

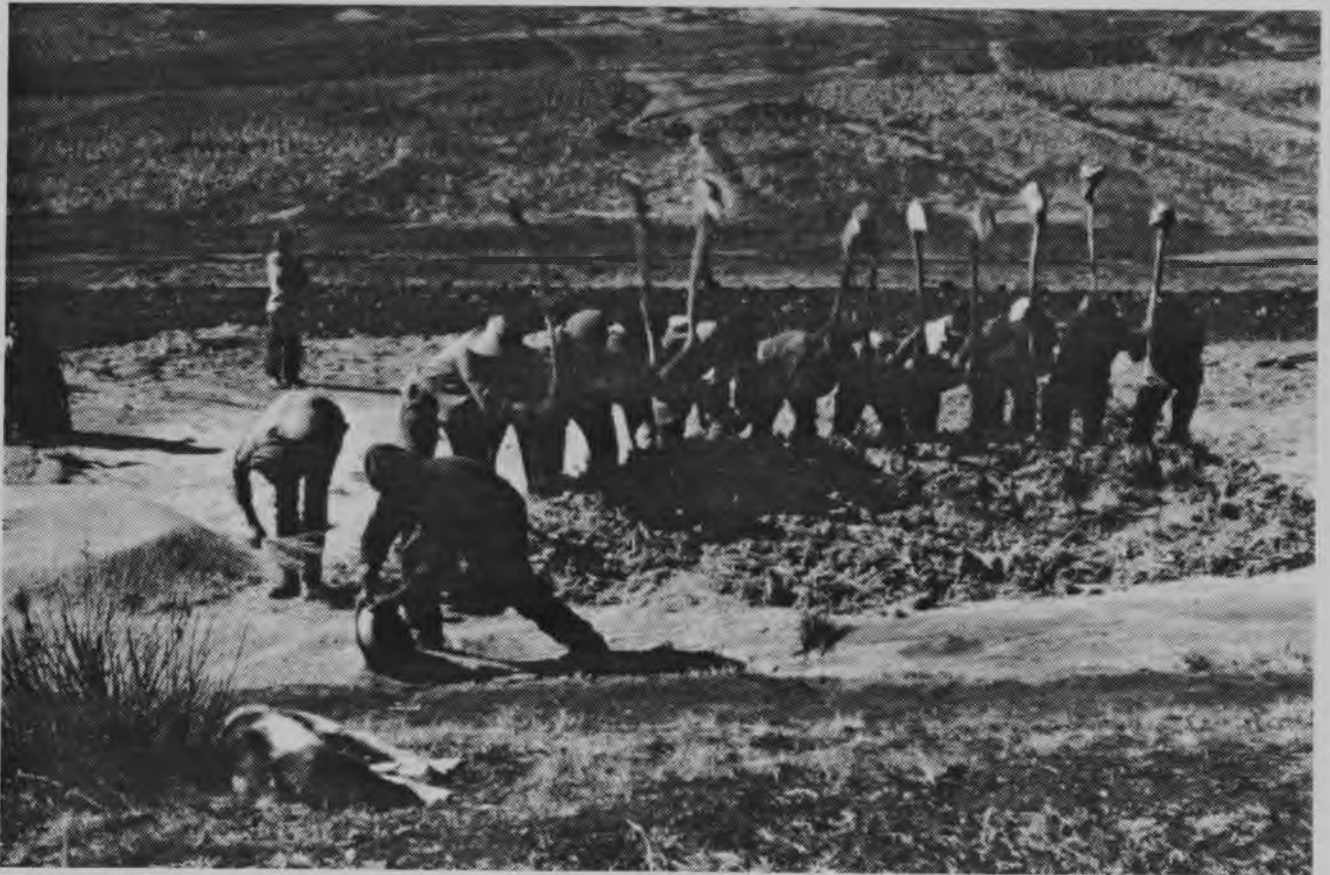
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A PLANNING SURVEY OF MAFETENG DISTRICT, LESOTHO

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URBAN AND REGIONAL PLANNING PROGRAMME DEPARTMENT OF
GEOGRAPHY, N.U.L. ROMA LESOTHO (RESEARCH REPORT VII)

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1984

PREFACE

This report is the seventh in a series of reports about research activities undertaken in the context of the Urban and Regional Planning Programme of the Department of Geography (URPP), National University of Lesotho.

This programme started in 1978 as part of an agreement of co-operation between the National University of Lesotho and the universities of Amsterdam and Utrecht in The Netherlands, with the aim to establish a specialized single major degree teaching and research programme in the field of regional planning.

The present volume summarizes the findings of field research in Mafeteng District by students from the National University of Lesotho and the University of Utrecht under supervision from URPP staff. The main purpose of the report is to present policy-relevant data in the field of regional development on one of Lesotho's ten districts. It should be seen as an inception report containing an inventory type of information with a view to identify development potentials and constraints.

Our thanks are due to all persons who have given help at various stages, specially to those students which seldomly complained about the often harsh winter conditions during the various fieldworks in Mafeteng District.

Roma and Utrecht,
Spring 1984

Henk Huisman
Jan Sterkenburg

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CHAPTER 1

INTRODUCTION

1.1. Objective of the Report

Nowadays, it is almost generally accepted that planning in developing countries at lower levels of scale than at the national has more potential to achieve development objectives, whether expressed in production and productivity increase, employment creation or improvement of living standards of the rural masses. It is argued here that the two main reasons responsible for this greater potential are of an environmental and socio-economic nature. In the first place, the various regions which constitute a country usually face rather different problems. This is a direct consequence of the region-specific environmental features with which people's activities are interwoven, but it is also due to aspects related to location and, inter alia, socio-economic patterns. Secondly, the imperative need to create the necessary pre-conditions and the framework for participation of the local population in plan formulation and plan implementation, puts a limit to the planning area's maximum size. The present-day organization of planning and plan implementation in Lesotho, like the other components of the administrative machinery, is still of a heavily centralized nature. However, the increasingly prominent desire to decentralize the administration, including the planning machinery, has resulted in some cautious first steps toward deconcentration, i.e. some administrative powers have been delegated to officers representing their line ministries in the "field". Presently, plans to further decentralize the administrative machinery in such a way that ultimately a situation of devolution, i.e. the delegation of a wide range of powers, including legislative powers, to subnational administrative units is reached, are being formulated.

Earlier research undertaken in the context of the Urban and Regional Planning Programme of the Department of Geography of the National University of Lesotho, has shown that the district is the best suitable spatial unit to realize decentralization efforts in planning and administration in this country. (Huisman and Sterkenburg, 1981) Obviously, as the rather unfortunate history of decentralization in a number of Sub Saharan African countries has shown, this process is accompanied by numerous and complex problems. Part of these problems relate to the existence of huge data-gaps, or sometimes even to the virtual absence of regional data, in many key fields of concern.

This lack of reliable data for planning purposes is also found in Lesotho. Since 1980 the Urban and Regional Planning Programme undertakes research at the district level. The first phase of the research exercise concentrated on the rural areas of one of Lesotho's ten districts, viz. Mafeteng District. The objective was twofold: an identification of homogeneous agricultural production areas and an analysis of the agricultural production structure of these areas in terms of characteristics of farm households, their resource position and the organization of farm operations. The results of this research have been laid down in a report published in 1982 (Huisman and Sterkenburg, 1982).

The second phase of the district research project focused on the inventory and analysis of the non-agricultural services supplied to the rural parts of the district and on the role of the service centres in providing these services. Next to the rural component now an urban component was introduced. The services provided from Mafeteng town, the only urban centre of the district, were analysed as to type and spatial extent in relation to the town's internal production structure. The results of this urban component of the second phase in the district oriented research project have been published recently (Huisman, 1983a).

The objective of the present report is to present a summary of the available information on Mafeteng District. In addition to the material obtained from published and unpublished reports, data have been collected through fieldwork in the district itself. This report has the character of an inception report and is the first attempt to present policy-relevant data, collected in the field as well as in the offices, on a district basis in Lesotho. It is expected that the report will be followed by more elaborate surveys to fill in the data-gap which is presently one of the crucial factors hampering decentralized development planning in Lesotho.

1.2. Structure of the Report

The present inception report on a planning study of Mafeteng District starts with an inventory of the district's natural and human resources, whereby the focus will be on aspects pertaining to agricultural potential and on the structure of the population. Special emphasis will be put on the relative incidence of the labour migration phenomenon and the consequences thereof for the socio-economic structure in both the urban and rural areas. The next chapter aims firstly at the description and analysis of the district's land use patterns, while secondly it will deal with the characteristics of the production units against the background of the relationship between labour migration and the resource position of the rural households. Both the present-day situation with regard to agricultural services in the district as well as the characteristics of planning activities carried out in the context of the former Basic Agricultural Services Project (Block V) will be dealt with in chapter 4, with the specific aim to assess which lessons can be learned from such planning and plan implementation activities at district level in Lesotho.

In chapter 5, attention will be paid to the various community services which are performed for the district population, viz. health,

education and rural water supply systems. Among other aspects, various problems and deficiencies of the services will be discussed. The last chapter addresses itself to Mafeteng town's role for the district economy and the district population, and will briefly assess the possibility to identify other service centres in the district. Lastly, some conclusions will be drawn on basis of the data collected, particularly with regard to regional planning activities in Lesotho.

CHAPTER 2

NATURAL AND HUMAN RESOURCES

The development potential of a region is heavily influenced by its natural and human resource position. Therefore, an inventory of the characteristics of the natural and human resources is an obvious first step in a planning survey. Data have been taken from secondary sources and are limited to those considered to be of reasonable accuracy.

2.1. Natural Resources

The concept of natural resources refers to a large number of often rather different aspects of a physical environment. Natural resources can be subdivided in those related to agricultural production activities, and those related to non-agricultural production. With regard to the latter type of resources, the Mafeteng District does not appear to have much potential. Apart from an attractive landscape in the eastern part, which may have some scope for tourism, and the relative abundance of house- and road building materials, no other valuable resources are known at present.

This does not apply to those natural resources with direct or indirect relationship to agricultural production. Unfortunately, data on these agro-ecological conditions have not yet been disaggregated by district for Lesotho. Although it is widely accepted for some time that the district is the best suitable unit for sub-national planning for most Third World countries, data collection exercises still continue to focus on other types of spatial units, such as catchment areas or altitude zones.

On a international scale three attempts have been made to provide a complete inventory of Lesotho's agro-ecological base. Two of these are of a rather general nature and divide the Mafeteng District in a Foothills and a Lowlands Zone (Ministry of Agriculture, 1963; Morojele, 1963; Kingdom of Lesotho, 1972). A third and more detailed inventory distinguishes between land province, land region and land system, which form an order of smaller spatial units described with increasing detail (Bawden and Carroll, 1968). The land system is the basic unit and consists of an area in which there is a high degree of homogeneity with regard to the pattern of topography or relief, soils and vegetation. These landsystems are grouped into six land regions on basis of similarities in lithology and morphogenesis, and finally these land regions are grouped into two land provinces. The classification is summarized below in table 1.

Table 1

Lesotho's Land Provinces, Land Regions and Land Systems

Land Province	*Land Region	=Land System
Mountain	*Higher Mountain	= 1 - 3
	*Lower Mountain Slopes	= 4 - 6
	*Lower Mountain Flats	= 7 - 9
	*Foothill	= 10 - 12
Lowland	*Lowland	= 13 - 24
	*Orange River	= 25 - 27

Source: Bawden and Carroll, 1968

In Mafeteng District, a wide variety of land systems is found (see Map 1). In the Western part, belonging to the Lowlands, extensive plains predominate. These plains are indicated as the Molteno Plains and the Southern Beaufort Plains.

Although these plains are in general rather flat, they are highly vulnerable to erosion. As most of the claypan soils of these systems have been brought under cultivation, conservation works and their maintenance play an important role to prevent loss of this rather valuable type of agricultural land. These plains alternate with an area of dolerite hills and plains with generally fertile but often stony clays. For much of the year the soil is dry, however, cultivation is taking place in those areas where the claylayers are not too shallow or too stony.

In the central part of the district which also forms part of the Lowlands, the Lowlands Escarpment and the Central Lowlands systems predominate. The first system comprises steep slopes with remnant steep sided plateaux with rather shallow and stony soils which allow for a limited amount of grazing. The Lowlands Escarpment is characterized by hilly, broken country with a considerable higher elevation than the plains in the western part of the district. The soils are in general moderately acid and most of the area has been brought under cultivation, with the exception of the koppies and scarps which are usually grazed.

In the eastern part of the district, the southern basaltic Foothills and the Compound Lower Slopes Systems predominate. The first of these comprises gentle north west facing slopes cut in basaltic rock. Although a considerable variation occurs, the soils are mostly used for crop farming and to a lesser extent for grazing.

The compound Lower Slopes as a landsystem is characterized by slopes and flat areas at about 2400 meters altitude with shallow soils. These lands are primarily used for grazing; occasionally some cultivation is found on the flats although yield levels are generally low due to shallow soils.

To present information on agricultural potential, Bawden and Carroll have combined the land system units with soil mapping units. They distinguish between four main categories:

- 1) land suitable for cultivation,
- 2) land suitable for grazing,
- 3) land suitable for both cultivation and grazing, and
- 4) land unsuitable for agriculture.

The land suitable for cultivation is further classified according to the possible intensity of agricultural operations. To this end, the categories semi-intensive and extensive cultivation are specified according to the length of the cropping cycle. The zone considered suitable for extensive operations only is characterized by a lower total annual precipitation, a relatively high degree of overgrazing and more serious erosion than the other zone. Although there is no difference in potential with respect to the crops to be grown, the area suitable for extensive operations has a lower percentage of soils fit for cultivation and therefore, long rotations and short cropping periods are necessary to prevent further degradation. It should be noted, however, that in various parts of Lesotho, due to the prevailing population pressure on land, these aspects are rather neglected in actual farming practice. The land suitable for grazing is subdivided in terms of the type of livestock to be held: A large stock zone suitable for both cattle and angora goats, and a so-called small-stock area for merino sheep only. The third main category is categorized according to again another criterion, viz. accessibility. The land area with poor access are, among others, the flat areas in the mountains, while the area with good access is found mainly in the foothills. The authors argue that in the poor access zone the agricultural potential is limited by both inferior communication and lack of marketing facilities, as well as by the harsh winter climate, which actually does not allow for the cultivation of maize and beans. On the other hand, they point out that the land with good access should be used for cash crop production, fodder crops and livestock. As Map 2 shows, in the Mafeteng District all of these sub-zones are represented, with the exception of the sub-zone land suitable for cultivation and grazing with poor access.

Table 2 presents data on the absolute and relative importance of the various agricultural potential zones in the Mafeteng District.

Table 2

Mafeteng District Agricultural Potential: Area of Zones in Hectares and As Percentage of Total Land Area of the District (Approx.)

