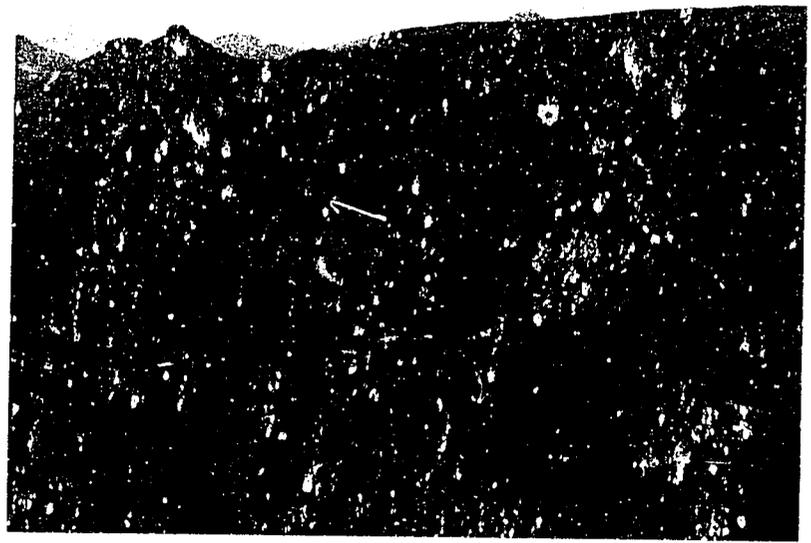


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SOUTHERN PERIMETER ROAD  
SOCIO-ECONOMIC BASELINE STUDY  
and  
PRELIMINARY IMPACT ANALYSIS

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SOUTHERN PERIMETER ROAD SOCIO-ECONOMIC BASELINE STUDY  
AND PRELIMINARY IMPACT ANALYSIS

SUMMARY

This socio-economic baseline study of the partially completed Southern Perimeter Road between Outhing and Qacha's Nek was conducted early in 1985. Its purpose was to establish benchmark information as a basis for measurement of the economic and social benefits of the Project. In addition, it was to establish hypotheses concerning effects which the road may have on the population in the road's zone of influence, and to make suggestions for an impact evaluation study to be undertaken after project completion. The main part of this report constitutes the detailed baseline study data reports, and suggestions for a follow-up impact study five years hence. However, since nearly half of the road had already been completed when this study was undertaken, it was also possible to make a preliminary assessment of impact along the first portion of the road.

The tentative impact analysis is based on information from people who were interviewed, observations made by the research team, traffic counts, and comparisons between baseline data from road sections which have been completed and those where construction work has not yet been started. Further study should be undertaken to determine to what extent the changes noted below are really associated with the road, or simply with peri-urban development at both the Outhing and Qacha's Nek ends of the Southern Perimeter Road.

Positive changes evident in areas where the road has been completed:

- More transport is available, trips are shorter, and easier, with less waiting. Through traffic to Qacha's Nek is faster and more frequent, even though the up-graded road is only half completed.
- Improved delivery services for heavy goods, merchandise, and building materials. Wholesalers from Lesotho and South Africa are making regular deliveries all along the road, even to areas where construction has not yet come.
- Increased commercial activity: shops, cafes, hotels, road-side food sales. Many are small Basotho businesses rather than just big South African based trading establishments.
- Increased ownership of vehicles by local businessmen.
- Much home construction with durable modern building materials and generally improved standard of living: fencing, furnishings, latrines, consumer goods.
- Increased employment where construction work has taken place, and generally higher income levels.
- Easy and rapid access to clinics. Women with small children can travel by taxi to monthly clinics rather than walking.

- Increased development project activity in area: more project staff, extension workers, consultants, supervisors, plans for new projects and construction of woolshed, government services, schools, churches, clinics.
- National integration evidenced by more through traffic on the road from Maseru and Outhing to Qacha's Nek: family visitors, development workers, civil servants, government officials, police, army.

Problems related to construction and completion of road from Outhing to Mphaki:

- People moving away from agricultural areas to settle on the road, to be near public services, commercial, employment and transport opportunities.
- Destruction of some arable land, trees, homesteads by widening of road and by new alignment through virgin agricultural/pasture lands.
- High, unregulated taxi fares, and lack of money to pay for transportation.
- Accidents to people and livestock as fast traffic increases.
- Social problems as old ways change and new ways come in. Robbers can come, and young people tempted to travel, go to towns and waste money.

Problems related to anticipation of SPR construction which is not yet complete:

- Increased through traffic by road to Qacha's Nek because of the partly completed Southern Perimeter Road increases need for a genuine all-weather link over the whole distance. In periods of heavy rain the present road between Sekake and Qacha's Nek is sometimes dangerous or even impassible, due to mud, flooding, rock-slides etc. Growth of commercial, development and governmental activities in Qacha's Nek bring more travellers who experience difficulties on the unfinished portions of the road.
- There are not sufficient feeder roads in the two districts, so many people still do not have access to the new arterial road. People on the old road to Mphaki, which has been bypassed, say they now lack transport and feel isolated. People living north of the Senqu River have no roads at all. They benefit from improvements on SPR once they cross the river by boat, but hope for bridges and roads on their side.
- Dependence upon goods and services coming in from South Africa to Lesotho via the Qacha's Nek border post continues, since the border is now open to commercial traffic. However government workers and most private Basotho travellers pass through Lesotho, not through the supposedly independent Transkei. Given the present high level of political tensions the border could be closed at any moment; thus contingency plans for providing food and services to the very rapidly growing population in the Qacha's Nek area must include completion of the all-weather road link.

## RECOMMENDATIONS

1. Top priority should be given to completion of the improved, all-weather Southern Perimeter Road through to Qacha's Nek as planned.
2. Encourage construction of feeder roads so the widest number of people in the zone of influence may benefit from access to services which the SPR brings.
3. Support other development projects in the two southern districts, so the new USAID-funded infrastructural link can be utilized for genuine development of the region, rather than simply become a route for migrant labour to move out, and for South African goods and services to move in. Community services, banking and postal services, village water supplies, clinics, schools, supply of agricultural inputs and extension service, encouragement of local horticulture and small-enterprise development, etc. are needed. This is particularly important in the rich agricultural areas on the middle stretches of the road, so that the full potential of the people, the water and the land can be developed. Otherwise there is danger of continued migration from rural areas to roadsides and towns. However, intensive agricultural activities to provide vegetables, poultry and other locally produced food to the growing populations at the two ends of the SPR should also be assisted.

## ORGANIZATION OF THE REPORT

This report is divided into two sections. Part One is narrative and analytical. It discusses the purpose and method of this 1985 Southern Perimeter Road Baseline Study; it summarizes the baseline data and considers preliminary indications of the impact which the partially completed road is already having in light of larger issues of development, dependency and socio-economic change in Lesotho. Part Two (APPENDICES) consists of detailed reports of the various types of baseline data collected, as well as discussion of research instruments in order to guide plans for gathering comparable data at the time of the final impact study. Throughout Part One reference will be made to the relevant tables and other information presented in the appendices. Thus we hope that the reader will not be overwhelmed by detail, but will know where supporting data can be found.

## ACKNOWLEDGEMENTS

This study was requested by the USAID Mission in Lesotho. I want to express my appreciation for their support and advice, as well as for the cooperation given by members of the Roads Branch of the Ministry of Works, and the Southern Perimeter Road Project Authority (SPRPA) staff, both in Maseru and Mt. Moorosi. The research could not have been planned, executed or analyzed and reported without the tireless work of the field research assistants, Mabilikoe Seephephe and 'Manapo Mokitimi, and the administrative assistant, Elizabeth Popp. Appreciation is also due to the eleven people who served as enumerators and stayed on to assist with data coding, as well as to Uraula Ruhie-Bolstar, Ambrose Mohale and Mabilikoe Seephephe who helped with the tedious tasks of computer data entry and analysis. Thanks also goes to the staff of the Mt. Moorosi hotel who took care of us as members of their family, and to Marge Wilson who shared her home in Mt. Moorosi with us. Above all, I want to thank my husband, John Gay, for his professional assistance as computer data analysis consultant, and his personal support throughout the entire process of research and report writing. Finally, I want to express my gratitude to the village people, chiefs, construction workers, government officials and development project staff in the Quthing and Qacha's Nek Districts who patiently answered questions, shared insights, and helped us in our efforts to understand the impact of the Southern Perimeter Road.

## NOTE ON CURRENCY

The basic monetary unit in Lesotho is the "loti", singular, and "maloti", plural. This is equivalent to one South African Rand, which was worth about \$ .50 (US dollars) at the time of this research. 100 "lisente" equal one "loti".

## NOTES ON STYLE

The majority of village names in Lesotho begin with the word "Ha" which means "at the home of". Thus "Ha Sempe" is the home of, or place belonging to Chief Sempe. For economy of space we have generally dropped this prefix, particularly in tables.

Throughout the report we use SPRPA when referring to the Southern Perimeter Road Project Authority, and SPR when referring to the Southern Perimeter Road itself.

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## 1 BACKGROUND TO THE SOUTHERN PERIMETER ROAD BASELINE STUDY

### 1.1 PROJECT PURPOSE AND GOALS

The purpose of the Southern Perimeter Road (SPR) Project is "to upgrade the basic transportation link between Qacha's Nek and the western lowlands of Lesotho" with the more general goal of facilitating "economic development and national integration through an all-weather road network." [1]

The project was designed in 1977 and 1978 and authorized in 1980 in response to Lesotho's general plan for developing a basic national road network and the specific problems created by South Africa's declaration of a purportedly independent Transkei to the south of Lesotho in 1976. The map shown in Figure 0.1 suggests the extent to which Qacha's Nek has always been a remote enclave, more easily served by South Africa's rail and road network and by airplane than by road links within Lesotho. Creation of the Transkei prevented the accustomed movement of Basotho traders, drivers and civil servants through the Qacha's Nek and Tele Bridge border posts for a period in the late 1970s and drove home the ever-present threat of border closure or other forms of restriction faced by Basotho living in the Quthing and Qacha's Nek districts.

Both the Louis Berger Feasibility Study and the Project Paper [2] noted in 1978 that:

The construction of an all-weather road in this area will not only enhance the unhindered movement of people within the country, but will also facilitate the movement of goods and delivery of social services. The Government of Lesotho has announced that special efforts will be made to accelerate development activities in southeastern and southern Lesotho. The transport of materials for development projects will be made easier and cheaper by an improved, all-weather road, and the farmers will be able to transport their produce more easily to Maseru and other centers for marketing. An upgraded Southern Perimeter road is a sine qua non for efforts to protect residents from the economic repercussions of Transkei "independence" and to accelerate development activities in the region.

-----

1. Project Authorization Agreement, 1980, p vi.

2. Project Paper, 1978, p. 010; see also Louis Berger Int., Techno-economic Feasibility Study of the Lesotho Southern Perimeter Road, 1978, Vol 1 p. II-1.

## 1.2 OBJECTIVES OF THE SPR BASELINE STUDY

As the scope of work for the SPR Baseline Study consultancy points out, the Project Agreement calls for a final evaluation to focus upon attainment of Project goals and purposes, particularly upon the contributions of the SPR to the economic and social development of southeastern Lesotho and its integration with the rest of Lesotho. However, the impact of the SPR Project cannot be assessed without a carefully-established baseline against which changes can be measured. Although a baseline socio-economic study was mentioned in the Project Paper, the 1983 Project evaluation pointed out that none had yet been conducted. In light of this deficiency, such a study was commissioned in 1984 and carried out in the early months of 1985. The specific objectives of the study are to provide:

- a. Benchmark information essential as the basis for accurate and meaningful measurement of the economic and social benefits of the Project, with particular reference to the effect on development in the road's zone of influence.
- b. Realistic hypotheses of positive and negative effects which the SPR may have on the population of the road's zone of influence;
- c. A suggested outline and study approach for an impact evaluation study of changes from the baseline, to be undertaken after project completion.

Because this study was not undertaken until two major sections of the improved road had already been completed (Quthing to Mt. Moorosi and Mt. Moorosi to Mphaki), it is not a true baseline study. However this very fact makes the study more interesting than if it had been conducted before any work had begun. For the sections of the road where no construction work has been carried out (Mphaki to Qacha's Nek) the data does provide a baseline against which changes can be measured. For the sections in Quthing District already influenced by Project activities carried out between 1981 and the beginning of 1985, the data provide some provisional indication of Project impact. For this reason it is important to distinguish the different geographical areas from which data has been collected in interpreting the results presented in this report. The survey was also designed to obtain as much time-depth as possible in order to indicate changes already underway at the time research was undertaken--for example dates of new businesses, residential moves and modern home construction.

It is important to note, however, that the major impact of the upgraded road which is designed to provide an effective link between Qacha's Nek and the rest of Lesotho, will only be felt when the entire Project has been completed.



Figure 0.1  
 LESOTHO  
 AND THE SOUTH AFRICAN  
 TRANSPORTATION SYSTEM  
 WHICH SURROUNDS IT

## 2 CATEGORIES AND LEVELS OF IMPACT OF THE SOUTHERN PERIMETER ROAD

The fundamental problem in designing a socio-economic baseline study is to determine what features are to be investigated and reported. As the 1983 Evaluation Report and the baseline study scope of work point out, "almost every socio-economic variable constitutes a potential index of positive or negative changes that might result from road construction. The problem then becomes one of selecting a few variables from a universe of possibilities." Four selection criteria are then suggested: validity of particular variables (do they really measure what one thinks they measure?); measurability (can one accurately quantify the value of the particular variable?); replicability (can the measurements be repeated over time?); and previous data collection (have such items been included in other baseline studies or published statistics?).<sup>[3]</sup> These criteria were utilized by our research team (the consultant and two Basotho research assistants) as we developed the research plan for this baseline study. For example, we didn't record the number of beda as an indicator of rural clinic growth when we learned that numbers are often inflated to make a case for clinic expansion - a validity problem. An example of measurability is this: people often said that juvenile delinquency increases with modern roads, but this cannot be easily quantified and measured. For the sake of replicability we are taking particular pains to report research methods, data sources and village locations to guide future measurements. A particularly troublesome problem about validity concerns the larger question of whether specific features of socio-economic change are necessarily linked to improved roads, or are determined by other development initiatives in the road's zone of influence, or by macro-economic and political factors. In this decade of upheaval in southern Africa, we must recognize that many factors other than the Southern Perimeter Road may bring about dramatic changes from the baseline data presented here.

### 2.1 CATEGORIES OF IMPACT

A number of measures of anticipated socio-economic impact are suggested in the various project documents, as well as in a series of USAID publications reviewing the impact of third-world rural road projects. The Berger Feasibility Study mentions the following as categories of change in Lesotho which are likely to be effected by road development:<sup>[4]</sup>

-----  
3. Project Evaluation Report, 1983, Appendix XX.

4. Berger, 1978, pp. v-77-90.

1. social structure and family life
2. education and health care
3. employment opportunities
4. skills training for SPR employees
5. migrant labour and home visits
6. formation of a national consciousness
7. provision of public services such as postal, police, water supply
8. new technologies
9. building methods and materials
10. urban growth
11. strip development along roadsides
12. loss of arable land and abandonment of marginal fields.
13. agricultural methods and marketing
14. livestock management and marketing
15. cost of imported food
16. decreased travel time and costs
17. inducement to building feeder roads
18. improved safety, comfort and availability of transport
19. reduced costs for building and maintaining public institutions
20. handicrafts and other agro-industries
21. tourism

A classification of categories suggested in the concluding volume of the USAID Program Evaluation series and restated in the 1983 Project Evaluation serves as a basis for the scope of work of this baseline study. Main headings are: (5)

1. Agricultural production, technology, inputs, extension
2. Agro-industry and non-agricultural enterprises
3. Employment levels
4. Marketing
5. Transport
6. Consumption and consumer goods
7. Health, nutrition and education
8. Distribution of impacts to certain socio-economic groups
9. Spatial considerations: urbanization, dispersion and migration
10. Land values, tenure and use
11. National integration, community development and community values
13. Impact on women and family

-----

5. Devres, Inc., Socio-Economic and Environmental Impacts of Low Volume Rural Roads: A Review of the Literature, 1980, and Project Evaluation Report, 1983, Appendix XX.



community. In addition, an arterial road links various towns within the region, and links villages with each other to the extent that they are on the main road or are served by a network of feeder roads. Most important, this model serves as a reminder that at the center of evaluating a road's impact are the individual villages, and the households which make up each village, within the region served. If a road is nothing more than a pipeline so that inputs can be sent into an area and labour, goods or money can be extracted, it cannot be regarded as helping to develop that area. It merely makes exploitation easier. It may be on the other hand, that goods and skills which enter the village remain there, and money and skills obtained by those who leave for work or training return to be used for local development and to be circulated in local productive activity. If this proves to be the case, then we can say that the road contributes to increased economic development of the region, as well as to improving access and integrating the region with the major national and international centers. Thus we must do more than simply measure increased inputs or outputs along the road's zone of influence. We must also try to measure how the inputs are used within the region, how much is invested locally, and what mechanisms develop for circulating money at local and regional levels.

This figure is a deliberate reversal of familiar center-periphery models, graphically putting individual households and villages at the center of this SPR baseline study. Thus it helps us consider each small unit in relation to the larger towns in Outhing and Gacha's Nek region, in relation to the national capital, and in relation to the international community, particularly South Africa which has always been the major supplier of goods and major market for labour and products from Lesotho, and to the international donor community which now contributes so much to development projects in this country. Subsequent discussions of the impact of the SPR will return to this theme.

### 3 RESEARCH METHODOLOGY

Preliminary field visits, development of research plans and survey instruments, field and documentary data collection, and final data analysis have been shared tasks of the SPR Baseline Study research team organized in December, 1984. Two Basotho research assistants and an administrative assistant worked with the consultant as the core team, augmented by eleven enumerators and five traffic counters during the field data collection period (February and March of 1985), and by assistants in data entry and analysis from April to June.

#### 3.1 DATA MATRIX FOR DEVELOPING RESEARCH PLAN AND QUESTIONNAIRES

As our research team developed a work plan, we drew upon lists of data categories like those mentioned, as well as our own experience of life, work and research in rural Lesotho, to create a DATA PLANNING MATRIX which is given in

Appendix 8. (Only the broad outline of this large working matrix can be included in the Appendix.) We listed down the vertical axis main classes of data which we would try to collect as measures of road-induced change. We then divided these into sub-categories in order to develop specific research strategies, interview schedules, and questionnaire items. Along the horizontal axis we listed the different levels from which information about each topic might be obtained: individuals, households, villages, businesses, institutions, projects, and district and national reports. Thus, for example, when we considered getting information about clinics we realized that we could ask households how often their members attended a clinic; we could report how many villages have clinics; and we could get Ministry of Health records of outpatient visits to each health center within the road's zone of influence. As specific questions were formulated, tested, and accepted or rejected, they were entered in the appropriate cells on large working charts. Although some items have been added and others subtracted from this matrix, it is given in its original summarized form in order to show the process of developing our research methodology and data analysis procedures.

### 3.2 TYPES OF DATA COLLECTION ACTIVITIES

Five basic types of data collection activities were carried out: collection of official records and published statistics concerning selected activities, institutions and projects within the districts of Quthing and Qacha's Nek; interviews with community leaders and business people in 34 villages within the road's zone of influence; household interviews in each of the 34 villages; a limited number of interviews with SPRPA construction workers; and traffic counts at 5 stations on the road. These are introduced briefly below, and form the basis for all of the discussion in Part One; detailed results and research instruments are presented in the relevant Appendices which form Part Two.

#### District and institutional level information

From various reports and offices and agencies in Maseru and the two district headquarters we sought printed information which can serve as indices of change over time. Of particular importance is data which exists from the period before the SPR construction began and which should be available in reliable form in the future. Since it is impossible to present all of this data, we have given illustrative tables, references to publications, and an evaluation of what is available in Appendix 5, in order to guide a final SPR impact evaluation. We began with the Quthing and Qacha's Nek volumes of the DISTRICT LEVEL DATA BANK series prepared in 1980-81 by the District Resource Planner's Project, under the Ministry of Cooperatives and Rural Development, updating selected information from this record. A national census is conducted every ten years. Comparison of district-level data from the 1966, 1976 and 1986 census should be important,

particularly for indicating regional population growth, proportion of residents to absentees, employment figures etc. Other sources of published statistics from various ministries, official reports and computerized data banks are discussed in Appendix 5.

Earlier data from development projects such as the Senqu and BASP Projects and independent research in the south is very limited. That which exists is discussed in Appendix 5 and comparisons with our baseline data are made where possible (see Tables 5.1 and 5.2).

#### Village level information and data concerning local businesses and consumer prices

For each of the villages in our baseline study, a profile was made of public services, schools, clinics, other institutions, businesses and skilled personnel. The enumerator interviewed the chief, school principal and other village leaders in order to obtain this information before proceeding with household interviews. In addition, the two senior research assistants visited schools and interviewed shop-keepers in each village. Local prices on a selected list of basic commodities was later collected from as many shops as possible. Results are reported in Appendix 1 and 2, and survey instruments and notes on methodology appear in Appendix 7.

#### Household and individual level information

Twenty household interviews were conducted in each of the sample villages, in order to provide socio-economic baseline data on the population within the zone of influence, as well as information regarding present or potential road use and attitudes regarding the benefits of improved roads. Eleven enumerators who live in villages within the SPR zone of influence were hired and trained to conduct these interviews. Each person lived in a village for an entire week, thus covering 33 villages x 20 interviews, with 22 additional interviews conducted by all the enumerators during a single day in a village near Mt. Moorosi SPRPA headquarters. Thus a total of 662 interviews form the sample on which the major part of this report is based.

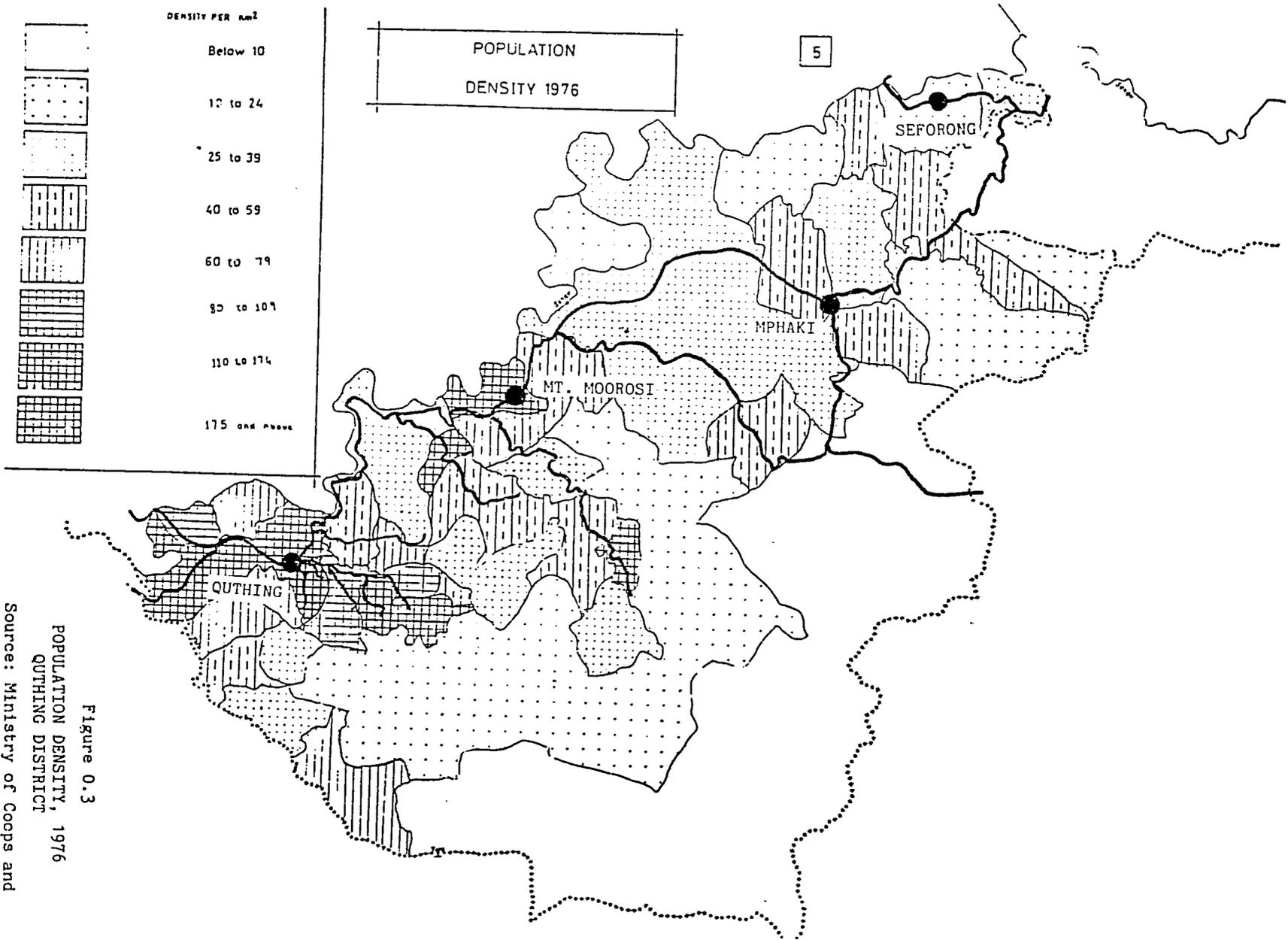


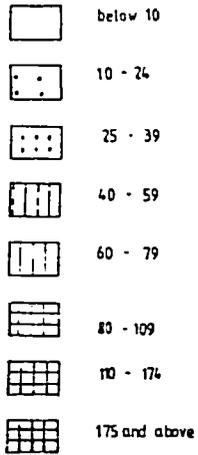
Figure 0.3

POPULATION DENSITY, 1976  
QUTHING DISTRICT

Source: Ministry of Coops and  
Rural Development  
District Office

POPULATION DENSITY 1976

KEY



PREPARED BY MINISTRY OF COOPS & RURAL DEVELOPMENT - DISTRICT OFFICE

-100-

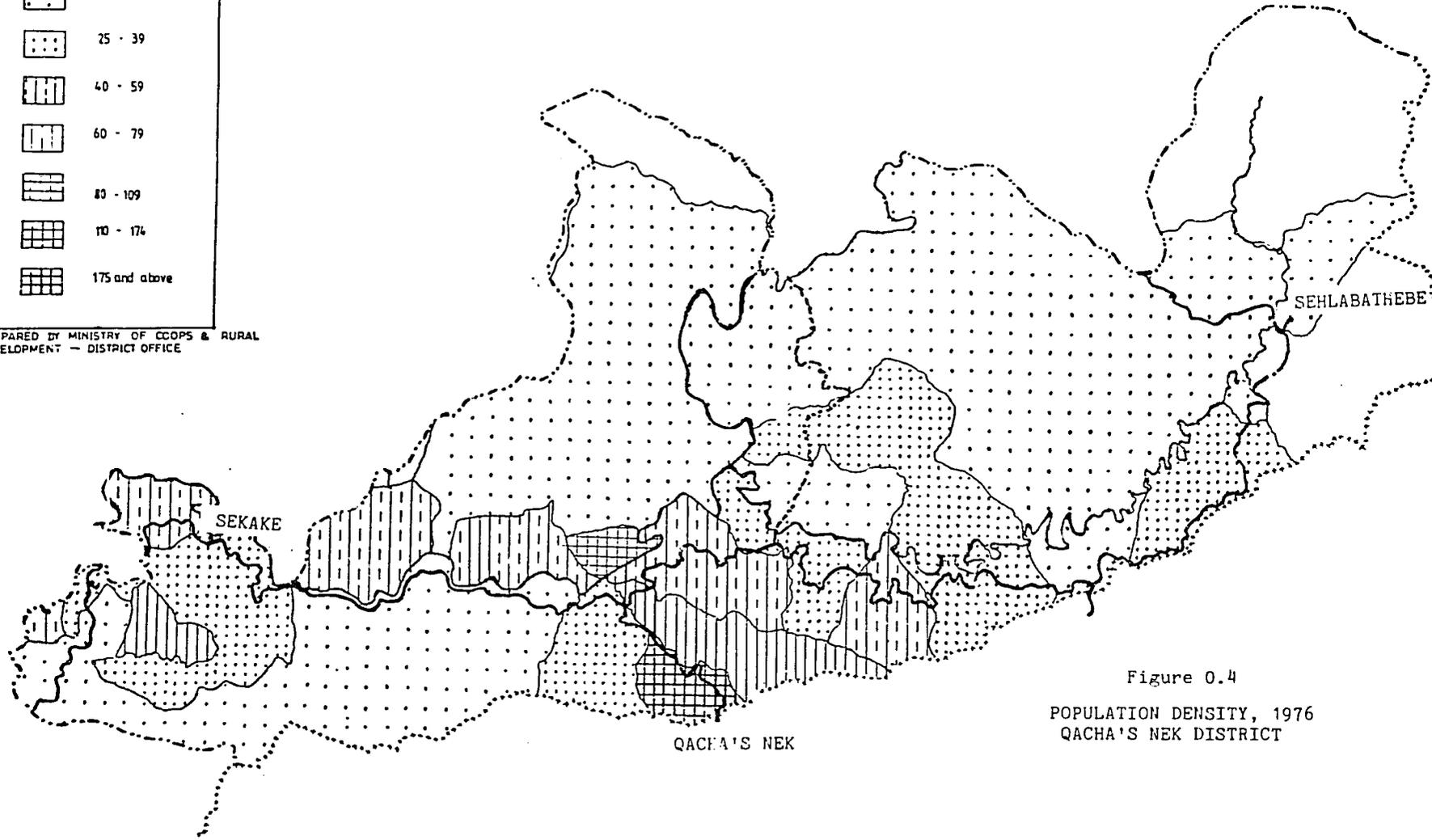


Figure 0.4  
POPULATION DENSITY, 1976  
QACHA'S NEK DISTRICT

Experience, opinions and use of income by construction  
labourers and other SPRPA employees

Brief interviews were conducted with 39 individuals who had found employment (temporary or long term) with the Southern Perimeter Road. Some were village women whose period of employment was over, while others were working for SPRPA at the time of the interviews.

Supplementary traffic counts

In order to supplement the official traffic counts conducted twice a year throughout the country by the Ministry of Works (Roads Branch), and special traffic surveys conducted by the SPRPA itself, we carried out detailed counts at five locations on the Southern Perimeter Road between Mt. Moorosi and Qacha's Nek. Local residents were hired, oriented, and provided with record forms on which to report visual observations concerning all vehicles which passed their locations between 8:00 and 18:00 hours, on two days each week, during the period of time when our village and household interviews were being conducted (late January to mid March). Each time we drove past these villages in the course of our field work we checked and collected data. A map showing the locations of our counts and of the most recent SPRPA and Roads Branch counts is included in Appendix 5, as well as tables presenting the results and sample report forms.

**3.3 VILLAGE LOCATIONS AND SAMPLE SELECTION**

The "zone of influence" of the Southern Perimeter Road can be considered in two ways. In the broadest sense it must be understood as including all of the two southern districts of Lesotho: Quthing and Qacha's Nek. This is because such an arterial road links the two district headquarters and hence affects administrative and commercial transport for both complete districts. In addition, most of the official published statistics are presented by district rather than by smaller units (except for population which is reported by village and "enumeration area" and specialized agricultural centers like woolsheds and diptanks.).(7) The 1976 census showed 88,491 persons living in Quthing district and 76,497 in Qacha's Nek District: together comprising 13.6% of Lesotho's total population.

In a more narrow sense it must be recognized that the major portion of the "zone of influence" lies in the most densely populated portions of the two

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7. Berger, 1978, Vol 1, II-39.

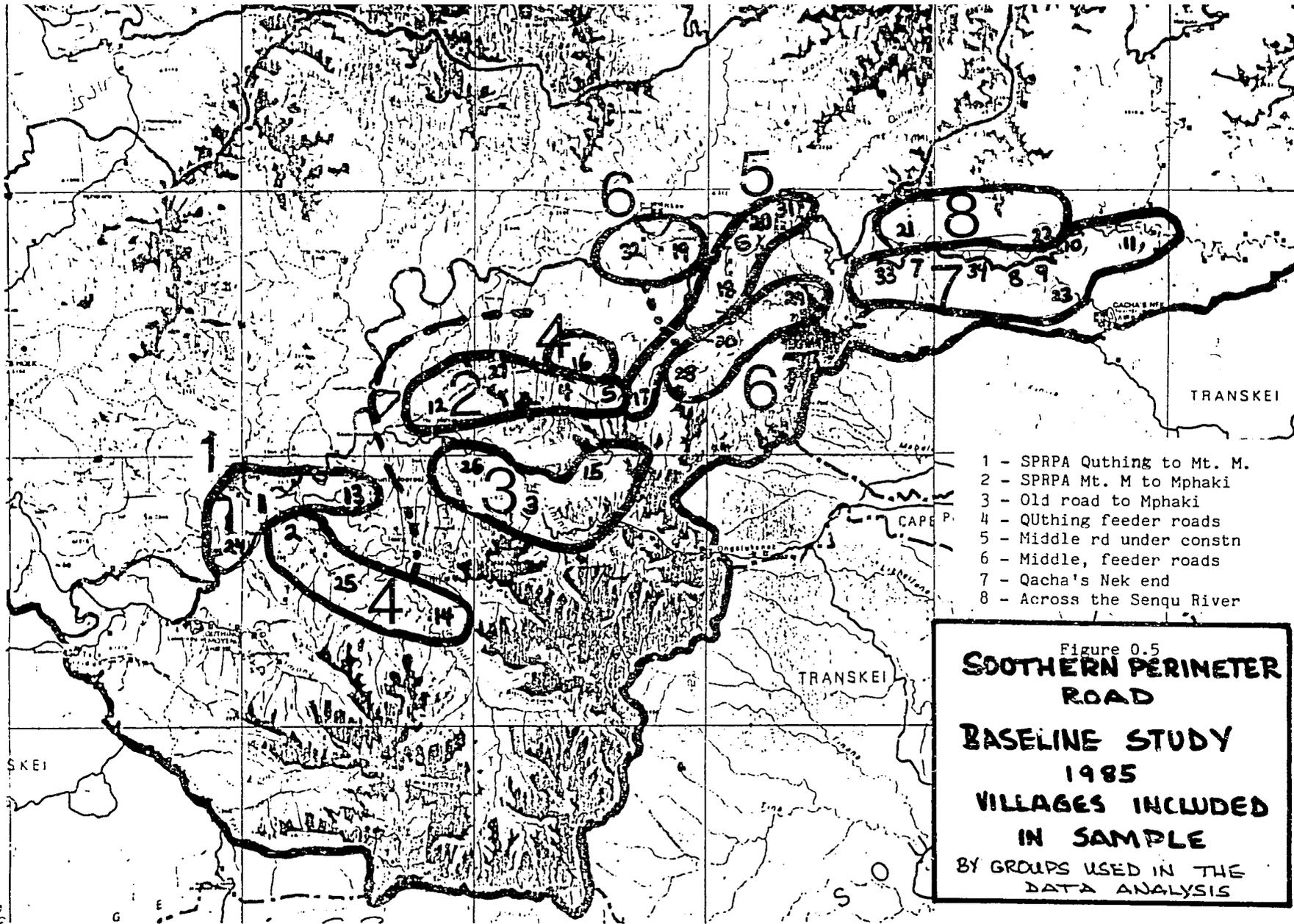
districts which constitute a band of about 10 to 15 kilometers along both sides of the road paralleling the course of the Senqu river, along the limited number of feeder roads between Quthing and Qacha's Nek, and north across the Senqu River in the western part of Qacha's Nek District. (See the maps of population density Fig. 0.3 and 0.4.) In consultation with USAID officials, our sample for study has been selected from this more narrowly defined "zone of influence." Thus the south-western end of Quthing District (Qomoqomong and Sixondo areas) and the northeastern portions of Qacha's Nek Districts (towards Sehlabathebe and Sehonghong) have been consciously omitted as too remote from the SPR road itself. District level data is readily available with which to monitor impacts on the "zone of influence" in the widest sense, and baseline data on the Sehlabathebe area is currently being collected in a comparable format to our study by USAID's Range Management Project.

Within the more narrowly identified "zone of influence", villages were selected in order to sample three main sections of the road: (1) the Quthing section - from Quthing to Mphaki, (2) the middle section - from Mphaki to Sekake including villages from both districts, and (3) the Qacha's Nek section - from Ha Kose just west of Whitehill to the Tsoelike area beyond Qacha's Nek.

Within each of these three zones we attempted to sample (A) major and minor villages on or near the Southern Perimeter Road, and (B) villages on or near remote feeder roads and across the Senqu River. Thus we had a basic six-zone plan in mind. However four factors led to modifications in this plan. The first was the fact that four distinct zones (rather than two) were identified in the Quthing section where all of the SPR Project activity to date has been carried out. Second, there are actually very, very few feeder roads in the Qacha's Nek district. Additional problems with village selection were presented by extremely heavy rains, washed out roads and dangerously flooded river crossings during the field research period. This, together with the tense pre-election political situation, made it dangerous or physically impossible to send enumerators and supervisors into certain areas. Thus some modifications were unavoidable resulting in eight zones which are introduced below. We also discovered that some villages which appeared to be "on the road" actually included sub-villages (sometimes that of the chief him/herself) which were 3 or 4 km away from the road, or which required an hour or more of hard almost vertical climbing to reach. Other villages identified as being "on feeder roads" had actually grown to have sub-villages or little shops much closer to the main road than the maps indicated. The location of villages by road zones is shown in Figure 0.5, while detailed maps of some villages are given in Appendix 1. Tables in Appendix 1 list all the villages and give details of location and distinctive features.

