



Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 15th May 2007

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

FORECAST DISCUSSION 14H00 EST 15th May 2007

Valid: 00Z 16th May 2007- 00Z 18th 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 lying above northern Madagascar stretching into eastern Tanzania. Another trough is lying to the southwestern coast of the sub continent, associated with westerly stream up to 110 kt, causing convergence over these areas. A high pressure system cell lying above southern D.R. Congo (8°S 27°E), is causing divergence over the rest of the sub continent.

At T+48 hrs, the trough which was lying above northern Madagascar stretching into eastern Tanzania has slightly shifted eastward, weakening in amplitude, due to a ridge. The trough which was lying above the southwestern coast of the sub continent has also shifted eastward. There is a shallow trough lying above eastern Zimbabwe, with a closed circulation over northern Zambia (10°S 30°E), causing convergence over eastern Zimbabwe, western Mozambique and northern Zambia. The rest of the sub continent is under divergence.

At T+72 hrs, there is no significant change in the general flow pattern except that the trough which was lying above the southern parts of the sub continent has shifted eastward, linking the shallow trough which was above eastern Zimbabwe.

FLOW AT 500MB

At T+24 hrs, the GFS models show a trough lying to the south of the Mozambican Channel, causing convergence over these areas. Another trough is lying above the southwestern coast of the sub continent. Convergence is also seen over Botswana / Zimbabwe border, to the northwest of the coast of Namibia, northwestern Gabon and eastern coast of Madagascar, due to shallow troughs. The Mascarene high with two cells, centered at 25°S 62°E and at 11°S 29°E is ridging the rest of the sub continent.

At T+48 hrs, the trough which was lying over southwestern coast of the sub continent has shifted eastward. Convergence over eastern Zimbabwe, western Mozambique, central

Zambia and northwestern Gabon prevails. The St Helene cell centered at 27°S 10°E is throwing a ridge into the southwestern parts of the sub continent. Divergence over the rest of the sub continent is maintained.

At T+72 hrs, the trough which was lying over southern parts of the sub continent has shifted to southern Mozambique, linking the shallow trough which was over eastern Zimbabwe, causing convergence over these areas. Convergence is also seen over the coast of Kenya, central D.R. Congo, western Gabon and over the eastern coast of Madagascar. Over the rest of the sub continent, there is no significant change in the general flow pattern.

FLOW AT 850MB

At T+24 hrs, there is a trough lying to the south of the Mozambican Channel, causing convergence over these areas. Areas which are to the north of 6°S latitude but to the east of 6°E longitude are under convergence due to a southeasterly trough, thus isolated thundershowers and strong wind is expected over these areas. Areas of convergence can also be seen over the coast of Namibia, due to a cut-off low. The Mascarene high pressure cell centered at 33°S 70°E is throwing a ridge into Madagascar and northeastern parts of Mozambique, but causing onshore flow along the northeastern coast of Madagascar, northeastern extreme of the coast of Mozambique and over southeastern Tanzania. The St Helene high is centered at 28°S 2°W , hardly ridging the southwestern parts of the sub continent. There is a sub tropical high pressure cell, lying over South Africa (32°S 27°E), causing onshore flow along southern Mozambique.

