

Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 24th January, 2007

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

Valid 00:00z 25th January 2007 - 00z 27th January 2007

The general pattern at 200hpa over the Southern Africa (South of the Equator) indicates an upper level near-equatorial ridge centered at about 19S 09E with a trough moving over the central Mozambique Channel. The trough axis extends northwards of the point 20S 38E right up to northern Angola with another weak trough moving over sub-Saharan Africa keeping the flow southwesterly 25 to 55knots over these areas. At T+48 the trough moves over southern Madagascar whilst the one over central sub-Saharan Africa will intensify causing the high pressure system to be displaced northwards and it's centre will be located at about 19S 03E. The jet-stream is expected continue moving far to the south and should have no influence to the weather overland. At T+72 the trough is expected to move over the eastern regions of the sub-Saharan Africa whilst the one over Madagascar will weaken as it exits in the east. The high pressure system centered at about 20S 05E behind the trough and the flow will be westerly to southwesterly 15 to 45 knots south of 18S and southeasterly 15 to 35knots northwards of this latitude.

At 500hpa, the St Helena high pressure system has split into several cells, but the cells that are causing subsidence over most parts of the sub continent have centers at 16°S 24°E, 13°S 34°E and 32°S 26°E. A back hanging westerly trough coupled an easterly with its northwest axis lying at 19°S 18°E and its southeast axis lying to the east of 40°S 60°E is causing some instability over the northern half on Namibia stretching into the southern half of Madagascar. The Mascarine high does not have significant influence over the sub continent since its centre is at 17°S 52°E. At T+48 hrs the cells of the St Helena high have merged, and its centre is at 20°S 15°W, and it is ridging into the western parts of the sub continent inducing subsiding motion over these areas. The Mascarine high has split into two cells with centers at 30°S 35°E and 20°S 56°E, causing subsidence over almost the whole of the eastern half of the sub continent. The back hanging westerly trough in line with an easterly, with its northwest axis at 15°S 22°E and its southeast axis to the east of 40°S 60°E is causing instability over Zambia stretching into southern Madagascar. At T+72 the St Helena high has split into cells, with centers at 13°S 14°E and 22°S 2°E, maintaining subsidence over the western parts of the sub continent. There is no significant change concerning the Mascarine high, hence subsidence is prevailing over almost the whole of the eastern half of the sub continent. The westerly trough in line with an easterly trough is also maintaining instability over Zambia stretching into the southeastern parts of the sub continent. The UK-MET and

ECMWF models handle the situation similar and no major discrepancies between these models and GFS.

At 850hPa St Helena high has its centre at 26°S 13°W and extends a ridge up to southern Zimbabwe this ridge has pushed the meridional arm of the ITCZ to the west and the trough to the east also it is in phase with a cut-off high located over eastern Angola. The Mascarine high has its centre at 18°S 56°E, between these two cells (i.e. the St. Helena high and the Mascarine high) there is a low located over the Mozambique Channel which is in phase with another low located over northwestern Angola. Zone of convergence can be seen extending from Congo, DR Congo to Uganda.

At T + 48 Hrs the St Helena high centre has shifted to the southwest and can not be seen in the chart but its back hanging ridge has intensified and is centered at 07S 47E this ridge has pushed the meridional arm of the ITCZ to the west and further south also it has pushed the trough from the south. The Mascarine high is located far to the east and can not be seen in the chart, between these two cells the St. Helena high and the Mascarine high there is a low located over the Mozambique channel extending to Madagascar other areas of low pressure are southwest of South Africa, Namibia and the coast of Angola. Zone of convergence is still extending from Congo, DR Congo to Uganda.

At T+72 Hrs the St Helena high centre has shifted to the east to about 30°S 03°E and the back hanging ridge has relaxed. The Mascarine high centre is now located at 34°S 54°E and it has a ridge extending up to eastern DRC, between these two cells the St. Helena high and the Mascarine high there is a trough from the south associated with a front which is in phase with the meridional arm of the ITCZ located over the Namibia, Western Zambia and Angola also there is a low over the central coast of Mozambique. Zone of convergence is over southern Angola as well as the southern part of Zambia. Generally there is a resemblance in the patterns of UK- Met, ECMWF and GFS models and no major discrepancies between the models.

Note: All maps or pictures are attached below including forecast maps for the next three days.

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SUMMARY TABLES FOR RISK AREAS

DAY 1: Thursday 25th January 2007

RISK	HEAVY PRECIPITATION				STRONG WINDS			
	No risk	Low risk	Medium risk	High risk	No risk	Low risk	Medium risk	High risk
Botswana				In the NW	X			
Madagascar				In the South	X			
Mozambique	X							
Tanzania	X				X			
Zimbabwe	X				X			

