## LESOTHO METEOROLOGICAL SERVICES (LEKALA LA TSA BOLEPI)



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**Ten-Day Agrometeorological Bulletin** 

 $11^{\text{th}} - 20^{\text{th}}$  December 2005



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

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# Highlights

- **Low rainfall was registered throughout the entire country.**
- Hot to mild weather conditions prevailed during the dekad.
- Vegetation cover medium over the northern Highlands.
- The temperatures are expected to be warm with a few mild days.

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#### WEATHER SUMMARY

The 2<sup>nd</sup> dekad of December was dry. The temperatures were generally warm to mild and the difference in temperature betweeen this period and the previous period was little. However, there was a well spread low amount of rainfall experienced over the kingdom of Lesotho as compared to the amount of rainfall experienced by the previous period.

#### **RAINFALL SITUATION**

The second dekad of December 2005 was dry over the entire country. This is depicted by the number of rain days which were mostly below 4 days (table 1). The dekadal rainfall values range from 0.0mm recorded at Mafeteng to 24.5mm registered at Mohale's Hoek station. Other stations with low rainfall includes Butha-Buthe and Quthing recording less than 10mm of dekadal rainfall. At areas surrounding the stations with dekadal low rainfall, summer crops (maize and sorghum) which are mostly at vegetation stage were deeply water stressed.

## Cumulative percentage rainfall departure from Normal

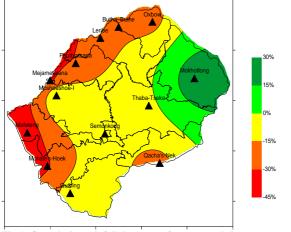


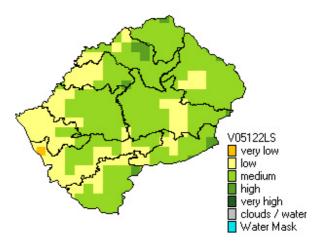
Fig.1: Cumulative rainfall departure from normal since 1<sup>st</sup> Sept to 20<sup>th</sup> December 2005.

On the whole, cumulative rainfall (1<sup>st</sup> September to 20<sup>th</sup> December 2005) ranges from 136.3mm recorded at Mafeteng station to the maximum of 364mm recorded at Oxbow (Table 1 & Fig 4). As compared the normal, all the stations recorded below normal cumulative rainfall.

#### **TEMPERATURE**

Generally, the temperatures experienced during this dekad were slightly below normal in most parts of the country. The highest temperature was recorded on the  $16^{\text{th}}$  at Phuthiatsana and the lowest was recorded at Semonkong on the  $13^{\text{th}}$ . The low temperatures are evident over the high lying areas with the dekadal mean temperatures of less than  $20^{\circ}$ C.

#### **VEGETATION**



The vegetation index (NOAA NDVI satellite image) for the 2<sup>nd</sup> dekad of December 2005 depicts that the degree of greenness is medium to low over the northern highlands and some parts of the Senqu river valley. It is at its lowest in Mafeteng and some parts of Mohale's Hoek districts.The highlands show a very high degree of greenness. The low greenness in the lowlands may imply that the land is bare and that the crops are still young.

#### **CROP STAGE AND CONDITION**

Due to low amounts of rainfall expirienced in the dekad in review, the crops (maize and sorghum) have experienced soil moisture stress throughout the whole country. This has affected the crops negatively at this time (emerging and vegetation) of the plant development stage. Apart from that, due to the high temperatures and the low rainfall, crops are at risk of rapid moisture loss due to evapotranspiration.

#### **DEKADAL OUTLOOK**

### 21<sup>st</sup> – 31<sup>st</sup> December 2005

Partly cloudy conditions with mainly isolated thundershowers are expected over the coming dekad. Otherwise it will generally be warm with a few mild days. Maximum temperatures are expected to vary between  $22^{0}$ C and  $30^{0}$ C in the lowlands and between  $15^{0}$ C and  $24^{0}$ C in the highlands. The minimum temperatures are expected to vary between  $10^{0}$ C and  $16^{0}$ C in the lowlands and between  $4^{0}$ C and  $12^{0}$ C in the highlands.