Agricultural Potential	Subzone	Area in ha.	Area as % of total
Land suitable for Cultivation	Semi-Intensive	68,700	32.9
	Extensive	54,800	26.2
Land suitable for Grazing	Small Stock	800	0.4
	Large Stock	19,900	9.5
Land suitable for Cultivation & Grazing	Poor Access	-	-
	Good Access	24,900	11.9
Land Unsuitable for Agriculture	-	39,900	19.1
Total		209,000	100.0

Source: Derived from Bawden and Carroll: Map Agricultural Potential, 1967

2.2. Population

In 1976, the year in which Lesotho's most recent population census was held, Mafeteng District's de jure population amounted to 154,339 persons. Projections by the Lesotho Bureau of Statistics on basis of the population growth figures for the district in the period 1966 - 1976 show a total district population of 175,900 for the year 1981. (Kingdom of Lesotho, 1977, Vol. IV) This figure means that the population of Mafeteng District is expected to grow faster than that in any other district, including Maseru District. At first glance this appears to be a remarkable fact since Mafeteng District already has the highest overall density. However, the picture is reversed if density per land area used for arable agricultural production is taken into consideration. Then, Mafeteng scores lowest of all districts. According to the Bureau of Statistics at present not less than 41% of the district's land area is actually used for arable agricultural production, the highest percentage in the country. (Kingdom of Lesotho, 1977, Vol. IV) Table 3 below summarizes aforementioned aspects.

Table 3

Population Projections Lesotho and Mafeteng District

	1976	1981
Population Mafeteng District ('000)	154.3	175.9
Proportion of Lesotho Population	12,7%	12.9%
Population Density Overall Lesotho	40/km ²	45/km ²
Population Density Arable Land Lesotho	315/km ²	354/km ²
Population Density Arable Land Mafeteng D.	183/km ²	206/km ²
Proportion of Arable Land	(Lesotho	13%
	(Mafeteng District	41%

Source: Kingdom of Lesotho, 1977, Vol.IV

The relationship between population and land resources expressed in density per arable area is only a valuable indicator for the development potential if the district population is dependent on agriculture for its livelihood. However, data on population by residential status show that a substantial number of absentees are included in the jure population (table 4).

The great majority of these absentees are participating in the migratory wage labour system. Analysis of census data reveals that apparently migrant labour plays an equally vital role in the economy of the district than in the national economy. Not less than 13.3% of the total population is absent, which is roughly similar to the 12.5% for the country as a whole. If the incidence per sex group is considered, this similarity emerges again. Male absentees as percentage of the total number of males amount to 23.3% for the district and 22.0% for Lesotho. For females the percentages are 3.8 and 3.7 respectively, modest figures showing insignificant differences in relative importance. With regard to the males in what is generally accepted as the fully productive-age brackets of 20 - 50 years, it appears that the Mafeteng District is slightly below the national average with 51.6 against 53.7%.

The importance of labour migration has to be considered when mentioning the availability of more land per capita in the Mafeteng District than in other districts:

In Lesotho, density figures are of limited value without taking account of the quality of the resources, of their distribution over the population, and of the relative attractiveness of wage employment in the Republic of South Africa over self-employed farming in Lesotho in terms of income per working day (See also Huisman, 1983b)

Table 4

Total Population by Residential Status and Sex - Mafeteng District 1976

	Males	Females	Total
Present	57,662	76,102	133,764
Absent	17,598	2,997	20,575
Total	75,260	79,079	154,339
Mafeteng District Lesotho			
Sex Ratio Present Population		75.8	75.6
Absent Males as % Total Males 20-50		51.6	53.7

Source: Kingdom of Lesotho, 1977, Vol. IV

The high incidence of male labour to the Republic of South Africa also appears from the employment statistics. The employment status classification reveals the high incidence for wage employment, particularly of men. Unfortunately, data do not specify adequately for women since no less than 80% is grouped under "other". This category comprises a substantial number of schoolchildren since all Lesotho citizens over 10 years old are included. In addition, many self-employed persons in agriculture apparently have been incorrectly classified as "other", possibly in view of the limited time spent on agricultural activities during the enumeration period. The magnitude of the category "other" also explains the huge difference in the totals between the employment status and the type of industry classifications.

A further specification of wage employment clearly reveals the dominance of the South African labour market as a source of wage income. Furthermore, it shows how this market for the migrant labourer from Mafeteng is dominated by men.

Table 5

Employment Status by Sex - Mafeteng District 1976 (Lesotho Citizens over 10)

Employment Status	M	%	F	%	Total	%
Self-Employed	1735	73	656	27	2391	2.1
Employed for wages:						
All types	24040	88	3458	12	27498	24.2
Government	739	58	535	42	(1274)	(4.6)
Private Sector	6590	86	1093	14	(7683)	(27.9)
Outside Lesotho	16554	91	1704	9	(18258)	(66.4)
Not Stated	157	56	126	44	(283)	(0.1)
Unpaid Family Workers	8894	59	6300	41	15194	13.4
Unemployed/Seeking Work	1767	68	849	32	2616	2.3
Other	18546	28	47418	72	65964	58.0
Total	54982	48	58681	52	113663	100.0

Source: Kingdom of Lesotho, 1977, Vol. III

This male dominance of migrant labour becomes understandable from the figures on distribution of the labour force over the various types of industry (table 6). The mining industry is the dominant sector whereby more than three-quarters of those working in this type of activity are employed in the Republic of South Africa. These employment statistics indisputably demonstrate the position of the South African economy as a source of employment and income for the Mafeteng population. The next important type of activity consists of the agricultural sector. It should be pointed out here that its importance most probably is substantially higher if "activities not adequately defined" are included: To a large extent these activities are found in the agricultural sphere. In sharp contrast to mining, employment in agriculture is almost exclusively found in the district. The service sector, which includes a sizeable share of public services, constitutes the third largest sector in terms of employment. It comprises a relatively high percentage working outside Lesotho (19%), which to a large extent can be explained by the substantial number of domestic servants who work for South Africa's white population. The other categories do not play a significant part in the district economy if measured in terms of employment and/or source of income, as together they do not constitute more than some 10 - 15% of the economically active population.

Table 6

Economically Active Population by Industry and by Sex, Mafeteng District 1976

Type of Industry	M	F	Total	% in Total	% in R.S.A.
Agriculture	7605	3512	11117	23.2	1.5
Mining/Quarrying	19761	271	20032	41.9	78
Manufacturing	387	327	714	1.5	18
Electricity, Gas/Water	30	6	36	-	-
Construction	1156	18	1174	2.5	30
Wholesale/Retail & Hotels	447	632	1079	2.3	7
Transport/Storage & Communication	477	13	490	1.0	55
Financing/Insurance & Business Serv.	23	3	26	-	-
Community/Social & Personal Serv.	3738	3514	7252	15.2	19
Activities Not Adequately Defined	2895	3025	5920	12.4	9
Total	36519	11321	47840	100.0	39

Source: Kingdom of Lesotho, 1977, Vol. IV

The statistics with respect to the relative importance of the various economic sectors for the district economy sketch a picture of a dependent economy integrated into the wider South African framework. Migrant labourers earn the bulk of the cash income in the South African mines, while those remaining behind are working in agriculture mainly. Part of the wage labourers earnings are creamed off and are used for the supply of public services to the district population. This picture is confirmed by the data on occupational structure of the Mafeteng District population: Miners, farmers and service workers dominate the scene. Not less than eight out of ten economically active persons are found in these categories.

Table 7

Economically Active Population by Occupation and by Sex - Mafeteng District 1976

Type of Occupation	M	F	Total	% in total	% in R.S.A.
Professional/Techn W.	392	516	908	1.9	
Adm./Managerial W.	94	40	134	0.3	
Clerical and Related W.	227	84	311	0.7	
Sales Workers	464	620	1084	2.3	
Service Workers	3107	2890	5997	12.5	21
Workers in Agric.	7537	3506	11043	23.1	
Workers in Production	20172	603	20775	43.4	76
Transport & Tr.Equip- ment Workers	471	13	484	1.0	55
Construction Workers	1174	26	1200	2.5	29
Occ. Not adequately Defined	2881	3023	5904	12.3	
Total	36519	11321	47840	100.0	39

Source: Kingdom of Lesotho, 1977, Vol.IV

A discussion of population characteristics cannot be limited to individuals. The household forms the basic unit of consumption. Therefore, characteristics of households have to be identified, particularly with respect to income position and income sources, to obtain a clear idea of socio economic conditions. These basic units show a number of important differences according to their type of residential area. Rural households differentiate from urban households with respect to composition, type of employment and level of income, but not so much in terms of the number of persons. Therefore, it is useful to make a distinction between the rural and urban households in Mafeteng District, whereby the first group numerically takes the most prominent place. An important factor to explain the differences as mentioned between rural and urban households relates to the relative

incidence of labour migration. The Mafeteng Survey data reveal that 56% of the rural households have one or more migrant labourer vs. 25% of the households in the urban part of the district. Consequently, the proportion of households with female heads differs considerably as well between the areas.

If a definition is applied according to which all cases where the man/husband is a migrant labourer are also considered to be headed by a female, an application which can be justified in view of the decisions the wife has to take in such a situation about day-to-day matters, not less than 68% of all rural households are headed by females. For the urban households the proportion with female heads is approximately 35%.

Regarding the size of households, differences are less striking. The average rural household size is 4.9 members, against 4 members in the township. These figures, however, conceal the rather strong variation in the number of members. While more than two-thirds of all household in the rural areas have five members or less, some very large households with sometimes more than ten members exist as well and they thus determine to a large extent the average figure. Also in the urban area large households do exist: Some 25% of the households have 6 members or more. It should be noted, however, that a proportionally large number of such big units were found in the peripheral parts of Mafeteng town, a zone with a semi-rural environment. On the other hand, some 15% of the households in Mafeteng town are single member households. Among these units one finds often both widowed (or divorced) elderly females and younger persons, most of whom are attending secondary school in town.

Such single member households are rather rare in the rural areas. Here about 25% of all households comprise adults only - the remaining households have on average 2.6 dependents per unit. For the population of the rural areas as a whole the ratio adults dependents is 1.5. It should be noted here that, unlike the usual pattern in town, not all dependents simply are schoolchildren. In the rural areas of Lesotho and of Mafeteng a substantial number of children, especially boys, earn their upkeep by contributing labour to the households, often in the form of looking after livestock.

Differences in living and socio-economic conditions are also reflected in composition of households in the areas of the district. In the urban areas by far the largest households category consists of a nuclear or conjugal family, usually comprising a few children below fifteen years of age who are schooling. The picture in the rural areas is more complex, which justifies a more detailed analysis. Here the largest group consists of the nuclear family type with the husband participating in labour migration. Most of these migrants are below 50. Usually the households comprise a number of young children. And the average size of this type is slightly higher than the overall household size, viz. 5.2 persons. The group of households headed by a person over 50 can be subdivided into three subtypes. Firstly, there are the units whereby an older person or couple lives together with adult children among which there are one or more migrants, grandchildren and other relatives below the age of fifteen. Secondly there is a similar subgroup without such labour migrants. Thirdly, there are units consisting of older couples who live together, or individuals who stay on their own or live with a grown-up son and/or

daughter. These latter units are of a relatively limited size. Another group which can be observed in the rural parts of the district are the nuclear households with a male head whereby farming in the community is the main economic activity. This type of unit is usually slightly smaller in size than the average household. In contrast to this, there are the so-called complex households with on average some 8 members, but with a wide variation in the type of persons present. For some of the members this more extended type of unit offers security aspects, both in economic as well in social sense. As pointed out elsewhere (cf. Hinderink & Sterkenburg, 1975, p. 227), this situation should not be labelled simply family parasitism. The function of this type of consumption unit is to some extent related to the provision of a "buffer" between socially and economically vulnerable relatives and the society. Obviously, this more specifically applies to the young wives of migrant labourers who would otherwise have to live independently. The last group identified here refers to those households which are called "incomplete". Although a variety of these units can be observed, the usual incomplete unit comprises a female household head who lives alone or with relatives and/or friends. The incomplete household type often reflects the negative effects of the labour migrancy system. It is in this group of households where most of the destitution cases are to be found which are often a consequence of abandonment by the main income earner. Although traditionally Lesotho custom prescribes that in such cases of abandonment the brother to the former husband provided basic necessities to the remaining members, quite a number of desperately poor households are to be found in this group. Not surprisingly, this type of household is below the average household size. Table 8 presents an overview of the frequency in which the household types as described occur in the rural parts of Mafeteng District.

Types of Households in Rural Areas Mafeteng District

Type	% of total number	average no. persons
Nuclear with/without children with husband as migrant labourer	43	5.2
Older person(s) with adult child(ren) as migrant labourer(s) either/not grandschildren	13	6.0
Sub-total households with migrant labourers	56	5.4
Older person(s) with children/grandchildren either/not with dependents (no migrants labourers)	12	4.2
Older person(s) without dependents	4	1.5
Complex households	7	8.0
Nuclear with/without children and farming in community	8	4.3
Other (incomplete) households	13	2.7
Total (All households)	100	4.9

Source: Mafeteng District Rural Survey, 1980

The pattern as described varies to some extent between the two agro-ecological zones in the district. This variation also relates mainly with differences in the relative incidence of labour migration. As map 4 shows, data per enumeration area reveal strong variations between degree of participation in the migratory wage labour system. The sample survey in the rural areas of Mafeteng focused on four village areas, viz. two in the Lowlands and two in the Foothill zone of the district. Therefore, the number of sampled areas is too small to allow for detailed conclusions on basis of extrapolation regarding relative importance of various household types per zone. However, there are indications that variations exist with regard to the distribution pattern of resources and the relative frequency of various householdtypes between the villages areas. This latter aspect will be discussed in the section dealing with the characteristics of production units (3.2 page 22)

CHAPTER 3

THE AGRICULTURAL SECTOR

3.1. Land Use and Agricultural Production

While the existing information on the quality and magnitude of resource potential for agriculture is already limited, accurate data on actual land use per district are even harder to obtain. Besides a classification of agricultural potential in the country, Bawden and Carroll give some information on land under cultivation and land not used for agricultural production purposes. However, apart from the rather rough indication on the maps as a consequence of the - for this purpose - inappropriate scale of 1 : 250,000, the assessment is derived from aerial photography of 1952! Obviously, this information is completely outdated. Unfortunately, other sources are not available. Therefore, it is useful to indicate the phenomena which caused the changes in the land use pattern and made the 1952 information outdated.

During the past thirty years population growth and labour migration have had - and are still having - a tremendous influence on land use patterns. Population growth and the increasing population pressure on land have brought about that areas classified as unsuitable for agriculture by Bawden and Carroll have been brought under cultivation, that land primarily suitable for extensive cultivation has been increasingly used on an intensive basis, and that grazing land has been ploughed and used for crop cultivation in numerous areas. On the other hand, arable land has been increasingly affected by erosion and soil degradation, which in some situations meant that cultivation has become impossible. Furthermore, land use changes have been brought about by alterations in the labour migration system, both with respect to the number of people involved and the real monetary value of wages earned. Part of the money earned through labour migration is invested in cattle, leading to higher cattle densities. Government policy measures, partly as a reaction to processes of population increase and migration, have also influenced land use in various ways, among other things by setting-up large scale agricultural projects and by soil conservation activities such as establishing woodlots. Present day

land use patterns, therefore, are completely different from thirty years ago:

1. Population growth led to an expansion of the area under cultivation, often in less suitable areas;
2. Land is unwillingly left uncultivated because of labour shortages, both permanently as well as seasonally;
3. Land is intendedly left uncultivated because of labour shortages caused by preferences for alternative income sources. This is especially important since the middle of the 1970s when mine-wages went up by more than 300% in real terms over a period of only a few years. Observations suggest that this phenomenon particularly refers to the marginal fields, less suitable for agriculture, and with generally lower yields;
4. Cattle densities have gone up as a result of population growth and the raise in migration earnings, so that unsuitable areas are now used for grazing.

