## **RAINFALL SITUATION FOR THE 2006/2007 RAINY SEASON**

The period October – December (OND) 2006, which mark the beginning of the rainy season (Oct-Apr) received above normal to normal rainfall (*Map 1*). A large part of the country experienced torrential rains at the beginning of November that inflated the accumulated rainfall amounts for the OND season. Due to those torrential rains there were flooding in some rivers. Coming to the second part of the rainy season, the period from January to March (JFM) and April saw extremely suppressed rains (*Map 2*). The second part of the season received below normal to normal rainfall. Very low monthly rainfall amounts were registered with the situation being chronic in much of the Lowlands. This brought **severe drought** conditions, where February 2007 even became the driest February in history since 1968. The western areas of Berea and Maseru; and the southern lowlands (Mafeteng, Mohale's Hoek and Quthing) remain the most affected. The Senqu River valley is another region that was affected by the drought.



Map 1: Cumulative Rainfall Percentage Departure from Normal for October – December 2006

*Map 2* depicts that the western Lowlands received about 40% of their normal cumulated rainfall. Other parts of the Lowlands accumulated not more than 60% of their normal cumulative rainfall on average. Although the Highlands were at deficits, they were better than the Lowlands.



Map 2: Cumulative Rainfall Percentage Departure from Normal for January – April 2007

The most affected areas are shown from the maps above that they have been in rainfall deficits since the beginning of the season. That means that these areas might be under severe stress for potable water since underground water resources have not been recharged appropriately.

Mean temperatures were high during the JFM. High mean temperatures inflated very significantly the rate of evapotranspiration to the already water stressed areas of the lowlands.

Water used for all activities in Maseru is fully abstracted from the Phuthi River – commonly known as Mohokare. And as a result of both suppressed rains and high temperatures, many river systems including Phuthi River started drying up as early as March and therefore there were notably low flows inadequate to supply Maseru with enough potable water. Maqalika dam in Maseru stores water that can be utilised during the dry seasons, but its levels were low too. The consequence of that was the release of water from the Lesotho Highlands Development Authority (LHDA) system on the 22<sup>nd</sup> of March to augment the Maseru water supply. The water was released from the outlet at 'Muela into the Phuthi watercourse.

The water situation in Maseru is still critical and business community and general public are encouraged to use water with care, and preserve remaining water resources.

## **COMPARISON OF 2007 WITH PAST YEARS STARTING FROM 2000**

The presentation below looks into the drought of 2007 and how the accumulated rainfall compares with other droughts that became prominent in January to April. In the last eight years, there have seasons where there have been remarkable droughts.

Accumulated rainfall may give a general glance to the seasonal rainfall. Combined annual cumulative rainfall for Butha-Buthe, Leribe and Maseru is pictorially presented below. Cumulative rainfall for the 2007 so far is very low compared with previous years. Frequent lengthy dry spells can even be seen from the curve. Water availability in Maseru and the rest of the country is always affected by recurrent droughts.

While other years had normal to above normal rainfall during January – April, the years 2001 and 2003 were at cumulative rainfall deficits. In October of 2003, there was water release from the LHDA system. The drought of that year became prominent in spring. But as the chart below shows, January – April of the year 2007 was far drier than all the years since the year 2000 as well as the normal. The preceding two years and the year 2000 received good amounts of rainfall which were well above normal for large part of the season. The good rains that fell during these wet years recharged underground water resources and improved water tables. Torrential rains that fell in the years 2005 and 2006 destroyed bridge structures in some roads of the country.

The other important feature shown in the chart is that in winter the cumulative rainfall graph remains horizontal. That means that there is no rainfall in winter, and that is since climatologically winter is dry in Lesotho.



Chart: Comparison of the combined accumulated rainfall for the years 2000 – 2007 and the mean.

## THE LIKELY WATER SITUATION IN THE COMING SPRING

Droughts always put water resources in Lesotho under pressure and therefore 2007 is no exception. The weather outlook for winter (May-June-July) predicts likelihood of below normal rainfall. That means that dry weather is expected during this winter. Moreover, normally spring does not have notable rainfall especially the first months of August and September.

The result of this expected dry weather in the coming winter can have devastating effects. It can be expected that most water resources will dry up as early as winter and a **serious potable water scarcity** is highly probable in the coming spring season and the severity of water shortage is likely to be more in the lowlands and the Senqu valley.