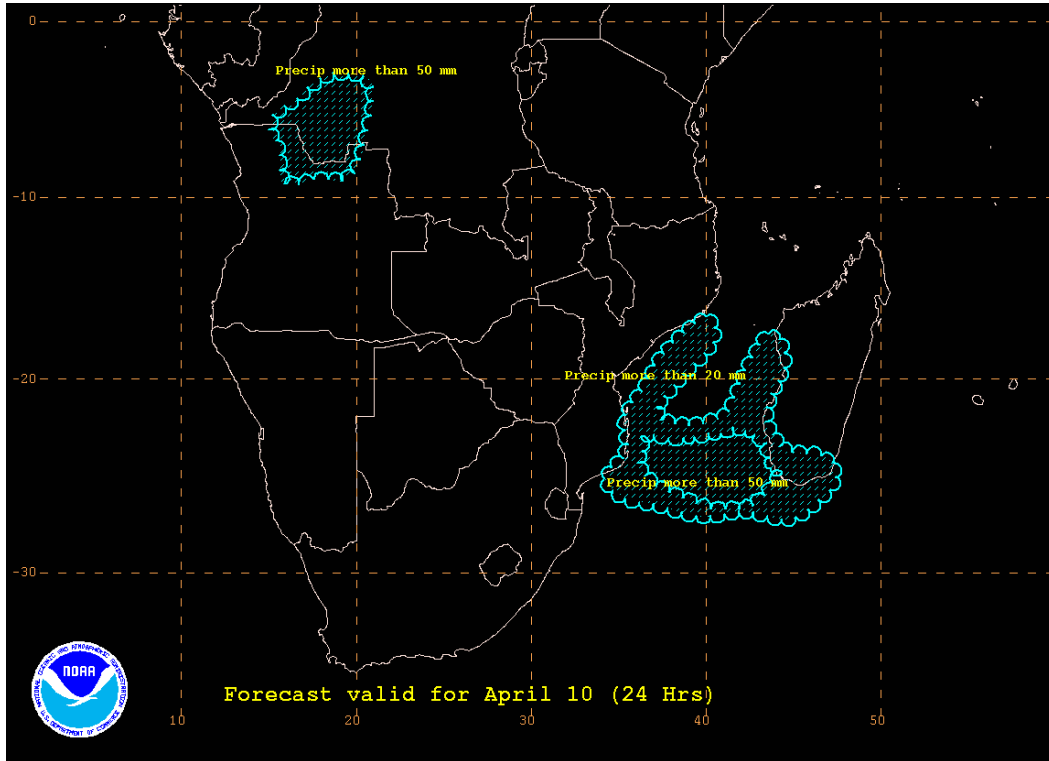
At T+24 hrs, the general flow pattern at 200hpa over Southern Africa (South of the Equator) as shown by the GFS, ECMWF and UK-MET models, is a persistent low system centered at 9°S 51°E, causing convergence over areas which are to the north of Madagascar. The models show a trough over the southeastern part of the sub continent, with a northwesterly flow and winds up to 50 kt, causing convergence over eastern South Africa and southern Mozambique. Another trough is over the Atlantic Ocean, approaching the western coast of the sub continent. There is a high pressure system centered at 5°S 20°E throwing a ridge over the rest of the sub continent. At T+48 hrs, the persistent low system which was centered at 9°S 51°E, is maintained. The trough which was over the southeastern part of the sub continent, with northwesterly winds up to 50 KT as slightly shifted eastward, causing convergence over the areas which are between 31°E and 49°E longitude and 20°S and 40°S latitude. There is a trough to the southwestern coast of the sub continent, causing convergence over these areas. Elsewhere the general flow pattern is maintained. At T+72 hrs, the trough over the southeastern part of the sub continent has shifted to the Mozambican Channel, weakening in amplitude. The trough to the southwestern coast of the sub continent is slightly shifting eastward. Elsewhere the general flow pattern prevails, except that there is a bud-off high to the eastern coast of Madagascar ridging the northern parts of Madagascar, hence subsidence.

