



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

**SHORT RANGE FORECAST DISCUSSION 14H00 EST 9<sup>th</sup> January, 2007**

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

**Valid 00:00z 10<sup>th</sup> January 2007 - 00z 12<sup>th</sup> January 2007**

The general pattern at 200hpa over the Southern Africa (South of the Equator) indicates an upper level near-equatorial ridge centered over southern Zambia and closed low at about 23S 12W approaching from the west. The flow overland is mainly westerly to southwesterly 25 to 55 knots south of 20S and SE to E 15 to 45knots north of 20S. Upper level divergence indicated over northern Mozambique, Madagascar as well as over Angola. At T+48 a weak trough moves through over the extreme northeastern part of S.A. in association with a cold front which is moving far to the south at the surface. Another sharp trough is approaching from the west as the high pressure system starts weakening. Divergence still indicated over northern Madagascar with some indicated over the western part as well. At T+72 the high pressure system has weakened considerably and forms a weak cell over Angola whilst in the south a sharp trough is moving over the NE part S.A., in association with a cold front at the surface. Strong divergence indicated over Madagascar east of the trough with some divergence also indicated over northern Mozambique.

The UK- Met and ECMWF models are similar to GFS in terms of positioning the systems at this level and there are no major discrepancies.

At 500hpa a weak trough is exiting the eastern part S.A. with a high pressure system centered south of Walvis Bay ridging overland to replace this exiting trough. Another trough is moving through over southern Madagascar and its axis extends as far as DRC and east of this trough line strong vertical uplift as well moisture indicated. At T+48 the trough intensifies over southern Mozambique channel and a low develops over northern Zambia and east of this low(southern Tanzania) strong vertical uplift is indicated where moisture is also present. At T+72 the trough axis extends over northern Mozambique through to northern Zimbabwe up to the southern part of Zambia whilst the high centered over central Namibia ridges overland behind this trough. Strong vertical uplift as well as moisture indicated over Madagascar east of the trough.

The UK-MET and ECMWF models handle the situation similar and no major discrepancies between these models and GFS.

At 850hpa a cold front is moving over southern Madagascar with its tail extending up to the northern part of Mozambique. An Atlantic high pressure system is ridging closely behind the cold front over the NE part of S.A. and over Mozambique. Abundant moisture indicated over the eastern parts mostly being advected by this high which is ridging eastwards behind the cold front. At T+48 a new trough develops in the west over central Namibia with strong vorticity indicated east of this trough line. The high pressure system is expected to form separate cell in the east and continues to feed in moisture over Mozambique, Zimbabwe as well as Botswana. A low is developing over the central Mozambique channel and extends to trough over the interior which extends up to DRC. At T+72 a cold front moves over the western interior of S.A. up to the southern part of Namibia with a high in the east intensifying in the process thus acts as blocking high preventing the front from moving further inland. The low over the central Mozambique channel is expected to intensify causing an increase in moisture transport over Madagascar and strong vorticity advection indicated around the vicinity of the low. Both the UK-MET & ECMWF models are in agreement with GFS 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: Wednesday 10<sup>th</sup> 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				Extr West	X			
Mozambique				Extr NE				
Tanzania	X				X			
Zimbabwe	X				X			

