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# Village Water Supply in Remote Areas

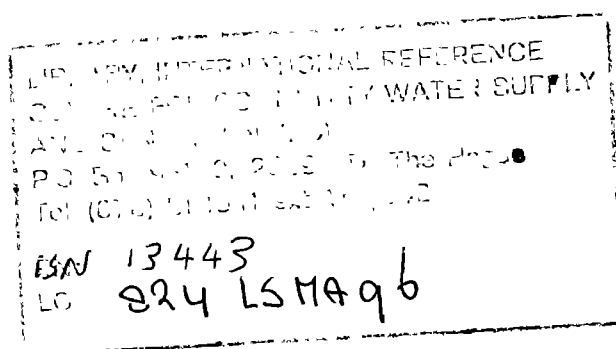
## An Evaluation of the Lesobeng Spring Protection Project of St James Hospital, Mantšonyane, Lesotho

by

David Hall  
Sechaba Consultants

Maseru

April 1996





# ST. JAMES' MISSION HOSPITAL

(Church of Province of Southern Africa)

P O Box 3,  
Mantsonyane 150,  
Lesotho  
Southern Africa

Mantsonyane, 17 June 1996,

Dear Sir / Madam,

Hereby we proudly present to you the evaluation report of the Lesobeng Spring Protection Project.

This water supply project is carried out by the Anglican St. James Mission Hospital Mantsonyane. It started in september 1993 with preparations. The construction activities started in March 1994, and are still continuing. The project aims to provide 27 villages with clean and sufficient drinking water by constructing water systems that adhere to the national construction standards of Lesotho.

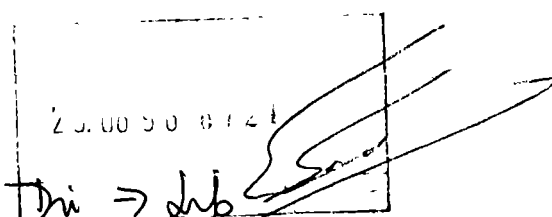
The project was financially made possible through Vastenactie/CEBEMO, the Dutch Catholic Cofinancing Organisation. Dienst over Grenzen =(Services Abroad) in Holland recruited and supported the Project Coordinator, while P.S.O in Holland backs him up financially. We are very much indebted to these organisations, and take this chance again to thank them very much for their support.

This is the report of the external evaluation of the project, carried out and prepared by Sechaba Consultants, an authoritative consultancy agency based in Maseru, Lesotho.

Yours Sincerely,



Dr. L. Meuwissen  
Medical Superintendent



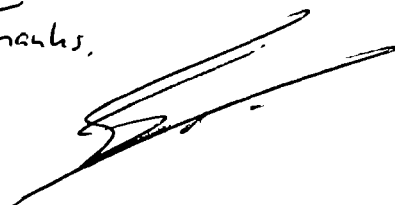
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Ir. E. van de Glessen  
Project Coordinator

Ir. van de Glessen followed a training programme at the IRC prior to his departure to Lesotho.

Please make this report end up in the library of the IRC.

Thanks,





## Acknowledgements

The Consultant would like to begin by thanking all the villagers of the Lesobeng Valley who gave so freely of their time to meet with the Research Team. The comments which they made during workshops, focus group discussions and individual interviews were extremely valuable and have been incorporated wherever possible into the Report.

The Hospital and Project staff were also all very cooperative and provided valuable insights into the functioning of the Project. The Project Assistant, the Masons were particularly helpful as was the Nurse Assistant of the Ha Lephoi Health Centre. The Project Manager went out of his way to provide all the necessary information and to comment on earlier drafts. Kaspar Grossenbacher, Country Director of Helvetas (which funded the study) also contributed comments, providing a valuable perspective from the Helvetas and Department of Rural Water Supply point of view.

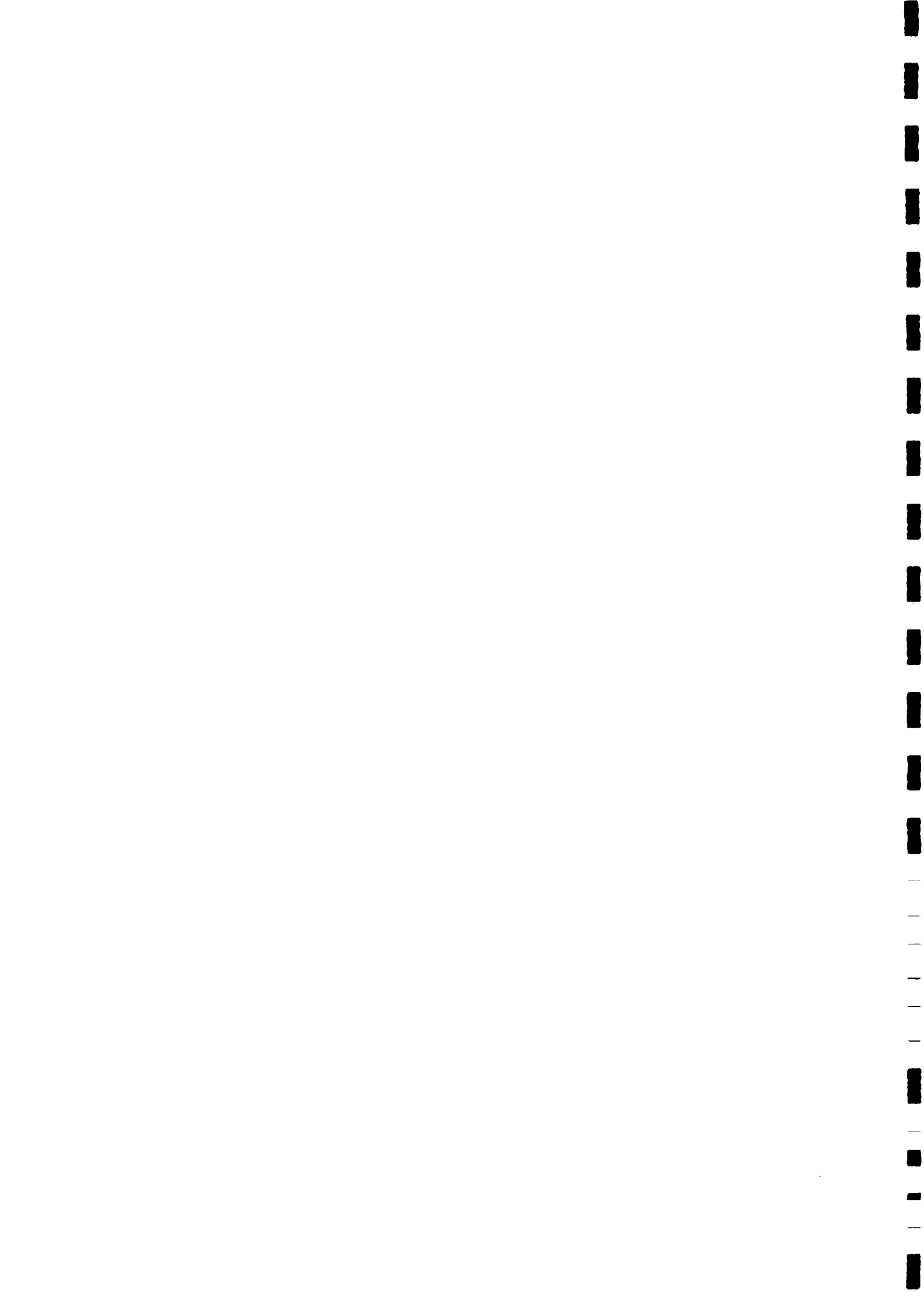
Individual members of the Research Team worked extremely hard to gather the required data. In particular I would like to thank Montseng Mofokeng who conducted the Workshops as well as many of the focus group discussions and interviews and compiled valuable notes. Hlalele Hlalele, her assistant, contributed significantly to the social aspects of the research while Likotsi Lemeke did an excellent job on the technical side. Without the expertise of Lawrence Hall, who came out of retirement specially to help on the financial aspects, the report would probably never have been completed.

David Hall  
Morija April 1996



# Table of Contents

1.	Introduction .....	1
2.	General Background .....	2
2.1	The Project Area .....	2
2.1.1	Thaba Tseka District .....	2
2.1.2	The St James Health Service Area .....	2
2.1.3	Lesobeng Valley Constituencies .....	4
2.2	Definitions .....	5
2.3	DRWS Standards .....	6
2.3.1	Construction Standards .....	6
2.3.2	Distance from Collection Points .....	7
2.3.3	Population Per Collection Point .....	8
2.3.4	Litres per capita per day .....	10
2.3.5	Community Participation and Management Standards .....	11
3.	The Project .....	12
3.1	Origins and Development of the Project .....	12
3.1.1	The Methalaneng Experience .....	12
3.1.2	The CARE Proposal .....	12
3.1.3	The 1993 St James Proposal .....	13
3.1.4	Obtaining Agreement from DRWS .....	14
3.1.5	The Revised 1994 St James Proposal .....	15
3.1.6	The Working Environment .....	17
3.2	Project Staff and Resources .....	18
3.2.1	Masons .....	18
3.2.2	The Project Assistant .....	18
3.2.3	Resources .....	18
3.3	Project Approach .....	19
3.3.1	Initial Contact .....	19
3.3.2	First Village Meeting .....	19
3.3.3	Letter of Application .....	19
3.3.4	Second Village Meeting .....	20
3.3.5	VWC Training .....	20
3.3.6	Project Start-up .....	20
3.3.7	Construction .....	20
3.3.8	Handover .....	20
3.3.9	Conflict Resolution .....	20





4.	Findings .....	21
4.1	Technical Achievements .....	21
4.2	Level of Service Achievements .....	21
4.2.1	Litres per capita per day .....	22
4.2.2	Proximity to collection points (150 metre standard) .....	23
4.2.3	Population per collection point .....	25
4.3	Financial Aspects .....	26
4.3.1	Bookkeeping and Audit .....	26
4.3.2	Cost calculations .....	26
4.3.3	Progress in Relation to Budgets .....	28
4.4	Community Participation and Management Achievements .....	30
4.4.1	Perceived Successes .....	31
4.4.2	Perceived Failures .....	31
4.4.3	People's Suggestions .....	33
5.	Discussion of Community Perceptions of the Project .....	34
5.1	Proximity .....	34
5.2	Communications with Villagers .....	34
5.3	Organising labour .....	34
5.4	Cash contributions .....	35
5.5	Waterminder Training .....	35
5.6	Conflict Resolution Mechanisms .....	35
5.7	The Role of the Masons .....	36
5.8	Involving VDCs .....	36
6.	Discussion of Main Findings and Recommendation .....	36
6.1	Project Preparation .....	37
6.1.1	The Need for DRWS Support to NGOs .....	37
6.1.2	Data Collection and Designs .....	38
6.2	Integration vs. Autonomy .....	38
6.3	The Need for a Steering Committee .....	39
6.4	Maintaining Standards .....	40
6.5	Building Community Management Capacity .....	40
6.6	Collection of Maintenance Funds .....	41

Annex 1: Terms of Reference and Comments

Annex 2: Budget from the 1990 CARE Proposal

Annex 3: Minutes of the Agreement between St James and DRWS

Annex 4: Photographs of Project operations



## 1. Introduction

The task of providing clean, sustainable water supplies for rural people is a challenging one in the best of circumstances. In Lesotho the mountainous terrain, harsh climate and low levels of income add to the complexity of the task. Despite these difficult conditions the Department of Rural Water Supply (DRWS), supported by numerous donors and non-governmental agencies (NGOs), has made steady progress over the last two decades and coverage now stands at 56%. This progress, however, has not been equal in all parts of the country. A recent survey shows that coverage varies significantly from one part of the country to another. The more accessible lowland areas are far better served than the remote mountains, with 78% coverage in the Lowlands compared with 22% in the Mountains. At present construction rates in the remote areas are unlikely to be reached by Government until well into the next century.

Over the last 10 years a number of NGOs have moved in to work in some of the remote areas that lie beyond the present capacity of Government. In the southern mountains the NGO Plenty has constructed as many systems as the Government, focusing on the remoter parts of Quthing District. In the eastern mountains Tebellow Hospital's Primary Health Care Programme has, with the help of Australian funding, constructed systems in the inaccessible Qabane Valley which can only be reached on foot or horseback. In 1993 the St James Hospital, with support from the Dutch organisation CEBEMO, launched a water supply project in the remote Lesobeng Valley located in the very heart of Lesotho's Maluti Mountains.

Since 1991 Sechaba Consultants, a Maseru-based research company, have been involved in monitoring and evaluating different rural water supply projects, including those of Tebellow and Plenty. In 1995 the Company was invited by St James to conduct an evaluation of the Lesobeng Spring Protection Project (LSPP). Funding for the evaluation was procured from the Swiss NGO Helvetas which has been supporting DRWS for over 15 years. This Report presents the results of the evaluation conducted by a small team of consultants and research assistants in December 1995 and January 1996.

While this report has been written specifically for the LSPP an effort has been made to give enough background on the area and on rural water supply standards and issues in Lesotho for it to be of more general interest. Because LSPP worked closely with DRWS and attempted to follow the national standards set by DRWS, it provides an interesting case study of the relationship between an NGO working in the water sector and the Government Department responsible for the sector. As will be seen, the question of meeting DRWS standards became a hotly debated issue which resulted in a rewriting of the original Project Proposal. For this reason we present the reader with adequate information on these standards before going on to describe and evaluate the Project.

Looking at the Project, after describing the origins, the structure and the working environment in which it operates, we consider the technical achievements focusing on the extent to which national standards have been met. Next the budgeting and costs of the project are considered as is the Project's handling of community participation and management issues. The Report closes with a discussion of issues and recommendations for the next phase.

## **2. General Background**

### **2.1 The Project Area**

#### **2.1.1 Thaba Tseka District**

The Project aims to serve villagers living in the isolated Lesobeng Valley. This valley is located in the south of the Thaba Tseka District, the newest of Lesotho's 10 districts. The District was created in the late 1970s in an attempt to provide the remote central mountains of Lesotho with an administrative and economic centre. With the support of the Canadian Government and other donors a new all-weather road was constructed into the area making it accessible to ordinary vehicles for the first time. Power lines brought electricity from the Lowlands and new infrastructure including government offices and a training centre were established. The new infrastructure stimulated local business and numerous small shops opened in the 1980s. Additional impetus was given by the Lesotho Highlands Water Project which used Thaba Tseka as a base before a new road was built to the dam from Leribe District.

Despite the growth of Thaba Tseka town the District itself remains one of the poorest in Lesotho. The 1994 *Poverty Mapping Exercise* (Sechaba Consultants) demonstrates that the Mountains of Lesotho are significantly poorer than the neighbouring Foothills and Lowlands, and the Thaba Tseka District is no exception. Although the District's road network has improved other infrastructure lags far behind the Lowland districts. This is particularly true of rural water supply with Thaba Tseka having the lowest percent of population served in the country. The map on the page opposite shows the location of Thaba Tseka District and gives the percentage of population served with water supply (1995 figures) for each district.

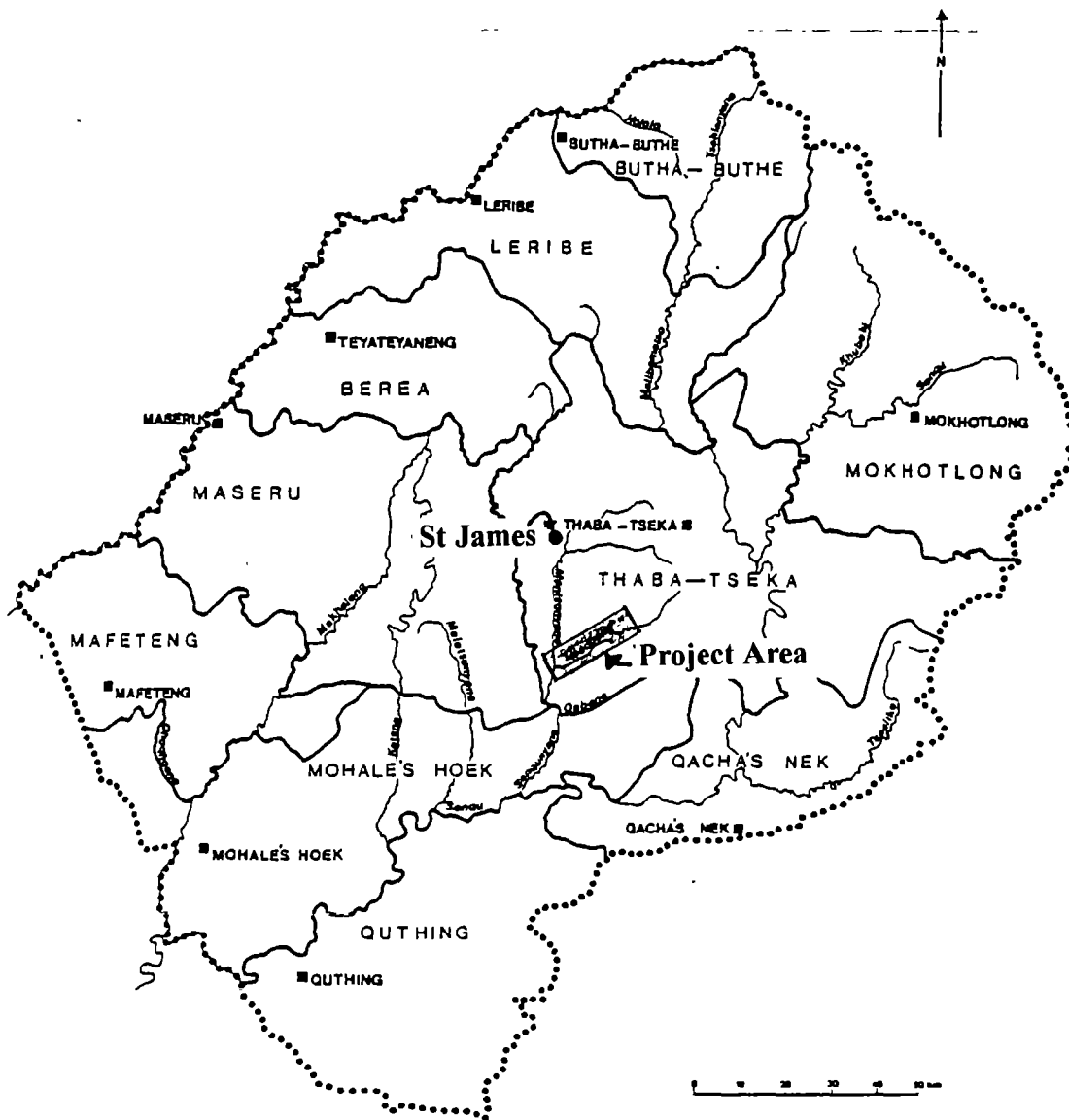
#### **2.1.2 The St James Health Service Area**

Besides being broken into districts and constituencies for administrative and political purposes Lesotho is divided into 18 Health Service Areas (HSAs) each surrounding a hospital. The map opposite shows these 18 HSAs and gives an indication of the services available in each.