Table	1

Rainfall and Temperature Summaries												
Rainfal				ll (mm)			Temperature (°C)					
	11 - 20 Dec 2005 Total From Sept 05 to 2nd Dek Dec 0				to 2nd Dek Dec 05	5 11 - 20 Dec 2005						
STATION	ALT.	Actual	Rain	Normal			%Dept. from	Minimum	Maximum	Dekadal	Dekada	
NAME	(M)	R/Fall	Days	R/Fall	Actual	Normal	Normal	Lowest(Day)	Highest (Day)	Mean	Normal	Deviation
Butha-Buthe	1770	9.1	3	36.6	249.7	304.4	-18	7.5 (11)	29.0 (16)	18.9	19.3	-0.4
Leribe	1740			31.6		257.2					19.8	
Mafeteng	1610	0.0	0	28.4	136.3	225.1	-39	5.1 (12)	29.6 (16)	18.8	19.9	-1.1
Maseru Airport	1530	3.7	1	26.6	151.3	233.7	-35	3.7 (17)	30.7 (16)	19.4	20.8	-1.4
Mohale's hoek	1600	24.5	2	29.6	163.3	240.6	-32	7.5 (13)	31.5 (16)	20.4	20.5	-0.1
Mokhotlong	2200	5.4	4	29.4	289.7	227.8	27	4.9 (13)	26.6 (17)	16.8	16.7	0.1
Moshoeshoe I	1628	13.7	2	25.3	251.4	248.1	1	7.4 (13)	30.4 (19)	19.7	20.3	-0.6
Ox-Bow	2600	19.7	5	55.2	364.0	458.5	-21	1.2 (14)	20.0 (17)	11.8	11.7	0.1
Phuthiatsana	1750	7.9	3	38.9	199.8	278.1	-28	9.1 (13)	31.3 (16)	20.3	20.4	-0.1
Qacha's Nek	1970	15.8	2	41.6	216.7	271.8	-20	5.1 (13)	28.4 (17)	17.5	17.7	-0.2
Quthing	1740	4.9	2	34.2	249.5	270.3	-8	9.5 (13)	30.4 (14)	20.2	20.2	0.0
Semonkong	2458			23.4		237		0.6 (13)	24.4 (17)	14.2	15.2	-1.0
ThabaTseka	2160	3.0	2	24.6	220.6	228.9	-4	6.0 (13)	25.1 (14)	16.4	16.4	0.0



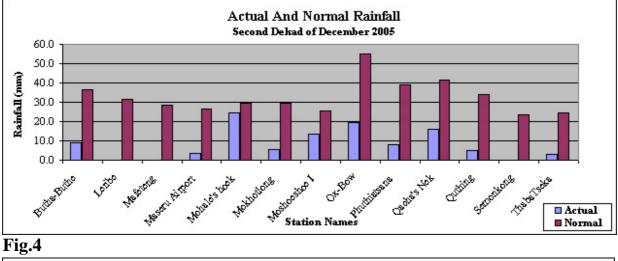
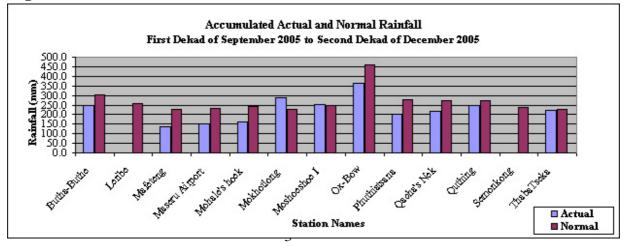


Fig.4



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Glossary		
Dekad : Ten day period		
Normal: Average figure over a specific tir	ne period.	
% Rainfall Departure from Normal: (Actu	al Rainfall – Normal Rainfa	ll)/ Normal Rainfall x 100

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

## And it is

## Produced by the

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Comments and Contributions would be highly appreciated.