



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

**SHORT RANGE FORECAST DISCUSSION 14H00 EST 06<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 06<sup>th</sup> April 2007**

**Valid: 00Z 7<sup>th</sup> April 2007- 00Z 09<sup>th</sup> April 2007.**

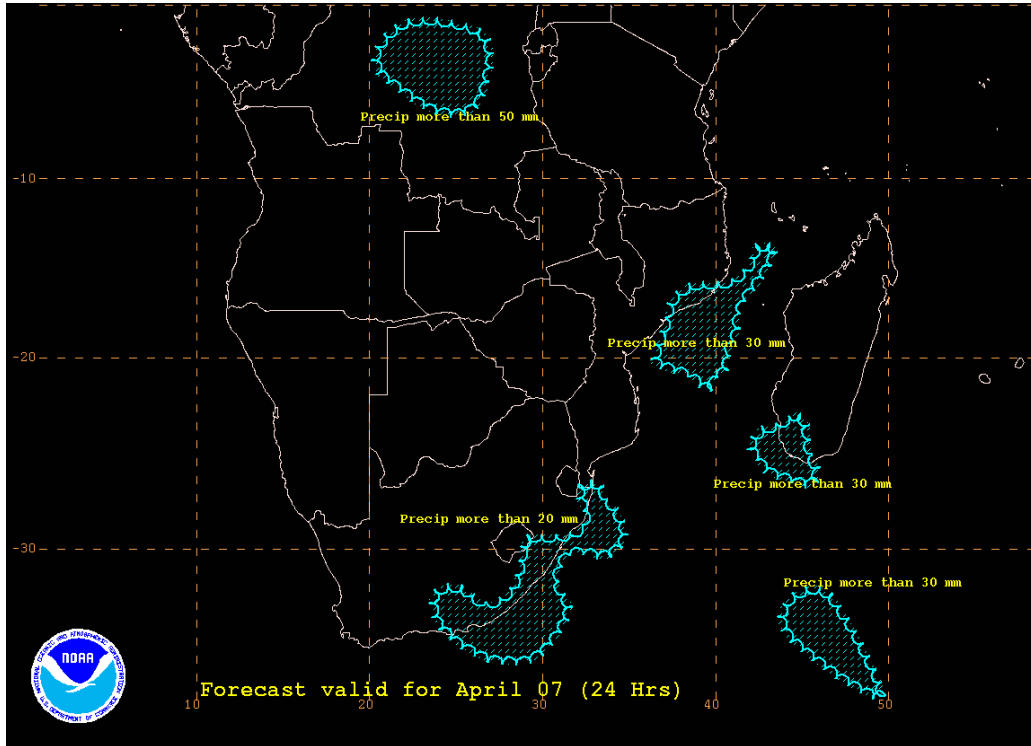
At T+24 hrs, the general flow pattern at 200hpa over Southern Africa (South of the Equator) as shown by the GFS, ECMWF and UK-MET models, is a deep low system centered at 8°S 49°E, causing convergence over areas which are to the north of Madagascar. The models show a trough over the southeastern part of the sub continent, with a northwesterly flow, stretching into northern Angola, causing convergence over these areas. There is a high pressure system centered at 11°S 5°E throwing a ridge over most of the sub continent. A bud-off high over the northern Mozambican Channel is ridging into northern Mozambique, northern Madagascar and eastern Tanzania. At T+48 hrs, the deep low system which was centered at 8°S 49°E, is maintained. The trough which was over the southeastern part of the sub continent, with northwesterly winds up to 65 KT as slightly shifted eastward, causing convergence over Zimbabwe, northeastern South Africa and southern Mozambique. Elsewhere the general flow pattern is maintained. At T+72 hrs, the trough over the southeastern part of the sub continent has shifted to the east, weakening in amplitude, and developed a closed circulation at 35°S 31°E. Elsewhere the general flow pattern prevails, except that the bud-off high which was over the northern Mozambican Channel has shifted eastward and is ridging the northeastern parts of Madagascar, hence subsidence.