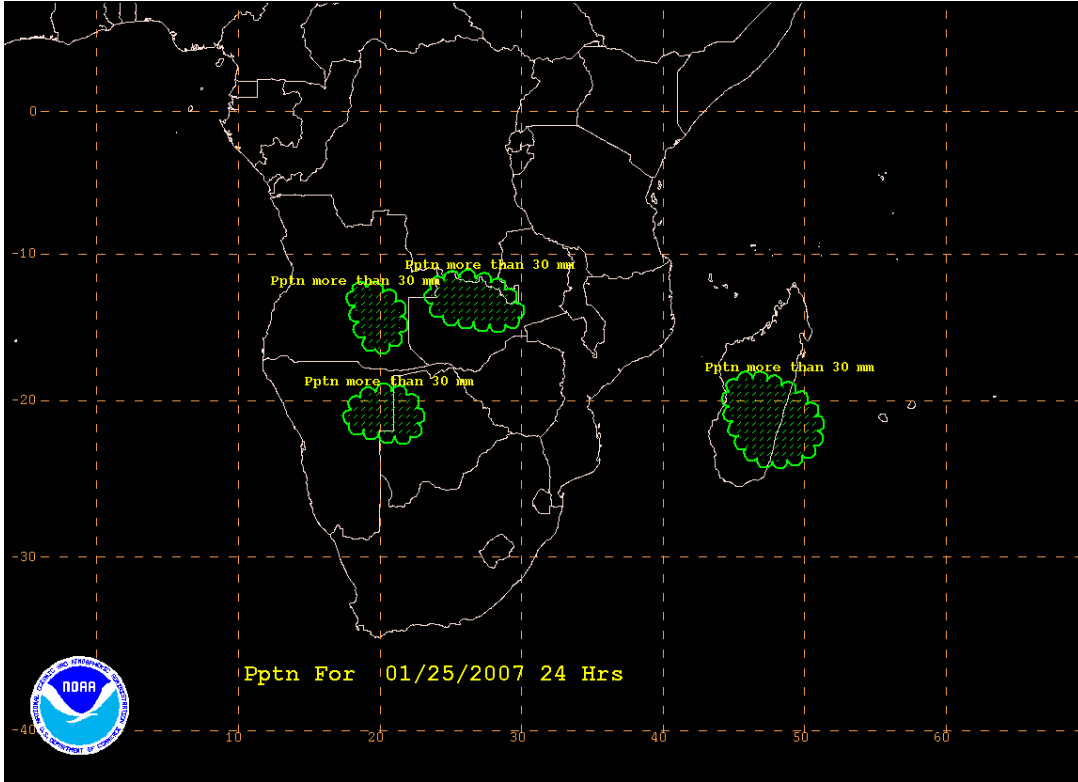
DAY 2: Friday 26th January 2007

RISK	HEAVY PRECIPITATION				STRONG WINDS			
	No risk	Low risk	Medium risk	High risk	No risk	Low risk	Medium risk	High risk
Botswana				In the NW	X			
Madagascar				Central & Eastern Parts	X			
Mozambique				Central Parts	X			
Tanzania	X				X			
Zimbabwe	X				X			

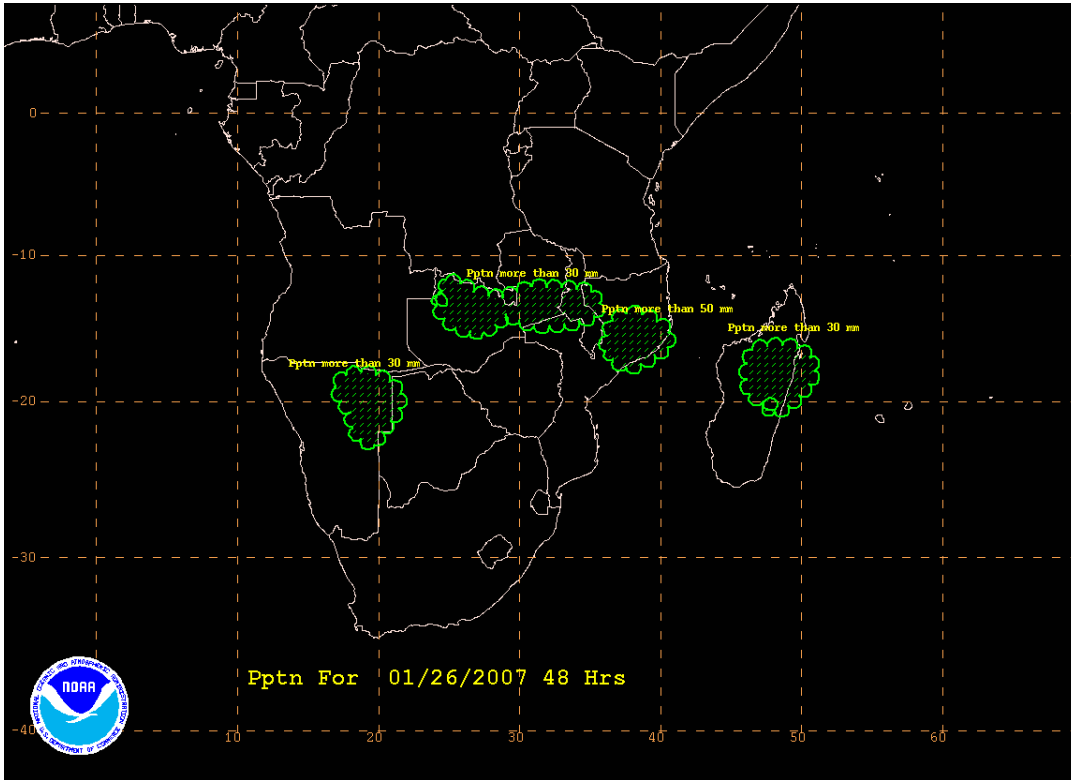
DAY 3: Saturday 27th January 2007

RISK	HEAVY PRECIPITATION				STRONG WINDS			
	No risk	Low risk	Medium risk	High risk	No risk	Low risk	Medium risk	High risk
Botswana	X				X			
Madagascar				Central and Eastern parts	X			
Mozambique	X			Extr. NW	X			
Tanzania	X				X			
Zimbabwe	X				X			

FORECAST FOR DAY1



FORECAST FOR DAY 2



FORECAST FOR DAY 3

