Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 9th January, 2007

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

Valid 00:00z 12th January 2007 - 00z 14th January 2007

At 850 MB, a trough is lying over the western parts of Angola, stretching over the border between Botswana and Namibia, down into the south eastern parts of South Africa. The areas which are south of Madagascar, stretching into western Tanzania are under the influence of another trough and surface convergence indicated over south east of Lake Victoria. At T+48, the trough which is over the west of the subcontinent stretches into the western parts of Zambia, otherwise making no significant movement over the other areas. The only significant change concerning the other trough is that it is shifted to the south west of Madagascar, otherwise it is maintaining its position over the other areas. The surface convergence which is over the south east of Lake Victoria is maintained. At T+72, the Atlantic Ocean high pressure cell is ridging into the extreme western parts of Namibia and South Africa, pushing the trough eastwards such that it covers also most parts of western Botswana. The other trough has moved off significantly from south west Madagascar to the south eastern parts of the sub continent. The result of the movement of the two troughs is that the sub continent is mainly under a low pressure system, except over the extreme south western and extreme north eastern parts of the sub continent, where there is an indication of an anticyclone.

At 500hpa a cut-off low is moving over the southern part of Madagascar where significant rainfall is expected as this system slowly moves over this area. A high pressure system centered over the central part of Namibia is dominant over the interior of Southern Africa hence will suppress any thunderstorm development over this area where it will remain dry. At T+48 the cut-off low will intensify over the southern Mozambique Channel hence a continuation of rainfall can be anticipated over southern Madagascar where heavier falls are more likely. A weak trough is expected to move through over the western interior of S.A. hence the high moves westwards whilst a trough over the central Zambia to the northern part of Mozambique is causing a linkage of Tropical storms from as far as DRC to the trough which is sitting over the southern Mozambique Channel. A line of storms stretching from northern DRC is expected to affect southern Tanzania,

northern Mozambique where heavy falls can be expected whilst the cut-off low over the Channel will cause significant falls over southern Madagascar. At T+72 the trough over the Channel will weaken but a connection still exists with the trough over the interior hence a continuation of significant amounts of rainfall is expected over northern Mozambique. Both the UK-Met model and ECMWF are in agreement with GFS no discrepancies to mention.

The general pattern at 200hpa over the Southern Africa indicates an upper level near-equatorial ridge centered over southern Zambia and a trough over the southeastern part of S.A. The flow overland is mainly southwesterly to westerly 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 the trough moves through 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 southern Madagascar with some indicated over the western part as well. At T+72 the high pressure system has shifted far north as a second westerly trough approaches from the west. Strong divergence indicated over Madagascar east of the trough with some divergence also indicated over northern Mozambique where the trough is also extending its axis.
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.

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: Friday 11th January 2007

	HEAVY PRECIPITATION				STRONG WINDS			
RISK	**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**			