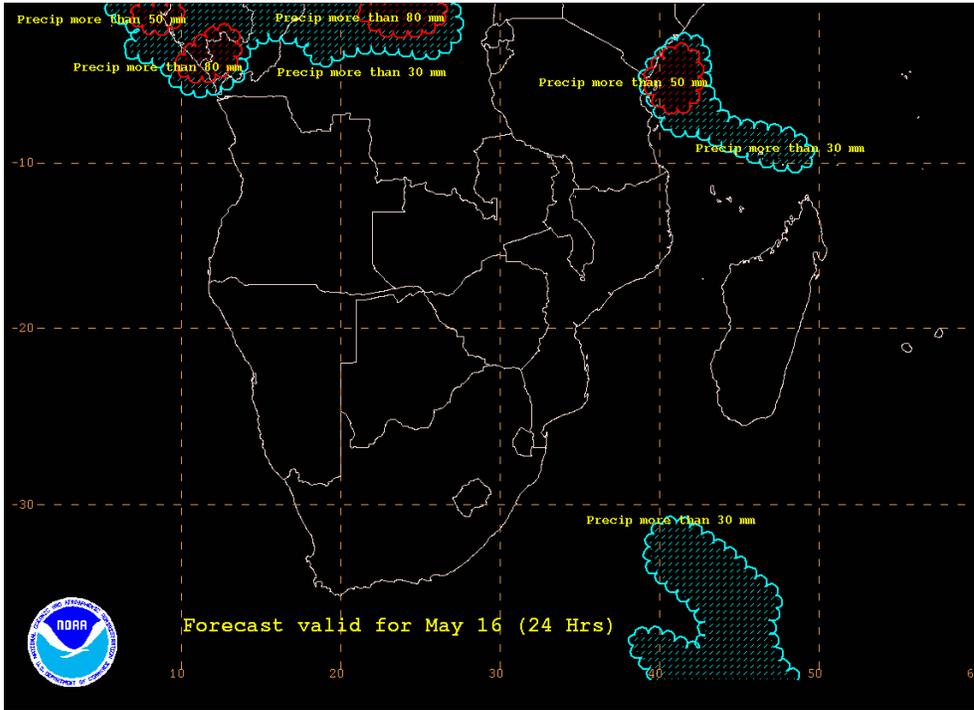
At T+48 hrs, the trough which was lying to the south of the Mozambican Channel has shifted eastward, weakening in amplitude as the sub tropical high shifts northeastward. There is a trough over southern South Africa with its southeast axis lying at 52°S 39°E and its northwest axis lying at 32°S 20°E . Over the rest of the sub continent, there is no significant change in the general flow pattern.

At T+72 hrs, the trough which was lying over southern South Africa has shifted further east, due to a ridge, causing convergence over the southern extreme of Mozambique and to the southern coast of Madagascar. The cut-off low which was lying over the western coast of Namibia has shifted westward. Areas which are to the north of 10°S latitude are under convergence due to a southeasterly trough. The Mascarene high cell, centered at 29°S 69°E is ridging into Central parts of the sub continent, maintaining the onshore flow regime along northern coast of Mozambique, northeastern Madagascar and also along the southeastern coast of Tanzania. Anticyclonic flow prevails over the rest of the sub continent, hence subsidence.

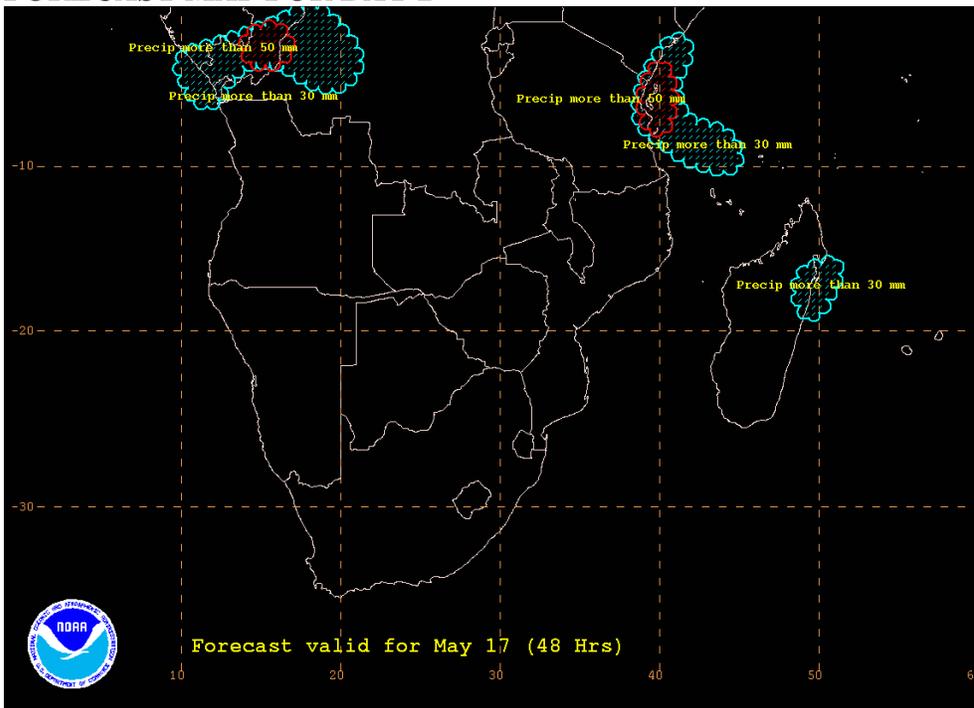
There is a huge spread between the ensemble products of the 50 mm isolines of 6 hourly total precipitations over eastern coast of Tanzania, to the northwest of the northern coast of Madagascar extending to the coast of Kenya, over central D.R. Congo and northwestern Gabon up to T+72 hrs, which implies uncertainty in the intensity of precipitation over these areas.

