

LESOTHO METEOROLOGICAL SERVICES (LEKALA LA TSA BOLEPI)



Ten-Day Agrometeorological Bulletin

1st – 10th April 2007



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

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Highlights

Last Dekad Review

- ❑ Dry weather conditions prevailed in most parts of the country.
- ❑ Warm weather conditions occurred.
- ❑ Prospects of poor summer crops production.

Next Dekad Preview

- ❑ Isolated to scattered rain and thundershowers expected mainly in the southern and western areas

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WEATHER SUMMARY

1-10 April 2007

In the last ten days the frontal systems frequently passed over the southern interior and over our area. The passage of the cold fronts pulled tropical moisture from the north and as a result isolated to scattered thundershowers were observed with more activities in the west and in the south. Cool to cold conditions were also experienced due to the passage of the fronts.

RAINFALL SITUATION

The northern to northwestern areas (Leribe and Phuthiatsana), and the western areas (Maseru) received near-normal to normal rainfall during the first dekad of April 2007. The highest dekad rainfall was experienced at Phuthiatsana (25.9mm) and Qacha's Nek (25.7mm). Qacha's Nek had above normal dekad rainfall.

The remaining parts of the country recorded below normal dekad rainfall. The dekad rainfall had been mostly below normal since January 2007.

The northeastern highlands of Thaba-Tseka and Mokhotlong received the lowest dekad rainfall of 4.1mm and 7.7mm respectively (see table 1).

Cumulative percentage rainfall departure from Normal

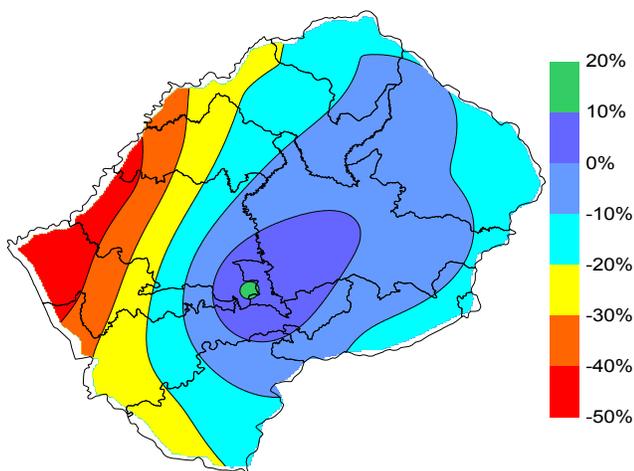


Fig.1: Cumulative rainfall departure from normal since 1st Sept 2006 to 10th April 2007.

The cumulative rainfall can be used to give a general picture of how the season has progressed. Cumulative rainfall since September 2006 up to present is normal at few places and below normal

at most places. The huge deficit in cumulative rainfall is in the western parts of the low-lying areas of Berea, Maseru, Mafeteng and Mohale's Hoek. The high-lying areas of Semonkong and Thaba-Tseka are the only areas that have positive percentage departure of actual cumulative rainfall from normal. Maseru and Mafeteng were the only areas that had deficits in cumulative rainfall at least by the end of December 2006, the present situation shows how fast the percentage departure of actual cumulative rainfall from normal has deteriorated since January until now when almost the entire country experiences deficits in cumulative rainfall (see fig 1 & table 1).

TEMPERATURE

Mean temperatures during the dekad under review were above normal except at Qacha's Nek.

Daily temperatures are gradually decreasing since this is the transition period into winter. However, no significantly low minimum temperatures were experienced during the first dekad of April 2007. Refer to *table 1* for the highest and lowest temperatures of the dekad.