ROADZONE 1 - The SPRPA road section from the Quthing District Headquarters (properly called Moyeni) to Mt. Moorosi has been completed through a fairly heavily populated area. A winding old road high above the Senqu River served this area since before the Gun War of 1879/80. The SPR Project construction camps and offices were established at Mt. Moorosi in 1981. (3 villages)

ROADZONE 2 - Between Mt. Moorosi and Mphaki (Letsielo) a completely new road was



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constructed through an agricultural and grazing area which previously had no road at all. This new alignment and a major bridge over the Quthing River was opened to traffic in October of 1984, just four months before our survey began; hence the impact of the road had barely begun. The front line road construction camp moved to Mphaki at the end of April, 1985. (4 villages)

ROADZONE 3 - Between Mt. Moorosi and Mphaki the long old road following the narrow fertile Quthing River valley then climbing up to high mountains near Ongaluk's Nek and Mphaki is still maintained in a minimal way. Most vehicles now prefer the short new route. (3 villages)

ROADZONE 4 - Four villages on feeder roads in the Quthing District were included; three lie south of ROADZONE 1 (at about 3, 10 and 24 km distance) and one is north of Mphaki at about 5 km distance. It takes 2 1/2 hours of very rough driving to reach the village at 24 km. The one at 3 km is the Principal Chief's village, Ha Sempe, and hence it is a very old, established and well developed village despite being on a rough winding access road. (4 villages).

ROADZONE 5 - The middle section of the SPR, between Mphaki (Ha Mahlomola Letsie) and Sekake's, is partly in Quthing and partly in Qacha's Nek districts. Construction work was just beginning on this section as our survey came to an end. (5 villages)

ROADZONE 6 - Of the villages on or near feeder roads in the middle section, some are just half an hour's drive from the main road, but others require an hour or two of driving plus 45 minutes of walking. Because of clay-like soil, most of these feeder roads are totally impassable in the rain. (5 villages)

ROADZONE 7 - Villages at the Qacha's Nek end of the road have been combined into one group, even though some are just a few km from the town itself, while others are an hour's drive before reaching Qacha's Nek, and two are on the well maintained road going north-east towards Sehlabathebe. (7 villages)

ROADZONE 8 - Two villages across the Senqu River were also included in the Qacha's Nek District. (All the area to the north of the Senqu near Quthing falls under Mohale's Hoek District and is primarily served by the Phamong Road.) The villages north of the Senqu in Qacha's Nek are particularly isolated, with no roads or bridges at all. They depend upon the Southern Perimeter Road which is reached by rowboat and one cable crossing for access to all goods and services in the major towns. A full day was required for interviewers and supervisors to cross the river and hike to either of these locations. (2 villages)

### 3.4 SAMPLE SELECTION WITHIN VILLAGES

Each interviewer lived for a week at a time in a village. During the week a village profile was filled out and 20 household interviews were conducted.

The sample of households to be interviewed was randomized geographically and stratified by estimated economic level, based on a rough appraisal of visible assets before the interview began. With the assistance of the local chief, a village was divided into roughly equal quadrants or sub-villages. Interviews were conducted in a different quadrant or sub-section of the village on each of 4 days, with 5 non-adjacent households, ranked at different economic levels, to be interviewed each day.

### 3.5 TRAINING AND SUPERVISION OF ENUMERATORS

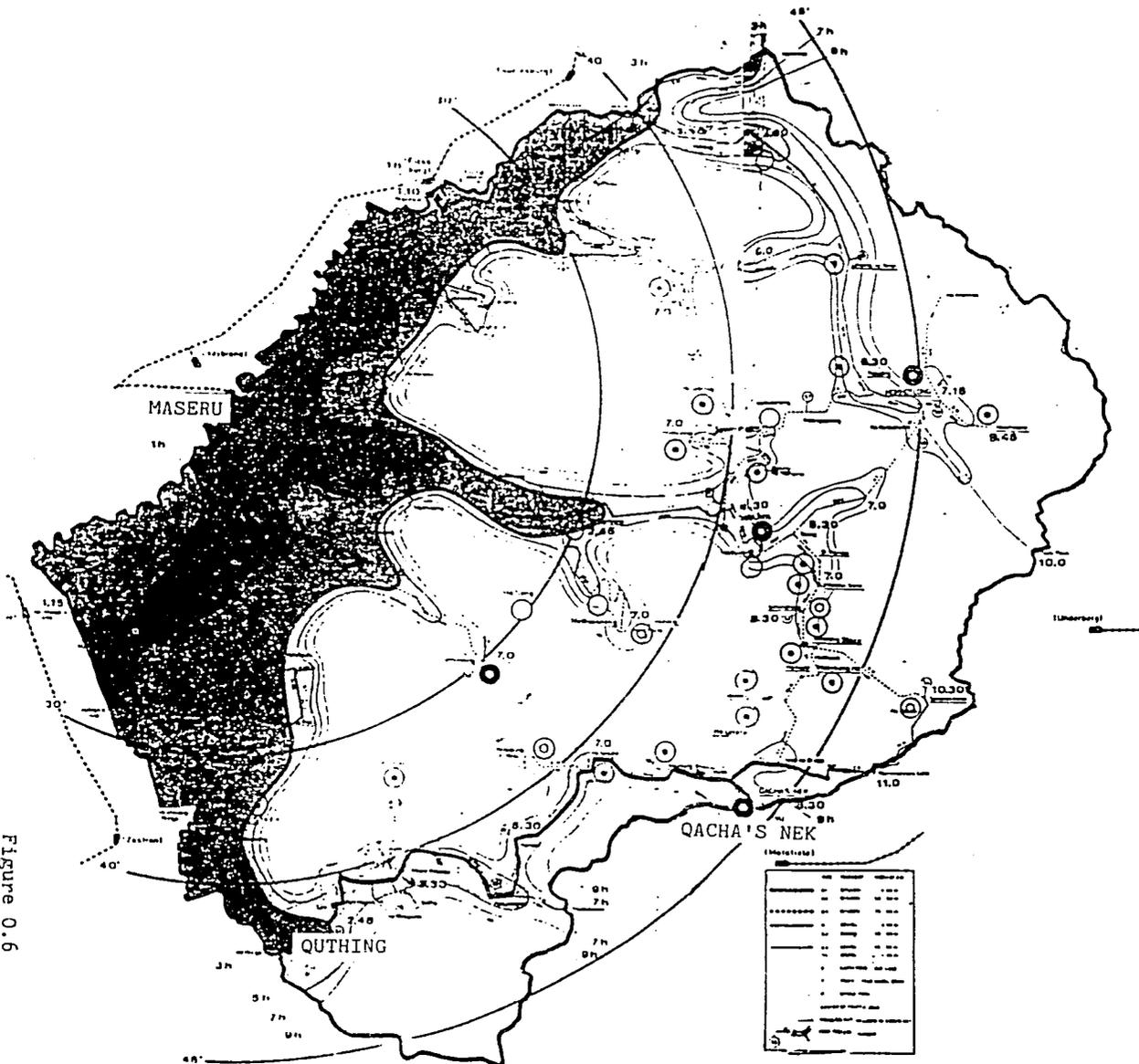
After research instruments were developed, trial tested, modified and printed, and sample villages selected, eleven enumerators were recruited through radio announcements, district labour officials, and SPR Project channels. Those selected assembled during the first week in February for training at the SPRPA offices in Mt. Moorosi. That weekend each one was taken to his or her site. During the week each person was visited by one of the supervisors, questionnaires were checked, shop-keeper interviews were conducted, as well as observations and in-depth interviews. It took the entire week and over 500 km of driving with two vehicles to deliver all the people and make the necessary follow-up visits. Enumerators reassembled for a period of data checking, preliminary coding and retraining during the third week, and then each was taken to a second village with a similar schedule of supervisory visits and interviews. After another brief regrouping, they proceeded to their third research locations, and then assembled in Maseru to assist with data coding.

### 3.6 DATA CODING ANALYSIS AND AVAILABILITY

All enumerators participated in a week of data coding, thus assuring time to check for errors and misunderstandings. Thereafter a smaller number of enumerators and the research assistants continued with coding, data entry for computer analysis, proofreading and data corrections. All data was analyzed by use of the Statistical Package for the Social Sciences, version for personal computer (SPSS-PC) on a Columbia IBM-compatible machine.

The raw data, parameters and system files will be available should subsequent analysis of the population studied be desired soon, or at the time of a final re-study. Within the scope of this six month-long study only a small amount of the data can be fully analyzed and reported in this paper. However the baseline data itself will remain in an accessible form for whatever use that USAID or other development projects might wish to make of it. For example, already during the months of May and June, IFAD's Rural Enterprises Development Project for western Outhing District, the UN land-use planning team working with the EEC-funded Mphaki Agricultural Project, and the Highlands Water Project have made use of information from this SPR baseline data. Such use of baseline data can facilitate the cooperation between road construction and other government or donor-funded rural activities upon which effective road-related rural development depends.

LESOTHO'S TRANSPORTATION SYSTEM  
1979  
Figure 0.6



LESOTHO TRANSPORTATION ST

ACCESSIBILITY WITHIN  
LESOTHO  
ROAD NETWORK 1979

ROAD TRANSPORT

9 HRS (5 MIN TIME FOR  
LANDCRUISER FROM MASERU.  
(MINIMUM TIME REQUIRED)

- 1 HOUR ISOCHRONE OF MASERU
- 3 HOURS ISOCHRONE
- 5 HOURS ISOCHRONE
- 7 HOURS ISOCHRONE
- 9 HOURS ISOCHRONE
- AREAS REACHED FROM MASERU  
NOT UNDER 9 HOURS.

AIR TRANSPORT

AIR ISOCHRONES OF MASERU  
(ACTUAL AVERAGE SCHEDULED  
FLYING TIMES UNDER GOOD CON-  
DITIONS)

CLASSIFICATION OF AIRFIELDS

- MASERU AIRPORT (INT. / DOM.)
- MAIN AIRFIELD
- AIRSTRIIP WITH LIMITED DEVELOPMENT  
POTENTIAL
- OTHER AIRSTRIIP
- POSSIBLE NEW AIRSTRIIP

RAILWAYS

- RAILWAY STATION IMPORTANT FOR LESOTHO

#### 4 SOCIO-ECONOMIC BASELINE DATA - PROFILE OF THE ZONE OF INFLUENCE

It is almost impossible to separate static baseline data from the process of preliminary impact analysis, because change is the most notable feature of the present situation in southern Lesotho. The moment one contrasts different segments of the area studied or examines dates in which commercial ventures, home construction or purchases took place, one is describing change, whether or not it is directly related to the new road. Thus this section will give only a brief overview of the data collected noting important themes, issues and context in which the data must be seen. Most of the information at each level--district, village and household-- is presented in the appendix, broken down by district, by road zone, or by village where appropriate.

##### 4.1 THE DISTRICTS OF QUTHING AND QACHA'S NEK - AN OVERVIEW

A socio-economic baseline description of these two districts in 1985 is dominated by the process of improving transportation and communication links which is underway, the increasing efforts of government to accelerate development activities in the area, and the rapid growth of the private sector in response to these changes.

##### The transportation situation

Lesotho's position as an island within South Africa has already been noted and illustrated by Figure 0.1 showing the transport situation which has prevailed for nearly a hundred years. Lesotho has been surrounded by a well-established South African rail and road network, linking each of Lesotho's main towns with the nearest South African rail-head. A second map, taken from a transportation study done by Dorsch Consult just before the SPR Project began, shows the transportation situation in 1979 from Lesotho's perspective. The detail on this greatly reduced map (Figure 0.6) cannot be seen, but the general idea is that the map plots the distance which one could travel by road from Maseru in a given number of hours, with additional detail concerning rail and air transportation. Here we see Lesotho's roads reaching out like fingers from the center, (Maseru) into the periphery (the mountain regions of Lesotho). The period since these maps were drawn has witnessed the development of a national road network, extension of public services and administrative functions to the rural areas and thus considerable progress in national integration as well as reduced dependence upon the external links with South Africa at every border

point.

Throughout its history, until the present decade, Qacha's Nek has been more closely linked with Matatiele and thus to Durban and East London, than to the rest of Lesotho. The creation of a supposedly independent Transkei and the political problems which this created, set in motion a process of constructing improved road and communication links between Qacha's Nek and the rest of Lesotho. The Southern Perimeter Road is obviously the key factor in this process, although improved roads from Qacha's Nek to Sehlabathebe, improved airport facilities, and new radio-telephone links are also changing the transportation-communication system in the south-east.

The border post at Qacha's Nek was effectively closed to Basotho for a period of time in the late 1970s, and Transkei's road maintenance was so poor that the road to Matatiele was barely passable between 1979 and 1981. At present there is a great deal of commercial traffic crossing each day, but the political situation in South Africa and the bantustans is so unstable, that it cannot be predicted when the border might be closed again. Interviews with government and business people in Qacha's Nek make it clear that if the border is open to commercial traffic, the majority of consumer goods, building supplies and food-aid will continue to come from the rail head at Matatiele because of the simple fact of lower prices. However the movement of government equipment and civil servants, of goods for Lesotho's development projects, of commercial goods to the growing number of shops all along the road between the main local supply centers of Quthing and Qacha's Nek, and the movement of passengers and their luggage and purchases throughout the country, all depend upon internal road or airplane links within Lesotho.

The most distinctive features of the SPR "zone of influence" during the baseline study period were associated with the processes of movement of travellers along the road, settlement of people in roadside and peri-urban areas, and the growth of public services and commercial enterprises at both ends of the southern perimeter road and at key growth centers along the way: notably Mt. Moorosi, Mphaki, Sekake and Whitehill.

A second set of distinctive features relates to the importance of agriculture and livestock for communities on the more remote feeder roads, the middle portion of the road's zone in general, and the areas around mphaki recently opened up by the new SPRMA road. However, the lack of public services, medical facilities, shops, transport, and sources of agricultural inputs and extension services are of serious concern to many people living in this middle area.

The contrast between these two general features raises a fundamental question concerning potential impact of the Southern Perimeter Road and related development processes in the "zone of influence". Will the road bring changes which enhance the agricultural and industrial productivity, improved standard of living, and better access to public services for communities along the road; or will it simply provide an avenue for passing traffic, for South African products and agricultural produce to reach Basotho markets, and for Basotho to go off in search of employment in Maseru and South Africa? These questions cannot be answered by those concerned with the SPR construction, but they should be of concern to evaluating the road's future impact and to development planners

anxious to make the best possible use of the new opportunities which the road will provide.

Population size and distribution - rural-to-urban migration

When the Berger Feasibility Study and the SPR Project paper were written in 1978, most of the available data on the zone of influence in the largest sense--Quthing and Qacha's Nek Districts--was based on the 1970 Agricultural Census and on preliminary reports from the 1976 National Census. Since another National Census will be conducted in 1986, the computerized census population figures and detailed analyses of employment, agriculture, education, health and other sectors will provide an easily available index of gross change during this ten year period.

In 1976, the population of Quthing District was 88,491 (7.3% of Lesotho's total) and that of Qacha's Nek was 76,497 (6.3% of Lesotho's total). Figures for density per square kilometer based on 1976 population and 1979 estimates of land and population are given in Table 0.1. If the 1979 estimates are accurate, they give a striking picture of the growing shortage of arable land in relation to population growth in these two districts, particularly when compared with the country as a whole.

Table 0.1

POPULATION DENSITY OF QUTHING AND QACHA'S NEK DISTRICTS  
COMPARED TO LESOTHO AS A WHOLE  
(de facto population)

	density per sq km of total land		density per sq km of arable land	
	1976	1979	1976	1979
Quthing	26.21	28.25	384.73	462.12
Qacha's Nek	16.74	17.69	436.18	691.10
Total Lesotho	35.06	37.45	299.94	372.97

1976 figures from 1979 Annual Statistical Bulletin

1979 figures from 1980 Annual Statistical Bulletin

The population in both districts is concentrated along the Senqu River Valley paralleled by the Southern Perimeter Road as far as Qacha's Nek. Maps in Figures 0.3 and 0.4 show the population distribution for the two southern districts in 1976. The southern half of Quthing District is sparsely populated

high mountain grazing land, although population concentrations can be seen near Moyaeni, along the feeder roads, in the Makoa area on the old road to Mphaki, around Mphaki itself and in the rich agricultural area near the border with Qacha's Nek District. It will be interesting to see how this pattern changes in the 1996 census results, particularly along the new SPRPA road to Mphaki.

In Qacha's Nek the population is even more dramatically concentrated along the Senqu River Valley to Qacha's Nek, the Tsoelike River Valley going east to Sehlabathebe, and the area around Qacha's Nek itself. There are rather densely populated areas of good farming land at the extreme west of the district, north of the Senqu River opposite Sekake and Whitehill, and along the road towards Sehlabathebe. We can anticipate considerable population growth in the western end where the SPK construction is underway and flat arable land exists, as well as in the peri-urban and flat arable areas along the road to Sehlabathebe. However people are moving out of the villages north and west of the Senqu because of transportation difficulties. The area south of the main road between Sekake and Whitehill is very sparsely populated, because it is very mountainous, with steep slopes or cliffs dropping down to the road and river. Thus roadside development along this stretch is not likely. Obviously the northern part of the district is very mountainous, isolated and sparsely populated. There are some settlements along the Senqu north of Qacha's Nek, but only a narrow, and now often impassable, road goes across the Tsoelike Bridge and north to Sehonghong. The main road now goes north-east along the border, past Kamatweliso's Gate as far as Sehlabathebe, and then turns back north-west over Matebeng Pass to Sehonghong. Transportation difficulties between Tsoelike and Sehonghong may contribute to depopulation of this area in favor of villages along the road towards Sehlabathebe and closer to Qacha's Nek town.

A recent paper by Andrew Spiegel, a University of Cape Town anthropologist, examines demographic and income data concerning five communities in Qacha's Nek and two in Transkei near Matatiele.<sup>18</sup> He analyzes an ongoing process of "rural-to-rural" migration by landless wage-dependent households away from more remote areas towards roadside villages and peri-urban settlements. He notes that this would be a typical rural-to-urban migration process, were it not for South African "influx control" policies which prevent migrant worker families from moving to the urban place of work. Our data on household movements and population growth support his assessment. For example, Table 1.5 shows the Qacha's Nek roadside villages having the highest net gain of any areas we studied, with the villages between Guthing and Mt. Moorosi coming next. Our interviews indicate that people are moving towards the road from remote mountain areas without roads, from distant villages on feeder roads, and from villages north of the Senqu or Tsoelike Rivers. Stated reasons for moving indicate that this urban drift is not only the result of landlessness, but of frustration with recent years of drought-related crop failure, lack of transportation, public services and consumer goods in remote areas, and desire for wage employment or informal income-generating activities which are more dependable than farming. Comparison of the changed population of constituency areas in Guthing and

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8. Andrew Spiegel, "Rural Differentiation and 'Internal' Migration: A Research Report from the Qacha's Nek/Matatiele Region", Human Sciences Research Council, Cape Town, 1984.

Qacha's Nek between the 1956 and 1976 census shows the greatest growth rates to be in the areas of projected SPR road construction: constituency 48 (from Mphaki almost to Christ-the-King) with a growth rate of 3.2%, and constituency 55 (from Christ-the-King to Qacha's Nek) with a growth rate of 2.8% (9) (See Figure 5.1 for a map of Constituencies and census Enumerator Areas.) We can anticipate a much greater acceleration of this process in the present decade. Such rural-to-roadside movement and roadside strip-development is common throughout Lesotho, particularly along roads leading to major towns and border posts. This was actually anticipated by the Berger Feasibility Study as a potential problem along the SPR if it is uncontrolled and if adequate public services are not also developed (10). However, it also indicates the potential growth of the population to be served by the Southern Perimeter Road.

#### Income and employment

District-level information concerning types and places of employment by sex and district is given in the 1976 Population Census Tables, with additional detail in a recent study of manpower and migration in Lesotho (11) and need not be repeated here. Certainly comparison with 1986 figures will be important for an SPR follow-up study. However, assessment of impact of the road cannot be done out of context of the diverse political and economic factors operating in the whole southern African region.

The Project Paper was written soon after dramatic increases in mine wages (1976) and at a period when it was relatively easy for Basotho men to find migrant work. There has been a radical cutback in the numbers of new Basotho miners being recruited in the 1980s, particularly with the policy of "stabilization" of the mine labour force and growing unemployment, unrest and need for job-creation in the rural "bantustans" of South Africa. This has led to a growing number of work seekers in the towns of Lesotho where there are mine recruitment offices. Local job-creation attempts in Lesotho are totally unable to meet the need of the unemployed. Since Qacha's Nek is far from the gold mining centers to the west, it has traditionally supplied labour to Durban, Port Elizabeth, East London, and other Natal and Eastern Cape industries, mines and farms. Many industries in the Eastern Cape have closed: 1984 and 1985. The unemployment situation for residents of Transkei and Ciskei is already very severe and the political situation in 1985 is very tense. These factors must be taken into account in assessing changes in employment patterns in the districts

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9. Primary School Inventory, Education Planning Unit, 1981.

10. Berger, 1978, p V-80.

11. Migration and Manpower in Lesotho: Report of a national survey - 1978/79, The Bureau of Statistics, Maseru, 1982

within the road's zone of influence. Road construction will certainly provide a great deal of local employment for a period of time, but the unemployment and political problems are so great that the long-term trends cannot be predicted, nor should they be linked directly with the road itself.

#### Agriculture: Crops And Livestock

The Agricultural Planning section of the Ministry of Agriculture has produced an excellent summary report of the agricultural situation from 1973/4 to 1981/2. Data on land, crops, livestock, marketing, cooperatives and use of fertilizer are presented with most data broken down by district. This report will be updated regularly. Thus on almost every issue it is possible to get time series data for Guthing and Qacha's Nek Districts. Data from 1973/4 to 1983/4 is already available in draft form. [12]

Probably the most significant feature to note for any road impact study is the effect of the drought on crop yields in the 1980s. It is often hypothesized that improved roads lead to an increase in agricultural production and marketing. This may indeed happen along the SPR's zone of influence and in the districts in general, but given the adverse climatic conditions of the baseline period, interpretation of agricultural statistics must be done with caution. Qacha's Nek was particularly hard hit. For example, maize production for the district dropped from 3,024 tonnes in 1981/2 to only 614 in 1982/3, and 1,144 in 1983/4. Sorghum production went from 1,374 to 371 to 126 in the same period. As mentioned above, many rural households told us they had moved from remote agricultural areas to villages near the road because they were discouraged by the drought. A critical question in relation to the SPR will be whether this process is reversible, should rainfall improve in the next five years. This is related to the issue of whether the Ministry of Agriculture and associated rural development projects make use of improved transportation to increase the availability of agricultural inputs and technical advice and assistance in order to reach farmers in the southern districts.

#### Health, food-aid and nutrition

Good data on health centers can be found from the Ministry of Health, and

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12. Lesotho Agricultural Section Report, Agricultural Planning, Ministry of Agriculture, Maseru, Lesotho, 1984.

from Catholic Relief Services. Samples of statistics from the various health centers in the two districts are given in Appendix 5. There are three hospitals in the district: a well established Cuthing Hospital in Moyeni, a fine, new solar-heated hospital in Qacha's Nek, and a mission hospital at Tebellow serving much of the population in the middle area and north across the Senqu River. The issue of transporting the sick to hospital is high in the minds of people in the more remote villages and often given as a reason for moving to live close to the roads. For the hospitals, and the health centers they are associated with, transportation of patients, staff and supplies are also important. Certainly changes in this area should be monitored after the SPR road is completed.

The Food and Nutrition Coordinating Office (FNCO) publishes a quarterly bulletin summarizing current statistics, reports and studies on food, nutrition and health issues. Again the issues of drought and short-falls in food production are crucial. The most recent bulletin points out that in 1983/4, as in 1982/3 the southern districts, particularly Qacha's Nek and Mohale's Hoek, were the worst hit. (13)

The tremendous amount of food aid coming into Lesotho in recent years is another important feature of the food situation. Most of the food aid for Qacha's Nek comes up from the Coast to Matatiele by rail, truck to Qacha's Nek and thence to distribution points. This food includes emergency drought relief distributed in almost every rural community in Lesotho in 1984/5, as well as food aid to schools, clinics, and Food-for-Work programs. The Food Management Unit coordinates food aid and keeps records on food receipts and distribution through various agencies, as do the agencies themselves. This is, again, something which must be considered in attempting to measure impact of the SPR on agriculture five years from now. Cuthing food comes from Maseru or Zastron via the Mohale's Hoek border post. An all-weather SPR will make the distribution of such food commodities easier, cheaper and more dependable, particularly in times of heavy rains. To the extent that feeder roads develop, more food will reach remote areas. But consideration must also be given to the effect of food aid as either a disincentive to local agricultural production, or as a positive incentive to other development projects such as feeder road construction and woodlot planting.

Figures from our baseline sample show that 9.4 % of all households reported income from Food-for-Work projects, 46% reported regular attendance at mother-and-child health clinics (most of which distribute food) and 74.3% have children attending school, through which they usually receive SCF food in school lunch programs. All but about 15% of the households in our sample participated in one or another of these programs, and many of these non-participants probably received a share in the special drought relief distributions which were reported in 32 of the 34 villages. Thus it appears that nearly all the households in our sample have received some form of food aid. On a basis of the retail store value of the total amount of food aid received from all donors through all programs between January and June of 1984, we calculated (conservatively) that

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13. Food and Nutrition Information Bulletin, Food and Nutrition Co-ordinating Office, Maseru, 1985, vol.1 no:4 p. 16

the average family in Lesotho received the equivalent of M20 worth of food per month! We have not added this amount into our summary income figures, but were we to do so, the average monthly income (cash plus value of crops produced) would be increased from M144.70 to M164.70 per month.

### Education

At the end of 1984 there were 103 primary schools, 6 secondary schools and 1 trade school in Guthing District; and 83 primary schools, 3 secondary schools and 2 home economics schools in Qacha's Nek. Good data for monitoring increase in number of schools, enrollment, teachers, facilities and exam pass rate exists in the Ministry of Education's Statistics Unit. There has been a rapid growth of schools and increased enrollment in the southern districts, as throughout the country.

### Village Water Supply

The present policy of the Village Water Supply section of the Ministry of Rural Development is to establish a district VWS office, maintenance and equipment center in each of the district headquarters towns. This was done several years ago in Guthing, and, in 1985, construction of the VWS office in Qacha's Nek was well under way. Building materials are purchased from the cheapest source--hence from Matatiele. But much of the VWS equipment such as pipes and fittings come from Maseru. Thus such supplies, as well as the staff, must normally travel over-land on the SPK. Once completed, greatly improved services can be offered to develop and maintain village water supplies throughout the district, depending upon the access to villages which an adequate road system makes possible.

### General growth of Qacha's Nek town

In addition to the specific activities mentioned already, there is other evidence of growth of Qacha's Nek as an administrative, commercial service and residential center: not just as a transfer point for goods coming in and going out through the border. There is the new airport, micro-wave radio-phone links,

town water system, residential areas, bank, several wholesalers, new petrol stations, and a new hotel which is bursting at the seams with visitors connected with various government ministries and development projects.

#### 4.2 THE 34 VILLAGES IN THE BASELINE STUDY SAMPLE

The 34 villages in which survey work was conducted illustrate a variety of patterns of community growth and of services offered. Appendix 1 gives details concerning public services, community activities and commercial enterprises in all the villages. In this section we will point out some distinctive features of different types of village growth patterns and services available.

##### Village growth patterns

Consideration of different types of community growth in relation to the development of roads helps us understand present settlement patterns and anticipate changes which are likely in the next five years.

(1) Traditionally, villages in Lesotho tended to develop along a ridge, or plateau which could overlook arable land and grazing livestock, yet which afforded enough flat land for house construction. Thus many of the old villages are located half way up a slope, or even on top of a plateau, where modern road access is difficult or impossible. Some of the communities in which we conducted interviews are typical of this old pattern, with either the entire village (Ha Kose and Lits'oeneng, for example) or a sub-section of a village, inaccessible by vehicle.

(2) After a road is established in an area, many individual households to attempt to build access roads to their own homestead so that heavy goods can be delivered by truck. In Makhosi we found one family starting to dig away at such a "driveway" in a place which could have caused serious erosion to the main road from which it was planned to diverge. In many other cases such individual or communal effort has succeeded in building short access roads linking sub-villages to a main road. Ha Sempe is such a village, where a winding access road of 3 or 4 kilometers climbs up to the principal chief's old village on the mountain-side.

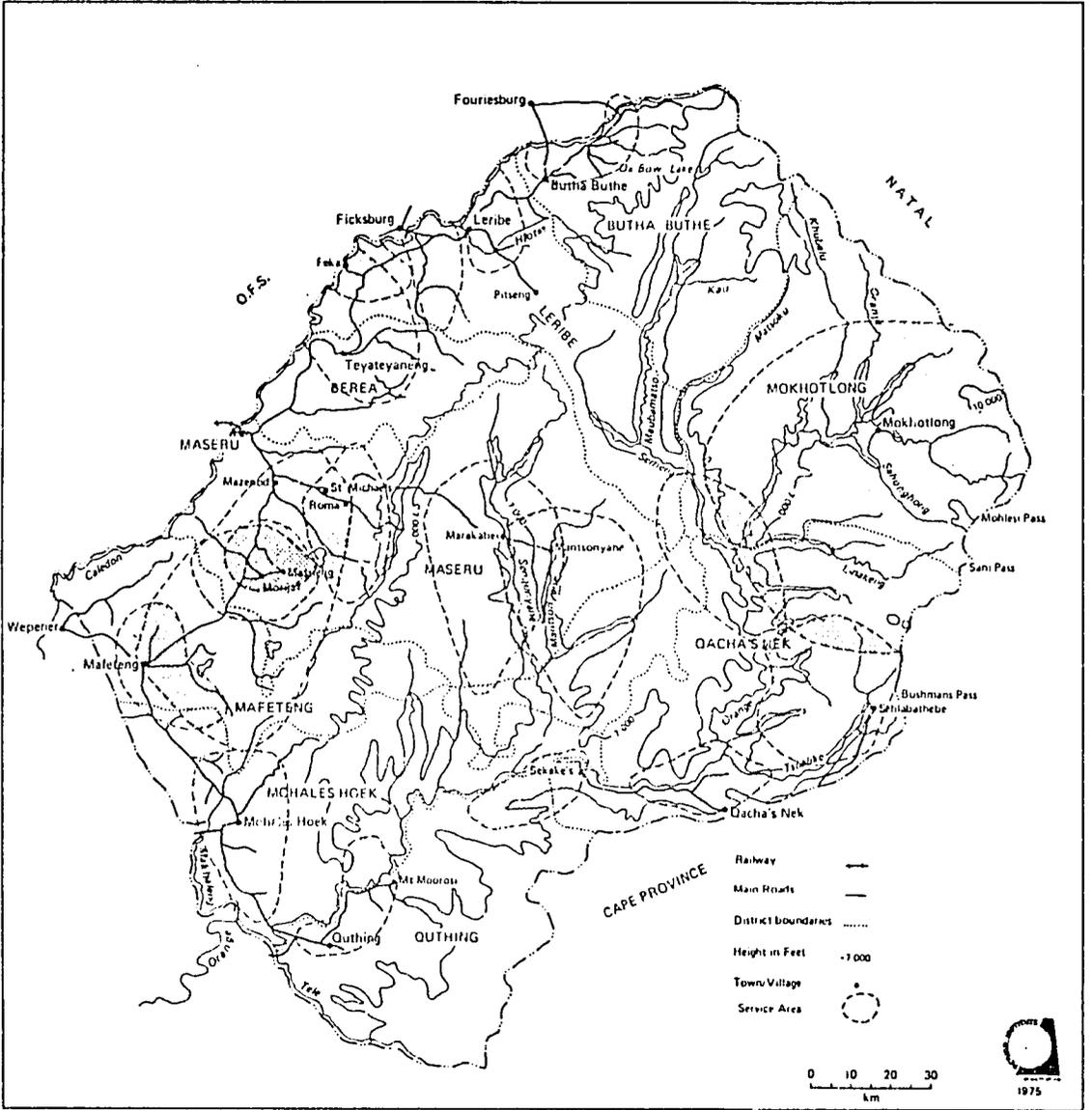
(3) It is common for young households to move from more distant and inaccessible hillsides to sites adjacent to the road itself, but within the same general area and chiefly jurisdiction. Throughout Lesotho one often finds an "old village" up on a mountain or plateau a few kilometers away from a road, and a new section of the same village growing up around a nucleus of roadside shops and houses. This process is underway at Thaba-Tsoeu near Qacna's Nek, and along the new road at Mohlakona and Mopeli.

(4) Another type of development is the growth of a village centering around a trader's shop or a mission station. Malephane, near the Roman Catholic mission of St. Gabriel's, and Matee, near Christ-the-King, are examples of a mission as a nucleus for a town. In the case of Malephane, the village and mission were the end of the line for many years, with a road leading traffic to and from the mission station but not beyond. Recently a new and very important shop has been opened at Mosoneke, three kilometers beyond the mission, so now it, rather than the mission, is the end of the feeder road.

(5) Increasingly common throughout Lesotho is roadside "strip-development". In this process a long string of homesteads develops along a road, as long as there is sufficient flat land (and water) for the population to be thus dispersed. Ha Tlali is an example of such a community. One of the problems with such a pattern is that it may be very difficult to provide services to such a scattered population. In the case of Ha Tlali it seems that all the services are actually based in Mphaki several kilometers away; there is not even a primary school in Ha Tlali. The project paper looked at the example of the then new road to Thaba-Tseka and speculated that strip-development was not likely to be a problem on the Southern Perimeter Road because it had not occurred on the Thaba-Tseka Road. However the crucial issues seems to be the availability of flat and moderately arable land. There was little such land on the ridge along which the Thaba-Tseka Road was built. But there is a great deal of land presently under cultivation in the area along the new road to Mphaki, and between Mphaki and Ha Kosi. It is very likely that residential areas will spread out all along this area as the new SPRPA develops. Land Use Planning connected with the Mphaki Project might well take this into consideration so that the best assistance can be given to the population likely to develop in such areas which are presently fields along the road-side, without destroying the agricultural base of the population.

(6) A final process is the development of significant growth centers along a road at points which are "nodes" in a network of foot-paths, bridle trails, roads, and perhaps even river crossings. Several of the most important villages we studied fall into this group. Sekake is the most important of these. Mr. Lesoli has had a mill and a shop on this site since 1939, from which he has served a wide radius of villages with people coming by foot and horse from the southern mountains (like Maboloka), by boat from communities north across the Senqu, and by foot, horse, donkey or vehicle along the road itself. From Sekake he has provided milling services and retail shops as far as Kubung (about 40 km away with no road access), at Nkau and Tebellong across the Senqu River, and at Ha Setsena and S-forong. He said that he took a grinding mill into Kubung by hauling it on wooden sledges with a team of oxen. There were a few other trading centers at the time, such as the James Cole shop at Whitehill (another river crossing point), Ngakeli's Store in Mphaki, Mitchell's in Mt Moorosi (Koali is the next-door community), and the Newman's Tsoelike store serving many communities north-east of Saka's Nek. A map from a 1975 study of growth centers in Lesotho shows the range of villages to which such centers were providing

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14. Moody, Elize. Growth Centres in Lesotho. Pretoria, Africa Institute of South Africa, 1975 p.69.



Service areas of selected towns and villages (all services)

Figure 0.7

Source: Moody, Growth Centers in Lesotho

services ten years ago. [14] (See Figure 0.7.) Stores at such nodal points become the nucleus around which many other activities develop and services are offered: schools, clinics, agricultural services, governmental agencies, and to which people move in order to be near the services and transportation routes.

#### Location of community services, institutions and local business

Detailed listing of services offered in each village appear in Appendix 1. In this section we discuss the implications of patterns of services revealed in analysis of household questionnaires.

We asked a number of questions concerning where families go for different supplies and services. We analyzed results for buying staple foods (primarily maize meal), buying paraffin, grinding grain, and buying improved seeds and fertilizer. On the computer, we constructed matrices, each having the 34 villages listed on the horizontal axis (with a new numbering system), and the places to which people went on the vertical axis with the same numbering system. These matrices were so wide in the form of computer printout, that we have made simple hand tally's to include in this report (Figures 0.8 to 0.9). On these charts, the numbering has been rearranged so that villages of origin, and of destination, run from a south-west to north-easterly direction. Thus the villages at the upper left are nearest to Outhing (Moyeni), while those at the lower right are at Qacha's Nek and Ts'oelike. The general picture these matrices give is clear, even though details of place names are not included.