In addition, a distinction should be made between land planted and land harvested. The difference in acreage between these two categories is considerable and is chiefly caused by pro forma farming whereby landholders put in a marginal effort to maintain their title to land, and also by harvest failures. According to a recent LASA report, the analysis of causes of crop failure is complicated by lack of data, but is estimated to be in the order of 8 - 10% of the planted area per annum on average, going up to 15 - 20% in extreme years. In addition, there is a variation per crop, whereby peas, beans and maize are more vulnerable than wheat and sorghum. Furthermore, there is a variation per ecological zone: the Lowlands and the Orange River Valley suffer more from harvest failures than the Mountain zone (LASA, 1982).

The situation in Mafeteng District with respect to land suitability, land planted and land harvested, is hard to assess because of the incompleteness of the data. The Lesotho Bureau of Statistics estimates that presently 41% of the land area (or some 84,000 hectares) of Mafeteng District is arable (Kingdom of Lesotho, 1977, Vol. IV). This, however, is a deceptive figure because it is based upon the proportion of land which is presently under cultivation and not on the proportion of land which is suitable for arable agriculture without the threat to become waste land because of accelerated exhaustion and erosion. The BASP report gives a total of 91,000 hectares of arable land for Block V which roughly coincides with Mafeteng District (Winch, 1981). Annual Statistical Bulletins mention harvested areas of 26,500 hectares in 1978 and 36,775 hectares for 1980. This means that only 30-40% of the arable land was harvested. The planted area per crop is only known for 1976/77 and indicates a crop failure in the order of 15%. This percentage is high for Lesotho in normal years, but it may well be the correct order of magnitude for Mafeteng District. One of the main reasons for harvest failure is drought. The LASA report shows a higher occurrence for the Southern Lowlands, especially for maize. The Western part of Mafeteng District in particular has a high proportion of sandy soils and highly variable rainfall. Even if the BASP figure is on the high side, it appears that only half of the arable/suitable land is cultivated and that some 15% of the area planted suffers from crop failure.

Table 9

Crop Failures per Crop, Mafeteng District 1976

Crop	Planted Area ha.	Harvested Area ha.	Failure as % of Planted Area	
			Mafeteng District	Lesotho
Wheat	9067	8261	8.9	5.2
Maize	16607	13037	21.3	13.2
Sorghum	13636	12790	6.2	9.3
Beans	2838	2461	13.2	14.8
Peas	1552	1170	24.6	27.5
Total	43700	37719	13.7	11.5

Source: Bureau of Statistics, 1977.

Farm surveys for various parts of the district confirm this pattern. The BASP baseline survey report mentions for 1978/79 that more than one-third of all households in the Lowlands and Foothills had no crops on their fields (Winch, 1981, p. 133). The URPP survey of 1980 indicated that 16% of all fields were left fallow with a strong variation between villages (3-31%). The variation between the villages appeared to be related to household labour availability and the degree of co-operation between villagers to make a better use of the available resources at the village level (Huisman & Sterkenburg, 1982, p. 25).

The cropping pattern for the area harvested shows a strong domination of maize and sorghum. Although maize covers the largest area, its limited suitability for ecological conditions found in Mafeteng is shown by the lower share in total output. Sorghum is much more suitable to the ecological conditions in the district, but consumption preferences for maize and the higher labour requirements of sorghum caused a decrease in the acreage under the latter crop.

Table 10

Cropping pattern Mafeteng District 1980/81

Crop	Area harvested	% of Area harvested	Av.yield (kg/ha)	Total production (tonnes)	% of production Mafeteng District
Wheat	830	2.2	429	356	1.6
Peas	452	1.2	190	86	0.4
Maize	18191	49.5	547	9947	44.5
Sorghum	15244	41.5	741	11296	50.5
Beans	2058	5.6	332	684	3.0
Total	36775	100.0	-	22369	100.0

Source: Bureau of Statistics 1981.

Also the comparison of the yield levels in Mafeteng District with those for Lesotho as a whole indicates the generally lower so, levels in Mafeteng, with exception of sorghum. So, the suitability of sorghum for the district is demonstrated by the lower proportion of failures and the generally higher yield level. The substantial percentage under maize, in spite of higher risks and lower yield, must be explained by a clear preference for maize as staple food, and by its lower labour demand.

Table 11

Position Main Crops in National Context-Mafeteng District 1980

Crop	% of total area harvested	% of total production	yield level Lesotho Kg/ha.	yield level Mafeteng District Kg/ha.
Sorghum	25.4	23.6	795	741
Maize	14.6	9.4	847	547
Wheat	4.2	2.1	852	429
Beans	27.9	19.5	477	332
Peas	9.7	2.7	682	190
Total	17.0	-	-	-

Source: Bureau of Statistics 1981.

The dominant position of the two crops and maize also appears from the value of output data. However, the attractiveness of growing beans - both for reasons of nutrition and as a source of cash-should be mentioned. Furthermore, the sharp variation in yield levels over time should be underlined again. Farming is a risky activity under Lesotho's agro-ecological conditions, and farm households try to reduce their risks in various ways.

Table 12

Value of Crop Production at Average Annual Producer Prices - Mafeteng District 1980

Crop	Total production in tonnes	Average Price Kg.	Total value	% of Value
Sorghum	9947	0.14	1,392,580	39.9
Maize	11296	0.15	1,694,400	48.6
Wheat	684	0.45	307,800	8.8
Beans	356	0.18	64,080	1.8
Peas	86	0.36	30,960	0.9
Total	22369	-	3,489,820	100.0

Source: Bureau of Statistics 1981.

The district's livestock position tallies with the national average. With 12.5 - 13.0% of the national population, Mafeteng has a proportional share in the national herd.

Similarly, as in Lesotho, livestock resources are distributed unequally over the population. On basis of the URPP sample survey, the number of stockholding households is estimated at 20,000. Some 36% of all households did not have any livestock, and 40% had no cattle.

Table 13

Livestock Position - Mafeteng District 1980

Type of Livestock	Total Number	% of Lesotho Total	Average number per stockholding hh*)
Cattle	69,489	11.8	3.5
Sheep	142,298	12.2	7.1
Goats	93,731	12.2	4.7
Pigs	11,346	13.8	5.6

*) = Estimated at some 20,000 households.

Source: Bureau of Statistics, 1982.

Households may bring changes to their livestock position by selling stock to other households in the district, and to some extent to other districts. In addition, livestock is used for payment of bridewealth. According to Murray, the latter is an important levelling mechanism in Lesotho (Murray, 1981). District level figures on sales to other districts are not available. Some indication of income accruing to the district is given by data on slaughtered animals. From figures it appears that livestock is not a very important source of cash income at the district level. However, these official figures are of limited relevance to indicate accurately the position of livestock in the rural economy of the district. Firstly, they are limited to official slaughter only and do not take account of ceremonial slaughter. Secondly, data refer to certain moments of time and do not give any idea about changes over time. Various factors influence these changes: purchases from elsewhere, natural increase, quantity and quality of grazing land and the related nutrition situation, disease and natural deaths. In addition, the picture for the district as a whole conceals the intra-district changes, especially among individual households. An effective government policy towards the livestock sector cannot materialize without this additional information with respect to the role of livestock in the district economy.

Table 14

Slaughtered Livestock - Mafeteng District 1980

Type of Livestock	Number Sold	Value/Unit	Total Value	% of Total
Cattle	445	165.83	73,794	20.1
Sheep & Lambs	12205	23.88	291,445	79.3
Goats & Kids	47	32.37	1,521	0.4
Pigs	19	30.000	570	0.2
Total			367,330	100.0

Source: Bureau of Statistics, 1982.

The data on crops and livestock as given above, together with information on labour migration, allow for a calculation of the relative importance of the various income sources for the district economy, although only in very general terms. For example remittances and deferred pay for labour migrants from the Mafeteng District are assumed to be proportional to the percentage of migrants originating from the district, i.e. 13% of the national total.

Subsequently, the sum of these two is augmented arbitrarily with about 50% for cash and goods taken home as assumed by the ILO report (ILO, 1979, p. 52). In this way, it becomes clear that some threequarters of the district's "product" originates from labour migration. In addition, crop output is calculated on the basis of average annual production prices for 1980. Both prices and output fluctuate from year to year and, for that reason, agriculture is a less stable source for households compared with labour migration.

Table 15

Composition of the District Product (Main Source of Income) Rural Households Mafeteng District

Source of Income	Total Value ('000)	%	Number of households	Average per household acc. to type of household*
Arable agriculture	3,500	21.8	27,600	126.8
Livestock Sales/ Slaughter	350	2.2	20,000	17.5
Labour migration - Remittances**)	3,500			
- Deferred Pay	4,656			
- Cash/Goods***)	4,000			
Total labour migration	12,156	76.0	20,700	822.8
Grand Total	16,006	100.0	31,350	510.5

*) = Number of Farmhouseholds 27,600; Number Stockholding households estimate at 64% all; Number of Migrant households estimate at 65% all; % based on URPP sample survey.

***) = 13% of total remittances Lesotho; 13% of total deferred pay Lesotho.

***) = 50% of total remittances/deferred pay on basis ILO calculations.

The calculation only gives a general order of magnitude to make clear that what the main sources of income are. Various types of activities are excluded: House building paid by earnings from labour migration, road construction and maintenance for government departments, partly paid for by Food for Work Programmes, handicrafts and trade, and a wide range of services in the informal sphere. The total value is also related to the number of households involved as calculated in the table below.

Table 16

Types of Households in Mafeteng District - Estimated Total Number

Total population Mafeteng District	171,000
Total population Mafeteng Town	11,000
Total population rural areas	160,000
Average household size	4.85
Total rural households	33,000
Households outside agriculture (est. at 50%)	1,650
Total "Agricultural" households	31,350
Landless households (12%)	3,762
Farm households	27,600
Households without stock (36%)	11,286
Stockholding households	20,000
Households with labour migrants (65%)	20,700

Source: URPP Survey Mafeteng District 1980 & 1981; Bureau of Statistics, 1982.

3.2. Characteristics of Production Units

Households in the rural parts of Mafeteng District are to a large extent agricultural households in the sense that almost all of them have access to land, a large proportion own livestock, and most of them carry out agricultural activities. There are strong differences, however, between households with respect to their resource position, and consequently as to the relative importance of agriculture for household income. The discrepancy between the formal customary regulation that all Basotho married males are entitled to land, and the actual situation that the available land of deteriorating quality has to be subdivided over increasing numbers of persons qualifying for land, has been recognized for some time. The discrepancy leads - among other things - to an increase in the farmsize in terms of the average hectarage and the number of fields per household.

For Lesotho, the percentage of landless households was established at 16.5 in 1980 (LASA, 1982, p. 59). The URPP Survey for Mafeteng revealed a slightly lower proportion, viz. 12% - which is in the same

order of magnitude as observed in the BASP baseline survey for the southern ecological zone (12.1% for the Lowlands and 11.3% for the Foothills; Winch, 1981, p. 112). The URPP Survey found a sharp variation between individual villages, however, from 0 to 21%. The village with the absence of landless households shows the highest proportion of fields fallow and a rather high average farm size per household member. Expectedly, the proportion of landless households will sharply increase in the near future, due to population growth and the implementation of the 1979 Land Act (LASA, 1982, p. 59).

The average farm size for those households owning land lies in the order of 2.3 hectares with a slight variation between the villages. Only one of the Foothill villages had a lower average farm size (2 ha.).

Figures of the BASP survey show a much sharper difference between the two ecological zones: 2.5 ha. for the Lowlands against 1.6 ha. for the Foothills. So, there is a substantial difference between the two surveys as to the Foothills' average farmsize.

The land distribution is not related to the size of the households; if account is taken of the number of household members, inequality with regard to access to land remains considerable.

Table 17

Frequency Distribution Farm Size for Landholding Households
(Percentage of Households) - Mafeteng District

Frequency Distribution	Village 1 LL.	Village 2 LL.	Village 3 FH.	Village 4 FH.	All households
Farm size (ha)					
less than 1	26	27	13	40	27
1.1 - 2.0	31	41	39	29	34
2.1 - 4.0	24	14	32	20	23
more than 4	19	18	16	11	16
Average farm-size ha.	2.34	2.38	2.57	1.91	2.30
Farm size per household member (ha)					
more than 0.25	26	37	29	40	32
0.26 - 0.50	26	27	29	34	29
0.51 - 0.75	15	9	10.5	14	12
0.76 - 1.00	7	9	10.5	0	7
more than 1.00	26	18	21	12	20
Average Farm size per household member	0.70	0.46	0.79	0.37	0.47

Source: Mafeteng District Rural Survey 1980.

The farmsize differs according to the type of household. Landless households are chiefly found among younger couples with the husband absent for labour migration. Moreover, if these younger couples have access to land, their average farm size is substantially smaller than that for other land owning households. In contrast, those households headed by older males generally have larger farms.

Livestock shows a more skewed distribution over the households than land in Lesotho. Half of all rural households did not own any stock in 1980. Over 70% of the cattle and 90% of all sheep and goats are owned by 20% of the rural population (LASA, 1982, pp. 60-62). Also in Mafeteng District, livestock is concentrated in fewer hands than land. Firstly, the survey showed that 36% of the households did not have any stock, while 40% did not own any cattle. Secondly, the frequency distribution shows that the number of stock units differs sharply between the stockowning households. About two-thirds of these households have less than 5 stock units.

Table 18

Livestock Characteristics of Households, Mafeteng District

Livestock Data	Total
% of households without stock	36.1
% of households without cattle	40.0
% of landless households	12.0
% of households without land and stock	5.2
Average number of livestock/household*	4.9
Average number of cattle/household*	3.8
% households less than 2 stock units	32.0
% households 2.1 - 5.0 " "	30.0
% households 5.1 - 10.0 " "	27.0
% households more than 10.0 " "	10.0

Source: Mafeteng District Rural Survey, 1980.

* for livestock owning, resp. cattle owning households only.

From these figures it becomes clear that a number of households have land but no livestock, no draught animals in particular. A small proportion has neither land, nor livestock: about 5% in Mafeteng District against 16.5% for the country as a whole (URPP Survey, 1980; LASA, 1982, p. 59) Finally, one finds households with livestock, but without land. Their livestock includes draught animals, which are sometimes used to perform services for landholding households against payment in cash or kind. The distribution of livestock according to type of household shows a concentration of stock among the households headed by older persons. Among the households with younger heads there is no significant difference between those with the husband absent for labour migration and those with the husband active as farmer in the reference community.