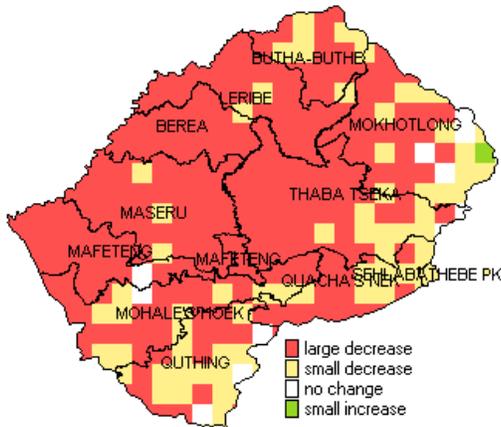
CROP STAGE AND CONDITION

Due to drought conditions since January 2007 and the high temperatures, summer crops were negatively affected as they were at critical stages of their development. The frost attack to crops at some places during the second dekad of March 2007 further exacerbated the crop conditions. Thus the crop conditions are in poor conditions in most parts of the country and the production is expected to be poor.

VEGETATION

The difference between the April 2007 first dekad NDVI satellite imagery and the normal satellite imagery for this period show large decrease of the present vegetation cover when compared with the normal imagery. This is depicted by NDVI satellite imagery shown below. The large decrease in vegetation cover may suggest that the pastures are in very poor conditions in most parts of the country.

Deterioration in vegetation cover had been experienced since this the commencement of this calendar year.



Difference in vegetation cover of the first dekad of April 2007 from the normal imagery of the same period.

WATER SITUATION

The water availability in the capital Maseru and probably some other areas is greatly affected by the dry weather conditions that have prevailed since January. The rains the country is experiencing presently cannot improve the water tables and thus the water availability especially

in Maseru is still unstable. The current drought condition poses a threat that water resources in the capital and the rest of the country in the coming season of spring (August – October 2007) will be stressed.

DEKADAL OUTLOOK

11th – 20th April 2006

During this transition period frontal systems are expected to be active and also the surface interior is expected to deepen while advecting moist air southwards over the southern interior resulting in rain showers and thundershowers over this area. Therefore the period is expected to experience isolated to scattered thundershowers and rain showers especially in the west and in the south.

SEASONAL OUTLOOK (April – June 2007)

There is a high likelihood of below average rainfall during this season. However, the El-Nino conditions that were prevailing since the second half of 2006 into this year have now dissipated. Temperatures are expected to be above average.

Table 1

Rainfall and Temperature Summaries												
		Rainfall (mm)					Temperature (°C)					
		1 - 10 April 2007			Total From Sept06 to 1st Dek April 07		1 - 10 April 2007					
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	13.5	28.8	4	590.9	741.5	-20	8.0 (10)	26.6 (1)	17.1	15.8	1.3
Leribe	1740	19.4	26.1	3	504.7	641.4	-21	8.1 (10)	26.8 (2)	17.3	16	1.3
Mafeteng	1610	10.5	25.7	1	322.9	588.1	-45	8.0 (10)	27.4 (5)	18.0	16.6	1.4
Maseru Airport	1530	18.8	23.7	3	310.1	591.6	-48	10.3 (10)	28.4 (5)	19.2	16.9	2.3
Mohale's hoek	1600	16.4	24.7	6	449.0	606.3	-26	6.5 (10)	28.0 (5)	18.1	16.6	1.5
Mokhotlong	2200	7.7	15.6	3	489.5	546.7	-10	4.9 (1)	24.4 (3)	14.0	13.3	0.7
Moshoeshoe I	1628	14.2	16.2	4	410.6	651.6	-37	8.6 (10)	27.6 (6)	18.4	16.9	1.5
Oxbow	2600	17.9	34.7	4	923.4	1028.1	-10	0.4 (3, 10)	17.8 (2)	9.1	8.6	0.5
Phuthiatsana	1750	25.9	28.5	2	443.2	657.6	-33	9.6 (10)	28.4 (1)	19.1	16.9	2.2
Qacha's Nek	1970	25.7	19.8	3	591.6	694.1	-15	8.1 (8)	24.6 (2)	15.8	17.3	-1.5
Quthing	1740	11.5	27.6	3	510.9	673.5	-24	8.6 (10)	26.6 (5)	17.9	16.2	1.7
Semonkong	2458	12.0	20.5	3	624.8	557.5	12	3.0 (10)	22.5 (2)	12.7	11.6	1.1
ThabaTseka	2160	4.1	10.1	4	558	549.9	1	6.4 (10)	23.7 (3)	14.2	13.3	0.9

