



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

**SHORT RANGE FORECAST DISCUSSION 14H00 EST 07<sup>th</sup> May 2007**

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

**FORECAST DISCUSSION 14H00 EST 07<sup>th</sup> May 2007**

**Valid: 00Z 08<sup>th</sup> May 2007- 00Z 10<sup>th</sup> May 2007.**

**FLOW AT 200MB**

At T+24 hrs, the general flow pattern over Southern Africa (South of the Equator) shown by the GFS, ECMWF and UK-MET models indicates a shallow trough lying above the southeastern parts of the sub continent, with a closed circulation above northeastern South Africa (26°S 30°E), associated with northwesterly wind up to 75 kt, linked to the trough which is lying to the south of Madagascar. Another trough is lying above the southwestern coast of the sub continent, causing convergence over these areas. There is a bud-off high to the east of the southeastern coast of South Africa, hence subsidence. A high pressure system cell lying above northern Mozambican Channel (11°S 47°E) is causing divergence over the rest of the sub continent.

At T+48 hrs, the shallow trough which was lying above the southeastern parts of the sub continent, has shifted further east, weakening. The trough which was to the south of Madagascar has also shifted further east. The trough which was lying above the southwestern coast of the sub continent has slightly shifted eastward, causing convergence over central South Africa, southwestern Botswana and southeastern Namibia. Divergence over the rest of the sub continent is maintained.

At T+72 hrs, there is no significant change in the general flow pattern except that the trough which was lying above central South Africa has shifted eastward.

**FLOW AT 500MB**

At T+24 hrs, the GFS models show a trough lying above southwestern coast of the sub continent, causing convergence over western South Africa and southwestern Namibia. There is a shallow trough above southern Madagascar, causing convergence over these areas. Areas of convergence can also be seen over northern Botswana and southeastern Angola, due to a shallow trough with a closed circulation over northern Botswana (19°S 24°E). The Mascarene high has two cells, centered at 30°S 32°E and at 14°S 40°E throwing a ridge into the rest of the sub continent.

At T+48 hrs, the shallow trough with a closed circulation over Botswana has deepened, extending its influence into western Zambia, southern Zimbabwe, southwestern Mozambique and northeastern South Africa. Slight convergence over southwestern Madagascar, prevails. The trough which was lying above southwestern coast of the sub continent has shifted southeastward, weakening in amplitude. The three models show that the St Helene high with two cells, centered at 26°S 2°W and at 5°S 10°E, is throwing a ridge into the western coast of the sub continent. The rest of the sub continent is under divergence of the Mascarene high.

At T+72 hrs, the shallow trough with a closed circulation has weakened in amplitude as the St Helene high shifts eastward. Slight convergence over southern Madagascar prevails. Divergence over the rest of the sub continent is maintained.

### **FLOW AT 850MB**

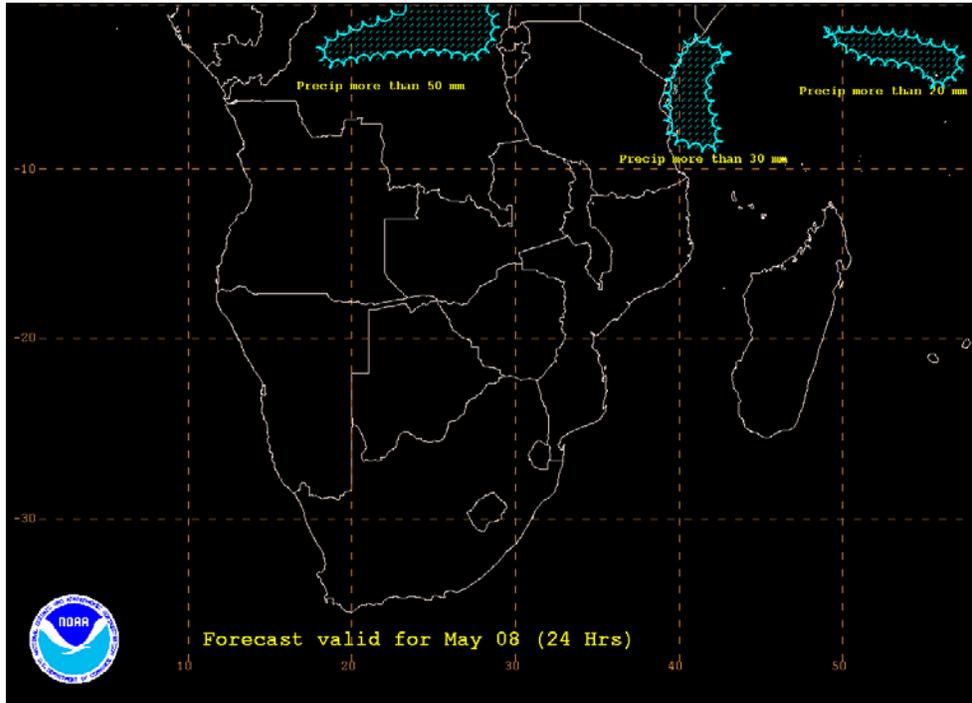
At T+24 hrs, there is a shallow trough lying over the western coast of South Africa, causing convergence over these areas. Areas of convergence can also be seen over northwestern D.R. Congo, northeastern coast of Tanzania and over the southeastern coast of Kenya, due to a southeasterly trough. The St Helene high cell is centered at 28°S 10°W, hardly ridging the southwestern coast of the sub continent. The Mascarene high centered at 31°S 40°E is throwing a ridge into the rest of the sub continent and causing onshore flow along the central and northern coast of Mozambique.

