



Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 24th May 2007

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

FORECAST DISCUSSION 14H00 EST 24th May 2007

Valid: 00Z 25th May 2007- 00Z 27th 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 southwestern coast of the sub continent, with its southwest axis lying at 60°S 30°E and its northwest axis above 31°S 9°E, associated with west-northwesterly stream up to 110 kt, causing convergence over these areas. Areas which are between 54°E and 70°E longitude but between 11°S and 0° latitude are under subsidence. A high pressure system cell centered above southern Tanzania is causing divergence over the rest of the sub continent.

At T+48 hrs, there is no significant change in the general flow pattern except that the trough which was above the southwestern parts of the sub continent has shifted eastward, causing convergence over northern and eastern South Africa and also over southern extreme of Mozambique.

At T+72 hrs, the trough which was above the southeastern parts of the sub continent has shifted northeastward into southern Mozambican Channel, due to a ridge. The rest of the sub continent is under subsidence.

FLOW AT 500MB

At T+24 hrs, the GFS models show a trough over the southeastern parts of the sub continent, stretching into southern Namibia, causing convergence over these areas. There is a shallow trough above northeastern Zimbabwe, causing slight convergence over western Mozambique. The Mascarene high with three cells, centered at 29°S 69°E, at 12°S 52°E and over northwestern Angola (11°S 20°E) is ridging the most of the sub continent. The sub tropical high pressure system centered near 33°S 10°W is throwing a ridge into the southern parts of the sub continent.

At T+48 hrs, the trough which was to the southeastern parts of the sub continent has shifted eastward to the south of the Mozambican Channel. There is an upper level low in tear-off stage, above central South Africa (29°S 27°E), without a corresponding low

within the lower levels of the atmosphere. The shallow trough over northeastern Zimbabwe has weakened. The rest of the sub continent is under divergence of the Mascarene and the sub tropical highs.

At T+72 hrs, the trough which was to the south of the Mozambican Channel has shifted southeastward, weakening in amplitude. The upper level low has slowly weakened shifting northeastward to central Mozambique, due to weak convection caused by the cold surface and also as the subtropical high has shifted eastward ridging in from the southwest. Slight convergence can be seen over the coast of Kenya. The rest of the sub continent is under subsidence, due to the Mascarene high.

The ensemble members of the GFS show a large spread of the 5700m and 5870m height contours to over the southern coast of the sub continent which implies uncertainty in location and depth of the trough to the southern coast of South Africa up to T+48 hrs.

FLOW AT 850MB

At T+24 hrs, there is a trough to the southeast of the coast of Madagascar with a closed circulation near 48°S 49°E and southwest-northwesterly winds up to 30 kt, weakening in amplitude. Areas which are to the north of 4°S latitude are under convergence due to a southeasterly trough with a closed circulation near 4°S 55°E. The Mascarene high pressure cell centered at 32°S 71°E is hardly ridging the northeastern parts of the sub continent, but is causing onshore flow along the northeastern coast of Madagascar and along the coast of Tanzania. A sub tropical high pressure system, centered at 35°S 1°W is ridging the most of the sub continent and causing onshore flow along the southeastern coast of South Africa and also along the central and northern coast of Mozambique.

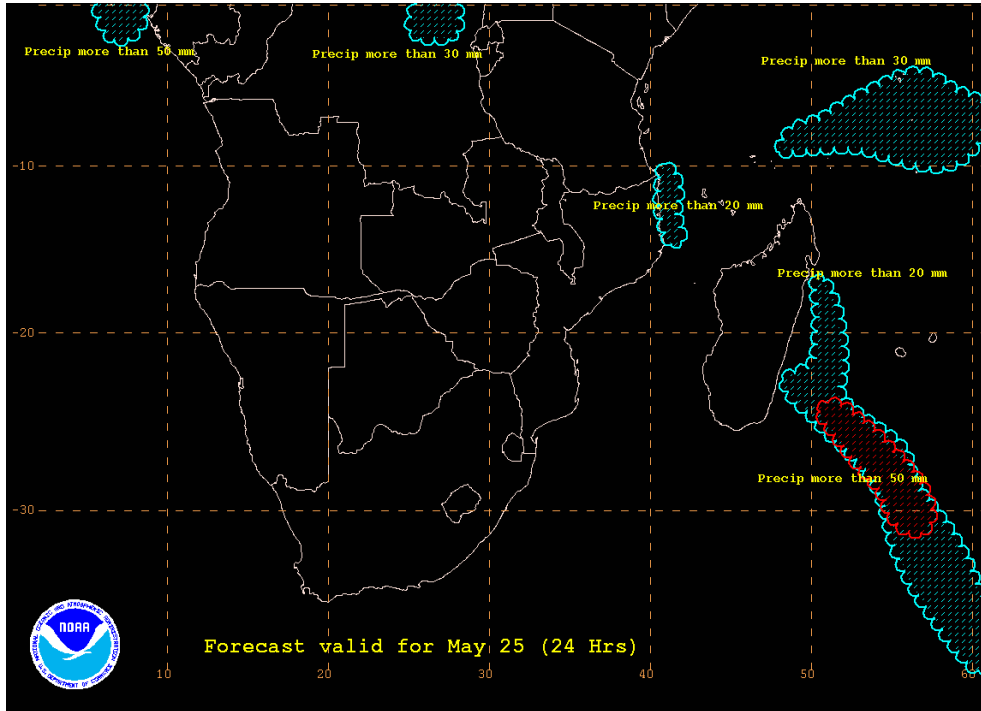
At T+48 hrs, the trough which was to the southeast of the coast of Madagascar has shifted eastward has the sub tropical high shifted eastward. Convergence over areas which are to the north of 4°S latitude is maintained. There is a shallow trough to the extreme southwest of the coast of South Africa. Over the rest of the sub continent, there is no significant change in the general flow pattern.