The ensemble products show that the probability of 10 m wind speeds to exceed 20 KT over areas which are to the south of 35°S latitude is 35 to 75% up to T+48 hrs, and drops at higher time leads.

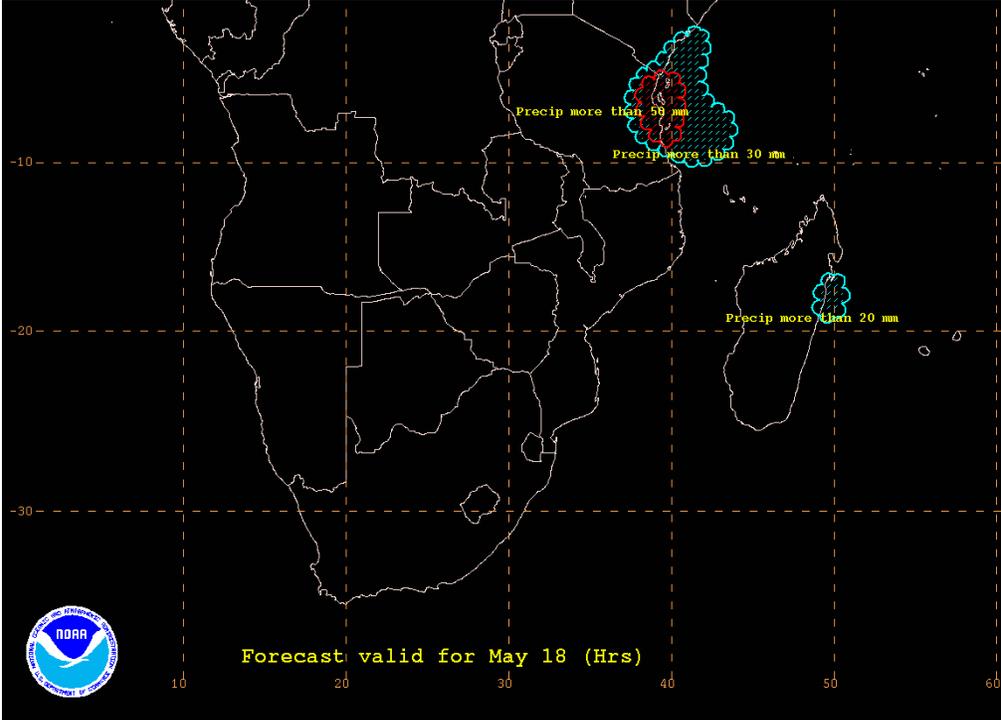
FORECAST MAP FOR DAY 1



FORECAST MAP FOR DAY 2



FORECAST MAP FOR DAY 3



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