

LESOTHO METEOROLOGICAL SERVICES (LEKALA LA TSA BOLEPI)



Ten-Day Agrometeorological Bulletin

11 – 20 October 2007



Issue No.2/2007-08

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

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Highlights

- ❑ Good rains received in most parts of the country.
- ❑ Increase in mean temperatures experienced in most places.
- ❑ General improvement in vegetation cover
- ❑ Land cultivation in progress.

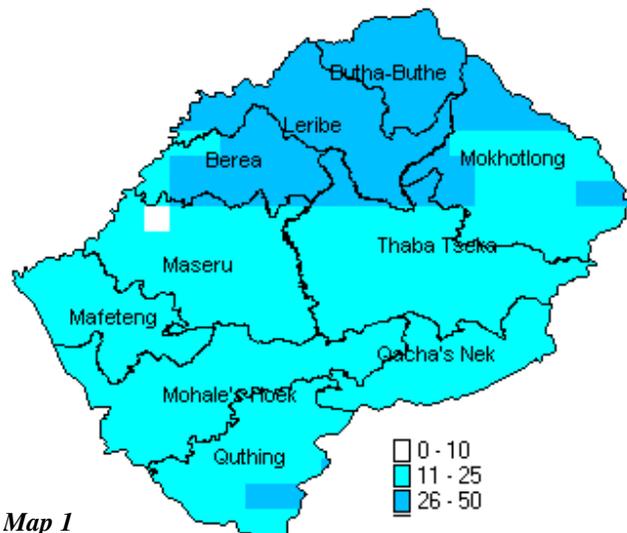
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WEATHER SUMMARY

Moisture influx into the interior of the subcontinent from the tropics continued as the interior trough oscillated over the subcontinent. Cold fronts remained active for most part of the period enhancing rainfall activities especially in the southern and the southeastern parts of the country. Low-level moisture advection induced by the Indian Ocean Anticyclone over the eastern parts also resulted in enhanced rainfall activities over those areas. Severe thunderstorms and hailstorms accompanied by damaging strong winds were observed on many occasions.

RAINFALL SITUATION



Map 1
Rainfall Estimates in (mm) for October 2nd Dekad 2007

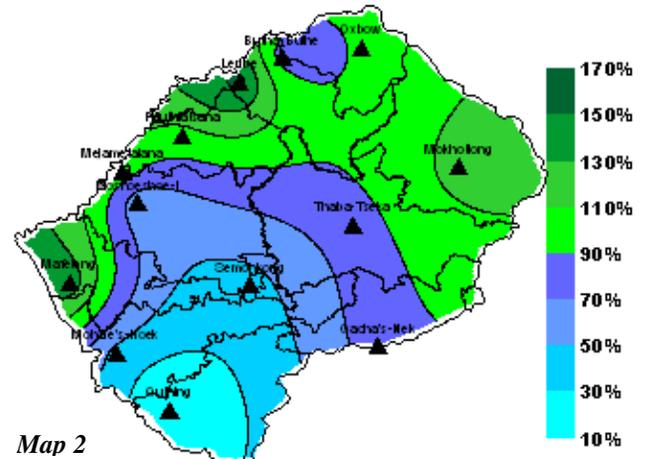
The second dekad of October was predominantly wet in the northwestern lowlands but there were slightly less rainfall activities in the western to southern parts of the country with the exception of Mafeteng (see *Map 1, Table 1 & Fig. 1*). Although considerable amount of rainfall was experienced through out the country in the last ten days, overall the rainfall activities were reduced compared with the first dekad. Highest and lowest dekad rainfall was recorded at Butha-Buthe (41.9mm) and Mohale’s Hoek (12.7mm) respectively. Mohale’s Hoek, Moshoeshoe 1 and Quthing together with Semonkong received below normal dekad rainfall (see *Table 1 & Fig. 1*).

The last three consecutive dekad had good rainfall countrywide. There were notable hail and thunderstorms during the dekad under review. The temporal distribution of rainfall varied from about three days at Mohale’s Hoek and Quthing to six at Thaba-Tseka.

Cumulative Percentage Rainfall Departure From Normal

Cumulative rainfall since the first dekad of September is above normal at most places. It is only Quthing in the southern parts that has normal cumulative rainfall since September 2007 (see *Map 2, Table 1 & Fig. 2*).

Central and northern parts of the country consistently maintain high percentage departures from normal, while parts of Senqu river valley and southern lowlands have lowest percentage departures indicating that most of high intensity rainfall activities have been concentrated in the northern parts of the country.



