



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

**SHORT RANGE FORECAST DISCUSSION 14H00 EST 13<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 13<sup>th</sup> April 2007**

**Valid: 00Z 14<sup>th</sup> April 2007- 00Z 16<sup>th</sup> April 2007.**

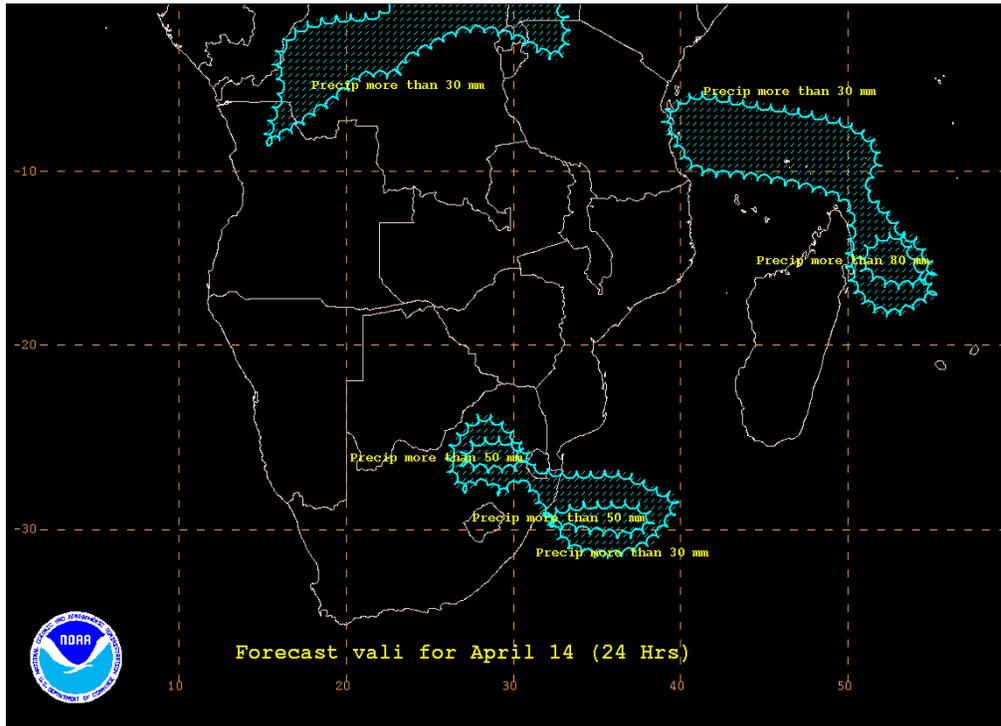
***Highlights:** A persistent deep low system lying to the further north of the coast of Madagascar, near 4°S 47°E, supported by a shallow trough at 500 mb is tracking westward. The presence of a low at 200 mb is expected to block its deepening, but intense rainfall over these areas is expected to prevail.*

At 200mb, the GFS, ECMWF and UK-MET models show the following general flow pattern over Southern Africa (South of the Equator). There is a shallow trough over northern Mozambique with a closed circulation over central Tanzania (8°S 36°E), hence convergence over these areas. A trough over the southwestern coast of the sub continent is causing convergence over southwestern Namibia and western South Africa. There is a low lying to the east of the coast of Tanzania (4°S 65°E) inducing convergence over these areas also. A high pressure system has its center located over southern D.R. Congo (5°S 21°E), causing divergence over the rest of the sub continent. At T+48 hrs, the shallow trough which was over northern Mozambique with a closed circulation over central Tanzania, prevails and the low lying to the east of the coast of Tanzania has shifted westward, to 5°S 47°E. The trough which was over southwestern coast of the sub continent slightly shifts eastward, causing convergence over southern Namibia, central and eastern South Africa. Elsewhere divergence prevails. At T+72 hrs, the shallow trough which was over northern Mozambique has weakened but the cut-off low over central Tanzania prevails. The ECMWF and UK MET OFFICE models put this low over northwestern Tanzania. The low which was at 5°S 47°E has shifted southwestward to the northern Mozambican Channel, causing convergence over these areas. The trough over the southern parts of the sub continent has shifted further eastward causing convergence over most of the southeastern parts of South Africa. The rest of the sub continent is under divergence.

