

LESOTHO METEOROLOGICAL SERVICES (LEKALA LA TSA BOLEPI)



Ten-Day Agrometeorological Bulletin

01st – 10th December 2003



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

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Highlights

- ❑ Poor spatial rainfall distribution experienced.
- ❑ Continuous dry spells coupled with strong winds are threats to crop performance.
- ❑ Winter wheat at full maturity with poor condition.
- ❑ Locust outbreak reported in some districts.
- ❑ Dry and hot weather conditions still expected over the next dekad.

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WEATHER SUMMARY
1st – 10th December 2003

The first dekad of December was hot, windy and dry. It was dominated by a shallow interior trough, however, there was insufficient moisture as the ITCZ was still further northwards. The high pressure cell, which has been situated south east of the sub-region, drew very little moisture into the interior. As a result, partly cloudy and hot conditions with very light isolated thundershowers occurred.

RAINFALL SITUATION
1st – 10th December 2003

In general, there has been poor spatial rainfall distribution. Stations like Leribe in the north west, Thaba- Tseka and Mokhotlong in the north east recorded significant rainfall of 34.5mm, 33.7mm and 32.9mm respectively. In contrast, Mhales’s Hoek, Moshoeshoel and Maseru airport in the western lowlands had very low rainfall of 0.4mm, 4.9mm and 7.2mm respectively (see table 1). All the stations recorded normal to below normal rainfall with the exceptions of Leribe and Thaba Tseka which had above normal dekadal rainfall (see table1 & fig.5).

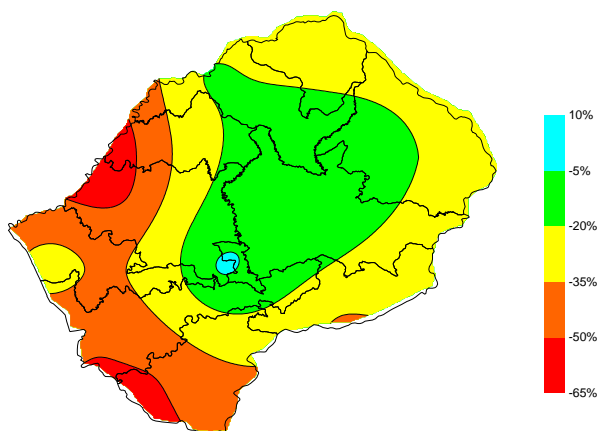


Fig.1: Cumulative rainfall departure from normal since 1st Sept to 1st dek. Dec 03.

Cumulative rainfall since 1st September to 10th December 2003 is normal to below normal (see fig 6). As seen from fig1, majority of the country experienced large negative percentage rainfall

departure from normal which shows deficit in soil moisture content, however the central part recorded less rainfall deficit.

TEMPERATURE
1st – 10th December 2003

Temperatures experienced throughout the country were normal to above normal with temperature deviations ranging from 0.1°C to 2.6°C. Day temperatures went as high as 32°C in some stations. High day temperatures resulted in the increased rate of evapo-transpiration and some crops wilted especially in areas, which received low rainfall amounts.

VEGETATION CONDITION
3rd Dekad of Nov – 1st Dekad of Dec

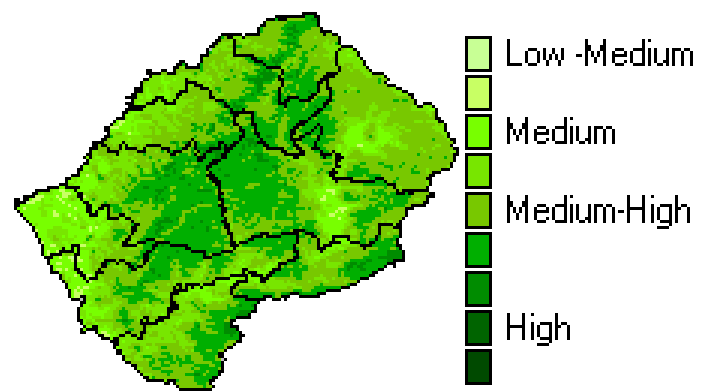


Fig. 2: Normalized Difference Vegetation Index for 3rd dekad of Nov. 03

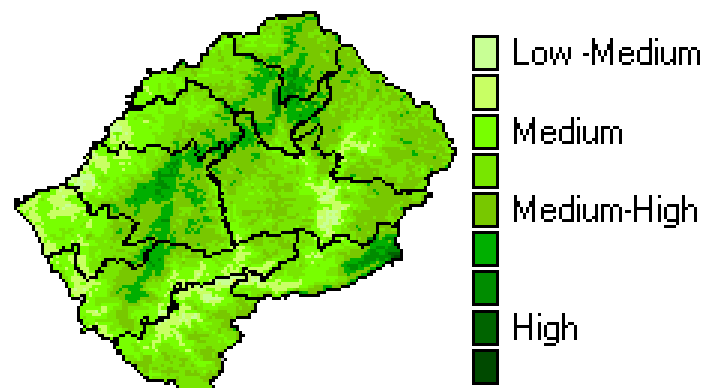


Fig.3: Normalized Difference Vegetation Index for 1st dekad of Dec.03

Figures 2 and 3 above show vegetation condition for the 3rd dekad of November 2003 and 1st