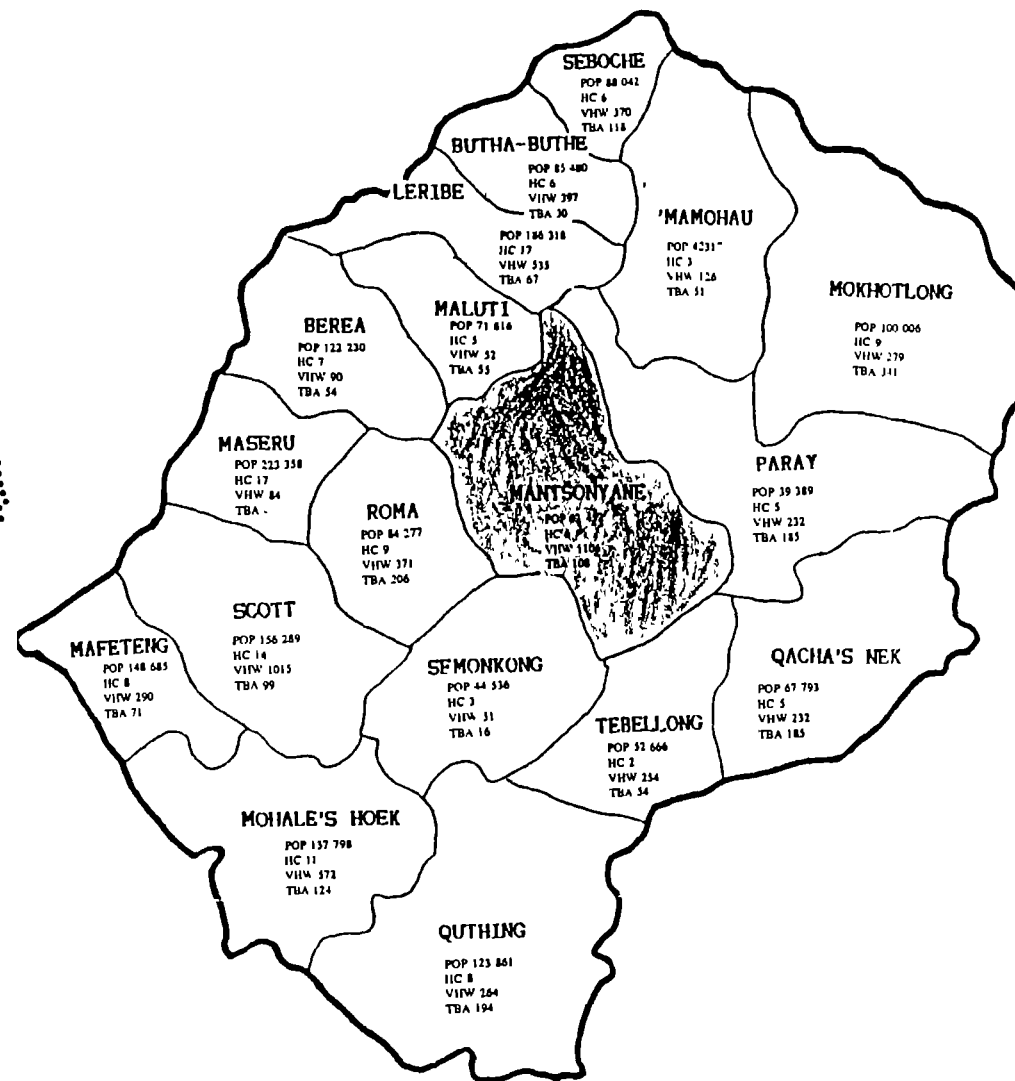
The St James HSA, which falls primarily into Thaba Tseka district, has a population of approximately 66,000 people. Until 1981 when the St James PHC programme began operating a mobile clinic in the area the people of Lesobeng had to travel to Mantsonyane to obtain even the most basic of modern health services. In 1985 the community built the Ha Lephoi Health Centre which is now staffed by a Nurse Assistant, a PHC-Motivator, a recently employed Health Assistant and a Nightwatchman. In 1992 the Hospital started to up-grade the facilities. The upgraded facilities consist of a new Health Centre with delivery facilities with a eight beds and a delivery room and a training hall. A Nurse Midwife and a Nurse Aid/Cleaner are to be added to the staff.

The clinic sees between 1200 and 1800 patients per annum in the out-patients department. Approximately 60 patients per annum are referred to the Hospital. The graph on page 4 gives an indication of the spread of the most common diseases treated at the hospital. Figures are based on clinic records for 1993 and 1994.

# DISTRICT MAP OF LESOTHO

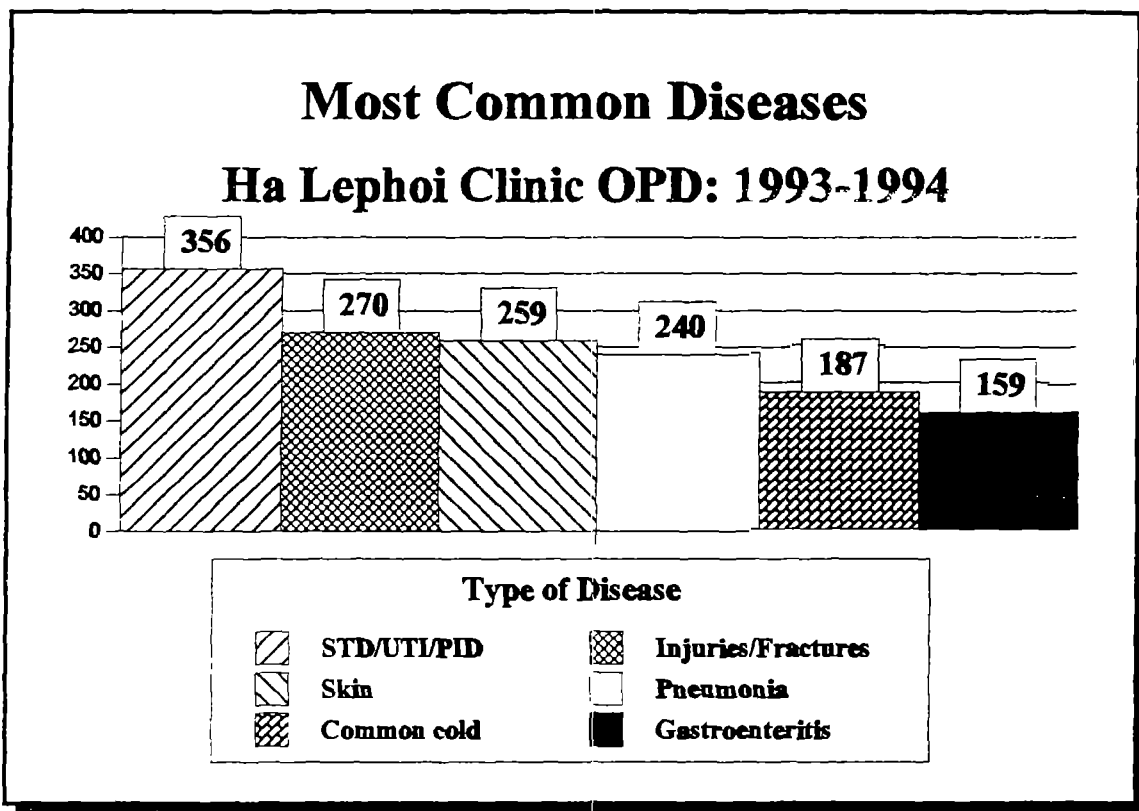


# Health Service Area Map of Lesotho



Source. Ministry of Health 1992

Pop = Population of Health Service Area  
 H C = Health Centres in HSA  
 VHW = Village Health Workers in HSA  
 TBA = Traditional Birth Attendants in HSA



Source: Ha Lephoi Clinic Data

Note: STD=Sexually Transmitted Diseases UTI=Urinary Tract Infection PID=Pelvic Inflammatory Diseases

What is immediately striking from the graph above is that skin diseases, many of which could probably be avoided with improved hygiene, are the second most common disease brought to the Ha Lephoi Health Centre. Gastroenteritis (mostly 'diarrhoea without dehydration') is the sixth most common type of disease. Improved use of clean water would probably also contribute to a decline in this category.

On the other side of the Lesobeng Valley lies the Montmartre Clinic that belongs to the Roman Catholic Mission. This is staffed by two Nurse Assistants and a Helper. Both clinics run an Outpatients Department, an Under 5 Clinic, an Ante Natal Clinic, Post Natal Clinic and provide immunizations and tuberculosis and leprosy control. In addition there are outreach services from both clinics that include school visits, latrine construction, community education, Village Health Worker (VHW) meetings and home visits.

### 2.1.3 Lesobeng Valley Constituencies

The Lesobeng River divides the constituencies of Thaba-Moea and Hloahleng which are served in part by St James Hospital's Primary Health Care (PHC) Programme. These constituencies are amongst the six poorest (out of 60) in the country. In these areas only 15% of adults have waged employment. The remainder struggle to survive on temporary unskilled jobs (*likoropo*), which

are few and far between, and on subsistence agriculture, which is not dependable given the erratic climate (only 10% of households produce enough grain to feed themselves). While livestock ownership is relatively high (80% of households) the depleted range lands are unable to sustain the large number of animals and the quality of livestock is fast giving way to quantity. Large tracts of grazing land are controlled by Principal Chiefs living in the Lowlands leaving local people with only limited control over these resources.

In addition to being economically deprived these remote mountain constituencies have extremely poor social services. The area has the highest proportion of unschooled adults in the country (33%). Those who do make it to school generally start very late with 43% of school children being defined as 'over age' by the Ministry of Education. This is often because young boys are held back from schooling to herd animals, resulting in the proportion of girls at school being significantly higher than boys (62% vs. 38%). The educational facilities themselves are amongst the poorest in the country; 31% of schools are inaccessible by vehicle and over one third have no desks or chairs. A large proportion of the teachers (39%) are unqualified and pass rates are low, with up to one quarter of the pupils having to repeat each year. Very few schools in the area have adequate water or sanitation facilities.

Until recently the Lesobeng Valley, which has a population of approximately 12,000 could only be reached by a 45 km track that took at least eight hours to traverse. This has now been upgraded and the journey from Mantsonyane (located on the Maseru-Thaba Tseka road) to Lesobeng can now be done in about two and a half hours.

## 2.2 Definitions

DRWS, like any other organisation, has its own in-house terminology. As many of these terms, which are used in this Report, may not be familiar to the reader we provide definitions of these below.

**A Project** A project is defined as an intervention designed to improve the water supply of a given area. In some cases this intervention involves rehabilitating or extending an existing water supply. The area covered usually consists of one village. However, many projects cover more than one village; some cover as many as six with a single gravity systems stretching between these.

**A Village** In the rural areas of Lesotho, especially in the more crowded Lowlands, it is some times difficult to determine where a particular village begins and where it ends. The situation is not helped by the fact that some large villages are broken up into different areas each of which has its own name. In defining a village we have considered two essential elements: physical situation and legal authority. As far as the first is concerned a village is taken as being an identifiable physical unit distinguished from others regardless of the legal authorities concerned. However, in situations where an area of continuous settlement is divided between two or more legal authorities (village chiefs) then each area of legal jurisdiction is taken as a village.

**A System** A system is defined as any self-contained water supply. Two basic types that are frequently used by DRWS and were adopted by Lesobeng are:

a) **Gravity-fed systems.** These consist of spring catchments, silt-boxes, storage tanks and pipes which distribute the water to a number of standpipes.

b) **Water point systems.** These much simpler systems consist of a storage tank, located on or very near a spring, with a tap in the side to deliver the water. As each water point is self-contained each one is defined as a system in its own right.

### Collection Points

By a collection point we mean any place at which a person may collect water. Five different kinds of collection point are used:

- \* standpipes on gravity and pumped systems;
- \* taps on water points;
- \* handpumps
- \* taps on tanks other than water points;
- \* DRWS protected springs.

In computing population per collection point protected springs are not included. Handpumps are generally only found in the Lowlands.

**Functioning** In gravity or pumped systems this term is used to describe those problems which lead to *no yield* at supply tanks and/or no flow at taps.

**Condition** This term is used to describe problems at systems which do not result in no yield or flow.

## 2.3 DRWS Standards

### 2.3.1 Construction Standards

In the first decade following independence about 200 water supply systems were constructed by the Department of Community Development. The systems built during this phase were often well below the standards required today: damage-prone plastic pipes and corrugated iron water tanks were frequently used. Villagers were expected to maintain the systems, but without training, spare parts or technical backup they were rarely able to do so. Within a few years many systems had ceased to function.

In 1978 a major review of the rural water supply sector showed that these early systems had not been sustainable because of the poor designs and materials used. A series of new design standards were introduced and published as a guide for all those working in the sector. For a start corrugated iron tanks were replaced with stone or brick water tanks. Wherever possible stone was to be cut and shaped using community labour; only where this was not possible was brick to



be used. The new standards specified that, between the spring and the storage tanks, siltboxes (made of stone or brick) were to be built. Furthermore, despite the significantly higher costs, a decision was made to build all gravity systems with galvanized iron (GI) pipes. Where it was not possible to bury these in trenches it was specified that the pipes should be protected against freezing and damage by small earth-filled dry walls. The diameters of pipe to be used in different parts of the system was specified. It is beyond the scope of this study to give details of these and other construction standards. However, here it is important to note that 20mm was set as a minimum diameter to be used.

### 2.3.2 Distance from Collection Points

The design standards specify that all households in a village should be within 150 metres of a collection point. The wide-spread availability of springs in Lesotho makes this a feasible target in *most* circumstances (unlike in Namibia where the target is that everyone should be within 2.5 kilometres!). However, it is not uncommon in Lesotho to find people using springs located below the village. These are often more than 150 metres away from the nearest household. In such cases, if the 150 metre standard is to be kept, alternative plans have to be made to bring the water closer to the households. Here there are only two possibilities: the first is to look for a suitable spring located above the village from which water can be piped, via a storage tank, to standpipes located within 150 metres of people's homes; the second (where such springs are not available) is to pump water from the spring below the village to a storage tank located above it. As can be expected either option can be costly.

Results from the national inspection (Sechaba Consultants, 1995) show that DRWS itself has found it difficult to maintain this high standard. Overall 49% of villages have some households over 150 metres from the nearest collection point. The table below shows the main findings:

	Percent of households over 150 metres				
	0%	1%-25%	25%-50%	51%-75%	76%-100%
<b>By district:</b>					
Butha-Buthe	50%	33%	12%	2%	4%
Leribe	43%	35%	14%	5%	3%
Berea	40%	38%	14%	7%	2%
Maseru	67%	23%	6%	2%	1%
Mafeteng	47%	27%	17%	4%	5%
Mohale's Hoek	51%	25%	15%	5%	4%
Quthing	50%	32%	12%	2%	4%
Qacha's Nek	54%	38%	7%	1%	-
Mokhotlong	62%	22%	6%	6%	4%
Thaba Tseka	38%	48%	9%	4%	3%
<b>OVERALL</b>	<b>51%</b>	<b>30%</b>	<b>13%</b>	<b>4%</b>	<b>3%</b>

Source: DRWS National Data Base, 1995

Although Thaba Tseka District has only 38% of villages having all households within the 150 metre target it has a large percentage (48%) of villages with only 1-25% of households beyond 150 metres of the nearest collection point. Further analysis of the same data show that *overall* the Mountain districts have come closer to meeting the standard (probably because they are less dependent on handpumps, which can not always be installed close to people's homes).

<b>Table 2</b>		
<b>Percent of villages with households over 150 metres by Ecological Zone</b>		
<b>Ecological Zone</b>	<b>Percent of households over 150 metres</b>	
	<b>0%-25%</b>	<b>Over 25%</b>
Lowlands	76%	24%
Foothills	87%	13%
Mountains	86%	14%
Senqu River	86%	14%

Source: DRWS National Data Base, 1995

It should be noted that results from Thaba Tseka do not include any of the Lesobeng projects as these were found to be under construction at the time of the inspection in that district.