At 500mb, the GFS models show a shallow trough to the northeastern coast of Mozambique stretching into the Mozambican Channel, which is associated with the tropical depression ex-Jaya. The UKMET and ECMWF models do not show a trough (but a low) to the northeast of the coast of Mozambique, but agrees with the GFS that there is a trough over southeastern part of the sub continent, stretching into southeastern Angola, causing convergence over these areas. The UKMET puts the center of the low associated to ex-Jaya near 17°S 38°E. There is a shallow trough to the southwestern coast of South Africa. The three models show the Mascarene high with two cells centered at 19°S 49°E and at 13°S 37°E, throwing a ridge over most of the northeastern parts of the

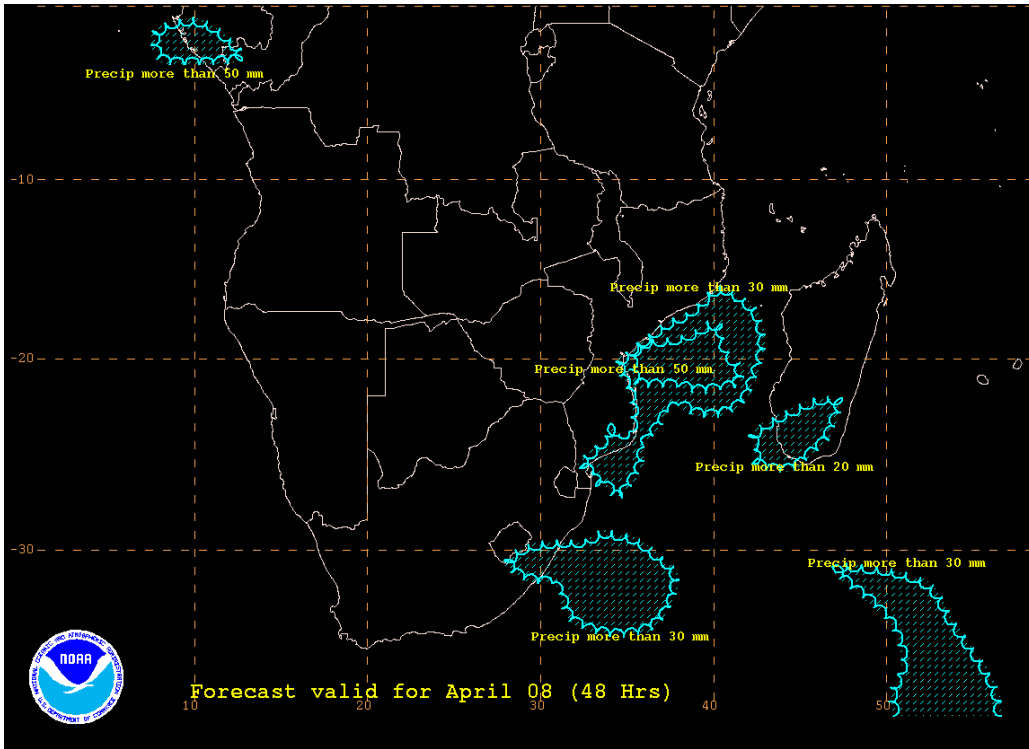
sub continent thus blocking the deepening of the shallow trough associated to ex-Jaya. The St Helena high also has two cells with centers located at  $11^{\circ}\text{S } 5^{\circ}\text{W}$  and at  $18^{\circ}\text{S } 14^{\circ}\text{E}$ , ridging into most of the western parts of the sub continent. At T+48 hrs, the three models show that the shallow trough associated with the tropical depression ex-Jaya shifts eastwards to the northwestern coast of Madagascar re-intensifying as the trough over the southeastern part of the sub continent is weakening in amplitude and shifting eastward igniting the system. The shallow trough which was to the southwestern coast of South Africa has shifted eastward, causing slight convergence over southeastern coast of South Africa. Convergence can also be seen to the east of the coast of Tanzania, where there is a low. The models also show that the ridges of the Mascarene and the St Helena highs prevails over the rest of the sub continent, hence divergence. At T+72 hrs, the trough which was to the southeastern part of the sub continent, weakening, has shifted into southeastern Mozambican Channel, hence convergence over southeastern Madagascar, has the ridge of Mascarene high reorients. There is a trough over the Atlantic Ocean approaching into the southwestern coast of the sub continent. Convergence to the east of the coast of Tanzania and southeast coast of South Africa prevails. The rest of the sub continent is under divergence. The ensemble members of the GFS show a huge spread of the 5700m and 5870m height contours to the northeastern parts of Mozambique at T+24 up to T+72, which implies uncertainty in the position and extension of the trough associated with the tropical depression ex-Jaya.