dekad of December 2003 respectively. Fig 2 shows a better vegetation cover. However, comparison of these two figures depicts a rapid loss of greenness during the 1st dekad of December (see fig3). This loss could be linked to the inadequate soil moisture to support most of the vegetation and therefore vegetation in general became water stressed.

CROP STAGE AND CONDITION

1st – 10th December 2003

In the lowlands very little planting has taken place due to the existing dry conditions. Nevertheless, in some areas crops are at emergence stage. But over the highlands and foothills areas the summer crops are mainly at vegetative stage. The crop conditions are fair to good. However, the continuous dry spells coupled with strong winds are dominating features that threaten crop performance, as they are likely to enhance depletion of soil moisture.

Planting of wheat was limited due to the drought. However, the very little that was planted is at full maturity, albeit in very poor conditions. As a result production for this year will be very low.

Special Report on locust outbreak

Outbreak of locusts (elegant grasshoppers) was reported in some areas in the Quthing, Maseru and Leribe districts. These locusts seem to be attacking the green leaves of every tree they come across including the peach trees. This is so, perhaps because crops have not shown up due to late planting in these areas. Fig1 below is a picture of a tree that has lost its leaves as a result of an attack by locusts.



Fig.4: Example of a tree having lost its leaves due to locusts' attack (Ha Lenono – Maseru district)

DEKADAL OUTLOOK

11th – 21st December 2003

Dry and hot conditions are still expected to continue during the second dekad of December. Very little isolated thundershowers can be expected during the last half of the dekad.

SEASONAL OUTLOOK

(December 03 – January 2004)

Light isolated thundershowers are expected to continue during this period, however there is a high likelihood below normal to normal rainfall.

Table 1

Rainfall and Temperature Summaries												
		Rainfall (mm)						TEMPERATURE (°C)				
		Total From Sept 03 to 1st Dek Dec 03										
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	10.5	27.6	3	168.2	219.9	-24	10.2(1)	29.0(5)	20.2	18.9	1.3
Mafeteng	1610	21.5	23.1	3	132.8	185.3	-28	8.4(9)	30.5(6)	19.6	19.0	0.6
Maseru Airport	1530	7.2	29.7	4	74.4	205.1	-64	N/A	30.9(1,2)	21.9	19.7	2.2
Mohale's hoek	1600	0.4	32.9	1	107.1	206.4	-48	10.0(10)	32.0(8)	20.9	19.8	1.1
Mokhotlong	2200	30.2	26.3	2	146.7	184.1	-20	8.0(1)	25.4(1,5)	16.9	15.6	1.3
Ox-Bow	2600	27.1	49.8	5	289.0	385.9	-25	2.5(1)	19.5(5)	12.2	11.1	1.1
Phuthiatsana	1750	27.5	29.6	5	130.4	212.9	-39	11.0(9)	29.4(5)	20.8	19.3	1.5
Qacha's Nek	1970	22.7	34.3	2	143.0	221.6	-35	9.0(4)	N/A	17.9	17.0	0.9
Quthing	1740	12.4	25.7	1	99.8	213.6	-53	11.3(4)	30.8(8)	21.4	18.8	2.6
Semonkong	2458	22.5	24.9	3	199.0	202.3	-2	3.4(1)	24.4(2)	14.9	14.5	0.4
Moshoeshoe I	1628	4.9	32.9	4	94.6	214.6	-56	9.9(9)	31.8(8)	21.4	N/A	N/A
Thaba Tseka	2160	33.7	27.8	5	170.5	188.9	-10	7.1(4)	25.1(3)	16.5	16.4	0.1
Leribe	1740	34.5	27.0	3	162.7	194.9	-17	N/A	29.1(8)	20.5	19.2	1.3