In view of the short growing season and the irregular distribution of rain, the command over the agricultural implement is very important. Apart from draught animals, this particularly applies to a plough and a planter because the timing of ploughing and planting is crucial for preventing failures. Those households, which have their own plough in combination with their own draught animals are in a better position to carry out ploughing at the right time. Households not owning a plough, are dependent on arrangements with other households, or have to apply for government tractor services. The planter also has the advantage of a regular distribution of the seed, which produces a better crop stand than alternative planting methods. The URPP Survey in Mafeteng District showed that almost half of all households own a plough and that one in every five households has a planter. There did not appear to be a clear overall higher incidence of plough and draught animals among the households with larger farms. Although the proportion was lowest in the smallest farm size category, the difference with the highest farm size categories was rather small. Moreover, the combination of plough and draught animals was also found among the landless households.

Table 19

Distribution of ploughs and draught animals according to farm size Mafeteng District, 1980

Farm Size	% of farms with plough & draught animals	Average farm size (ha.)
less than 1 ha.	31	0.56
1.1 - 2.0 ha.	44	1.53
2.1 - 4.0 ha.	42	2.75
more than 4.0 ha.	70	5.63
Total average	44	

Source: Mafeteng District Rural Survey, 1980.

Various views have been aired about the relationship between labour migration and the resource position of rural households. Initially, the higher incidence of labour migration among poorer households was considered a major factor for the assumed uniform income distribution in Lesotho (World Bank, 1978). Subsequent studies based on thorough fieldwork have sketched a completely different picture. Van der Wiel has shown that labour migration is the main household income determinant for most rural households. The poorer households are those without migrants, almost irrespective of the productive assets in the form of land and livestock (Van der Wiel, 1977). Spiegel and Murray have pointed out the differential distribution of landholding and migrant labour at different stages in the household development cycle (Spiegel, 1980; Murray, 1981). They emphasize the independency between migration and farming. Migrants use their remittances to invest in livestock and implements, and to improve their relations in order to acquire land.

The distribution of farm resources according to type of household in Mafeteng District tends to confirm these conclusions. Migrant households show a higher percentage of landlessness and generally have smaller farms, particularly if the husband of the female head is the migrant. Livestock resources are more related to the age of the head of households than to labour migration. Nuclear households with a migrant labourer do not have less stock than other nuclear households. The larger size households, often with migrant labourers and usually headed by older persons, have larger farms and more livestock. These older heads often do not participate in labour migration (anymore), but act as manager of the household's land- and labour resources. The plough-cattle combination does not increase significantly with farm size. Also landless households and those with small farms (less than 1 ha.) own implements and cattle and they use these resources to perform activities for other households.

If looked at the situation from the angle of farm size, the households with more than average land resources (more than 2.3 ha.) show some specific characteristics. These households are much more often without migrants, have a considerably lower proportion of female heads, and a sharply higher proportion without youngsters/dependents. Moreover, the larger farms were generally found among households with older heads. These households also had a lower percentage without stock - cattle in particular, a more than average ownership of ploughs' and yet a higher incidence of sharecropping on their fields.

The agricultural activities of households in the Mafeteng District are mainly directed towards food production for the farm households. This appears from the cropping pattern and the low proportion of households marketing produce.

Table 20

Cropping Pattern and Produce Marketing - Mafeteng District 1980

Variable	Total
% of households growing:	
- maize	72
- sorghum	58
- wheat	12
- beans/peas	17
% of households marketing produce	6

Source: URPP Sample Survey Mafeteng District, 1980.

In addition, very few farmers use fertilizer (13%), often in relatively small quantities, and some of them mainly because they entered into a sharecropping arrangement with the Ministry of Agriculture. The average size of the farms using fertilizers was considerably above the average for all farms, viz. 3.1 against 2.3 ha.

The differences in resources position between households and the demand for food in view of the size and composition of the household is attempted to be bridged at the level of the community through a variety of arrangements. In the Mafeteng District, the following arrangements were observed: Sharecropping (seahlolo) with various combinations of land, labour and implements inputs; sharecropping arrangements with the Ministry of Agriculture (Food Self Sufficiency Programme) in which the farmer contributes his land and some labour for weeding against 25% of the harvest; hiring of tractor or ox-plough services against payment in cash; labour exchange arrangements (kopano) among a number of co-villagers on each others fields while each land owner remains entitled to his whole harvest; working parties (letsema) for specific activities whereby participants are remunerated in locally brewed beer; and co-operation in harvesting against a share of the harvest.

The advantages of the various arrangements are obvious: the cultivations of a larger proportion of land; the more effective use of draught animals and implements; and the possibility for landless households to obtain at least part of their food requirements. The wide variety of arrangements allows households to enter into the most suitable one under the circumstances. In fact, households often have separate arrangements for individual fields. In the Mafeteng District, no less than 60% of the households was involved in any of these arrangements; the village with the lowest degree of participation showed the highest proportion of fallow/uncultivated fields. In spite of these arrangements with respect to a more effective use of resources, the agricultural system has clear disadvantages. The most striking negative factors are the low yield levels and the detrimental effect on the conservation of natural resources.

The low yields in Mafeteng District are related to the use of land which is less suitable for agriculture; the cultivation of crop varieties which are ill-adapted to the ecological conditions; the low level of inputs, especially fertilizers; and the inadequacies in crop husbandry, the timing of ploughing and planting and the quality of weeding in particular. It appeared to be impossible to obtain reliable yield figures in the context of a single visit survey as undertaken in Mafeteng District.

Therefore, only some general conclusions can be drawn:

- a high proportion of the households experience crop failure on at least one of their fields;
- yield levels varied strongly between households;
- the highest crop yields reported were found among the households using fertilizer; and
- the larger farms generally experienced higher yield levels because of more intensive agricultural operations, a more frequent use of fertilizer, and obviously, the higher degree of dependence on agriculture.

Consequently, hardly any household achieved yield and production levels to meet the staple food needs. If applying the BASP yield levels for the southern part of Lesotho to Mafeteng District, households produce on average only half of their carbohydrate requirements. For a substantial proportion of households purchases by far exceed half of the needed quantity.

CHAPTER 4

AGRICULTURAL SERVICES

4.1. Present Situation

For Mafeteng District, no large-scale area-based projects have been undertaken. Assistance to farmers are provided through regular government channels. In essence, this means the posting of extension officers in Mafeteng town and parts of the district; and the organization of input supply through the Finance and Marketing Co-operative Union of Lesotho, also known as Co-op Lesotho. In addition, credit facilities are available through commercial banks, credit unions, thrift societies and farmers associations, apart from informal arrangements among villagers. Furthermore, marketing facilities are offered through the Produce Marketing Corporation (PMC).

However, these facilities are of a marginal nature and have very little impact on agricultural production. There are only 28 extension officers for the whole district, i.e. 1 per 1000 farm households. They have to carry out their duties without adequate input supply organization available to the farmers. Co-op Lesotho operates a mere three stores in Thabana Morena, Mpalipali and Matelile, through which inputs are supplied apart from facilities offered by private traders. The bleak picture is confirmed by the URPP farm survey results. No more than three households out of 155 reported to have been visited by extension officers during the six months preceding the survey. Also, the predominant subsistence character of agricultural activities was revealed. Only 13% of the farmers reported to have applied fertilizer, often in relatively small quantities and by some of them mainly because they entered into a special share-cropping arrangement with the Ministry of Agriculture. In addition, only 6% of the households sold any crops through formal marketing channels.

This low incidence of agricultural commercialization was not related to the absence of credit facilities which, at the time of the survey, were offered to 2 farmers associations by the Lesotho Agricultural Development Bank (LADB), reaching a total of 82 with

together 134 hectares of arable land. They obtained a sum of M. 15,400 of seasonal credit or M. 200 per farmer, none of which had been repaid at the end of the season. In addition, the LADB provided loans to 9 co-operatives for the purchase of tractors, a poultry unit, a piggery, a mill and the establishment of vegetables and fruit farms.

The two main organizations in the field of input supply and marketing, and the provision of credit facilities, viz. Co-op Lesotho and LADB, are further strengthened by means of a Marketing and Credit Project which is financially supported through the International Fund for Agricultural Development. At the time of writing this report, details about this project were not yet available. It is clear that the success of such a project is determined by the degree to which it is geared towards actual farming conditions in the district. Past experiences with agrosupport services in the district, notably with the much publicised Basic Agricultural Services Programme (BASP) amply show the advantages of this type of project for the government bureaucracy rather than for the rural population.

4.2. The Basic Agricultural Services Project in Mafeteng District

After the failure of the large-scale area-based projects, the supply of a package of related services in order to stimulate farmers to increase the production of major food crops became the essential element of Lesotho's agricultural policy. This new approach, labelled the Basic Agricultural Services Programme (BASP), was directed to the whole of the Lowlands and the Foothills, and had to be implemented through the existing government organizations. The programme was planned to start in 1978.

The differences in intentions with the area-based projects are clear. No detailed and costly interventions in land use and existing farm structure for a limited number of farms, but a supply of basic services to large numbers of producers in the main crop producing areas. These services comprised extension, input supply, credit, marketing and rural roads. In addition, attention would be paid to the improvement of maps through new aerial photography, and to the increase in efficiency of farm implements through the services of mobile farm implements repair teams. How did this approach work out for the Mafeteng District?

The effectiveness of the extension service had to be raised by an increase in the number of extension workers, an improvement of the system of supervision and a change in the methodology. The ideal farmer-extension worker ratio was set at one crop assistant to 600 farmers. Supervision was to be improved by the posting of a field supervisor for 10 crop assistants (CA), by setting a fixed work schedule and by making surprise visits to check the activities of the crop assistants. The new methodology implied a combination of a training programme of the crop assistants coupled with visits to farmers. Important criterion for selecting individual farmers for visits was their expected role as intermediaries to other farmers in modernizing agriculture. To this end, trial plots would be established on their farms. In the Mafeteng District, the plans did not work out

well. There was a poor participation in the training programme; insufficient staff came available, so that in only 18 out of the 28 designed Extension Areas officers were actually posted by 1982, and the number of farmers per CA was about double the planned ratio. Figures on the numbers of contact farmers are unknown. The trial plots hardly got off the ground. In 1980/81, only nine were laid out and the next year it was discontinued altogether, reportedly because of the lack of clear instructions and of transport (P. Huisman, 1982).

Input supply to farmers was channeled through Co-op Lesotho, the Produce Marketing Corporation (PMC) and private traders prior to BASP. Among these, Co-op Lesotho was the main supplier, which provided through its network of depots an estimated 70% of all inputs. (World Bank, 1981 Vol. II p. 104).

BASP advocated a combined approach to input supply and marketing. The PMC was to perform this function, but it could appoint private traders as its agents. Under the BASP, the construction of a network of trading posts was planned with the ultimate aim of having one post per five kilometer radius, obviously on the assumption that the main bottleneck to the use of inputs and the sale of produce was the distance to be covered by the farmer to make use of these services. For the Mafeteng District, the initial plan comprised the construction of 29 stores in addition to the 6 already existing ones belonging to private traders. In 1979, the number was reduced to 11, and construction was completed by the end of 1980. Only 5 actually functioned because of lack of staff and even these were closed down within half a year because of financial and organizational problems the PMC had run into. Input supply was transferred to Co-op Lesotho again, but this organization took over only 3 of the 11 stores.

Credit facilities of three types were planned under BASP: seasonal credit facilities for fertilizer; HYV seed and insecticides/pesticides; medium-term credit for implements; and longterm credit for tractors and other large-scale assistance such as poultry units, piggeries and mills. BASP gave the responsibility for middle- and long-term credit to the Lesotho Agricultural Development Bank (LADB), and limited itself to seasonal credit. The supply of credit was characterized by a complex organizational structure and detailed regulations, so that chiefly the better-off households qualified for it. In Mafeteng District, the actual number of farmers involved was highly limited, repayment recatch was poor, and only small parts of the district were served due to lack of personnel.

The BASP also assumed that a large proportion of Basotho farmers were unable to use agro-support services because of an inadequate road network. Therefore, the improvement of the feeder road system was considered an important precondition for making available the required services. For the Mafeteng District, the initial plan came to the improvement of 296 kms of roads over the period 1979/1982. In 1979 plans were revised, which increased costs and, therefore, reduced the length of the stretches. Ultimately, the target for Mafeteng District was brought down to a mere 27 kms.

The costs summary of BASP in Mafeteng District showed a strong emphasis on the establishment of a supply distribution and marketing network and on road construction and improvement. In other words, there was a heavy accent on physical infrastructure (75% of total planned expenditure). In retrospect, it is clear that very few operations of BASP have been achieved. The programme suffered from grand design, and targets had to be reduced from the very beginning of actual activities. The major cause of the lack of success, however, is that the programme was based on wrong assumptions. BASP assumed that farmers did not produce at the optimal level because services were not available. It did, however, not take account of specific conditions under which the agricultural sector operates in Lesotho. Its close relationship with labour migration as the main source of income for the vast majority of rural households was not acknowledged. Research has made abundantly clear that in general agriculture is less important as a major source of income compared to labour migration; that its relative importance varies for individual households; and that considerable differences exist in resource position between rural households. In sum, the programme was not tailored to the actual conditions in rural Lesotho, but because of inappropriate timing rather than lack of attention for these conditions.

A Baseline Survey had been included as one of the main activities of the Monitoring and Evaluation component of the programme. It aimed to provide basic data on farm structure and on production techniques, constraints and input- output levels (Winch, 1981).

The main policy recommendations of the survey report for the type of area in which the Mafeteng District is located were:

1. The extension service should direct its efforts to female farmers in view of the high incidence of labour migration and the consequent absence of males;
2. The unequal distribution of resources over households results in a shortage of draught power and the consequent late performance of farming operations for a number of households. Therefore, government policy should be directed towards the improvement of the equipment and draught power situation by making available ox- drawn equipment and by encouraging farmers to rear and share healthy animals;
3. The generally higher output levels of farms with a diversified cropping pattern and the drier conditions in the southern part of the country shows the necessity of adaptive research focussed on the potential for crops such as sorghum, millet, groundnut, chick peas and fodder in order to arrive at a more suitable cropping pattern.
4. The more suitable cropping pattern and the correct and timely execution of farm operations, ploughing in particular, in combination with the use of proper inputs would result in faster initial growth and in turn would lead to a reduction of risks in farming.

The results of the survey were hardly used because implementation received priority over appropriate planning. In addition, survey results became available rather late, mainly because of the emphasis on time-consuming questionnaire research rather than on rapid analytical studies about the dynamic aspects of farming in its wider socio-economic context.

CHAPTER 5

COMMUNITY SERVICES

In this section on community services in Mafeteng District attention will be paid to health and education facilities and to rural water supplies. For each of these elements, the organizational structure, the available facilities, the main problems and deficiencies and the spatial pattern in relation to population distribution will be dealt with.