### 2.3.3 Population Per Collection Point

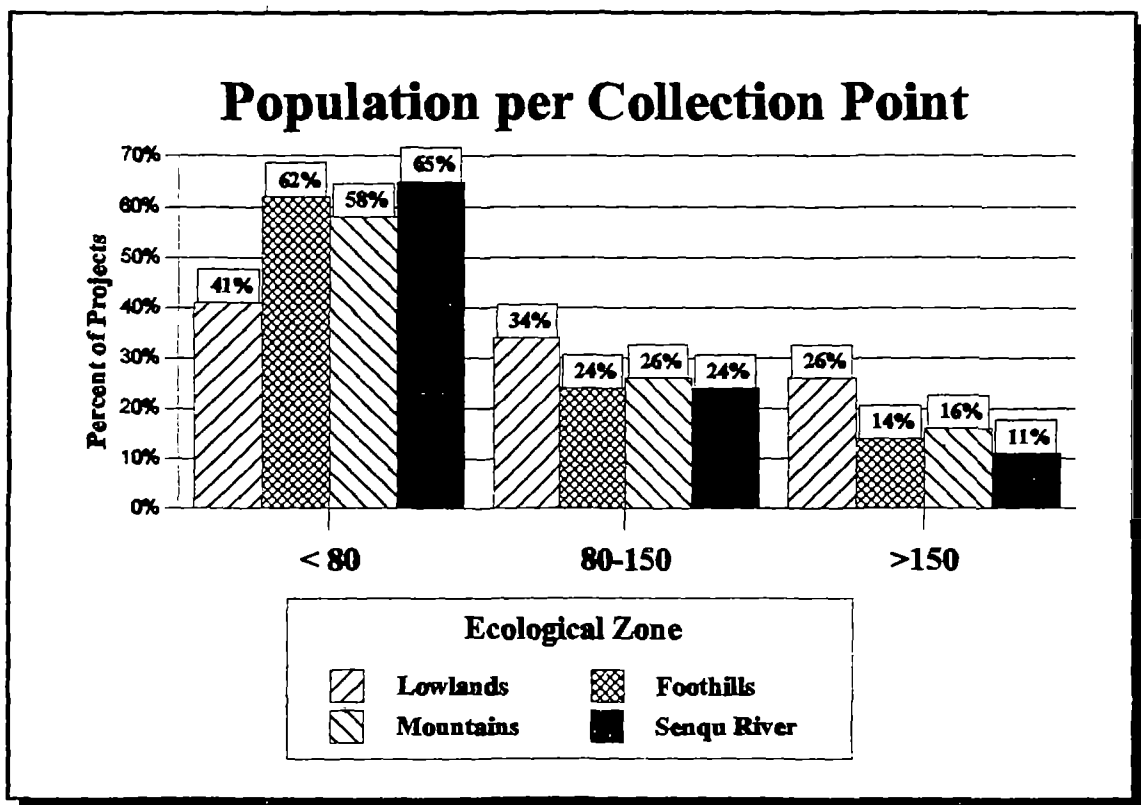
A collection point is defined as any part of an improved water system where the public may collect water. In Lesotho 63% of collection points are standpipes, 28% handpumps, 3% are taps on storage tanks, 5% taps on waterpoints (small storage tanks located near springs) with the remainder (less than 1%) being protected springs. The DRWS's standard is that there should be between 80 and 120 people per collection point in all its projects. Although having fewer than 80 people to a collection point (CP) presents no problem from the users' point of view it is not considered to be an efficient use of resources from a design point of view. Having over 120 indicates overcrowding and suggests the people may have to queue to draw water. The table on the next page shows the number of people per total collection point and the number per working collection point (as at the time of inspection). As can be seen this has also not been an easy standard to meet with 57% of projects having fewer than 80 people per collection point (results are based on up-to-date population counts by Village Water Committees) and 13% having over 150. The difference between the total collection points and the working collection points reflects the extent to which water systems are functioning.

**Table 3**  
**Population per collection point:**  
**Categories by working CPs in projects**

Percent of projects	Less than 80	80-150	Over 150
<b>By district:</b>			
Butha-Buthe	56%	30%	14%
Leribe	36%	36%	28%
Berea	47%	28%	27%
Maseru	38%	36%	27%
Mafeteng	42%	35%	22%
Mohale's Hoek	55%	24%	21%
Quthing	68%	29%	3%
Qacha's Nek	65%	26%	9%
Mokhotlong	74%	17%	10%
Thaba Tseka	36%	24%	40%
<b>OVERALL</b>	<b>49%</b>	<b>30%</b>	<b>21%</b>

Source: DRWS National Data Base, 1995

Here we find Thaba Tseka district having a fairly high percentage of projects (40%) with more than 150 people per collection point. This result is possibly influenced by the emergency drought programme which introduced single collection points (on storage tanks) to many communities. The Thaba Tseka situation is not typical of the Mountains, which, overall have a low percentage of projects with over 150 people per collection point. This can be seen from the graph below:



### 2.3.4 Litres per capita per day

Lesotho has accepted the World Health Organisation (WHO) recommendation that at least 30 litres per capita per day should be available to the population. Although this is higher than the average used by rural Basotho (about 15 l/c/d) the 30 l/c/d standard is widely accepted as numerous studies have shown that increasing the *quantity* of water used is as important, if not more so, than improving *quality*.

It is important to point out that determining the extent to which a project has been able to meet the target of 30 l/c/d is complex as it is necessary to obtain accurate data on both spring yields and population. In the case of spring yields these vary dramatically according to rainfall while in the case of population there are problems associated with both project boundaries and population growth rates. In short the indicator being used (l/c/d) is not, statistically speaking, particularly reliable. Reports dealing with the monitoring and evaluation of water supplies stress that a *reliable* indicator is one which produces similar results when measured repeatedly. This is certainly not the case with the spring yields where the measurement can change significantly over night. When it is not possible to obtain a reliable result from a single measurement these should be repeated over time and an average should be used, as is the practice when a DRWS system is being designed. However this is not possible during a single visit and for this reason projects are advised to keep monitoring yields over time. This being the case the reader is advised to treat the results given with some caution.

<b>DISTRICT</b>	<b>No Water in System</b>	<b>Below 7</b>	<b>7 to 30</b>	<b>Over 30</b>
Butha-Buthe	2%	24%	42%	32%
Leribe	7%	23%	48%	22%
Berea	6%	19%	36%	39%
Maseru	4%	17%	44%	34%
Mafeteng	3%	28%	39%	30%
Mohale's Hoek	3%	23%	38%	36%
Quthing	1%	14%	57%	29%
Qacha's Nek	2%	2%	46%	51%
Mokhotlong	6%	9%	27%	58%
Thaba-Tseka	4%	35%	41%	20%
<b>Overall</b>	<b>4%</b>	<b>19%</b>	<b>43%</b>	<b>35%</b>

Source: DRWS National Data Base, 1995

Again it becomes evident that this is not an easy standard to maintain; only 35% of gravity projects have above 30 l/c/d. The previous table shows that Thaba-Tseka District is struggling with only 20% of projects providing adequate water.

Looking at the same data from the point of view of the ecological zones we find the following:

<b>Table 5</b>		
<b>Litres per Capita per Day by Ecological Zone</b>		
	<b>Percent of Projects</b>	
<b>Ecological Zone</b>	<b>Less than 30</b>	<b>Over 30</b>
Lowlands	73%	27%
Foothills	67%	33%
Mountains	55%	45%
Senqu River	66%	34%

Source: DRWS National Data Base, 1995

### 2.3.5 Community Participation and Management Standards

The DRWS approach to rural water supply requires the collaboration of three parties: (i) the donors, who provide funds for the purchase of most materials; (ii) the Government (through DRWS) which now provides most of the staff, offices, stores and vehicles and (iii) the community which contributes all the unskilled labour. Without the cooperation of these three parties very few rural water systems would have been built.

Before construction of a water system can begin in any village the community is expected to take certain steps. These include: making an official application to DRWS, electing a Village Water Committee (VWC) and opening a bank account into which the community is expected to contribute cash (usually not more than M10 per household) for maintenance and minor repairs when needed. Before construction begins waterminders are elected. Most of these receive on the job training during construction, although many are taken to courses. Once the construction of a rural water supply system is complete it is DRWS policy that it should be handed over to the community to be owned and managed by them through the elected VWCs. At this stage toolboxes are supposed to be provided to the waterminders to enable them to carry out minor repairs.

The VWCs are not expected to manage the rather complicated tasks of organising labour and cash contributions without guidance. In the 1980s, DRWS began to give increasing emphasis to supporting the VWCs. With funding first from USAID and later from CARE International, DRWS developed training manuals, ran courses for VWCs and eventually established a Village Affairs Unit at Headquarters in Maseru. Under this unit are 10 Village Liaison Officers (one per district) who are specially trained to handle all aspects of community relations, including the training of VWCs. This training requires approximately 10 days, if all aspects of the management of the water system are to be covered. At least 20% of this time is spent on basic bookkeeping and banking.

During the training the VWCs are given guidance as to how to formulate a constitution. Although model constitutions are available the VWCs are encouraged to work with their communities to adapt these so as best to meet their requirements.

Once training is over the Village Liaison Officers (VLOs) will follow-up the VWCs in their villages, giving support where needed.

### **3. The Project**

#### **3.1 Origins and Development of the Project**

##### **3.1.1 The Methalaneng Experience**

It is important to trace the origins of the Project as far back as possible as these had a significant impact on the expectations and attitudes of those involved on the side of the Hospital. From all available accounts it appears that the origins can be traced back as far as 1987. In that year the PHC Department worked in close conjunction with the DRWS District Office in Thaba Tseka in the Methalaneng area, just north of Lesobeng. The objective of this collaboration was to adequately protect springs and, where appropriate, to construct waterpoints, thus improving both the quality and quantity of water available. DRWS provided the technical input, including training of staff in spring protection, while the PHC Department focused on the social aspect, which included mobilizing the communities. Over a two year period 57 springs were protected (Annual Report, 1991) of which about 20 had storage tanks with taps, making them 'waterpoints'.

The success of the Methalaneng exercise prompted the two parties to consider expanding activities into the Lesobeng Valley. In 1988 DRWS began to survey springs and the PHC Department began to mobilize the villagers. Unfortunately the poor road conditions lead to a decision by DRWS to postpone work in the area until the road was improved.

In 1989 major road works resulted in a considerable improvement, reducing the travel time between Mantsonyane and Lesobeng from five hours to two and a half. However, when DRWS was informed of the improved conditions they pointed out that they had since moved operations to the north of Thaba Tseka District and would not be able to return for at least five years.

##### **3.1.2 The CARE Proposal**

The Hospital believed that the initiative should not be lost and so began to seek technical and financial assistance "to assist the people to do the work that DRWS initially planned to do". At this point CARE International in Lesotho was approached for assistance and a project proposal was drafted by the Programme Officer Howard Bell.

CARE's proposal (dated March 1990) was comprehensive in its scope and ambitious in its scale. CARE proposed to assist the PHC Department not only in the development of clean water systems but also in the development of "sanitation and health education services". The target population in the Lesobeng Valley was estimated to be 10,000, living in 75 villages. Full-time project personnel, to be packed up by short-term external consultants, included: a Project Manager/Engineer; a Technical Supervisor; a Health Assistant; a Village Liaison Officer and a Health Education Officer. A five-year plan was prepared with a budget of US\$1,277,577

(M3,066,184 at the time). In addition to staff hiring and training, the first year of activities was to involve detailed spring surveys, "community baseline surveys" and "community responsive health education activities". The last year was to include "an evaluation of health education extension methodology effectiveness and impact." If successful it was hoped that the approach could be applied throughout the Mantsonyane HSA.

Taking Bell's budget (see Annex 2) and dividing the overall cost by the target population of 10,000 souls it is apparent that the cost of the Project, in its most comprehensive form, would be M306 per capita (1990 prices). If all the components that are not directly related to the construction of water systems are excluded and only the water engineer is maintained as permanent staff the cost per capita drops to M190 (including a 20% administration charge).

It is important to bear in mind that this budget was drawn up by a person with considerable experience in preparing project proposals in general and with particular experience in the rural water supply section (CARE was funding DRWS's operations in the Central Region at the time). Sechaba Consultants had contact with CARE at the time and we recall discussion with Bell about the Lesobeng Project proposal which suggested that he was putting considerable time and effort into the preparation of the Proposal. Bell's Proposal was apparently successful and it is said that the funds had been approved. However in 1990 a sudden change in management (Bell was promoted to a London-based position) resulted in the cancellation of the Project. The exact reasons for this are unclear but, once again, St James Hospital and the people of Lesobeng were left without any support for their project.

### **3.1.3 The 1993 St James Proposal**

For three years the project lay dormant. Then, in 1993, the Medical Superintendent learned that the husband of a new doctor, due to arrive later in the year, was a trained water and irrigation engineer. Seizing the opportunity he worked together with the Matron and PHC Coordinator to prepare a new project proposal for the Lesobeng area.

The then Medical Superintendent used the CARE proposal as a starting point. Working through it he carefully selected particular elements to prepare a refined and simplified version. Looking at his annotations in the original CARE version it is informative to see which elements were deleted and which were maintained. From the annotations it appears that his objective was to focus the project on the construction of water systems. To this end he deleted, from the original CARE proposal, all references to (i) improving sanitation and to (ii) strengthening the capacity of PHC staff to train, supervise and monitor community health workers and to create community awareness and demand for PHC services. In addition he deleted references to baseline surveys, evaluations and the development of health education capacity and models. In short the proposal was reduced from being a more comprehensive PHC proposal to being one that focused purely on constructing water systems.

Although there is clear evidence that the Medical Superintendent used the text of the CARE proposal to draft a new version it appears that he did not pay any attention to the budget. For advice on the budget he went to the then District Engineer (DE) of Thaba Tseka in early 1993. Apparently the DE advised him to calculate his budget on the basis of M50 per capita at these

were the "average costs in Thaba Tseka District"<sup>1</sup>. It is far from clear where the DE obtained these costs. The National Data Base, which is based on data extracted directly from District files, gives an average cost of M75 per capita. However, these are unadjusted costs from files completed between 1982 and 1992. If these costs were to be adjusted to take inflation into account and brought to a 1993 figure it would be significantly higher. However, it would be nowhere near the M190 per capita cost estimated by CARE in 1990. The reason for this is basic: DRWS per capita costs (as recorded in Final Project Reports) are not the real costs; they do not include the costs of professional, skilled or administrative staff or any of the overheads needed to run the organisation. When an NGO prepares a budget it has to consider all of these and needs to budget according to total *real* costs of providing clean water to rural communities.

The Medical Superintendent obviously gave some consideration to this as the total cost of his budget (to serve 60 villages with an estimated population of 120 per village) was M655,000 is M91 per capita, not M50. Nevertheless, as will be shown, even this is well below the real costs that the Project incurred once operations began.

Because villages and water systems can vary so much in size these are not particularly useful indicators of cost and for this reason cost per capita is used. In preparing projects it is therefore important to have fairly precise information on the target population. The CARE proposal had envisioned a one year preparatory period during which precise information would be collected of both a technical and social nature. The 1993 St James proposal did not include any time for this and was, instead, based on a number of estimates and assumptions relating to population. To estimate the population a map was studied and all villages that appeared on it were counted (100). While this may give an approximate number it is hardly an accurate way of measuring population as many villages do not appear on existing maps. Next it was assumed that 60% of the villages would apply for an improved water system, and so an arbitrary target of 60 villages was set. It is far from clear why this assumption was made; were the villages which did not apply to be permanently excluded or to be included in a later phase? Finally it was estimated that the average village size in the Lesobeng area was 120. Again, it is not clear how this figure was obtained but it appears that this was an overestimate; a count of 40 villages in the Lesobeng area in 1994 gave an average size of 94 inhabitants, which would significantly influence any per capita cost estimates based on a count of villages.

In March 1993 St James submitted the "Proposal for Accelerated Spring Protection Programme in the Lesobeng Valley" to the CEBEMO (Netherlands) for funding. The proposal was accepted in August 1993 but the donors requested that support from the Government of Lesotho be obtained.

#### **3.1.4 Obtaining Agreement from DRWS**

In May 1993 the then Medical Superintendent of St James held a meeting with DRWS at Headquarters in Maseru to obtain the support requested by the donors. The full text of the minutes from this critical meeting are appended as Annex 3. It is clear that from the outset DRWS was concerned that their standards should be met and this was stressed at the beginning of the meeting. In order to ensure this the organisation committed itself to undertake certain responsibilities. As can be seen from the Annex these included: preliminary surveys, design of

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<sup>1</sup>Minutes of a meeting held at St James between the Hospital and DRWS in February 1994



systems and preparation of project files *as per VWSS policies and standards*; work plans; assistance to project coordinator in the implementation of the project; assistance in recruiting and training of Masons for the construction work; supervision of the construction work; preparation of monthly progress reports and the maintenance of the completed water supply systems.

The Hospital, on the other hand, accepted responsibility for social mobilization of the communities; the procurement, transport and storage of materials; the provision of transport for DRWS staff during survey and construction phases; provision of logistical support, administrative staff, four masons and one foreman; management of funds and reporting to donors. In addition (Item 8) the Hospital agreed to "strictly follow VWSS policies and standards". As a result of a misunderstanding regarding the qualifications of the new Project Manager it was at first agreed that he would not be responsible for surveying the springs and designing the systems and that DRWS would provide this service. Although the question of his qualifications was rectified (he is a qualified water engineer) DRWS maintained its position that it would undertake these tasks.

### **3.1.5 The Revised 1994 St James Proposal: Bringing the Budget in line with Standards**

The implications for the Project of accepting DRWS standards were clearly not explored either by St James, or by DRWS staff, who accepted wide ranging responsibilities in terms of supporting St James. The implications were not apparent to the Project Water Engineer until January 1994, four months after his arrival, when the DE Thaba Tseka brought in the cost calculations for the first two villages. From these it became apparent that the material cost would be twice as much as originally anticipated (M5,000 per village instead of M2,500). From this he concluded that the Project would not be able to serve the target of 60 villages; instead he estimated that only 30 villages could be served and that the Hospital "considered this to be a major problem" (Minutes 3/1/94). It was noted that the additional cost of material was a result of the inclusion of piping (with siltboxes) to bring the collection points within 150 metres of the population, as specified by DRWS standards.

These observations mark the start of a heated debate between the Hospital and DRWS on the issue of "Budget versus Design Standards". It is well worth summarising the arguments of the two sides of the debate as these not only had important consequences for the Project but are also important in terms of future DRWS policy. What is interesting is that the basic objectives of both the Hospital and DRWS are the same: providing safe, clean water to improve the health of the rural population; what differs is how best to achieve this goal.

For the Hospital providing clean water in as many villages as possible was fundamental. Reflecting on their experience in the Methalaneng area, where DRWS fully cooperated in protecting springs and building waterpoints, they could not understand, or fully accept, the insistence that certain service level standards now had to be maintained. The Hospital made it clear that "...it is confusing that VWS is insisting now on a different kind of approach than in Methalaneng, which was also a joint undertaking." The Project Coordinator/Engineer explained that he had understood that by "standards" DRWS meant technical construction standards and that he was not aware that "social standards, like service level, were included in the agreement." The view of the hospital was summarized by the PHC Director at a meeting with DRWS in January 1994:

"...The original idea of the project was to build simple water systems, including a spring protection and a waterpoint. The goal of the project was to provide 60

villages with clean and sufficient water throughout the year. This was agreed with the sponsor (CEBEMO) and the Hospital. Whether these waterpoints are situated in the villages or 400 meters outside the village is not considered important by the hospital. Especially if we have to choose between providing 60 villages with a lower service level or 30 villages with a high service level, the Hospital would prefer to serve 60 villages."