Fig.5

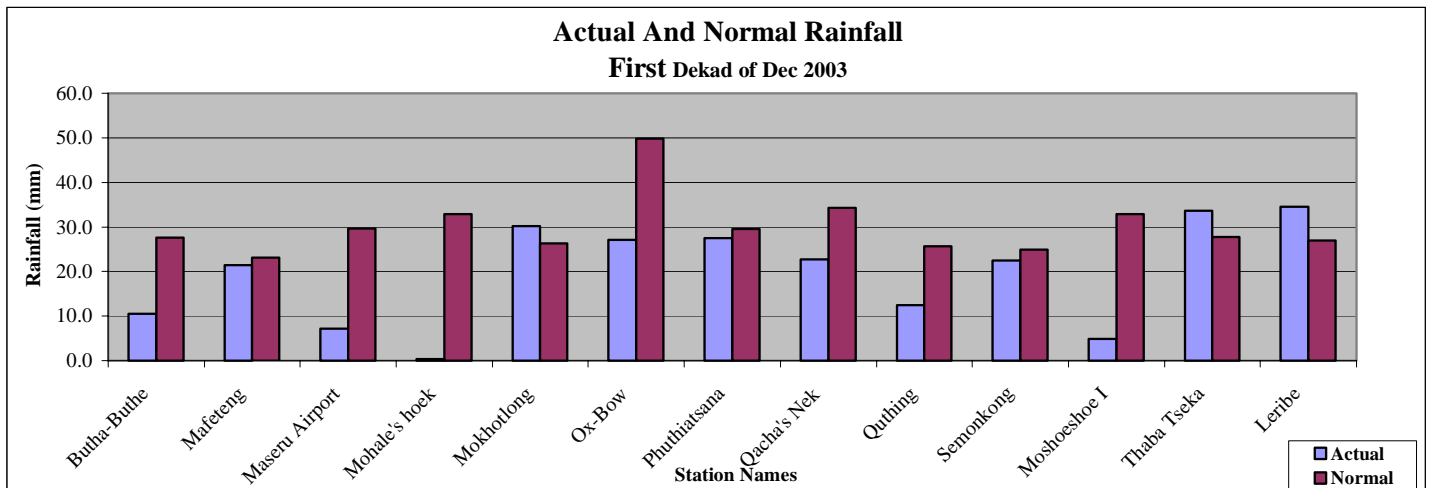
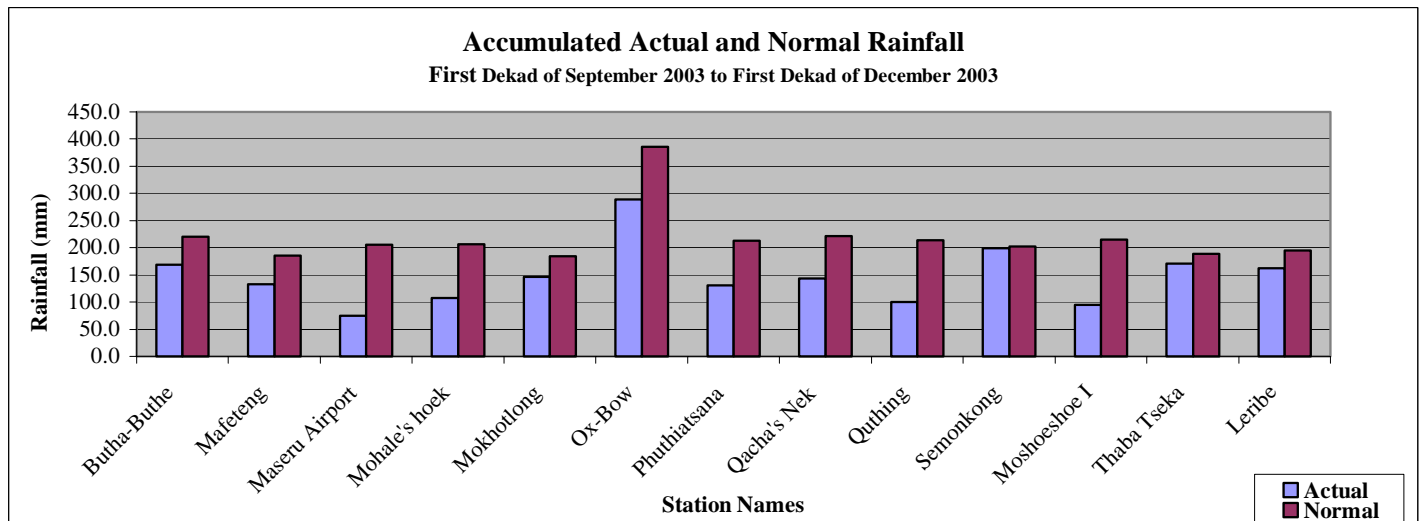


Fig.6



Glossary

Dekad : Ten day period

Normal: Average figure over a specific time period.

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

This Bulletin is issued during the Summer Cropping Season (October – April).

And it is

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Comments and Contributions would be highly appreciated.