



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

**SHORT RANGE FORECAST DISCUSSION 14H00 EST 25<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 24<sup>th</sup> May 2007**

**Valid: 00Z 26<sup>th</sup> May 2007- 00Z 28<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 trough to the southeastern coast of the sub continent, with its southwest axis lying at 60°S 51°E and its northwest axis above 28°S 20°E, associated to west-northwesterly stream up to 130 kt, causing convergence over these areas. Areas which are over the southern extreme of the sub continent are under subsidence. A high pressure system cell centered above southern Tanzania (9°S 34°E) is causing divergence over the rest of the sub continent.

At T+48 hrs, the trough which was to the southeastern coast of the sub continent has shifted northeastward linking a shallow trough above western Mozambique, due to a ridge, and causing convergence over these areas. Anticyclonic flow prevails over the rest of the sub continent.

At T+72 hrs, there is no significant change in the general flow pattern except that, the trough which was to the south of Madagascar has shifted eastward stretching into northern Mozambican Channel. There is a shallow trough to the southwestern coast of South Africa.

**FLOW AT 500MB**

At T+24 hrs, the GFS and UK-MET models show a upper level trough to the south of Madagascar, linking a shallow trough over central Mozambique. Another shallow trough, with a closed circulation, is lying over eastern South Africa, causing convergence over these areas. The Mascarene high with two cells, centered at 29°S 71°E and at 13°S 53°E is ridging the northeastern parts of the sub continent. The sub tropical high pressure system has also two cells, centered at 32°S 8°W over northwestern Angola (10°S 20°E), throwing a ridge into the rest of the sub continent.

At T+48 hrs, the upper level trough which was to the south of Madagascar has shifted eastward and the shallow trough over central Mozambique with a closed circulation

linked to the upper level trough, is deepening (tear-off stage). Subsidence of the Mascarene and the sub tropical highs prevails over the rest of the sub continent. At T+72 hrs, the upper level trough which was to the southeast of Madagascar has shifted southeastward, weakening in amplitude. The trough which was over central Mozambique has slowly weakened shifting northeastward as the subtropical high has shifted eastward dominating the weather in the southern parts of the sub continent, hence subsidence, but causing onshore flow along the central coast of Mozambique. Slight convergence can be seen over southeastern Zambia. The rest of the sub continent is under divergence, due to the Mascarene high.

The ECMWF show a upper level low near 17°S 36°E, associated with the trough over central Mozambique, enhancing convergence over the central coast of Mozambique.

### **FLOW AT 850MB**

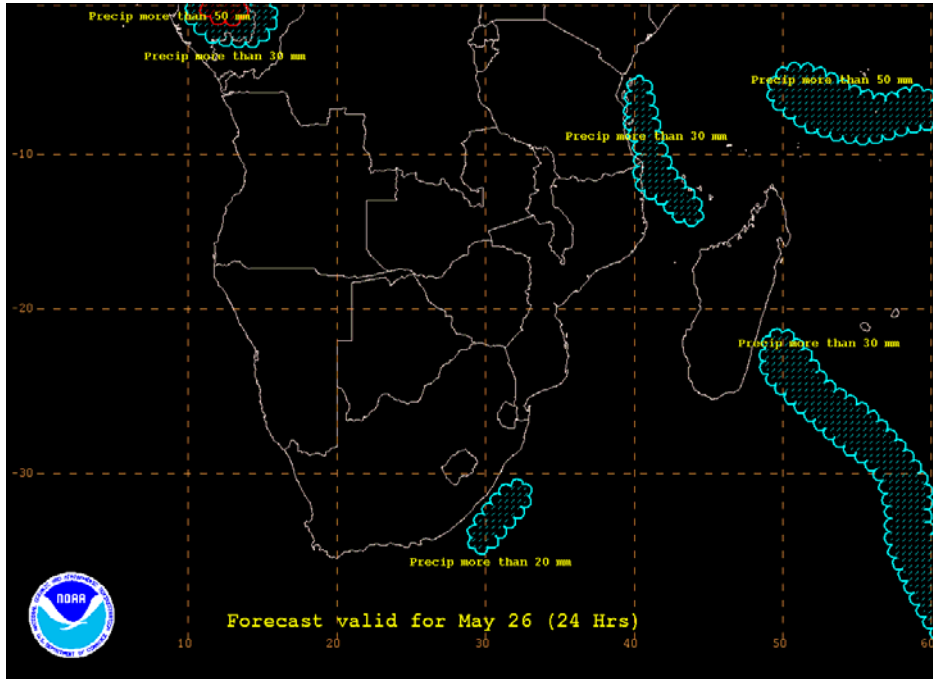
At T+24 hrs, there is a trough to the southeast of the coast of Madagascar associated with southwest-northwesterly winds up to 35 kt, weakening in amplitude. A southeasterly trough with a closed circulation near 8°S 55°E is causing convergence over the coast of Kenya, Tanzania and northeastern D.R. Congo. There is a trough lying to the southwestern extreme of the coast of South Africa. The Mascarene high pressure cell centered at 31°S 71°E is ridging the southeastern coast of Madagascar and Tanzania and also causing onshore flow along the eastern coast of Madagascar and along the coast of Tanzania. The St Helene high is centered at 34°S 1°E, throwing a ridge into the western coast of South Africa. There is a sub tropical high pressure system lying over eastern South Africa (29°S 30°E), ridging the most of the sub continent and causing onshore flow along the coast of Mozambique.