The Hospital pointed out that the budget had been drawn up with the advice of the DE in Thaba Tseka and that DRWS was therefore partly responsible for the budget now being too low to meet the target of 60 villages. It was argued that if the Hospital had to meet DRWS level of service standards then the extra costs incurred in doing so should be met by DRWS. The hospital proposed that the Project cover the costs of the springs and the waterpoints (as planned) and that, where necessary, DRWS provide the extra piping required to bring the water within 150 metres of the villages.

In response DRWS argued that they, as a national body, could not have different standards for different parts of the country. The 150 m standard was presented as being important for health reasons: if water was not brought close to people they would continue to use unprotected sources which became available after rain. To ensure that only the protected sources were used after construction it had been decided that these should be brought within 150 metres of people's homes. The idea of flexible levels of service standards was unacceptable. According to the minutes DRWS argued:

"If there is no clear cut definition of service level, this means that any service level can be satisfactory...VWS has many projects all over the country, and many are in cooperation with NGOs. VWS, as an international sponsored government body, cannot afford itself to use different standards in different areas, just because the NGOs have different ideas on this."

At a meeting in Maseru it was made clear that DRWS could not be held responsible for any advice given "before an official agreement of cooperation" between the parties had been established and that the idea of providing pipes or of later extending systems to bring them within 150 metres was quite unacceptable.

In conclusion DRWS asked the Project to rewrite the proposal in such a way that standards would be met. It was acknowledged that the goal of serving 60 villages would not be met.

Given the insistence of the donors that agreement with Government be reached and the insistence of DRWS that standards be met St James had no choice other than to "return to the drawing board" to draft a new proposal.

Looking at the Revised Proposal there are a number of important changes which should be noted. First, the target was revised. This was done by recalculating the average material cost per village (based on the DRWS designs for the first 8 villages) and dividing these into the amount budgeted for material in the earlier proposal (M150,000). It was found that material costs had risen from an average of M2,500 to an average of M5,295 per village. Looking at this, and at the cost of skilled labour, it was concluded that only 27 villages could be served.

Second, under a new section "Activities", the Project undertook to focus on the following areas:

- i) Training VWC's how to perform their tasks
- ii) Training of project staff (Masons) in community mobilization
- iii) Training of waterminders to do simple maintenance tasks.

The PHC Department was to conduct "special health/hygiene education in the villages where the construction phase has (almost) ended".

Third, the "roles and responsibilities of the participating organisations" were listed. These are very similar to those in the original agreement (Annex 2) although a few refinements were made. In particular the proposal specified that the Hospital would be charged with daily management of the project; preparation of work plans; training of VWCs and waterminders; construction of the systems; monitoring of implementation; submission of monthly reports; and continuing the monitoring of the health situation in the Lesobeng. Significantly DRWS's additional responsibilities included "the timely submission of project files and designs to the Project Coordinator, according to the Project schedule and progress" and monthly technical supervision of the construction work.

### **3.1.6 The Working Environment**

Given the pressure that DRWS placed on the Hospital to accept its standards it would be reasonable to assume that the organisation, on its part, would have made an effort to meet the responsibilities agreed upon in May 1993 and recorded in the Revised Project Proposal presented in September 1994. This, unfortunately, was not to be the case. Most disturbing to the Hospital was the failure of DRWS to provide designs in a timely fashion, even after private sector consultants were employed to do this for Lesobeng as part of an on-going national programme. The Project Coordinator/Water Engineer had to wait for one year for DRWS to deliver designs prepared for them by the private sector consultants. At this point relations with the District Office had deteriorated to the point that the Project Coordinator had been told "never to set foot in the office again". Not surprisingly there was no DRWS supervision of construction and no monthly reports to Headquarters. In short, although the Hospital made considerable efforts to meet the demands of DRWS they were given very little support by the national body. In our closing chapter we discuss the consequences of this problematic relationship and recommend changes for the future which might result in more fruitful results.

Given the problematic relationship with DRWS the Project could have looked for support from other NGOs working in the water sector. Here it would have been particularly useful to have visited the Tebellong Hospital Primary Health Care Department which ran a water supply project in a very remote area for three years. DRWS did not make the new Project Coordinator aware of any of the NGO projects and he acknowledges that he did not think of exploring contacts.

While the relationship with DRWS was problematic it was not quite as detrimental to the development of the Project as a series of conflicts that took place within the Hospital itself. While it is beyond the Terms of Reference of this evaluation to describe these in any detail it is important to note that the Project was operating within a very difficult working environment for more than one year. In brief, disagreements amongst senior staff resulted in a paralysing strike in April 1994 which effectively shut the hospital down. Although the Hospital Board intervened the situation could not be satisfactorily resolved and in February 1995 a large number of staff had to be

dismissed and the Hospital was once again shut down. Once the hospital re-opened in March 1995 a long process of recruitment and rebuilding began.

The troubles at the Hospital had important consequences for the Project. Firstly, because the PHC Department ceased to function in a cooperative manner (meetings were not held during this period) the Project worked in isolation and was unable to draw on experiences or resources of the Department such as a properly planned integration of health education activities into the Project. Second, the Project Coordinator, although able to do some work while based in Maseru (during the closures) effectively lost four months of work. In brief it is clear that there were serious implications for having the Project based at the Hospital and these have to be considered as preparations are made for the next phase (these are discussed in more detail in the final chapter).

### **3.2 Project Staff and Resources**

The Project operates with a small number of staff. Beside the Project Coordinator there are four masons and a Project Assistant.

#### **3.2.1 Masons**

Each mason works in two adjacent villages, alternating his time between them. Two of the four masons are from the Lesobeng Valley and it is reported that they have completed about 70 % of the combined work of all four masons, suggesting that local masons may have a greater degree of dedication to the area and the job. The masons, being in the villages all the time, do play an important role in community matters and the Project tends to depend on them to identify problems; meetings are held with them every second week to discuss these.

#### **3.2.2 The Project Assistant**

The Project Assistant is a PHC Motivator who first became involved in village water supply matters during the Metalaneng Project. He is now responsible for community liaison activities on the Lesobeng Project. He is based at Ha Lephoi and takes responsibility for organising and addresses village meetings (*lipitso*) and assists the masons with community-related issues. A small store was constructed at the clinic and the Project Assistant also acts as store keeper.

#### **3.2.3 Resources**

Transport resources consist of one 4x4 Toyota pick-up (equipped with extended roof rack); one Honda motorcycle and use of the clinic's three horses. When these are in use by clinic staff, horses are hired from villagers. The 4x4 pick-up has been used very effectively to transport pipes in the valley. The Project has pipes and other supplies delivered from Bloemfontein to the Hospital and whenever the 4x4 visits the valley (usually once a week), a load of pipes or other supplies is transported at the same time. This has resulted in a considerable saving in transport costs. The supplies are collected by villagers from the Ha Lephoi Clinic and carried to their villages, which are often several hours walk away from their homes.

### 3.3 Project Approach

We have already described how the Project Proposal was revised in order to meet DRWS standards. Below we focus more on the social aspects, describing how the Project approached and worked with the community.

#### 3.3.1 Initial Contact

The Project, following the example of the Hospital, has worked very closely with the traditional authorities (chiefs and headmen) of the Lesobeng Valley. Initial contact is made by the Project Manager and/or the Project Assistant visiting a village chief and explaining the nature and objectives of the Project. Occasionally one or two of the masons will join the party. If other people (such as the chief's advisors) are present they usually participate in this introductory meeting. At this meeting the chief (or headman) is asked to call a *pitso* (village meeting) to brief the villagers and to see if they are interested in the project.

#### 3.3.2 First Village Meeting

At the *pitso* the Project Assistant is present to explain to the people the nature of the Project and to answer any questions. At this point an explanation is given of what will be expected from the villagers and what will be provided by the Project. This can be summarised as follows:

##### To be provided by the Project:

- i) Technical expertise
- ii) Skilled labour (masons)
- iii) Construction materials
- iv) Transport of materials to store as Ha Lephoi, to village if possible
- v) Training of Village Water Committee and water minders

##### To be provided by the villagers:

- i) Elected Village Water Committee/Waterminder<sup>2</sup>
- ii) Housing for Mason
- iii) Local materials (sand, rock)
- iv) Transport of project materials from store to construction site
- v) Voluntary unskilled labour for trenches and excavation of spring
- vii) M10 per household towards a maintenance fund

#### 3.3.3 Letter of Application

If as a result of the *pitso* the villagers accept the requirements and are keen to proceed with the project a letter of application has to be made to the Project Management in which they express their willingness to meet the requirement specified at the *pitso*. This letter is viewed by the Project Management as a statement by villagers to the effect that they are interested in receiving a protected water system and they are now requesting help with achieving that goal.

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<sup>2</sup> At the start of the Project the villagers were also asked to elect a waterminder. As the Project progressed it was found that the waterminders elected by the community in advance of construction were not always the most suitable people. Consequently a decision was made that the masons should "look to see who is most interested" and then nominate the person; the mason's choice is "checked with the community" before the end of construction.

### **3.3.4 Second Village Meeting**

After the letter of application has been received a second *pitso* is held to discuss the Project in more detail. Project staff are introduced to the community and the people are asked to elect a village water committee (VWC) and do a population count. Once this has been done the information and the names of the committee members is submitted to the Project Management in writing.

### **3.3.5 VWC Training**

Once a VWC has been elected the Project arranges for them to be trained. This training, which is of one day's duration, is carried out by the Project Assistant, although for a few months in 1994 (April to August) the Project had the help of a Government Rural Development Assistant who was working in the area. The committee is usually given a copy of the VWC Training Manual of DRWS. This training does not always take place before construction begins.

### **3.3.6 Project Start-up**

Once the VWC is in place the preparation phase begins. A mason will visit the village to explain in detail to the villagers what they have to do (collecting sand, gathering and shaping stones, digging trenches, excavating the spring, transporting material). As this work gets under way the mason will return about once a week to check on progress. The organisation of village labour is responsibility of the VWC. In addition to organising labour the VWC is meant to collect maintenance funds. Although all households are supposed to have contributed M10 to the maintenance fund before any work begins the Project Management does not apply this regulation strictly.

### **3.3.7 Construction**

Once the preparation phase is complete to the satisfaction of the Project Management the actual construction can begin. At this point the community must ensure that accommodation is available for the mason, who will reside in the village until the system is complete. As noted earlier, during construction the mason will work closely with a person he believes will make a suitable waterminder. This approach ensures that the waterminder gets a degree of on-the-job training while construction is under way.

### **3.3.8 Handover**

Once the system is complete an official handover ceremony is meant to take place. At this ceremony the waterminder will be provided with a tool-box and basic tools to enable him to take proper care of the system and carry out minor repairs. Many of these ceremonies were delayed because of the closure of the Hospital (which made it impossible for important officials linked to the Project to be present).

### **3.3.9 Conflict Resolution**

It is virtually inevitable that in the course of any Project misunderstandings and conflicts of one kind or another will arise. The Project attempted to build in conflict resolution mechanisms primarily through frequent meetings between Project Management and field staff. By frequently visiting the area the Project Coordinator endeavoured to keep closely in touch with all developments. When problems arose he attempted to deal with these promptly using local

resources, including hospital staff. Forms were developed to monitor progress and report any problems. A file was established recording all village affairs.

Having looked at how the Project was set up and designed to operate we now turn to consider the successes and the constraints. We begin with a description of the technical achievements and the financial aspects of the Project. We then look at community participation and management, focusing on people's perceptions of the Project. The final chapter is one of discussion and recommendations where we reflect on the successes and failures and make suggestions for the future.

## **4. Findings**

### **4.1 Technical Achievements**

During the evaluation a technical inspection was conducted of systems constructed by the Project. This was done by a Research Assistant using a form that was designed for the national inspection conducted by Sechaba Consultants in 1995 for DRWS. In total 21 systems were inspected in 18 different villages. In all cases the systems were found to have been well constructed and very few problems were detected. The most common problem was that of exposed pipes; 7 of the 18 villages (39%) had some pipeline exposed.

Lesotho high erosion rate results in this being a widespread problem with 58% of systems found to have exposed pipe during the national inspection. In the Mountain areas it is particularly important that pipelines should be well covered as freezing frequently occurs overnight in winter. The national inspection found that this was the most common reason (in winter) for there being no flow to water tanks in Thaba Tseka district. The only solution is to mobilize communities to regularly repair any damage to dry walls (where the pipeline passes over rock) and to keep all pipelines properly covered. This requires the VWCs to be well trained in how to organise community labour in a fair way (this is discussed in more detail in our last chapter).

Small leaks were noted in two of the stone tanks and a crack was found in one standpipe. The watermindes should have the capacity to make such minor repairs themselves if adequately trained.

### **4.2 Level of Service Achievements**

We have described in some detail the efforts made by the Hospital to meet the stringent 'level of service standards' set by DRWS. In this section we consider the extent to which the Project has actually managed to achieve these. The table on the next page summarises the overall findings.

**Table 6**  
**Level of Service Achievements**

Village	Type of System	Number of Collection Points (ex. PS)	Population Served	Population Per Collection Point	Litres Per Capita per Day	% of HHs over 150m
Ha Lephoi	1 x GR	1	112 <sup>3</sup>	112	156	5%
Ha Marumo	1 x WP	1	110	110	n.a	100%
Ha Ramuso	1 x WP	1	125	125	230	15%
Qobacha	2 x GR	4	194	48	105	0%
Khamolane	1 x GR	1	84	84	171	5%
Ha Mosa & Ha Lesitsi	3 x WP	3	97	32	326	5%
Ha Motsiba	2 x WP	2	226	113	120	20%
Khoaeleng & Ha Letsika 1	1 x GR 1 x WP 2 x PS	3	175	58	139	0%
Ha Namu	1x GR	2	72	36	104	0%
Ha Seile	1 x WP	1	28	28	144	5%
Mabelikoe	1 x WP 1 x PS	1	51	51	451	0%
Ha Mohau	1 x WP 1 x PS	2	186	93	n.a	15%
Ha Bolese	1 x WP 1 x PS	1	106	106	n.a	5%
Khajoaneng	2 x WP	2	116	58	409	5%
Thaba Ntso	1 x GR 3 x PS	3	200	66	144	0%
<b>Totals/Means</b>		28	1,882	67	204	12

Note: WP=Waterpoint GR=Gravity PS= Protected Spring (DRWS standard)  
Protected springs are not included as 'collection points' as they hold no storage capacity.

#### 4.2.1 Litres per capita per day

In the table above we have highlighted those cases in which, strictly speaking, the DRWS level of service standards have not been met. What is immediately apparent is that in all cases the systems were providing more than enough water. In three places it was impossible to get an

<sup>3</sup> This does not include approximately 40 people who use an older system (pre-dating the Project) which is located at the Ha Lephoi Clinic.



accurate reading because the inlet was submersed; however, given that the tanks were overflowing it would seem that all systems were providing well over the required 30 litres per capita per day.

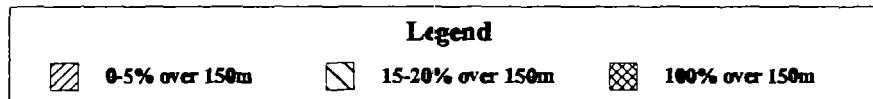
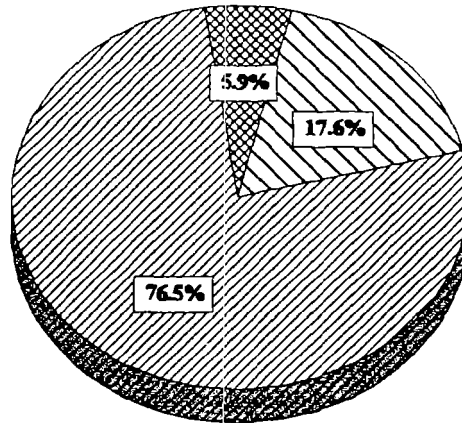
We must stress the importance of taking into account the seasonal factors which result in great variations in spring readings and, once the system is built, the amount of water available per capita per day. Our inspection was done shortly after some of the best rains Lesotho has experienced in 5 years. Had the readings been taken a few months earlier, at the end of one of Lesotho's worst droughts, the readings would have been very different. Given the absence of comprehensive spring readings from the period of drought it is impossible to evaluate accurately the extent to which the systems met the needs of the people at this critical time. However, according to the Project Manager, even in the drought most tanks had water. Only in Khamoloane did the spring dry up and there people had no alternative but to use the river. In Ha Mohau there was rationing but still some water. In Ha Mosa one water point dried but the other had enough for village. Measurements were taken in Thaba Ntso and Khajoaneng and both waterpoints had about 15 l/c/d. By way of comparison the national inspection found that 80% of Thaba Tseka DRWS projects failed to meet the 30 l/c/d standard (35% had below 7 l/c/d) and 42% had to be rationed during drought.

It would appear that one reason why the systems have ample water during the rainy season and, on the whole, adequate water during the dry season, is because the springs were measured during a period of drought. The great fluctuations in spring yields underlines the importance of taking as many spring readings as possible for the design. Although the DRWS standard is that at least two readings should be taken, it would appear that the private contractors who designed the systems relied on only one reading (a second reading was taken after the designs were complete). It is fortunate that the readings were taken during an extremely dry period thus resulting in systems designed for minimal spring yields. In the future it would be wise for those responsible for measuring spring yields to adhere to the standard.

#### **4.2.2 Proximity to collection points (150 metre standard)**

The pie chart on the next page summarises the results presented in the table. As can be seen 76.5% of villages have almost nobody over 150m from the nearest collection point. A small proportion (17.6%) have between 15% and 20% over 150 metres while only 5.9% have all households beyond this target. In our small sample this percentage represents the case of Ha Marumo where the spring was below the village and nothing, other than installing an expensive pumped system, could be done to bring the water closer. In this village the collection point is still within the 300 metre mark and the path to it is level and easy to walk.

