

LESOTHO METEOROLOGICAL SERVICES (LEKALA LA TSA BOLEPI)



Ten-Day Agrometeorological Bulletin

01st – 10th November 2005



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*...dedicated to the agricultural community
... aimed at harmonizing agricultural activities with weather and climate*

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Highlights

- ❑ Above normal rains in the south eastern parts.
- ❑ Cool to mild weather conditions prevailed during the dekad.
- ❑ The Lowlands have not received sufficient cumulative rains.
- ❑ Vegetation cover low over the southern Lowlands.
- ❑ The next ten days expected to be dry and hot.

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WEATHER SUMMARY

The first dekad of November was generally wet and mild. However, temperatures dropped significantly on the 7th, due to cold air, which moved inland behind a frontal system that passed over the region. Rainfall occurred from 4th up to the 6th due to the passage of a frontal system and on the last day of the dekad, when a trough developed on the sub region.

RAINFALL SITUATION

The south eastern and the central parts of the country received above normal to normal dekadal rainfall of 39.9mm at Qacha’s Nek and 23.1mm at Semonkong (Table 1). Near normal dekadal rainfall values were registered at Butha-Buthe. Otherwise the remainder of the country had below normal rainfall. The lowest dekadal rainfall amounts were recorded at Maseru Airport, Phuthiatsana and Mafeteng with 0.0mm, 1.2mm and 9.4mm respectively (see table 1). These low rainfall amounts are not sufficient to sustain crops at any stage of their growth hence some crops were stressed due to shortage of soil moisture.

Cumulative percentage rainfall departure from Normal

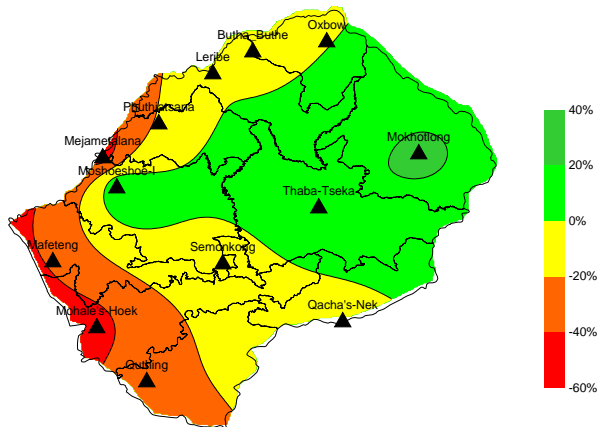


Fig.1: Cumulative rainfall departure from normal since 1st Sept to 10th November 2005.

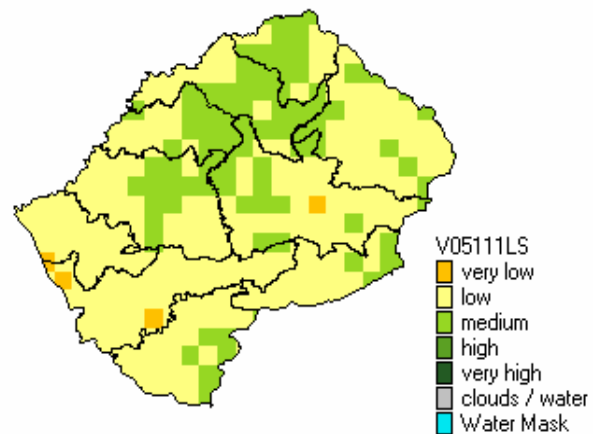
On the whole, cumulative rainfall (1st September to 10th November 2005) is below normal to normal (Table 1 & Fig 1). Moshoeshoe I, Mokhotlong and Thaba-Tseka are the only

stations which recorded above normal cumulative rainfall. Maseru Airport, Mohale’s Hoek, Mafeteng and Quthing have the highest deficits of cumulative rainfall. The cumulative rainfall range from 56.0mm recorded at Maseru Airport to 235.9mm at Oxbow.