5.1. Health

Formally, the health facilities in Lesotho fit into a four-tier system. At the apex of the system the Queen Elizabeth II hospital in Maseru is expected to function as the national referral hospital. At the district level, the district hospitals form the second-tier, but in actual practice their level of facilities does not differ fundamentally from the Maseru hospital and complex cases are sometimes preferably referred to hospitals in the Republic of South Africa. The Lesotho government intends to upgrade the Queen Elizabeth II hospital in the course of the Third Five-Year Plan period. Under the district hospitals a varying number of clinics is placed, whereby clinics have less facilities and personnel qualified at a lower level. Finally, the base of the health system is formed by the Village Health Workers (VHW). The latter implies a recent change in health policy with more emphasis on primary health care. The VHW is a villager with basic training in curative and environmental health, and in nutrition, who operates in close co-operation with a nearby clinic. By introduction of the primary health care system, clinics will continue to be coupled to hospitals, but not necessarily within district boundaries. Taking account of the catchment areas of existing hospitals, so-called Health Service Areas will be identified and demarcated.

The present health system in Mafeteng District comprises the district hospital in Mafeteng town, a total of 10 clinics irregularly distributed over the district, and some 141 VHWs with an additional 26 under training. The district hospital employs 3 medical doctors, 16 qualified nurses and 55 other staff in various supporting services. It

has good medical facilities, including a laboratory and an operation theatre with X-ray equipment. Furthermore, the hospital has a number of internal clinics, among others for the treatment of tuberculosis patients, for family planning activities often coupled with pre- and postnatal care, and for toddlers.

Large numbers of patients make use of the hospital services. In 1980 the average number of patients attended per workday amounted to 145, leaving aside the patients visiting the clinics served by hospital staff in the direct surroundings of the town.

The clinics in the rural areas all have a number of qualified staff(nurses), but the number varies per clinic. The number of patients treated per clinic shows sharp differences and is not related to the staff position. Therefore, the patient-staff ratio is also strongly different. It ranges from 500 to 2700 per nurse per annum or - assuming 250 working days per year - between 2 and 11 per day on average. The differences in number of patients should be explained in terms of accessibility and reputation/available facilities. The figures indicate that, generally, staff is available in sufficient numbers. However, roughly half of all nurses is insufficiently qualified.

Table 21

Size of Staff and Number of Patients Clinics - Mafeteng District

Name of clinic	number total	nurses number qualified	number other staff	number patients per annum	patients nurse ratio
Motsekuoa	7	1	2	11,036	1577
Tsa Kholo	4	3	3	7,500	1875
Matelile	5	3	6	6,600	1332
Malealea	2	2	2	5,400	2700
Thabana Morena	2	1	1	5,066	2533
Mt.Tabor	4	4	7	4,864	1216
Emmaus	6	3	0	3,690	615
Samarita	7	2	3	3,330	476
Kolo	3	2	2	2,628	893
Masemouse	2	2	2	no data	no data
Total	42	23	28	50,114	1193

Source: URPP Survey 1981

The facilities available in the clinics show general presence of piped water and a high proportion with electricity. However, most clinics lack simple laboratory facilities and half of them have no separate delivery/maternity room. In addition, in most of the clinics only one or two beds are found. Therefore, most clinics are in fact dispensary-cum-maternities. There is scope for some expansion of facilities, particularly for those clinics at some distance of the district hospital.

Table 22

Medical and Other Facilities Clinics - Mafeteng District 1981

Name Clinic	Number Beds	Separate Del/Mat. Room	Laboratory	Electricity	Piped H ₂ O	Mobile Clinic	Family Planning Unit
Motsekuoa	-	-	-	x	x	x	-
Tsa Kholo	4	x	x	x	x	x	x
Matelile	11	x	-	x	x	x	x
Malealea	3	-	-	-	x	-	x
Thabana Morena	3	-	-	-	x	-	x
Mt. Tabor	12	x	x	x	x	-	x
Emmaus	2	x	-	x	x	-	-
Samaria	1	-	-	x	x	x	-
Kolo	2	-	-	-	x	-	x
Masemouse	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Total	38	4	2	6	9	4	6

Source: URPP Survey, 1981.

The clinics are chiefly visited for treatment to young children: 40% of the patients are under 5 years of age. In the age categories of 15-45, the clinics are mainly visited by women: 80% of patients are female. This is obviously related to the absence of males for wage labour in the Republic of South Africa, but also to the high incidence of visits in relation to pregnancies.

Table 23

Distribution of Patients by Age and Sex - Clinics Mafeteng District

Age Category	Total Patients	% per Age Category	% Females
0 - 15	781	36.9	52
6 - 15	291	13.7	56
16 - 25	379	17.9	86
26 - 35	301	14.2	83
36 - 45	129	6.1	81
46 - 55	113	5.3	63
56 - 65	68	3.2	63
65	56	2.7	62
Total	2118	100.0	65

Source: URPP Survey 1981.

The recent changes in health policy in Lesotho with emphasis on primary health care have resulted in the appointment and training of Village Health Workers, also in the Mafeteng District. The phenomenon

was strongly concentrated around a limited number of clinics by the end of 1981 - as shown in table 24 and on map 6. However, the situation may have changed considerably since then, in view of the expansion of the programme during 1982. Unfortunately, no information is available as yet about the activities of the VHWs and the quality of their performance.

Table 24

Village Health Worker Programme - Mafeteng District 1981

Name clinic	Number of VHW	Number of Villages
Tsa Kholo	14	4
Samaria	4	2
Motsekuoa	24	11
Thabana Morena	6	5
Matelile	35	10
Emmaus	26	7
Masemouse	32	22
Total	141	61 (partly including villages in Mokale's Hoek District)

Source: URPP Survey 1981.

An analysis of the place of residence of the patients of the clinics revealed their catchment areas. Map 6 indicates that these catchment areas partly overlap so that patients have some choice and may go to the clinic of their preference. It also makes clear that some parts of the district are less well served with health facilities, viz. the extreme eastern and western parts and some areas in the southern part of the Foothills Zone. However, these areas have only a small proportion of the district population. Therefore, clinics are rather evenly spread over the Mafeteng District.

If compared to the national situation, however, the Mafeteng District shows a below average pattern of health facilities. With 13% of the country's population, it has one of the nineteen hospitals, 11.5% of the clinics, 6.4% of the hospital beds and 7.5% of the physicians. Therefore, the ratios for population to various types of facilities are usually unfavourable if compared to the national average.

Table 25

Health Facilities Mafeteng District Compared to National Average 1981

Type of Facility	Lesotho Total	Mafeteng District Total	Mafeteng District as % Lesotho	Ratio to Population	
				Lesotho	Mafeteng District
Total population in '000	1331	171	12.9	n/a	n/a
Hospitals	19	1	5.3	70,000	171,000
Clinics	87	10	11.5	15,300	17,100
Hospital Beds	1874	120	6.4	,710	1,425
Clinic Beds	289	43	14.9	4,605	3,977
Physicians	80	6	7.5	16,638	28,500

Source: Bureau of Statistics, 1982.

Most clinics in Mafeteng District are run by private organizations, i.e. various types of missions. Only three of them are under government. This implies that these clinics are financed in varying degree with funds from outside Lesotho. In all clinics patients pay for their treatments, but there are no standard rates. The rates vary from R 0.50 to R 2.30 for children and from R 0.90 to R 3.30 for adults, and usually include the cost for drugs. The Ministry of Health contributes to the clinics in the form of medicines (drugs, vaccines etc.).

The improvement of health facilities in Mafeteng District does not call for high investments. The district is best served with minor improvements to the existing clinics such as the construction of delivery room and simple laboratory facilities, and the expansion of the number of beds. In addition, upgrading of part of the staff would improve services, whereas a decrease in the differences of these services should be accompanied by some standardization of fees.

Lesotho's government policy on health shows a clear emphasis on improvements in the apex of the health system. No less than three-quarters of all capital investment under the Third Five Year Plan goes to the extension and upgrading of the Maseru hospital and only relatively small amounts are reserved for improvement to the clinics and the district hospitals.

Table 26

Planned Capital Investment Health Sector Lesotho 1980/85

Budget Item	Total planned Investment (in '000 M)	% of Total
Health Clinics	1,751	8.8
Queen Elizabeth II Hospital	15,005	74.9
District Hospitals	1,585	7.9
Drugs, Supplies & Equipment	1,341	6.7
Flying Doctor Service	161	0.8
Mental Hospital	180	0.9
Total	20,023	100.0

Source: TFYDP, N.d., p. 339.

Of course, the quality of the health services cannot be measured by capital investment only. Recurrent expenditure is a much more important yardstick. Even then, relatively small amounts spent on effective, well-trained Village Health Workers will be a most important investment for the improvement of the general standards of health.

5.2. Education

The educational facilities in Lesotho can be subdivided into primary schools, secondary schools, vocational and specialized training institutes and the National University of Lesotho. Primary and secondary schools are found in all districts, but the vocational and specialized training institutes and the National University of Lesotho are almost all located in the capital and Maseru District. In addition, secondary schools are concentrated in the Lowlands and Foothills, while the primary schools in the mountain areas in particular do not teach up to the highest standard. Primary schools have a high drop-out ratio (75%). Roughly half of all pupils who complete primary school, continue their education at secondary schools, but here again there is a high proportion that does not complete their studies: 50% obtains the Junior Certificate, 27% the COSC. For all schools, females form the largest proportion of pupils/students.

Also in Mafeteng District, the present school attendance is relatively high for females, particularly in the age category 10-14 years. This is also shown by the proportion of females "never attended" in the 10-19 years age brackets. Figures for males are much lower; almost half of the males between 10 and 14 years old were not attending in 1976. For males between 15 and 19 years still over 25% never attended.

Table 27

Lesotho Citizens Present School Attendance Mafeteng District 1976
(Selected Age Categories)

Age Category	Attending		Not Attending		% Not Attending		% Never Attending	
	M	F	M	F	M	F	M	F
5 - 9	2927	5180	6577	4192	69.2	44.7	68	43
10 - 14	5723	8922	4062	880	41.5	9.0	33	4
15 - 19	3063	4044	4669	4490	60.4	52.6	27	3

Source: Kingdom of Lesotho, 1977 Vol. III.

The present enrolment in primary schools gives figures in the same order of magnitude and points at a situation not much different as recorded at the time of the 1976 census. In addition, the proportion of females increases with each standard to reach 75% for standard 7. On average two-thirds of the primary school pupils are females.

Table 28

Enrolment in Primary Schools by Standard and Sex - Mafeteng District 1980

Standard	Males	Females	Total	% Females
1	3353	5367	7220	53.6
2	2265	2720	4985	54.6
3	1619	2760	4379	63.0
4	1150	1920	3070	62.5
5	959	1985	2944	67.4
6	676	1706	2382	71.6
7	533	1593	2126	74.9
Total	10555	20951	31506	66.5

Source: Educational Statistical Returns, 1981.

The total number of primary schools in the district and the number of classes look rather impressive. In addition, the schools are rather big - 300 pupils per schools on average - and the average number of pupils per class is high (48). Most schools have between 100 and 350 pupils (70%) whereas 5% has over 550 pupils. Only 10% of the schools have less than 100 pupils. The pupils: teacher ratio is the same as the figure for Lesotho as a whole. After the ratio went up from 44 in 1971 to 52 in 1977, it has been reduced again to 48 in 1980. This decrease was accompanied by an increase in the proportion of unqualified teachers (36%). Furthermore, Mafeteng District has a

rather high proportion of schools which provide facilities up to and including standard 7 (80% against 60% as the national average). In spite of this, there is ample scope for expansion of the primary school system in Mafeteng District, if account is taken of the high proportion of males not attending, and the limited number of standards completed by those who do attend. This expansion comprises both personnel and physical infrastructure. With respect to personnel, it should be noted that there is:

- a high number of pupils per teacher
- a strong variation in the number of pupils per teacher between schools
- a high percentage of unqualified teachers, although equal to the national average
- a high proportion of females among unqualified teachers.

Table 29

General Data on Primary Schools - Mafeteng District 1980

Type of information	
Total number of primary schools	104
Total number of classes	660
Total number of pupils	31,506
Average number of pupils per school	303
Average number of pupils per class	48
Total number of teachers/qualified	359
Total number of teachers/unqualified	223
Grand total	582
Average number of pupils per teacher	54
Percentage of Female teachers	72
Percentage of qualified teachers	62
Percentage of Females among unqualified teachers	86

Source: Educational Statistical Returns, 1981.

The strong variation in number of pupils per teacher between the various schools is related to the fact that all primary schools except one are managed by missionary organizations. This probably reduces the opportunities for transfer of teachers from one school to the other. Since it is largely accepted that the quality of education is also heavily influenced by the number of pupils per class, it seems worthwhile to explore the possibilities for facilitating transfers in combination with upgrading of teachers and other measures for improvement.

Table 30

Classification of Primary Schools as to Size and Number of Teachers - Mafeteng District 1980

Size category (number of pupils)	Number of schools as to number of teachers/school								
	1 teacher	2	3	4	5	6	7	8+	Total
25 - 74	1	2							3
75 - 99		6	2						8
100 - 149		2	4	4	2		2		14
150 - 199		1	3	7	3			2	16
200 - 249			1	5	2	5	1	1	15
250 - 299				3	5	4		1	13
300 - 349						3	8		11
350 - 399						2	2	2	6
400 - 449							1	6	7
450 - 499						1	1	3	5
500 - 549									-
550 - 599								1	1
600 - 649							1		1
650+								2	2
Total number of Schools with	1	11	10	19	12	15	16	18	102*)

Source: Educational Statistical Returns 1981.

*) = No information available on two schools

With respect to physical infrastructure, it strikes that there is a high number of pupils per class, a high proportion of classes which are not housed in a school building - although facilities here as such are not necessarily poorer than in the school buildings - and, particularly, a high proportion of children for which no school furniture is available. Children sometimes have to get their education in the open air and in many cases where buildings are available they have to sit on the floor.

Table 31

Type of Class Accommodation and Facilities available - Primary Schools
Mafeteng District

Type of Accomodation	Number of Classes	% of Classes
School building	264	40.0
Church	331	50.0
Other (House etc.)	15	2.5
Open air	50	7.5
Total	660	100.0
Type of Facilities	Ratio	
% of pupils for which desks are available	11	
% of pupils for which benches are available	24	
% of pupils for which no school furniture is available	65	
% of classes with blackboards	74	

Source: Educational Statistical Returns, 1981.

Secondary schools in the Mafeteng District show a considerably lower average number of students per school than primary schools. Seven out of the ten secondary schools have a student number between 100 and 200. The proportion of females among the students is about the same as for the primary schools (61.6% against 66.5%).

However, only three out of the ten secondary schools provide education up to Form E. Rather than an expansion in the number of secondary schools, there seems to be a need for upgrading all existing schools to Form E level. Here again, this is particularly a question of improving the qualifications of teachers. For secondary schools the proportion of qualified teachers is similar to that for primary schools (65 against 62%), but part of the qualified teachers are expatriates. In contrast to primary education, there is no sharp difference as to sex in terms of qualications. The national figure for qualified secondary school teachers is much higher than the one for Mafeteng District (78.5%).