Figure 0.8 shows the matrix for where people go to buy their staple food, which is usually maize meal. In Sesotho, the question was "U\_sela\_kae?" It can be seen that in almost every location, most people purchase the staple food in their own village, or a big shop in a nearby village. In only a few cases, where there is no shop in the village or where public transportation and delivery services are good and prices very different, do people go to another village. The preference is clearly to shop locally and thus avoid the inconvenience of long distance transportation of heavy sacks of grain. If people do shop at a distance, they must then arrange and perhaps pay for the grain to be delivered by the trader, carried by public transport or rented space in a truck, perhaps ferried across the Senqu River, and finally transported into the village by donkeys, wheelbarrows, or headloads.

Responses to a similar question, "Where do you buy paraffin?" produced a similar matrix which we have not included. Here too a clear diagonal shows that most people buy paraffin in their own villages, although a substantial number from the eastern end go by vehicle to Qacha's Nek for lower prices. Maize meal purchases were reported by 99.7% of the people, and paraffin by 96.2% of the people.

The matrices in Figure 0.9 plot where people go to grind grain, and buy improved seeds. A matrix for fertilizer purchases is very similar. When we

compare Figures 0.8 and 0.9 we note first that only 86% report grinding, only 11.4% used improved seeds, and a mere 6.3% used fertilizer. The second thing to notice is that, whereas there are shops selling maize meal and paraffin in almost every village, there are only about 15 places where people can go for grinding, and only 4 main places where seeds and fertilizers are purchased. The locations of the mills and villages which report going to each are shown in the next map (Figure 0.10) while the location of the four sources of agricultural inputs are listed on the matrix.

The contrast between the distribution of the two types of services illustrates a fundamental problem in this southern area: the sources of imported consumer goods are developing very rapidly, while the supply centers for agricultural inputs and services to support local production are few and far between. If one must travel 20 or 30 km to purchase seeds and fertilizers, most farmers are not going to bother; instead, they will continue with old, unimproved cultivation methods. If one produces grain, and then must grind it laboriously by hand with stones, or transport it 15 or 20 km by headload or by donkey to have it ground, it is not surprising that many people just don't bother, and seek cash to buy imported mealie-meal or commercially baked bread, or hope to obtain free food-aid.

The underlying question, then, is this: will road improvements simply allow more food-aid handouts and expensive, imported, pre-processed foods to reach remote villages; or will development projects seek ways to increase the distribution points where people can purchase the inputs and services necessary for stimulating and increasing local productivity?

### Shops and Commercial Transport

A summary table of number of shops and type of goods carried in each village is in Appendix 1, information from interviews with shop-keepers and a report on consumer prices appears in Appendix 4, and details from the traffic counts are given in Appendix 7. Table 1.4 shows that shops in all but one village sell paraffin, in all but 2 villages they sell cabbage, and in all but 3 villages they stock commercially baked bread. On the other hand, the number of shops carrying tools and building materials is limited to the major traders, and to a few small businessmen, like those along the new road at Ma Mopeli, who seem to understand the importance of stocking items basic to genuine rural development and who have the means to transport heavy hardware to their retail stores.

Another interesting observation is the great distance which delivery trucks travel. Unfortunately, we did not have time to collect exact figures, but we observed Frazer's Wholesale trucks coming from the Orange Free State towns like Zastron or Wepener, proceeding at least as far to the east as Mphaki. Likewise we saw J.Y. Yudleman's truck, coming all the way from Matatiele or the affiliated wholesaler in Gacha's Nek, making deliveries at least as far as



Figure 0.9

MATRIX SHOWING WHERE PEOPLE GO TO GRIND GRAIN, BY VILLAGE

VILLAGES IN SPR SAMPLE

	4	5	6	7	10	11	13	15	16	18	19	20	23	24	25	27	29	30	31	32	33	34	36	38	39	40	42	43	45	46	47	48	50	51	
0	5	7			1	15	3	11		5			1	1	1	3				2			2	10	3	2	3	5	3	8		4			
2										2																									
3			1				1																												
4	15	20	8			2	6	1		4																									
6			2	1	1																														
7			2	17																															
8								1																											
9				1	18	3	4	5																											
12				1		5	3		3																										
18										1																									
21										6	16		1																						
23							20			4	20	19	18	19																					
25										1																									
26																	14																		
27																3																			
28																	1																		
30																	19	20																	
33																							18	20											
35																								20											
38																									20	18	9								
40																											17	19	16	4					
44																																			
46																																			
52																																			
53																																			

MATRIX SHOWING WHERE PEOPLE GO TO BUY IMPROVED SEED, BY VILLAGE

	4	5	6	7	10	11	13	15	16	18	19	20	23	24	25	27	29	30	31	32	33	34	36	38	39	40	42	43	45	46	47	48	50	51	
0	20	18	20	15	18	12	17	18	16	21	19	20	18	18	15	19	20	20	20	15	20	20	19	18	11	13	17	19	20	19	15	20	14	20	
3				1																															
11				4	1	8	3	1																											
12				1		1				1																									
15								1																											
23								4					2	2	5	1																			
25										1																									
36																						1													
40																						1					9	7	3	1					
44																																			
53																						3			2								1	4	6
54																																			



Mphaki and Makoae on the old road. For many years there has been a transportation vacuum, a lack of transport and delivery services in the middle section between Mphaki and Sekake. Suddenly we find that dealers at the two ends are so anxious to build up new customers along the road, that instead of a transportation "watershed" in the middle, there is now a competitive overlapping of delivery services from both ends of the SPR meeting in the Mphaki area. At the moment, South African businessmen are making every effort possible to encourage the development of a private retail sector and markets for their goods all along the new road in southern Lesotho.

#### 4.3 THE HOUSEHOLDS IN THE BASELINE STUDY SAMPLE

A large amount of socio-economic baseline data concerning the 682 households interviewed now exists on computer files. This can be referenced in a variety of ways to be of assistance to development activities in the zone of influence, and it is designed to provide bench-mark information for comparison in the future. A limited amount of analysis has been done, already producing reams of computer printout. The basic presentation of this information is given in Appendix 2, although the limitations of space and time restrict the amount of detail which can be presented. Since there is no point in repeating here the data which is given in Appendix 2, this section will simply indicate the type of data available, give some generalizations about the sample as a whole, and point out a few features of particular interest. (15) The next major section of Part One, Preliminary Impact Analysis, will make further comments on details of the socio-economic baseline data which imply road-related changes already under way.

#### Demographic Data: population, residence, education

The mean household size is 6.1 members, of whom 5.0 are residents and 1.1 are absentees. 88.4% of all households report one or more absentee, with slightly more in the Middle section (69%) and less at the Quthing end (63%). Most of these absentees are migrant workers, either in Lesotho or in South Africa, although some are students, work-seekers, or people on extended visits. 19.5% of all households report one or more children who attend school away from home. Migrant workers going to South Africa are reported in 56.2% of all households. There are substantially more migrants going from the Middle section (64% of households) than from the Quthing end (47.5%), and within Quthing's four

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15. References to specific tables in Appendix 2 will generally be made at the end of each paragraph, rather than throughout the text, because they would be too numerous.

road zones the numbers are much higher from the more remote villages than from those along the main SPRPA road. As will be pointed out later, the employment opportunities created by the SPR Project and associated commercial developments and community services in the area have no doubt contributed to this difference.

The majority of the household heads are married men (73.3%), with widowed women being the second most frequent (21%). Altogether 76% of household heads are male, and 24% are female. Table 2.3 gives a four-way break down between male-headed households with and without wage earners, and female-headed households with and without wage earners. A forthcoming IFAD development project in Quthing has a mandate, among other things, to provide small-scale productive enterprise development assistance to "the poorest of the poor." A brief analysis of our Quthing data showed that the female-headed households without wage employment (10.7% of all households) constitute the most economically disadvantaged group in terms of productive assets, household possessions, agricultural production and cash income. This is an example of the type of correlations which can be done with the data for specific purposes. (Tables 2.2, 2.3)

Although we recorded information about every individual in every household, analysis was only done at the household level, not the individual level. Thus details concerning age, sex, educational level and employment of individuals exists in the raw data but is not presently accessible. We did tabulate the highest educational level attained by any adult in the family and found it to be 6.9 years of schooling: slightly higher in Gacha's Nek and lower in Quthing. There were only 6.9% of all households with no adult who had ever attended school. 74% reported some adult with at least five years of schooling, which might be taken as an indicator of households with functionally literate adults. About three fourths of all households have at least one child attending school, while 21.3% have a child presently attending secondary or high school.

#### Household and agricultural assets

Several tables are given which summarize mean number of homestead and household items owned and percent of households owning such items as buildings, fenced plots, latrines, water tanks, motor vehicles, coal stoves, sewing machines, radios, beds, and "furniture", meaning fancy expensive sofas and stuffed chairs. (Tables 2.6 and 2.7) Similar tables are given for agricultural assets: fields and trees, animals, and farm implements. (Tables 2.8 and 2.10) The tables give each of the three major zones, and then a summary for the total population. As time and space permit, selected items are also broken down by the eight distinct road zones (see Preliminary Impact Analysis) and village level information exists in the form of computer printout. The overall picture given by these four tables and supplementary analysis is that on many measures associated with modernization and an increasing standard of living, both the Quthing and Gacha's Nek ends are high and the Middle section is low. For

example, about 15% of households at either end have wire fencing around their plots or gardens, while only 5.5% of the Middle group do. The figures for latrines is almost the same, with slightly more among the Quthing group and distinctly less in the Middle. Some items, like radios and beds, are everywhere about equally distributed.

There is a less clear pattern in agricultural assets. Somewhat more households at the Quthing end have fields (77.7%) than at Qacha's Nek (68%), which fits the picture of population density on arable land given in Table 0.1.

The percent of households owning no livestock at all is 27.9% in Quthing, 27% in the Middle, and 44.7% in the Qacha's Nek group. Holdings of cattle, sheep, goats, horses and donkeys are higher among the Quthing and Middle group than at Qacha's Nek end. The means and percent raising chickens are particularly high in the Quthing group, perhaps indicating an interest in commercial chicken raising in this area. These very general comments must be considered with two qualifications. First, remember that our interviews in Qacha's Nek District were confined to the immediate zone of influence of the SPR; we did not attempt to reach the Sehlabathebe area or other more remote mountain areas where livestock are more numerous and more people are making their living by agriculture and stock rearing. Certainly data now coming from the Sehlabathebe baseline study will be an important correction for a picture of Qacha's Nek as a district. The second qualification is to remember the diversity of road zones and hence of villages included in the Quthing end section.

#### Agricultural and livestock production

The mean number of bags of the principle crops produced in 1983/4, as well as percent of households which planted each crop, is given in Table 2.10. The devastating impact of the drought in Qacha's Nek is very clear from this table, showing almost no yield from most crops in that area. Table 2.16, near the end of Appendix 2, gives summary measures whereby we computed the cash value of reported agricultural production for 1983/4 and again the contrast between Qacha's Nek and the rest of the sample is striking: M11.90 for the year in Qacha's Nek, compared to M61.40 in the Middle and M82.20 in Quthing (M55.55 for the total sample). If we take the estimated cash value of crops produced in 1983/4 and divide by 12, we find that for the total sample, only M4.63 per month can be said to have been contributed by agriculture to the monthly income, or 3.2% (4% for the highest producers, those in Quthing section). This is in contrast to an amount of 12% which Tesfa Guma, an FAO agricultural economist, estimated that crops contributed to family income in 1976 in the Senqu Project

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16. Guma, Tesfa and William Mofoso, Farm Management Economics Terminal Report, Senqu River Agricultural Extension Project, Mchale's Hoek, UN/FAO, 1976, p. 42.

area. (16)

The fact that only 11.4% of the households used improved seeds, and only 6.3% used fertilizer, has already been noted. In addition, 4.3% used insecticides. Almost all of these households are from villages close to the Co-op Lesotho centers at Ha Koa11, Whitehill and Qacha's Nek, or to the Mphaki Project at Mphaki (Letsielo). A few reported buying such items in local shops or mission stations and one person went to Matatiele. Our data suggests that the use of such inputs is strongly correlated with supply centers and transportation routes.

Similarly there are very few users of livestock related inputs. Although chickens are kept by 80% of all households, only 8.2% buy chicken feed (over a third of these buy from Co-op Lesotho at Whitehill). Only 5.2% buy animal food (grain) and 2.6% buy fodder. Medicines for treating livestock were reported by 11.7% of the group; this is probably higher because treatment for livestock ailments is more generally available at woolsheds and livestock centers as well as at Co-op Lesotho stations and the Mphaki Project (which served 28 of the 52 users).

Wool and mohair sales are important sources of income to residents of the SPR's zone of influence. 18.2% reported selling wool, while 17.4% sold mohair. The villages on the Guthing feeder roads, the area around Mphaki, and the Middle section had the highest amounts and most number of cases. The woolsheds at Seleaters, Maphelle, Ha Ntsie and Whitehill, and private traders at Mphaki and Sexake are the most important places for wool and mohair sales. Sale of other livestock products were surprisingly low. Only 5.7% sold cattle, 4.5% sold sheep or goats, and 1.8% sold horses or donkeys. Almost all of these sales were within the village or to people in other villages: not at formal livestock markets. Chickens were sold by 6.9% and eggs by a mere 3.1%, although a very small number of people in roadside and peri-urban areas at the Guthing and the Qacha's Nek end sold quite large quantities as commercial poultry enterprises.

### Employment and income

Tables 2.14 and 2.15 report results of our questions concerning amount of cash income per household per month, from various sources. The first table shows means calculated for the entire sample regardless of how many reported a particular source of income, and then computed for the limited set of people reporting. Thus, for example, the overall monthly mean received from male migrant earnings was M62.16, but since only 369 households reported income from this source, the mean was M113.54 for the households of male migrants. Note that 95.9% of households report income from male migrants, and for the entire sample, the M62.16 per month amounts to 43.8% of the total cash income from all sources combined. The most frequently mentioned income sources and the percent of people reporting each source, can be computed from Table 2.14. Thus we find 10.3% with income from men employed in Lesotho, 7.9% with income from women

working in Lesotho, 9.2% with livestock sales, 17.3% sale of wool and mohair, 7.5% sale of poultry, 8.5% sale of crops, 10.8% sale or re-sale of fruit and vegetables, 7% sale of handicrafts, knitting and sewing, 9.7% Food-for-work activities, and a staggering 35.8% report income from sale of home-brew or imported beer. (The slight discrepancies between these percentages, and the figures given above for sale of livestock and agricultural products, is due to the fact that there were several different questions in the survey, and sometimes a person reported sales but did not know the amount of money, or reported the money but had given a negative response to the previous questions.)

The amounts reported for earnings from a stall or shop are unusually high, although only 6.2% of the households report this source. The amounts are high in part because small shop-keepers tend to report gross intake rather than net profit, being unfamiliar with the concept of subtracting expenditures from intake. It is also because there were actually several very prosperous shop-keepers who were quite honest in their reporting. Note the contrast between the mean on this item for all households (M22.19), and the mean for those 41 who actually do run shops (M367.00).

## 0.1 PRELIMINARY IMPACT ANALYSIS

A few indications of changes which the Southern Perimeter Road has already brought can be obtained from the data which we have collected, although a complete impact analysis will only be possible when the entire project, from Guthing to Macha's Nek, has been completed. This preliminary analysis is based on the following types of information, much of which is presented in detail in the relevant appendices.

- STATED OPINIONS BY THE 602 HOUSEHOLDS INTERVIEWED, concerning changes brought by the Southern Perimeter Road, benefits and problems of road construction in general, village needs, and other transportation problems.
- OBJECTIVELY MEASURABLE FEATURES FROM HOUSEHOLDS, VILLAGES AND TRAFFIC COUNTS, COMPARING ROAD ZONES AND CHANGES OVER TIME on such items as home construction, standard of living, income, increase in numbers of vehicles, road uses and growth of new businesses.
- EVIDENCE FROM OBSERVATIONS, EXPERIENCE AND INTERVIEWS WITH VILLAGERS, BUSINESS PEOPLE, SPRPA STAFF, DEVELOPMENT WORKERS AND GOVERNMENT OFFICIALS concerning changes already noted or anticipated in the Southern Perimeter Road's zone of influence.

### 0.1.1 CHANGES WHICH THE SPR ROAD HAS BROUGHT - THE PEOPLE'S VIEW

Rather than begin with categories suggested by the Project Paper or other literature, we begin by listening to ordinary villagers along the road. We asked them to mention changes they have already noticed because of the construction work on the road from Guthing to Mphaki. Table 0.2 gives a compilation of answers given to this question, showing frequency and percent of responses by the total group, and then weighted frequencies for the three main road zones. Similar tables summarizing answers to related questions are given and discussed in Appendix 3.

Table 0.2

WHAT CHANGES HAS THE SOUTHERN PERIMETER ROAD BROUGHT SO FAR?  
 Frequency of responses given by 575 households  
 (Up to 3 possible responses per household)

RESPONSE	FREQUENCY All zones	PERCENT All zones	WEIGHTED FREQUENCIES		
			Quth	Midl	Q Nr
I haven't seen it yet	256	29.7	19	102	127
Improved quality of road	150	17.4	82	20	15
Trips are now shorter	113	13.1	21	29	55
More transport is available	88	10.2	29	37	10
Few cars on old road	64	7.4	43	2	1
More shops, roadside sellers	60	7.0	18	16	18
Goods transported easily	21	2.4	9	6	3
Vehicles travel easily	18	2.1	10	3	1
Transport of sick people quicker	14	1.6	7	4	-
New government garage, and woolshed	14	1.6	10	-	-
Fewer accidents	9	1.0	4	-	3
Better houses (cement, zinc)	8	0.9	1	6	-
Trips cost less	5	0.6	2	1	1
Old road not maintained	5	0.6	4	-	-
More churches, schools	5	0.6	2	-	2
People move to be near road	5	0.6	1	4	-
Vehicles from Mas-rn come often	4	0.5	1	2	-
Still need access roads to village	4	0.5	3	-	-
Rural development in general	4	0.5	1	1	1
Drought relief (food) comes	3	0.3	1	2	-
High, unregulated taxi fares	3	0.3	1	1	-
Problems, expenses, roaming about	5	0.6	2	2	-
Animals get killed on road	2	0.2	1	1	-
Employment on rd construction	1	0.1	1	-	-
	861	100.0	273	239	237

\* Weighted frequencies are given for the sake of comparability, since there were 200 households in the Middle and Qacha's Nek groups, but 282 in the Quthing group. To normalize the scores, the actual number of responses from all Quthing households has been multiplied by a correction factor of .71 (Quth Freq x .71 = 200/282).

Comparing responses from different areas reveals the experience, perceptions, problems and expectations of people in the zone of influence.

"We don't know because we haven't seen it yet" - This is the most frequent response from the people in the middle section and the Qacha's Nek end and on the old road or remote feeder roads in Guthing. Such comments not only state a fact, but imply the desire on the part of many that they too should be able to benefit.

"Improved quality of the road" - This is the major heading under which we have grouped a variety of observations about the road being smooth, wide, well surfaced, with better bridges, less dust, less steep grades, etc. Naturally such comments come most often from the Guthing to Mphaki population who make most use of the road. Responses grouped under the heading "Vehicles travel easily" also show awareness of how the quality of the road affects the vehicle operators and users. Probably the comments that there are "fewer accidents" is also related.

"Trips are now shorter, we get to our destinations quickly" - This is the second most frequent comment from people at the Qacha's Nek end, showing that over a quarter of the 200 households are already aware of benefits they receive, even though only the Guthing to Mphaki section has been completed. The reduced travel time is particularly important for travellers going from Qacha's Nek to Maseru or other northern towns, especially the poor and ordinary people who cannot afford the airplane fare. It is also important for children travelling to schools, civil servants and extension workers, and business people. It is now possible for the trip from Qacha's Nek to Maseru to be made by in a single day, as some private taxis and small buses do, although the Lesotho National Bus still stops overnight in Guthing. Obviously this difference between a one or a two day journey is crucial, because the need to find accommodation in a strange town on route to Maseru was a great problem which is at last being overcome.

"More transport, both public and private" - This is the next most frequently mentioned item. Even people in the middle section comment on the increase, even though the road had only reached Mphaki. Related and frequently mentioned responses are "Goods transported easily, shops and wholesalers now make deliveries to villages, shoppers can bring their purchases home easily, etc."

"More shops and road-side sales people along the way" - This observation was made by people from all three sections, even those just passing through.

"New government and development project activities" All of the people making this comment are in the Guthing group. Specific mention was made of a new woolshed being constructed near Lebelonyane on the new road to Mphaki, and a new government garage, roads camp, and Mphaki Project developments in Mphaki itself. Note also responses from each district about rural development in general and about drought relief grain reaching these areas easily.

"Transport of the sick people quicker" Note, in addition to this table, that the concern with transportation for medical care is the second most frequently

mentioned benefit of roads in general (Table 3.2) and village improvement needed (Table 3.6).

"Better houses, more cement block houses and zinc roofs" - See Tables 0.3 and 0.4 later in this section for additional evidence of this change, which seems very obvious to any traveller on the road.

"Trips now cost less" - This comment is made by 5 people, but 3 others said taxi fares are high, and 2 said people now roam about and waste money.

"Few cars on the old road" and "The old road is not maintained" - Not surprisingly, these comments were primarily made by residents of the old road. Data given in Appendix 7 from the traffic counts supports the lack of sufficient transport to meet the needs of this rather densely populated and, formerly heavily travelled section of the road. In fact the road is being maintained, with employment opportunities for local residents. The comments came at a period of abnormally heavy rains which caused road maintenance problems everywhere (see photographs.)

"People are moving to the roadside" - This category actually includes two different observations about population shifts: new houses and businesses are moving to the roadside sites within a single village, and people are moving from remote areas or old road villages to villages along the new road.

Other items which are mentioned infrequently can be left to speak for themselves. We also suggest that this table should be studied in relation to the tables reporting answers to other opinion questions which are included in Appendix 3. Some items which do not appear very high in this table about changes, come to the forefront in other related questions.

Thus EMPLOYMENT is not high on the list here, perhaps because it is not seen as a long-term change which the SPRPA has brought, even though long term employment trends may become evident after five years. Employment is, however, an important concern which is evident in other tables. See particularly Table 3.2, in which 75 out of 230 Qacha's Nek households, mentioned road construction jobs as a benefit of road improvements.

AGRICULTURE is another concern which we might have expected to be mentioned; and it is in other tables. However, agriculture too may be seen as something which is not immediately relevant to a new road, even though long term impacts of the road on agriculture may be considerable. Perhaps the lack of comments about agriculture show that the first value of improved transport is the opportunity people get to move AWAY from the isolated farm homestead for shopping, visiting and other purposes. Perhaps it takes several years (and adequate rain and agricultural development projects) for changes in a road to bring about changes in agricultural inputs, practices, technology and extension. See Table 3.5 for detail concerning agricultural related transportation problems.

## 5.2 OBJECTIVELY MEASURABLE FEATURES FROM BASELINE DATA

The baseline data which has been collected and reported in the appendices by THREE ZONES, can also be broken down by our original eight ROAD ZONES. This makes it possible to compare certain conditions in villages in road zone 1 (between Moyeni and Mt. Moorosi where the SPRPA work has been completed), and zone 2 (between Mt. Moorosi and Mphaki where the SPRPA new alignment has been completed) and the other zones which are more removed from the SPRPA road. A limited number of variables of interest have been broken down by the eight road zones for comparison in this section.

This gives some indication of the impact of the SPR Project activities on the area in which it has been based since 1980. Interpreting such data must be done with caution, however, for two reasons. First, because it may take months or even years for patterns of living to change and for private sector growth, public services and development projects to respond to the new opportunities presented by a new road. For example, the new road to Mphaki had only been open for four months at the time our study began. Data on agricultural resources and production as well as home construction represent the period before the road was open. A second, and more general caution, is that changes within an area, or differences between areas, cannot necessarily be attributed to the road itself. They may result from other factors, such as (1) the long history of settlement and commercial development in the Guthing to Mt. Moorosi area, (2) urban development efforts in Qacha's Nek after the Transkei border closure of 1976, (3) deliberate expansion of public services in a defined "growth center" such as Sekake, or (4) from the effect of a particular development project in an area away from the new road, such as the Plenty Lesotho Project on the old road at Ha Makoae.

With these qualifications stated, we present some comparative data for the reader's cautious interpretation. First, in Table 0.3, data is given concerning general standard of living as measured by the percent of households owning certain types of modern household assets. It is clear that on every measure, the first zone is above average for the whole population, and higher than any other sub-group except in the case of furniture. By furniture we mean what local shops mean: heavy, expensive items such as stuffed chairs, sofas, and "Lounge suites" or quality wooden and upholstered dining room table and chair sets. A few of these items are to be found in between a quarter and a half of the households in all areas. They are most common, however, in the Guthing to Mt. Moorosi section, and in the Guthing feeder roads which can be reached by delivery trucks or private vans turning off from the SPRPA road. The difference in percent having wire fencing, latrines and coal stoves is particularly striking. The second road zone still has the characteristics of some of the most remote agricultural areas in the middle; it will be interesting to see how rapidly changes take place in this newly accessible area.

Table 0.3

OWNERSHIP OF HOUSEHOLD EQUIPMENT AND FURNITURE BY ROAD ZONE  
percent of households with one or more

road zone	wire fence %	la- trine %	coal stove %	furni- ture %	vehi- cle %	zinc roof %
SPRPA G to Mt.M	35.0	46.7	33.3	53.6	8.3	75.0
SPRPA new Mphaki rd	7.4	3.7	4.9	27.2	3.7	51.2
Old Mphaki road	5.0	10.0	5.0	55.0	5.0	46.7
Guthing feeder rds	21.3	13.8	8.8	51.3	7.5	51.3
Middle under constn	10.0	9.0	6.0	36.0	1.0	60.0
Middle feeder rds	1.0	4.0	-	32.7	-	46.5
Across Senqu river	15.0	12.5	15.0	35.0	5.0	60.0
Gacha's Nek end	14.5	14.4	20.0	33.8	3.8	60.6
Total	12.2	13.1	11.5	38.8	3.8	56.2

The second chart (Table 0.4 below) gives details about building construction, based on a "modernization score". About each building which a family owned, the interviewers recorded the nature of the walls (ranging from mud and stick to cement block), of the roof (thatch or corrugated iron, generally called "zinc"), whether or not it had glass windows and metal door frames, and how many rooms there were. On the basis of this information a "modernization score" was computed. The mean scores for up to three buildings per household are given in Table 0.4, as well as the number of households giving information about a first, a second and a third building. (Only a few had more than three). The same pattern as in Table 0.3 occurs, with the highest modern building score being found in the area where the Southern Perimeter Road Project has been based and where road construction has been completed. In this case we note that among the people who have managed to build a second and a third building, those on the brand new road to Mphaki score in second place. Observation along the road indicate a tremendous amount of new home construction as people rush to take advantage of the new-found opportunity for heavy, bulky building materials to be delivered by truck or purchased from the new shops spring up in places like Mohlakoana and Ha Mopeli on the new road and others in

Mphaki and beyond. Some of the photographs in Appendix 10 illustrate this process. Additional information concerning the date of building construction and purchase of building materials was collected and may be used for comparative analysis in the future.

Table 0.4

BUILDING MODERNIZATION SCORE.  
 BASED ON TYPE OF CONSTRUCTION, ROOFING AND NUMBER OF ROOMS  
 mean score per building, scoring up to 3 buildings per household  
 and number of cases

road zone	1st building		2nd building		3rd building	
	mean	cases	mean	cases	mean	cases
SPRPA Q to Mt.M	5.6	58	7.3	43	8.7	24
SPRPA new Mphaki rd	2.9	81	6.6	46	8.0	18
Old Mphaki road	2.9	60	4.9	50	6.9	21
Outing feeder rds	3.7	78	5.7	61	7.9	35
Middle under constn	4.2	98	5.3	74	6.3	39
Middle feeder rds	3.4	99	4.8	66	5.6	29
Across Senqu river	3.8	40	5.6	34	3.1	14
Qacha's Nek end	4.7	159	5.8	117	4.0	55
Total	4.0	673	5.7	491	7.3	229

\* examples of scoring: (thatched rondavel=1 or square thatched house=5 or square stick/stone walls metal roof=7 or cement walls metal roof=8) + (glass windows=1 or glass windows and metal door frames=2) + (number of rooms) = total BUILDING MODERNIZATION SCORE

The third table in this series (Table 0.5) gives some indication of the financial basis for the standard-of living indicators above. It is clear that the opportunities for local wage employment for both men and women within Lesotho are much greater for those households living in the vicinity of the SPRPA project than for any other group, although for women the amounts earned are quite small, and not too different from the amounts reported from the Qacha's Nek end of the road. The highest mean for men working in Lesotho was M44.35 from Pokane, in the first road zone. The fact that these local wages are high in this zone does not necessarily mean that the people found employment with the Southern Perimeter Road work; but it does suggest a generally higher amount of money circulating in the local economy in this area--which is, incidentally, the nearest to Maseru and to Guthing, Mochale's Hoek and other lowland towns where people may find employment. The figures for earnings from cafes and shops, and figures for total income support this.

Table 0.5

MONTHLY CASH INCOME FROM WAGE EARNERS, RETAIL TRADE, ALL SOURCES,  
PLUS CASH VALUE OF AGRICULTURAL PRODUCTION IN 1983/4  
mean maloti per month per household

road zone	men in RSA monthly	men in Lesotho monthly	women in Lesotho monthly	cafe or shop monthly	total income monthly	crops value yearly
SPRPA Q to Mt.M	50.19	31.88	14.46	76.14	278.11	41.56
SPRPA new Mphaki rd	63.83	6.54	4.00	.49	107.30	94.26
Old Mphaki road	85.75	3.00	3.87	18.67	142.75	72.88
Guthing feeder rds	74.29	6.94	4.59	14.20	172.50	107.36
Middle under constn	46.60	7.14	3.73	39.18	112.22	66.34
Middle feeder rds	54.35	7.93	3.35	7.37	94.70	56.50
Across Senqu river	78.62	10.50	4.50	28.62	176.48	19.88
Qacha's Nek end	61.24	15.77	13.51	15.96	136.47	9.89
Total	62.16	11.14	7.06	22.19	141.85	55.49

A second striking feature of Table 0.5 is the fact that earning from male migrant workers, and from crops, appears to vary inversely with that from local employment. This pattern is most dramatic in the case of value of crop production, with the highest amounts found in the Guthing feeder road villages and the newly opened up road to Mphaki. An important question in the case of road zone 2 is whether the present level of agricultural production will be sustained, with adequate support from agricultural development project activities, or whether the new road will lead to a shift away from agricultural production towards wage employment.

Finally, we note a summary measure which includes both reported cash income from all sources, and the cash value of agricultural produce (as given in the

last column of Table 0.5, divided by 12, less any income from crop sales which had been included in the cash income report--to avoid counting this amount twice.) Note that we have not attempted to quantify the subsistence value of livestock production. The figures for eight zones are given in Table 0.6. In 1974 a Poverty Datum Line estimate was calculated by Marres and Van der Wiel for Lesotho. This figure has been periodically updated by the Bureau of Statistics. The most recent update gives a figure of M260.31 as the Poverty Datum Line for an average rural household in April, 1984. (17) The only road zone in which our estimated total income (cash and crop value) is above this Poverty Datum Figure is that in which the Southern Perimeter Road Project has been working. Again we emphasize that the SPR Project is only one of many factors which contribute to the higher income levels, and higher standard-of-living indicators in this area. It is an area which has been heavily settled and developed for many years, which is closest to Maseru, and which has a few very affluent residents. Yet certainly the SPR Project has played a role in increasing the amount of money in circulation, increasing employment opportunities, and providing the improved infrastructure to make other private enterprise and government sponsored development activities possible.

Table 0.6

MONTHLY CASH INCOME PLUS VALUE OF AGRICULTURAL PRODUCE  
mean maloti per month per household

road zone	total income
SPRPA Q to Mt.M	292.14
SPRPA new Mphaki rd	115.11
Old Mphaki road	146.80
Cuthing feeder rds	176.37
Middle under constn	116.82
Middle feeder rds	98.65
Across Senqu river	172.73
Qacha's Nek end	137.19
Total	144.74

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17. Marres, P., and A. Van der Wiel, Poverty Eats My Blanket, The Government Printer, Maseru, 1975 and up-date by K. S. Nyokong, Bureau of Statistics, Maseru, 1984.

### 5.3 EVIDENCE FROM TRAFFIC COUNTS AND RELATED DATA

Appendix 7 gives detail concerning the amount and type of traffic at various sections of the road. It includes reports of government and SPRPA counts, as well as SPR Baseline Study counts made between January and March of 1985. We noted an average of 89 vehicles and an estimated 512 travelers per day at Ha Mopeli, on the new SPR alignment between Mt. Moorosi and Mphaki. This was only four months after the road was opened and contrasts with just 41 vehicles reported at Mphaki, eight kilometers beyond Ha Mopeli, in May of 1984. Only 36 vehicles and an estimated 252 passengers per day were counted in the middle section, at Malefane during our research period in 1985. (See Tables 7.2 and 3.)

We will also include here data from the household interviews concerning uses made of the road, comparing road zones. We asked each household how many trips they had made by vehicle during the period since Christmas, roughly 6 to 8 weeks. The results are given below.

Table 0.7

#### NUMBER OF TRIPS MADE IN PREVIOUS 6 - 8 WEEKS, MEAN NUMBER PER HOUSEHOLD BY ROAD ZONE

road zone	mean number of trips
SPRPA Q to Mt.M	3.8
SPRPA new Mphaki rd	2.0
Old Mphaki road	1.9
Guthing feeder rds	1.3
Middle under constn	2.1
Middle feeder rds	1.9
Across Senqu river	1.8
Qacha's Nek end	4.9
Total	2.7

It is clearly the villagers at the two ends of the road near the two main towns, who are making most use of the road. In the Qacha's Nek sample we had several villages within 20 km of Qacha's Nek, and in the village closest to Qacha there were several people who have regular employment, drive vehicles, or who regularly sell food on the street of the town. These few daily travellers greatly inflated the averages for this road zone. Next to Qacha we see the people on the main SPR section, from Guthing to Mt. Moorosi, as the next most frequent travellers. These figures say as much about the differential availability of public transport, as they do about people's intention to

travel. The opinions about road benefits and problems which are discussed in Appendix 3 give a good picture of the areas where people are suffering for lack of transport, and areas where it is becoming readily available but at prices which many people say they cannot afford.

#### 5.4 OBSERVATIONS, EXPERIENCE AND INTERVIEWS ALONG THE ROAD

The most obvious source of evidence for the impact of the Southern Perimeter Road comes from our own observations, experiences and interviews with business-people, development workers, SPRPA staff and government officials during the field research period when we drove about 9,000 km back and forth between Quthing and Qacha's Nek. This evidence came in both positive and negative form. We learned about the changes which the completed sections of the road are already making at the south-western end. We also learned (often by bitter experience) about the transport problems which travellers face along the north-eastern end. A number of the photographs in Appendix 10 illustrate points which are made in this section.

##### Increased availability of transportation

The increased amount of public and private transport and reduced time for travel is the first thing almost everybody in the Quthing area with whom we spoke mentioned. "We are kings now, because of this road" said one woman living on the new road near Mphaki. "Even nursing mothers can now manage to go to Quthing to shop, and come back and nurse their children--something which never happened before." She herself lives in Mphaki but now commutes each day by taxi to a teaching job in a growing Secondary School in Ha Mopeli, 6 km away. Before the road opened she spent two hours a day walking.

"Women are perhaps the chief beneficiaries of the new road," said one of the Nello Teer workers just before he left. "Coming from the mountain villages, I used to see so many women walking to and from the clinic every Tuesday, with babies on their backs, and headloads of groceries as well. Now we see very few people walking. All these people are riding buses, or waiting by the roadside for transport." Although our interviews showed that some people complain about high fares and lack of money, this observer felt that "the money for taxi-fares is there, once the road makes the transport available."

Later on in our trip, on a high isolated stretch of the nearly deserted old road near Ongeluk's Nek, this comment was reinforced. We watched a group of men passing on horseback. Then boys on donkeys who were transporting heavy loads of grain. Then a woman on foot, struggling with a heavy metal trunk on her head a baby on her back, and a small child at her side, with no alternative but to walk. Men have always had more access to animal transport in Lesotho, while

women have themselves been the beasts of burden for their families, until trucks and buses can relieve them of some of the load.

Another effect of the improved road on transport is that many more private individuals are now operating vehicles in the zone of influence. We saw a surprising number of vans and taxis with license plates from the northern districts of Lesotho, suggesting either that people from the south are buying vehicles, or that owners and drivers from the north are now finding it worth-while to run their taxis and transport goods into the southern districts. We also saw many big delivery trucks, small vans and private cars with South African plates. One Mosotho said that with the new road, a 4-wheel drive is no longer needed. Since any kind of car can get to Mphaki, many migrant workers are buying their own cars to drive home with, and people from Maseru can drive to visit their relatives along the new road.

The absence of public transport in the middle sections of the road was just as obvious to us as its presence between Quthing and Mphaki. And even more acute are the problems of those who live on remote feeder roads, or across the Senqu River. We met some on the main road who had walked for hours, only to be forced to sit by the road-side for the rest of the day, sometimes in the rain and mud, hoping for a vehicle to pass to take them to Quthing or Qacha's Nek. The store manager at Tebellong said the people north of the river have particular problems. They may ride by horse down from the mountains and then have to leave the horse all day while they cross the river by boat, wait for a ride in to Qacha's Nek, do banking, shopping and other business, then hope there will be a vehicle to get them back in time to cross the river before dark and ride home. The manager said that just the previous week she had had M10,000 in checks to take to Qacha's Nek and cash for such people--mostly wool and mohair payments and money from the mines. The completion of the SPR through road would speed trips for village people like these, even though they live at some distance from the road itself.

