

LESOTHO METEOROLOGICAL SERVICES (LEKALA LA TSA BOLEPI)



Ten-Day Agrometeorological Bulletin

01st – 10th December 2005



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

Contents

Weather Summary

Page 1

Rainfall Situation

Page 1

Temperature

Page 1

Vegetation

Page 1

Crop Stage and Condition

Page 2

Dekadal Outlook

Page 2

Rainfall and Temperature

Summaries

Page 3

Glossary

Page 4

Highlights

- ❑ No rainfall was registered in the lowlands.
- ❑ Hot to mild weather conditions prevailed during the dekad.
- ❑ Vegetation cover medium over the northern Highlands.
- ❑ The temperatures are expected to be mild to hot during the next dekad.

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WEATHER SUMMARY

The 1st dekad of December was dry. Convective activities that prevailed had invaluable moisture which in turn brought no precipitation. Temperatures were generally warm to hot. This was due to the northerly and northeasterly winds that dominated during this period.

RAINFALL SITUATION

The first dekad of December 2005 was very poor as far as rainfall is concerned. That is far below normal dekad rainfall was registered in northern parts of the country whereas in the southern region no rainfall was registered except in Quthing where only 0.7mm amount of rainfall was recorded (see table 1). Apart from that the rain days varied between 1 and 4 days. These low rainfall amounts are not sufficient to sustain crops at any stage of their growth hence some crops might be stressed due to shortage of soil moisture.

Cumulative percentage rainfall departure from Normal

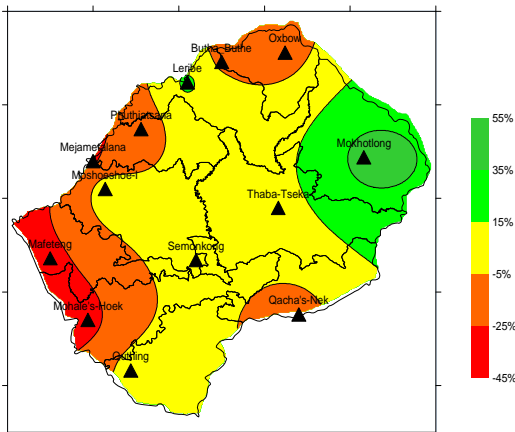


Fig.1: Cumulative rainfall departure from normal since 1st Sept to 10th December 2005.

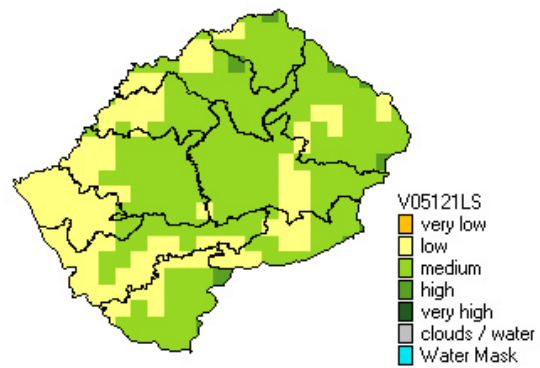
On the whole, cumulative rainfall (1st September to 10th December 2005) is below normal (Table 1 & Fig 1). The stations in the north and the centre of the country are the only stations where above normal cumulative rainfall was recorded. However, Quthing in the south registered above normal cumulative rainfall. Mohale’s Hoek and Mafeteng have the highest deficits of cumulative rainfall. The cumulative

rainfall ranges from 136.3mm at Mafeteng to 344.3mm at Oxbow.

TEMPERATURE

The whole country experienced above normal dekadal temperatures except in Butha-Buthe where below normal temperature was registered, with a negative deviation of -0.1^oC. However, the rest of the had positive deviations. Maseru Airport registered the highest maximum temperatures 30.2^oC on the 10th of December whereas the lowest minimum temperature of 2.8^oC was registered at Oxbow on the 2nd of December. High temperatures experienced had 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 December 2005 depicts that the degree of greenness is medium to low over the northern highlands and some parts of the Senqu river valley. It is at its lowest in Mafeteng and some parts of Mohale’s Hoek districts. The highlands show a very high degree of greenness. The low greenness in the lowlands 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 and vegetation stages. At some places in the low-

lying areas planting is still in progress. However, in some areas in the southern highlands weeding is in progress. Due to the high temperatures and the low rainfall crops are at risk of rapid moisture loss due to evapotranspiration.

region is still foreseen to dominate much of the forecast period. As a result this period is expected to be mainly dry except for very few days where isolated thundershowers may be anticipated. Temperatures are expected to be mild to hot.