Fig.3

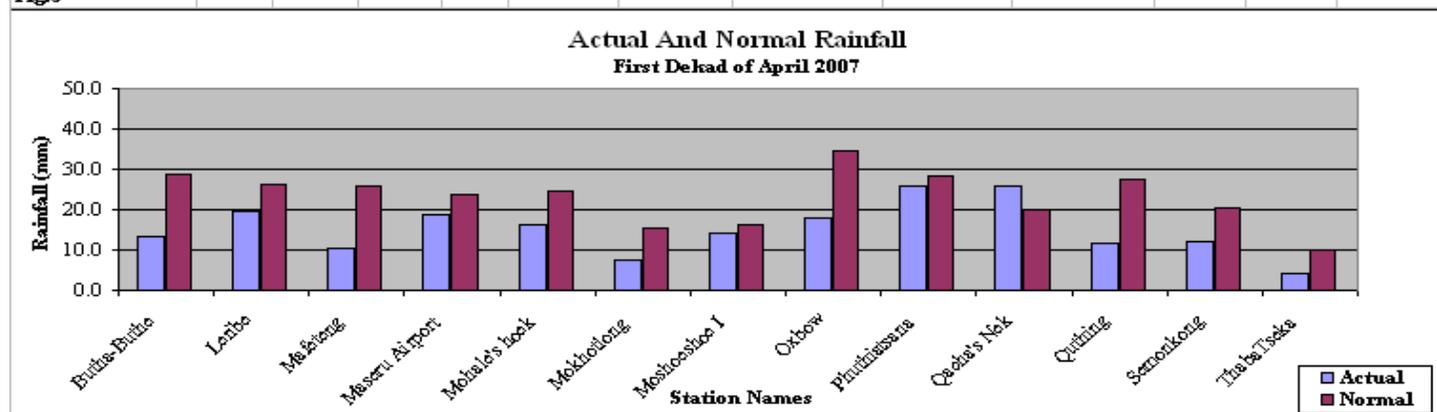
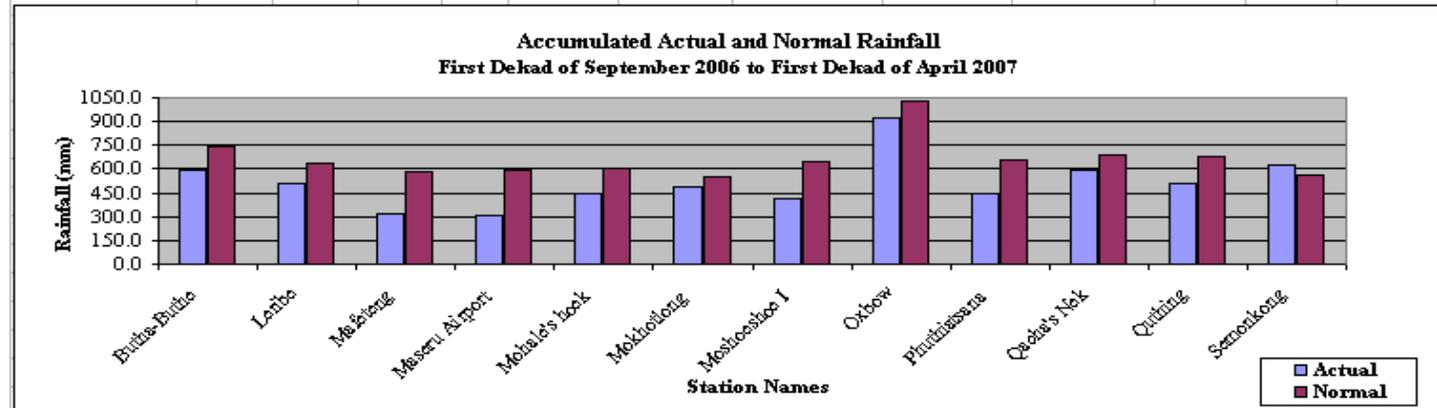


Fig.4



Glossary:

Dekad : Ten day period

Normal: Average figure over a specific time period.

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

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.