

LESOTHO METEOROLOGICAL SERVICES (LEKALA LA TSA BOLEPI)



Ten-Day Agrometeorological Bulletin

11th – 20th January 2007



Issue No.11/2006-07

Vol.4

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

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Highlights

Last Dekad Review

- ❑ Very dry weather conditions experienced.
- ❑ Hot weather conditions occurred.
- ❑ Small decrease in vegetation cover.

Next Dekad Preview

- ❑ Temperatures expected to continue rising.
- ❑ Isolated to scattered rains expected.

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WEATHER SUMMARY

11th – 20th January 2007

Very hot and dry conditions continued unabated in the last ten days, as the interior surface trough and the semi permanent surface low over the Eastern Cape remained shallow with little moisture influx over the interior of the subcontinent. Tropical disturbances were also active in the South West Indian Ocean denying the subcontinent some moisture advection

RAINFALL SITUATION

The first two dekads of 2007 calendar year witnessed dry weather conditions. Only Phuthiatsana and Semonkong received near normal to above normal dekadal rainfall during the second dekad of January. The rest of the country experienced below normal dekadal rainfall. The highest rainfall of the dekad was 41.5mm at Semonkong. Mohale’s Hoek did not have even a drop of rainfall in the dekad under review (see table 1).

The rain days were very few throughout the country. Semonkong and Qacha’s Nek had the highest number of rain days with six.

Cumulative percentage rainfall departure from Normal

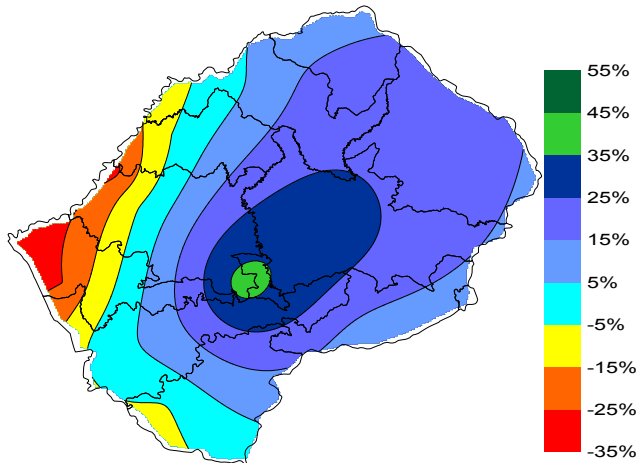


Fig.1: Cumulative rainfall departure from normal since 1st Sept to 20th January 2006.

Cumulative rainfall since the first dekad of September 2006 to second dekad of January 2007 is above normal in the central and north-northeast areas of the country. Meanwhile the cumulative rainfall in the western parts of the country is below normal. Since the beginning of

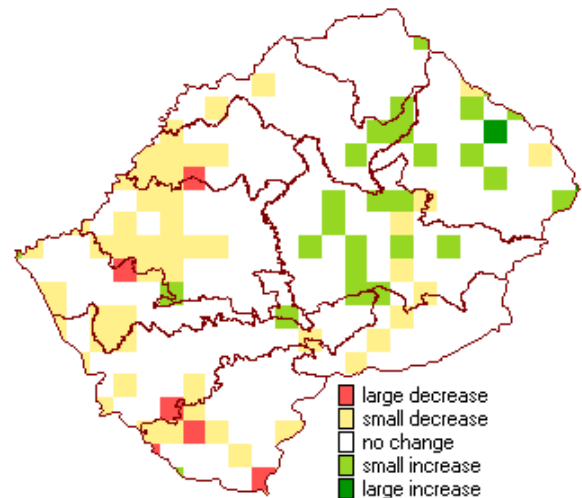
the current calendar year, precipitation decreased. This dry spell decreased the cumulative rainfall in most parts of the country. For the major part of the season, some areas of Maseru and Berea, and large parts of Mafeteng have shown, and still continue to depict deficits of cumulative rainfall.