#### Increased commercial activities - and transport of goods purchased

The rapid growth of small retail businesses, and movement of vehicles supplying goods to shops along the road, is the next most evident impact the road has had. The area between Quthing and Mt. Moorosi has had shops and been served by delivery trucks for many years, so it is difficult to measure the growth which the SPRPA activities have stimulated, though local business men like the manager of Mitchell's Store in Mt. Moorosi attest to a booming business in the area. It is on the completely new road alignment, between Mt. Moorosi and Mphaki, that the change is most obvious. On our first field trip, in December, just two months after the road was opened, one of the SPRPA engineers pointed out half a dozen new little shops which had sprung up overnight. Other established shops are now expanding to handle building materials, tools, farm implements, fodder, furniture and other bulky items which they can now bring in by truck. In Mohlakoana, an old shopkeeper told how he used to have goods sent

from the Republic to Mt. Moorosi, then bring them by donkey to his shop. Now he sits watching big delivery trucks from Frazers and Remus wholesalers pass through the village each day on the way to shops all along the new road, in Mphaki and beyond. "In the past" he said, "it was only the big traders on the roads who could afford trucks and pay people to transport goods for them. Now there is so much transport and delivery service that many local people are opening shops in every little village."

One store-keeper on the new road said that he used to have to spend so much time driving to buy his stock, and had to sleep overnight in South African towns which was very inconvenient. Now he can go to Wepener or Zastron and buy stock and return the same day, or place orders and have them delivered. "The road is linking the camps," he said, "making the distances between towns so short that I can do business in several places in the same day and still get home before dark."

At a number of points on the roadside we saw piles of roofing zinc, poles and rafters, bags of cement, metal door and window frames, and sacks of maize meal which had been unloaded from one of these delivery trucks for villagers who would then bring donkeys or headload the goods to their villages a bit off of the new road. The increase in construction of new buildings with modern building materials is one of the most visible changes all along the road. Even in the middle section between Quthing and Qacha's Nek, there are many new shops, and evidence of regular delivery of building materials and related goods for an expansion of commercial and home construction activities.

"With this type of road", one of the Basotho working for the SPRPA explained, "even the people up on the mountains can adopt the style of life like people in Maseru. Many have been to school in Maseru and they too want nice things which town people have--better houses, water taps, latrines, furniture, stoves, even TVs." He went on to say that the improved road now makes it possible for development projects and private businesses to bring in heavy machinery such as generators, transformers, pumps, etc. He had learned the importance of such machinery during his work with the SPR Project, and realized that the same infrastructure which made it possible to move these items for road construction, would facilitate the movement of such heavy machinery for other development activities.

Increased commercial activity also includes the opening of new hotels, restaurants, bars, and places of entertainment along the way, as well as opportunities for individuals to sell fruit or cooked food by the roadside. We noted investments at all levels. In Qacha's Nek a splendid new hotel has been opened by an enterprising resident who could see the growing influx of civil servants, development project people, and other visitors. He already had opened a very successful restaurant and cafe, then a petrol station. Near the new airport, he has now added a hotel/motel which has become the social center of Qacha's Nek in just the first few months of 1985. At the other end of the road at Pokane, between Quthing and Mt. Moorosi, where SPR construction is completed, is an auto mechanic turned businessman, who has opened a shop, a supermarket and a bar and "disco" with an elegant thatched-roofed tourist-oriented design. He is planning to open a hotel next. He said a friend had advised him a few years ago that the new Southern Perimeter Road was going to be built and that such investments would surely succeed with all the travellers soon to come.

Apparently, his friend was right.

It isn't only the rich businessmen who benefit. At Ha Mopeli, on the new road, we talked with a woman selling fat-cakes in front of a new shop where all the taxis and buses stop. She said she came from a remote village near Kubung, 18 km walk to the north, on the banks of the Senqu River. Defeated by poverty, drought, and family problems, she had come to the road-side where she found a dependable way to support her children, cooking and selling fat-cakes to the travellers who now pass each day. We wondered, as we talked with her, about the possible negative impacts of the road on agriculture, encouraging people to move away from the farm lands to join the the strip settlements along the road-sides. From her perspective, she had found that selling cooked food in the "informal sector" to relatively wealthy passers-by, was a much more interesting, dependable and less back-breaking way to earn a living than farming.

#### Movement of people and changing land use

Related to the opening of new businesses and increased home construction, is the issue of changing land use and population movements. It will take some time for long term trends to be measureable, but already changes are evident, particularly along the completed sections of the road and in Mphaki. As new shops and bars and restaurants and butcher shops and cement block making businesses spring up along the road-side, it is clear that what were formerly fields, or residential sites, are being reallocated as business sites. Similarly, new houses are appearing along the road-sides where fields are being reallocated as residential sites. The new road itself has necessarily ploughed through rich agricultural land in the area in and around Mphaki. Several businessmen on the new road said they had recently moved up from sites on the old road. One informant said that there were many applications for business and residential sites in Ha Mopeli, and Mphaki. Many villages along the road in the middle and at the Qacha's Nek end are experiencing similar growth also, particularly in the area of Sekake, and between Whitehill and Qacha's Nek town.

Comparison of 1984-5 roadside photographs such as we have taken, and a recent nationwide series of colour aerial photographs taken for the Range Management Project, with pictures which could be taken in 1990, should be of great interest for monitoring changing roadside settlement patterns. Likewise one could compare growth of the two main urban areas for which detailed maps from the past twenty years exist.

Better transport encourages better-qualified workers to come to these areas, to feel less isolated, and be willing to stay

Several people pointed out to us the impact of the shorter road link upon efforts to recruit and retain qualified nurses, teachers, agricultural extension workers, and other trained development workers in the southern areas. The priest at Christ-the-King mission said that he used to feel so isolated, being assigned to work so far from Maseru. When he visited his brothers in Maseru they expressed pity for him as if he were a real "country boy" out of touch with the life of the church and nation. Now, he says, there are always visitors from Maseru passing through on the way to Qacha's Nek. They now come by road rather than plane, because the trip is quick and easy--and so they keep him in touch. He himself can now go to Mt. Moorosi in the morning, do mission business, and be back for mass in the evening, whereas it used to require an overnight stay.

The Anglican school in Ha Mopeli, and the Catholic school in Mt. Moorosi, also said it is now much easier to get good teachers. People are now willing to work there knowing that they can get a bus home to Maseru for a weekend and be back in time for classes on Monday morning.

Likewise the Ha Mopeli school staff said that officials from the Ministry of Education now, for the first time, are beginning to visit them, because they are on the main road at last.

Increased employment opportunities and skills training

Many people along the way from Mphaki to Qacha's Nek were eager to find employment during road construction, as people in the Quthing area already had done. When we advertised for survey enumerators, we had about ten applicants for every temporary post we could offer. Our interviewer in Sekake discovered that there were imposter recruiters along the projected road zone who were collecting fees of about 50 lisente from villagers hopeful of gaining road construction jobs. A man would write people's names on a list, pocket their money, and disappear. Wage employment is desperately desired in this area, and people know that there will be some luck; ones who will be hired during the road construction period.

We also learned from interviews with SPRPA senior staff that useful skills had been imparted to people who had worked on the road. One Nello Teer engineer told us that (1) Basotho had been trained sufficiently well in carpentry skills during the building of the Quthing River Bridge that the Malawian carpenters who originally came had been replaced by Basotho; (2) skilled Basotho masons and

bricklayers had learned improved methods of mixing and handling concrete, skills which they were able to transfer to private work in the local construction business after SPRPA employment was over, and (3) that most of the taxi drivers on the new road from Quthing to Mphaki had learned to drive the new road through work as drivers with SPR trucks during the construction period. He felt that this was an important factor in the low accident rate on the new road.

#### Integration of southern areas with the rest of the country

Each day that we were on the road we saw a number of government landrovers carrying agricultural, health and other extension workers, civil servants, political figures, stock theft unit policemen, military personnel and other representatives of local and national government. Some were on patrol, some were just passing through from Maseru, and some were on their way to hold village pitsoa or carry out various development activities. It seems as if there has been a great increase in the number of such government travellers in recent months. They now come from Maseru by road in just one working day, whereas previously the trip would have taken two days, or they would have flown, or they simply would not have travelled in this area at all. Whether their assignment is security, development or politics, these government travellers give evidence to the fact that the Southern Perimeter Road has already made a significant contribution to meeting one of the project's goals, integration of the remote southern districts with the rest of the nation.

#### Agricultural projects and agro-business benefit from road improvements

The impact of the SPR on agriculture is difficult to predict. One negative impact which people mentioned to us and which is obvious to any observer, is the unavoidable destruction of fields, gardens and trees along the route of the road. Related is the process of roadside residential development, whereby prime arable land is used for homestead development. Another potentially negative impact might be a more long-term attitudinal change, whereby people become preoccupied with wage employment, informal sector activities and acquisition of consumer goods, perhaps even moving away from the farming areas to seek work in the towns, to the detriment of local agricultural production.

On the other hand, there are many ways in which the improved Southern Perimeter Road is already having a positive impact on agricultural and agro-industry developments in the southern districts.

First, we note the rejuvenation of the Ministry of Agriculture's EEC-funded

**Mphaki Livestock Development Project.** This project has been going since 1979, but with very limited staff and impact. However, in the past six months it has begun many new activities. This is partly related to new, capable and energetic staff, both local and expatriate. However, the very fact that the staff has suddenly increased is not unrelated to the road improvements which permit them to travel to Maseru for project and personal business in a little over four hours, rather than the eight or nine hours which it used to take. In addition to new staff, the project is expanding its services by building a new woolshed at the high Lebelonyane Pass on the new SPRPA road. Those building the woolshed said that it had been planned anyway, and was not connected with the new road. But obviously it would have been impossible to reach this location by vehicle without the road. The Danish volunteer doing the building said that now, because of the road, suppliers in Mphahle's Hoek and Quthing are willing to deliver building materials directly to the site or to the project offices, making construction much simpler. Thus the SPR Project is providing the infrastructure to assist another donor's agricultural services project--the type of cooperative development activity necessary to encourage positive, rather than negative, impacts of the road on local agriculture.

Similar evidence can be cited from other existing or potential agriculturally related projects in the area. For example, the International Fund for African Development (IFAD) is currently developing a project to assist small scale irrigation projects, agriculture, and other small businesses in Quthing District. The sociologist with the preliminary planning team pointed out to me that the existence of a good surface transport infrastructure is vital if the project is to be economically feasible. IFAD will be making loans to local farmers, artisans and business people. The only way such enterprises can operate at a profit is if there is adequate transportation at reasonable cost for materials to the production sites, and for products from site to market. He anticipates a great increase in population, unemployment, and lack of agricultural resources in the area; hence the need for infrastructural development to support investment in intensified horticultural production, construction, carpentry, and other small businesses is imperative.

The fact that the improved road from Mateteng to Mphahle's Hoek and the SPR have already cut the travelling time from Maseru to Qacha's Nek in half, has led to increased overland travel for people associated with and planning other agricultural and agro-industry projects. The USAID-funded Range Management Project in Sehlabathebe is one example. Another is a small UNICEF-funded Women in Development Project which will be setting up a Women's Income-generating Activity project at Sekake, under the Nutrition section of the Ministry of Agriculture. The director told me that there has been a Nutrition Center at Sekake for some time, but it has not been utilized. Now the improved road link will help make it possible to get this project going in the area, with regular visits to the staff in charge.

Private businesses related to agriculture and livestock are also already benefitting from the road improvements. We spoke with the directors of a new mohair buying corporation which will be opening in the Sekake area. They said that the improved road makes a tremendous difference. Now that they can move from their Maseru office to Sekake in six hours, a day's journey, they have decided to open a branch there. Improvement of the road links to Quthing and Qacha's Nek, however, is important to cut transportation costs sufficiently to

make the new venture economically viable. Another businessman with whom we spoke produces vegetables on irrigated sites along the Senqu River, but sometimes has difficulties transporting the perishable foods to market for timely sale. Improvement of the road towards Qacha's Nek would make it possible for such local producers to serve the growing population in these areas, rather than let South African farmers provide them with fresh produce. And, hopefully, agricultural development projects and government agricultural extension work would take advantage of improved road facilities to reach more of the southern area with technical advice, assistance and inputs, particularly in the areas of intensive poultry, fruit and horticultural production to meet the needs of a growing population with a declining resource base.

Rural development in general benefits from road improvement, but the need for an all-weather road link to Qacha's Nek remains

Agricultural development is only one among many types of development activities with great potential for assisting the population of Lesotho's long-neglected southern districts. For all such projects, a short, safe and dependable all-weather road link to Quthing and Maseru remains a crucial, unmet need.

As my research colleagues and I sat talking in the new hotel in Qacha's Nek one terribly stormy evening in February, this point was brought home to us all. Heavy rain had fallen for days. We had failed to get our enumerators started in villages north across the Senqu because the river was in flood and crossing had been impossible, even by row boat, for about five days. We had narrowly missed being washed over the edge of the bridge over the Qanya River near Whitehill, like the vehicle shown in Appendix 10. We had waited an hour for the flood waters crossing the main road into Qacha's Nek to subside so that we could reach the hotel.

We spoke with many other civil servants and consultants stranded in Qacha's Nek that night, all worrying about how they could pass the flooded road to get back to Maseru or whether planes could fly the next day. The Peace Corps Deputy Director had been stranded for three days. A French hydrologist was unable to get out into the field to do measurements for a proposed micro-hydro project. A Lesotho Paramilitary Force plane assisting Lesotho Airways had been grounded for days, with a back-log of hundreds of passengers unable to travel by road, who were waiting for the chance to fly back to work in the mines, or to Maseru. A Village Water Supply Engineer asked us if we thought the truck from Maseru which he was awaiting would make it in this weather. It was bringing urgently needed pipes for construction of new village water supplies. A Kenyan doctor and Ministry of Health workers had flown in from Maseru, and were waiting for the rain to stop so they could visit clinics in the District. A group of Basotho National Party (BNP) Youth Leaders leaders had actually gone over the edge of the Qanya River bridge in the dark, and one of their party was still in hospital. A busload of University students were stranded on a field-trip. For us and for all of these people we met, the need for an all-weather road link

between Qacha's Nek and Maseru was urgent. The very fact that part of the road has been improved has increased the number of development workers travelling on the Southern Perimeter Road, anxious to get on with the business of helping the government fulfill its commitment to increasing development of the southern districts of Lesotho. Without completion of the improved surface link, they will continue to face the frustrations experienced by the stranded travellers in the hotel that night.

Should the political tensions in southern Africa escalate and the border again be closed as it was at Qacha's Nek in 1977-8 and at other border posts briefly in 1983 following the December Maseru massacre, the need for this road would be absolutely imperative.

## Appendix 1

## SOCIO-ECONOMIC BASELINE DATA - VILLAGES

Basic data on the 34 villages is given in considerable detail in this section since this report must serve as a guide for planning a follow-up study of the same population at the end of the SPR Project. In Tables 1.2, 1.3 and 1.4 the villages are presented according to the 8 road zones determined in our research design and explained in section 3 on RESEARCH METHODS. In addition, the section on CLUSTER ANALYSIS, at the end of this appendix, discusses the question of similarities and differences between villages in more detail. The general location of these villages is shown on a map in the first part of the report (Figure 0.5). Detailed maps from the District Data Bank series (Figures 1.1 and 1.2) show the location of the 34 villages within the districts, while two maps at a 1:50,000 scale show the precise location of some of these villages, and the spatial dispersion of the population sampled in relation to the existing road network. (Figures 1.3 and 1.4).

Table 1.1 lists all the villages in the order in which they were numbered and visited in three weeks of field data collection. It gives the census enumerator area and district in which each village falls, the estimated number of households in the area sampled, and the number of household interviews conducted. There were difficulties in supervising enumerators spread out over such a wide area. There were also disparities between what appears to be a "village" on a map, in the 1976 Census village list, and in the field under a particular village chief whose guidance and permission is essential. Thus interviews were sometimes conducted in more sub-villages than we had anticipated--sometimes in less. Hence the number of households listed is very approximate. A much more precise population estimate is being made by land use planners working with the Mphaki Project. They are actually counting buildings for each village in the entire Mphaki Project area and calculating population on a basis of our SPR Baseline data concerning number of people per household and number of buildings per household. The Mphaki Project should soon have a very extensive data base on all villages in the north-eastern half of Quthing District.

Table 1.2 gives a detailed tabulation of the number of agricultural activities, public services and institutions in each village. Table 1.3 gives a similar tabulation of the number of skilled artisans and number of businesses and vehicles in each community. Space requires a short heading for each column in a vertical format. Thus a list of the headings, and an explanation where necessary, is given here below each of these tables. In both of these tables the villages are ordered within each zone in the geographical order as one travels from south-west to north east along the SPR.

Table 1.1 LOCATION AND POPULATION OF VILLAGES INCLUDED IN  
THE SPR BASELINE STUDY

Code number	Village name	Enumerator area	District	Estimated number of households	Number of interviews
FIRST WEEK OF INTERVIEWS					
1	Seleitara	51.13	Q	144	20
2	Sempe	51.12	Q	163	20
3	Makoe	49.10	Q	212	20
4	Mopeli	49.05	Q	49	20
5	Mphaki (Letsielo)	48.10	Q	74	20
6	Mosi	48.17	Q	169	20
7	Whitehill (Sehapa)	55.09	QN	400	20
8	Mphahama	55.06	QN	55	20
9	Mpiti	55.06	QN	200	20
10	Mosuo	55.03	QN	167	20
11	Rats'oleli	55.02	QN	48	20
SECOND WEEK OF INTERVIEWS					
12	Mohlakoena	49.02	Q	100	22
13	Koali	50.18	Q	713	20
14	Ralebona	50.11	Q	463	20
15	Mokhoasi	49.11	Q	190	20
16	Tlali	49.05	Q	53	20
17	Mahlomola Letsie	48.09	Q	88	20
18	Malefane	55.14	QN	40	20
19	Seforong	48.18	Q	200	20
20	Matee (Christ the King)	55.16	QN	57	20
21	Stirling	56.18	QN	110	20
22	Mohlapiso	56.13	QN	111	20
23	Thaba-Ts'oeu	55.05	QN	250	20
THIRD WEEK OF INTERVIEWS					
24	Pokane (Ft. Hartley)	51.08	Q	178	20
25	Malephane (St Gabriels)	51.09	Q	365	20
26	Maphelle	49.07	Q	47	20
27	Lebelonyane	49.03	Q	34	20
28	Ponts'eng	48.13	Q	115	20
29	Maboloka	55.15	QN	50	20
30	Sekhalabateng	55.12	QN	57	20
31	Sekake	55.13	QN	103	20
32	Lits'oeneng	48.15	QN	35	20
33	Kose	55.09	QN	81	20
34	Noosi	55.07	QN	232	20

Table 1.2 NUMBER OF PUBLIC SERVICES AND INSTITUTIONS IN EACH VILLAGE

VILLAGE	AGRIC & COOPERATIVE							GVT COMMUNITY HEALTH SCHOOL								
	W	D	A	W	C	C		P	A	D	S	P				
V	O	I	A	G	G	O	O	A	S	P	L	I	C	O	E	R
I	L	P	G	E	A	O	P	F	T	O	C	R	L	U	C	I
L	S	T	P	X	R	D	E	T	O	L	O	P	I	G	S	S
N	H	A	R	T	D	L	R	C	F	I	U	O	N	V	V	F
U	E	N	O	E	E	O	A	E	I	C	R	R	I	H	W	F
M VILLAGE	D	K	J	N	N	T	T	N	C	E	T	T	C	W	S	W
(ZONE 1)-----																
24 Pokane Ft Hartly	1	1	2	1	1	1	1	-	1	-	-	-	-	1	1	-
1 Seleitara	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
13 Koali	1	1	1	1	1	1	1	1	-	1	-	-	-	1	1	1
(ZONE 2)-----																
12 Mohlakoana	-	-	-	-	-	-	-	-	1	-	-	-	-	5	-	-
27 Lebelonyane	1	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-
4 Mopeil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
5 Mphaki Letsielo	1	-	1	4	1	-	-	1	1	1	1	-	-	1	-	1
(ZONE 3)-----																
26 Maphelle	1	-	-	-	-	-	-	-	-	-	-	1	1	-	1	-
3 Makoe	-	1	-	1	-	1	-	-	-	-	-	-	-	-	1	-
15 Mokhosi	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-
(ZONE 4)-----																
2 Sempe	-	1	1	1	1	1	-	1	-	-	1	-	-	1	1	1
25 Malephane St Gab	-	-	-	-	1	-	-	1	-	-	-	-	-	1	6	1
14 Ralebona	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
16 Tlali	-	-	-	-	1	1	1	1	-	-	-	-	-	-	1	1
(ZONE 5)-----																
17 Mahlomola Lets	-	-	-	-	1	-	-	-	-	-	-	-	-	2	1	-
18 Malefane	-	-	-	-	1	-	-	-	-	-	-	-	-	3	-	1
6 Mosi	-	1	-	-	-	-	1	-	-	-	-	-	-	2	1	1
20 Matee Christ Knq	-	-	-	-	1	-	-	-	-	-	-	-	-	1	2	1
31 Sekake	1	-	1	1	1	1	3	1	1	1	1	1	1	5	1	-
(ZONE 6)-----																
28 Pontseng	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	1
30 Sekhalabateng	-	-	-	2	1	1	-	-	-	-	-	-	-	-	-	1
29 Maboloka	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
32 Lits'oeneng	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
19 Seforong	-	1	-	-	-	-	-	-	1	-	1	-	-	-	1	-
(ZONE 7)-----																
33 Kose	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-
7 Whitehill	1	1	-	1	-	-	-	-	1	-	-	-	-	1	1	-
34 Noosi	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-

(Table 1.2 continued)

N VILLAGE	W	D	A	A	G	W	C	C	P	P	L	A	C	V	V	F	D	S	P	
8 Mphahama	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	
10 Mosuoe	-	-	-	-	-	1	1	-	1	-	-	-	-	-	-	-	1	1	-	2
11 Ratsoleli	-	-	-	-	1	1	-	-	-	-	-	-	-	2	1	1	1	-	-	
9 Mpiti	-	1	-	2	-	-	-	-	-	-	1	-	1	1	1	-	1	1	-	1
23 T-Ta'oeu Heratge	-	-	-	-	-	-	1	-	-	-	-	-	-	2	1	1	1	-	-	
(ZONE 8)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
21 Stirling	-	1	-	-	-	-	1	-	-	-	-	1	1	-	1	-	1	-	1	
22 Mohlapiao	-	1	-	-	1	1	-	-	-	-	-	-	-	3	1	1	1	-	1	

Key to headings on Table 1.2

## AGRICULTURAL SERVICES AND COOPERATIVES

WOOLSHED	for shearing, classing and packing wool and mohair for sale
DIPTANK	for sheep and goat medication
AGPROJ	agricultural or nutrition project
AGEXTEN	agriculture, nutrition or livestock extension worker
GARDEN	community garden
WOODLOT	community woodlot
COOPERAT	cooperative: agric, tractor, blockmaking, dairy, chickens
CRAFTCEN	craft center: knitting, sewing, spinning, weaving, cooking

## GOVERNMENT SERVICES, COMMUNITY ACTIVITIES, HEALTH AND EDUCATIONAL INSTITUTIONS

POSTOFIC	post office: an official government postal agency
POLICE	police station
LCOURT	local court
AIRPORT	airport
CLINIC	clinic or health center
VHW	village health worker (a villager with basic health skills)
VWS	village water supply (a clean, protected, improved supply)
FFW	food-for-work project such as road-building, erosion control
DROUGHTR	drought relief: free food given out to needy households
SECSCHL	secondary school
PRISCHL	primary school

From Table 1.2 we can see four villages emerge with more recorded services than the others. Ha Koali is next to Mt. Moorosi, on the completed SPRPA road, with agricultural and nutrition centers which go back to Senqu Project activities of the mid-1970s, as well as a woolshed, consumer cooperative store, and many small shops. It is so close to Mt. Moorosi that many of its residents work with the SPRPA, and all take advantage of major public services provided in Mt. Moorosi. Mphaki Letsielo is the junction of new and old roads, the site of an EEC-funded agricultural project, as well as several government services and shops. Sempe is listed by road zone as being on a feeder road, but since it is the village of the principal chief for the entire Outhing District, it has been

a prominent and developing village in the district, even though its location up on a plateau means it is not directly on the improved Quthing to Mt. Moorosi road. Sekake is the fourth main center, with two old shops serving a wide area along the middle of the road, and a large population north across the Senqu River. Many new government services have been introduced since 1975 as part of a deliberate policy of "growth center" development. There is a cooperative weaving center, a nutrition center, an airport, a post office, local court, police station, etc.

The map from a 1975 study on Growth Centres in Lesotho shown in Figure 0.7 gives a very clear picture of the important place which Sekake played ten years ago in providing services in southern Lesotho. Although other smaller villages with shops, clinics, schools and other services have developed and continue to fill in the gaps as the road is improved, Sekake is likely to continue to be foremost, followed by Mt. Moorosi, Mphaki and Whitehill/Tebellong.

Note that a cluster of items charted on Table 1.2, in 5 of the 6 right hand columns, are more broadly associated with many rural villages, even those far from the main roads, rather than with growth and service centers. These are Village Health Workers, village water supplies, food-for-work projects and drought relief. Primary schools are found in almost every community. Villages with none listed are generally close to other larger towns or missions which do have schools.

Table 1.3 gives a similar listing, based on the private sector: skilled artisans and other workers, and retail businesses and associated services such as vehicles, petrol stations, etc. The first part of the listing may not be too dependable, because one local chief or interviewer's definition of a "skilled builder" may have been quite different from another person's. But we do see a similar pattern, with the Quthing to Mt. Moorosi end having a high score, along with Mphaki Letsielo, Sekake, and some of the Qacha's end towns. Also, on the Quthing feeder road, we see Sempe again high, and Malephane, which is the home of a large and very active Roman Catholic mission which has trained many residents in sewing, knitting and other skills, as well as providing them with other useful skills and providing educational and medical facilities.

Table 1.3 PRIVATE SECTOR ACTIVITIES - NUMBER IN EACH VILLAGE

VILLAGE	SKILLED PERSONS									BUSINESSES AND VEHICLES							
	B	U	R	T	K	N	R	A	E	M	C	M	R	B	V		
	I	O	A	I	A	R	T	E	C	P	B	R	S	T	I		
	L	D	F	L	T	I	N	L	D	A	T	O	C	U	H		
	N	E	E	O	E	O	T	W	E	N	R	C	T	R	E		
	U	R	R	R	R	T	R	K	R	I	U	K	O	N	R		
	M	S	S	S	S	V	S	R	S	C	L	S	R	T	Y		
	P	E	S														
(ZONE 1)																	
24 Pokana Ft Hartley	3	3	4	1	1	-	-	1	2	1	1	-	-	2	2	5	4
1 Seleitara	6	5	2	1	1	-	1	1	-	-	-	-	-	1	-	2	2
13 Koali	4	4	20	1	-	4	2	1	1	-	7	3	-	5	2	5	7
(ZONE 2)																	
12 Mohlakoana	2	1	-	-	-	-	-	2	-	-	-	-	-	-	-	5	4
27 Lebelonyane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1
4 Mopeli	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2	2
5 Mphaki Letsielo	1	1	2	-	-	1	-	-	1	1	-	-	2	1	2	2	8
(ZONE 3)																	
26 Maphelle	-	-	2	2	2	-	-	-	-	-	2	-	-	-	-	3	2
3 Makoae	-	-	7	1	-	-	-	-	-	-	1	-	-	-	5	6	9
15 Mokhosi	-	-	2	1	-	-	-	-	-	-	-	1	-	-	-	2	2
(ZONE 4)																	
2 Sempe	4	4	4	2	-	-	-	-	-	-	1	2	-	3	1	5	-
25 Malephane St Gabriel	6	6	15	3	1	1	-	-	-	-	2	2	-	1	1	4	3
14 Ralebona	8	6	7	1	-	-	-	-	-	-	-	-	-	-	1	2	-
16 Tlali	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2	-	3
(ZONE 5)																	
17 Mahlomola Letsie	1	1	1	1	1	3	3	-	-	-	1	-	-	-	-	5	1
18 Malefane	2	2	-	3	-	-	-	-	-	-	-	-	-	1	2	1	4
6 Mosi	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	3	1
20 Matee Christ the King	7	5	-	1	1	-	-	-	1	-	-	1	-	-	-	4	6
31 Sekake	3	3	6	1	-	3	3	3	-	1	-	2	-	3	3	3	5
(ZONE 6)																	
28 Pontseng	4	6	-	-	-	-	-	-	-	-	-	-	-	1	2	1	5
30 Sekhalabateng	2	3	5	-	-	-	-	-	-	-	-	-	-	-	2	2	-
29 Maboloka	2	3	3	1	-	-	-	-	-	-	-	-	-	-	-	1	-
32 Lita'oeneng	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
19 Seforong	3	4	-	-	-	-	-	-	-	-	-	-	-	-	1	4	2
(ZONE 7)																	
33 Kose	5	3	7	1	3	1	1	1	1	-	-	-	-	-	-	2	1
7 Whitehill	2	3	1	-	-	-	-	-	-	-	1	-	2	1	2	-	2
34 Noosi	3	5	4	-	1	-	-	-	-	-	-	-	-	-	-	4	2

(Table 1.3 continued)

N VILLAGE	B	R	T	K	R	C	M	W	W	P	C	T	R	B	B	C	V
8 Mphahama	1	1	3	-	2	-	-	-	-	-	-	-	-	-	-	1	-
10 Mosuoe	4	4	3	1	-	-	1	-	-	-	-	2	-	-	-	8	2
11 Ratsoleli	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	3	2
9 Mpiti	3	3	-	-	-	-	-	-	1	-	2	-	2	-	2	5	1
23 T-Ts'oeu Hermitage	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	3	3
(ZONE 8)-----																	
21 Stirling	2	2	1	2	1	2	-	2	-	-	-	-	-	-	2	2	-
22 Mohlapiso	4	4	3	2	1	-	-	-	-	-	-	-	-	-	-	6	-

Key to headings in Table 1.3

## SKILLED PERSONS, ARTISANS

BUILDERS	builders, masons
ROOFERS	men able to build rafters and attach corrugated iron roofing
TAILORS	tailors and dressmakers: those who mend and sew with machine
KNITTERS	knitters: primarily those using knitting machines
RADIOTV	repair people for radios, TV and other electrical equipment
CARPNTRS	carpenters: includes both building and furniture making
METALWKR	metal workers: those who can work with sheet metal and repairs
WELDERS	welders
MECHANIC	mechanics: auto, truck and tractor repair

## SHOPS, OTHER BUSINESSES AND NUMBER OF VEHICLES

PETROL	petrol station
CMBLOCKS	making cement blocks for sale
TRACTOR	tractors
RESTURNT	restaurant - probably also implies bar
BUTCHERY	butchery
BIGSHOP	big shop: with building materials, clothing, perhaps a mill
CAFE	a small shop, open longer hours, selling limited type of goods
VEHICLES	vehicles of any sort other than tractors

Table 1.4 gives details concerning shops and cafes in each village. It gives the number of shops reported per village, plus the number which have a truck, which have a fridge, and which regularly sell selected consumer goods in the villages. This list has been broken down by road zone. Detailed information concerning the shops in which interviews were conducted and consumer prices recorded is given in Appendix 4. The slight discrepancies in number of shops shown in Table 1.3 and 1.4 is because the information was collected from different informants in different parts of the field work process.

Table 1.4  
NUMBER OF SHOPS, VEHICLES, FRIDGES AND SHOPS SELLING SELECTED ITEMS  
BY VILLAGE AND BY ROAD ZONE

Road zone	Village	Number of shops reported	tru ck	fri dge	para ffin	cab bage	bre ad	cem ent	roof zinc	to ols
1 SPRPA Q to Mt M										
	1 Seleitara	2			2	2	2			
	13 Koali	15	8	6	15	14	11			
	24 Pokane (data incomplete)	5	4	2	5	5	5			
2 SPRPA new Mphaki Rd										
	4 Mopeli	2	2	2	2	2	2	2	2	2
	5 Mphaki Letsielo	4	1	3	4	4	4		1	1
	12 Mohlakoana	6	1	1	6	6	6			
	27 Lebelonyane	3	1		3	3				
3 Old Mphaki road										
	3 Makoa	11	4	1	11	11	9	2	3	4
	15 Mokhosi	2	2		2	2	2			
	26 Maphelle	3			3	3	3	1		
4 Outlying feeder roads										
	2 Sempe	6		1	6	6	1	1	1	1
	14 Ralebona	3	2	1	3	3	2		2	
	16 Tleli	2	2		2	2	1			
	25 Malephane	5	3	1	5	4	3	1	1	1
5 Middle under constn										
	6 Mosi	3			3	3	3		1	
	17 Mahlomola Letsio	5			3	3	4			
	18 Malefane	3	2	2	3	3	3	1	1	1
	20 Matee ChristKing	4		1	3	3	3			
	31 Sekake	6	3	5	6	6	6	3	3	3

(Table 1.4 continued)

Road zone	Village	Number of shops reported	NUMBER OF SHOPS HAVING EACH OF THESE:						
			tru ck	fri dge	para ffin	cab bage	bre ad	cem ent	roof zinc
6 Middle feeder roads									
19	Seforong	5	1	1	5	5	5		
28	Pontseng	3		1	3	3	3	2	2
29	Maboloka	1			1	1			
30	Sekhalabateng	2			2		1		
32	Lits'oeneng	0	(no shops)						
7 Qachas Nek end									
7	Whitehill	2	1	2	2	2	2	1	2 2
8	Mphahama	1			1	1	1		1
9	Mpiti	7		3	5	7	7		1 2
10	Mosuoee	8		1	7	8	4		
11	Rats'oleli	3			3	3	3		
23	Thaba-Tsoeu	3		2	3	3	3		
33	Koae	2	1		1	1	1		
34	Noosi	4	1		4	4	4		
8 Across Senqu River									
21	Stirling	4	3*	1	4	4	4	2	2 2
22	Mohlapiso	6			6	6	6		

\* Although Ha Stirling is across the Senqu River from Whitehill, it is striking that 3 shops are reported as owning vehicles. However, the vehicles are kept parked on the Whitehill side of the river and used for purchasing stock from Qacha's Nek or Matatiele. The only way to cross the river is by rowboat. The very high count in Ha Koali does indicate the growth of this town which is practically a part of Mt. Moorosi. The very high number of shops in Makoae more probably reflects the zeal of the enumerator who comes from this village, knows every tiny cafe dealer, and liked to do interviews in sub-villages farther off than we had anticipated. However, Makoae has an old livestock/veterinary center, as well as a school and a major development project called Plenty Lesotho, so it will continue to be the major center along the old road to Mphaki.

Table 1.5

NET GAIN IN NUMBER OF HOUSEHOLDS MOVING INTO AND OUT OF VILLAGE  
AND NUMBER OF APPLICATIONS FOR SITES:  
(Mean number per village, grouped by roadzone)

Road zone	Number of villages	Net gain per village	PENDING APPLICATIONS PER VILLAGE	
			residential sites	business sites
1 SPRPA Q to Mt M	3	9.6	6.0	7.0
2 SPRPA new Mphaki Rd	4	2.0	4.3	2.7
3 Old Mphaki road	3	.6	1.7	3.3
4 Outhing feeder roads	4	-1.0	13.8	1.8
5 Middle, under constn	5	6.2	21.0	5.6
6 Middle, feeder roads	5	1.0	2.8	1.0
7 Qacha's Nek end	8	16.0	1.4	.4
8 Across Senqu River	2	.5	.5	1.0
Total	34	6.0	6.6	2.6

The table above presents village-level data concerning population movements and land allocations. Each chief reported the number of households which moved into and moved out of the village in the past year (1984). By subtracting the number who had moved out from the number moving in, we derive a measure of total gain in the number of households per village. Thus a positive number indicates a growing area, a negative number indicates decline. This table gives a very clear picture of an increase in the number of households in the villages at either end of the road, particularly at the Qacha's Nek end. There is also growth, although somewhat less, in the middle part along the road. This is in striking contrast to the decline or very slow growth of villages on feeder roads, on the old road between Mt. Moorosi and Mphaki, and from north of the Senqu River. The villages with the highest net gain are Ha Mpiti (10.7 km from Qacha's Nek at a major road junction) with a gain of 50, Thaba-Tsoeu, even closer to Qacha, with 46, Sekake with 20, Ha Koali (next to Mt. Moorosi) with 18, and Seleitara, between Mt. Moorosi and Outhing, with 12. The lowest are the most remote, -11 at Ralebona, -4 at Lits'oeng, -3 at Mokhosi, and -2 at Maboloka. Information was also obtained about where people had moved in from, or moved away to. This helped us realize how some villages on remote feeder roads, had people moving in from much more remote mountain areas far from any road; and then other old-time residents of the same village were moving on to be on the main road, or to larger urban centers. Even Ralebona, for example, on a rough road 24 km south of Mt. Moorosi, reported several families moving in from the Tabaane mountain areas to the south, as well as other families moving to Mt. Moorosi and Pokane. Pokane, in turn, reported families moving in from Ralebona

area, and families moving out to Guthing, Mhalea Hoek and Maseru.