Map 2
% Departure of Rainfall (Sept 1st Dek - Oct 2nd Dek, 07)

TEMPERATURE

Mean temperatures were mostly above normal in most parts of the country. Only Phuthiatsana and Qacha’s Nek had slightly below normal dekadal mean temperatures. Daily temperatures were generally warm through out the dekad, and there were no notable cold days in the lowlands. However, there were days with below 5°C daily temperatures in the highlands. There is a general trend of increase in daily temperatures as we are approaching summer.

The highest daily maximum temperature of the dekad was recorded at Maseru Airport (28.5°C) on the 17th while the lowest minimum daily temperature of the dekad was observed at Semonkong (2°C) on the 20th.

CROP STAGE AND CONDITIONS

Moisture content of the soil has increased because of the recent rain that the country has experienced. Farmers are using the accumulated moisture to cultivate land for summer cropping. Land preparation and sowing are always done simultaneously.

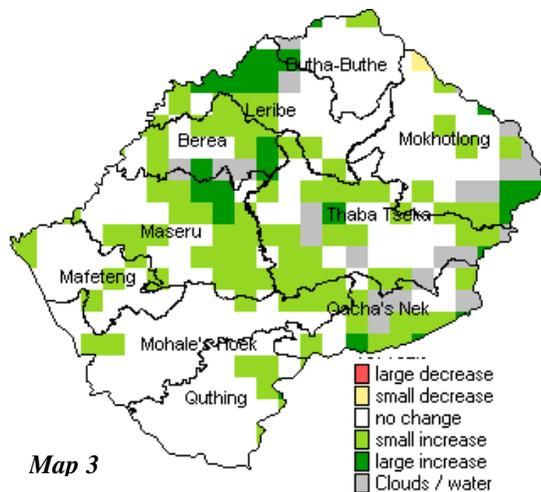
NDVI difference satellite imagery (Map 3) indicates that general vegetation is improving. However, the level of greenness is still below normal at most places.

Wheat grown in winter is improving and it is generally at vegetative stage. Water resources are doing well and it is believed that water availability is currently satisfactory.

DEKADAL OUTLOOK

21 – 31 October 2007

The coming last ten days are expected to experience reduced rainfall activities compared with the previous ten days. However isolated thundershowers are still anticipated becoming scattered with hailstorms and strong winds at times. Temperatures will remain generally warm to hot becoming cooler with the passage of cold fronts in the south.



Map 3

NDVI Difference (Oct 2nd - Oct 1st, 2007)

Table 1

Rainfall and Temperature Summaries												
		Rainfall (mm)						Temperature (°C)				
					Total From Sept 07 to 2nd Dek Oct 07			11 - 20 October 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	41.9	24.2	4	135.5	76	79	8.0 (20)	26.5 (14)	17.5	16.3	1.2
Leribe	1740	34.8	24.0	5	183.7	72	157	8.4 (11)	27.3 (17)	17.0	16.5	0.5
Mafeteng	1610	32.0	23.1	*	144.9	59	144	*	*	*	16.1	*
Maseru Airport	1530	19.9	22.3	5	135.2	67	102	8.8 (11)	28.5 (17)	17.7	17.1	0.6
Mohale's hoek	1600	12.7	25.0	3	99.3	69	43	6.0 (11)	28.3 (17)	18.0	16.7	1.3
Mokhotlong	2200	28.7	20.0	4	140.9	65	117	3.6 (11)	26.4 (17)	14.9	13.6	1.3
Moshoeshoe I	1628	19.9	26.1	5	109.1	70	56	7.6 (11)	27.5 (17)	17.3	17.1	0.2
Phuthiatsana	1750	39.5	28.0	5	157.9	78	102	9.1 (14)	27.4 (17)	16.7	16.8	-0.1
Qacha's Nek	1970	35.9	22.7	5	135.1	75	81	5.4 (20)	28.0 (17)	14.8	14.6	-0.1
Quthing	1740	13.5	24.1	3	91.4	80	14	7.5 (11)	28.1 (17)	18.1	16.5	0.2
Semonkong	2458	15.0	22.1	4	109	76	43	2.0 (20)	23.0 (17)	12.79	11.7	1.6
Thaba-Tseka	2160	34.0	22.1	6	127.6	71	81	3.9 (11)	25.5 (17)	14.01	13.4	1.1

