



Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 20TH December, 2006

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

**FORECAST DISCUSSION 14H00 EST 22nd, December, 2006
Valid 12:00Z 23rd, December 2006 - 00z 25th December 2006**

At T+24, the general pattern at 200hpa over the Southern Africa (South of the Equator) shows a strong anticyclone or high pressure system centered at about 20°S 22°E also to the northeast of Madagascar there is an anticyclone positioned at 13°S 53°E. The prevailing flow south of 23°S in the Atlantic ocean is north westerly curving in South Africa and become southwesterly to westerly in the Indian ocean at a speed of 30 to 105 knots. A sharp trough in the Atlantic ocean extending north-west of 32°S 02°W in phase with the trough from the south with southeast axis is approaching from the west. At T+ 48 Hrs the high pressure system centered has maintained its position and the anticyclone which was positioned at 13°S 53°E northeast of Madagascar has moved to the west just north of Madagascar. The sharp trough in the Atlantic ocean which was extending north-west of 32°S 02°W has also moved to the west and the trough from the south has moved to the east in the Indian ocean making the flow south of South Africa to be zonal becoming Southwesterly to the east of South Africa and almost easterly from Tanzania to D R Congo. At T+72 Hrs the high pressure system centered is still maintaining its position with a cutoff high to the southeast of South Africa and a west-east axis extending to the Indian ocean. The anticyclone which was positioned just north of Madagascar is weakening and it has moved to the northern coast of Mozambique. The sharp trough in the Atlantic ocean has moved further to the west and in phase with another trough from the south. The ECMWF and the UK-Met models show similar pattern which resemble with the GFS model.

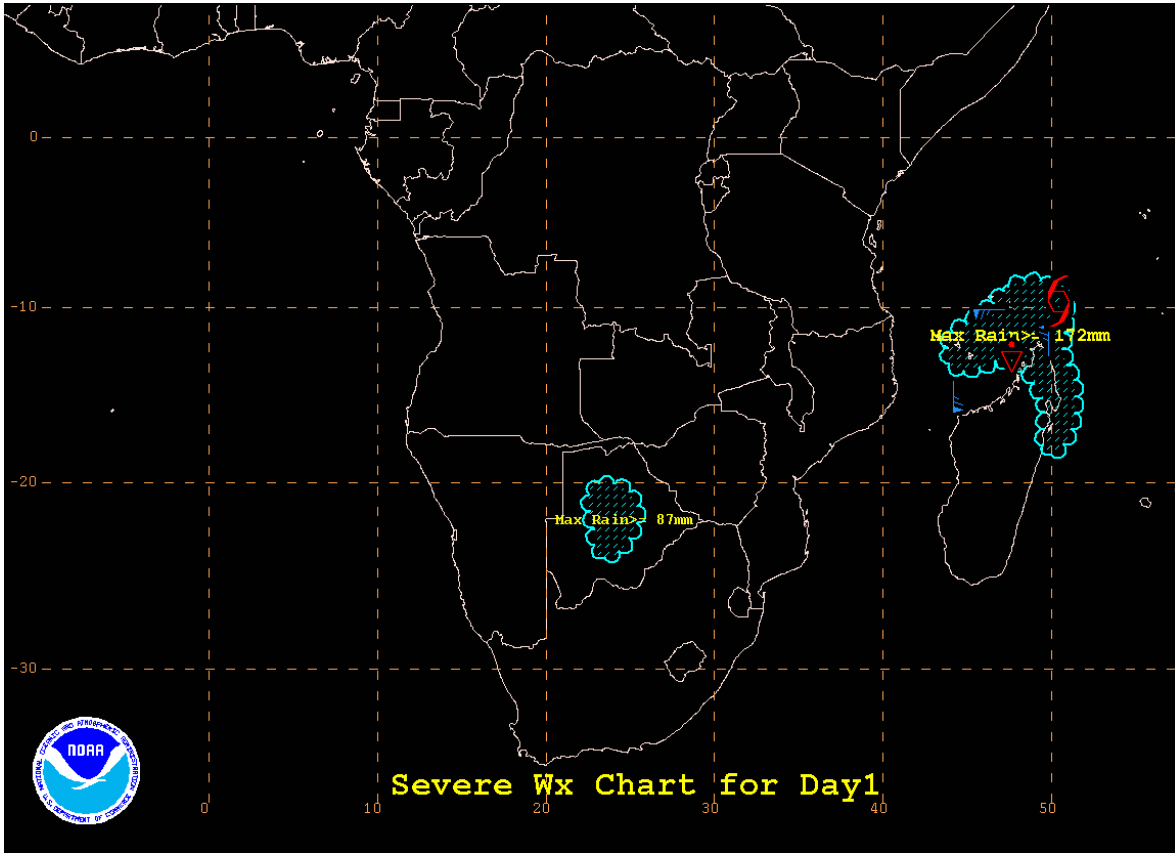
At 500hpa a Tropical cyclone Bondo can be seen centered at about 10°S 48°E but the high pressure cell from 200 hPa can still be seen at this level with its centre at 23°S 24°E and the flow over south of South Africa is zonal, at this level the meridional arm of the ITCZ is to the north of 10°S. At T+48 the tropical cyclone Bondo has moved closer to the southern coast of Tanzania and is centered at about 10°S 43°E. The high pressure has slightly moved to the south and the center is at about 21°E 26°S, the flow south of South Africa is zonal becoming southerly on the eastern coast of Mozambique and South