At 500mb, the GFS models show a shallow trough over the central Mozambique stretching into central Zambia, with a closed circulation at 24°S 39°E. There is a trough over eastern coast of South Africa, linking the trough over central Mozambique, causing convergence over these areas. A persistent deep low is lying to the east of the coast of Tanzania (9°S 47°E). The three models show the Mascarene high with two cells centered at 19°S 62°E and at 33°S 49°E, hardly ridging the eastern parts of the sub continent but blocking the deepening of the shallow trough with a closed circulation. The St Helena

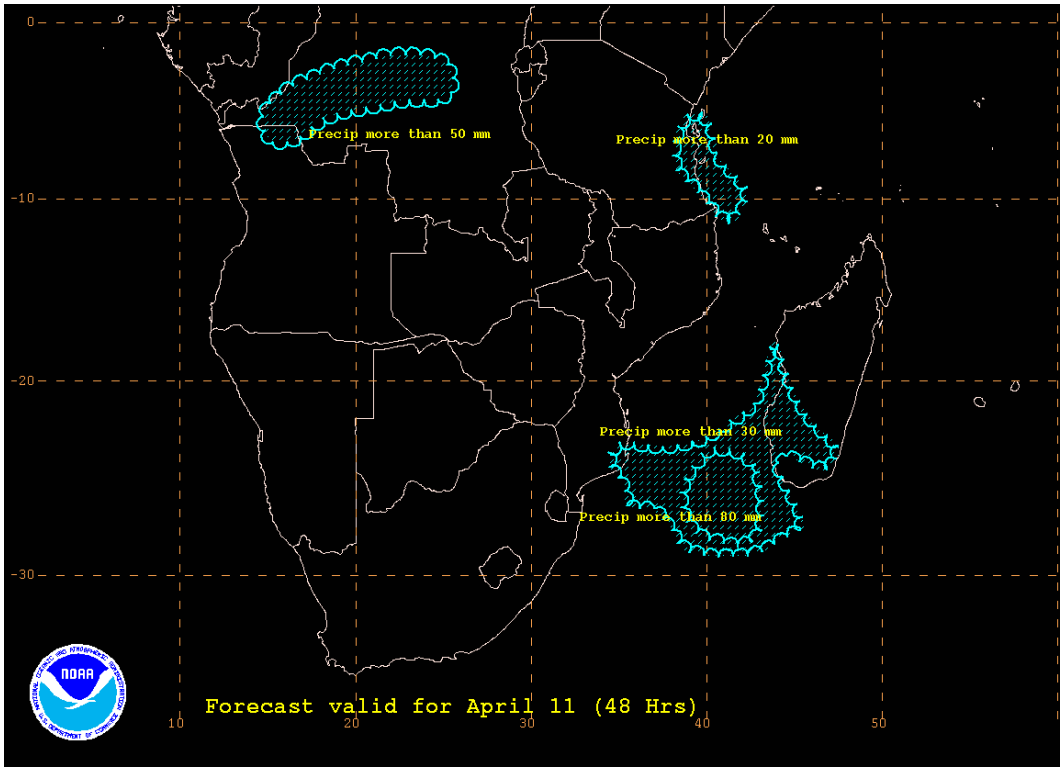
high also has two cells with centers located at  $9^{\circ}\text{S } 8^{\circ}\text{E}$  and at  $22^{\circ}\text{S } 19^{\circ}\text{E}$ , ridging into most of the sub continent. At T+48 hrs, the three models show that the shallow trough linked to the trough over eastern South Africa has shifted eastwards, stretching into central Zambia. There is a trough over the Atlantic Ocean, approaching the southwestern coast of the sub continent. Convergence to the east coast of Tanzania is maintained. Convergence can also be seen over southwestern D.R. Congo/Angola border, where there is a low. The models also show that the ridges of the Mascarene and the St Helena highs prevails over the rest of the sub continent, hence divergence. At T+72 hrs, the trough which was over the Atlantic Ocean, approaching the southwestern coast of the sub continent has shifted eastward, hence convergence over southeastern Namibia and South Africa. The trough which was over the south eastern coast of the sub continent has weakened as the St Helene high shifts eastward. The low which was to the east coast of Tanzania has shifted westward, causing convergence over the coast of Tanzania and the southeastern coast of Kenya. Slight convergence can be seen over Zambia and northeastern Angola. The rest of the sub continent is under divergence. The ensemble members of the GFS show a huge spread of the 5700m and 5870m height contours over Angola/Zambia border and central D.R. Congo at T+24 up to T+72, which implies uncertainty in the position and stretching of the trough over central Mozambique and the low over D.R. Congo.