## Percent of Households over 150m from Collection Point



The cost of bringing water closer to people has not been insignificant. If only waterpoints had been built, it is estimated that the following costs could have been saved (out of a total budget of M665,000):

<b>Table 7</b>	
<b>Cost Implications of 150m Standard</b>	
Item	Cost
Piping	M70,275
Siltboxes	M17,000
Skilled labour	M10,818
Transport	M12,400
<b>Total:</b>	<b>M110,473</b>

These calculations, done in conjunction with the Project Manager, are based on the 30 villages which will be served by September 1996 and do not include the costs of designing the more complex gravity systems which were paid by DRWS to contractors as part of larger programme (this is discussed in more detail in the next section).

Given an average cost of M15,000 per waterpoint, it can be estimated that seven additional waterpoints could have been built had the 150m design standard not been adhered to. If one were to assume that each waterpoint were to serve a village (with an average population of 94) this would have been enough to have served a further 658 people or an additional 20% of the number who will be served by September 1996. If the costs of design are included this figure could probably be doubled.

The gains which might have been made in terms of coverage have to be very carefully considered in relation to the possible loss of support for the Project from the community and the risk of villagers using unprotected sources. These are discussed in detail in our final chapter.

#### 4.2.3 Population per collection point

Earlier we pointed out that collection points should ideally serve between 80 and 120 people, with a maximum of 150. Below we summarise the results presented in the 'Level of Service' table on page 20 and compare these with the national average:

	National	Lesobeng Project
Percent of villages with fewer than 80	49%	60%
Percent of villages between 80 and 150	30%	40%
Percent of villages with over 150	21%	0%

As can be seen the tendency has been for the Lesobeng project to have a higher percent of villages with fewer than 80 people per collection point than is the case nationally. This is an almost inevitable result of serving villages with rather small populations, as is generally the case in the Mountains. As DRWS and NGOs move to serve villages in increasingly remote areas it is going to be increasingly difficult to maintain this standard as the minimum of one collection point in a village with fewer than 80 people will involve breaking the standard! It should be recalled that this standard was set at a time when most of DRWS's work was concentrated in the Lowlands; as more work is done in the Mountains the need may arise for a new standard, suitable to Mountain conditions, to be set. At the same time the viability of serving very small populations with waterpoints will arise. An example in the case of Lesobeng is the settlement of Ha Seile which had a population of 28 in 1994. In such cases, especially if the spring has a reasonable yield, it may be more appropriate to provide protected springs for the population.

## 4.3 Financial Aspects

### 4.3.1 Bookkeeping and Audit

The Project books appear to have been well kept. The ledger and the financial statements prepared by the auditors were made available to the Consultants. These have been submitted regularly to the hospital management and to the donors in Holland. The accounts have been presented simply as a statement of income and expenditure. The records available enabled us to make a satisfactory assessment of the way in which the project's finances have been handled, how the project is faring in relation to budget and what the approximate cost per capita will be by Project completion.

### 4.3.2 Cost calculations

The ledger provided records of expenditure in categories such as salaries, transport and building materials; no costs had been allocated to specific systems or villages in the ledger. However, accurate records had been stored on computer of the materials used in the first 10 villages and these became the basis for our calculations. For categories other than materials, average costs were calculated based on the real costs over the period it took to serve the 10 villages.

The table is divided into two sections: on the left we have calculated costs without village labour and on the right we have included village labour using the amount of M14 per day that was used in the revised Project Proposal. The estimates of village labour were based on records kept by the masons which were helpful. As can be seen village labour represents 38% of the overall cost of the system. The value of this should not be underestimated. It is often heard that rural people pay "nothing" for their water. While it might be true that the financial contributions to the maintenance fund are generally small, the value of community labour represents a very significant contribution towards the capital cost of the water supply.

Salaries are shown as constituting 47% of the costs. However, this does not reflect the full costs as the Project Assistant is actually paid by the PHC Department with the Project only paying an 'allowance' of M250 per month (he devotes 60% of his time to the project).

Transport costs represent only 18% of the total cost (excluding village labour). It is our view that given the nature of the mountainous terrain, the distance from sources of supply and the condition of roads, this aspect of the Project has been very well handled, with optimal use being made of the Project vehicle. The figures shown include *all* costs: fuel, maintenance, servicing, insurance and truck hire *as well* as a proportion of the capital cost of the vehicle. If the same vehicle were used for a second phase of the Project, the transport costs per system would be even lower.

We have calculated the costs per collection point and per capita. Both of these exclude the costs of system design which, as noted earlier, were covered by DRWS. As can be seen the cost per collection point (regardless of the technology used) is M15,267 and the per capita cost works out at M169. These cost should enable reasonably accurate projections to be made for any new phase. Because DRWS does not have figures readily available showing the actual costs (i.e. including all salaries, overheads, transport, etc) in Thaba Tseka it is difficult to compare how the Project has done in relation to DRWS. However a comparison can be made on the basis of population served per annum per mason: the figure for Lesobeng is 375 (based on two year average) while for DRWS it is 342 (based on a five year average).

**Table 9  
Cost Calculations**

Village	Type of System	Num CPs	Pop. Served	Salaries	Building Materials	Transport	Other Costs	Total (ex-Village Labour)	Cost per Capita	Cost per Collection Point	Village Labour	Total (Inc. Village Labour)	Cost per Capita	Cost per Collection Point
Ha Lephoh	1xGR	1	152	9363	8456	3328	1523	22670	149	22670	17794	40464	266	40464
Ha Marumo	1xWP	1	110	8163	1987	3328	1523	15001	136	15001	10822	25823	235	25823
Ha Ramuso	1xWP	1	125	8163	2435	3328	1523	15449	124	15449	12600	28049	224	28049
Khamolane	1xGR	1	84	9363	8667	3328	1523	22881	272	22881	15848	38729	461	38729
Ha Mosa & Ha Lesltsi	3xWP	3	97	16806	5051	6655	3048	31560	325	10520	12950	44510	459	14837
Ha Motsiba	2xWP	2	226	9603	4418	3328	1523	18872	84	9436	14424	33296	147	16648
Khoaeleng & Ha Letsika I	1xGR 1xWP	3	175	16086	15988	6655	3048	41778	239	13926	16982	58760	336	19586
Ha Sephooko	1xWP	1	117	8163	1987	3328	1523	15001	128	15001	8792	23793	203	23793
<b>Total/Mean</b>	12	13	1086	85710	48989	33278	15234	183212	169	15267	110212	293424	270	24452
<b>Percent of Total</b>	-	-	-	47%	27%	18%	8%	100%	-	-	38%	-	-	-

### 4.3.3 Progress in Relation to Budgets

The table opposite gives an indication of progress made in relation to the budget. We have, for interests sake, included the first St James Proposal (March 1993) and the Revised Proposal (Sept. 1994) and have again calculated the costs per capita. We were able to obtain figures for actual expenditure to the end of December 1995. To estimate expenditure to the end of the Project (September 1996) we calculated the monthly costs based on the period July-December 1995, added inflation at 15% where applicable and projected these through to September 1996.

As can be seen the first budget was based on an estimated per capita cost of M91 (1993 prices). We have already argued that this was an underestimate. Indeed, even if only waterpoints and protected springs had been built, the cost per capita should have been at least 20% higher (based on the calculated savings noted earlier).

The second budget, by contrast, was rather cautious. As a result of the various discussions with DRWS regarding level of service, the target population was lowered considerably (to 27 villages) resulting in a per capita cost increase to M205. Looking at costs per capita based on actual expenditure (Dec. 1995), it is evident that, in practice, the Project managed to make some considerable savings, thus reducing the costs to M183 per capita. Projections to the end of the Project (Sept. 1996) suggest that this will basically remain the same (M187).

The last column in the table shows that the main saving has been on transport, with M25,000 less being spent than anticipated in the revised budget (most through efficient use of the Project vehicle in transporting pipes to Lesobeng). The use of the Ha Lephoi Health Centre to store material also resulted in considerable saving (M14,000), while some savings were also made on building materials and administration costs (by the Project Manager handling these). As a result of the savings made, we estimate that by the end of the Project in September 1996 there is likely to be a surplus of about M30,000.

In addition to this M30,000 the Project should have an additional M108,200 derived from the favourable exchange rate. The original budget approved by CEBEMO (M655,00) was the equivalent of Fl. 375,000 in September 1993. Since then the value of the rand/maloti has progressively declined in relation to the *guilder*. As a result each time the CEBEMO has transferred a portion of the agreed amount (Fl. 75,000 in five payments over three years) the actual amount received in rands/maloti has increased. This is illustrated below:

<b>Date of Payments</b>	<b>Dutch Guilders</b>	<b>Maloti</b>
Sept 1993	Fl. 75,000	M130,939
Jan 1994	Fl 75,000	M129,198
Aug 1994	Fl 75,000	M154,247
July 1995	Fl 75,000	M173,855
Jan 1996	Fl 75,000	M175,200 ( <i>estimate</i> )
<b>Total</b>	<b>Fl 375,000</b>	<b>M763,439</b>

**Table 10**  
**Comparison of Budget and Expenditure**

Item	First Proposal March 1993	Revised Proposal September 1994	Expenditure to December 1995	Estimated Total Expenditure at Project end (Sept. 1996)	Estimated Surplus/ Deficit
Salary: Water Engineer, Masons	284 000	294 000	205 713	303 264	(9264)
Transport: Truck hire	40 000	30 000	10 357	14 241	15 759
Project vehicle	75 000	76 000	75 326	75 326	674
Running costs	40 000	40 000	28 748	51 266	(11 266)
Other transport	10 000	15 000	3 102	3 433	11 567
Tools and Equipment	20 000	25 000	25 822	28 404	(3 404)
Building Materials	150 000	150 000	165 358	144 490	5510
Storage	20 000	20 000	5 806	6 000	14 000
Administration and Audit	15 000	15 000	4 933	6 594	8 406
<b>Total Cost</b>	<b>655 000</b>	<b>665 000</b>	<b>525 165</b>	<b>633 018</b>	<b>31 982</b>
Survey and Design Costs	0	0	0	260 000	
Estimated Target Population	7 200	3240	2867	3379	-
Cost per Capita	91	205	183	187 (264 with design)	

In the table on the previous page we have shown the costs of the survey and design and the impact that these have on per capita costs. The amount shown is roughly what DRWS paid contractors to survey and design systems in Lesobeng. It must be stressed that this was part of a national programme to involve the private sector in the preparation of projects in advance of construction. The Lesobeng Project was added to the list of projects to be prepared. In many ways this cost could have been avoided if DRWS and the Project had reached an agreement for the Project Manager (who is well qualified for this task) to undertake all surveying and design. As can be seen if the contractor survey and design costs are to be included the overall per capita costs would be raised to M264, excluding village labour. If village labour was ever to be paid the per capita cost would rise by another 38% to M384.

Given that the Project is likely to end with a surplus in the bank careful thought should obviously be given as to how this should best be spent. In the last chapter we offer some suggestions.

#### **4.4 Community Participation and Management Achievements**

Information on the extent of community participation and management was gathered during the evaluation using two different methods. First a one-day workshop was organised at Ha Lephoi and representatives of villages served by the Project were invited to attend. Second, key informant interviews and focus group discussions were held in nine villages with men, women and village leaders.

In order to ensure that different sectors of the community were represented, the following categories were invited: chiefs, Village Development Councils (VDCs), Village Water Committees (VWCs), Village Health Workers (VHWs) and Headteachers of local schools. Altogether ten villages sent representatives to the workshop with the following breakdown: 10 chiefs, 13 VDC members, 46 VWC members, 11 VHWs and 1 Headteacher (total 80).

The workshop was conducted in a participatory manner using the SOFT method by which the participants themselves explore the Successes, Opportunities, Failures and Threats of a Project. Given the limited time it was decided to focus on successes, failures and opportunities (or suggestions). The participants worked in three groups consisting of: (i) VHWs and headteachers, (ii) VDC members and Chiefs and (iii) VWCs. An experienced workshop facilitator and recorder ran the workshop.

What is clear from the presentation that follow is that the Project, as far as the villagers are concerned, has had mixed results. Some people are very pleased while others, mostly those who are not as close as they would like to be to collection points, are less pleased. Because the results do not come from a household survey it has not been possible to quantify the exact percent of people falling into particular categories (eg. percent "satisfied" and percent "unsatisfied"). Instead we have recorded the different views (which some times contradict because people's experiences are different) as they were put forward by different workshop and discussion group participants; in the last chapter we assess and discuss these in the light of our overall findings. It will also be noted that, as is often the case, people have spent more time discussing what they see are the problems (in the hope that these can be rectified in the future) than the successes (which, once mentioned, are not discussed in such detail). For this reason the section "Perceived Successes"



is shorter than that which deals the "Perceived Failures"; the length of these sections should obviously not be taken as an indicator of the extent to which the Project has succeeded or failed.

#### 4.4.1 Perceived Successes

The VHWs and VWCs noted three main successes: (i) a reduction in the occurrence of scabies and diarrhoea, attributable to clean water; (ii) the availability of adequate quantities of water which had put an end to queuing and (iii) increased proximity of water to people's homes. The Chiefs and VDC members mentioned the same successes but added that water had a good taste and that the water project had resulted in people "showing an interest in working hard".

The same successes were underlined by the focus groups and key informants in the villages. In addition some women noted that: "By working together on the water system people have come closer together and have learned to work in harmony". Some women stressed that one of the successes was that old and sickly people were now able to draw water where the taps were placed close to their homes.

An interesting observation was that the Project has made it possible for people to use more water than before. A group of women at Ha Letsista illustrated this pointing out that before construction of the new supply, people usually drew between one and three buckets whereas after construction most took between three and four buckets. If this observation is correct (and in the absence of baseline data it is difficult to prove), it is an important one as numerous studies have shown that the health impact of water projects is derived primarily from increases in the quantity of water used.

#### 4.4.2 Perceived Failures

**Proximity** The mostly frequently mentioned failure, noted by all groups, was that the Project had not been able to bring water close enough to people's homes and in some cases the waterpoints were outside the village. The VHWs said that the "project had failed to provide a tap for each household", indicating that some people had very high (unrealistic) expectations of the Project.

**Community Participation** The VDCs and Chiefs felt that one important Project failure was that "the Project had not fully involved the community in the planning process". This point was illustrated with the observation that the Project had not worked with VDCs and that it had not developed, to the satisfaction of the community, a strategy to enable work on the water system to be carried out without interfering with people's other activities such as hoeing. In short it was felt that community labour contributions were poorly organised. The same group felt that there should be some payment for community labour, a position which might have been influenced by the news that some water systems are now being constructed in other parts of the country with paid labour (under the Constituencies Capital Development Fund).

**Waterminder Training** The waterminders had particular concerns of their own. For them the main project failure was lack of training. They were also concerned about the delay in receiving toolkits, which are usually provided on completion of the system. In other cases the waterminders complained that the chairperson of the VWC had kept the toolkit and they were not

pleased with this arrangement. Waterminders were concerned that, because of the lack of training, they were not sure where to buy spare parts for repairs or where to report major breakdowns.

**VWC Training** During the focus group discussions and key informant interviews it emerged that the VWCs have had only one day of training. This was described by the VWCs as "a meeting where they discussed VWC constitutions and household contributions". The VWCs feel that this "training" is inadequate and does not enable them to manage the more complex aspects of community management, notably organising village labour and managing financial contributions.

**Labour Contributions** To illustrate the problem they faced in organising labour a number of VDC members pointed out that they frequently had to leave community management matters to the masons. As a result a situation developed that is not unusual in the Lesotho context: a large proportion of the men pulled out within a short time leaving women with the difficult tasks of crushing stones, digging furrows and transporting materials. The women themselves resented this, especially because they were also expected to carry out many agricultural tasks, notably weeding. One VWC member illustrated the problem by saying: "This is the season for hoeing the fields and when people do turn up for work nobody knows what to do".

A related problem arose because everyone was often expected to work everyday; this was not practically possible as people have other responsibilities and need to alternate between work on the water supply and these. A problem for poorer families was lack of food. As one interviewee put it:

"The masons ask us to work everyday, but this is often impossible for those of us who do not have enough food in the house. I can't carry a lunch box to work because in doing so I am depriving the children with food for the day and without eating some lunch I have no strength to work."

**Financial Contributions** From the interviews it would appear that many villagers and VWCs are confused about the financial contributions. First some villagers feel they were not adequately consulted about the need for financial contributions or about the appropriate amount to be collected or the acceptable uses of the money. They complain that the amount of M10 per household was "imposed" on them without "proper consultation".

Many poorer villagers said they could not afford the M10 contribution and the VWCs members said they have found it difficult to enforce payments and are uncertain about how to handle this problem. To their credit a number have used innovative methods such as *stockvels* and concerts. The treasurers were concerned that they did not have proper receipt books or cash books to record these funds and are uncertain how to go about doing this.

The VWCs' biggest problem is what to do with the money once it has been raised. The VWCs complained that taking the money to the bank in Thaba Tseka was too costly and, for this reason, the treasurer would usually keep the money at home.

In the last chapter we discuss each of the comments made; first we look at people's own suggestions for improving the Project.

#### 4.4.3 People's Suggestions

A number of interesting suggestions came out of the workshops, the focus group discussions and the key informant interviews. Some, such as "provide a tap for every household", are clearly not feasible. Others indicate a real understanding of the issues and are perfectly practical. Below we present these as made by the villagers and key informants:

**Giving Guidance for VWC Election** A number of interviewees that the Project should give guidance for the election of VWCs to ensure that this was done in a free and fair manner.

**Improve Training** Most of the suggestions from villagers focus on improving the capacity of the VWCs and the waterminders. Most common was the suggestion that the Project should "train VWCs and waterminders" and that there should be "follow-up training" on a regular basis. Villagers hoped that increased capacity would enable the VWCs to play a more significant role in organising labour, making them less dependent on the masons. It was also suggested that methods should be devised to ensure that community labour be more fairly organised. On the question of VWC training the mason were particularly adamant that more training was required and that "a one-day workshop is not sufficient...this should be extended to allow for more understanding for what is expected".

**Involving Village Development Councils** Some people, notably the VDC members and Chiefs, suggested that the VDCs should be more involved in the Project and related activities such as building access roads to the remote villages.