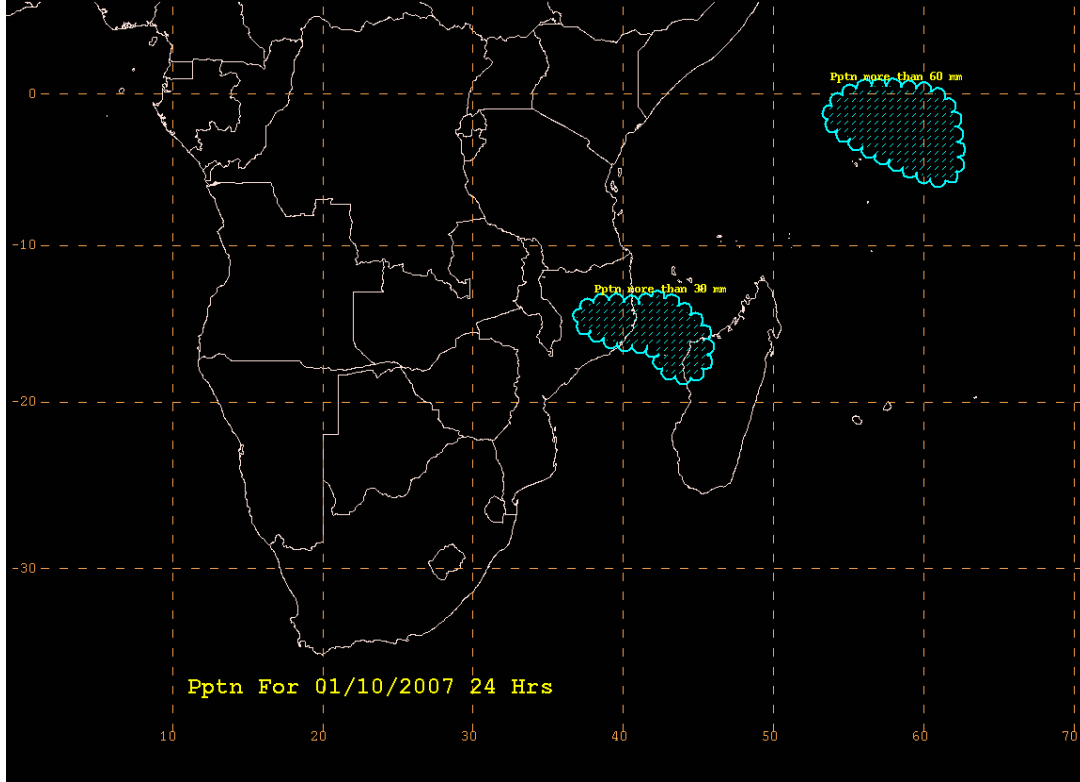
**DAY 2: Thursday 11<sup>th</sup> January 2007**

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 Parts	X			
Mozambique	X				X			
Tanzania	X				X			
Zimbabwe	X				X			

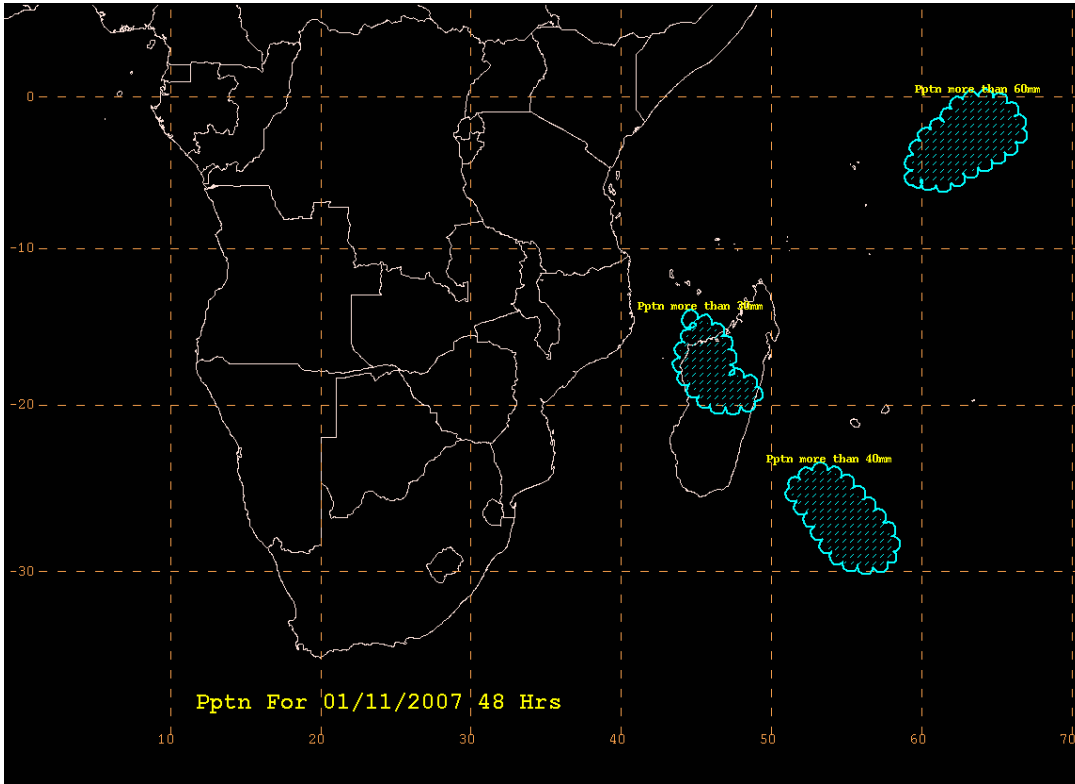
**DAY 3: Friday 12<sup>th</sup> January 2007**

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				In the SE	X			
Mozambique	X				X			
Tanzania			In the SW		X			
Zimbabwe	X				X			

# FORECAST FOR DAY1



### FORECAST FOR DAY 2



### FORECAST FOR DAY 3