At 850mb, there is a deep low lying over southern Mozambican Channel near  $21^{\circ}\text{S } 39^{\circ}\text{E}$ ; hence intense thundershowers are expected to continue over central and southern coast of Mozambique, over the channel and over the southwestern coast of Madagascar. A shallow trough is causing convergence over the southwestern coast of South Africa. The St Helene high with its center located at  $31^{\circ}\text{S } 11^{\circ}\text{E}$  is ridging into the western coast of the sub continent. The Mascarene high is centered at  $39^{\circ}\text{S } 41^{\circ}\text{E}$  and is throwing a ridge over the most of the sub continent. At T+48 hrs, the deep low shifts south-southeastward, intense thundershowers and strong winds are expected to persist over central and southern coast of Mozambique, over Mozambican Channel and also over the southwestern coast of Madagascar, but some reduction over central Mozambican Channel. The shallow trough which was approaching the southwestern coast of the sub continent has deepened, causing convergence over the western coast of Namibia, and South Africa. Convergence is also seen over D.R. Congo/Angola southwestern border and northeastern D.R. Congo. The St Helen high is hardly ridging the western coast of the sub continent. Divergence prevails over the rest of the sub continent. At T+72 hrs, the deep low over southern Mozambican Channel has shifted southeastward. The trough which was over the southwestern coast of the sub continent has shifted to the southeast, causing convergence over the areas which are to the east of  $25^{\circ}\text{E}$  longitude but to the south of  $22^{\circ}\text{S}$  latitude. The low over northeastern D.R. Congo has shifted northeastward to the north of the equator. Slight convergence can be seen over southern Botswana and Namibia. Divergence is maintained over the rest of the sub continent. There is a reasonable agreement between the ensemble products of the 50 mm isolines of 6 hourly total precipitations over southern Mozambican Channel, up to T+48 hrs.

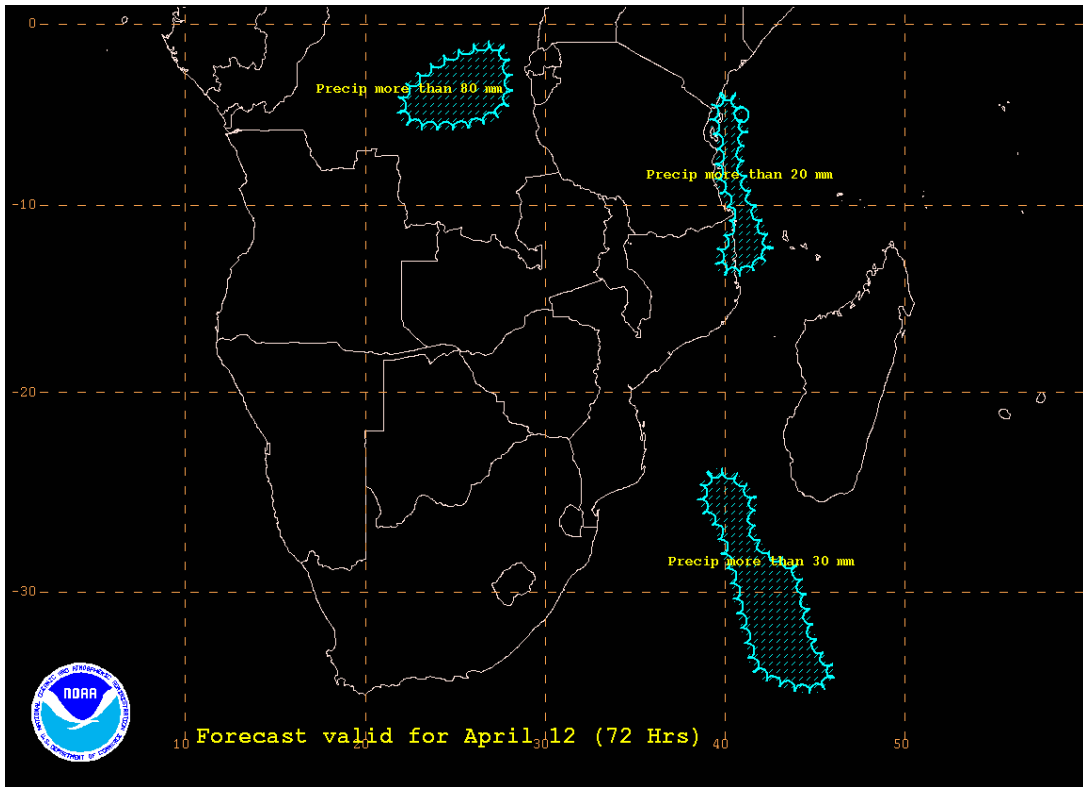
## FORECAST MAP FOR DAY 1



## FORECAST MAP FOR DAY 2



**FORECAST MAP FOR DAY 3**



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