Table 32

General Data Secondary Schools - Mafeteng District

Type of information	
Total numbers of schools	10
Total number of students	1969
Percentage female students	61.6
Percentage of boarders	21.3
Average number of students per school	197
Number with highest Form taught	
- C	6
- D	1
- E	3
Number of teachers	89
Percentage of female teachers	48.3
Percentage of qualified teachers	65.2

Source: Educational Statistical Returns, 1981.

There is also some scope for improvement of facilities for secondary schools, but of a different nature if compared to primary schools. For secondary schools the situation with respect to desks and benches seems to be rather satisfactorily. Improvements are chiefly needed in the field of electricity supply, piped water, kitchen and library facilities.

Table 33

School Furniture, Equipment and Facilities - Secondary Schools
Mafeteng District 1981

Type of information	
Percentage of students with desks	81
Percentage of students with benches	19
Total number of Secondary Schools	10
Number of schools with - Laboratory	7
- Electricity	5
- Piped Water	5
- Toilets	9
- Library	4
- Dormitory	7
- Dining Hall	4
- Kitchen	6

Source: URPP Survey, 1981.

Map 7 shows the spatial distribution of educational facilities in the district. It appears that primary schools have been established

throughout the region. This means that usually young children can reach a school without losing more walking time than a few hours daily.

Regarding secondary schools a less balanced pattern of distribution shows. Especially for those children living in the northwestern part of the district, it is hardly possible to attend a school within reasonable distance of their home area. This situation makes it necessary for a considerable number of pupils to attend schools which have boarding facilities, or, especially if there is a clear preference for a specific religious background, to attend a school in Mafeteng town and stay with relatives or friends.

Education already forms an important source of local non-agricultural employment in the Mafeteng District. There are ample opportunities for further employment creation in this field, particularly by ameliorating the system of primary education. Any improvements to secondary education have a high foreign exchange component. The rehabilitation of primary buildings, the expansion by constructing new classrooms and the provision of appropriate school furniture could raise employment outside agriculture in the district, providing proper arrangements are made to this end. Furthermore, a higher number of better qualified teachers could be employed.

Table 34

Employment in Education - Mafeteng District 1981

Type of employment	Number	Percentage
Teachers primary schools	582	81.2
Teachers secondary schools	89	12.4
Cooks	35	5.0
Other	10	1.4
Total	716	100.0

Source: Educational Statistical Returns and URPP Survey, 1981.

Present government policy in Lesotho is rather unclear with respect to investment in education and priorities between various segments of the education sector. It is, therefore, impossible to link present needs in Mafeteng with priorities in government policy.

5.3. Rural Water Supply

Most rural households in Lesotho obtain their water for domestic use from natural springs. According to recent estimates, in the lowlands there are on average some two perennial springs per km², while in the other ecological zones the incidence, again on average, is estimated to be slightly higher. (Feachem et.al., 1978, p. 25). Usually these

springs are virtually unprotected from pollution by, for instance, livestock, dust and running surface water. Obviously, a number of villages have no access to natural springs due to their rather uneven distribution over the country and streams form their main source of watersupply. Especially in the Lowlands, the streams may be heavily polluted with organic matter as a consequence of the relatively high densities of both animal and human populations in the catchment areas. During heavy showers large quantities of dirt are washed to the streams, which consequently create a health hazard to users. Standing surface water, such as water in dams and pools, is normally not used for domestic purposes, but is reserved for the livestock. Rainwater, collected from the roofs, is seldomly used for human consumption.

Improved water supplies are still a relatively rare phenomenon in rural areas in spite of the substantial number of projects implemented since independence.. At the most 12% of rural Lesotho's population have access to supplies which are protected one way or the other, and another 9% have access to piped water, provided all systems are in working order (Feachem, p. 26).

In the Mafeteng District, only about 9% of the population has access to improved water supplies, which is below the national average figure. Four different types of water supply improvements can be identified, i.e. gravity fed systems, windpump systems, motorized systems and handpump operated installations. Table 35 below presents data as to the relative number of systems and the estimated number of users. It should be pointed out that this assumes all installations to be in working order.

Table 35

Improved Water Supply Systems and Number of Users - Mafeteng District 1981

Type of Information	Total	Gravity Fed	Wind Pump	Motorized Pump	Hand Pump
Number of supplies	43	24	13	4	2
Population Served	13,400	6,400	3,700	2,400	900
% of Total Population	9.1	4.5	2.5	1.6	0.5

Source: DCDO's Office Mafeteng.

The spatial distribution of the various systems is shown on map 8. The analysis makes clear that there is ample scope for improvement of water supply in Mafeteng District. Unfortunately, the construction of improved systems requires complex bureaucratic procedures, and is characterized by political haggling, and strong delays in implementation due to technical problems, non-availability of transport and equipment, and poor supervision. Moreover, these systems are vulnerable, and require regular maintenance. Therefore, any expansion of these improved water supply systems has to wait for training of maintenance staff recruited locally. This type of training is presently undertaken. Experiences in other countries have shown the importance of local participation in construction as a pre-condition for proper maintenance, and of health education programmes by Village Health Workers as an instrument to increase the effects of improved supply systems.

CHAPTER 6

SERVICE CENTRES

Mafeteng town is the only settlement officially designated as urban area in the Mafeteng District. Presently, the centre comprises about 10,900 inhabitants, which makes the town the third largest after the capital Maseru and Teyateyaneng. As a regional centre, Mafeteng provides a variety of regional functions by a - for Lesotho standards - relatively well-developed road network. Tar road connections with the north, west and south enable good communication with the district and the surrounding regions. The absence of any other "urban area" in the district, of course, does not mean that other settlements with service functions beyond their immediate boundaries are lacking. This chapter outlines Mafeteng's role for the district economy and population, and discusses other service centres and their functions for the surroundings areas.

Mafeteng town performs five different types of functions for the district, viz. administrative - and community services by government departments and private business; commercial services, both with regard to collection and distribution of goods, partly produced in the town's secondary sector; transportation services, both in the field of goods and of passenger transport; and construction activities performed by town-based firms for the rural areas. The order in which the various functions are dealt with is based upon the number of persons engaged per sector in district oriented activities, as given in the table below.

Table 36

Regional Functions of Mafeteng: Number and Proportion of Persons Engaged in District-Oriented Activities, 1981

	Persons Engaged	% of Total per Sector
Services	343	31
Commerce	185	18
Secondary Activities	140	58
Transport	64	46
Construction	50	31
Total	782	27.0

Source: Mafeteng Urban Survey, 1981

In Mafeteng Town is the district's administrative headquarters in the first place. Among the various government departments, the local branch of the Ministry of Agriculture is the largest. From Mafeteng town, fieldstaff in the district is supervised by a number of specialists.

Other important departments are respectively the Ministry of Works local branch, which is responsible for the district's roadnetwork, the sub accountancy (tax collection and related activities), the subordinate court and the Law Offices of the Ministry of Justice, and the Regional branch of the Ministry of Co-operatives and Rural Development.

The town is also a relatively important educational centre. Most schools are managed by missionary organizations, but the government is responsible for the salary payment of the staff of all schools which have been formally recognized.

This applies to the total of four primary schools and six secondary schools in the town. One of the secondary schools also offers technical training to pupils. Analysis of samples taken from schoolrecords show that there is a significant difference as regards the size of the catchment areas of primary and secondary schools. It is estimated that some 20% of those attending primary school in town are not living there. However, virtually all of these children originate from villages within a ten kilometer radius. The importance for the district of Mafeteng's secondary schools is considerably higher as at least 40% of the students attending this type of education are from outside the urban area's boundary. Basic data on Mafeteng's schools are presented below in table 37.

Table 37

Basic Data on Schools - Mafeteng Urban Area 1981

Type of information	
Number of Primary Schools	4
Total Staff	55
Staff unqualified	6
Total number of students	2386
Ratio Staff/Students	1:43
Number of students from outside town	500 (est.)
Sex ratio all students	84
Number of Secondary Schools	6
Total Staff	87
Staff unqualified	15
Total number of students	1372
Ratio Staff/Students	1:16
Number of students from outside town	550 (est.)
Sex ratio all students	73

Source: Mafeteng Urban Survey, 1981.

Mafeteng district's only hospital is situated in Mafeteng town. The establishment is - for Lesotho standards - well-equipped with modern operation facilities, a laboratory and a number of clinics in which specialized treatment is given to large numbers of patients. The hospital has 112 beds which are usually all occupied. Consequently, the occupancy rate on an annual basis is over 90%. Apart from the in-patients, a very large number of out-patients visit the hospital and its clinics. Analysis of the hospital's records shows that not less than 60% of all patients treated originate from outside the urban area. Data presented in table 38 emphasize the important regional function of Mafeteng hospital.

Table 38

Basic Data - Mafeteng Hospital 1980

Medical Doctors	3
Nurses	16
Number of patients admitted (in-patients)	4248
Number of in-patients from outside Mafeteng Town	2600 (est.)
Number of visits out-patients	36401
Number of visits out-patients from outside town	22000 (est.)

Source: Mafeteng Health Department.

Apart from the hospital, Mafeteng town has a public health department staffed by a public nurse and three so-called health assistants. This department is responsible for district - wide preventive health care by means of inspection of water supply systems, checks on hygienic standards in public places, control on the quality of food and food storage and health information campaigns.

Services provided by Mafeteng's private sector to the district population and firms are manifold. The most important function relates to the activities of three labour migrant recruitment centres, which together are responsible for the recruitment of some 12,000 migrants annually, mostly for the Republic of South Africa's goldmines and collieries. Only a few percent of those recruited in Mafeteng are inhabitants of the town and consequently the majority of the workers drafted are members of Mafeteng District's rural households. As in most developing countries, the town's business services are not of great importance to the district economy. Mafeteng has local branches of all three banks operative in Lesotho. Furthermore, there are two insurance agencies, which draw an estimated 40% of their annual turnover from district-oriented activities.

Mafeteng is an important commercial centre. Commerce activities are to a large extent district-oriented, especially those of the wholesale sub sector. The four wholesale establishments, which together employ at least 85 people, draw some 70% of their turnover from the district.

The goods range from foodstuffs to building materials, most of which are directly imported from the RSA. For retail trade, a distinction should be made between informal and formal trade. The informal trade is of little significance for the district population. However, the part of the formal retail sector which consists of the six supermarkets, is for almost half of its turnover dependent on sales to the district population. This is mainly due to the importance of the town as a node in the labour migrancy system. Many migrants spend substantial amounts after returning from the Republic. Furthermore, Mafeteng is important as centre where regular payments from the deferred payment system are provided to the migrant's family. An important share of these payments are usually immediately exchanged for goods available in the large shops with a central location.

The regional function of secondary activities is also limited to formal type establishments, viz. a pharmaceutical industry and a large bakery. The clinics in the district are provided with medicines by the first firm, through the National Drugs Stockpile Organization, while the bakery provides virtually all bread sold through formal retail channels in the district. Both establishments are selling in substantial quantities to customers outside the district as well and form the only Mafeteng based firms with an extra-regional function.

The regional function of Mafeteng's transport sector is quite important. Some 18 mini-bus firms with one or two vehicles each, a firm with two large passenger busses and the Lesotho National Bus Corporation arrange for the town's transport services with the rest of the district. It is estimated that about half of all passengers are living in the rural areas of Mafeteng District. The construction function of Mafeteng is merely accidental and related to the temporary activities of rehabilitating the road between Mafeteng town and Mohale's Hoek.

Apart from those indentified in Mafeteng town, there are some establishments in the district which perform an extra local service function. They are limited to postoffices, court buildings, secondary schools, clinics and large retail stores. Usually these activities are located in or near villages, some of which have an above average size. If a village which comprises at least three of the eforementioned activities is classified as a service centre, some six settlements in the district qualify, viz. Kholo, Makhakhe's, Matelile, Motsekuoa, Thabana Morena and Tsa Kholo. Map 9 shows that these centres are rather evenly spread over the district and are situated at least 20 - 25 kms from the district capital at well accessible locations which are all served by regular public transport. The size of these settlements varies between a modest 300 to some 1600 inhabitants. This clearly indicates that in fact these centres are very small, rather embryonal nodes in the economic landscape of the district.

SUMMARY AND CONCLUSIONS

In spite of the quite substantial amount of data collected with regard to the rural production environment and living conditions, planners are confronted with considerable data gaps if assigned with the task to design a district development plan for the various districts in Lesotho. This lack of data is especially found with regard to land suitability and land potential in relation to actual land use. The classification designed by Bawden and Carroll is too general and the categories distinguished are too wide to be directly useful in land use planning activities at the district level. Additional primary data collection in this field is required. Catchment areas form appropriate physiographic entities for analysis, provided they are linked up with organizational units for land use, i.e. the village territory. Furthermore, it is necessary that a clear distinction is made between the general suitability for cultivation and/or grazing and the potential c.q. carrying capacity for agricultural activities. According to data available now, some 70% of Mafeteng District's land area is suitable for some type of cultivation, but questions as to the agricultural potential cannot be answered. Soil erodibility data play an important role in this respect, especially for those areas where intensive agricultural activities take place. Detailed cropping guidelines can only be provided if information on slope angle and type and thickness of soil and topsoil is available. The presence of excellent aerial photography in colour of large parts of the country at a for this type of interpretation suitable scale is of great help in carrying out such a district land use planning exercise.

Agricultural production activities can only be understood in the wider context of the socio-economic environment in which rural households undertake a series of activities to arrive at optimal income levels. In the district, as in most other parts of Lesotho, the principal differentiating factor for the socio-economic structure is labour migration. This clearly appears from the composition of the district income, of which not less than three-quarters originates from labour migration. Apart from agricultural production, no other activity in the rural areas contributes substantially to household income. Any planning not taking due account of the over-riding importance of the migration phenomenon is unrealistic. Two factors are especially important, viz. the absence of a large proportion of adult men and the inflow of a considerable amount of cash. Therefore, the main question for the planners is how to channel the migrants' earnings into productive activities in their mainly rural areas of origin in such a way that they contribute to higher incomes of non-migrant households

and improve the living conditions of the migrant households. Obviously, this question can only be answered if detailed information is available on the nature and relative importance of the existing co-operation networks in the rural areas. Planned action from government departments should be attuned to the various arrangements of co-operation.

Furthermore, given the large proportion of female heads of households in the rural areas, it is necessary that those implementing rural development programmes should address themselves to this group specifically. It is suggested that such a re-orientation is one of the most important pre-conditions for successful public participation in the regional development planning process in Lesotho.

In addition, it should be noted that the large variations which have been found regarding the socio-economic structure between village and enumeration areas imply that careful research, aimed at a detailed analysis of local socio-economic conditions, is required before any project or programme is implemented.

The main productive sector in the rural areas of Mafeteng District is agriculture. However, as an economic activity, farming is a risky business. This is clearly shown by the importance of harvest failures. A complete dependence on income from agriculture is not an attractive option for a rural household. Therefore, households try to combine a number of economic activities to maximize income and minimize risks. The mix of activities is heavily determined by the household's resource position in terms of land, labour and livestock which in turn are influenced by the household development cycle. Planning exercises have to take due account of these differences and specify improvement measures accordingly.