NB: * Some data was missing in some days

Fig.1

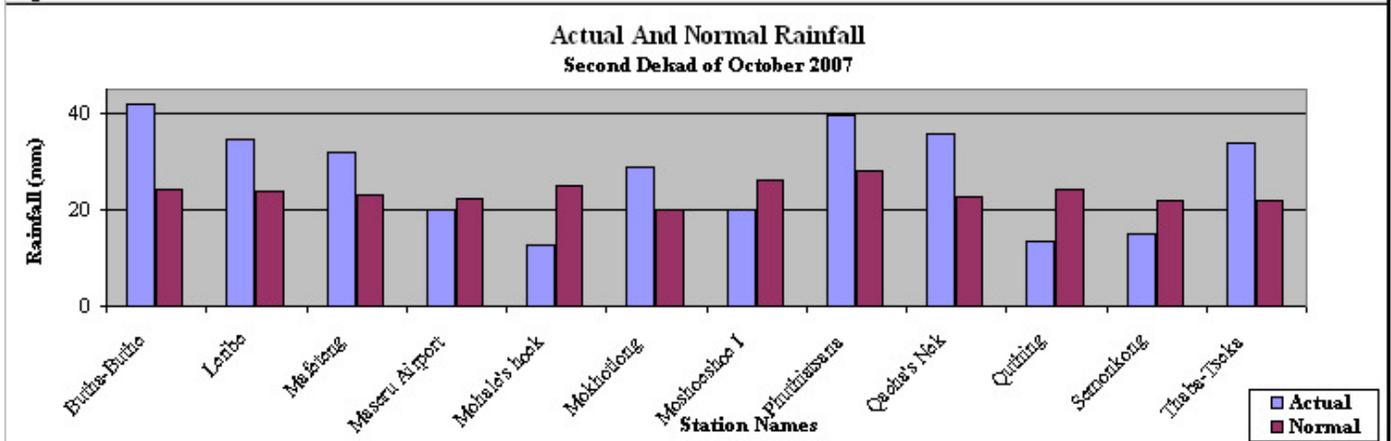
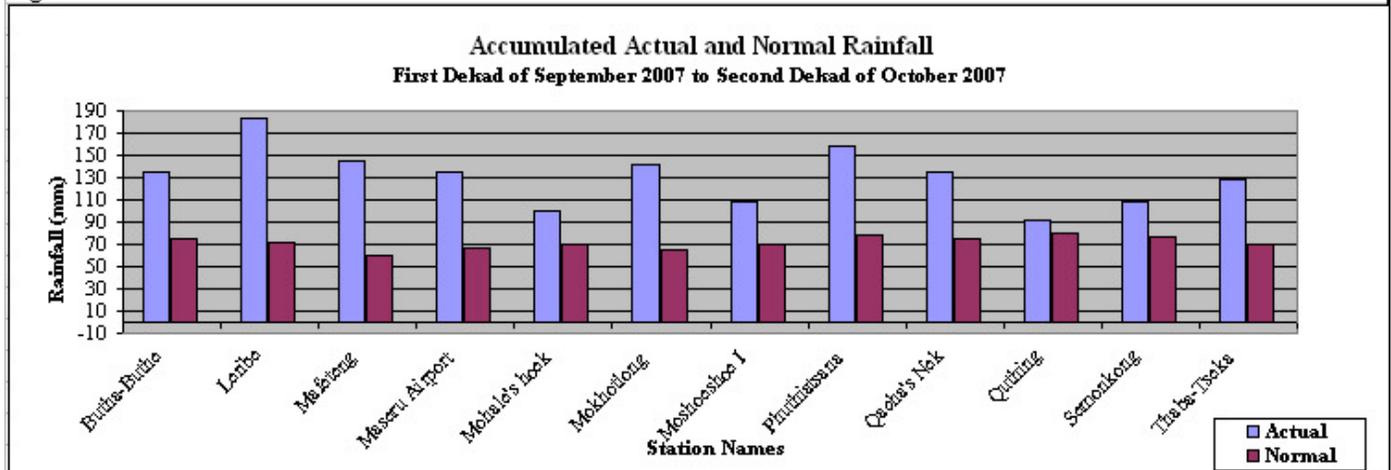


Fig. 2



Glossary

Dekad : Ten day period

Normal: Average figure over a specific time period.

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

NDVI: Normalized Difference Vegetation Index – simply implies how good or bad the vegetation is for the specific period.

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

And it is

Produced by the

Lesotho Meteorological Services as a contribution to the

National Early Warning Unit for Food Security.

The Unit is coordinated by the Disaster Management Authority in the

Prime Minister's Office.

Comments and Contributions would be highly appreciated.