TEMPERATURE

Some areas of the country experienced above normal dekadal temperatures while the rest of the country had below normal temperatures. Negative temperature deviations were recorded at Qacha’s Nek (-2.0°C), Quthing (-0.8°C), Semonkong (-0.7°C) and Mafeteng (-1.3°C). However, positive deviations were also registered at Mokhotlong (1.1°C), Oxbow (1.0°C) and Buthe-Buthe (0.6°C). Maseru Airport registered the highest maximum temperatures of above 30°C on the 4th of November. High temperatures experienced, have the negative impacts on crops as they increase the rate of evapotranspiration and this reduces the soil water content.

VEGETATION



The vegetation index (NOAA NDVI satellite image) for the 1st dekad of November 2005 depicts that the degree of greenness of the vegetation is low over the lowlands and some parts of the Senqu river valley. It is at its lowest in Mafeteng and Mohale’s Hoek districts and some areas in the Thaba-Tseka district. Some parts of Qacha’s Nek show a very high degree of

greenness. The low greenness may imply that the land is bare and that the crops are still young.

CROP STAGE AND CONDITION

Crops (maize and sorghum) in the western and northern lowlands are at emergence stage to early vegetative stage. At some places in the low-lying areas planting is in progress. Due to the high temperatures and the low rainfall crops are at risk of rapid moisture loss due to evapotranspiration.

DEKADAL OUTLOOK

11th – 20th November 2005

Generally cool to warm weather conditions are expected during this period with dry to moderate conditions in the beginning of the dekad. However, relatively wet weather conditions are anticipated during the middle of the dekad as rain and isolated to scattered thundershowers are highly possible. Winds are to be light.

Table 1

		Rainfall and Temperature Summaries										
		Rainfall (mr)					TEMPERATURE (°C)					
		Total From Sept 04 to 1st Dec Dec 04					1- 10th Dec 2004					
STATION	ALT.	Actual	Norma	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	47.9	27.6	7	193.6	219.9	-12	11.6 (10)	28.2 (4)	19.8	18.9	0.9
Leribe	1740	40.5	27.0	6	194.8	194.9	0	11.4 (10)	28.3 (1, 2)	20.7	19.2	1.5
Mafeteng	1610	24.8	23.1	6	106.4	185.3	-43	8.9 (8)	29.6 (4)	20.5	19.0	1.5
Maseru Airport	1530	24.0	29.7	3	163.6	205.1	-20	12.0 (8)	29.8 (4)	21.6	19.7	1.9
Mohale's hoek	1600	2.5	32.9	1	216.8	206.4	5	10.0 (8)	31.0 (4)	21.6	19.8	1.8
Mokhotlong	2200	15.8	26.3	6	182.5	184.1	-1	8.6 (10)	26.9 (6)	17.8	15.6	2.2
Moshoeshoe I	1628	28.6	32.9	7	196.9	214.6	-8	12.0 (8)	30.4 (4)	21.1	N/A	N/A
Ox-Bow	2600	114.6	49.8	8	408.6	385.9	6	3.4 (10)	21.0 (5)	12.3	11.1	1.2
Phuthiatsana	1750	10.1	29.6	3	138.5	212.9	-35	12.6 (10)	29.5 (3)	21.5	19.3	2.2
Qacha's Nek	1970	13.0	34.3	6	295.9	221.6	34	8.3 (8)	28.9 (4)	19.1	17.0	2.1
Quthing	1740	4.7	25.7	2	176.0	213.6	-18	11.1 (1)	31.5 (4)	21.8	18.8	3.0
Semonkong	2458	12.9	24.9	3	201.8	202.3	0	4.6 (8)	25.0 (3)	15.8	14.5	1.3