TEMPERATURE

Temperatures were relatively high during the dekad under review. The positive deviations of dekadal normal mean temperature from actual dekadal mean temperature witness this fact. Areas from west to south of the country were very hot as mean temperature deviations were all above 1°C (see table 1).

The highest daily temperature of the dekad was recorded at Maseru Airport where 34°C was recorded on the 14th. The high temperatures increased the rate of evapotranspiration thus depleting the water resources that would be available for crop use.

VEGETATION



Difference image of two NOAA NDVI images – the first dekad of January 2007 and the second dekad of January 2007 shows that generally, vegetation cover in most of the lowlands decreased. The difference image of the current dekad image with the normal image shows almost a similar picture. Due to high temperatures and poor rainfall during the previous dekad, vegetation cover has decreased in most parts of the lowland. However, there has

been a small increase of vegetation cover in the central to northeastern areas of the highlands.

CROP STAGE AND CONDITION

Due to high temperatures and suppressed rains, all summer crops have been under water stress. Further developments of maize and sorghum crops were once again negatively affected in most parts of the country this dekad.

At this stage of developments, soil water stress reduces the potential production of the maize crop, and even sorghum. Maize and sorghum crops conditions are still ranging from vegetative to flowering stages in most areas of the lowlands. Crops in the western tip of Mafeteng, where it has been very dry and hot since the beginning of the current year are at risk of being permanently destroyed by hot temperatures and no rainfall.

In the central, north and northeastern highlands the maize crop is expected to further develop without major constraints.

Summer wheat harvesting is finished.

DEKADAL OUTLOOK

21st – 31st January 2007

The coming ten days are expected to be generally dry and temperatures continue to rise. However, isolated thundershowers are still anticipated at the beginning of the forecast period, becoming scattered towards the end of the period.

Table 1

Rainfall and Temperature Summaries												
		Rainfall (mm)					Temperature (°C)					
		Total From Sept 06 to 2nd Dek Jan 07					11 - 20 Jan 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	29.4	41.5	4	464.6	416.3	12	12.2(12)	30(13)	20.8	20.2	0.6
Leribe	1740	29.8	38.8	4	364.6	360.4	1	11.8(12)	31.5(13)	21.3	20.7	0.6
Mafeteng	1610	6.2	33.9	1	235.4	315	-25	11.8(20)	33(13)	22.2	20.6	1.6
Maseru Airport	1530	14.8	36.1	5	237.4	328	-28	13.4(16)	34(14)	23.2	21.7	1.5
Mohale's hoek	1600	0	33.1	0	343.7	335.9	2	13(13,20)	33.5(14)	23.4	20.8	2.6
Mokhotlong	2200	18.6	30.1	3	379.2	323.8	17	7.5(12)	27.6(14)	17.9	17.7	0.2
Moshoeshoe I	1628	14.9	37.0	3	325.1	354.7	-8	12.4(16)	33.2(13)	22.8	21.2	1.6
Phuthiatsana	1750	31.8	39.0	5	354.0	371.6	-5	13.2(16)	32.9(12)	22.3	21.3	1.0
Qacha's Nek	1970	22.7	38.4	6	420.9	394.2	7	10.9(20)	29.5(14)	19.3	18.4	0.9
Quthing	1740	4.5	29.4	3	346.3	371	-7	11(18)	33.3(13)	22.6	21.2	1.4
Semonkong	2458	41.5	29.6	6	448.4	321.6	39	6.6(20)	26(13)	16.4	16.0	0.4
Thaba-Tseka	2160	17.1	29.8	4	417.1	320.2	30	8.7(12)	27.3(13)	17.6	17.2	0.4