At 850mb, there is a trough associated with the Tropical depression ex-Jaya lying over northern Mozambique with a closed circulation at  $19^{\circ}\text{S } 38^{\circ}\text{E}$ ; hence intense thundershowers are expected to continue over northeastern coast of Mozambique and over the channel. This trough is linking the trough to the southeast of the Mozambican Channel. Convergence is also seen over northeastern D.R. Congo. The St Helene high with two cells centered at  $41^{\circ}\text{S } 20^{\circ}\text{E}$  and at  $23^{\circ}\text{S } 11^{\circ}\text{E}$  is ridging into most of the sub continent. At T+48 hrs, the trough associated to ex-Jaya shifts southwestward, intense thundershowers and strong winds are expected over northern and central Mozambican Channel and also over the southwestern coast of Madagascar, but some reduction over northern Mozambique. The trough which was to the southeast of the Mozambican Channel has shifted further east as the St Helen high progress's southeastward and is ridging in from the south causing onshore flow along the southeastern coast of the sub continent feeding the tropical depression ex-Jaya leading to re-intensification. Convergence over northeastern D.R. Congo is maintained. Divergence prevails over the rest of the sub continent. At T+72 hrs, there is a low near  $21^{\circ}\text{S } 41^{\circ}\text{E}$ , deepening, as the onshore flow along the southeastern coast of the sub continent prevails. There is a trough over the southwestern coast of the sub continent, causing convergence over these areas. The low over northeastern D.R. Congo is shifting northeastward to the north of the equator. Divergence is maintained over the rest of the sub continent. The ensemble products show that the probability of 10 m wind speeds to exceed 20 KT over the southern coast of the sub continent is 45 to 85%, reaching the same value from T+48 hrs up to T+72 hrs in the extreme southeastern coast.

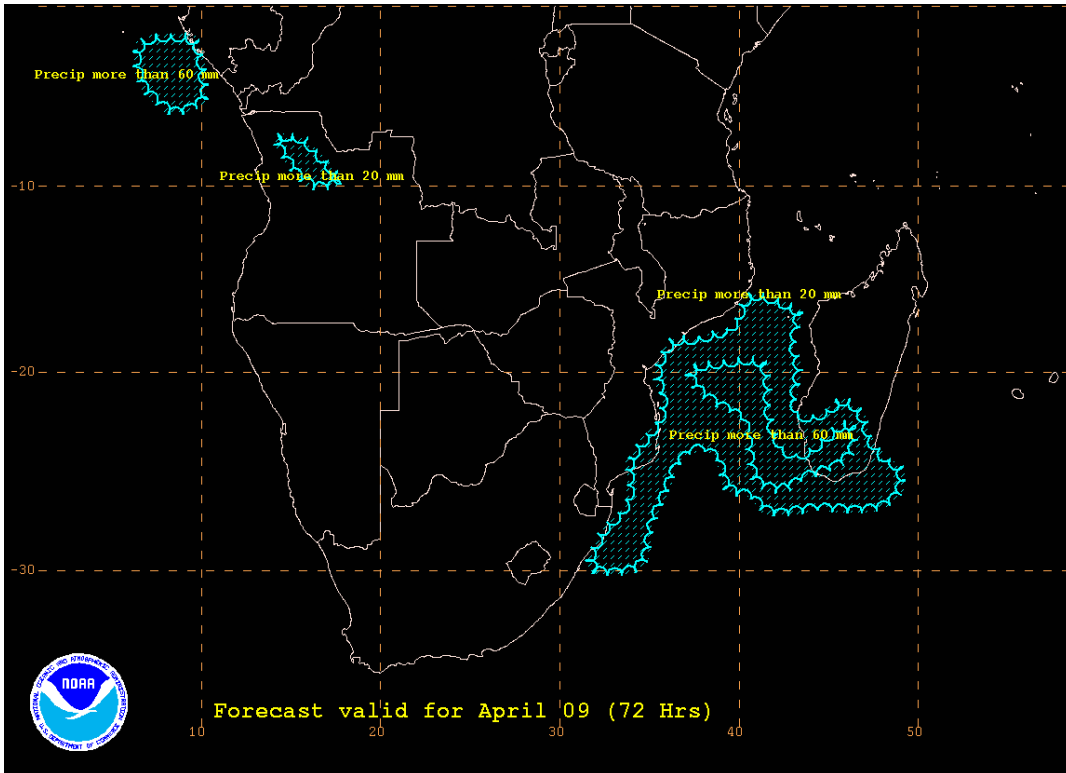
## FORECAST MAP FOR DAY 1



## FORECAST MAP FOR DAY 2



**FORECAST MAP FOR DAY 3**



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