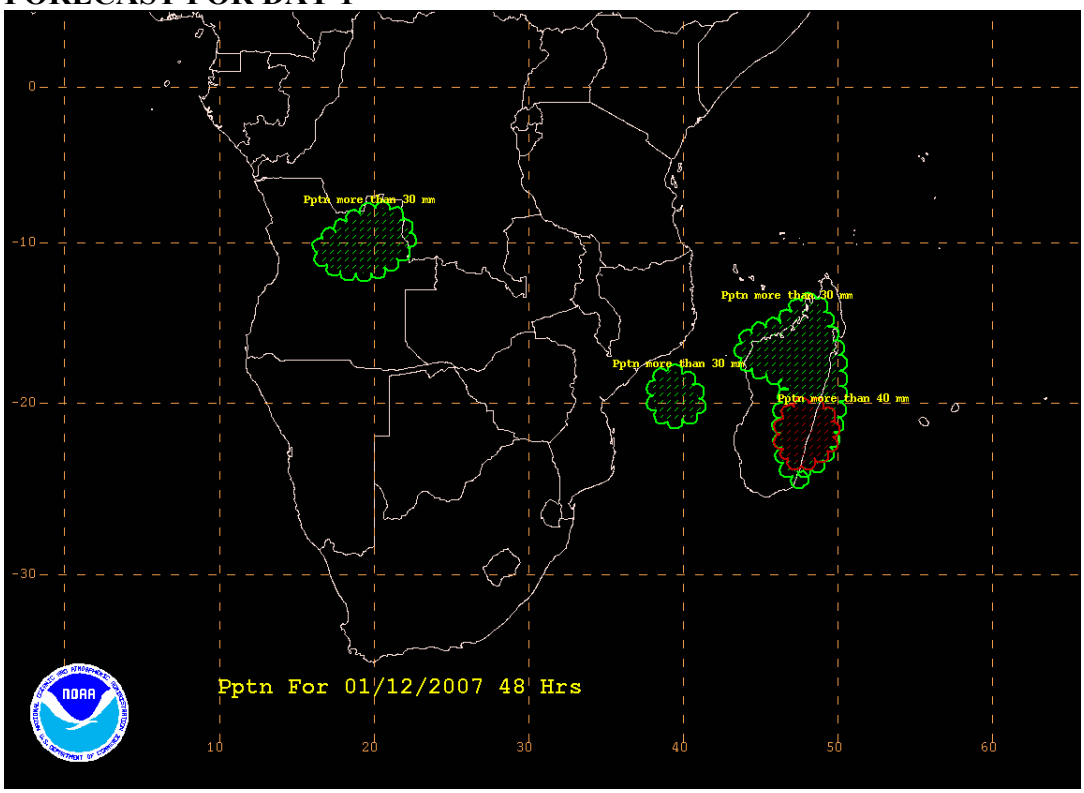
DAY 2: Saturday 13th January 2007

	HEAVY PRECIPITATION				STRONG WINDS			
RISK	**No risk**	**Low risk**	**Medium risk**	**High risk**	**No risk**	**Low risk**	**Medium risk**	**High risk**
Botswana	X				X			
Madagascar				SE	X			
Mozambique				N	X			
Tanzania				SW	X			
Zimbabwe	X				X			