At T+48 hrs, there is no significant change in the general flow pattern, except that the shallow trough which was lying over the western coast of South Africa has slightly shifted eastward. Onshore flow over central and northern coast of Mozambique prevails.

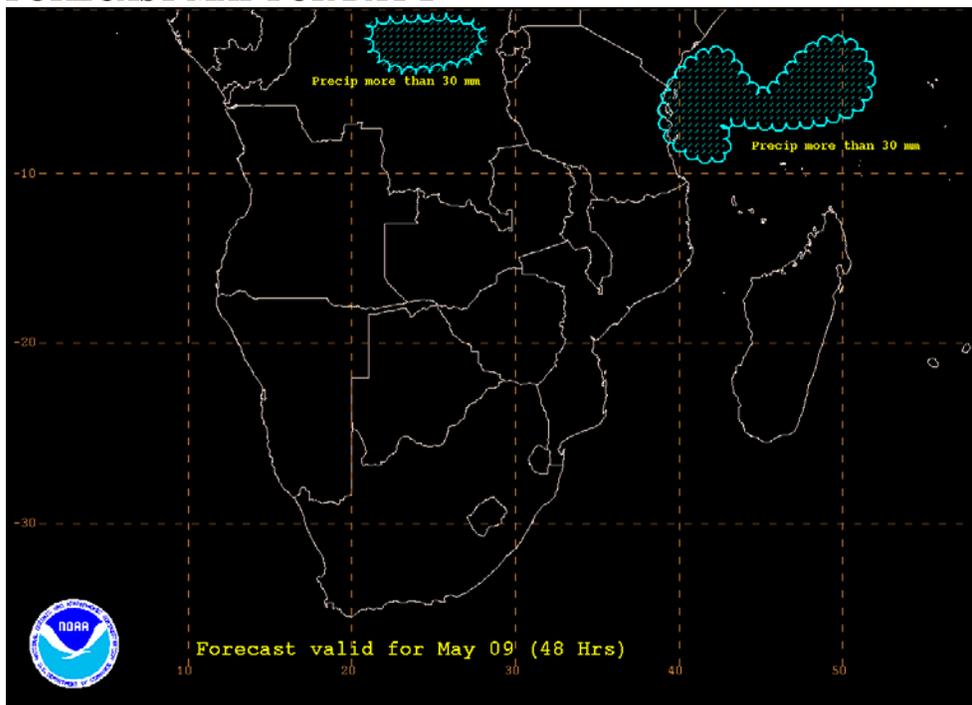
At T+72 hrs, onshore flow along the northern coast of Mozambique prevails. There is a shallow trough to the south of Mozambican Channel. Areas which are to the north of 12°S are under convergence due to the southeasterly trough. The rest of the sub continent is under divergence of the Mascarene high and St Helene high.

There is a huge spread between the ensemble products of the 50 mm isolines of 6 hourly total precipitations over northwestern D.R. Congo, northeastern coast of Tanzania, southeastern coast of Kenya and to the north of the northern coast Madagascar up to T+54 hrs, denoting uncertainty in the intensity of precipitation over these areas.

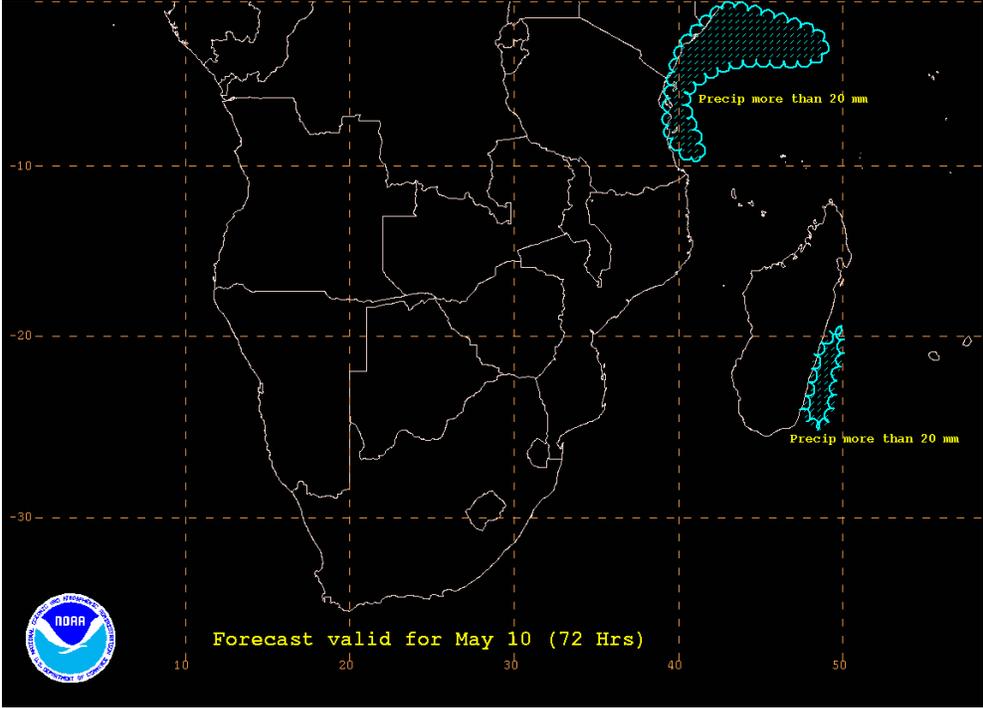
### FORECAST MAP FOR DAY 1



### FORECAST MAP FOR DAY 2



**FORECAST MAP FOR DAY 3**



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