We also report the number of pending applications for residential sites and for business sites. This too gives some indication of growth, although not necessarily of in-migration since applications are often made by present village residents who want to begin a business or establish a home for an adult son and family. Furthermore, a large number of outstanding applications may simply indicate delay in a particular Land Allocation Committee's work. These factors may explain why there seems to be some inconsistency between the "net gain" column and the applications for sites. Several villages in the middle had a very large number of pending applications. Again Ha Mosi on the road at the junction to Seforong (50), Sekake (41), and Ha Sempe (39) had the highest number of applications for residential sites. Sekake had the highest number of business site applications (15) with Ha Koali next (13), and Pokane and Ha Mosi next with 7 each. Lebelonyane, at nearly 2500 meters on the new SPR road alignment, was a very small, isolated pastoral community with a few wheat fields on precipitous slopes until half a year ago; now it too is suddenly a growing roadside community with 10 residential and 5 business site applications pending and a new woolshed under construction.

#### NOTE ON GROUPING VILLAGES BY CLUSTER ANALYSIS

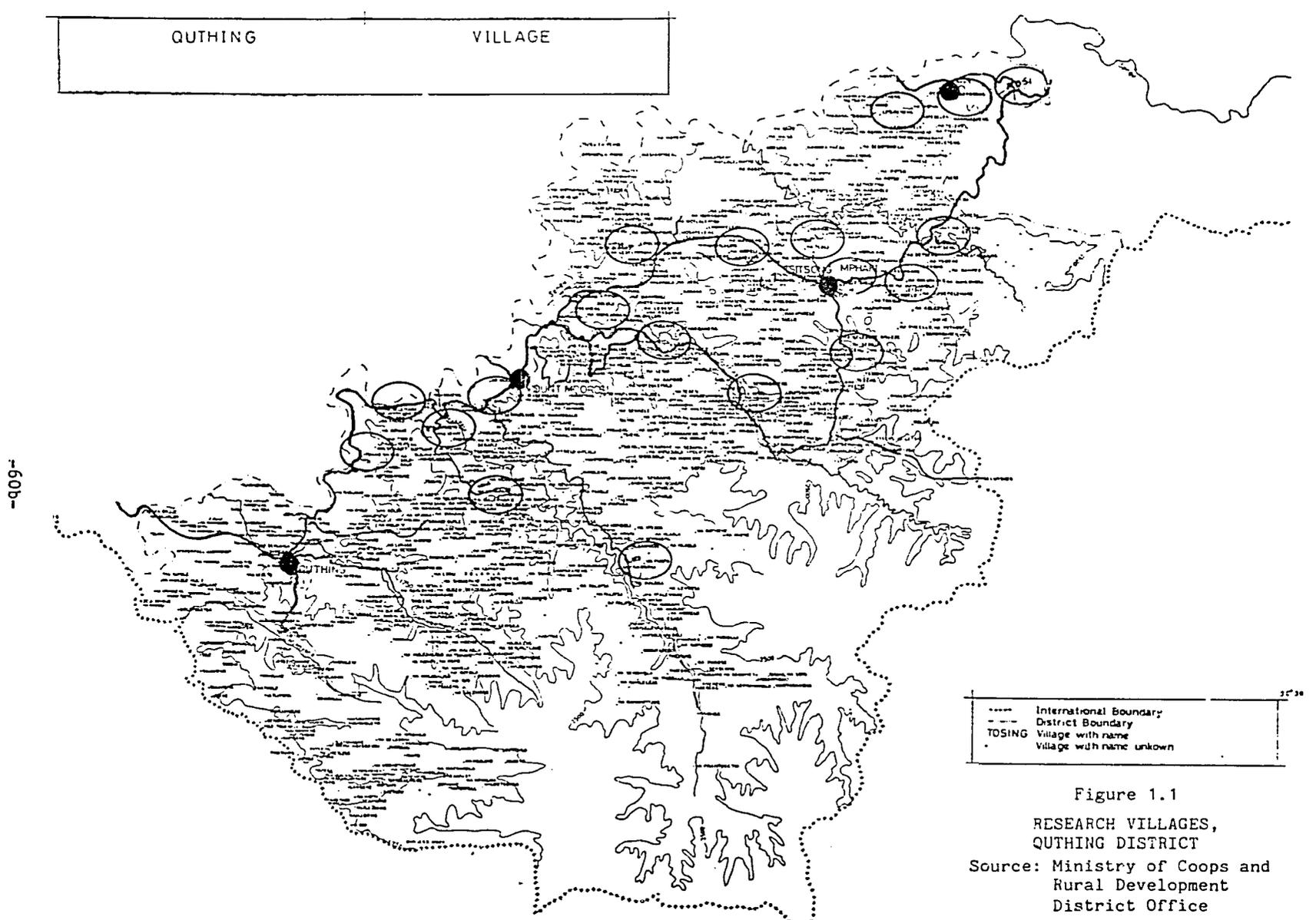
An important feature of a computerized data base such as the one we have created, is that cases may be grouped, and regrouped, in a variety of ways for analysis now, and for comparative analysis in five years time. We have already explained our decision to group villages into eight road zones as well as three major road zones which we have used for most of our data analysis. This was done on a basis of geographical location. In addition, we made use of an analytical process called "cluster analysis" to see what kind of natural groupings occur among the villages on a basis of a wide variety of numerical variables within the household baseline data itself. A more thorough analysis of the implication of this analysis could be done, were there more time. Three of the resulting tables, as well as a brief explanation of the process, are given below.

The method of calculation was this: we took the means for a wide range of numerical variables such as number of members, school-attenders, wage employees, migrants; household and agricultural and livestock assets; agricultural production, and income from various sources. We normalized the data, reducing them to Z-scores by subtracting the mean for each variable from each of the values for that variable and then dividing by the standard deviation. In this way all variables were made comparable in that the resulting normalized versions all had mean=0 and standard deviation=1. In cluster analysis, those villages which have the most similar patterns of values of the normalized variables are grouped together. Through this means, a hierarchy of villages is constructed, wherein villages with closely similar patterns of values are joined at low levels in the hierarchy and villages with very different values appear in remote sections of the hierarchy.

Table 1.6 was based on means concerning agricultural assets and production. The resulting cluster diagram shows a very clear break between the first group of 18 villages at the top, and a second group of 11 in the lower third. The top group are those near Gacha's Nek, and along the main road, plus the Seforong feeder road. Other observations and data suggest that for this group, agricultural resources and production are much lower than for the others, either because of limited land, poor soil, or drought-related discouragement and conflicting wage-oriented interests. The second group, Mopeli to Mahlomola Letsie, give quite the opposite picture. These are communities in the Middle section of the eastern end of Guthing district around Mphaki and the new SPRPA road, where the soil is still rich and where agriculture and livestock are still the main focus of people's lives. Finally we note that Pokane stands in a unique central position, while Ts'oene-Pontseng, Ralebons, Malepane and Kose are off by themselves for reasons which are not clear, although they too score high on many agricultural measures. Kose, in particular, is unique, a livestock oriented village perched high on the plateau above the road just west of Whitehill, a very old town on the livestock trekking route to the high summer grazing areas and to South Africa beyond.

A second grouping is shown in Table 1.7, based on all household possessions. Here we see the position of Ha Koali and Pokane, the two communities most influenced by SPRPA construction activities, standing out as quite distinct from all of the other villages, suggesting a generally higher standard of living. Sekake too stands out as a bit distinct from all the others, indicating its special position as an important central roadside town for many years and now a selected "growth center".

The third cluster diagram, Table 1.8, is based on means of all 33 variables available. In this case we see a combination of the two types of groupings. Pokane and Ha Koali still remain in a class by themselves (at the bottom of the diagram). Then Ha Kose is alone, as it was on the previous agricultural cluster diagram. Ralebons and Malepane again form a distinct group, feeder road villages in the Guthing District with unusually high numbers of livestock.

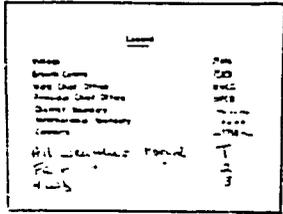


-909-

..... International Boundary  
 - - - - - District Boundary  
 O TOSING Village with name  
 . Village with name unknown

Figure 1.1  
 RESEARCH VILLAGES,  
 QUTHING DISTRICT  
 Source: Ministry of Coops and  
 Rural Development  
 District Office

# VILLAGE STRUCTURE



PREPARED BY MINISTRY OF COOPS & RURAL DEVELOPMENT - DISTRICT OFFICE

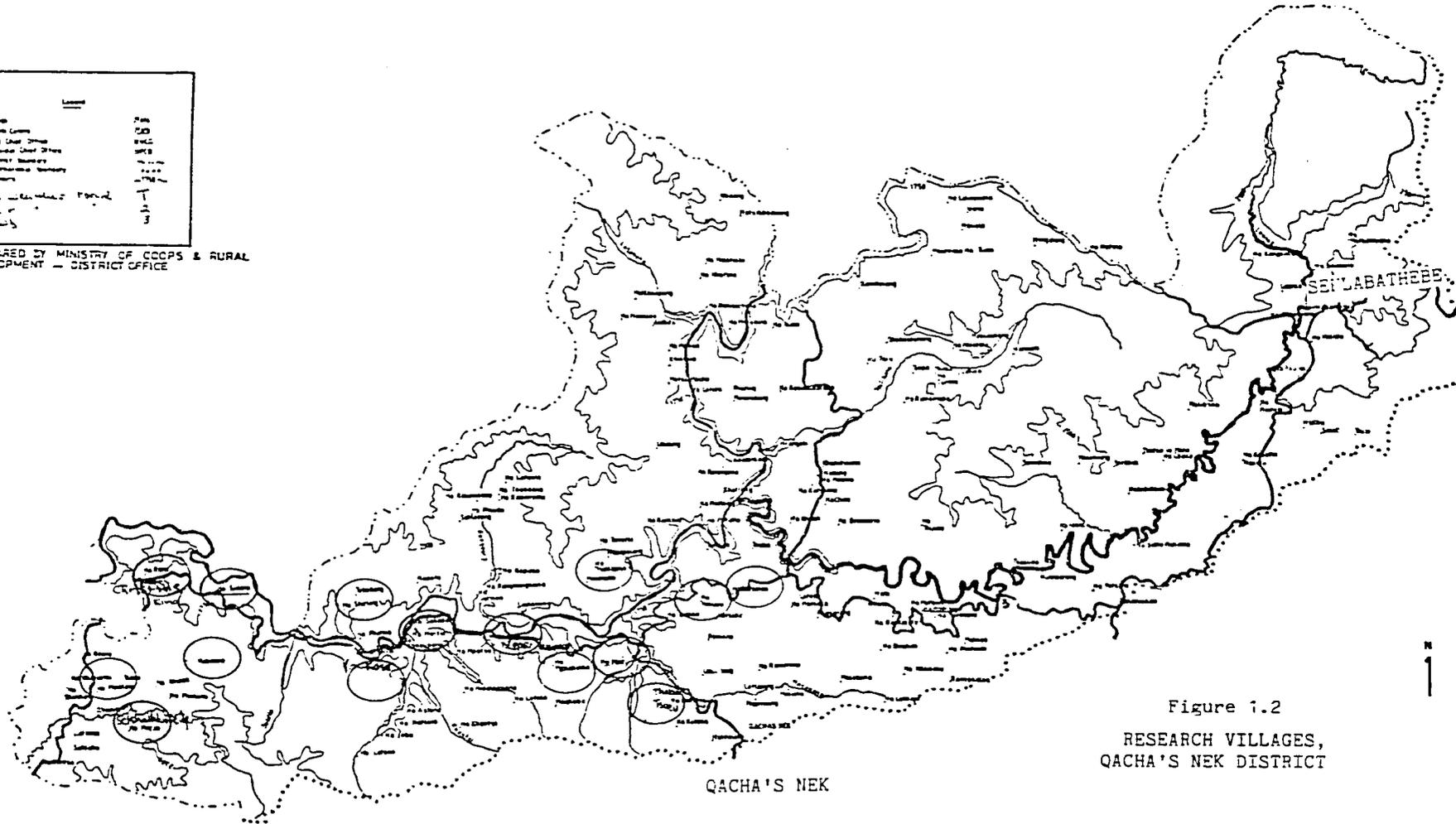


Figure 1.2  
RESEARCH VILLAGES,  
QACHA'S NEK DISTRICT

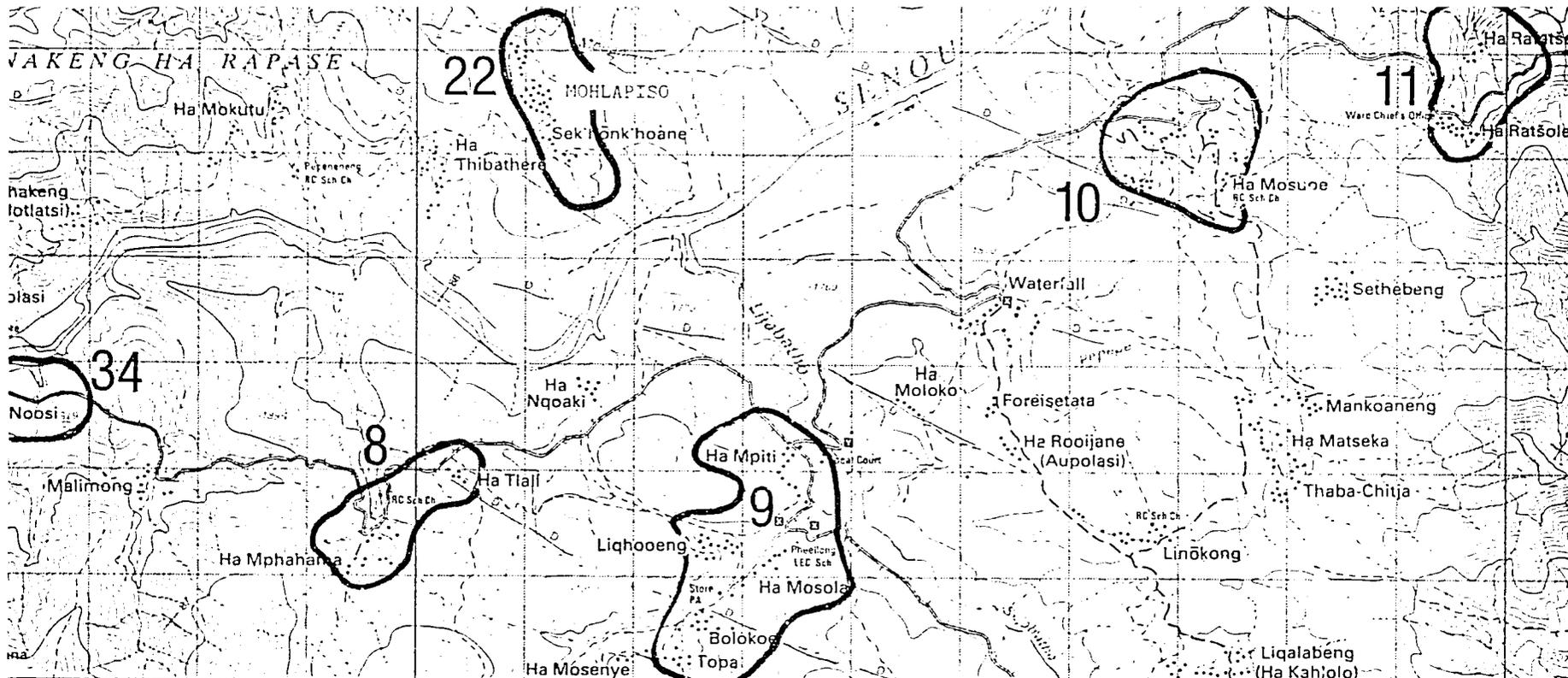
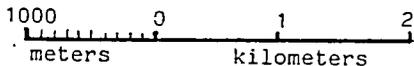


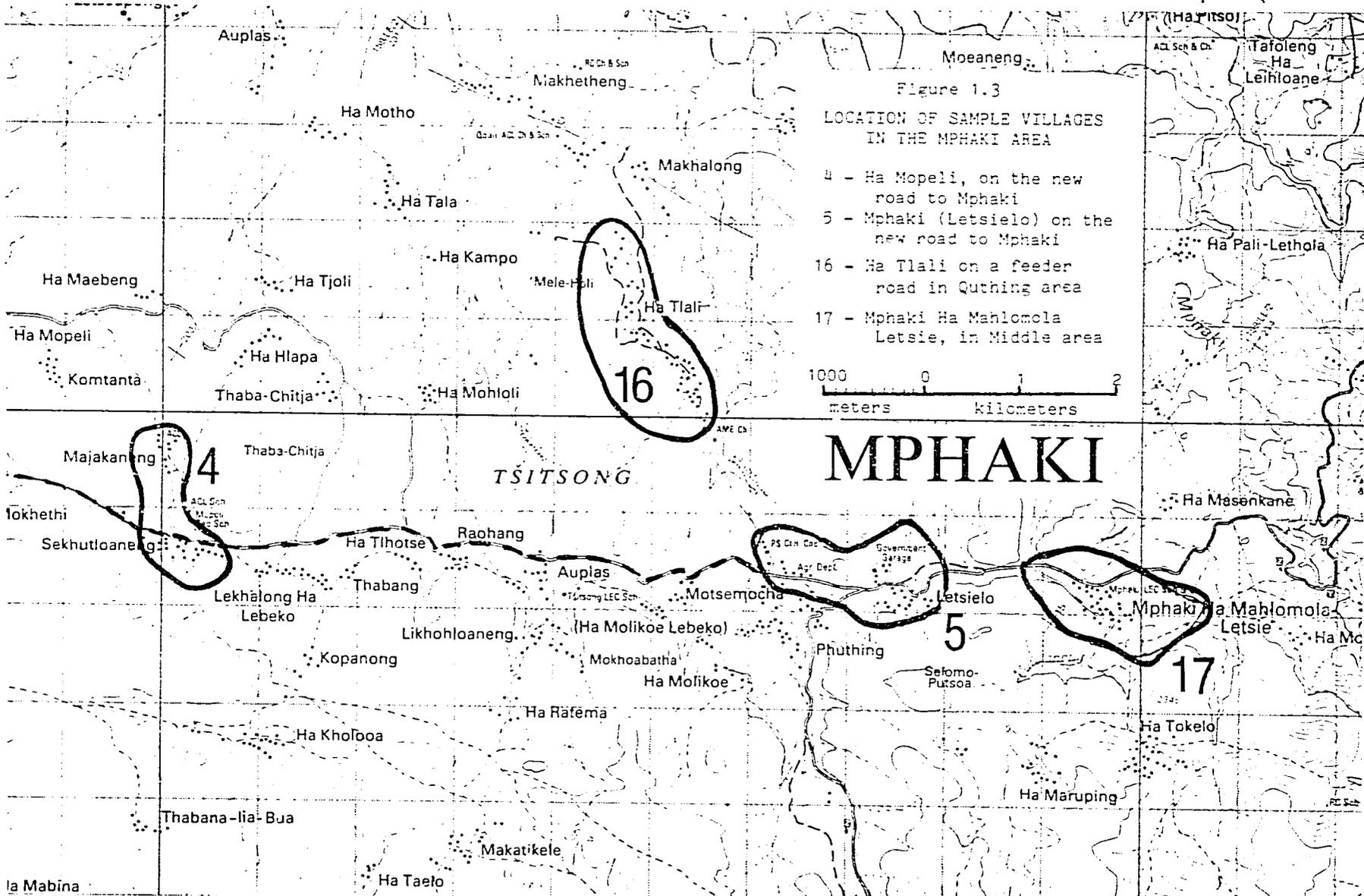
Figure 1.4

LOCATION OF SAMPLE VILLAGES  
IN THE AREA NEAR QACHA'S NEK

- 34 - Noosi
- 8 - Mphama
- 9 - Mpiti
- 22 - Mohlapiso (north of River)
- 10 - Mosue
- 11 - Rats'Jleli
- 23 - Thaba-Tsoeu



# QACHA'S NEK

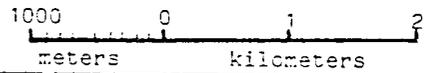


Moeaneng

Figure 1.3

LOCATION OF SAMPLE VILLAGES  
IN THE MPHAKI AREA

- 4 - Ha Mopeli, on the new road to Mphaki
- 5 - Mphaki (Letsielo) on the new road to Mphaki
- 16 - Ha Tlali on a feeder road in Quthing area
- 17 - Mphaki Ha Mahlomola Letsie, in Middle area



**MPHAKI**

1000

Figure 1.5

CLUSTER ANALYSIS  
OF VILLAGES  
BASED ON BUILDINGS AND HOUSEHOLD ASSETS

Dendrogram using Average Linkage (Between Groups)

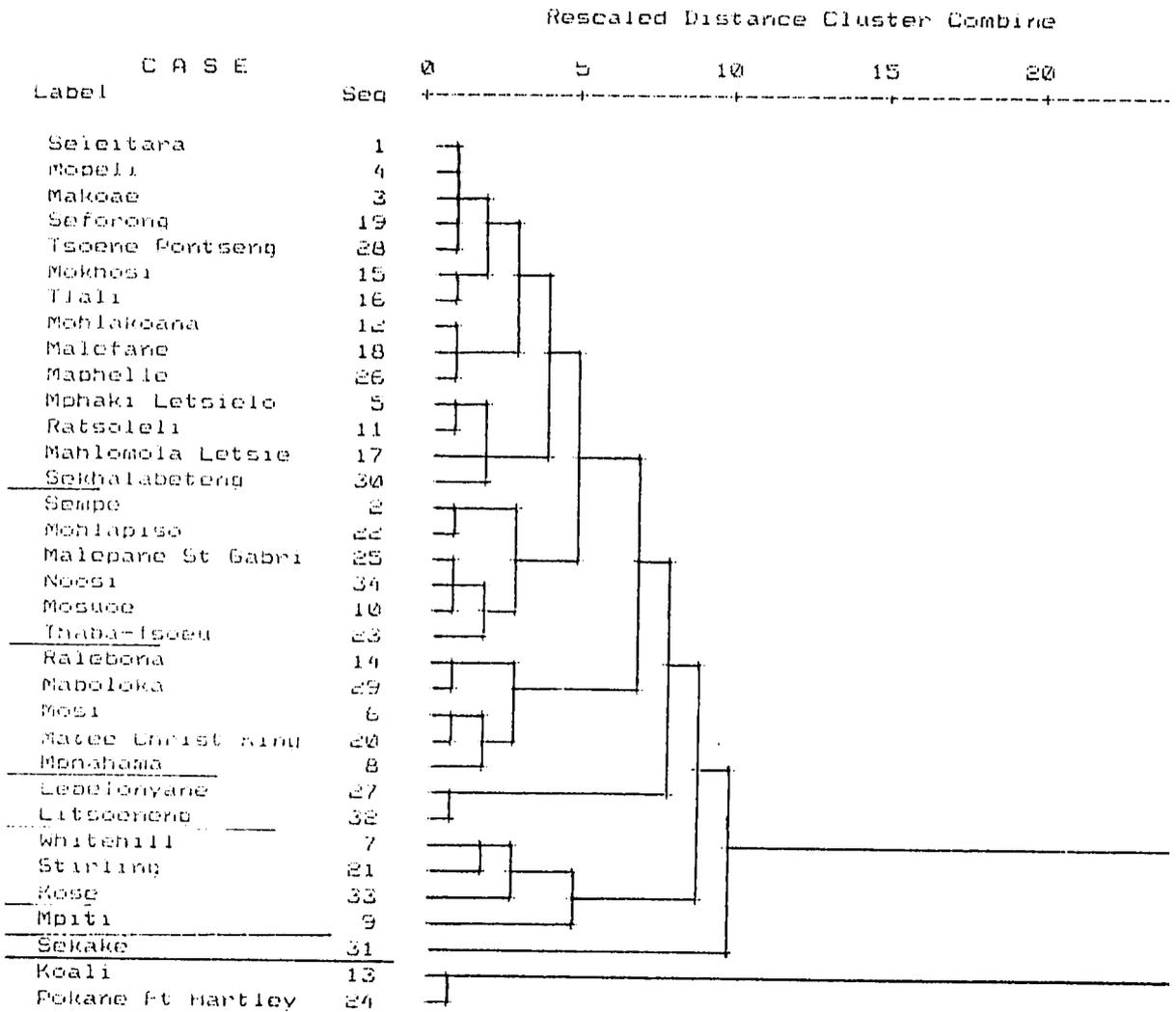
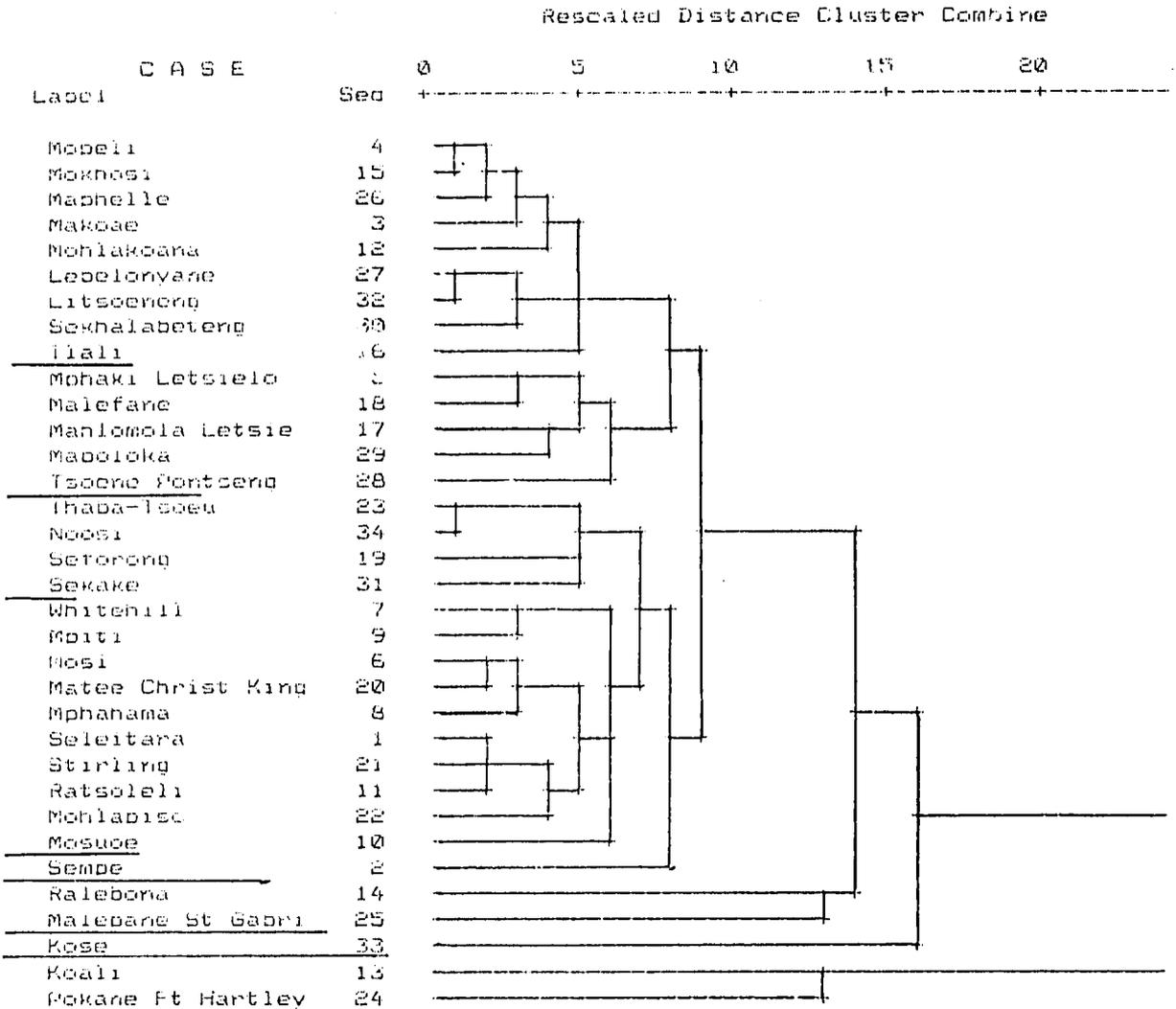




Figure 1.7

CLUSTER ANALYSIS  
OF VILLAGES  
BASED ON 30 DIFFERENT VARIABLES CONCERNING  
DEMOGRAPHY, HOUSEHOLD ASSETS, AGRICULTURE, INCOME, ETC.

Dendrogram using Average Linkage (Between Groups)



## Appendix 2

## HOUSEHOLDS: SOCIO-ECONOMIC BASELINE DATA

Basic data on the 682 households is given in this section, with brief explanations and comments as necessary. The major discussion of this data occurs in the first part of the report, in sections 4 (SOCIO-ECONOMIC PROFILE) and 5 (PRELIMINARY IMPACT ANALYSIS).

The household data we have collected and computerized can be grouped, analyzed and presented in many ways. Section 3 on RESEARCH METHODS, explains the basis of sample selection and grouping of villages into 8 "road zones" in relation to the Southern Perimeter Road. Throughout most of this section a simpler, 3-part division has been used, grouping together (1) all villages on main and feeder roads from Quthing to Mphaki Letsielo where construction has been completed, (2) villages from both districts in the Middle, between Mphaki Ha Mahlomola Letsie and Sekake, where construction work is now going on, and (3) villages on or near the road and across the river near the Qache's Nek end of the proposed SPR. (See the maps in Figures 0.5 and 1.1 and 1.2 and Tables 1.1 and 1.2 for the location of villages studied and the districts and road zones to which each belongs. Sometimes data is presented, or at least discussed at the level of 8 road zones, or even at individual village level if the differences are significant. Certainly a follow-up evaluation five years from now would be able to go back to the data bank and compare at whatever level seems appropriate.

With numerical variables such as household members, assets, income, etc., two measures are usually given: the mean number of the item per household, and the number of households possessing one or more of this item. Because of the convention of computer data processing, the phrase "% with" refers to the percent (%) of all households in the particular group having one or more of the item.

The first table shows typical household size and composition. Resident members are those who were present at the time of the interview (what is known as the de facto population). Absentees are typically workers in South Africa or other parts of Lesotho, dependent children away at boarding school, and household members on extended visits away. The total (or de jure population) includes both groups, as long as they are regarded to be supported by, or to be the principal financial support of, the household and do not have their own independent households elsewhere. There are no significant differences between zones on these variables.

Table 2.1

HOUSEHOLD COMPOSITION  
RESIDENTS, ABSENTEES AND TOTAL PEOPLE PER HOUSEHOLD  
mean number per household

zone	RESIDENT	ABSENT	TOTAL
Quthing	5.0	1.1	6.0
Middle	5.2	1.1	6.3
Qacha's Nek	4.7	1.2	5.9
TOTAL	5.0	1.1	6.1

The next two tables show a breakdown by sex and marital status of household head, and by a general category called "household type", which makes a two-way distinction between male and female household heads, and households with and without wage employment. Further analysis by either of these categories in relation to income, agricultural resources and production, etc. can be done. For example, in Table 2.3 the reported monthly cash income (summary of all income sources) is given for each of the household types. The relative income status of each group and the particularly disadvantaged status of female headed households with no wage earner is clear.

Table 2.2

SEX AND MARITAL STATUS OF HOUSEHOLD HEADS			
Sex	Marital status	Frequency	Percent
MALE			
	unmarried	2	.3
	married	500	73.3
	widowed	8	1.3
	separated/divorced	8	1.3
FEMALE			
	unmarried	4	.6
	married	7	1.0
	widowed	143	21.0
	separated/divorced	10	1.5
TOTAL		682	100.0

Table 2.3

HOUSEHOLD TYPE BASED ON SEX OF HOUSEHOLD HEAD  
AND WHETHER OR NOT ANY MEMBER HAS WAGE EMPLOYMENT -  
ALSO SHOWING TOTAL MONTHLY INCOME BY HOUSEHOLD TYPE

Household type	Frequency	Percent	Total income
Male head, wage employment	393	57.6	M 174.90
Male head, no wage employment	125	18.3	120.52
Female head, wage employment	91	13.3	112.56
Female head, no wage employment	73	10.7	41.58
TOTAL	682	100.0	141.85

Table 2.4

TOTAL WAGE WORKERS, MIGRANTS, PEOPLE EVER EMPLOYED BY SPRPA  
AND NUMBER OF TIMES MIGRANTS VISIT HOME PER YEAR  
mean number per household and  
percent of households with one or more

zone	total wage workers	total migrant workers	ever worked on SPR	migrants home visits N per year
<hr/>				
Outlying				
mean	.9	.5	.7	1.7
% with	66.7	47.5	14.2	99.2
Middle				
mean	1.0	.7	.1	1.2
% with	74.0	64.0	1.0	95.3
Qachas Nek				
mean	1.1	.7	.0	1.3
% with	74.0	60.5	.5	93.5
<hr/>				
TOTAL				
mean	1.0	.6	.3	1.4
% with	71.0	56.2	6.3	96.1
<hr/>				

WAGE WORKERS includes all family members with regular paid employment. It does not include self-employed people, farmers, shop owners, builders, etc. MIGRANTS refers primarily to men who are regularly working in South African mining and other contract jobs, although there are also 19 women migrants, primarily domestic workers. Even if migrant workers happened to be home on brief leave at the time of the interview, they were counted as migrant workers. The 43 households who had someone working on the SPRPA now, or in the past, are discussed at the end of Appendix 6, on construction workers.

The data for the final column was elicited by asking, for each migrant worker in the family, exactly how many times he come home in the previous year. The mean is calculated only for those households with migrant workers, and the percent figure represents the percent of migrants who made one or more home visits. The idea was to test the hypothesis that migrant workers from improved sections of the road come home more often than migrants from remote areas. In fact, the figures do show a slightly greater frequency in the Outlying end, where the road is best and the distances to Free State gold mines is least. But the difference is too slight to be statistically significant. We actually found the highest rate of home visits on Outlying feeder roads (Ha Tlaji, very near Mphaki, and Malephane), and on the new SPRPA road (Ha Mopeli, Mohlakoana and

(Lebelonyane). In the case of Tlali and the three on the new road, this may represent migrants who were coming home often to help the family take advantage of opportunities for home construction and new business ventures in the vicinity of the new road.

Table 2.5

HIGHEST ADULT EDUCATIONAL LEVEL AND PRESENT SCHOOL ATTENDANCE  
PER HOUSEHOLD BY ZONE

mean number or educational level per household  
and percent of households with number greater than zero

zone	Highest adult ed level in househld	Number of children attending prim sch	Number of children attending hi school	Total num of childn attending school	Number of children away at school
Quthing					
mean	6.4	1.5	.3	1.7	.3
% with	89.0	70.9	21.3	73.4	20.9
Middle					
mean	6.8	1.6	.3	1.9	.2
% with	95.0	73.5	19.5	75.0	17.6
Qachas Nek					
mean	7.6	1.6	.3	1.9	.3
% with	97.0	71.0	23.0	75.0	19.5
TOTAL					
mean	6.9	1.6	.3	1.8	.3
% with	93.1	71.7	21.3	74.3	19.5

Table 2.6

OWNERSHIP OF BUILDINGS, FENCING, LATRINE AND WATER-TANK:  
mean number per household and  
percent of households with one or more

zone	Thatch roofed building	Zinc roofed building	Wire fenced plot	Latrine	water tank	motor vehicle
<hr/>						
Outthing						
mean	1.6	.7	.2	.2	.1	.1
% with	89.0	55.3	15.2	17.0	8.2	6.0
Middle						
mean	1.5	.6	.1	.1	.1	.005
% with	84.4	53.3	5.5	6.5	1.5	1.0
Qachas Nek						
mean	1.5	.8	.1	.1	.1	.1
% with	86.0	60.5	14.6	14.0	4.5	4.0
<hr/>						
TOTAL						
mean	1.6	.7	.1	.1	.1	.1
% with	86.8	56.2	12.2	13.1	5.1	4.0

In the section on preliminary impact analysis, details were given about the distribution of certain household assets by eight roadzones, as well as building modernization. There is also a section at the end of this appendix concerning where and when building materials were purchased. Table 2.6, above, and 2.7, below, give summary tabulations by the three main zones.

There were 90 latrines counted, the majority being in Pokane (15 out of 20 households) and Ha Koali 13 out of 20) in the Outthing area along the first section of the SPRPA road. Many people seemed aware of the importance of latrines and some had heard of VIP latrines (ventilated improved pit latrines), but only 5 of this type were reported at private homes. Some schools, however, have VIP latrines.

Concerning motor vehicles, the following detailed breakdown can be given. There were a total of 30 vehicles reported: 4 private cars, 16 vans (pick-up trucks), 3 big trucks, and 4 tractors, plus 3 unidentified. We also asked about bicycles, thinking that in the future, with improved roads, their numbers might increase. We found only 9 bicycles in the 682 households interviewed. It would

have been good had we also asked about wheelbarrows. Other studies have shown about half of the lowlands and foothills households owning these wheelbarrows but unfortunately we did not obtain data on wheelbarrows for our sample area.

