LESOTHO METEOROLOGICAL SERVICES
(LEKALA LA TSA BOLEPI)

Ten-Day Agrometeorological Bulletin

01st – 10th December 2004

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

Contents

Highlights

- **Above normal rains in the northen parts.**
- **High temperatures prevailed during the dekad countrywide.**
- **The Lowlands have not received adequate cumulative rains.**
- **Vegetation low in the Lowlands and the Senqu River Valley.**
- **Weeding of crops in progress.**
- **The next ten days expected to be dry and hot.**

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WEATHER SUMMARY

The first dekad of December was generally dominated by a shallow surface trough, which was situated over the central interior. As a result, most parts of the country received only traces and light isolated thundershowers. However the surface trough deepened during the second half of the dekad and its combination with the frontal system, which passed on the 7th, resulted in an influx of moisture into the central interior. This caused isolated to scattered thundershowers to occur.

RAINFALL SITUATION

The northern parts of the country received above normal dekadal rainfalls of 114.6mm in Ox-Bow, 47.9mm in Butha-Buthe and 40.5mm in Leribe (Table 1 & Fig 3). Near normal dekadal rainfall values were registered at Mafeteng, Mokhotlong and Maseru airport. Otherwise the remainder of the country had below normal rainfall. The lowest dekadal rainfall amounts were recorded at Mohale's Hoek, Quthing and Phuthiatsana with 2.5mm, 4.7mm and 10.1mm 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 water.

Cumulative percentage rainfall departure from Normal

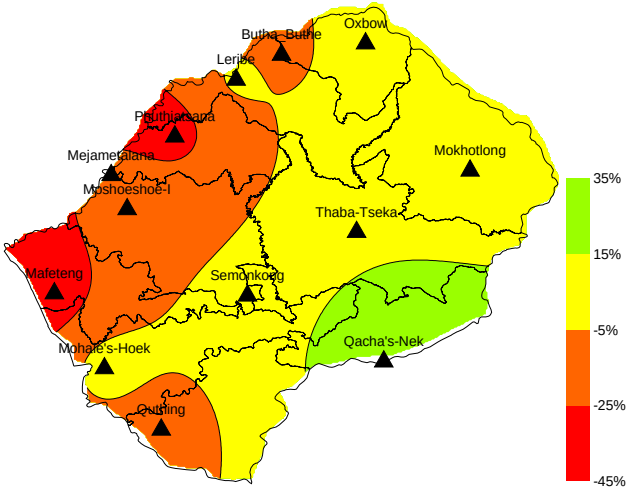


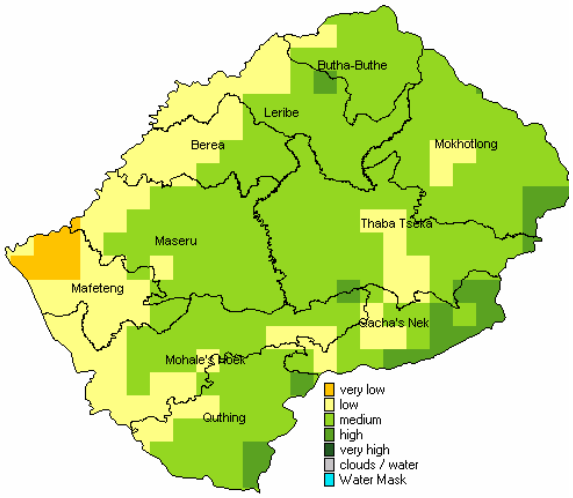
Fig.1: Cumulative rainfall departure from normal since 1st Sept to 10th December 2004.

On the whole, cumulative rainfall (1st September to 10th December 2004) is normal to below normal (Table 1 & Fig 4). Qacha's nek is the only station which recorded above normal cumulative rainfall with the cumulative percentage departure from normal of 43%. Mafeteng and Phuthiatsana have the lowest deficits of cumulative rainfall. The cumulative rainfall range from 106mm recorded at Mafeteng to 408.6mm at Oxbow station.

TEMPERATURE

Above normal temperatures were experienced over the entire country. Temperature deviations are high with Butha-Buthe experiencing the lowest deviation of 0.9°C and Quthing had the highest deviation of 3.0°C (Table 1). Quthing, Mohale's Hoek and Moshoeshoe 1 had the highest maximum temperatures of above 30°C on the 4th of December. The high temperatures experienced, have the negative consequences on crops as they increase the rates of evapotranspiration and thus depletes the soil water content.

VEGETATION



The vegetation index (NOAA NDVI satellite image) for the 1st dekad of December 2004 depicts that the degree of greeness of the vegetation is low over the lowlands and some parts of the Senqu river valley. It is at its lowest in Mafeteng district. Some parts of Qacha's Nek show very high degree of greeness. The low

greeness may imply that the land is bare and that the crops are still young as large parts of the lowlands are arable.

CROP STAGE AND CONDITION

Crops (maize and sorghum) in the western and northern lowlands are at an emergence stage to early vegetative stage. At some places in the low-lying areas planting is in progress. Due to excess heat and small amounts of rain experienced, crops find it difficult to survive as water is rapidly lost through evapotranspiration. Weeding is in progress in most parts of the highlands and some parts of the lowlands.

Harvesting of winter wheat has started in the lowlands, and wheat production is expected to be below normal.