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

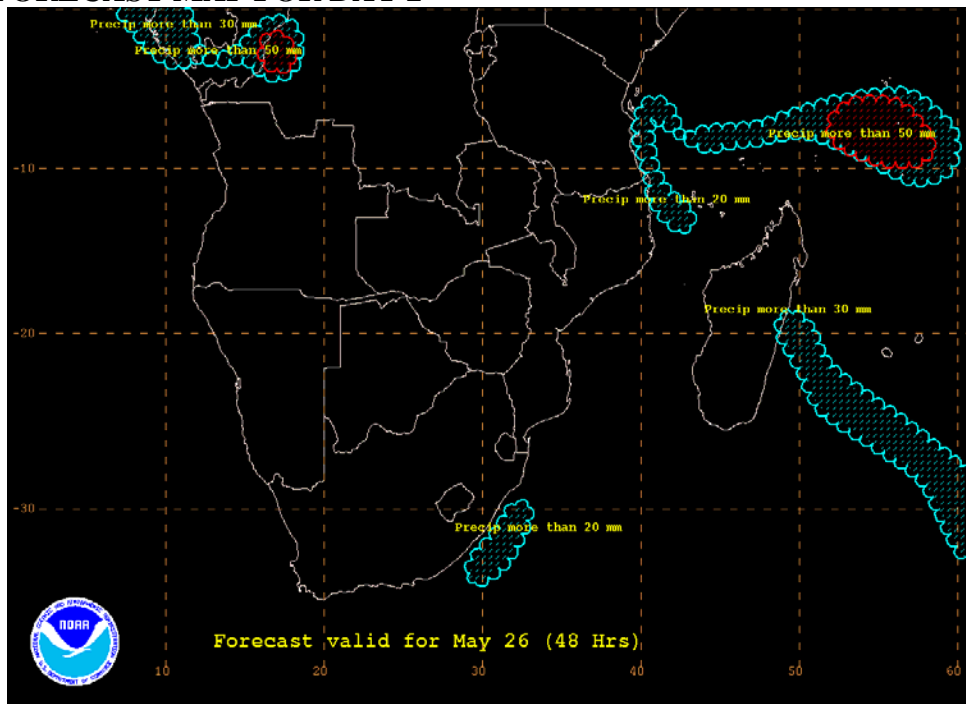
There is a reasonable spread within the mean in the ensemble products of the 50 mm isolines of 6 hourly total precipitations to the north of the coast of Madagascar, over Congo Brazzaville and Gabon, to the extreme northeast of the coast of Mozambique and to the southeast of the coast of Madagascar up to T+54 hrs, which implies that the mean precipitation expected over these areas is near 50 mm. But there is a huge spread to the southeast of the eastern coast of South Africa up to T+42 and over the eastern coast of Tanzania up to T+72 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 southeast of the coast of Namibia, over southeastern coast of South Africa and over northern Mozambican Channel is 35 to 85% up to T+48 hrs, and drops at higher time leads.

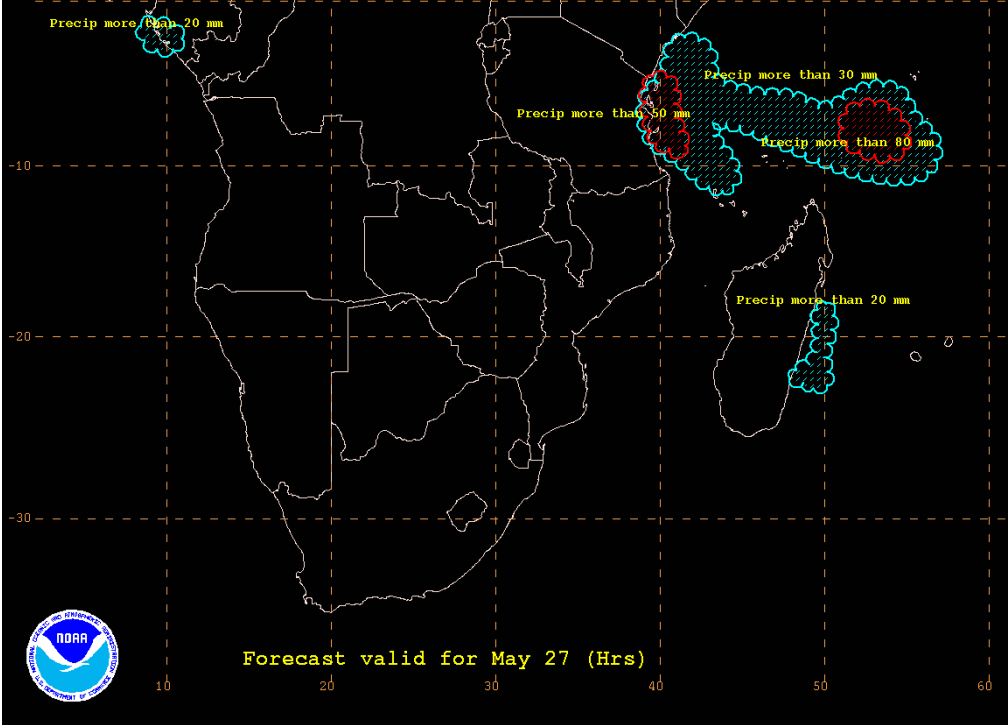
FORECAST MAP FOR DAY 1



FORECAST MAP FOR DAY 2



FORECAST MAP FOR DAY 3



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