Table 2.7

OWNERSHIP OF HOUSEHOLD EQUIPMENT AND FURNITURE:  
mean number per household and  
percent of households with one or more

zone	coal stove	sewing, knitting machine	radio	furniture sofa or chairs	bed
<hr/>					
<b>Quthing</b>					
mean	.1	.3	.7	2.0	1.4
% with	12.1	24.1	59.9	45.5	83.0
<b>Middle</b>					
mean	.0	.2	.7	1.4	1.4
% with	3.0	14.6	64.8	34.3	86.9
<b>Qachas Nek</b>					
mean	.2	.3	.8	1.4	1.8
% with	19.0	26.5	63.5	34.0	87.0
<hr/>					
<b>TOTAL</b>					
mean	.1	.2	.7	1.7	1.5
% with	11.5	22.0	62.4	38.8	85.3
<hr/>					

We asked about gas stoves as well as coal stoves, but found only 12 gas stoves, in contrast to 83 coal stoves. It may be that with improved transportation, as well as improved distribution facilities for propane gas to refill cylinders, the use of gas stoves will increase in the southern districts as it has in recent years in the western lowlands of Lesotho.

There were 150 households reporting "sewing machines", 13 of which actually had knitting machines instead of, or in addition to, sewing machines.

The term "furniture" is generally used in Lesotho to refer to expensive stuffed chairs, sofas, lounge suites, etc. It is to this type of furniture that our question referred, not to simple kitchen-type tables, chairs and cupboards.

Table 2.8

AGRICULTURAL ASSETS - FIELDS, TREES AND IMPLEMENTS  
mean number per household and  
percent of households with one or more

zone	fields	fruit trees	other trees	plough	planter cultivt	ox cart
<hr/>						
Quthing						
mean	1.6	2.6	3.5	.5	.2	.01
% with	77.7	51.2	22.0	45.7	15.2	1.4
Middle						
mean	1.3	2.1	1.5	.4	.4	.02
% with	73.4	46.7	16.6	34.0	23.0	2.5
Qachas Nek						
mean	1.3	3.3	2.0	.3	.4	.03
% with	68.0	66.5	15.5	32.0	20.0	3.0
<hr/>						
TOTAL						
mean	1.4	2.7	2.5	.4	.3	.02
% with	73.6	54.4	18.5	38.3	29.3	2.2
<hr/>						

Table 2.8 shows basic agricultural assets, Table 2.9 gives details about how fields were cultivated in each of the three zones, while Table 2.10 shows the actual production reported for each major crop at the harvest of the previous year. In addition, summary variables adding all crops together and calculating their cash value at current market prices are given in Table 2.16. Because of the severe drought in 1983/4, particularly in the Qacha's Nek district, the production figures are probably much lower than under normal rainfall conditions. For future comparisons, data collected each year by the Bureau of Statistics would be more meaningful than that which is given in Table 2.10. Additional aspects of agricultural production, including use of agricultural inputs, have been discussed in Part One of this paper.

Table 2.9

CROSSTABULATION:  
METHODS OF PLOUGHING DURING 1984/5 AGRICULTURAL YEAR BY ZONE  
showing frequency of methods, and percent for each zone

ZONES > PLOWING METHOD	count col %	Quthing	Middle	Qachaa Nek	row total
Do not have fields	56 19.9	57 28.5	60 30.0	173 25.4	
Did not plough our fields	13 4.6	5 2.5	18 9.0	36 5.3	
Ploughed with oxen	195 69.1	120 60.0	109 54.5	424 62.1	
Ploughed by tractor	14 5.0	15 7.5	10 5.0	39 5.7	
Ploughed by oxen and tractor	4 1.4	3 1.5	3 1.5	10 1.5	
Column Total	282 41.3	200 29.3	200 29.3	682 100.0	

Table 2.10

AGRICULTURAL PRODUCTION IN 1983/4  
mean number of bags harvested per household cultivating each crop  
and percent of households cultivating each crop

zone	m maize	sorghum	wheat	peas and beans	cabbage and other vegs
<b>Quthing</b>					
mean num bags	1.4	1.8	1.0	.2	1.0
% cultivating	42.9	40.1	27.3	11.0	9.2
<b>Middle</b>					
mean num bags	2.1	.5	.8	.1	.2
% cultivating	44.5	19.0	23.0	2.5	2.0
<b>Qachus Nek</b>					
mean num bags	.3	.3	.0	.0	.2
% cultivating	16.5	16.0	.5	4.0	7.5
<b>TOTAL</b>					
mean num bags	1.3	1.0	.6	.1	.5
% cultivating	35.6	26.8	18.2	6.5	6.6

Table 2.11

LIVESTOCK OWNERSHIP BY ZONE  
mean number of animals per household  
and percent of households owning one or more

zone	cattle	sheep	goats	horses	donkeys	pigs	chickens
<b>Quthing</b>							
mean	2.9	10.0	7.9	.5	.7	.5	8.3
% with	59.8	33.7	33.7	28.8	37.4	26.0	85.1
<b>Middle</b>							
mean	2.9	6.6	3.0	.5	.7	.3	6.3
% with	60.6	32.3	23.2	30.2	35.7	18.6	77.4
<b>Qachus Nek</b>							
mean	2.1	2.5	4.0	.4	.7	.4	7.9
% with	44.5	12.7	21.8	16.0	30.5	29.0	75.6
<b>TOTAL</b>							
mean	2.6	6.8	5.3	.5	.7	.4	7.6
% with	55.5	27.2	27.2	25.4	34.9	24.7	80.1

A summary measure of livestock ownership (LARGE STOCK UNITS) was computed by considering each head of cattle, horse or donkey equal to 1, and each sheep or goat equal to .2. Table 2.12 shows the number of households in each of the three zones which have no fields, and which have no livestock, as well as those who have neither fields nor livestock. The lack of productive agricultural resources in our Qacha's Nek sample is clear, fitting the pattern which has already been noted of lack of arable land in the district. However, had our sample included households from the northern areas across the Senqu and Ts'oolike Rivers, the picture might have been different. Data from the Sehlabathebe Baseline Study may provide an important corrective. Table 2.13 is a crosstabulation which shows the distribution of large stock units for the entire sample, correlated with access to arable land.

Table 2.12

PERCENT OF HOUSEHOLDS IN EACH ZONE LACKING ACCESS TO  
AGRICULTURAL RESOURCES: FIELDS AND LIVESTOCK

zone	% with no fields	% with no livestock	% with no fields or stock
Quthing	22.3	27.9	8.6
Middle	26.6	27.0	8.2
Qacha's Nek	32.0	44.7	20.8
Total	26.6	32.5	12.0

Table 2.13

CROSSTABULATION OF TOTAL STOCK UNITS BY NUMBER OF FIELDS  
FOR ALL HOUSEHOLDS

FIELDS-> LGSTOCK	Count						Row
	Row Pct	0	1	2	3	4	Total
	Col Pct						
	Tot Pct						
none	0	81	78	39	17	4	219
		37.0	35.6	17.8	7.8	1.8	32.5
		45.3	38.2	22.8	18.5	14.8	
		12.0	11.6	5.8	2.5	.6	
1 - 2	2	25	31	25	14	2	97
		25.8	32.0	25.8	14.4	2.1	14.4
		14.0	15.2	14.6	15.2	7.4	
		3.7	4.6	3.7	2.1	.3	
3 - 5	3	57	82	74	45	13	271
		21.0	30.3	27.3	16.6	4.8	40.3
		31.8	40.2	43.3	48.9	48.1	
		8.5	12.2	11.0	6.7	1.9	
5 - 10	4	15	13	31	15	7	81
		18.5	16.0	38.3	18.5	8.6	12.0
		8.4	6.4	18.1	16.3	25.9	
		2.2	1.9	4.6	2.2	1.0	
11 - 15	5	1		2		1	4
		25.0		10.0		25.0	.6
		.6		1.2		3.7	
		.1		.3		.1	
16 - 20	6				1		1
					100.0		.1
					1.1		
					.1		
Column Total		179	204	171	92	27	673
		26.6	30.3	25.4	13.7	4.0	100.0

Table 2.14

REPORTED MONTHLY INCOME BY SOURCE:  
MEAN PER HOUSEHOLD AND PERCENT OF HOUSEHOLDS REPORTING EACH SOURCE  
(in maloti)

Source of Income	Mean computed for all households interviewed	Number of households reporting this source	Mean computed for those reporting this source
wages of migrant men	62.16	309	113.54
wages of migrant women	1.90	19	67.95
wages of men working Lesotho	11.13	68	110.56
wages of women working Lesotho	7.06	52	91.25
earnings from house building	2.43	28	58.57
earnings from truck,taxi, etc. piece jobs	.91	4	154.25
earnings from ox team	2.16	45	32.58
sale of livestock	.03	3	7.33
sale of wool or mohair	2.84	61	31.61
sale of chickens, eggs	3.04	114	18.02
sale of crops	1.84	50	24.98
earnings from own cafe or shop	1.78	56	21.52
re-sale of fruit, vegetables	22.19	41	367.00
sale of beer	.71	71	28.18
sale of handicrafts	3.44	236	24.19
Food-for-Work projects	5.74	46	84.57
pension or insurance	.62	64	5.56
"help" from friends	2.60	20	87.90
other sources	1.28	51	16.96
	1.83	28	44.25
<b>MEAN FOR ALL SOURCES</b>	<b>141.85</b>	<b>659</b>	<b>-----</b>

In Part One of the paper in the section on household data we have already discussed Tables 2.14 and 2.15. We have also given figures for selected income sources, divided by the eight road zones, in the section on preliminary impact analysis (Table 0.5). Here we give the complete list of all income categories about which we asked, which together form the basis of the total income figure reported in this table and Table 0.5. Note that Table 2.14 first gives the mean computed for all 682 households interviewed, and then the mean for the limited set of households which reported each particular income source. A number of the items coded as piece jobs might also be included with building: such things as digging latrine holes, leveling sites before construction, etc. Sale of beer includes both selling homebrew (the most common) and re-sale of imported beer and spirits (the most lucrative).

Table 2.15

REPORTED MONTHLY INCOME BY SOURCE AND BY THREE ZONES  
MEAN PER HOUSEHOLD  
(in maloti)

Source of Income	Guthing	Middle	Qacha's Nek
wages of migrant men	68.58	50.51	64.77
wages of migrant women	1.60	1.76	2.48
wages of men working Lesotho	11.14	7.54	14.71
wages of women working Lesotho	6.26	3.54	11.69
earnings from house building	2.92	1.39	2.77
earnings from truck, taxi, etc. piece jobs	.63	0.00	2.21
earnings from ox team	3.84	.95	.95
sale of livestock	0.00	.01	.10
sale of wool or mohair	4.11	3.06	.84
sale of chickens, eggs	4.19	1.33	3.12
sale of crops	2.57	.32	2.33
earnings from own cafe or shop	2.83	.87	1.19
re-sale of fruit, vegetables	24.16	23.12	18.50
sale of beer	1.07	.34	.55
sale of handicrafts	13.69	4.91	4.51
Food-for-Work projects	7.82	1.25	7.27
pension or insurance	.97	.54	.21
"help" from friends	3.46	1.78	2.19
other sources	2.53	.22	.55
	2.38	1.26	1.62
<b>MEANS FOR ALL SOURCES</b>	<b>167.50</b>	<b>103.20</b>	<b>144.70</b>

Table 2.15 gives a breakdown for all income sources by three main zones. Among the notable features are: the generally lower earning from all types of wage employment, and indeed from all income sources, in the middle section. It will be particularly interesting to see if the movement of SPRPA construction work into this area in 1985 changes this picture, or if the two peri-urban ends of the road will continue to offer the most by way of wage employment, with the road just providing an opportunity for workers to reach the centers of employment, and for consumers to reach the centers of commerce.

Table 2.16

SUMMARY MEASURES OF MONTHLY CASH INCOME, ANNUAL AGRICULTURAL PRODUCTION  
AND TOTAL MONTHLY INCOME COMBINING CASH INCOME AND VALUE OF CROPS  
mean number and percent greater than 0  
per household by zone

zone	total monthly cash income	ag prod total N of bags 1983/4	cash value of agric productn	N bags reported as sold 1983/4	monthly income cash + ag value
<b>Outlying</b>					
mean	M 167.5	4.3	M 82.2	6.3	171.6
% with	98.2	73.0	73.0	11.7	100.0
<b>Middle</b>					
mean	103.2	3.4	61.4	2.6	107.5
% with	99.5	61.0	61.0	7.0	99.5
<b>Qachas Nek</b>					
mean	144.7	.6	11.9	.5	144.5
% with	93.3	22.5	22.5	1.0	93.3
<b>TOTAL</b>					
mean	141.8	3.0	55.5	3.5	141.7
% with	97.1	54.7	54.7	7.2	97.9

This table gives a series of computed summary variables. TOTAL MONTHLY CASH INCOME is based on the data shown in detail in the two previous tables. The second column, AGRICULTURAL PRODUCTION, reports what householders said was their total production of maize, sorghum, wheat, peas and beans in 1983/4, given in bags, tins (.20 of a bag) or basins (.10 of a bag.) A bag weighs between 80 and 90 kgs, depending on the type of crop, the size of bag, and how fully it is packed. The CASH VALUE OF AGRICULTURAL PRODUCTION was calculated on the basis of local market price estimates of the Ministry of Agriculture for late 1984: maize = M16 per bag, sorghum = M17 per bag, wheat = M22 per bag, and peas or beans = M50 per bag. This was calculated for the entire year's crops. Then this figure was divided by 12, and added to the previous total income figure (minus any crops sales included in that previous figure) in order to give a TOTAL INCOME figure for cash income plus crop value.

Table 2.17

REASONS GIVEN FOR TRIPS TAKEN IN THE PREVIOUS 6 - 8 WEEKS  
 Frequency of responses given by 481 households  
 (Up to 3 possible answers per household)

purpose of trip	frequency	% of responses
Shopping	268	28.6
Visit, family business	200	21.4
Doctor, clinic, hospital	172	18.4
Other business in town	107	11.4
School or sports	47	5.0
Job hunting, NRC	35	3.7
work	31	3.3
Funeral, feast etc	28	3.0
Pitso, GVT business	15	1.6
Church business	10	1.1
Buy goods for cafe/shop	9	1.0
Court, police, stocktheft	4	0.4
Training course	4	0.4
Egg circle (buy or sell)	2	0.2
Buy parts for vehicle	2	0.2
Building related business	1	0.1
Agriculture	1	0.1
<b>TOTAL</b>	<b>936</b>	<b>100.0</b>

People were asked to tell how many trips members of their family had made by vehicle on the road since Christmas. The reasons are shown in the above table. Information concerning the frequency of these trips in the previous 6 to 8 weeks was given in Table 0.7 in the Preliminary Impact Analysis section. The mean number of trips for the whole sample was 2.7. The mean for the total Quthing group was 1.9, for the Middle section was 2.0, and for the Qacha's Nek end it was 4.3. The highest means were from the villages nearest the main towns at the two ends of the road.

There were 106 households, out of 682, who said they had moved from one place to settle in their present locations. The largest number were people who moved from remote mountain areas, or from north across the Senqu River. Some moved from such places to villages on feeder roads. Others, in a kind of second-generation moving process, moved from villages on the feeder roads to those on the main roads. Table 2.18 gives the frequency of reasons given for moving. The most important reason was to be on or near the road and to have access to transportation. This tabulation combines up to 3 responses per household. Many people said, first, that they wanted to be near the road, and then went on to mention advantages of being by the road such as clinics, shops, schools. Others, particularly those who had moved to good agricultural areas (even if not on a main road) said they just liked the place, they wanted fields and pastures, or they had family reasons for moving.

Table 2.18

REASONS FOR MOVING GIVEN BY THOSE HOUSEHOLDS  
WHICH MOVED TO SETTLE IN NEW VILLAGES

Value Label	Frequency	Percent	Valid Percent	Cum Percent
near road, transport	27	25.5	25.5	25.5
liked the place	23	21.7	21.7	47.2
fields, pastures	13	12.3	12.3	59.4
not cross river	9	8.5	8.5	67.9
medical care	7	6.6	6.6	74.5
to start business	7	6.6	6.6	81.1
family troubles	6	5.7	5.7	86.8
didn't move	3	2.8	2.8	89.6
good water	2	1.9	1.9	91.5
work transfer	2	1.9	1.9	93.4
poverty in old place	2	1.9	1.9	95.3
near shops	1	.9	.9	96.2
near schools	1	.9	.9	97.2
river+road+business	1	.9	.9	98.1
avoid cold frost	1	.9	.9	99.1
road + business	1	.9	.9	100.0
	-----	-----	-----	
TOTAL	106	100.0	100.0	

The next table shows the dates when those people who had moved to new

villages (the same group as in the previous table) said they had done so. It is interesting to see the increased mobility in the most recent period, particularly in the Qacha's Nek end area. Of course it is also important to consider that the total sample from Qacha's Nek is bigger than from any other of the 8 road zones. One should also realize that people who moved into a village 10 or 20 or 30 years ago are not as likely to mention it, for they now consider themselves as "old timers" in relation to more recent arrivals.

Table 2.19

DATES WHEN PEOPLE MOVED TO NEW VILLAGES  
BY ROAD ZONE

ROAD ZONE >	SPR Q - MtM	SPR new rd	old Mpk rd	Qth fd rda	mid rd	mid feed rda	cross Senqu Riv	Qch Nek end	row total
SAMPLE SIZE >	60	82	60	80	100	100	40	160	682
date moved									
1950-54	-	-	-	-	2	1	-	1	4
1955-59	2	1	-	1	-	1	1	2	8
1960-64	1	-	-	1	3	-	1	2	8
1965-69	1	3	3	1	1	-	-	3	12
1970-74	2	-	1	4	2	1	-	5	15
1975-79	3	9	-	-	2	4	-	5	23
1980-84	6	3	-	3	8	2	1	13	36
Total	15	16	4	10	18	9	3	31	106

The final table in this section reports details we collected concerning the dates and places where people purchased modern building materials. We felt that baseline information in this area would help to measure change over time, both looking back, and looking ahead to the time when the SPR is finished. Table 2.20 gives the percent of the sample of households which said they had not bought, had bought prior to 1979, or had bought since 1980, certain types of building materials. We also show the location of the main places where these items were purchased, listing all those places mentioned by 10 or more households.

Table 2.20

PERCENT OF HOUSEHOLDS HAVING PURCHASED CERTAIN BUILDING MATERIALS,  
BY YEARS OF PURCHASE  
NOTING ALSO MAIN PLACES OF PURCHASES

type of item	% who have not bought	% buying before 1979	% buying during 1980-85	main sources of purchases (10 or more mentions)
zinc roofing	45.9	26.2	27.9	Mt. Moorosi, Qacha's Nek Sekake, Whitehill, Moyeni, Mphaki, Villa Maria, Malefane, Ts'oelike, RSA
wooden rafters	49.6	24.6	25.8	Qacha, Mt Moorosi, Sekake, Moyeni, Whitehill, Mphaki, RSA, Malefane, Pokane, Ts'oelike
cement blocks	90.3	4.0	5.7	Koali
cement (pockets)	88.7	4.3	7.0	Mt Moorosi, Sekake, Qacha
metal door frames	73.6	11.9	14.4	Mt Moorosi, Moyeni, Whitehill Qacha, Sekake
wooden doors	43.8	31.1	24.9	Mt Moorosi, Qacha, Moyeni, Sekake, Whitehill, Mphaki, Mpitit, RSA. Villa Maria, Malefane, Ts'oelike
glass windows	33.1	36.4	30.2	Mt Moorosi, Sekeke, Qacha, Moyeni, Whitehill, Mphaki, RSA, Ts'oelike, Mpitit, He Mopeli, Tsosing
coal stove	90.8	5.3	4.0	Qacha, Moyeni, RSA, Whitehill
latrine	94.6	1.9	3.7	Qacha (8 only) Mt Moorosi (4) made of scrap (4)

## Appendix 3

OPINIONS OF VILLAGE PEOPLE CONCERNING ROADS,  
TRANSPORTATION PROBLEMS AND VILLAGE NEEDS

The following tables summarize multiple answer questions asked during all the household interviews. Comments on Table 3.1 have already appeared in Section 5 of Part One. Brief comments on the other five tables are in this Appendix.

Table 3.1

WHAT CHANGES HAS THE SOUTHERN PERIMETER ROAD BROUGHT SO FAR?  
Frequency of responses given by 675 households  
(Up to 3 possible responses per household)

RESPONSE	FREQUENCY	PERCENT	WEIGHTED FREQUENCIES		
	All zones	All zones	Quth	Midl	Q Nk
I haven't seen it yet	256	29.7	19	102	127
Improved quality of road	150	17.4	82	20	15
Trips are now shorter	113	13.1	21	29	55
More transport is available	88	10.2	29	37	10
Few cars on old road	64	7.4	43	2	1
More shops, roadside sellers	60	7.0	18	16	18
Goods transported easily	21	2.4	9	6	3
Vehicles travel easily	18	2.1	10	3	1
Transp. of sick people quicker	14	1.6	7	4	-
New qvt garage, and woolshed	14	1.6	10	-	-
Fewer accidents	9	1.0	4	-	3
Better houses (cement, zinc)	8	0.9	1	6	-
Trips cost less	5	0.6	2	1	1
Old road not maintained	5	0.6	4	-	-
More churches, schools	5	0.6	2	-	2
People move to be near road	5	0.6	1	4	-
Vehicles from Maseru come often	4	0.5	1	2	-
Still need access roads to village	4	0.5	3	-	-
Rural development in general	4	0.5	1	1	1
Drought relief (food) comes	3	0.3	1	2	-
High, unregulated taxi fares	3	0.3	1	1	-
Problems, expenses, roaming about	5	0.6	2	2	-
Animals get killed on road	2	0.2	1	1	-
Employment on rd construction	1	0.1	1	-	-
	861	100.0	273	239	237

Each table first gives frequency and percent of all responses, then gives a breakdown of frequencies by the three major road zones: Quthing to Mphaki (282 cases), Mahlomola Letsie to Sekake (200 cases), and Ha Kose to villages near Qacha's Nek (200 cases). Some questions were answered by more households than others. Thus above each table we give the actual number of households responding. Since the number of cases in the first group is larger, a correction factor of .71 has been used to normalize the figures presented (Quthing freq x .71 = 200/282).

Table 3.2

## BENEFITS OF ROAD IMPROVEMENTS IN LESOTHO IN GENERAL

Frequency of responses given by 594 households

(Up to 3 possible responses per household)

RESPONSE	FREQUENCY	PERCENT	WEIGHTED FREQUENCIES		
	All zones	All zones	Quth	Midl	Q Nk
Purchases brought home easily	152	16.3	58	50	21
Sick brought to hospital easily	148	15.8	44	61	25
Road work jobs available	139	14.9	30	22	75
More transport	98	10.5	32	35	18
Quicker, shorter trips	92	9.9	23	39	20
Travel easier	84	9.0	33	24	13
More shops, business develops	36	3.9	15	10	5
Less wear on vehicles, fuel saved	24	2.6	10	6	3
Dead transported easily	23	2.5	11	7	1
Rural development generally	22	2.4	6	6	8
Vehicles come near home	15	1.6	5	6	2
More visitors	15	1.6	6	2	4
Road now wide and safe	15	1.6	5	1	7
There still are no roads here	13	1.4			13
Food aid comes	10	1.1	6	2	
Private car + taxi owners benefit	10	1.1	6		2
More schools, clinics, latrines	9	1.0	1	6	1
More and better bridges	8	0.9	2	1	4
Roadside food sale is possible	8	0.9	2	4	2
No benefits to us yet	7	0.7	1		6
Tractors are more available now	4	0.4	2	2	
Grader leveled ballfield, house sites	2	0.2	1	1	
-----					
	934	100.0	299	285	230

In response to a more general question about benefits of building new roads and improving old roads (Table 3.2) some items recur and new topics appear.

There are less striking differences between the groups of respondents. Transport of consumer goods and building materials, and transport of the sick are at the top for the first two groups. The middle zone is more concerned about transporting the sick, probably because there is no hospital between Quthing and Tebellong (across the Senqu from Whitehill, almost 150 km away), and only 3 regularly staffed health centers along this stretch of the road. Both of these sections are already benefitting from the SPK and mention more transport and quicker, shorter, easier trips often. It is also in this area that people are aware of an increase in the number of shops. The highest item on the Qacha's Nek list is employment on road construction. This reflects the desire for wage employment and a limited agricultural resource base in many villages near Qacha's Nek town and along the road. It certainly shows their hope for employment when the SPRPA construction work reaches their end. It is also striking that 13 of the Qacha's Nek people say there are "no roads here"; all are from the villages north of the Senqu River.

Table 3.3

PROBLEMS OF ROAD IMPROVEMENTS IN LESOTHO IN GENERAL  
Frequency of responses given by 561 households  
(Up to 3 possible responses per household)

RESPONSE	FREQUENCY All zones	PERCENT All zones	WEIGHTED FREQUENCIES		
			Quth	Midl	Q Nk
No problems	268	43.3	77	116	44
Accidents to people and animals	125	20.2	39	29	41
Fields, houses, paths, destroyed	74	12.0	25	17	22
Enemies, thieves come easily	26	4.2	6	13	4
Bad behavior, peace spoiled	25	4.0	10	4	7
Fares not regulated, too high	21	3.4	11	3	2
Road still far, no access roads	21	3.4	13	2	
Culverts ruin land, weeds spread	13	2.1	6	3	1
Still not enough transport	10	1.6	6	1	1
Old road is still bad	10	1.6	3	6	
Waste of money, petrol	10	1.6	7		
No more jobs, road work is over	7	1.1	4		1
We can't move ploughs on new road	5	0.8	2		2
FFW road construction work is hard	4	0.6	4		4
	619	100.0	209	198	125

The positive view which rural Basotho have about roads is revealed in responses to a question about problems which arise from road construction in general in Lesotho. Over half of those interviewed had no problems to mention. Note first that 121 households, or 17.8% of all those interviewed, gave no answers at all to this question, implying that there are no problems. Of the

561 who did answer, 43.3% of the responses (from 39.1% of all households) explicitly state that they can think of nothing negative about road construction and gave no further answers. Households in Qacha's Nek, in particular, have few negative comments, probably because of their urgent desire for road improvements and then lack of experience with actual construction work.

The group with the most specific comments about negative impacts are people from Quthing to Mt. Moorosi and Mphaki, who have had the intensive SPRPA work going on in their area since 1981. People near both Quthing and Qacha's Nek where the traffic is heavier than in the middle, comment on increased number of accidents. They also mention the destruction of fields, houses and other household resources, because of road alignment or widening, because of blasting, and subsequently because of erosion and soil washed through culverts and other drainages onto people's fields. The Quthing people also comment on high or unregulated taxi fares, which is concomitant with the benefits of increased transport made possible by the SPR road improvements. Public transport has increased so rapidly that neither government regulations nor competition have yet brought costs down; meanwhile, people are eager to take advantage of new opportunities to travel by road, which creates a new demand for cash payments from limited household funds. Related comments came from people who said the road tempts people to roam about and waste money (or petrol if they own vehicles) travelling needlessly up and down. There were also people, particularly in the Quthing area, who spoke of new behavior problems such as juvenile delinquency, prostitution and loose living in the construction camp areas, and drunkenness and rudeness on public vehicles. We have grouped all these comments under one heading, together with more general comments about traditional culture being eroded as modern ways move in along with the road.

There is a concern in the middle area about thieves, enemies and political terrorists coming (and then escaping) more easily where roads exist. On the other hand, some people in the previous question (Table 3.2) noted that on wide, well travelled roads, pedestrians are less likely to be robbed or assaulted than on isolated foot-paths. (Since a research assistant and I were within minutes of an armed robbery of a trader's vehicle on the most remote feeder road in the middle section, we have a particular awareness of this issue, and appreciation for the safety which more heavily travelled roads afford.)

Five people made the surprising comment that they are no longer able to move ploughs on the road. Ploughs are generally hauled from home to the fields on ox-drawn wooden sledges which scar deep ruts in the ground. In order to protect road surfaces, farmers are not allowed to use sledges on the roads. One chief in a Qacha's Nek village spoke bitterly about this problem, saying that his people are just poor peasants who do not own vehicles, so the only effect of the road has been to interfere with old farming practices. "So we go out at dawn, and on Sunday, and steal the road," he said "in order to move our ploughs when there are no police to see."

Table 3.4

TRANSPORTATION PROBLEMS IN GENERAL  
Frequency of responses given by 517 households  
(Up to 2 possible responses per household)

RESPONSE	FREQUENCY	PERCENT	WEIGHTED FREQUENCIES		
	All zones	All zones	Quth	Midl	Q Nk
No transport, long wait for transp	288	45.3	57	101	107
No good road where we live	99	15.6	36	9	40
Lack of money and jobs	68	10.7	26	11	29
No road to village, far to bus stop	49	7.7	14	27	2
No problems	46	7.2	22	11	4
High, unregulated fares	25	3.9	11	1	9
Lack of bridges	23	3.6	1	4	18
Clinics far, no ambulance	9	1.4	4	1	2
No transport on Sundays, rainy days	6	0.9	1	4	
Breakdowns of public buses	5	0.8	3	1	
Accidents by speed, drunkenness	4	0.6	1	3	
Transport for agric purposes	3	0.5	1	1	1
Stealing, cursing, terrorists	4	0.6	2	1	
Husband seldom comes home	2	0.3			2
Shops far, no transport for heavy items	3	0.5	1	2	
Sleep grades on road	1	0.2		1	
No tractors for ploughing	1	0.2	1		
-----					
	636	100.0	181	178	205

Near the end of the interview we again gave people the opportunity to mention other transportation problems. These responses, given in Table 3.4, show similar concerns and geographical patterns to the tables already discussed. Again the need for more transport dominates the answers from the middle and Qucha's Nek. Those in Quthing who say there is no good road are from the feeder roads and the old road which they are implicitly comparing with the improved Southern Perimeter Road serving the other parts of Quthing.

Table 3.5

AGRICULTURAL-RELATED TRANSPORTATION PROBLEMS  
Frequency of responses given by 491 households  
(Up to two possible answers per household)

RESPONSE	FREQUENCY	PERCENT	WEIGHTED FREQUENCIES		
	All zones	All zones	Quth	Midl	Q Nk
No fields, no problems	191	31.0	53	81	35
Insufficient transport	121	19.6	27	23	59
Bad roads or no roads	56	9.1	13	11	26
Veterinarians far, don't come	26	4.2	12	8	1
Harvest transport	24	3.9	1	12	10
No money for agric. purposes	21	3.4	11	4	2
No donkeys	21	3.4	11	13	?
No means of ploughing	20	3.2	14		
Fertilizer is far, no transport	20	3.2	9	7	
No modern machines + methods	17	2.8	11	1	1
Public trsp fares high, no money	15	2.4	6	4	2
Co-op Lesotho far, mill far	15	2.4	4	10	
No bridges	12	1.9	1		10
Livestock extension + services	12	1.9	9		
Animals killed on road	9	1.5	1		8
Woolsheds are far	7	1.1	3	3	
Agric + livestock markets	7	1.1		4	3
Insecticide, medicine far	7	1.1	4		2
Chicken food + fodder far	5	0.8	3	1	
Seed and other inputs far	4	0.6	3		
Lack of employment	5	0.8	2	2	
Road destroyed fields	2	0.3	1		1
	617	100.0	192	184	162

A number of new items emerged when we asked about agricultural transport problems. More than 30% of the responses were from people who said they have no such problems, primarily because they have no fields; this corresponds with our figure of 26.4% of all households without fields. For the remaining people, insufficient transportation in general and bad roads were most frequently mentioned, particularly in Qacha's Nek. Most of the other comments list specific problems resulting from this general lack of roads, transportation, or from the great distance a farmer must presently go to obtain inputs and services. Quthing residents mention modern agricultural needs more often than other zones: veterinarians, money to invest, means to plough (perhaps tractors or money to hire them), fertilizer, farm machinery, and extension workers. Farmers in the middle have problems in a more traditional farming transport context: needing animals, carts or trucks to help bring the harvest home, donkeys for transport, and a Co-op Lesotho store from which to buy agricultural supplies. The Qacha's Nek people seem so preoccupied with general problems of transport, roads and bridges that detailed responses are not given.

Table 3.6

IDEAS ABOUT WHAT WOULD MAKE THE VILLAGE A BETTER PLACE TO LIVE IN  
 Frequency of responses given by 672 households  
 (Up to 3 possible responses per household)

RESPONSE	FREQUENCY All zones	PERCENT All zones	WEIGHTED FREQUENCIES		
			OUTH	MIDL	Q NK
Village water supply, water tanks	298	15.7	100	78	79
Clinic, hospital, ambulance, mortuary	242	12.7	77	70	63
Roads to villages, improved road	178	9.4	61	33	57
Shops, wholesalers, Co-op Lesotho	167	8.8	40	62	49
Better schools, more teachers	110	5.8	34	25	37
Grinding mill	94	4.9	48	20	6
Latrines, VIP, public toilets	87	4.6	26	25	25
Police, Post, court, other Govt offices	82	4.3	31	20	18
Public + Govt Transport	75	3.9	14	35	20
Public market	65	3.4	7	33	22
Hotel, bar, entertainment hall	55	2.9	12	22	16
Community garden	49	2.6	9	10	26
Co-op Lesotho	45	2.4	4	32	7
Jobs and factories	37	1.9	15	15	1
Agricultural tools + machinery	35	1.8	12	8	10
Bridges	33	1.7	4	1	26
Ag, nutrit, livestock extension, vets	30	1.6	9	13	4
Chicken rearing improvements	26	1.4	4	10	11
Food-for-work, aid, money, clothes	26	1.4	9	2	12
Handicraft projects, dressmaker	25	1.3	4	7	13
Tree planting, firewood	22	1.2	11	2	4
Modern agric methods, co-ops	20	1.1	9	2	4
Bank, credit union, ADB	16	0.8	6	7	1
Woolshed and diptank	14	0.7	5	6	1
Creche, pre-school	12	0.6	1	3	8
Adult educ + vocational schools	10	0.5	1	1	7
Mine recruiting office	9	0.5	2	3	3
Help destitute, funa burial society	9	0.5	4	2	1
Skilled builders, block makers	5	0.3	1	2	1
TV, Phones, electricity	5	0.3	-	2	3
Stadium, Youth groups, clubs	6	0.3	-	2	4
Airplane landing field	3	0.3	-	3	-
Petrol stations, mechanics	3	0.2	-	3	-
Good pastures, crops, rain	4	0.2	-	-	4
Churches, prayers, peace	3	0.2	1	2	-
-----					
	1900	100.0	561	561	543

Other tables have been shortened by combining responses into more general categories. Here the detail has been retained to show the diversity of responses, most of which speak for themselves. The overwhelming concern from all groups is for village water supplies. Next most important are medical needs, with a few people also mentioning need for a mortuary. The lack of roads in Qacha is again significant, and access roads into little side villages is a concern in Guthing and the Middle areas. Lack of shops, Co-op Lesotho and transport in the middle is very clear, and lack of grinding mills in Guthing. Other items are too numerous and diverse to mention. Altogether, these answers help shed light on the kinds of changes which the people we interviewed hope to see in their areas as improved roads and associated private businesses and development activities increase.

## Appendix 4

## VILLAGE SHOPS, CAFES AND CONSUMER PRICES

In addition to a brief inventory of all the shops in each village studied, in-depth interviews were conducted by the senior research assistants with traders or shop-keepers in as many shops and cafes as time permitted. The interview form used is given in Appendix 8. There were 69 businesses interviewed: 20 general dealers, 37 small cafes or grocers, 3 butchers, 1 grinding mill, 1 with general dealer, cafe and butcher's license, and 7 with unspecified types of licenses or no license at all. Considerable detail is reported in this section because so little data is available about the operations of small retail traders in Lesotho. In addition to the information presented here, Appendix 1, giving village profiles, includes a tabulation of the number of shops in each village studied, the number with vehicles, refrigerator/freezers, and with a regular supply of key commodities (Table 1.4.).

INTERVIEWS WITH LOCAL TRADERS

Some of the major general dealers, like Newman at Tsoelike and Lesoli at Sekake's, have been pioneers in rural development in the southern part of Lesotho. As the pictures in Appendix 10 show, such traders operate from large complexes of buildings, buying wool and mohair and baling it for shipment, providing grinding mills for local grains, and selling building materials, tools, staple foods and all sorts of consumer goods. Such traders have been among the first to bring vehicles into their areas, open up roads and establish satellite shops in more remote areas. For example, Mr. Newman has shops at Wachana's Nek, Tsoelike Bridge and Maitikane serving villages in the Sengu Valley north of Tsoelike. The Tsoelike store was opened in 1905; he himself has been there since 1955. He continues to take a great interest in transportation problems and road development in this area. Mr. Lesoli, a Mosotho trader, settled in Sekake in 1939, first as a miller and then a general dealer. He subsequently established shops in Beiforong, Ra Nkhu (north of the Senqu River), and at Ra Setsena. He says it was traders like himself who worked to build and maintain roads to such outposts in the south before the Roads Branch had the resources to do so. Interviews have identified a number of similar traders, South Africans and Zasothon, who opened up transport and pioneered rural development throughout the remote parts of Lesotho. Even now, on the new SPRPA road section between Mt. Moorosi and Mphaki, and on the feeder roads, such shop-keepers can be found, bringing in goods essential to development and an improved standard of living, providing transport where there are no public

buses, and hiring local people to repair the roads themselves when necessary.

