

LESOTHO METEOROLOGICAL SERVICES

(LEKALA LA TSA BOLEPI)



Ten-Day Agrometeorological Bulletin

11th – 20th December 2006



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... aimed at harmonizing agricultural activities with weather and climate

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Highlights

- ❑ Below normal rains at some places recorded.
- ❑ High temperatures prevailed during the dekad countrywide.
- ❑ The Lowlands have not received adequate cumulative rains.
- ❑ Weeding of crops in progress over some places.
- ❑ Drier conditions expected to persist in the next year.

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WEATHER SUMMARY

The interior trough remained shallow and confined to the north with little moisture advection over the interior. Isolated to scattered thundershowers accompanied by hailstorms at times occurred between the 15th and the 19th with significant rainfalls over the northern and northeastern parts. Moisture advection was confined to the northern and northeastern parts as moist tropical air brushed over these areas. A semi permanent low pressure over Eastern Cape oscillated over the southern interior of the subcontinent bringing warm dry air where on the 19th a strong surface dry line resulted in moderate to heavy dust storm over Maseru. Temperatures soared and remained in the lower 30's for most days. Occasionally weak frontal systems swept south of the subcontinent with the Atlantic Ocean Anticyclone ridging behind them inland thereby pushing the interior trough to the north. At upper levels the flow remained zonal and anticyclonic.

RAINFALL SITUATION

The Lowlands were dry during the second dekad of December, except for Butha-Buthe in the north, which received above normal dekadal rainfall of 40.2mm. Mokhotlong in the highlands is the only station, which recorded near normal dekadal rainfall of 28.6mm. Oxbow registered 47.5mm, which was the highest rainfall of the dekad in the country (see table1). The lowest dekadal rainfall amount was recorded at Quthing in the southern part of the country. Most parts of the Lowlands had soil water deficit and that had negative impacts on the crops.

Cumulative percentage rainfall departure from Normal

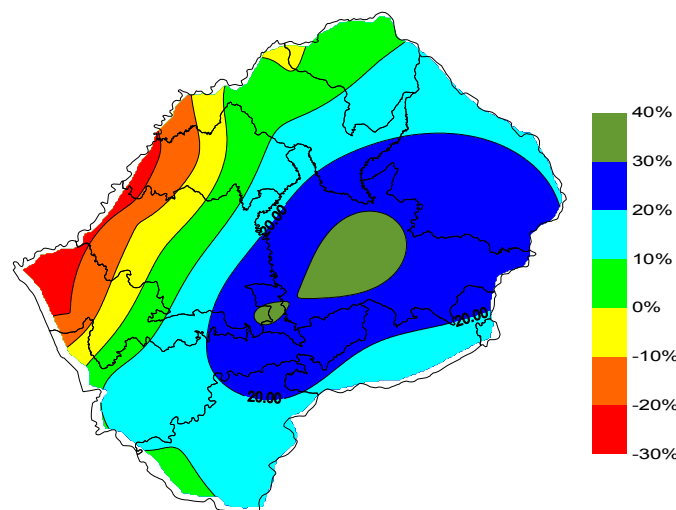


Fig.1: Cumulative rainfall departure from normal since 1st September to 20th December 2006.

Cumulative rainfall (1st September to 20th December 2006) is normal to below normal (Table 1 & Fig 4). Mafeteng and Maseru Airport registered highest cumulative rainfall deficits with %departure of -20% and -26% respectively. Ox-Bow had received the highest cumulative rainfall of 497.5mm followed by Thaba-Tseka and Semonkong with 311.7mm and 311mm respectively (see table 1).

TEMPERATURE

Above normal temperatures were experienced over the entire country. This is shown in table 1 where all stations in the lowlands registered maximum temperatures above 30.0°C. Maseru Airport experienced the highest maximum of 33.6°C followed by Mohale's Hoek and Mafeteng in the southern lowlands with 33.5°C and 33.3°C respectively. In the Highlands, Mokhotlong had the highest maximum temperature of 30.1°C. Temperature deviations range between 1°C of Semonkong and 2.2°C of Maseru Airport (see table1). Due to high temperatures and less rain, the soil water content is rapidly depleted and the crops and vegetation in general are badly affected.

CROP STAGE AND CONDITION

The erratic rains experienced in the Lowlands since the start of the cropping season, have affected the planting of the cereals of maize and sorghum. The spatial distribution and the dry spells experienced had negative consequences to the present summer cropping. However, the cereal crops in the Lowlands are mostly at vegetative stage and there are few farmers that have started weeding and weeding is much stronger in the Highlands. Due to excess heat and small amounts of rain experienced, crops find it difficult to survive, as water is rapidly lost through evapotranspiration.

The harvesting of Winter wheat is in progress.

Dry conditions are expected to persist over most places except in the north and in the northeast where rainfall is expected to be near normal. Isolated thundershowers with localized hailstorms are expected becoming scattered in most cases in the north and in the northeast between the 21st and the 25th. Temperatures are anticipated to remain high for the period.