Fig.3

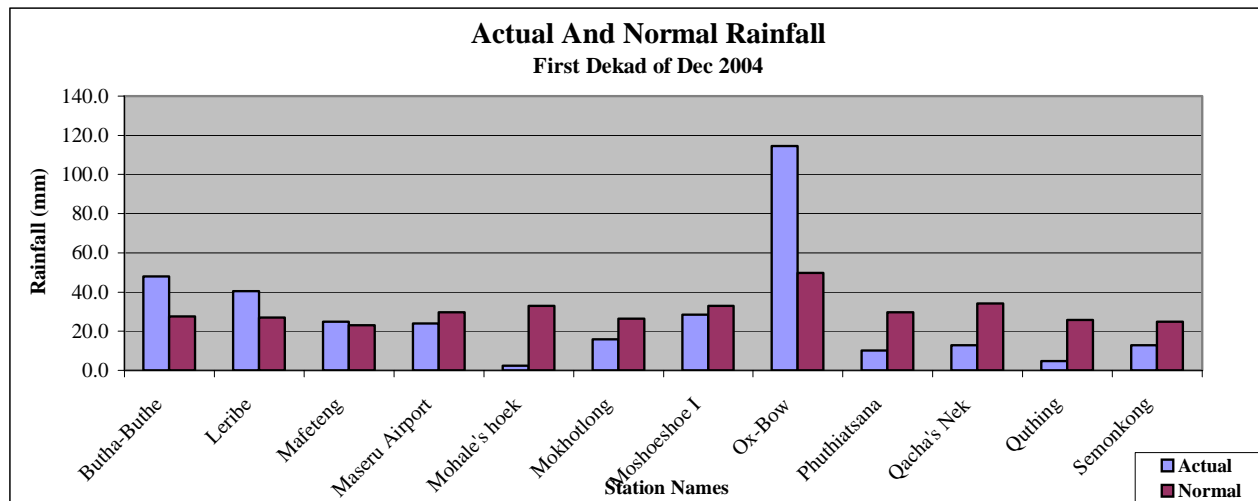
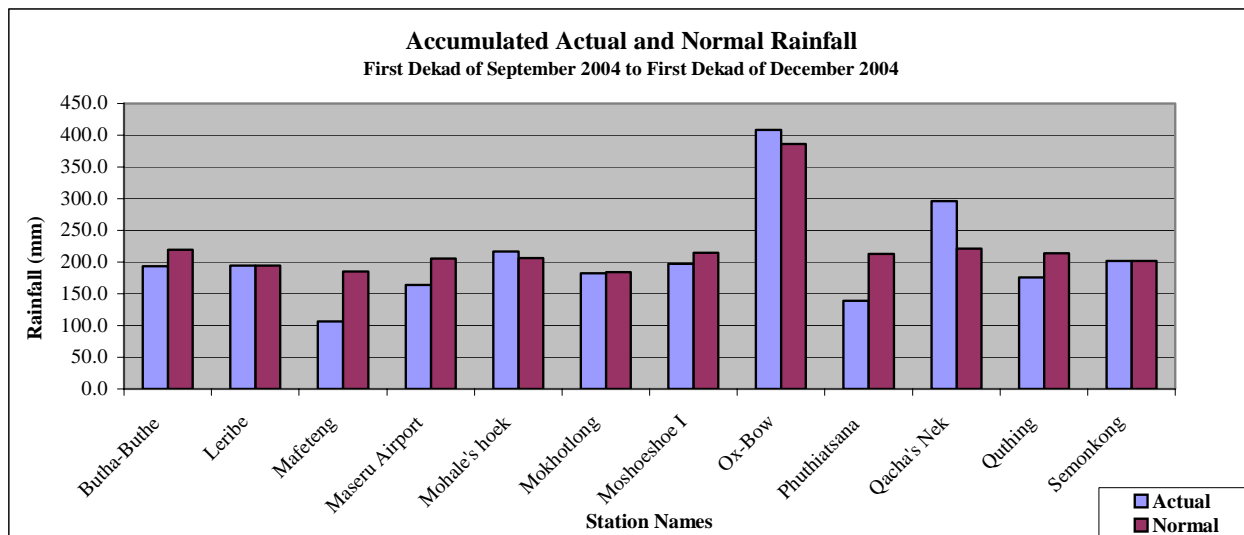


Fig.4



Glossary

Dekad : Ten day period

Normal: Average figure over a specific time period.

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

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And it is

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Comments and Contributions would be highly appreciated.