In contrast, a number of those we interviewed were very small traders operating out of buildings of no more than 12 square meters or even from their own homes. A small shop or cafe is looked upon by many Basotho as the very best investment they can make, and in fact, other surveys have shown this to be the case. Older studies of Lesotho described the purchase of cattle as the major form of investment in rural Lesotho. Today, with the growing land shortage, dependence on wage employment, inflow of cash, movement of populations to towns and roadside areas and the desire to buy building materials, consumer goods and pre-processed food and drink investment in retail trade has come to replace investment in cattle for many people.

Table 4.1

## DATES IN WHICH BUSINESSES WERE ESTABLISHED

Date shop opened	Frequency	Percent	Cum Percent
1901	1	1.7	1.7
05	1	1.7	3.4
39	1	1.7	5.2
53	1	1.7	6.9
58	1	1.7	8.6
61	1	1.7	10.3
63	1	1.7	12.1
66	1	1.7	13.8
69	3	5.2	19.0
70	2	3.4	22.4
74	4	6.9	29.3
75	2	3.4	32.8
76	1	1.7	34.5
77	5	8.6	43.1
79	2	3.4	46.6
80	4	6.9	53.4
81	1	1.7	55.2
82	2	3.4	58.6
83	6	10.3	69.0
84	15	25.9	94.8
Jan-March 85	3	5.2	100.0
TOTAL	58	100.0	

The rapid growth of the commercial sector in the road zone of influence is indicated by Table 4.1 showing the dates when the shops we interviewed were established. See also Appendix 5 (Table 5.3) which shows the great increase in number of licensed traders between 1981 and 1984 in the two districts under consideration.

A similar indication of growth which is specifically related to the road is the increase in vehicle ownership: 41.2% of those interviewed own one or more vans or trucks. One trader in Sekake owns 7. Several also operate public buses or taxis. Of the 39 vehicles reported, 10 were bought before 1982, 4 in 1982, 11 in 1983, and 14 in 1984.

The next four tables give information about the reasons businesses were established in particular locations (Table 4.2), previous work done by the trader (Table 4.3), his or her source of capital (Table 4.4) and suggestions for other types of business which would be successful in this area (Table 4.5). (Note that 25% of the owners are female, 42% of the managers are female, and about 30-90% of those working behind the counter are female.)

Table 4.2

## REASONS TRADERS GIVE FOR STARTING THEIR BUSINESS IN PRESENT LOCATION

Value Label	Frequency	Percent	Cum Percent
near the road (and school)	24	45.3	45.3
to help the community	8	15.1	60.4
there were no shops here	6	11.3	71.7
it is my home	5	9.4	81.1
only available place	2	3.8	84.9
to earn money, a good business site	2	3.8	88.7
asked to buy stock for owner	2	3.8	92.5
relative or friend was here	1	1.9	94.3
chief gave me this site	1	1.9	96.2
a central place near many villages	1	1.9	98.1
to provide a job for wife	1	1.9	100.0
	-----	-----	-----
TOTAL	69	100.0	
Valid Cases	53	Missing Cases	16

In Table 4.2, the relationship between the road and the location of a shop is absolutely clear. Some simply said they chose the location because it is on

the road. Others added that it is at a junction with other roads or with footpaths and bridle trails, or that it is also near a school or clinic.

Table 4.3

PREVIOUS TYPE OF WORK DONE BY THE TRADERS INTERVIEWED

Value Label	Frequency	Percent	Valid Percent	Cum Percent
RSA migrant worker, miner	14	20.3	29.2	29.2
running another shop or selling in one	10	14.4	20.8	50.0
teaching	3	4.3	6.3	56.3
hawker (selling soft goods from RSA)	2	2.9	4.2	60.4
farming	2	2.9	4.2	64.6
taxi owner	2	2.9	4.2	68.8
mechanic	2	2.9	4.2	72.9
RSA railways	2	2.9	4.2	77.1
selling beer	1	1.4	2.1	79.2
sewing and knitting	1	1.4	2.1	81.3
selling livestock	1	1.4	2.1	83.3
police force	1	1.4	2.1	85.4
civil servant	1	1.4	2.1	87.5
accounts clerk	1	1.4	2.1	89.6
renting houses	1	1.4	2.1	91.7
driver	1	1.4	2.1	93.8
building houses	1	1.4	2.1	95.8
working for book company in RSA	1	1.4	2.1	97.9
	1	1.4	2.1	100.0
	21	30.4	MISSING	
	-----	-----	-----	
TOTAL	69	100.0	100.0	
Valid Cases	48			
Missing Cases	21			

One one of the most interesting things in Tables 4.3 and 4.4 is the evidence that former migrant workers are investing money in the commercial sector in Lesotho. The SPR Project paper speculated about the prospect for migrants breaking traditional spending patterns and being attracted by the new road to invest in vehicles and small businesses. [1] Our evidence shows that this process is well underway.

Table 4.4

## SOURCES OF CAPITAL USED TO ESTABLISH PRESENT BUSINESS

Value Label	Frequency	Valid Percent	Cum Percent
Husbands earnings (details not given)	14	31.1	31.1
Previous RSA work (mines or other)	9	20.0	51.1
Previous shop or cafe	3	6.7	57.8
Taxi or bus	2	4.4	62.2
Hawker (selling soft goods from RSA)	2	4.4	66.7
Wool/mohair sales	2	4.4	71.1
Livestock sales	2	4.4	75.6
Bar and butchery	2	4.4	80.0
Teachers earning	1	2.2	82.2
Policemans earnings	1	2.2	84.4
Pension	1	2.2	86.7
Sewing	1	2.2	88.9
Knitting	1	2.2	91.1
Beer sales	1	2.2	93.3
Previous investments	1	2.2	95.6
Borrowed in RSA	1	2.2	97.8
Given by someone	1	2.2	100.0
TOTAL	45	100.0	100.0
Valid Cases	45		
Missing Cases	24		

1. Project Paper, 1978, p. 111.

Table 4.5

## TRADERS' SUGGESTIONS FOR NEW BUSINESSES LIKELY TO SUCCEED IN THIS VILLAGE

Frequency of responses given by 42 shop keepers  
(Up to 3 possible responses per interview)

RESPONSE	FREQUENCY	% OF RESPONSES
Hotel, restaurant, bar	16	23.5
Butchery	13	19.1
Off-sales liquor	9	13.2
Wholesalers	4	5.9
General dealer	3	4.4
Supermarket	3	4.4
Clothing shop	3	4.4
Grinding mill	3	4.4
Co-op Lesotho	3	4.4
Petrol station	2	2.9
Garage, mechanic	2	2.9
Furniture shop	1	1.5
Shop selling dishes	1	1.5
Chemist	1	1.5
Soft drinks store	1	1.5
Taxi	1	1.5
Egg circle	1	1.5
Shop selling building materials	1	1.5
	-----	
	68	100.0

The next table concerning paraffin purchases (4.6) is just one of a number in the data file which show where shopkeepers go to buy particular commodities. We asked about mealie meal, cabbages, groceries in general, clothing and paraffin. In all of these tables the geographical pattern is quite clear. The traders in both the Qacha's Nek section and the Middle section generally go east to purchase their supplies in either Qacha's Nek or Matatiele. The only exception to this in Table 4.6 is one small cafe owner who buys paraffin from a larger shop nearby, in Whitehill. Those in the Quthing area generally travel west: they obtain almost all of their supplies from Mt. Moorosi, Quthing, Mhales Hoek, or Zastron and Wepener in the Orange Free State. The two exceptions in the table below, where Quthing traders buy paraffin from Matatiele and Qacha's Nek, may be explained by the lower prices on petroleum products and railed into Matatiele from Durban. Assuming a continued open border at Qacha's Nek, competitive prices and efficient delivery services by wholesalers there, this pattern may continue. An interesting question in assessing the impact of the Southern Perimeter Road is the extent to which the road improvements will move the "watershed" to the west, encouraging more of the middle group to obtain supplies from Quthing and other major lowlands towns. More crucial is the

potential role the road will play should political tensions in southern Africa escalate and the border again be closed as in 1977-1978.

Table 4.6

SOURCES OF PARAFFIN PURCHASED FOR RESALE BY SHOPKEEPERS  
BY MAJOR ROAD ZONES

Crosstabulation: PARAFFIN SOURCE By ZONES3

ZONES3->	Count	Guthing	Middle	Qachas Nek	Row Total
PARAFFIN SOURCE	Col Pct	1.00	2.00	3.00	
Mohale's Hoek	3	1			1
		4.8			2.1
Zastron	14	1			1
		4.8			2.1
Wepener	15	4			4
		19.0			8.3
Guthing Moyeni	4	10			10
		47.6			20.8
Mt. Moorosi	6	3			3
		14.3			6.3
Whitehill	7			1	1
				5.9	2.1
Qachas Nek	9		6	13	19
			60.0	76.5	39.6
Matatiele	17	1	3	2	6
		4.8	30.0	11.8	12.5
Matat and QM	18	1	1	1	3
		4.8	10.0	5.9	6.3
Column Total		21	10	17	48
		43.8	20.8	35.4	100.0

Number of Missing Observations = 12      significance = .0001

Table 4.7 shows the types of transport used for bringing several different types of commodities to the shops. Note that the most common source of transport is the delivery service provided by the suppliers. Most suppliers are large wholesale dealers such as Frazers, Jandrells and Remus to the west, in Guthing, Mohales Hoek and the Free State; and Metro, J. Y. Yudleman and Haborona to the east in Qacha's Nek or Matatiele. Likewise bread is delivered by the suppliers, Astoria Bakery from Maseru and Mafeteng Bakery. Even when the border was closed in 1977-78, Matatiele traders would take orders and deliver goods to Basotho traders waiting at the border gait.

Table 4.7

## TYPE OF TRANSPORT USED TO OBTAIN STOCK FOR RESALE

Type of transport	Para- fine	Mealie meal	Grocer- ies	Cab- bages	Bakery bread	Clo- thing
Delivered by supplier	18	21	16	15	25	6
Trader's own vehicle	14	8	13	11	5	6
Public transport	7	7	10	6	5	2
Hired vehicles	5	7	5	2	3	--
Boat, donkey, people	4	4	4	3	4	1
Postal order	--	--	--	--	--	1
Grow or bake their own	--	--	--	1	1	--
Total number of shops stocking this item	48	47	48	38	43	16

CONSUMER PRICE SURVEY

In addition to the first series of interviews with local traders, enumerators returned in late May to collect data on consumer prices in as many shops as possible. They visited 42 shops, most of them ones which had previously been interviewed in depth. In addition, prices on comparable items were obtained from 5 shops, large and small, in Maseru to provide a basis of comparison between urban and rural prices. Prices were recorded in 26 of the villages in which the original baseline survey was conducted. Unfortunately there was only time to revisit one of the shops across the Senqu River; and that was near the river in Tebellong, not in the more distant Ha Stirling itself. The shops ranged in size from 9 square meters (1 case) to large complex

institutions like those of Newman's and Lesoli's mentioned above, with 10 or more buildings and too many rooms to count (6 cases). Excluding these 6 big shops, the mean size was 23 square meters while the mode was 12 square meters. In addition to giving mean prices, Table 4.8 shows the number of shops visited in each road zone: 23 of these held general dealer's licenses, while 24 held cafe or grocer's licenses. Those who conducted this price study made the following observations about the shops visited:

Many of the shops claim to be General Dealers, but in reality they just sell groceries. This is especially true on feeder roads where shop keepers have difficulties in transporting hardware items such as roofing zinc, cement, door frames and other heavy building materials, whereas groceries can be transported by head or by donkey. It is in these small shops that prices are higher because the shop owner knows that people will have to buy from him, especially those who have no extra money to transport to bigger shops. Transportation problems are now difficult for shop-keepers in the Makooae area on the old road, particularly small dealers who don't own vehicles and must depend on public transportation. Shop owners who are along the main road are happy, especially the ones on the new SPRPA road between Moyeni and Mphaki, because they say they are now able to move goods easily between their shops and wholesalers.

There is also considerable difference in terms of buildings, shelves and other furniture between shops in remote villages and those close to the main road. In the remote areas cafes are mostly rondavels without shelves. Goods are just arranged neatly on the floor or on cardboard boxes. In one case we saw the traditional Basotho type of mud shelves being used to display goods. In some cases the shop also serves as a bedroom with only a curtain as a room divider.

Another observation concerns the sale of beer in small shops on all parts of the road, especially in Mphaki where the new SPRPA camp is being built. There are already two new restaurants which have been built. The beer is cheaper here than in Mt. Moorosi. Many people now come from Mt. Moorosi to spend weekends in Mphaki. It looks as if Mphaki is going to be a beer can town like Mt. Moorosi in a short while.

The selection of items for this study was determined by our previous interviews with village traders concerning their best selling items. In addition, we consulted staff at the Bureau of Statistics who are responsible for compiling a quarterly consumer price index for urban Lesotho regarding items to be included, and standard brands and sizes. The questionnaire, which gives the brand and size investigated, appears in Appendix 2. However, many rural shops have a very limited selection of goods. Thus when prices were obtained for a comparable brand, they have been included. And when prices could only be obtained for a different size item, we have calculated a price for the standardized quantity. (Note that in local shops there is no consistent pattern

of lower or higher prices for large bulk purchases of a commodity.) The list begins with the most commonly sold items moving to those least available.

Table 4.8

AVERAGE PRICES FOR COMMON CONSUMER GOODS BY ROAD ZONE  
In Maloti

N of shops selling item	Item	unit size	SPRPA	Quthing	Middle	Qacha's	Maseru
			Q - Mphaki	old+fedr	section	Nek	
			8 shops	13 shops	13 shops	8 shops	5 shops
			M	M	M	M	M
47	Sugar	1 kg	1.03	1.00	1.08	1.03	.87
47	Milk LongLife	.5 lt	.60	.62	.68	.66	.52
47	Powdered Soap	150 gms	.49	.48	.55	.54	.45
47	Candles	pkt. of 6	.97	.94	1.03	.89	.83
46	Maize meal	25 kg	14.03	13.61	14.93	14.12	12.00
46	Salt	500 gms	.23	.23	.28	.29	.26
46	Fat/oil	125 gms	.35	.37	.41	.39	.30
46	Tinned fish	155 gms	.56	.57	.64	.60	.51
46	Sunlight Soap	125 gms	.34	.29	.31	.30	.34
45	Coffee	62.5 gms	.43	.46	.42	.50	.38
45	Paraffin	1 litre	.70	.71	.65	.62	.62
45	Cigaretts	pkt. of 20	.95	.97	1.00	.96	.84
43	Wheat meal	25 kg.	17.36	18.62	19.46	19.67	15.63
42	Vaseline	50 gms.	.55	.53	.51	.54	.44
41	Bread,brown	loaf	.72	.77	.78	.68	.57
37	Dawn hnd lotion	200 ml	1.47	1.62	1.74	1.60	1.18
23	Baby milk	250 gms	2.50	2.29	2.52	2.33	1.98
20	Blanket	1 adult size	49.29	48.90	57.55	54.00	46.25
12	Primus	1	15.60	14.29	16.95	13.72	12.20
11	Cement	50 kg pocket	8.16	7.50	9.49	9.13	5.95
10	Roof zinc	12 ft. lgth	16.62	16.60	16.79	16.40	15.65

After tabulating these actual prices, we made another calculation based on Maseru prices in order to show the effect on prices of road location. We indexed each item by dividing its local price by the Maseru price for that item. Maseru indexed prices are shown in the next table. The general pattern of higher prices in more distant and remote middle areas is very clear.

Table 4.8

INDEXED PRICES FOR COMMON CONSUMER GOODS BY ROAD ZONE  
SHOWING AMOUNT OF DIFFERENCE FROM MASERU PRICES  
In Maloti

N of shops selling item	Item	unit size	SPRPA	Outthng	Middle	Qachs's	Maseru
			Q - Mphaki	old-fedr	section	Nek	
			8 shops	13 shops	13 shops	8 shops	5 shops
			M	M	M	M	M
47	Sugar	1 kg	1.19	1.16	1.25	1.19	1.00
47	Milk LongLife	.5 lt	1.17	1.20	1.32	1.27	1.00
47	Powdered Soap	150 gms	1.08	1.07	1.23	1.20	1.00
47	Candles	pkt. of 6	1.16	1.13	1.24	1.07	1.00
46	Maize meal	25 kg	1.17	1.13	1.24	1.17	1.00
46	Salt	500 gms	.89	.89	1.11	1.12	1.00
46	Fat/oil	125 gms	1.16	1.23	1.36	1.31	1.00
46	Tinned fish	155 gms	1.09	1.12	1.26	1.17	1.00
46	Sunlight Soap	125 gms	1.01	.84	.90	.89	1.00
45	Coffee	62.5 gms	1.13	1.22	1.11	1.33	1.00
45	Paraffin	1 litre	1.13	1.14	1.04	1.09	1.00
45	Cigaretts	pk. of 20	1.13	1.16	1.19	1.15	1.00
43	Wheat meal	25 kg.	1.11	1.19	1.24	1.26	1.00
42	Vaseline	50 gms.	1.24	1.20	1.16	1.22	1.00
41	Bread,brown	loaf	1.25	1.34	1.37	1.20	1.00
37	Dawn hnd lotion	200 ml	1.25	1.37	1.48	1.36	1.00
23	Babymilk	250 gms	1.26	1.16	1.27	1.18	1.00
20	Blanket	1 adult size	1.07	1.06	1.24	1.17	1.00
12	Primus	1	1.28	1.17	1.39	1.13	1.00
11	Cement	50 kg pocket	1.37	1.26	1.59	1.53	1.00
10	Roof zinc	12 ft. lgth	1.00	.85	1.01	.99	1.00

## Appendix 5

## PUBLISHED REPORTS OF OFFICIAL STATISTICS, PROJECTS, RESEARCH

The purpose of this section is to provide a reference to sources of official statistics, published reports and other data concerning the Quthing and Qacha's Nek Districts which may provide indices of change in relation to the Southern Perimeter Road. We are particularly interested in data which is broken down into smaller units than the districts themselves. In a few cases, examples or updated published figures are given in this Appendix, but this section is intended primarily as an annotated reference for future impact analysis.

The Bureau of Statistics (BOS) should be the center for all official statistics, and may be able to serve this function when its newly increased computer facilities are fully operative. But reports from various Ministries are often late in getting to the BOS, or they do not have time and staff to handle all the data which is available. Thus it is often necessary to contact the statistics sections or planning units of different ministries, or even government records in the district offices. Similarly Central Planning and Development Office (CPDO) coordinates various projects and donor activities in the country; hence its library is a good starting point for locating project proposals and reports, as well as the relevant ministries and the donor organizations. However it is often best to go from this source to the projects themselves for access to their data. The Institute for Southern African Studies (ISAS) at the National University of Lesotho (NUL) in Roma maintains a documentation center which can provide assistance in finding and obtaining copies of unofficial reports, historical studies, research of individual scholars etc.

OFFICIAL STATISTICS COMPILED BY GOVERNMENT AGENCIES

National Population Census of 1976, and forthcoming 1986 census. - Many tables in the census reports are divided by district. Population figures are summarized in Volume III and details at the Constituency and Enumerator Area level are given in Volume II of the 1976 Population Census Report.

Migration and Manpower in Lesotho - Note that a special report of a 1977/8 National Migration Survey, has recently been published. There is a great deal of interesting data in this report. Many tables divide information into lowland, foothill, mountain and Senqu Valley groups. An examination of the enumerator areas used in the data collection shows that all of the villages included in the Senqu Valley group fall within the SPR zone of influence in the limited sense used in this report. Thus the data so classified is particularly relevant for supplementing our baseline data.

Figure 5.1 shows the enumerator areas for the two southern districts, indicating those used in this 1978/9 study as well as those used in ongoing agricultural survey work.

Annual Statistical Bulletin - This publishes summary information, often broken down by district on a wide range of sectors such as population, education, health, agriculture, trade, prices etc. By tabulating data from successive Annual Statistical Bulletins it is possible to get time series information on many features of the road's zone of influence. As an example, Table 5.4 gives the most currently available figures for registered motor vehicles in each district.

10 District Data Bank reports prepared by the Ministry of Cooperatives and Rural Development in 1982/3. These bring together a wide range of hitherto unobtainable information on each district. The books are accompanied by a map book for each district showing (1) general public services, (2) boundaries, (3) agriculture, land use and agricultural services, (4) transport and communications, (5) population density, and (6) village structure. These books and maps provide a very valuable reference. For example, Table 5.3 is based on the 1981 District Data Bank listings of licensed traders in each district, updated by our research staff from ledger books in the two district Ministry of Commerce offices. As an additional example, several of the maps in this report come from the District Data Bank Series (Figures 0.3, 0.4, 1.1, 1.2, and 5.2, 5.3, 5.4, and 5.4). We have, however, added main roads, rivers and major towns to improve clarity, but we have reduced the large originals to A4 size.

Health - The Ministry of Health now has a computerized data bank, receiving and processing quarterly reports from all health centers in the country. Older health statistics can be found in Annual Statistical Bulletins and Health Statistics Bulletins. Table 5.4 gives computerized figures from health centers in Guthing and Gacha's Nek for outpatient attendance while Table 5.5 gives similar information on immunizations. Both of these are objectively measurable indices of community use of health facilities which may be found to increase over time or to vary according to proximity to road improvements. Other potential measures such as number of staff and physical facilities of rural health centers, and attendance at mother-child-health centers, is still not very dependable but may be in the future. The Ministry's Health Planning Unit is able to access data quickly and efficiently on specific health institutions within the SPR zone of influence. In addition to data from the Ministry of Health, the Catholic Relief Services office (CRS) keeps thorough records on attendance at their MCH clinics (Mother and Child Health). Specific clinics in the southern districts could be monitored over time by using their records.

Food and Nutrition Coordinating Office (FNCO) issues a quarterly bulletin summarizing current statistics, reports and studies about health, food and nutrition topics.

Education reports - Until 1981, a bulletin of Educational Statistics has been prepared by the Ministry of Education, and issued by the BOS. However, data

is only broken down by District or institutions of higher education. Since 1981, a much more ambitious program of computerized educational statistics has been initiated within the Ministry, together with a school mapping project. It is now possible to locate information on any school of any level in the country, updated annually. In 1981 a Primary School Inventory was published. Since then, annually updated computer printouts are available in the Ministry's Education Statistics Unit. Table 5.7 gives certain basic facts from 1984 about the primary schools in the villages covered by this study, as well as summaries for all schools in the two districts. It should thus be easy to pinpoint these schools for time-series information when the SPR is completed.

Agriculture - An Annual Agricultural Situation Report was issued by the Ministry of Agriculture in 1984 giving district-level analysis based on data provided by the BOS. This report is to be updated each year, based on the BOS program of agricultural and livestock production data collected throughout the year. There are 80 clusters of 3-4 adjacent enumerator areas chosen on a random sample basis from all over the country. These clusters remain constant for two years after which others are selected. The 12 clusters in Quthing and Qacha's Nek District being studied during the 1983/4 and 1985/6 agricultural years are shown in Figure 5.1. Detailed agricultural data on each cluster is available at the BOS, but not yet on a computerized basis. If this information is computerized, it should provide an excellent basis for monitoring many aspects of agricultural production in the SPR zone of influence, such as crops planted, produced and sold, fertilizer and pesticide use, livestock ownership, reproduction and marketing, etc. Such information will be much more comprehensive and accurate than any we were able to collect in our brief baseline study.

Agricultural data also exists at Lesotho Produce Marketing Service (LPMS) for specific woolsheds reporting wool and mohair clip and through the Livestock Division and Field Services for specific diptanks and veterinary centers. Such data might be investigated over a period of years in relation to the SPR. It may be found that veterinary visits and wool and mohair marketing may be assisted by the road, and new facilities may be built. However the basic movement of livestock to such services is "on the hoof" and thus not likely to be much effected by road construction.

#### BASELINE DATA FROM DEVELOPMENT PROJECTS IN THE SOUTHERN DISTRICTS

Several of the agricultural and other development projects in the southern districts have collected data in the past, are doing so at the moment, or will in the future. Thus they can provide a wide range of baseline information as well as case study material on transport-related changes over the next five years.

SENQU RIVER AGRICULTURAL EXTENSION PROJECT - This project, under Ministry of Agriculture and UN/FAO, was concerned with Mofales' Hoek and Guthing District agriculture in the middle 1970s. Among the reports which were issued there are two which give some data on the area with which we are concerned. The Farm Management Economics Terminal Report by Tesfa Guma and William Mafoso (1), mentions that Mt. Moorosi was one of its sample areas. However, since almost all of the data is grouped and generalizations are made about the entire sample, we cannot isolate any specific villages for comparison. The Rural Sociology Technical Report, by John Gay (2), does give data on a limited number of items which is drawn specifically from Mphaki Letsielo and Mphaki Mahlomola Letsie. This is his "mountain" sample, which he contrasted with a "foothills" group in Mofales Hoek District. He interviewed 112 households in the two Mphaki communities. We interviewed a sample of 40 households in the same communities. Table 5.1 in this Appendix gives some comparative data from his 1976 sample and ours of 1985.

BASIC AGRICULTURAL SERVICES PROJECT - BASP - While this project was operative under EEC funding and the Ministry of Agriculture, a major Baseline Survey was undertaken between 1979 and 1981 to provide "benchmark data in order to describe the basic structure of smallholder farms in terms of resources and organization and to determine performance levels...output, yield and income from farming." (3) The Guthing-to-Mt. Moorosi area was included in BASP's Block VI but data is reported for the entire block which includes parts of Mafeteng, Mofales Hoek and Guthing Districts. The report only distinguishes between lowlands and foothills villages. Ha Sempe is the only village from our area which was included and there is no way to make comparisons without going back to the original BASP data bank.

SEHLABATHEBE RANGE MANAGEMENT AREA - Under the USAID-funded Land Conservation and Range Development Project, a detailed survey of 380 households in the Sehlabathebe area of Qacha's Nek District has recently been conducted. Data will be available in the following categories: demographic measures, income and employment, agricultural resources, crops and livestock management and production, range development and community organization. This data will provide a very important part of the baseline data on the Southern Perimeter Road's zone of influence, representing the more remote mountainous areas which our survey could not reach.

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1. Tesfa Guma and William Mafoso, Farm Management Economics Terminal Report, Senqu River Agricultural Extension Project, UN/FAO, Mofales' Hoek, Lesotho, 1976
  2. John Gay, Rural Sociology Technical Report, Senqu River Agricultural Extension Project, UN/FAO, Mofales' Hoek, Lesotho, 1977
  3. Fred Winch, The Agro-Economic Farm Situation in the Lowlands and Foothills of Lesotho, 1981, Ministry of Agriculture, Maseru, p. 1.

MPHAKI LIVESTOCK DEVELOPMENT PROJECT - Although this project has existed in Mphaki since about 1979, it has only recently begun serious data collection activities. At present, there are several land use planners working under the United Nations to assist the project in developing a land use plan for the entire project area. A very detailed preliminary report on the village of Qhoali Ha Tlhaku in the Qhoali Valley Area, was prepared by two land-use planners in 1984. [4]

RURAL ENTERPRISES DEVELOPMENT PROJECT (IFAD) - This is a new project to be implemented by UN/IFAD in the Quthing District starting in 1985. It will help develop small investment opportunities in agricultural production (such as irrigation, horticulture, dairy and poultry) and non-farm enterprises such as carpentry, building materials etc. At present there has been no independent data collection, but it is attempting to bring together existing data and will be monitoring changes in small-scale enterprise development as the project develops. Thus its experience and records over the next five years, together with the experience of the Mphaki Project, should be of great assistance in a follow-up study on the Southern Perimeter Road.

LESOTHO AGRICULTURAL DEVELOPMENT BANK - A survey of Farm Credit was conducted in February and March 1985 by a Louis Berger consultant team for LADB together with local researchers. Field research was carried out in many of the same agricultural clusters utilized by the BOS in its ongoing Agricultural Production Survey. Agricultural assets, use of inputs, production methods, marketing, credit and income were investigated. A report should soon be available. The data is computerized in a form which is compatible with the SPR Baseline Study data; thus it would be possible to isolate information from those clusters which fall within the SPR zone of influence for comparative study five years in the future.

#### DATA FROM OTHER NON-GOVERNMENTAL RESEARCH

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4. Julia Dorman and Joel Tejada, Soils and Land Use in Part of the Qhoali Valley (Area 10, with Special Reference to the Village of Qhoali Ha Tlhaku - Quthing District), UN/FAO, 1984.

GROWTH CENTERS IN LESOTHO - In 1975 a study was conducted by Elize Moody concerning major growth centers throughout Lesotho (5). One volume gives basic data on the level and range of services studied; a second volume presents a more general analysis of growth center theory and policy issues concerning "the space economy" of Lesotho. Excellent maps of the "service areas" of Lesotho's major towns and trading shops are included. One of these is reproduced in this report (Figure 0.7).

RURAL DIFFERENTIATION AND 'INTERNAL' MIGRATION: A RESEARCH REPORT FROM THE QACHA'S NEK/MATATIELE REGION - Andrew Spiegel, of the University of Cape Town, conducted research on the redistribution of migrant earnings in villages about 10 km north of Qacha's Nek in 1976. He returned to the area in 1981 and again in 1984 to do follow-up research and pull together several other related studies for a research report issued by the Human Sciences Research Council of South Africa (6). We have mentioned his major themes in Part One, page 16. His paper makes interesting comparative analysis of several studies and shows the value of gathering data on the same basis, from the same area, over a period of time. Table 5.2 gives examples of the data he cites, together with parallel data from our study.

5. Moody, Elize, Growth Centers in Lesotho, Pretoria, African Institute of South Africa, 1975

6. Andrew Spiegel, "Rural Differentiation and 'Internal' Migration: A Research Report from the Qachals Nek/Matatiele Region", Human Sciences Research Council, Cape Town, 1984.

Table 5.1

MEAN NUMBER OF FIELDS, LIVESTOCK, WAGE-WORKERS AND MIGRANT WORKERS  
PER HOUSEHOLD, AND PERCENT OF HOUSEHOLDS WITHOUT EACH ITEM  
COMPARING DATA FROM TWO MPHAKI VILLAGES IN 1975 AND 1985

study area	date	fields		livestock*		wage-workers		migrants	
		mean	% none	mean	% none	mean	% none	mean	% none
SENQU PROJECT	1976								
Mphaki Letsielo (53 households)		1.9	7%	---	25%	.9	37%	.8	---
Mahlanola Letsie (59 households)		2.4	4%	---	23%	1.2	21%	.9	---
SPR BASELINE	1985								
Mphaki Letsielo (20 households)		1.6	15%	3.0	5%	1.0	35%	.45	55%
Mahlomola Letsie (20 households)		1.2	35%	3.3	10%	1.3	10%	.9	25%

\* Based on "livestock units" calculated as: a cow, horse or donkey = 1, while a sheep or goat = .2.

The first thing we learned in trying to prepare this table is that comparison between final reports is not easy, because data may be reported in ways which are not comparable. However, if original data has been preserved, or coded and computerized in a way which allows one to reaccess it, then it is possible to isolate specific populations, and analyze specific facts in ways that make comparison between studies, and over time, possible. Given more time, more of such comparisons between the 1976 and 1985 Mphaki data would have been possible.

These two villages both are called Mphaki. The first one, "Letatielo", is the growing town at the junction of the old and new roads, where all the government services such as clinic, police station, agricultural project etc. are located, as well as the new SPRPA roads camp. There are several old shops, one of which has a grinding mill serving villages from a very wide radius. With the transfer of the roads camp from Mt. Moorosi to Mphaki, new shops, restaurants, bars, and a petrol station have also appeared within the first few months of 1985. The second village, Mphaki Mahlomola Letsie, is actually the original Mphaki; it is the residence of the area chief and has a primary school,

a village water supply, and several cafes, but few other services. Mphaki Letsielo is certainly developing as a major growth center in the area; whether this growth will reach as far as Mahlomola Letsie remains to be seen.

Looking at the comparisons in the Table itself, we note first the dramatic decline in arable land, shown both in the mean number of fields per household, and the percent of households without fields. This can be attributed either to population growth (with only a finite number of fields) or to an influx of newcomers to this growing area, people interested in business and employment opportunities rather than farming. The chief of Mahlomola Letsie reported 1 household moving away (going to Guthing town) and 6 households moving in from more remote villages, because they wanted to "be near the road and the vehicles."

The actual increase in number of stock holding households is surprising, given a general decline throughout both districts. Perhaps the explanation is that the Mphaki Project is dedicated to livestock improvement, so number of villagers may have turned to raising improved breeds with modern methods, having support and encouragement from the Project. Or it may simply reflect chance variation given the small sample from each village in the SPR Baseline Survey.

The mean number of people with wage employment has not changed significantly, nor has the number of migrant workers in Mahlomola Letsie. However, the number of migrants is substantially less in Mphaki Letsielo. Perhaps this is because some people from this village have found employment locally with the government, the Mphaki Project, and the SPRPA construction work, and no longer need to go away as migrants.

Table 5.2

HOUSEHOLD ACCESS TO FIELDS, LIVESTOCK, AND WAGE EMPLOYMENT  
COMPARATIVE DATA FROM FIVE SMALL STUDIES CONDUCTED IN QACHA'S NEK DISTRICT  
AND FROM THE SPR BASELINE STUDY

study area		% of h-hlds with no fields	% of h-hlds with no livestock	mean number of wage earners per household	num- ber of cases
FROM RESEARCH REPORT BY SPIEGEL - QACHA'S NEK/MATATIELE REGION					
"Makhaola" at road junction near QN *	(in 1976)	20.5	46.2	1.3	39
	(in 1981)	34.0	54.0	1.2	50
"Lithabeng" near Mpiti but farther from road	(in 1976)	18.1	34.1	1.4	44
	(in 1981)	24.5	39.6	1.0	53
"Ligoabing" near Mpiti but by Senqu River	(in 1981)	30.0	63.3	.87	30
- "Ngoe" peri-urban QN behind qvt garage	(in 1982)	87.5	70.0	.73	40
Matebeng remote mountains in northern QN	(in 1982)	7.4	26.3	.87	123
FROM SPR BASELINE STUDY - 1984					
QUTHING					
Moyeni to Mphaki		22.5	27.9	.9	280
M DDLE					
nahlonola Letsie to Sekake		26.5	27.0	1.0	196
QACHA'S NEK end villages including 2 north of Senqu					
		32.5	44.7	1.1	197

\* Pseudonyms for village names have been used by the author of the report in order to respect the wishes of villagers who provided information.

In the preceding table, the time depth information from two communities is particularly interesting. In both the cases of "Makhaola" and "Lithabeng" the increase in percent of households without fields, and without livestock, is dramatic. Our data on the agricultural resource base is very similar to that which Spiegel reports. We also found between a quarter and a third of the households having no fields, and with the greatest land-shortage to be in the area of Qacha's Nek near the town or along the road. Likewise our data show a high percent of households without livestock in the Qacha's Nek end. Decline in land-holding, decline in livestock, and changes in the number of wage workers and/or migrant workers are important indicators of basic changes in the income base of any community in Lesotho.

The number of wage earners did not change significantly, nor is it significantly different from our SPR data. However, as Spiegel points out, there are fewer than average wage earners in the households in the peri-urban area which he calls "Ngoe", right in Qacha's Nek. Many of these are households headed by women who have no source of regular income. They survive by brewing and selling beer, in order to obtain a small income from others in town with money to spend.

Table 5.3

TRADERS BY TYPE OF ENTERPRISE:  
QACHA'S NEK AND QUTHING DISTRICTS

	QACHA'S NEK		QUTHING	
	1981	1984	1982	1984
General Cafes	265	344	179	214
Grocers	62	141	135	222
General Dealers	47	54	74	145
Basotho Beer Sellers	14	48	-	-
Miller	19	13	19	14
Wholesaler	3	3	1	1
Restaurants	4	3	6	10
Dealer in Textiles	4	5	14	5
Chemist	3	3	-	-
Dealer in Furniture	1	2	20	2
Wood & Coal Merchants	1	1	-	2
Petrol Dealer	3	1	5	4
Photographic Studio	3	1	2	2
Brickmaker	2	5	5	71
Butchery	24	*	104	81

\*Information not available

Source: Qacha's Nek District Data Bank, March 1983

Quthing District Data Bank, January 1983

Updated from records in District Commerce Offices, 1985

The main categories to notice in this listing are the first three, since data concerning the other types of enterprises is very undependable because of changing definitions, and changes in enforcement. For example, butchers are all recorded in Quthing, but none, recently, in Qacha's Nek. Basotho beer sellers are apparently registered in Quthing, but have not been in Qacha's Nek since 1983. The increase in number of cafes, grocers and general dealers in the three year period is phenomenal, indicating the investment which local people are making in retail trade in this area. Note that there is an actual decline in number of millers, confirming our other observations about the lack of grinding mills in the area. We also found that several licensed mills were not operating in 1985, due to broken equipment which the owners had not been able to transport to Matatiele for necessary repair.