DEKADAL OUTLOOK

11th – 20th December 2004

The second dekad of December is anticipated to be generally dry and hot especially during the first half. However the rainfall situation is expected to improve slightly towards the end of the period as the interior trough is anticipated to dominate during this period.

Table 1

Rainfall and Temperature Summaries												
		Rainfall (mm						TEMPERATURE (°C)				
					Total From Sept 04 to 1st Dek Dec 04			1- 10th Dec 2004				
STATION NAME	ALT. (M)	Actual R/Fall	Normal R/Fall	Rain Days	Actual	Normal	%Dept. from Normal	Minimum Lowest(Day)	Maximum Highest (Day)	Dekadal Mean	Dekadal 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

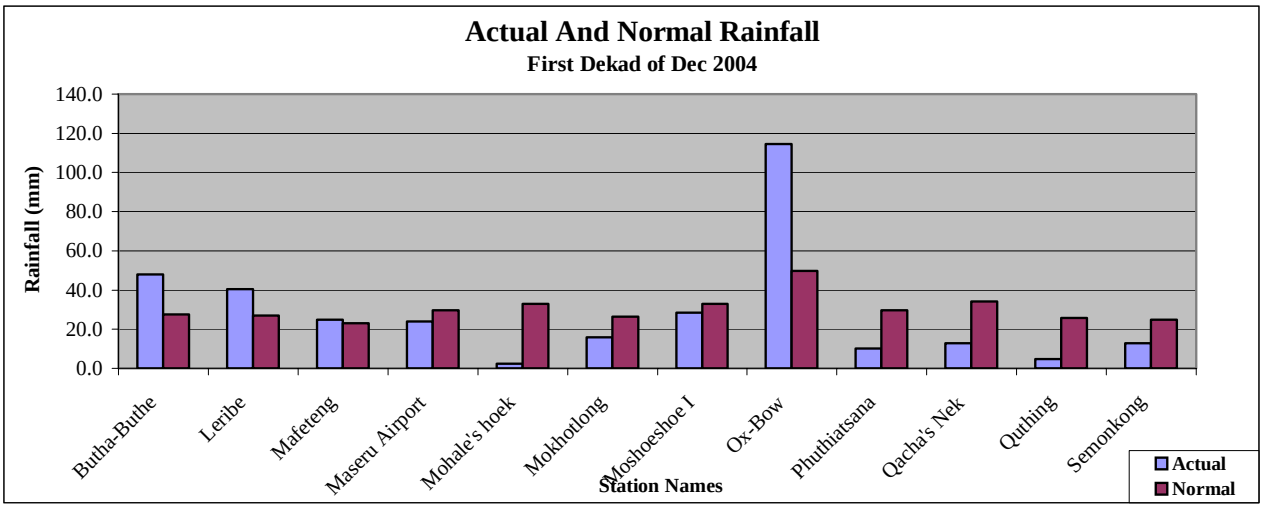
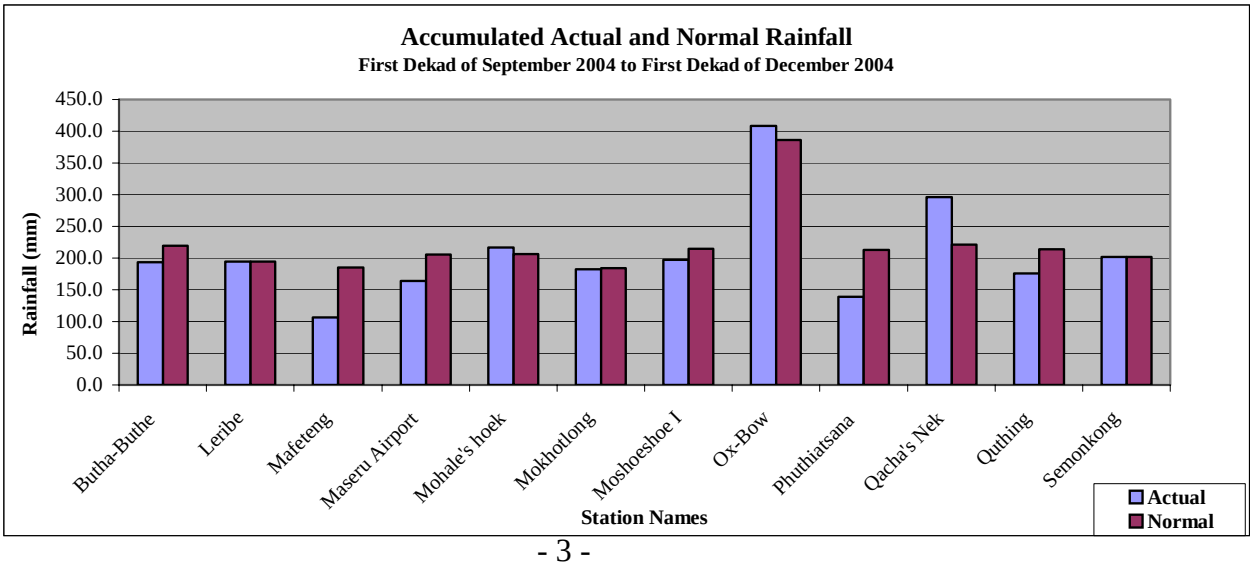


Fig.4



Glossary

Dekad : Ten day period

Normal: Average figure over a specific time period.

% Rainfall Departure from Normal: (Actual Rainfall – Normal Rainfall)/ Normal Rainfall x 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.