Africa. At T+72 the tropical cyclone Bondo has moved to the south and its center is at about 12°S 45°E and to the north east of Madagascar there is a storm which has developed positioned at 15°S 50°E, the meridional arm of the ITCZ is to the north of 10°S and the zonal part is to the southern part of Tanzania and Mozambique, and the flow over south of South Africa is northwesterly at 20 to 50 knots.. The UK- Met and ECMWF models indicate similar situation.

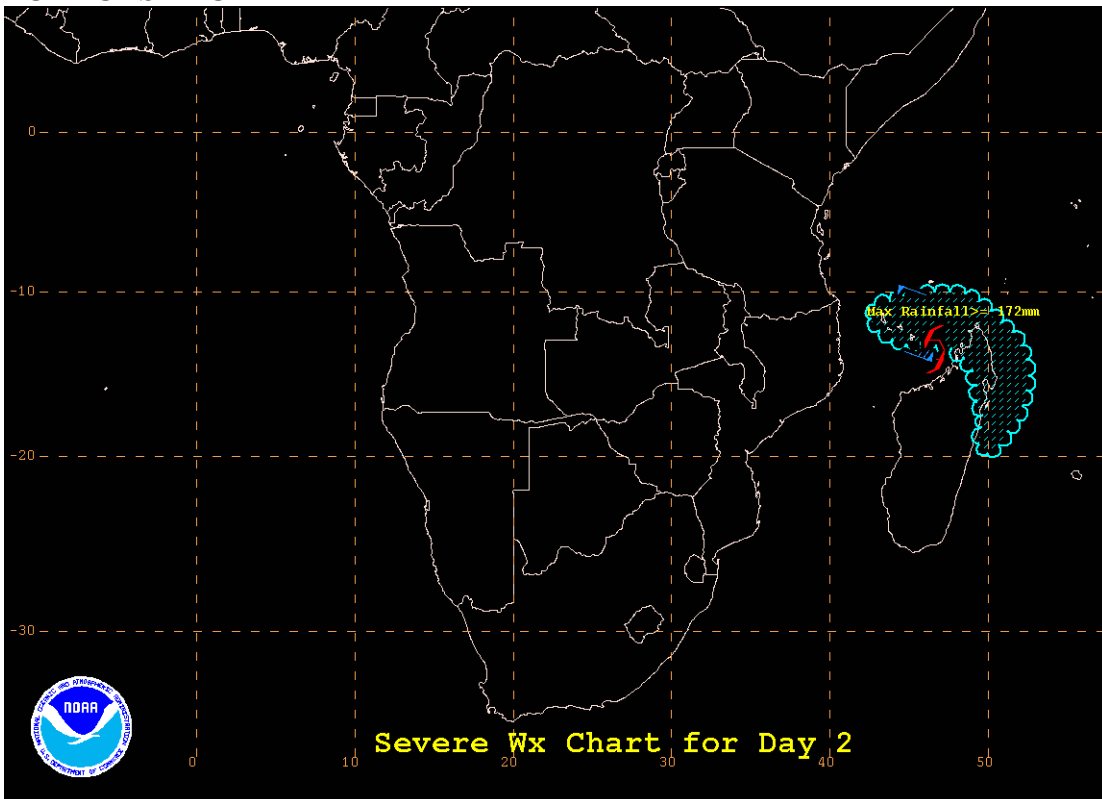
At 850hpa the tropical Cyclone Bondo positioned at 10°S 48°E can be seen and confirmed by the satellite imagery also the westerly flow from the D.R. Congo air converge over southern Tanzania with southeasterlies and northwesterlies, again convergence can be seen over Zambia moving southwards through Zimbabwe, Angola, Botswana and South Africa and the flow south of South Africa is almost zonal from West to east. Positions and centers of St. Helena high and Mascarin high are 25°S18°W and 36°S54°E respectively. After 48 Hrs the tropical Cyclone Bondo has moved slightly moved to the south west to 12°S 47°E and the convergence over Zambia moving southwards through Zimbabwe, Angola, Botswana and South Africa still there and the flow south of South Africa is zonal from West to east becoming north westerlies over the eastern part of South Africa. The Mascarin high has shifted northwards and it has a ridge extending to the western coast of South Africa, The Mascarin High is stationary and it has maintained its position. GFS ensemble, suggests 30-50% chance of 24 hour cumulative rainfall exceeding 70mm over the Indian Ocean just north of Madagascar while ECMWF suggests 30 to over 80% chance. There is a resemblance in the flow pattern between of UK- Met, ECMWF and GFS models. However, ECMWF is suggesting winds of up to 55kt around the cyclone center, while NCEP and UK Met suggest 45kt.

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FORECAST MAP FOR DAY1



FORECAST FOR DAY2



FORECAST FOR DAY 3