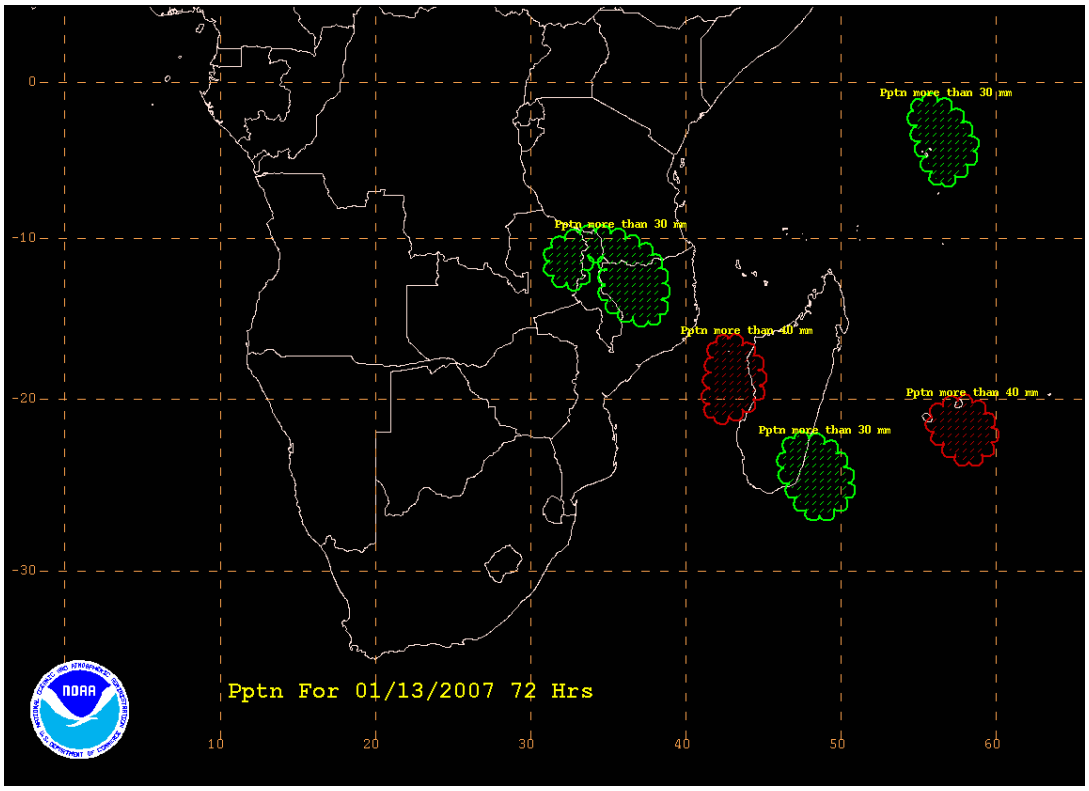
DAY 3: Sunday 14th January 2007

	HEAVY PRECIPITATION				STRONG WINDS			
RISK	**No risk**	**Low risk**	**Medium risk**	**High risk**	**No risk**	**Low risk**	**Medium risk**	**High risk**
Botswana	X				X			
Madagascar				SE	X			
Mozambique	X				X			
Tanzania			In the SW		X			
Zimbabwe	X				X			

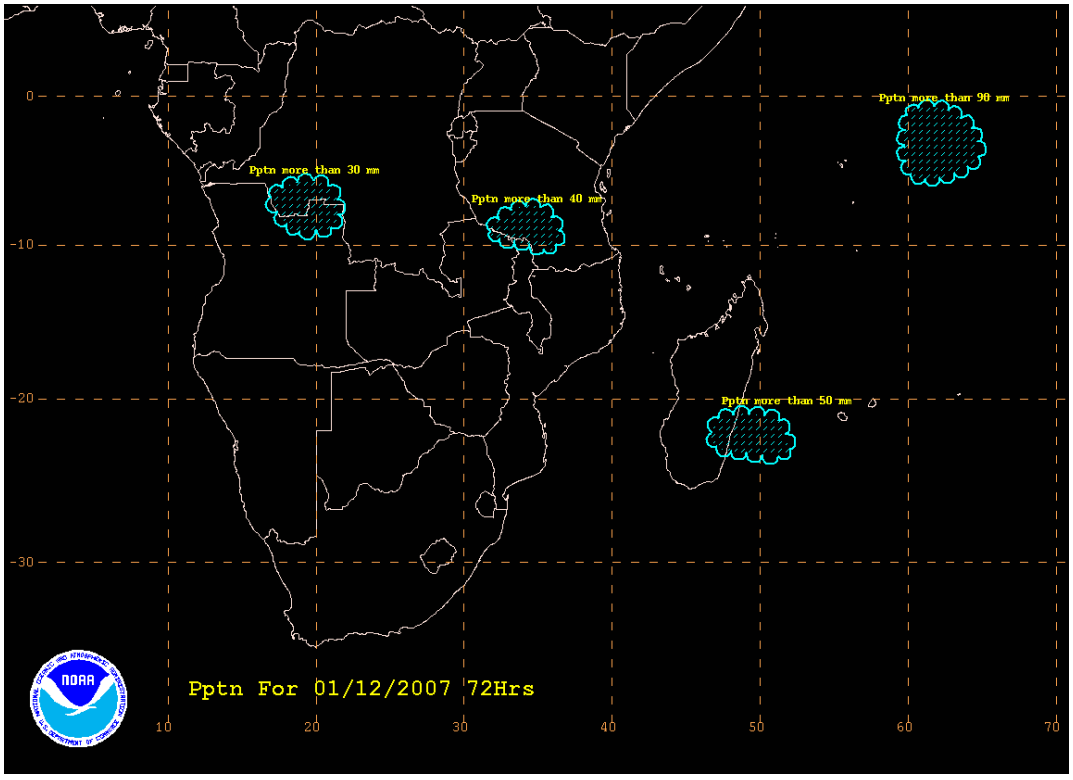
FORECAST FOR DAY 1



FORECAST FOR DAY 2



FORECAST FOR DAY 2



FORECAST FOR DAY 3