Since agricultural activities are mainly directed towards the food requirement of the household, cropping patterns are more the result of composition preferences and the availability of labour, than of the suitability of the natural environment. This specifically appears from the relatively small area under sorghum. Although more suitable to environmental conditions in the district than e.g. maize, an expansion of the sorghum acreage cannot be expected easily in view of the lower labour input of and the consumer preference for maize. Price incentives, proper land use planning and an adequate supply of services are important policy instruments to influence the cropping pattern.

The supply of agricultural services as means to enhance production has suffered from bureaucracy and a lack of knowledge about the precise functioning of the farming system.

Funds made available were to a large extent spent on the expansion and maintenance of a bureaucratic apparatus and the construction of physical infrastructure, while measures brought little advantage to the rural procedures. Any agrosupport policy has to take into consideration a few 'basic givens' in Mafeteng's rural production environment, viz. the vulnerable ecological conditions and risky weather conditions, the high monetary income from labour migration as a potential source of investment in agriculture, the large proportion of female heads of household assigned with the day-to-day management of agricultural activities, and the wide range of co-operation arrangements between households as an instrument to make a more effective use of available resources.

Better living conditions for the rural population of the district can be achieved through improvements of health, education and drinking water facilities. There is a general shortage of primary school buildings, furniture and equipment; the improvement of this situation offers good opportunities for employment creation. Both the health and education sectors are characterized by a high proportion of insufficiently qualified staff so that the design of staff training programmes deserves attention. Finally, there is ample scope for improved water supply systems, provided these systems are technically simple, are planned and constructed in close co-operation with the local population, and are combined with health education programmes.

A number of services in Mafeteng District are clustered in service centres. Mafeteng Town strongly dominates among these centres. Further expansion of services, whether made available by government departments or through voluntary organizations, will have to take account of two types of priority criteria:

- priority for those areas not served at present by a certain type of services, and
- priority for locating the service in a cluster with other services.

The inventory planning survey of Mafeteng District reveals the clear need for a district planning organization to adjust national development planning policy to the specific environmental and socio-economic circumstances of a region and to allow for a more intensive participation of the population involved. It has been recognized that a certain degree of decentralization in development planning enables a more efficient tackling of a number of problems facing the country. Among these are the obvious need for a better use of domestic resources - because of the limits to the further expansion of labour migration - and the scope for improvement of the population's basic necessities of life. Furthermore, a decentralized planning organization allows for a much more effective monitoring and evaluation of planning activities. Feedback from the level of implementation is an essential element in realistic planning exercises and helps to attune future plans to the actual requirements.

Recently, the Government of Lesotho has shown renewed interest in the established of a district planning organization. Policy oriented data collection on regional development problems and the offering of tailored training programmes to future staff of district planning organizations, are two important fields in which a number of sections of the National University of Lesotho, among which the applied-geography programmes, can play a role.

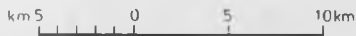
The present report has attempted to show how a first step to contribute to the establishment of a regional data base can be made. It is hoped that it will act as a stimulant for discussion both within the university as well as within the planning sections of the various ministries in Lesotho.

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





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MAP 1

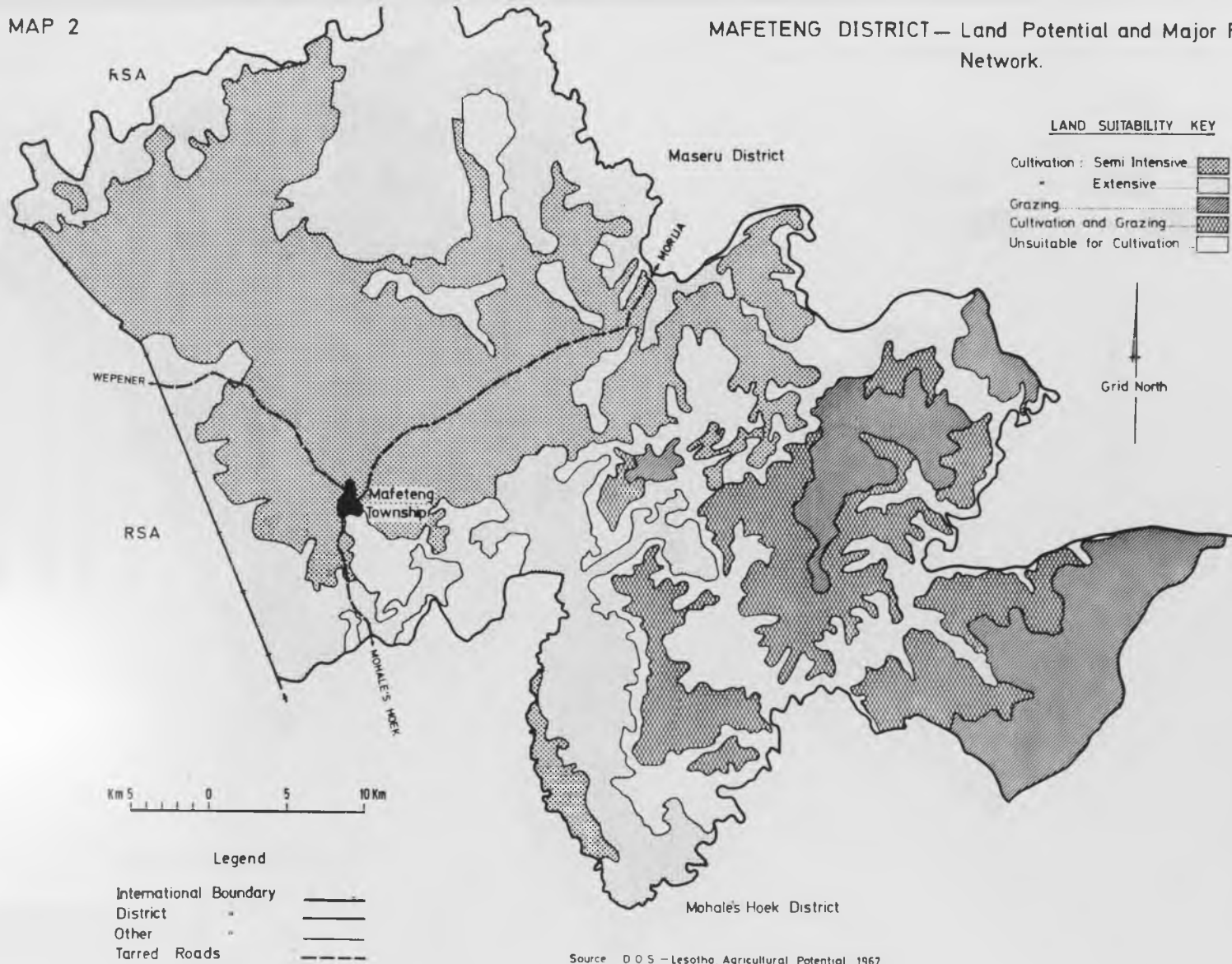


Legend

Higher Slopes	3		Molteno Plains	19	
Compound Lower Slopes	6		Dissected Molteno Plains	20	
Southern Basaltic Foothills	11		Southern Beaufort Plains	22	
Lowlands Escarpment	13		Makhaleng Lowlands	17	
Central Lowlands	16		Dolerite Hills and Plains	24	

MAFETENG DISTRICT - Land Systems.

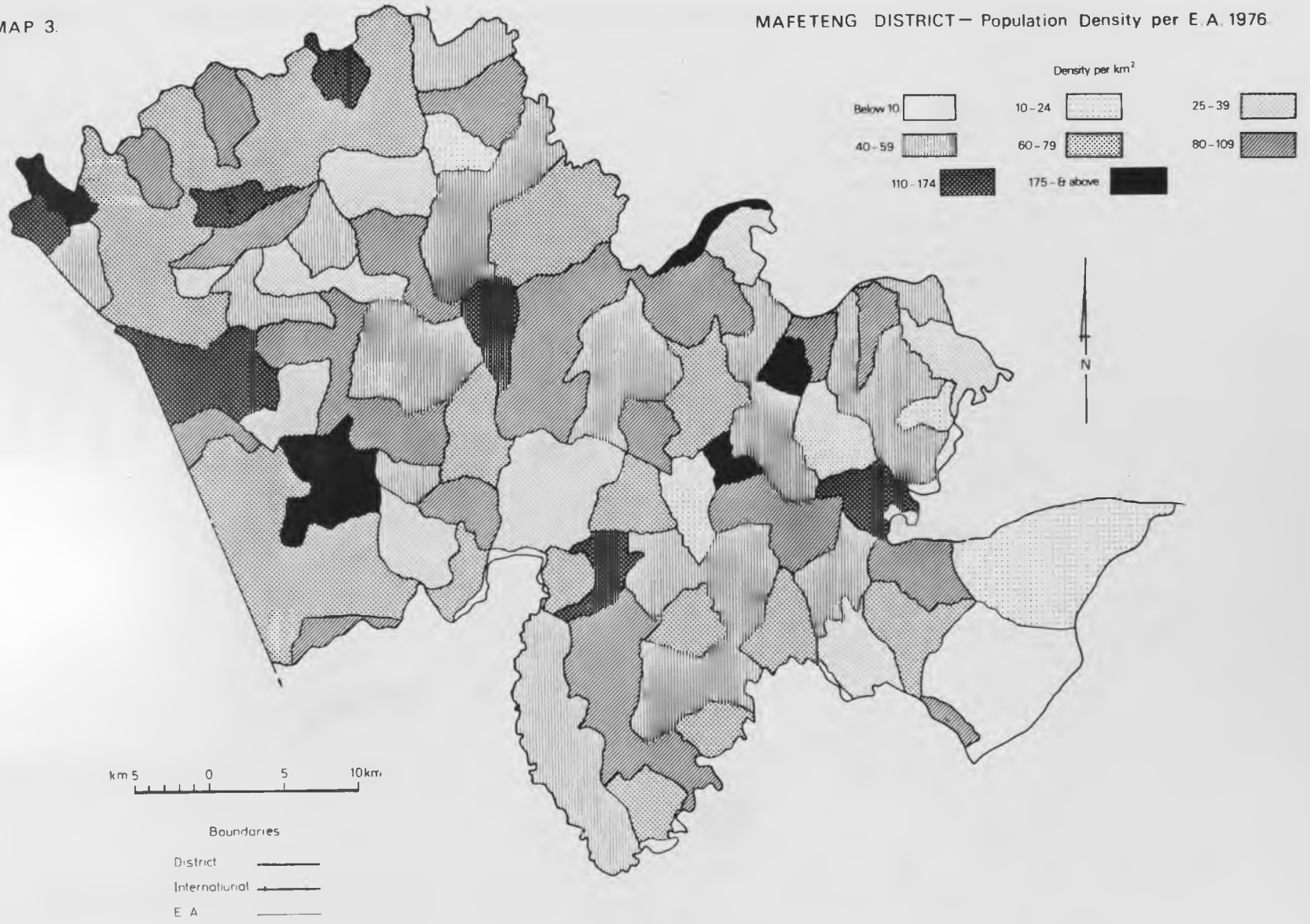




Source: D O S — Lesotho, Agricultural Potential 1967

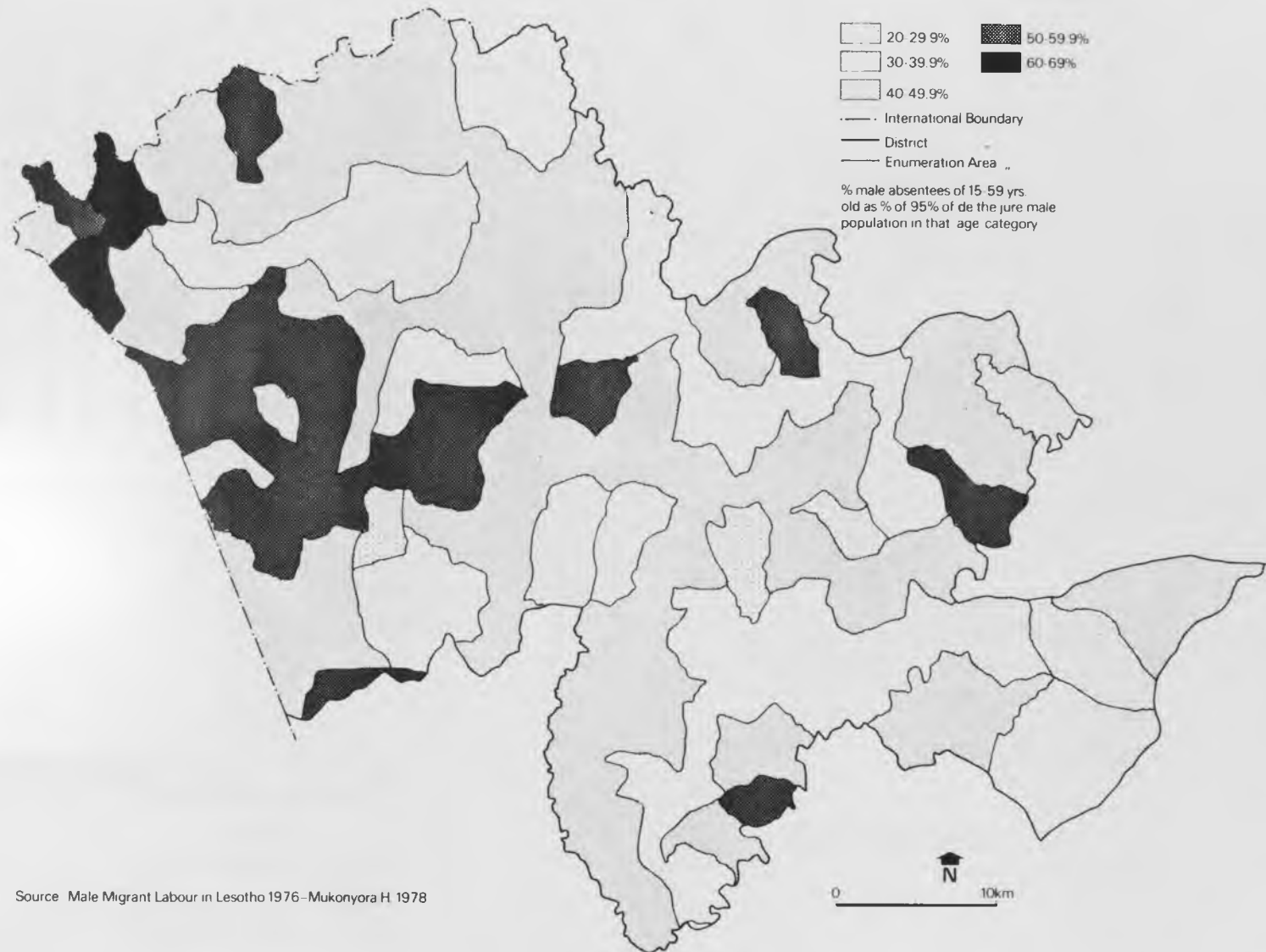
MAP 3.