DEKADAL OUTLOOK

11th – 20th December 2005

The presence of a shallow trough over the

Table 1

Summaries		Rainfall and Temperature										
		Rainfall (mm)						Temperature (°C)				
		1 - 10 Dec 2005			Total From Sept 05 to 1st Dek Dec 05			1 - 10 Dec 2005				
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	3.7	39.0	2	240.6	267.8	-10	5.2 (10)	27.4(3,7)	18.6	18.7	-0.1
Leribe	1740	0.2	36.1	1	270.1	225.6	20	9.5 (8)	28.2(6)	19.6	19.0	0.6
Mafeteng	1610	0.0	28.7	0	136.3	196.7	-31	9.0 (9)	28.5(7)	19.1	18.9	0.2
Maseru Airport	1530	0.0	29.9	0	147.6	207.1	-29	11.8 (10)	31.0(7)	21.7	19.9	1.8
Mohale's hoek	1600	0.0	35.5	0	138.8	211.0	-34	9.0 (9)	30.0(7)	20.4	19.6	0.8
Mokhotlong	2200	11.6	27.4	4	284.3	198.4	43	7.9 (3)	25.5(8)	16.6	15.9	0.7
Moshoeshoe I	1628	0.0	33.2	0	237.7	222.8	7	10.5 (8)	30.2(10)	20.6	19.7	0.9
Ox-Bow	2600	7.9	58.1	4	344.3	403.3	-15	2.8 (2)	19.2(8)	11.4	11.3	0.1
Phuthiatsana	1750	0.0	30.3	0	191.9	239.2	-20	11.5 (9)	29.2(5)	20.7	19.6	1.1
Qacha's Nek	1970	1.0	39.1	1	200.9	230.2	-13	6.4 (9)	27.2(5)	17.0	17.0	0.0
Quthing	1740	0.7	32.3	1	244.6	236.1	4	11.0 (9)	29.0(7)	20.3	19.3	1.0
Semonkong	2458	5.6	32.4	3	216.8	213.6	1	3.5 (9)	23.5(6)	14.8	14.3	0.5
ThabaTseka	2160	5.8	30.9	4	217.6	204.3	7	6.7 (9)	23.6(8)	16.1	15.8	0.3

Fig.3

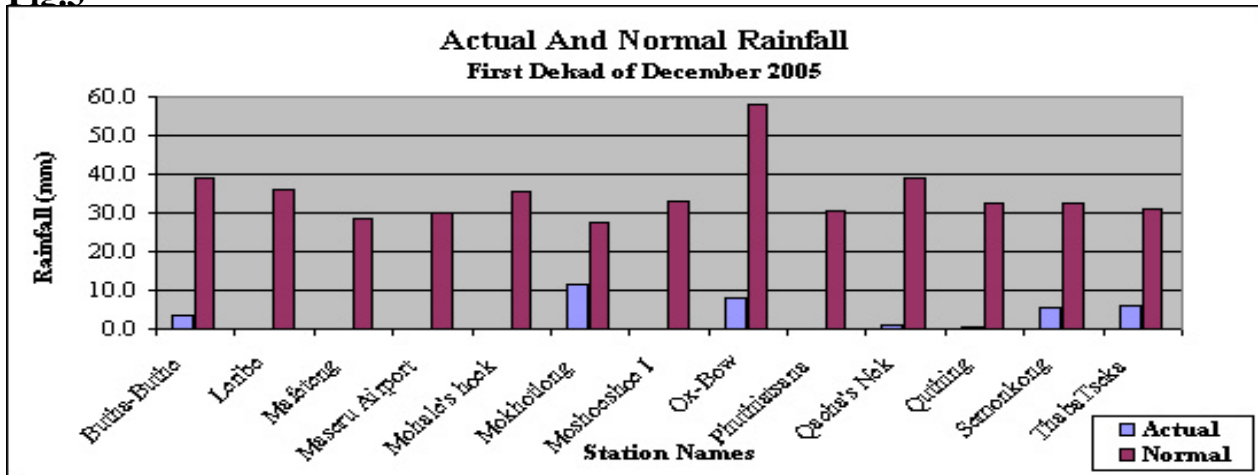
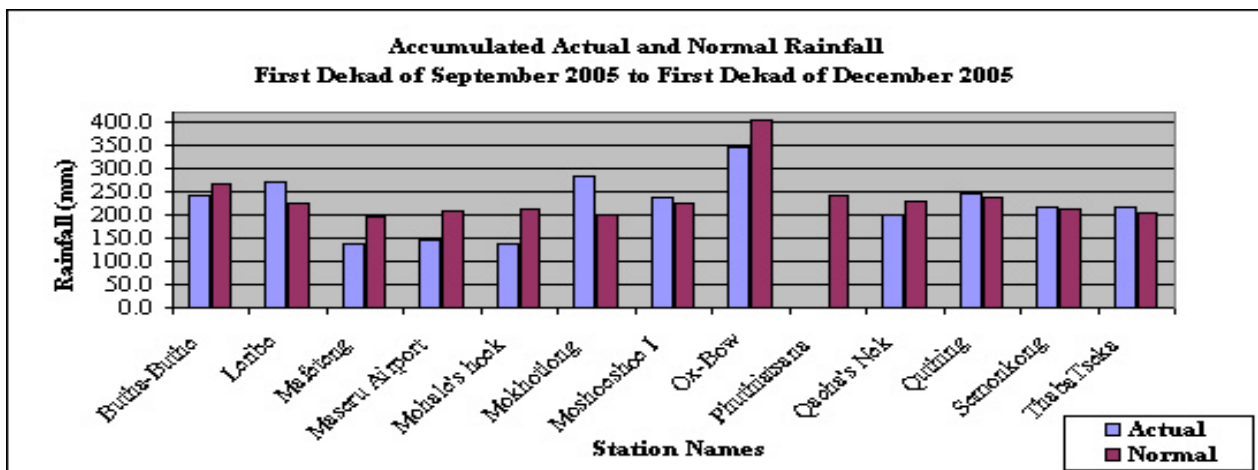


Fig.4



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.