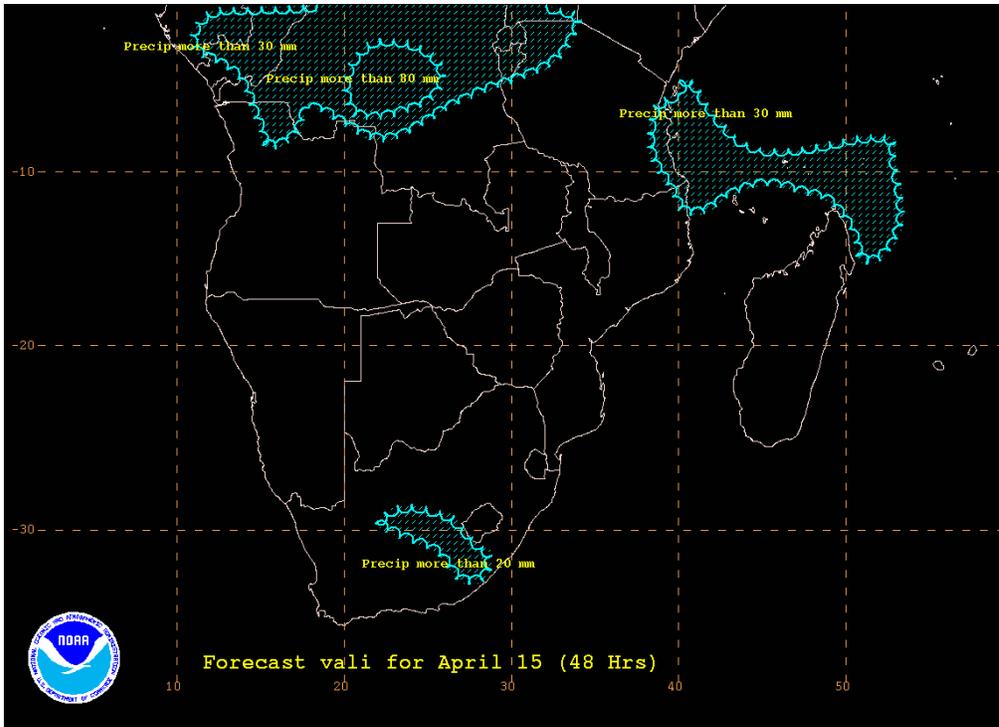
At 500mb, the GFS models show a trough over southwestern coast of the sub continent, causing convergence over southwestern Namibia and western South Africa. Convergence is also seen over areas which are to the northwest of Angola, northern D.R. Congo and Tanzania. The three models show the Mascarene high centered over central Mozambican Channel at 18°S 42°E, throwing a ridge over the rest of the sub continent. At T+48 hrs, the three models show that the trough which was over southwestern coast of the sub continent has shifted to central South Africa, has the St Helene high centered at 27°S 9°E is hardly ridging the southwestern coast of the sub continent. There is a slight convergence over the areas which are to the north of the Mozambican Channel and northwestern Namibia. The rest of the sub continent is under divergence of the Mascarene high. At T+72 hrs, the trough which was over the central parts of South Africa has slightly shifted to the southeast, causing convergence over southeastern South Africa. There is a cut-off low over the southeastern coast of Tanzania, causing convergence over these areas. Another trough is lying over the Atlantic Ocean, approaching the southwestern coast of the sub continent. The Mascarene high has shifted northwestward throwing a ridge into the rest of the sub continent. The ensemble members of the GFS show a huge spread of the 5700m and 5870m height contours over which are to the north of Mozambican Channel, to the north of the coast of Madagascar, central Tanzania and D.R. Congo at T+24 up to T+72, which implies uncertainty in the position of the shallow trough with a closed circulation, and the southwestward track of the cut-off low.