Fig.4

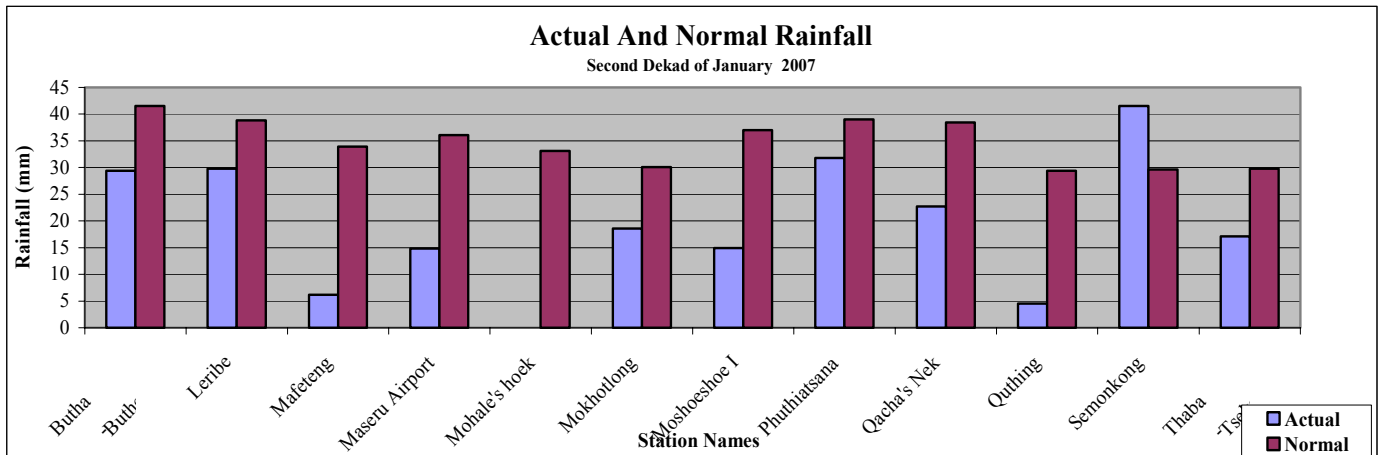
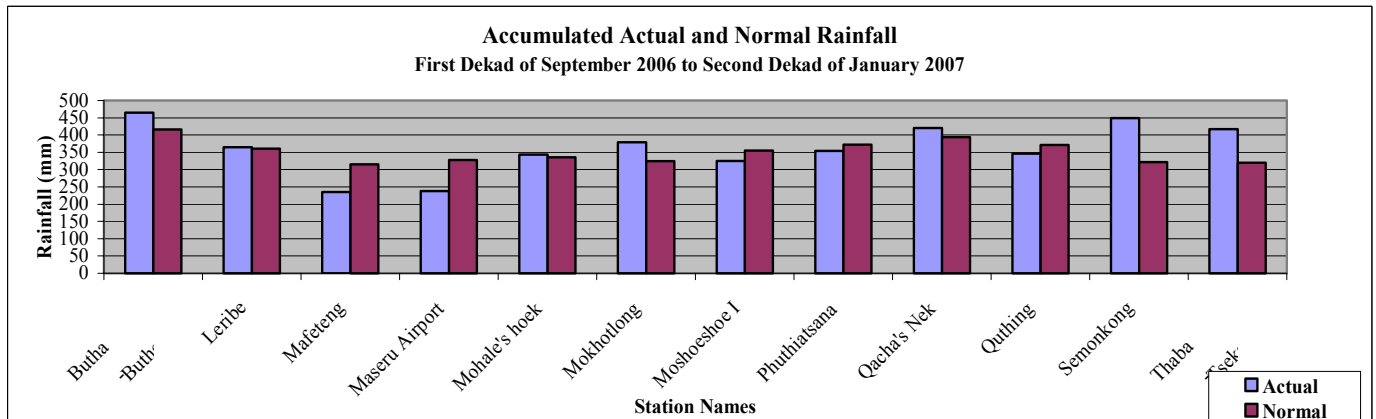


Fig.5



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

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.