**Recruit Local Manager** On the management it was suggested that an effort should be made to recruit a qualified Mosotho to manage the Project. It was felt that a local person would have a better understanding of the cultural and political environment the Project functions in. To assist the new manager and other staff it was suggested that a book of Project "Rules and Regulations" should be drawn up and distributed to all involved in the Project.

**Expanding the Project** Both the masons and the nurse assistant felt that the Project should be expanded to serve all villages in the area that are prepared to work.

**Improving VWC capacity to Organise Labour** The masons were concerned about the amount of time being spent on community liaison matters and suggested that "the Project should employ someone to mobilize the villagers before the masons are sent to work." It was felt that such a person should be a qualified builder so that he (or she?) could show villagers exactly what to do.

**Improving Communications** The masons argued the "communications with the villagers have to be improved; ...people should know why they are getting a particular system".

**Improving Quality of Plastering** While most of people's suggestions focused on community and organisational matters there was one technical suggestion that the masons should: "Improve plastering on the water tanks to prevent leaks".

## **5. Discussion of Community Perceptions of the Project**

In this chapter we discuss some of the interesting issues to emerge out of the workshops, focus group discussion and interviews. Recommendations are made where appropriate.

### **5.1 Proximity**

The importance of proximity cannot be over stressed. Looking at the successes there is no doubt that people have greatly appreciated the improvements which have been made. However, although only four of the villages inspected have a significant number (i.e. +15%) of households beyond the 150 metre standard, it is clear that many people still feel disappointed that greater degrees of proximity have not been achieved. In a sense this comes as no surprise. Experience from elsewhere in Lesotho and from other countries clearly suggests that people are motivated firstly by proximity (getting water closer), secondly by reliability (having water available at all times) and thirdly by health benefits (having cleaner water). It is quite likely that, had the Hospital maintained its position of providing only waterpoints and protected springs, the level of support for the Project would have been lower and the disappointment greater. This has to be considered as preparations are made for any new phase.

In preparing a new phase the Project should give special attention to ensuring that people's expectation regarding issues such as the proximity of the collection points are not raised to unreal levels. In this respect special precautions must be taken if outsiders become involved in any project activities. We have noted that DRWS contracted private sector engineers to survey springs and design the systems. Not only did this add enormously to the costs of the systems but it also led to some confusion at village level. The villagers did not fully understand the role of the external engineers and there is anecdotal evidence to suggest that their expectations were raised to unrealistic levels by those charged with surveying the springs. This apparent confusion underlines the importance of coordination between all parties involved in a water project and most especially the need for any external visitors to be accompanied by a member of the project staff on all visits to the villages.

### **5.2 Communications with Villagers**

Although the Project held village meetings it is important to stress that these are fast becoming an inadequate way of communicating with people. Attendance is often low and meetings are often dominated by a small number of influential people. Women are entitled to express their views but are frequently not given the opportunity. In the Lesotho Highlands Water Project area it has been found that other means, besides village meetings, have to be devised. These include: distributing leaflets explaining issues; conducting household visits; using radio and video. While some of these may have been beyond the means of the Lesobeng Project it would appear that a greater effort is called for as far as consultation is concerned.

### **5.3 Organising labour**

Many VWC members commented on problems experienced in organising labour. The complexity of this task is generally underestimated. DRWS gives very little attention to advising VWCs on how to organise labour and does not include any suggestions in its VWC Training Manual. As

a result poor attendance during construction is a common feature in rural water supplies in Lesotho. This rapidly leads to demotivation and conflict. Efforts clearly have to be made to train the VWCs in how to deal with organising labour, and some suggestions for this are made in the last chapter.

#### **5.4 Cash contributions**

The VWC treasurers are clearly worried about dealing with cash contributions. They have good reasons for this. Only one out of the 15 villages visited was found to have banked their funds. Altogether these villages had collected over M3,000. Once the Project has served 30 villages in September 1996, it can be anticipated that over M6,000 will have been raised and most of this will be kept in the homes of VWCs treasurers. Having this amount of money hidden at people's homes not only presents a security threat to the treasurers but also does not make sense given the lost opportunity to raise some interest. This issue is discussed in the last chapter.

#### **5.5 Waterminder Training**

The waterminders are clearly concerned about receiving adequate training. A one-day training session has been planned by the Project but this had not yet taken place at the time of the evaluation. Although some on-the-job training takes place it would be useful to reinforce this with a short course as soon after construction as possible. It is especially important that basic information, like where to report repairs, should be acquired as part of 'on-the-job' training during the construction of the water systems. While waterminders are waiting for the course they could be provided with a Sesotho version of the Village Water Supply Management Handbook; none of the Lesobeng water minders have seen this before or heard of it.

The absence of toolkits in some villages is a result of the Project waiting for the official handover of the systems to present these to the waterminders; these were, however, delayed by the problems at the Hospital and, as a result, few waterminders have toolkits. Although the presentation of toolkits provides a symbolic and focal point during official handover ceremonies, there is no reason why they should not be made available to the waterminders before the ceremony takes place (these are often delayed for months after the water system is completed). The toolkits could then be 'officially' handed over as part of the ceremony.

#### **5.6 Conflict Resolution Mechanisms**

Disputes of different kinds are almost inevitable in any project where collective effort is required. What is important is that these should be resolved well before they prevent progress. It is apparent from the interviews that there were disputes involving the masons and villagers which were not promptly resolved and which did affect progress on some of the systems. The masons themselves are not trained to resolve conflicts and are often too closely involved to do so. The Project Assistant has a fair amount of experience but no formal training in conflict resolution techniques. The Project Manager, as an expatriate, is not in a position to understand the nature of disputes or to act as an intermediary. The Project does not have trained Village Liaison Officers (VLOs) and never approached the Thaba Tseka VLO for assistance. It would be appropriate for the Project to make contact with DRWS to learn more about the Village Affairs Unit and the

VLOs. If possible it would be useful for the Project Assistant to spend time with the Thaba Tseka VLO to learn about the methods employed.

### **5.7 The Role of the Masons**

Given the proximity of the masons to the community it is not surprising that a number of comments were made about their role in dealing with the community. While it is not unusual for DRWS to be involved in community liaison matter (DRWS masons often play such a role), it should be noted that without appropriate training in community liaison matters, it is not entirely fair to expect masons to handle a task which falls outside their area of expertise. Furthermore, evidence from other parts of the country suggests that masons are sometimes 'part of the problem' and cannot, therefore, be expected to report objectively on problems experienced. While the local masons may be more dedicated there is, on the other, always a danger that they might be influenced by people who know them and may become involved in local disputes; adequate management mechanisms are required to ensure that a professional, unbiased approach is always maintained.

### **5.8 Involving VDCs**

Both chiefs and VDC members were invited to the evaluation workshop. Although VDCs are playing a more prominent role than ever before in the development issues (following democratic national and local elections) the Project has followed the example of the Hospital and deals almost exclusively with the Chiefs. This fact has not gone unobserved in the villages and resulted in some comments being made. The Project needs to discuss the issue in some depth and consult interested parties from the area to obtain their opinion. Our view is that it would not be advisable for the Project to ignore VDCs in any new phase.

## **6. Discussion of Main Findings and Recommendation**

In this section we attempt to summarise the main findings and make recommendations for the preparation of a new phase. We must stress that our suggestions should only be taken as a starting point; it is important that each one should be critically reviewed by all the stakeholders presently involved in the Project as well as those who may be involved in any new phase.

The overall finding from the evaluation is that the Project has succeeded in meeting the water supply needs of over 1,800 people living in a remote part of the country which would not have been served by Government for many years. The Project has operated in a cost effective and efficient manner. DRWS standards have generally been met and technical standards are high. The systems were found to be functioning well with virtually no observable problems. Although insufficient attention has been given to VWC training this may still be rectified before the end of the Project using surplus funds which have accumulated through efficient operations and a favourable exchange rate. *It is recommended that funding be sought for a second phase of the Project.*

## 6.1 Project Preparation

### 6.1.1 The Need for DRWS Support to NGOs

Looking back over the history of the Project as far back as 1987 when work first began in the Methalaneng area, one can only be impressed by the efforts St James has made to ensure that the remote communities in its HSA were served with clean water supplies. Like other NGOs, St James quite rightly recognised that if the people of the area were to be served before the end of the century, it would require an initiative on their behalf and for this they are to be commended.

The Hospital was fortunate, in 1990, to have the assistance of CARE Lesotho in preparing the first proposal for Lesobeng. Unfortunately funding fell through and the ambitious CARE proposal could never be put to the test. When, in 1993, the Hospital prepared a new proposal they did so without professional assistance. What help they got from DRWS in preparing the proposal was completely inadequate. The absence of proper guidance resulted in a proposal, that was accepted by the Donors and DRWS, which had a budget that fell far short of the real costs of providing clean water systems to remote rural communities.

Reflecting on these events, it would seem evident that there is an important issue at stake which goes well beyond the boundaries of the Lesobeng Project. There can be no doubt that NGOs working in Lesotho will, in the years to come, continue to be interested in the rural water sector and will continue to seek funding to implement projects. Given that NGOs are assisting Government in fulfilling its overall objectives the least Government can do is to provide an "enabling environment". Considerable thought has to be given to what exactly this means.

The impression gained from existing documentation and interviews with NGOs over the years is that DRWS has not always been supportive of NGOs entering the sector and has tended to treat them more like competition than partners. This may be because of unsatisfactory NGO performance. Many do not notify DRWS of their operations, they employ poor design and construction standards, and after a few years withdraw. Given this experience DRWS has developed a clear and perfectly rational policy on NGOs: systems must be approved by DRWS and must be built in accordance with DRWS standards if the Department is to take long-term responsibility for their maintenance after project completion. While such a policy is rational, DRWS does not back it up enough support to the NGOs during project preparation to ensure that all critical aspects are taken into consideration.

It has to be appreciated that if the foundations of a project are poorly laid the project itself is quite likely to suffer the consequences, as was the case with the Lesobeng Project. DRWS should be able to assist NGOs entering the water sector not only with the technical aspects (such as ensuring designs meet standards) but also with project design. In particular DRWS should be able to ensure that the proposed approach is appropriate to the area where the NGO will be working and that there are adequate resources to cover all aspects of the work.

In advising NGOs emphasis should also be given to the social aspects of rural water supply. The Project Manager of the Lesobeng Project had no idea that DRWS had a Village Affairs Unit or Village Liaison Officers, one of whom is stationed in Thaba Tseka. Equally important he had no idea of the extent of training required for VWCs and was never given any advice on this. He was also unaware of previous NGO experience in the country and was given not given any advice in this respect. DRWS should be able to advise on such aspects and be able to refer NGOs to the

experience gained by others; a whole library of reports exists in DRWS, many of which cover the work of NGOs.

*In short we recommend that DRWS define more clearly what is meant by an "enabling environment" and devise more effective approaches to dealing with NGOs, offering them the type of guidance suggested above. It may be worth while considering the establishment of an NGO Unit in DRWS. This need not be a permanent body; a group of suitably qualified professionals could be identified from within the Department who would meet as and when needed.*

Although an agreement was eventually drawn up between St James and DRWS, it is quite apparent that the terms of agreement were not strictly adhered to by both parties. DRWS, in particular, has not met its commitment to provide "timely submission of project files and designs" nor has it provided "monthly technical supervision of the construction work".

*Given these problems we recommend that the NGO Unit, which would liaise with the Lesotho Council of NGO on an on-going basis, should also be responsible for ensuring that any agreements reached between DRWS and NGOs are met by both parties.*

### **6.1.2 Data Collection and Designs**

Calculating budgets is complicated by the use of different units. We found that the different Lesobeng Project documents refer to "population", "villages" and "systems" and different cost estimates are made at different points using these. For example the Revised Proposal set as a target 27 villages and 27 systems, obviously anticipating that there would be one system per village (which is usually, but not always the case). It is very difficult to project costs according to villages and systems as these can vary so much in size; for this reason it is preferable to estimate costs per capita, as population variations (such as growth per annum) can be more accurately predicted. However, for this it is essential that accurate figures be obtained at the outset and this was clearly not done in the case of Lesobeng.

*We strongly recommend that a careful population count be done in all villages to be included in any new phase.*

A related topic is that of spring surveys and design of systems. The costs paid out under the present Project (by DRWS) are high and were largely unnecessary given that the Project Manager is a qualified engineer. While the involvement of the private sector is likely, in the long term, to help DRWS speed up its operations, the Project must consider low-cost alternatives for future phases.

*We therefore recommend that the Project approach organisations such as US Peace Corps for technical assistance. It is also recommended that a proportion of the surplus funds be spent in conducting springs surveys and doing preliminary designs as this will enable a much more accurate budget to be prepared for the new phase*

## **6.2 Integration vs. Autonomy**

The Lesobeng Project operates as part of the St James Hospital PHC Department. The CARE proposal reflects a real effort to making optimal use of this situation, seeking to build PHC



capacity in a variety of different ways. Ironically, the St James proposal reduced the Project to a water engineering project, virtually ignoring its location within the Hospital. All attention was given, both in the March 1993 proposal and the revised version of 1994, to obtaining maximum coverage with very little consideration being given to health education, community management or any other non-technical components. Given the engineering focus, the Project could have functioned in a virtually autonomous manner. In certain respects this may have been advantageous in that, if problems arose at the Hospital, the Project could have continued to function.

On the other hand a project operating independently of the Hospital may not have had the possibility of making use of the PHC Motivator, the Ha Lephoi Health Centre and/or facilities at the Hospital itself (such as staff housing). This would have raised the costs and might also have resulted in a loss of credibility amongst local people.

It would have been worthwhile for the Project Management to have explored the experience of the Tebellong PHC Water and Sanitation Project. This operated within the PHC Department throughout its period of funding (1990-1993). Particularly note worthy was the close collaboration with the VHWs who became involved in an innovative health education campaign under the Project (see Hall and Adams, 1991). In many ways the Project became a driving force for PHC in the villages, demonstrating the Hospital's commitment to improving the lives of people in a very practical manner while, at the same time, linking this to broader health issues through health education.

To achieve this, constant coordination was required between Project staff and other members of the PHC Department; this proved to be time consuming, requiring constant effort. The Tebellong experience suggests that integration within a PHC Department is viable and rewarding as long as all parties are committed to the process and prepared to make the additional effort.

As long as the Hospital and PHC Department remain effective and free from paralysing internal conflicts a water project (especially one that gives attention to related health education matters) can greatly benefit from its location in the PHC Department. However, it has to be recognised that there is the risk of the Project becoming embroiled in Hospital conflicts and having Project activities undermined by this.

To avoid this risk the Project could be established independently of the Hospital, becoming an autonomous body serving the people of Lesobeng (or any other part of the HSA). It could, quite naturally, still coordinate its activities with those of the PHC Department in a variety of ways. As preparations are made for a new phase, the question of where to position the Project has to be given serious consideration and the monetary and organisational implications have to be carefully calculated. It is impossible to make any recommendations in one direction or another as the character and objectives of the new Project (or phase) have still to be formulated.

### **6.3 The Need for a Steering Committee**

No matter how well trained or gifted an expatriate might be, he or she cannot be expected, within the limited period of a two to three year contract, to grasp all the social, economic and political aspects that rural water supply projects have to function in. The Project Manager has done an admirable job in very trying circumstances and should be commended for this. However, there

are some indications that he may have been all the more effective had he been able to draw on the experiences of a wider body of experts.

While it may be very difficult for the Project to do this (suitably qualified Basotho are not easy to recruit given competition from larger agencies such as the Highlands Water Project), it may be possible to find ways of involving more local professionals in an advisory capacity.

*Given this we recommend that any new Project should have a local manager (if possible) and a Steering Committee consisting of: (a) people with experience in the rural water supply sector - from Government and the NGOs; (b) people working in the PHC department and (c) people who live in the Project area or who know it well. The role of the Steering Committee would be to give advice and guidance as the Project develops.*

#### **6.4 Maintaining Standards**

The question of maintaining level of service standards has resulted in serious disagreements between the Hospital and DRWS. We have already noted that these could possibly be avoided if DRWS were better prepared to assist NGOs. The results of our financial analysis show that the Project could have served about 20% more households with clean water if the 150 metre standard had not been applied. On the other hand the results of our participatory workshops, focus group discussions and key informant interviews all point in one direction: people are primarily concerned about proximity and would have been very disappointed (some are already) if the Project had not brought water closer to their homes. Evidence from the National Inspection conducted by Sechaba Consultants clearly shows that if people are unable to access water from improved sources close to their homes, they will make use of any unprotected sources nearby, thus undermining the health objectives of the improved supply. While this problem may be overcome, to a certain extent, by protecting springs in the area it is quite impossible to protect all of these as many are seasonal and only appear after good rain. Although significant efforts have been made by the Project to protect springs there, the inspection found three villages (out of 18) where villagers were using unprotected springs.

*Therefore, for reasons of health and community acceptance of the Project, we recommend that all efforts be made to ensure that the 150m standard is adhered to in future phases of the Project. All springs that are used must be protected, including those which are seasonal.*

#### **6.5 Building Community Management Capacity**

There is broad consensus from all concerned that this critical aspect of the Project received inadequate attention. The one-day meeting that the Project Assistant has with the VWCs is inadequate. A proper VWC training course requires two weeks; a simplified version would take a minimum of one week. The results of lack of training in the Lesobeng area are evident: problems organising labour and collection contributions to the maintenance fund; no proper records; inadequate arrangements for the banking of funds; poor understanding of the roles of the VWC and of each member on the committee; lack of confidence; reliance on masons to carry VWC tasks and lack of respect from the community.

The situation regarding waterminders is not much different. Although the systems are so simple that they are virtually maintenance free, the waterminders do not have the confidence to carry out the most simple tasks or the tools to do so. More worrying, if something major went wrong they are not sure what reporting procedures they would follow.