MAFETENG DISTRICT— Population Density per E. A. 1976

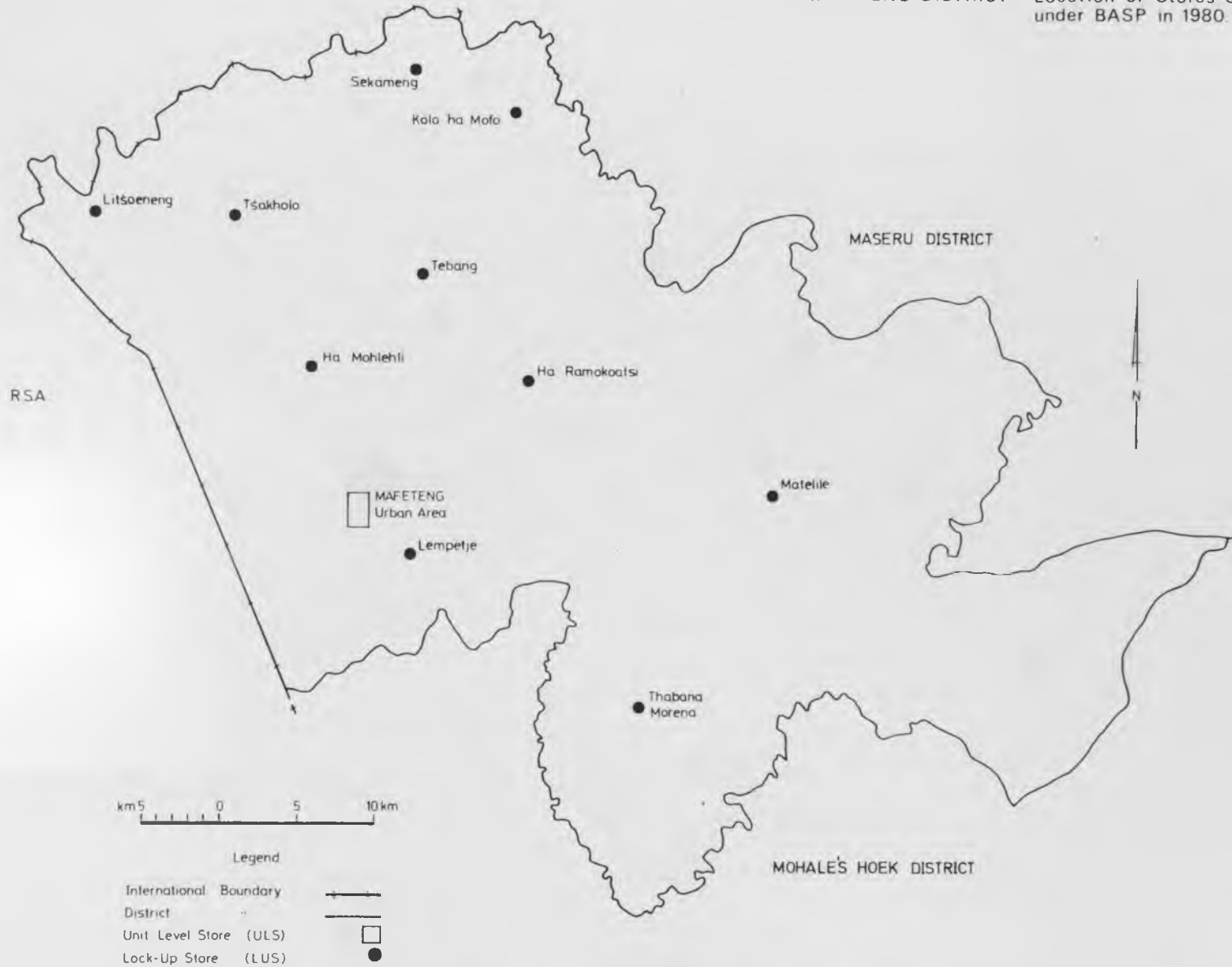


MAP 4

MAFETENG DISTRICT – Relative Incidence of Male labour migration per E.A. 1976.

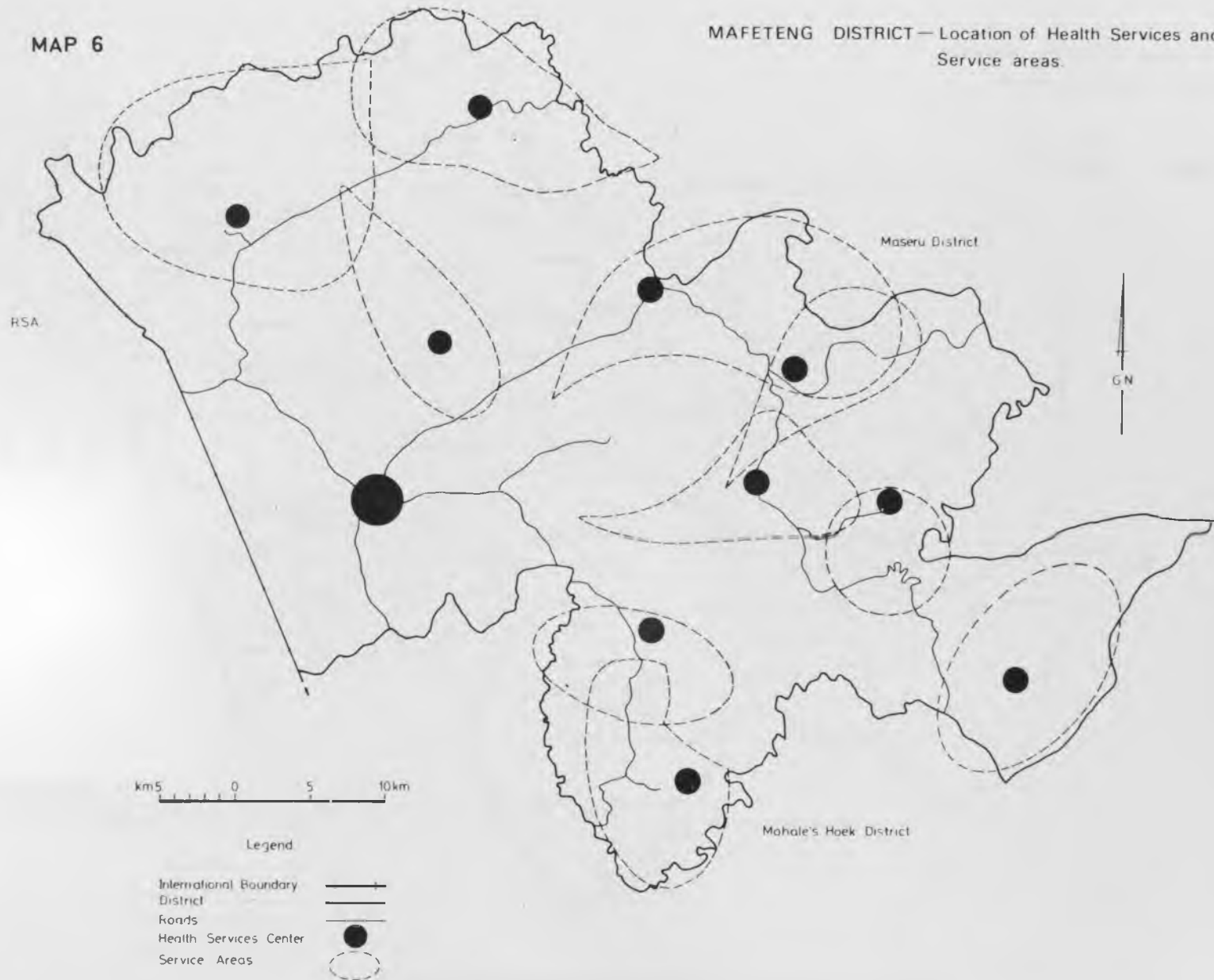


Source: Male Migrant Labour in Lesotho 1976 – Mukonyora H. 1978



MAP 6

MAFETENG DISTRICT — Location of Health Services and Service areas.

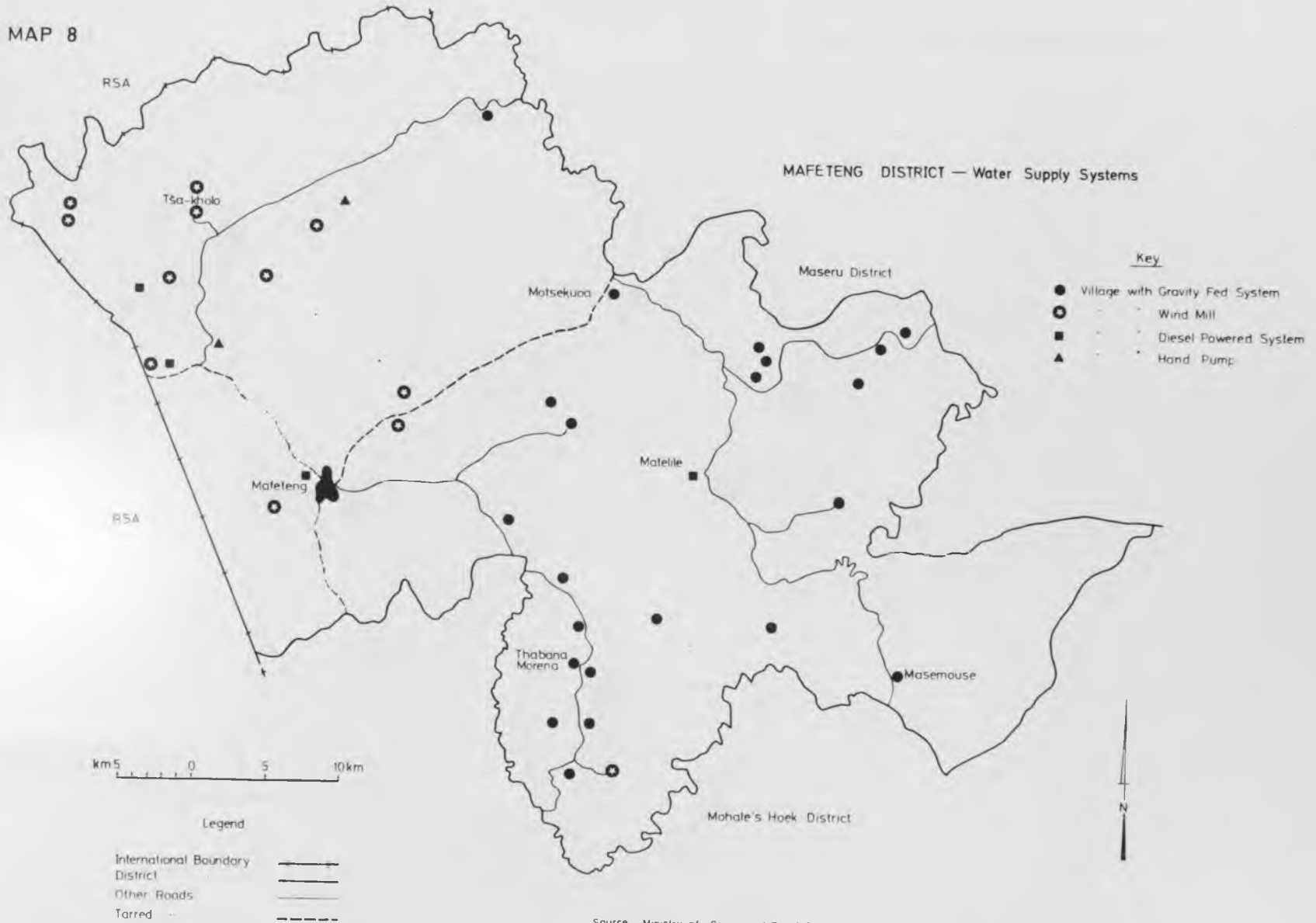


MAP 7

MAFETENG DISTRICT — Location of
Primary and Secondary Schools.



MAP 8



Source: Ministry of Coops and Rural Development — Water Supply in the Mateteng District 1981

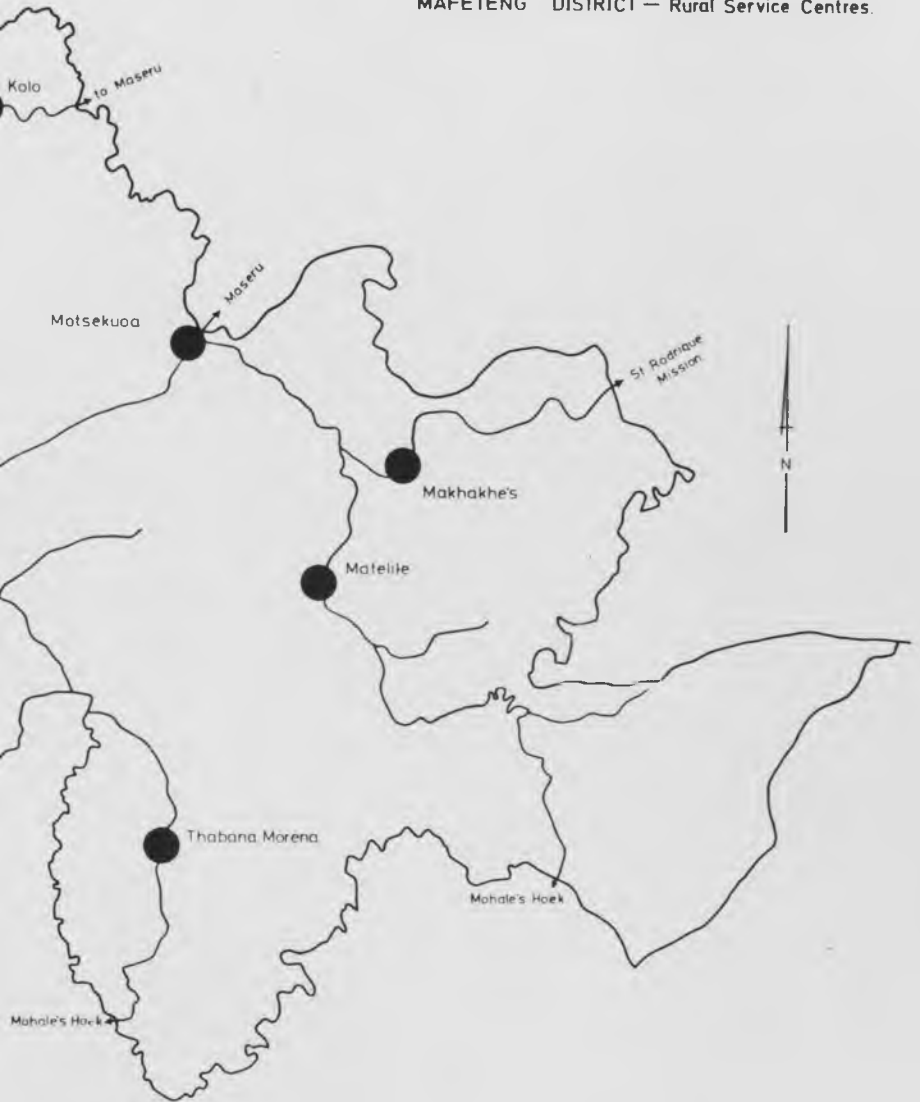
MAP 9



Legend

- International Boundary 
- District 
- All Weather Roads 
- Rural Service Centre 

MAFETENG DISTRICT — Rural Service Centres.





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