At 850mb, a is a deep low lying further northeast of the coast of Madagascar, near 4°S 47°E. There is a trough to the southwestern parts of the sub continent, aligned with a low lying over the coast of Namibia, causing convergence over these areas. Convergence is also seen over northern Angola, southwestern D.R. Congo and southern Namibia. The Mascarene high with its center located at 31°S 44°E is ridging the rest of the sub continent. At T+48 hrs, the deep low which was near 4°S 47°E, shifts westward, hence intense thundershowers and strong wind from the northern coast of Madagascar to the coast of Tanzania. The trough which was to the southeastern parts of the sub continent has shifted eastward, weakening as the St Helene high cell, centered at 30°S 1°E is ridging into the western coast of the sub continent. Convergence over Namibia, South Africa, western Angola and western D.R. Congo is maintained. Divergence caused by the Mascarene high prevails over the rest of the sub continent. At T+72 hrs, there is a trough over the southwestern coast of South Africa, causing convergence over these areas. The deep low to the east of the coast of Tanzania has filled up. Convergence is also seen over central and western South Africa, Namibia, western Angola and D.R. Congo. The St Helene high centered at 35°S 19°W is hardly ridging the western coast of the sub continent. The rest of the sub continent is under divergence of the Mascarene high. There is a huge spread between the ensemble products of the 50 mm isolines of 6 hourly total precipitations over eastern and northeastern South Africa, to the east of the coast of South Africa, from the eastern coast of Tanzania extending to the north of the coast of Madagascar and over D.R. Congo at T+24 up to T+48 hrs and northeastern South Africa at T+48 hrs, denoting uncertainty in the intensity of precipitation over these areas.

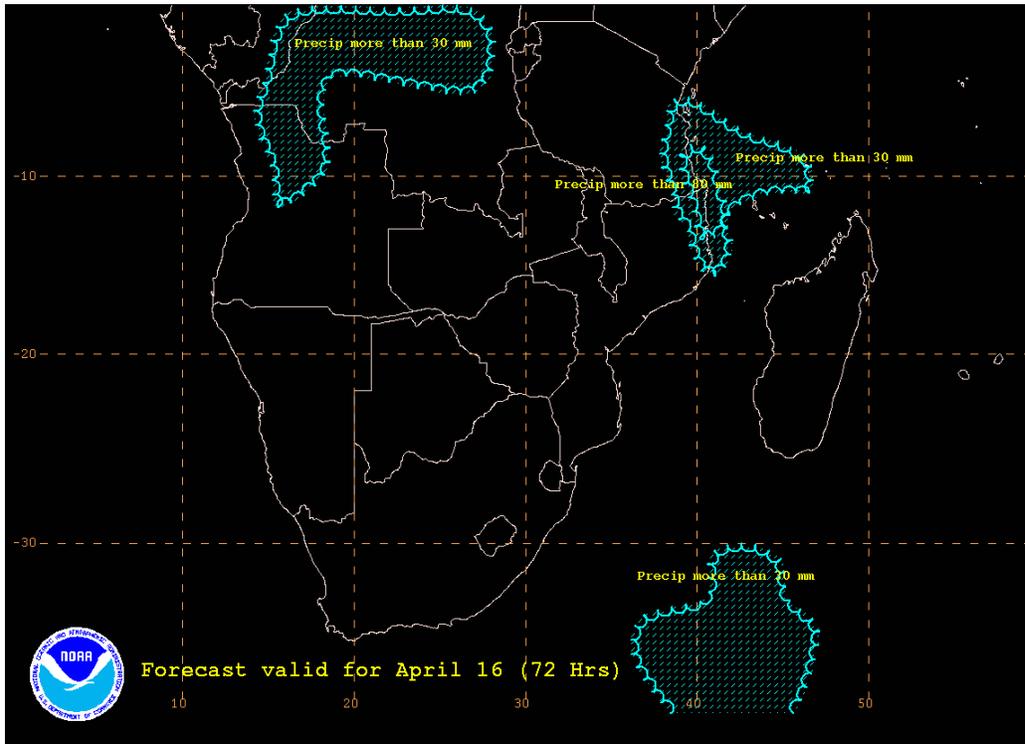
## FORECAST MAP FOR DAY 1



## FORECAST MAP FOR DAY 2



**FORECAST MAP FOR DAY 3**



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