*To ensure the long term sustainability of the Project it is critical that the question of building VWC capacity be addressed very seriously. We recommend that any surplus funds should be used on this and not on trying to extend coverage. In particular we recommend that the Project approach the Thaba Tseka Rural Development Centre of LHDA which is currently running courses for the VWCs in the Katse area (for about 90 villages). A curriculum has been developed for LHDA which would be well suited to the Lesobeng Project; it could be simplified in certain places and the course could be reduced to a week. Costs could be cut by sending only three people from each committee. As the Mantsonyane HSA serves part of the LHWP area the Rural Development Centre would be prepared to become involved in training VWCs (costs would have to be covered by the Project or a donor).*

*An important aspect of the course will be to train new VWCs to organise community labour so that it is distributed fairly between all adults (men and women) and takes into account people's need to have time to attend to other tasks. Masons should not be directly involved in this; their task is to tell the VWC members how many people are required each day and the VWC members are then charged with organising the labour. A method first devised by the Tebelling Project has been adapted and included in the curriculum now being used by LHDA.*

*Given the simplicity of the systems, the training of waterminders need not take very long. However, special attention should be given to tap maintenance (changing and even making washers) as this is the most common problem experienced. Tools should be given to the waterminders as soon as construction is complete (they should get as much on the job training as possible) and then be 'officially' handed over later during the opening ceremony. The VWC should consider the waterminder as a member and one of the three people to go for training in Thaba Tseka.*

## **6.6 Collection of Maintenance Funds**

The collection of maintenance funds is problematic in all parts of Lesotho. In the remote Mountains it is not only problematic, it is also quite inappropriate for a number of reasons: firstly, people are significantly poorer and have less access to cash income; secondly, banks are so far from most villages that virtually all the funds raised would be spent on transport if regular banking were to be done; thirdly, the systems are so simple that funds are hardly ever needed; last, but certainly by no means least, the social cost to the VWCs of trying to get people to pay is simply not worth it. It is impossible to enforce payment and VWC regulations which threaten fines or prevention of water collection are usually made to look completely ineffective. In Lesobeng, as in other parts of the country, financial contributions have been used as a measure of community motivation; again we are of the opinion that this is inappropriate and that alternative measures need to be found to judge 'community motivation'. Our experience is that water in itself is usually enough to motivate people, as long as the question of proximity is addressed. Where villagers appear to be demotivated, there are usually social issues behind this which can be addressed through effective community liaison measures.

*We therefore recommend that the practice of raising 'maintenance funds' before the project begins be ended. Instead communities would be given training in appropriate fund raising measures to deal with problems when the need arises. The Project would do well to invest some of the surplus funds in basic maintenance and repair equipment and a small stock of pipes and fittings. One of the waterminders would be elected to act as an area waterminder with responsibilities for the equipment and stock. He would be given additional training and, when needed, the other waterminders would call on him for assistance. Communities would raise funds for any additional costs when needed. We further recommend that existing funds be banked in a single account under the responsibility of an umbrella VWC; with interest gained this account would probably be adequate to cover most minor repairs for many years to come.*

**Annex 1**

**Terms of Reference and Comments**



Therefore, it is assumed that the opinions and experiences of the target group concerning the project largely reflect the quality of the project as a whole.

"Villagers of Lesobeng" is a rather unspecified group. In the evaluation, distinction should be made between local leaders, men and women as sub-groups of this target group.

Next to this, an assesment of the following matters should take place:

- quality of the constructed water systems;
- cost-effectivity of the project;
- whether the project is on schedule to reach the goal of 27 villages.

A number of villages in Lesobeng Valley which have not (yet) been served by the project, should be included in the evaluation, in order to obtain a clearer picture of the impact of the project, and to investigate the expectations and willingness to participate in the project.

### 3. Specific Objectives

#### A) Opinions and experiences of the target group

The evaluation will assess how the beneficiaries view and experience the project. Distinction will be made between local leaders, men and women as different sub-groups of the target group. Attention will be paid to the following fields of interest:

- 1) Project procedures.
- 2) Tasks and division of tasks between the project and the villagers.
- 3) Results and benefits of the project.

Themes that will be dealt with in these fields of interest are communication with project staff, transport, labour, trainings, maintenance and health.

#### B) Assessment of the quality of the water systems.

An assessment of the quality of the completed water systems will take place. Proper functioning, neatness, workmanship and durability of the systems will be checked. As a reference, the national VWSS standards will be used.

#### C) Cost Efficiency of the project.

The actual costs per beneficiary will be calculated. As a further indication, a comparison with the national average should take place. If possible, overhead costs should be included.

#### D) Project Schedule

The actual output of water systems of the project will be compared with the output schedule which is needed to reach the project goal of serving 27 villages.

#### E) Villages not (yet) included in the project

Villages that are not (yet) included in the project activities will be visited, in order to obtain an impression of:

- the drinking water situation outside the area of project activities.
- the existing expectations and opinions concerning the project. Again, procedures, tasks and benefits will be taken into account. Next to that, the willingness to participate in the project will be a point of attention.

DRAFT PROPOSAL 18 October 1995  
FOR A MIDTERM EVALUATION OF THE LESOBENG SPRING PROTECTION PROJECT, CARRIED  
OUT BY ST. JAMES MISSION HOSPITAL AS PART OF ITS PRIMARY HEALTH CARE  
ACTIVITIES.

### 1. Background.

The Lesobeng Spring Protection Project (LSPP) was started in September 1993 with preparations. In March 1994, the first construction activities started. The LSPP is being carried out by St. James Mission Hospital Mantsonyane, in cooperation with the Village Water Supply Section (VWSS) of the Department of Home Affairs of the Government of Lesotho (GOL). The Donor is CEBEMO, the Dutch Catholic Co-financing Organisation.

The objective of the project is to improve the health of the people in the Lesobeng Valley through providing them, with their own assistance and management, with sufficient clean and accessible drinking water.

Initially, the project aimed at providing 60 villages in 3 years time with simple water points. When the project was being established, it was decided to follow the (national) construction standards of the GOL/VWSS, mainly to ensure the maintenance and thus sustainability of the constructed systems. This policy made the systems bigger, and more time and money consuming. The project goal had to be adjusted to serving 27 villages, in order to remain within the given budget and time. CEBEMO indicated to be more interested in an eventual second phase, rather than to raise the project budget in order to reach the goal of 60 villages within the three years. The revised proposal was approved of by the three involved parties in September 1994.

Project procedures largely reflect VWSS-policies. We refer to the revised project proposal for detailed information concerning the roles and task definitions of actors involved.

An evaluation of the project is regarded desirable by both CEBEMO and the LSPP management, to assess how the project has been carried out so far. It will also help CEBEMO and the project management to decide whether the LSPP should be continued, and if so, how it should be continued.

### 2. Objectives

The study will have two objectives which are equally valued.

The first objective is:

a) to assess how the project has been carried out so far.

The second objective is:

b) to make recommendations how the implementation of the project can be improved.

The project management prefers that the main focus of the evaluation will be on how the villagers of Lesobeng view and experience the project. As target group and participants, they are the ones who are benefitting from this project, and they are most directly involved in the implementation and day-to-day execution of the project



### 5. Time schedule and manpower indication (tentative)

It is hoped that the Consultant can carry out the evaluation at the end of November or beginning of December 1995.

The manpower and time needed for the evaluation is estimated per objective as follows:

- A) Three interviewers, of whom at least 1 is a woman and 1 is a man.  
One day per village = 5 days total.
- B) + D) One inspector could do this in 5 days.
- C) One person could take two days, with help from the Project Coordinator.
- E) Three interviewers could take 3 days.

Total field work including transport to and from Maseru could take place in 10 working days = 2 weeks.

Time needed for preparation should be indicated by the Consultant.

### 6. Budget

The external evaluator will work out a budget. This budget should be approved of by the sponsor before the final assignment of the evaluation to the external evaluator can take place.

### 7. Evaluation Report

The evaluation report is expected to be ready 4 weeks after finishing the field work. Six copies in the English language are expected. The copies are expected to be delivered at St. James Mission Hospital Mantsonyane, or at the Diocesan Office of the Anglican Church in Maseru.

The project management will send the report to CEBEMO and other parties involved.

### 8. Services rendered to the evaluator by the LSPP

- Availability of Project Assistent on request (and almost full time).
- Availability of Project Coordinator on request (but not permanently)
- Introduction of evaluation team in the villages by the project assistent, on request.
- (Simple) accommodation in Ha Lephoi Clicic during field work. including beds and use of kitchen.
- 1 trip from Mantsonyane to Ha Lephoi, and 1 trip return.
- All project books will be made available on request.
- A position paper will be issued by the project management prior to the evaluation.

These services need to be requested on forehand by the evaluator, so that the project staff can plan and prepare their activities.

#### 4. Methodology

An external evaluation is proposed by the project management.

An outside organisation carrying out this evaluation will ensure a more objective investigation and interpretation of findings. It will also add to the expertise and manpower, which is welcomed because the PHC-staff has no experience in such evaluations, and is already quite busy with its normal daily tasks.

Next to this, the project management thinks that the target group will feel more free to express its views and opinions when an independent agency carries out the evaluation.

Sechaba Consultants in Maseru will be asked to be the external evaluator. With their experience in carrying out evaluation and inventarisation studies, also in the field of Water Supply, the project management views them as a very suitable evaluator.

While the determination of the methods will be finally done by the external evaluator, an indication of methods is given in the following:

A) Opinions of the target group

Five villages will be selected for this investigation. These villages should differ in certain aspects which are important for the implementation: (e.g. distance from road, distance from Clinic, period of finishing, small or bigger water system, Mason involved).

In each village, several semi-structured interviews should be held with the chief, at least 3 men and 3 women separately. Next to that, a group discussion with the Village Water Committee should take place about their training and coordinating task. The Water Minders should be interviewed about their task.

B) Assessment of the quality of the water systems.

A field inspection of all constructed systems will take place, using a checklist.

C) Cost Efficiency of the project.

Desk study: Review of the project books.

D) Project Schedule

A field inspection should take place also at the systems which are under construction, to see how far they are. This should be combined with activities under B).

E) Villages not (yet) included in the project

Three villages should be randomly selected within the Lesobeng Valley. Semi-structured interviews should be held with at least 5 villagers in each village: the chief, 2 men and 2 women.

## 2.2 Involving Target Groups

The target groups should not simply be seen as providers of information. Different sub-groups of villagers and staff should be involved in setting the evaluation agenda. In other words they should help the team to decide what exactly is to be evaluated and how this should be done. In many cases it will be possible to involve these sub-group in evaluation activities. For example VWCs could be involved in collections up-to-date population counts (essential to calculate level of service goals) while masons and other technical staff could be involved in the inspection of completed systems.

## 2.3 Fields of Interest

The ToR propose three basic fields of interest: project procedures, tasks and division of tasks and results and benefits of the project. These broad categories may cover most of the critical issues to be evaluated in water supply projects. Given the comments made above regarding the involvement of target groups in setting the evaluation agenda it is evident that the 'fields of interest' must remain open from the outset and must be flexible enough to include issues of concern to the different stakeholders at any given moment of the evaluation.

While being open to the input of the local stakeholders it is useful to refer to the experience gathered internationally in the evaluation of water supply projects. This experience provides a useful reference point and may serve as a check list to ensure that certain critical universal issues are not overlooked. For this purpose reference will be made to the World Health Organisation's *Minimum Evaluation Procedures for Water and Sanitation Projects* and to World Bank's *Indicators of Progress in Water and Sanitation Programs*.

The international experience shows that sustainability is particularly important in water supply projects. In this regard the evaluation should consider how to develop indicators on: reliability of the systems, human capacity development, local institutional capacity, cost-sharing and collaboration among organizations.

On the sub-themes it is important to point out that measuring health impact *per se* is extremely complicated and will certainly be beyond the scope of this evaluation. However it will be possible to look a related health issues and proxy indicators.

## 2.4 Assessment of the Quality of the Water Systems

Sechaba Consultants have gained considerable experience in this regard through the national inspection of all water systems in the country. Indeed a number of the completed Lesobeng systems may have been inspected as part of this process. Nevertheless, I believe that all systems should be inspected again to ensure that the information is as up-to-date as possible. In this respect, as noted earlier, it is important to go beyond checking functioning, workmanship and durability to include level of service. The standards set by DRWS in this respect include: population per collection points, litres per capita per day and distance to collection points.

As part of the inspection it would be possible to collect sample of water from each system. The hospital would then be able to analyse these with the objective of checking for any contamination.

**Sechaba Consultants Comments on the Draft ToR  
for a Midterm Evaluation  
Lesobeng Spring Protection Project - St. James PHC**

**1. General Comments**

I have reviewed the ToR and, on the whole, I find them to be clear and a viable starting point for a detailed working plan. I am pleased to see that the “main focus of the evaluation will be on how the villagers of Lesobeng view and experience the project”. The challenge facing the evaluation team will be how to make this possible; how to ensure that as many people in as many different categories as possible are involved and given every opportunity to express themselves. At the same time it is important to look at the technical accomplishments ensuring that the evaluation considers not only building standards but also at the degree to which DRWS ‘level of service’ of goals have been reached.

**2. Detailed Comments**

**2.1 Identifying the Target Group**

The ToR quite rightly point out that “villagers of Lesobeng” is a rather unspecified group and proposes that distinction be made between local leaders, men and women as different sub-groups. The ToR make it clear that by “local leaders” they are referring only to traditional leaders (the chiefs). While they should be included I believe it is important to include other leaders. Specifically the elected members of Village Development Councils should be included as should Village Health Workers. Where schools have benefitted from the project head teachers or members of school boards or committees should be involved. It may also be wise to include in the leadership sub-group option leaders such as ministers and influential businessmen/women.

The sub-groups ‘men and women’ need to be carefully composed to ensure that they include different socio-economic categories. In particular it is important to include destitute and disadvantaged households, that may have found it difficult to contribute cash to the maintenance fund and/or labour to the construction process. It is not clear why the number of sub-group participants is limited to three. Semi-structured focus-groups are generally larger (8-12 participants) while participatory workshops can include many more (25-35). In my discussion of the methodology I discuss this in more detail.

I am pleased to note that the Village Water Committees are included as a sub-group. What is not clear to me is why we would only meet with the VWCs from five villages. During the evaluation of the Plenty Project invitations were sent to the VWCs of many more villages and a very successful one-day workshop was held with a group of about 30 participants from about 20 villages. I would propose that a similar participatory workshop be held in Lesobeng and that all villages with completed systems be invited to send representatives. If distance between these villages is a constraint then it may be necessary to organise more than one workshop.

A category that is often overlooked in evaluations is junior project staff. On the construction side this would include all the masons and any other technicians. They would have important insights into the efficiency of field operations. On the Primary Health Care side it is important that staff who have responsibility for health education be involved.

## Addendum to the Comments on the ToR

### Discussion with Helvetas/DRWS

On the 1st and 4th December discussions on the proposed study were held with Helvetas/DRWS in Maseru. The following comments were made and have been accepted as useful additions to the TOR.

**Overall** DRWS felt that the Evaluation might produce interesting information on the experience of construction rural water supply systems in remote parts of the country. However, it was noted that special attention should be given to checking the extent to which the projects experiences may or may not have been influenced by being part of a Primary Health Care Programme as, if this had influenced the outcome, it would not be possible to generalise the findings or conclude on their relevance to other remote areas.

In particular it was agreed that the Consultants would:

- a) to describe exactly how the Project strived to meet DRWS standards and discuss the consequences/constraints of these on Project implementation;
- b) ensure that local people were involved in setting the Workshop agendas;
- c) determine the exact approach used by Project regarding: how the community were approached; what commitments were made on each side; what preparations took place before construction; how labour and other contributions were managed and what support was given after construction.
- d) determine the extent to which the original project concept (spring protection with waterpoints) was developed; how much it was adjusted in view of DRWS comments and what the consequences were from a financial and organisational point of view.

At the request of Helvetas the following detailed work plan is presented:

Activity	Dates	Rural Water Consultant	Workshop Facilitator	Recorder	Account-ant	Tech. Inspector	Data Entry Clerk
Prepare Work plan and Instruments	4-6/12						
Review Plans with Project Management	8-9/12						
Conduct Workshops and Focus Group Discussions	11-22						
Review Project Accounts/Books Inputs and Outputs	27-29						
Inspect Systems	3-10						
Enter Data	16-23						
Analyse Data and Notes	3-10						
Report Writing	22-27						
Presentation of Findings	30-31						

## **2.5 Cost Efficiency of the Project**

In the same way that villagers and technical/PHC staff are to be involved we believe that the questions of the cost efficiency are best answered through the close involvement of Project Management. The costs of bringing-in an accountant to review the books of the project would increase the cost of the evaluation enormously. It is assumed that the Project's auditors and manager will be able to provide the necessary information and that the role of Sechaba Consultants would simply be to calculate the costs (per unit and to compare this with available data from other projects in the country).

## **2.6 Project Schedule**

While it is obviously important to assess the extent to which the project target is being met it will also be important to consider the criteria that have been used in selecting villages this will certainly be important to villagers)

## **2.7 Villages not yet served**

This component will have to be handled with care so as not to create any expectations that might not be met in the future.

## **3. Methodology**

I have already argued that both implementors and beneficiaries should be included in setting the agenda and in collecting necessary information. The role of Sechaba Consultants will be to act primarily as facilitators of a process which involves, as far as is practically possible, the local implementing institution and the villagers. Given this we would argue that the basic method should be participatory, involving as many people as possible.

I have already noted my concerns regarding limiting the number of people involved in each sub-group to the chief, three men and three women. I would propose that these should be expanded considerably. Where possible participatory workshops should be held to which men and women from all the project villages in the immediate area are invited. It should be noted that the methods used in these workshops are specifically designed to ensure that the views of sub-group are expressed. These workshops could then be supplemented with focus groups discussions with leaders (as defined earlier) and, where necessary, other sub-groups. The workshops would be low-cost. They would be held in school classrooms or churches with the only expenses being a simple lunch (cooked locally) for the participants and a small travel allowance for each participant where public transport had to be used.