DEKADAL OUTLOOK

21st – 31st December 2006

Table 1

		Rainfall and Temperature Summaries										
		Rainfall (mm)						Temperature (°C)				
		Total From Sept to 2nd Dek Dec 06						11 - 20 December 2006				
STATION	ALT.	Actual	Normal	Rain			%Dept. from	Minimum	Maximum	Dekadal	Dekadal	
NAME	(M)	R/Fall	R/Fall	Days	Actual	Normal	Normal	Lowest(Day)	Highest (Day)	Mean	Normal	Deviation
Butha-Buthe	1770	40.2	36.6	4	302.1	304.4	-1	7(11)	32.4(14)	20.4	19.3	1.1
Leribe	1740	8	31.6	3	278.6	257.2	8	7.8(11)	31.9(16)	21.4	19.8	1.6
Mafeteng	1610	3.8	28.4	1	181	225.1	-20	7(11)	33.3(14)	21.6	19.9	1.7
Maseru Airport	1530	8.3	26.6	4	173.8	233.7	-26	7.9(11)	33.6(14)	23.0	20.8	2.2
Mohale's hoek	1600	18.3	29.6	2	278.1	240.6	16	9.8(11)	33.5(14)	22.5	20.5	2.0
Mokhotlong	2200	28.6	29.4	4	280.6	227.8	23	6.1(11)	30.1(16)	18.0	16.7	1.3
Moshoeshoe I	1628	13.5	25.3	3	227.1	248.1	-8	7.6(11)	32.9(16)	22.4	20.3	2.1
Ox-Bow	2600	47.5	55.2	5	497.5	458.5	9	0.2(11)	22.6(14)	13.5	11.7	1.8
Phuthiatsana	1750	4.2	38.9	3	233.7	278.1	-16	8.2(11)	32.2(16)	22.3	20.4	1.9
Qacha's Nek	1970	12.7	41.6	4	298	271.8	10	5.1(11)	30.6(14)	18.8	17.7	1.1
Quthing	1740	1.2	34.2	1	295.9	270.3	9	8.5(11)	32(14)	22.0	20.2	1.8
Semonkong	2458	16.5	23.4	5	311	237	31	2.5(11)	26.9(14)	16.2	15.2	1.0
Thaba-Tseka	2160	14.1	24.6	4	311.7	228.9	36	5.2(11)	28.3(14)	17.8	16.4	1.4

Fig.2

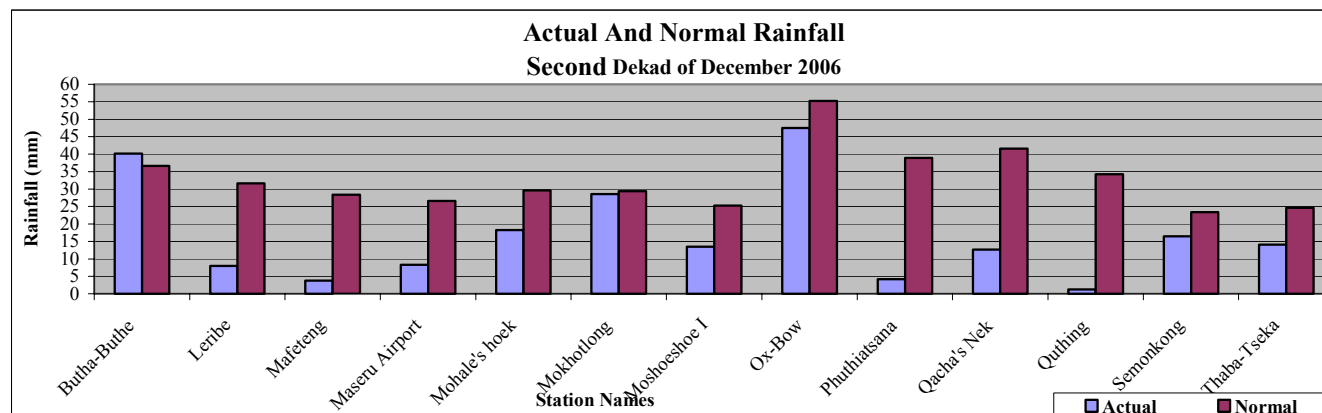
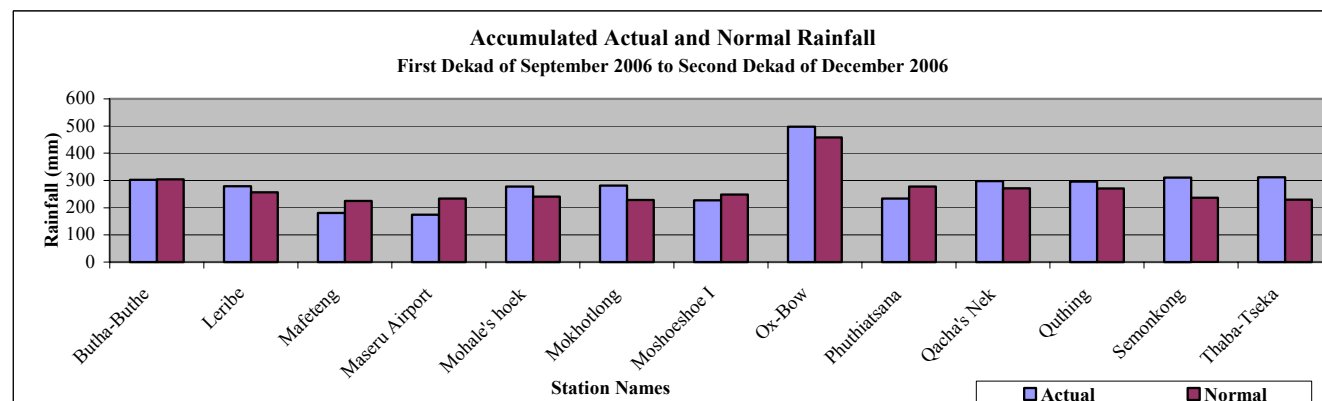


Fig.3



Glossary

Dekad : Ten day period

Normal: Average figure over a specific time period.

% Rainfall Departure from Normal: $(\text{Actual Rainfall} - \text{Normal Rainfall}) / \text{Normal Rainfall} \times 100$

NDVI: Normalized Difference Vegetation Index -

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And it is

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Comments and Contributions would be highly appreciated.