At T+48 hrs, the trough which was to the southeast of the coast of Madagascar has shifted eastward has the sub tropical high shifted eastward. Convergence over the coast of Kenya, Tanzania and over northeastern coast of Mozambique prevails as the cut-off low associated to the southeasterly trough has shifted northwestward, thus strong wind and heavy rainfall over these areas is expected. The trough which was to the extreme southwest of the coast of South Africa has shifted eastward. Anticyclonic flow prevails over the rest of the sub continent.

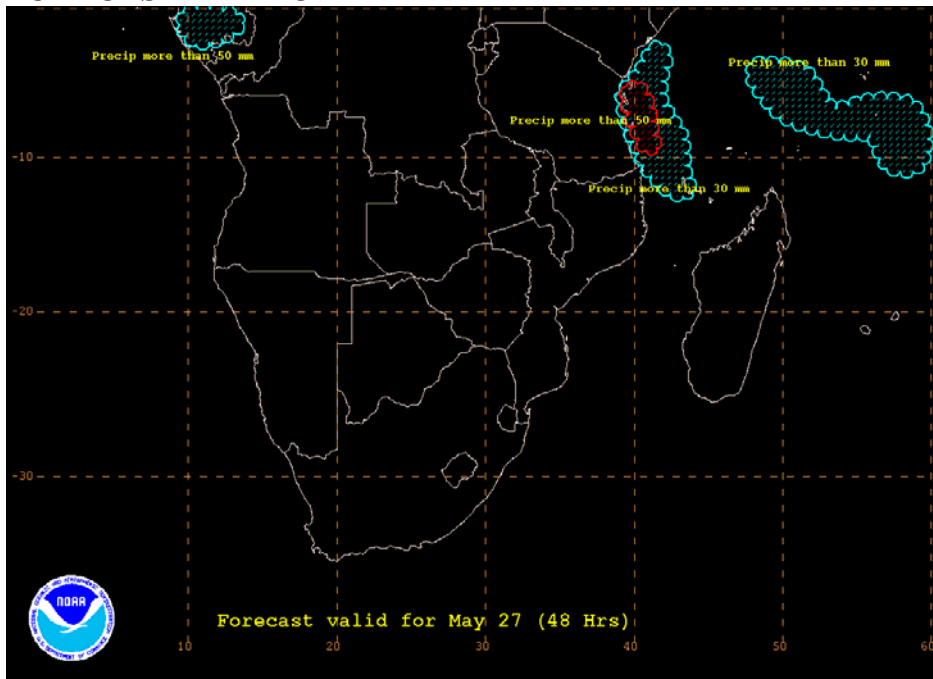
At T+72 hrs, there is no significant change in the general flow pattern except that, the shallow trough which was to the extreme south of the coast of South Africa has shifted eastward, weakening in amplitude.

There is a reasonable spread within the mean in the ensemble products of the 50 mm isolines of 6 hourly total precipitations to the north of the coast of Madagascar, over Gabon, to the extreme northeast of the coast of Mozambique and to the eastern coast of Tanzania up to T+72 hrs, which implies that the mean precipitation expected over these areas is near or exceeds 50 mm.

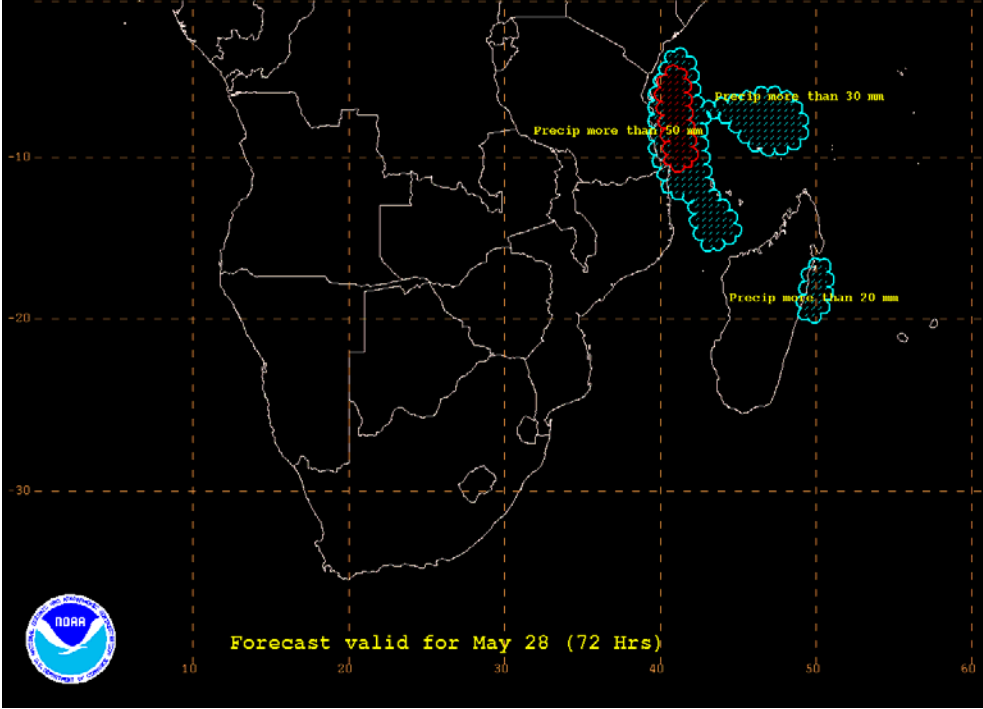
### FORECAST MAP FOR DAY 1



### FORECAST MAP FOR DAY 2



**FORECAST MAP FOR DAY 3**



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