**Annex 2**

**Budget from the 1990 CARE Proposal**





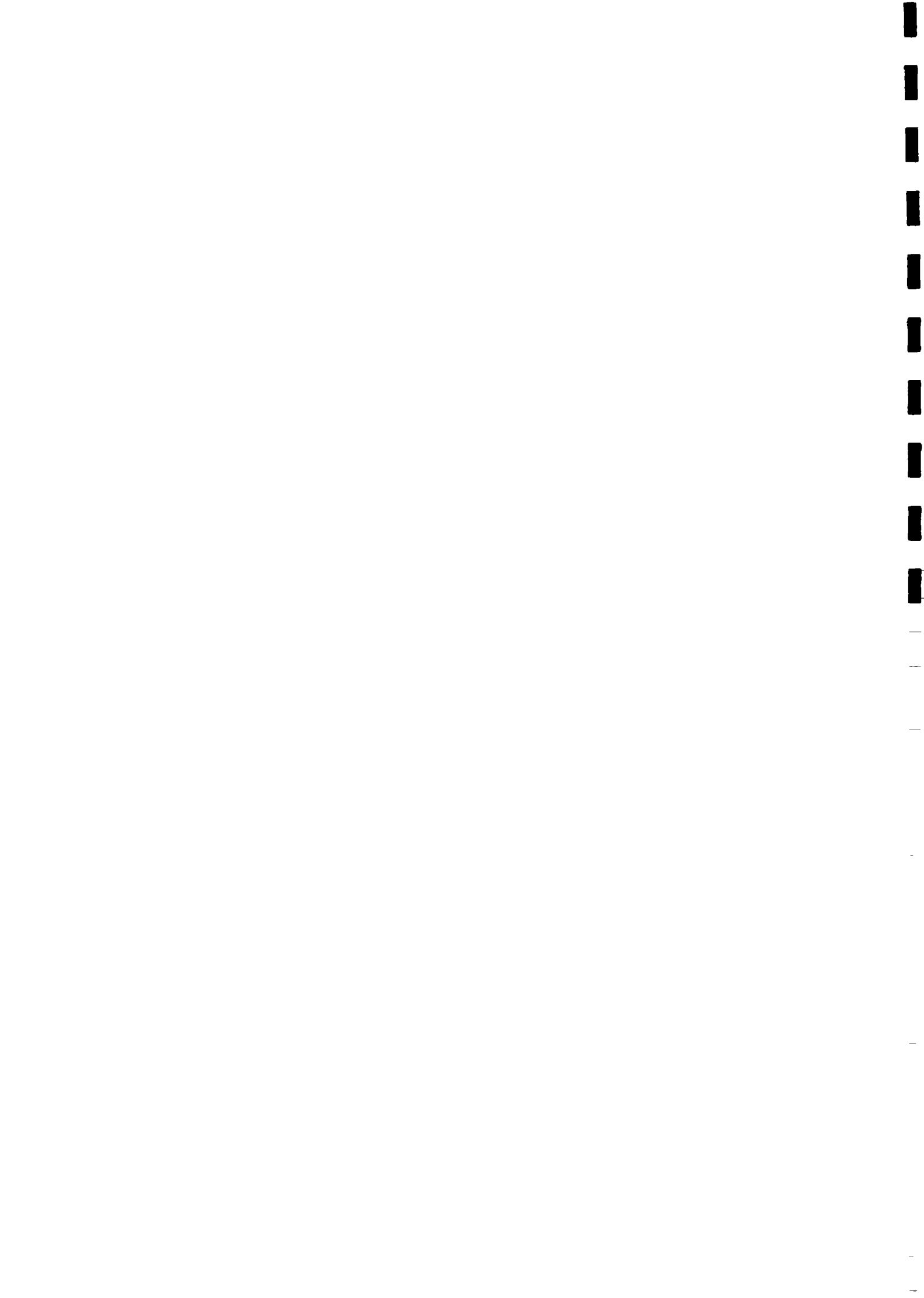
TABLE 1: LESOBENG PRIMARY HEALTH CARE PROGRAM: 5 YEAR FINANCIAL PLAN

ITEM	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
<b>A. SERVICE DELIVERY</b>						
1. W/S materials, equipment, skilled labour	\$35,000	\$50,000	\$50,000	\$65,000	\$20,000	\$220,000
2. Sanitation capitalization	\$10,000					\$10,000
3. Extension - materials	\$1,500	\$1,000	\$1,000	\$1,000	\$500	\$5,000
4. Extension - consultants	\$2,500	\$2,500				
5. Tools/equipment	\$8,000	\$4,000	\$4,000	\$4,000	\$2,000	\$22,000
SUBTOTAL	\$57,000	\$57,500	\$55,000	\$70,000	\$22,500	\$262,000
<b>B. PROJECT OPERATIONS</b>						
1. Vehicles	\$30,000		\$35,000			\$65,000
2. Animals	\$1,500					\$1,500
3. Infrastructure	\$30,000					\$30,000
4. Staff training	\$2,500	\$2,000	\$1,000	\$500		\$6,000
5. Fuel/delivery/maint/etc	\$15,000	\$16,050	\$17,174	\$18,376	\$19,662	\$86,261
SUBTOTAL	\$79,000	\$18,050	\$53,174	\$18,876	\$19,662	\$188,761
<b>C. PROJECT PERSONNEL</b>						
1. Project Manager/engineer	\$45,000	\$40,000	\$42,800	\$45,796	\$49,002	\$222,598
2. Technical supervisor	\$11,765	\$12,588	\$13,469	\$14,412	\$15,421	\$67,656
3. Health Assistant	\$11,765	\$12,588	\$13,469	\$14,412	\$15,421	\$67,656
4. Village Liaison Officer	\$11,765	\$12,588	\$13,469	\$14,412	\$15,421	\$67,656
5. Health Education Officer	\$11,765	\$12,588	\$13,469	\$14,412	\$15,421	\$67,656
SUBTOTAL	\$92,059	\$90,353	\$96,678	\$103,445	\$110,686	\$493,221

ITEM	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
<b>D. BASELINE SURVEY &amp; EVALUATION</b>						
1. Regional Technical Advisor	\$7,000		\$3,500		\$3,500	\$14,000
2. External Consultants			\$6,000		\$6,000	\$12,000
3. In-country expenses	\$2,000		\$1,000		\$1,000	\$4,000
<b>SUBTOTAL</b>	<b>\$9,000</b>	<b>\$0</b>	<b>\$10,500</b>	<b>\$0</b>	<b>\$10,500</b>	<b>\$30,000</b>
<b>E. ADMINISTRATION</b>						
1. Mission @ 20%	\$47,412	\$33,181	\$43,070	\$38,464	\$32,670	\$194,796
2. Int-personnel	\$20,000	\$20,000	\$21,400	\$22,898	\$24,501	\$108,799
<b>SUBTOTAL</b>	<b>\$67,412</b>	<b>\$53,181</b>	<b>\$64,470</b>	<b>\$61,362</b>	<b>\$57,170</b>	<b>\$303,595</b>
<b>PROJECT TOTALS</b>	<b>\$304,471</b>	<b>\$219,084</b>	<b>\$279,821</b>	<b>\$253,683</b>	<b>\$220,519</b>	<b>\$1,277,577</b>

**Annex 3**

**Minuted Agreement between  
St James and DRWS**





Ministry of Interior, Chieftainship Affairs and Rural Development

Village Water Supply Section

P.O. BOX 686

Maseru 100

Tel: (266) 312978

Telex 4233 LO Fax (266) 310199

Date: 27th May 1993.

Dr. Oosterhuis  
Medical Superintendent  
St. James' Mission Hospital  
P.O. Box 3, Mantsonyane 150  
Lesotho

Subject: **Lesobeng Valley Project**  
**Cooperation between St. James' Mission Hospital and**  
**Village Water Supply Section of Government of Lesotho**

Dear Sir,

This is to confirm that on the basis of our discussion in the meeting on 10th May 1993 (Minutes attached for your ready reference), we are in total agreement to cooperate with you to execute the above mentioned project.

We trust, both of us together will make the project successful which will be a great help to the communities of Lesobeng Valley in improving their quality of life.

Thank you.

K.W. Lesaoana  
Head of Section  
Village Water Supply

cc: NOE, ASM, REC, DE (TT)

## MINUTES OF MEETING

Place : VWSS, Headquarters, Maseru

Date : 10 May 1993

Present : K. W. Lesaoana, S.E.  
M. Rahman, NOE  
L. P. Chhetry, REC  
T. Sepamo, D.E.  
E. Oosterhuis, Med. Sup.

Ref : Lesobeng Valley Project.

### Minutes

The purpose of the meeting between Village Water Supply and Dr. E. Oosterhuis representing St. James' Mission Hospital is to define the level of cooperation between two parties for the construction of rural water supply scheme in Lesobeng Valley in Thaba Tseka District.

Dr. E. Oosterhuis submitted the project proposal and briefly outlined the history, aims of and objectives of the project. The St. James' Hospital is responsible for providing all of the curative and preventative health care for the Mantsonyane Health Service Area. However without potable water systems this would not be possible and hence requested VWSS to assist St. James' Hospital to build water systems in Lesobeng valley which falls under Mantsonyane HSA.

In 1988, an effort was made to start the project. The hospital and clinic staff in Ha Lephoi and Montmatre began communities mobilization. The communities organized and collected necessary funds and banked the money to build water systems. VWSS surveyed the area however due to the bad access roads construction could not be started.

### Summary of the project proposal.

Project name	:	Lesobeng Valley Project
Population to serve	:	12,000 in about 100 villages
Project duration	:	Three years
No. of systems	:	60
Donor	:	St. James' Mission / CIBIMO
Finance	:	M 921,000.00

VWSS asked Dr. E. Oosterhuis whether they would be able to manage and administer the project and further requested to elaborate on various issues such as personnel, transport, storage facilities, finance, etc. in order to ensure the successful implementation of the project in accordance with the VWSS standards.

Dr. E. Oosterhuis said, St. James' Hospital is supported by various donors from England, Germany etc. St. James' has already submitted a project proposal to CIBIMO, a donor organization in Holland, to finance the construction of water supply project in Lesobeng valley and the approval from CIBIMO is expected by the end of December 1993.

Regarding personnel, Dr. Oosterhuis said Eric v/d Giesen would be coordinating the project. Eric's background is of Irrigation Engineering. He has some experience in communities water supply. Eric will therefore not design the system, however he will assist in the capacity of the project coordinator for the management of the whole programme.

Dr. E. Oosterhuis further said St. James' has two Land Cruiser 4x4, 5 ton truck, two drivers, and motorbikes. He further said there are two PHC motivator, one will be deputized to VWSS.

VWSS emphasized to follow the standard approach and questioned whether the villages have applied for the water systems, whether they have water committees etc. District Engineer Thaba Tseka said he will find this information from DADO Thaba Tseka. St. James will also assist VWSS in this regard.

After discussions following responsibilities were agreed by both parties.

#### **Responsibilities of St. James' Mission Hospital**

1. Planning, organizing pitsos and mobilizing community.
2. Procure and transport all construction materials to the stores and project sites.
3. Provide storage facilities in Mantsonyane, Ha Lephoi and Montmatre
4. Provide transport to VWSS staff during survey and construction of the project
5. Provide other logistic support such as Accountant, Secretary, store keeper, maintenance personnel etc.
6. Provide health worker assist VWSS during survey, design and supervision of the project.
7. Employ 4 Masons and 1 Foreman.
8. Provide accommodation to VWSS staff.
8. Strictly follow VWSS policies and standards.
9. Manage the funds of the project and carry out implementation of the project.
10. Reporting to the donor and VWSS regarding the progress of the project.


#### **Responsibilities of VWSS**

1. Preliminary survey, design and preparation of project files for the water systems as per VWSS policies and standards.
2. Prepare work plan.
3. Assist project coordinator in the implementation of the project.
4. Assist in recruiting and training of Masons for the construction work.
5. Supervise the construction work.
6. Monthly progress report (D.E.).
7. Maintenance of the completed water supply systems.

Dr. E Oosterhuis requested a letter of support from VWSS so that he can forward it to CIBIMO.

During design and implementation of the project monthly meetings will be held between St. James Mission Hospital and VWSS at a place and date agreed by both the parties to discuss the progress of the project.

Minutes recorded by

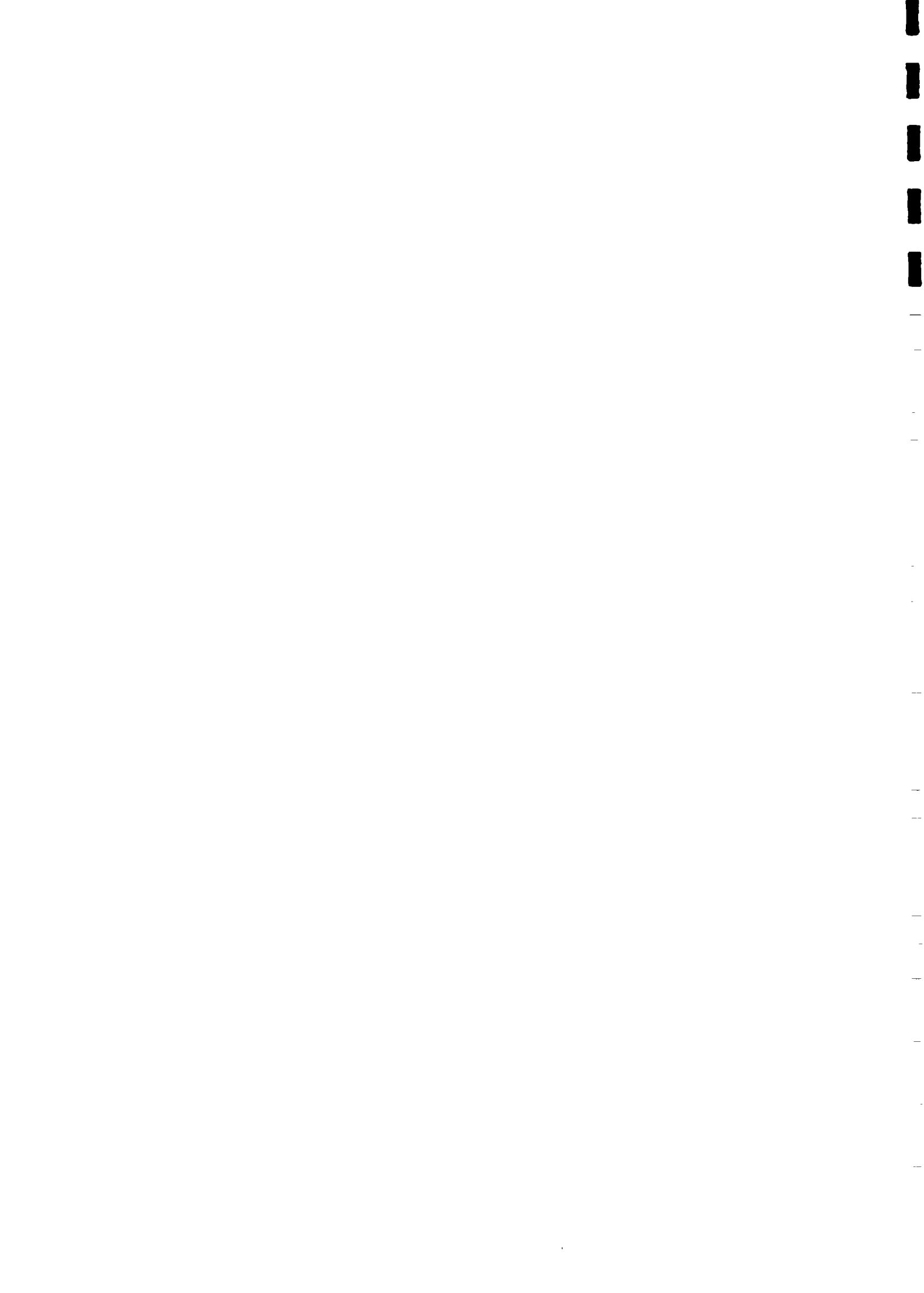


L.P. Chhetry  
Regional Engineer Center  
VWSS, Khubetsoana



**Annex 4**

**Photographs of Project Operations**

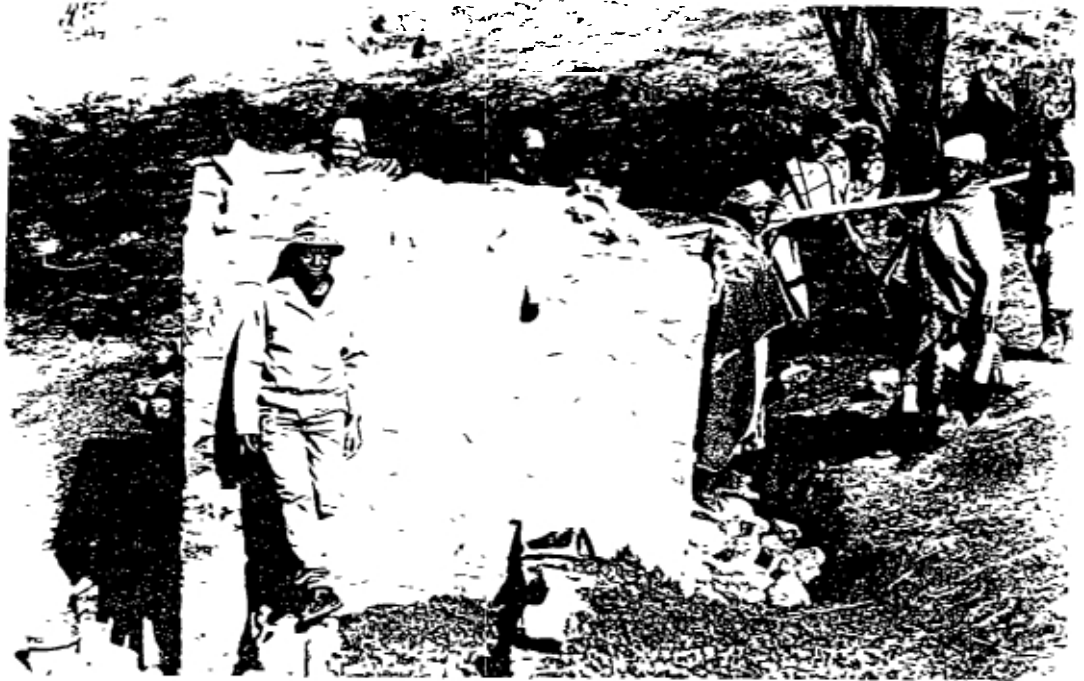




1. Villagers carrying pipes from the store at Ha Lephoi Clinic



2. Work on a waterpoint in progress.



3. A waterpoint nears completion



4. A nearly completed protected spring



5. Villagers breaking stone for concrete



6. The Rural Development Assistant with Project staff overlooking the Lesobeng Valley