Table 5.4

NUMBER OF MOTOR VEHICLES REGISTERED (NEW & RENEWAL)  
QUTHING AND QACHA'S NEK DISTRICTS

	1976	1977	1978	1979	1980	1981
<b>QUTHING DISTRICT</b>						
Private Cars	11	66	64	48	66	107
Combis, Buses & Minibuses	3	19	29	31	46	74
Vans, Trucks & Four Wheel Drive	0	135	202	107	218	268
Tractors & Combine	0	11	20	20	23	39
<b>QACHA'S NEK DISTRICT</b>						
Private Cars	3	4	7	11	34	53
Combis, Buses & Minibuses	6	10	22	19	21	42
Vans, Trucks & 4-Wheel Drive	30	60	94	103	142	162
Tractors & Combine	0	1	3	3	7	12

Source: Annual Statistical Bulletin 1977-1982

The registration of motor vehicles, like the licensing of shops, is something which provides a general measure of change with specific reference to the road. Similar lists of government vehicles are available in the districts, although many of the government and project vehicles on the roads are actually registered in Maseru.

Table 5.5

OUTPATIENTS' ATTENDANCE AT RURAL HEALTH CENTERS  
QUTHING AND QACHA'S NEK DISTRICTS

NAME OF CENTER	1981	1982	1983	1984
<b>QUTHING DISTRICT</b>				
Quthing Hospital	38310	23988	17376	18076
Taatsane (Ralebona)	2792	2460	2276	3279
Mphaki	6351	5434	7872	7598
St. Gabriel's (Malephane)	2527	2932	2809	349
St. Matthews (Mt. Moorosi)	8898	7117	7567	8602
Sixondo	-	-	481	4631
<b>QACHA'S NEK DISTRICT</b>				
Tebellong	7185	7688	6722	6911
Sekake	2219	1907	1877	1859
Qacha's Nek Hospital	9411	9512	8023	9707
Sehlabathebe	3615	3213	2738	3931
St. Francis (Rats'oleli)	11168	12041	11472	11551
Christ the King (Matee)	20205	22302	17128	19506
Hermitage (Thaba-Ts'oeru)	11233	12849	13963	15584
Lebakeng	2746	3283	1940	2786
Rankakala	-	-	925	632
Matebeng	-	-	-	385
<b>QUTHING DISTRICT TOTAL</b>	<b>58878</b>	<b>41931</b>	<b>38381</b>	<b>45685</b>
<b>QACHA'S NEK DISTRICT TOTAL</b>	<b>67782</b>	<b>72795</b>	<b>64788</b>	<b>72852</b>

Note: Sixondo began operation 1983, figure represents 3 months attendance.  
Rankakala began operation 1983, figure represents 8 months attendance.  
Matebeng began operation 1984, figure represents 2 months attendance.

Source: Outpatients Report for All Facilities, Health Planning Unit,  
Statistics Dept. 1985

Table 5.6

NUMBER OF IMMUNIZATIONS GIVEN AT RURAL HEALTH CENTERS BY QUARTER  
QUTHING AND QACHA'S NEK DISTRICTS

NAME OF CENTER	1984	
	3RD QUARTER	4TH QUARTER
QUTHING DISTRICT		
Quthing Hospital	3116	2959
Tsatsane	164	334
Mphaki	667	720
St. Gabriel's	964	720
St. Matthews	1485	1221
Sixondo	380	299
QACHA'S NEK DISTRICT		
Tebelione	990	917
Sekake	326	390
Qacha's Nek Hospital	519	500
Sehlabathebe	428	586
St. Francis	917	1257
Christ the King	709	847
Hermitage	374	861
Lebakeng	188	269
Rankakala	150	374
Matebeng	-	-
QUTHING DISTRICT TOTAL	6776	6253
QACHA'S NEK DISTRICT TOTAL	4601	6001

Source: Quarterly Report of Health Centers to EPI, Health Planning Unit, Statistics Department, 1985

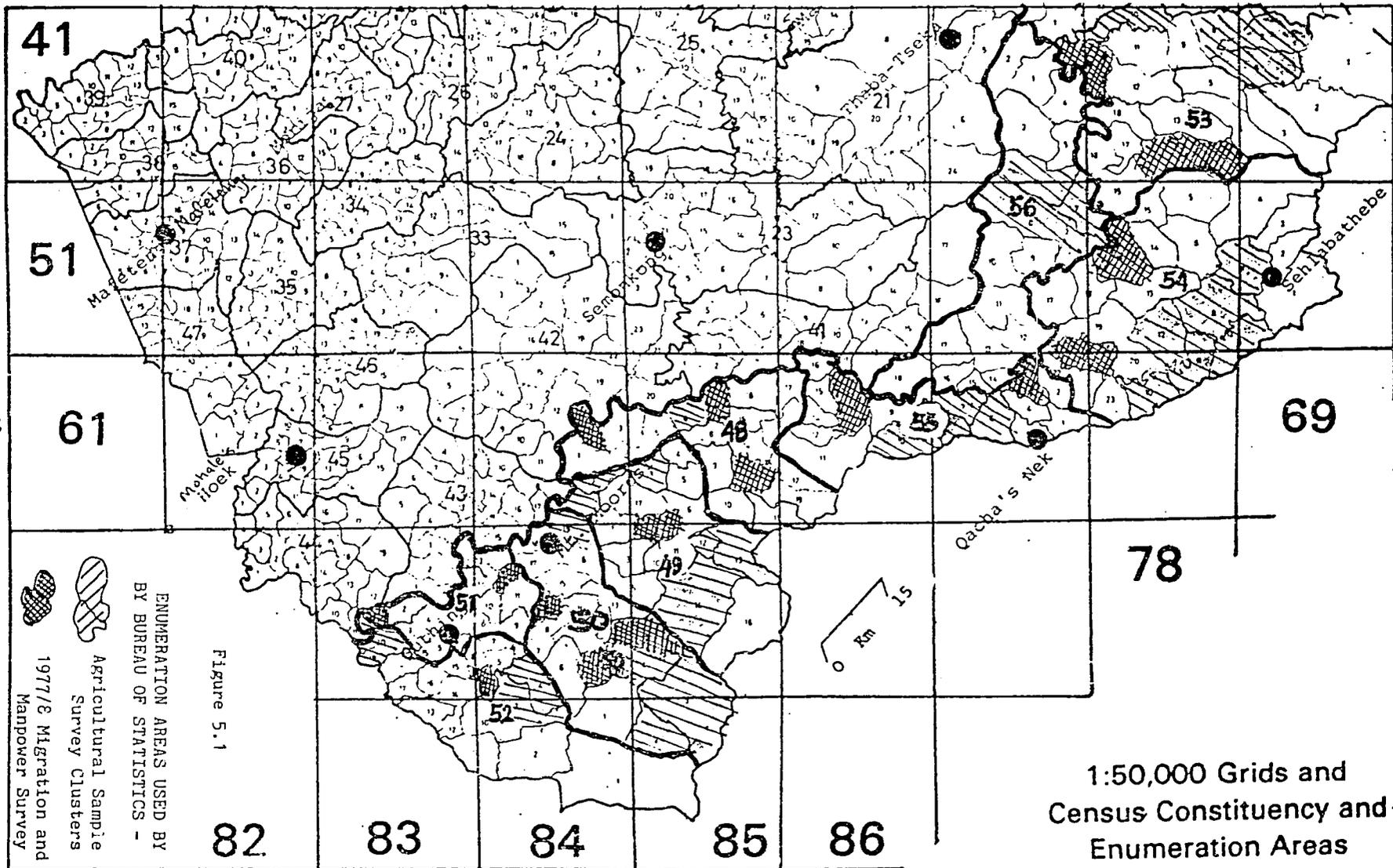
Only the two most recent quarterly reports have been recorded in the Health Planning Unit's data bank. Since there can be great seasonal variation in clinic attendance, these figures should not be taken as indicators of change over time. Rather they are illustrative of the type of data which should be available and easy to summarize in the future.

Table 5.7

PRIMARY SCHOOL DATA CONCERNING VILLAGES SELECTED FOR STUDY  
GUTHING AND QACHA'S NEK DISTRICT, 1979 and 1984

Village Number & Name	School Code Number*	1979		1984	
		Tea- chers	Enroll- ment	Tea- chers	Enroll- ment
<b>GUTHING DISTRICT</b>					
1 Seleitara	137017	3	113	4	160
2 Sempe	137018	3	130	3	173
"	127018	5	202	4	192
3 Makoae	137022	4	218	5	344
"	127041	4	206	4	209
4 Mopeli	147004	4	181	4	235
12 Mohlakoana	147003	3	109	3	209
"	127049	2	97	3	96
32 Lits'oeneng	147005	2	114	4	130
6 Mosi	147019	2	82	2	118
13 Koali	137021	9	420	8	468
14 Ralebona	127026	1	93	2	197
15 Mokhosi	127046	2	103	3	123
17 Mphaki	137036	5	186	6	216
19 Setorong	147031	5	307	6	314
24 Pokane	127004	3	104	4	166
"	147001	6	253	6	260
25 Malepane	137011	7	323	8	364
26 Maphelle	137031	2	111	2	122
<b>QACHA'S NEK DISTRICT</b>					
7 Whitehill	128020	2	149	3	161
8 Mphanama	138036	-	-	2	92
9 Mpitl	128009	3	126	6	308
10 Mosuoe	138020	3	115	3	137
"	128010	4	221	5	200
11 Rats'oeleli	128001	4	171	5	235
"	138010	11	566	10	571
18 Malefane	128041	2	100	2	112
20 Matee	138051	7	216	6	361
21 Stirling	128019	10	416	8	387
22 Monlapiso	128018	2	113	2	173
23 Thaba-Tsoeu	138001	10	390	11	434
29 Moboloka	138052	2	137	3	213
30 Sekhalabateng	138053	3	164	3	254
31 Sekake	128040	5	299	5	345
33 Kose	138054	2	96	2	128
34 Noosi	138003	3	126	4	180

\* 1st digit=school level/2nd=sponsoring agency/3rd=district/4-6th=school code



1:50,000 Grids and  
Census Constituency and  
Enumeration Areas



Q.ACHAS NEK GENERAL SERVICES

LEGEND

HOSPITAL	HOSP
CLINIC	CLN
SCHOOL	Scp
PRIMARY	ScpP
SECONDARY	ScpS
HIGH	ScpH
TECHNICAL	ScpT
VOCATIONAL	ScpV
CHURCH	Ch
MISSION	MIS
POST OFFICE	PO
POLICE AGENCY	PA
VILLAGE WATER SUPPLY	VWS
COURT HOUSE	CH
HOTEL	H
REST HOUSE & LODGE	RH
PUBLIC STATION	PS
PUBLIC	PS
BOVT	BOVT
SCOUT BARANG	SB
POLICE STATION	PS
MAJOR TRAIL & UNDESIGNED	T
DRAFT CENTRE	CC
RIVER	R
CONTOUR	C
DISTRICT BOUNDARY	---
INTERNATIONAL BOUNDARY	----

PREPARED BY MINISTRY OF COOPS & RURAL DEVELOPMENT - DISTRICT OFFICE

- 116d -

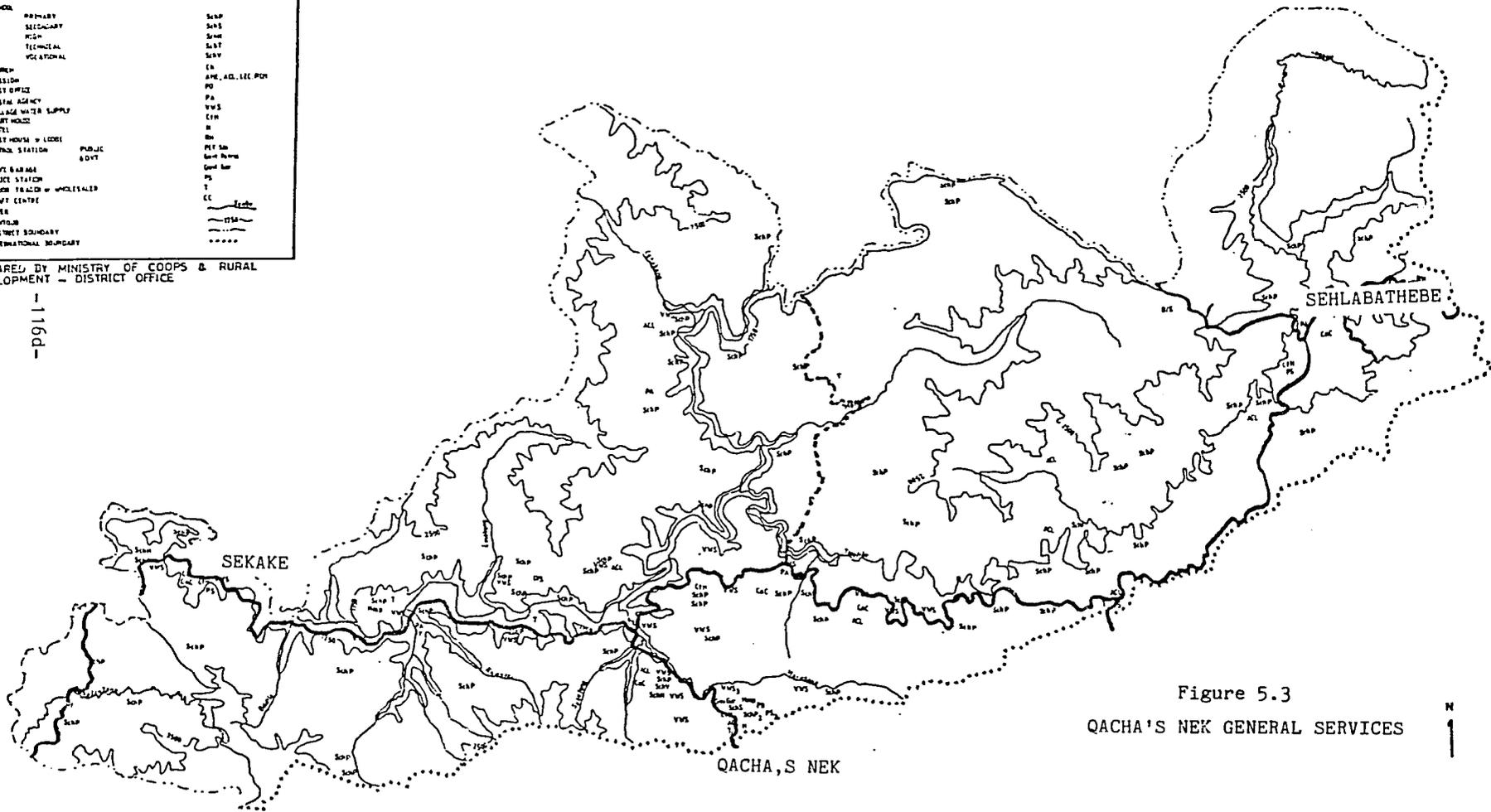


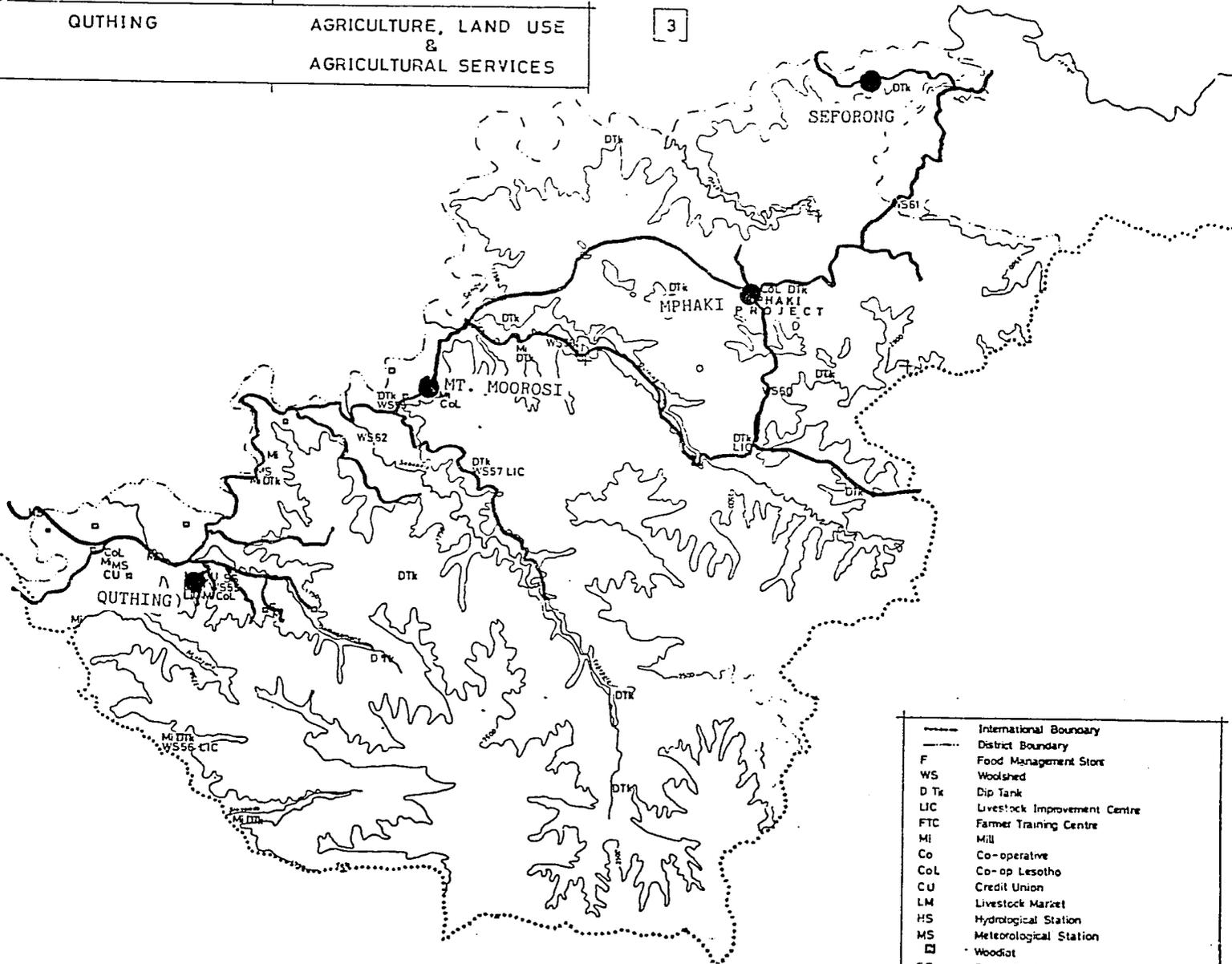
Figure 5.3  
QACHA'S NEK GENERAL SERVICES



QUTHING

AGRICULTURE, LAND USE  
&  
AGRICULTURAL SERVICES

3



-----	International Boundary
-----	District Boundary
F	Food Management Store
WS	Woolshed
D Tk	Dip Tank
LIC	Livestock Improvement Centre
FTC	Farmer Training Centre
M	Mill
Co	Co-operative
CoL	Co-op Lesotho
CU	Credit Union
LM	Livestock Market
MS	Meteorological Station
W	Woodlot
SS	Sheep Strand

-116-

Figure 5.4

AGRICULTURE, LAND USE &  
AGRICULTURAL SERVICES  
QUTHING DISTRICT

Source: Ministry of Coops and  
Rural Development  
District Office.

# AGRICULTURE, LAND USE, and AGRICULTURAL SERVICES

LEGEND	
WATERLOO	W
SELF SUFFICIENCY PROGRAM	SSP
FOOD MANAGEMENT STORE	FS
WDC, S.W.D	SWD
DIAPYRE	DC
LIFESTYLE IMPROVEMENT CENTRE	LIC
FARMER TRAINING CENTRE	FTC
MILL	M
CO-OP LEASING	COL
COOPERATIVE	CO
CREDIT UNION	CU
GRAZING ASSOCIATION	GA
AGRICULTURAL STORE	AS
WEEKEND MARKET	EM
HYDROLOGICAL STATION	HS
CLINIC	CL
DISTRICT BOUNDARY	-----
INTERNATIONAL BOUNDARY	.....

PREPARED BY MINISTRY OF COOPS & RURAL DEVELOPMENT - DISTRICT OFFICE

-116-

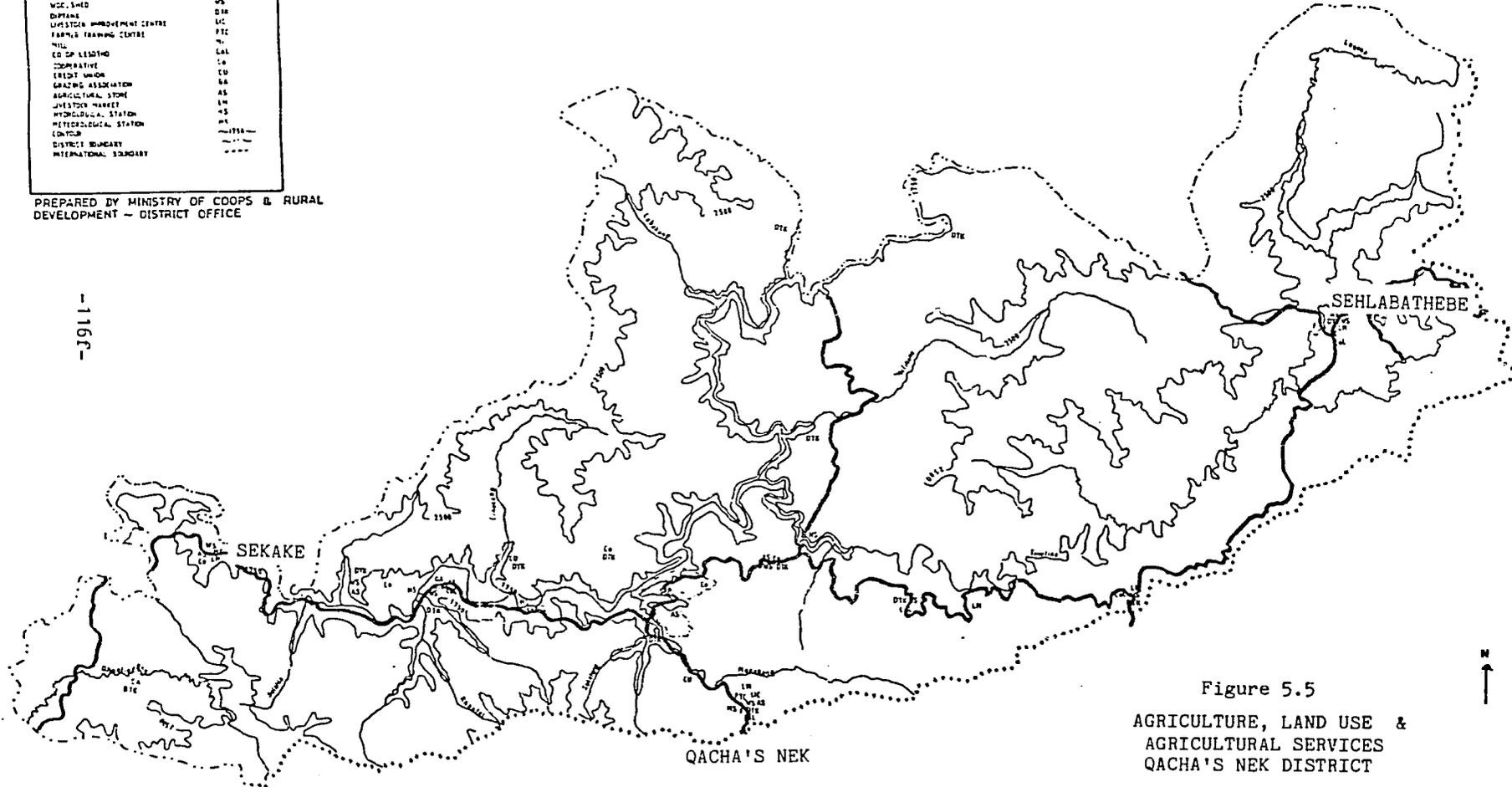


Figure 5.5  
 AGRICULTURE, LAND USE &  
 AGRICULTURAL SERVICES  
 QACHA'S NEK DISTRICT



## Appendix 6

## SPRPA CONSTRUCTION WORKERS

Most of the tables in this section are based on a small sample of 41 construction workers (both present and former) who were interviewed before the main survey began. In addition, there were 43 people in our large household sample who reported having some family member who had worked on the SPR. The second part of this appendix deals with this group.

CONSTRUCTION WORKER INTERVIEWS

There were 26 men, and 15 women in the group interviewed during the first week of February. Most of the women were interviewed at their homes along the roadside several months after their brief employment was over. All of the men were still employed when interviewed, hence they were contacted after hours in Mt. Moorosi or Mphaki. Only 3 of the women were still employed and were contacted through the personnel office. The other 12 women had been hired for short periods (from 3 weeks up to several months) to remove oversize rocks from the rough fill dumped on the road surface. They were only employed for the period when road work was near their villages. This is an example of the choice made for labour-intensive methods in certain aspects of construction, which thus gave employment to local people. A question about residence showed that these 12 women, plus 22 of the men, came from the immediate vicinity of the SPRPA road construction or from villages on nearby feeder roads. Three women office workers, and 4 men came from other districts or from the western end of Quthing District (Lomogonond).

Table 6.1 shows the frequency of people in different types of jobs, with a special note of those who are women.

Table 6.1

## TYPES OF SPRPA EMPLOYMENT HELD BY CONSTRUCTION WORKERS INTERVIEWED

Value Label	Frequency	Percent	
picking stones (all women)	12	29.3	
labourer, digging etc.	6	14.6	
watchman	4	9.8	
warehouse stock keeper or clerk	4	9.8	
machine operator	3	7.3	
security	2	4.9	
electrician	2	4.9	
carpenter	2	4.9	
secretary + typist (women)	2	4.9	
costing technician	1	2.4	
accountant (woman)	1	2.4	
welder	1	2.4	
adjusting signboards	1	2.4	
	-----	-----	
TOTAL	41	100.0	
Valid Cases	41	Missing Cases	0

The next table shows previous employment held by those interviewed. If a person mentioned two previous jobs, this chart only records the first and hence most important one they mentioned. Out of all those who listed previous jobs, only 4 were women: 2 had been teachers and 2 had been domestic workers. Most of the group who were hired for rock picking were simply local farmer/housewives or widows who had never had paid employment. Through this brief job they were able to earn a small amount of money to supplement migrant remittances, agricultural production and other informal income-generating activities like selling beer, selling fruit, sewing, etc. The three women who had regular office jobs were all young with no previous employment. Two were not yet married and were saving money to go back to school. In contrast, 17 of the 26 men were married, and thus supporting wife, children and other relatives with SPRPA earnings.

Table 6.2

## TYPES OF PREVIOUS EMPLOYMENT HELD BY THOSE INTERVIEWED

Value Label	Frequency	Percent	Valid Percent
domestic work	4	9.8	15.4
machine boy	3	7.3	11.5
clerk	3	7.3	11.5
team leader	3	7.3	11.5
machine or winch operator	3	7.3	11.5
security	2	4.9	7.7
teacher	2	4.9	7.7
electrician	1	2.4	3.8
fitter	1	2.4	3.8
locomotive driver	1	2.4	3.8
timber boy	1	2.4	3.8
delivery truck for local shop	1	2.4	3.8
local court president	1	2.4	3.8
no previous employment	15	36.6	MISSING
	-----	-----	-----
TOTAL	41	100.0	100.0
Valid Cases	26	Missing Cases	15

The crosstabulation below shows that almost all of the men with previous employment had worked in South Africa. The numbers in this study are obviously very small, but the limited data does support the hope of the Southern Perimeter Road Project that job-creation during the period of road construction does enable some Basotho men to find employment without having to go out of the country as migrant workers.

Table 6.3

## PLACE OF PREVIOUS JOB BY SEX

SEX->	Count	MALE	FEMALE	Row Total
PLACE OF PREVIOUS JOB		1.00	2.00	
South Africa	1	20	1	21 80.8
Lesotho	2	2	3	5 19.2
Column Total		22	4	26 100.0

Table 6.4, on the next page, shows that a good many of the workers, particularly those with regular jobs, feel that they gained new skills while working for the SPRPA. Sixteen of the people interviewed gave no responses to this question. Most of these were the women who only worked a few weeks picking large rocks out of the road, although it was one of these women who said she at least had learned about "the discipline of work" for she had never before had wage employment. The great diversity and nature of the responses suggests that most people did not answer in terms of general skills; rather they simply mention the particular job they did as a new skill learned. However many of the people had had no previous work experience or training in advance for their jobs, so their SPRPA work naturally included on-the-job training and hence acquisition of specific skills.

Table 6.4

NEW SKILLS ACQUIRED  
 Frequency of responses given by 25 workers  
 (Up to 2 possible answers per worker)

RESPONSE	FREQUENCY	% OF ALL RESPONSES
Classifying types of rock	3	10.0
Care for equipment	2	6.7
Bridge building	2	6.7
Machine operating, driving, loading	2	6.7
Putting up signs	2	6.7
Accounts	2	6.7
Filing	2	6.7
Discipline of work	1	3.3
Carpentry	1	3.3
Auto or motor mechanics	1	3.3
Electrical work	1	3.3
Workshop assistant	1	3.3
Costing	1	3.3
Grade checking	1	3.3
Digging pits	1	3.3
Blasting rocks, drilling, split	1	3.3
Building culverts	1	3.3
Welding, fixing steel	1	3.3
Human behavior	1	3.3
Knowledge about tools	1	3.3
Typing	1	3.3
Report writing	1	3.3
	-----	
	30	100.0

In Table 6.5 we see responses to a more general question about benefits from SPRPA employment. It is clear that the primary benefit perceived is the money earned. We asked questions about daily pay, monthly net pay, and total earned during the working period. However, our sample is so small and answers may not have all been completely honest. Thus the responses are not significant enough to be reported. Should a more detailed economic analysis be desired, the actual wage records of the SPRPA should be examined, and interviews conducted with a larger, more carefully selected sample. The women who picked rocks reported only an average total of M86.50 for the period of time they worked: (M5.2) per day, or net monthly pay of M98.40 if they worked a full month). However, a SPRPA official said they could earn M138.24 if they worked a full 4 week shift, 9 hours a day, 6 days a week. A few male labourers also had only short-term employment with total earnings of one or two hundred Maloti. However most of the men, and the three women in office jobs, had worked for a year or more, at quite good salaries, so they reported several thousand Maloti each.

Table 6.5

BENEFITS OF WORKING ON THE SOUTHERN PERIMETER ROAD  
Frequency of responses given by 40 workers  
(Up to 3 answers per worker)

RESPONSE	FREQUENCY	% OF RESPONSES
Money generally or to support family	19	24.7
Clothes, shoes	17	22.1
Food	16	20.8
School fees	13	16.9
Rent	3	3.9
Human relations experience	3	3.9
Office work experience	2	2.6
Built house	2	2.6
Fertilizer	1	1.3
Pay debts	1	1.3
TOTAL	77	100.0

It is of considerable interest to see how much money which the SPR Project had injected into the local economy, no matter how large or small the amount, has been utilized. Tables 6.6 and 6.7, give details of how people said they have used their earnings thus far, and how they anticipate using earnings in the future.

Table 6.6

USE OF SPRPA EARNINGS TO DATE  
Frequency of responses given by 41 workers, past and present  
(Up to 4 possible answers per worker)

RESPONSE	FREQUENCY	% OF RESPONSES
Food	23	25.3
Clothing & blankets	23	25.3
School fees	16	17.6
Support family	12	13.2
Livestock	4	4.4
Pay rent	4	4.4
Build a house	3	3.3
Deposit in the bank	3	3.3
Household utensils	1	1.1
Pay debts	1	1.1
Medical care	1	1.1
Total	91	100.0

Table 6.7

PLANS FOR FUTURE USE OF SPRPA EARNINGS  
Frequency of responses given by 21 people presently employed  
(Up to 2 possible answers per worker)

RESPONSE	FREQUENCY	% OF RESPONSES
Deposit in bank	10	26.3
Build shop, cafe, butchery	6	15.8
School fees, education	6	15.8
Agriculture, agric equipment	4	10.5
Build a house	3	7.9
Build a bar	2	5.3
Transport hire or buy vehicles	2	5.3
Clothing & blankets	1	2.6
Insurance	1	2.6
Get married	1	2.6
Build houses to rent	1	2.6
Opening firm or shop	1	2.6
Total	38	100.0

A comparison of these two tables is significant. Table 6.6 shows that the most immediate uses of wages is for subsistence needs. The women rock-pickers, in particular, reported using the small amounts they earned for food, clothing, and blankets. Naturally these women did not answer the question about future plans because they had no prospect of further earnings. Men generally said they had used money to support the family in general, to pay school fees or to buy food and clothing. In contrast to the past use of wages to meet subsistence needs, Table 6.7 shows the desire of those with ongoing employment (primarily men) to make major investments, to save for future needs or investments, or to invest in education for themselves or their children. These tables give a good indication of how earnings generated by the SPR Project are being reinvested in the local economy by those who make major investments, pay school fees, and purchase food, clothing and other commodities from local shops.

Table 6.8

PROBLEMS RELATED TO WORK  
 Frequency of responses given by 12 workers  
 (Up to 3 possible answers per worker)

RESPONSE	FREQUENCY	% OF RESPONSES
Long hours, low wages, hard work	5	25.0
Bad employer/employee relation	3	15.0
Low wages, some days not paid	2	10.0
Can't plough fields in time	1	5.0
Animal theft	1	5.0
Theft of planks at work	1	5.0
Stealing by other workers	1	5.0
Official undermanned security	1	5.0
Car accident	1	5.0
Bad working conditions	1	5.0
House destruction along road	1	5.0
No rent allowance	1	5.0
No one cares for animals at home	1	5.0
-----		
	20	100.0

Finally, we asked about problems workers had encountered in relation to SPRPA work (see Table 6.8). The fact that only 12 people responded to this question indicates the generally high level of satisfaction with the opportunity for employment and the working conditions. A few people had inter-personal relations problems and a few mention low wages and long hours, primarily those women doing the lowest level of unskilled work. Other problems reflect the unavoidable conflicts which rural people face when they take wage employment and can no longer supervise or carry out accustomed agricultural tasks.

HOUSEHOLDS IN BASELINE SAMPLE WITH SPRPA EMPLOYMENT

In addition to the small group of construction workers interviewed, there were 43 households in our large baseline study who said that some family member had found employment with the SPRPA. This represents 6.3% of all 682 households interviewed, and 11.7% of those in the Guthrie District. In only one case was the worker from outside Guthrie District; the exception was the household of one of our own SPRPA Baseline Study enumerators. From the 42 Guthrie households we learned that 9 still had people employed by the SPRPA, while the other 33 had done temporary work which was now over. The following table shows the type of employment held by these SPRPA workers.

Table 6.9

TYPES OF SPRPA EMPLOYMENT REPORTED IN SPR BASELINE STUDY  
(43 cases reporting past or present SPRPA work)

Type of work	frequency	percent
digging gutters, holes etc.	9	20.9
picking rocks from the road	8	18.6
watchman	6	13.9
building culverts	5	11.6
driver	3	7.0
surveyor	3	7.0
carpenter	2	4.7
plumber	1	2.3
time keeper	1	2.3
tar spreader	1	2.3
office work	1	2.3
"tea-boy"	1	2.3
rock picking and watchman (2 people)	1	2.3
survey enumerator	1	2.3
-----		
TOTAL	43	100.0

Table 6.10

COMPARISON OF HOUSEHOLDS WHICH FOUND SPRPA EMPLOYMENT  
WITH OTHER HOUSEHOLDS IN QUTHING DISTRICT  
(Given as mean number/value of item per household)

category for comparison	Hlds having SPRPA work, piece jobs (42 cases)	Hlds which never had SPRPA work (334 cases)
fields	1.7	1.5
cattle	2.4	3.0
total livestock units*	2.2	2.2
agricultural production in bags	4.6	4.0
highest adult educational level	5.5	6.7
number of children in school	1.7	1.8
migrant workers	.1	.6
wage employed persons	.6	1.0
income, total cash per month	M 102.61	M 154.00
cash income + value ag produce	M 108.72	M 157.97

\* cow, horse, donkey = 1 unit; sheep, goat = .2 unit.

The final table, 6.10, shows how this group of Quthing District residents who had found employment on the road, compared with other households in the same district. It is notable that in terms of agricultural assets, these households are very much like the rest of the Quthing population we interviewed. In fact, their reported production was even higher than the average. In educational level the adults are slightly below the average, but have a comparable number of children attending school. What is striking is that there are fewer migrant workers per family, fewer wage earners, and dramatically lower income than in other households. This suggests that they are a more disadvantaged group with no man able to go to the mines and with limited other income sources. If this is so, then the earnings which SPRPA employment or short term piece-jobs have provided for such people, is benefitting the ordinary or slightly less well-to-do family along the road's zone of influence. They have apparently not ceased to be farmers by virtue of finding temporary wage employment.

## Appendix 7

## TRAFFIC COUNTS

During the period of data collection, traffic counts were conducted at five points on the road between Mt. Moorosi and Qacha's Nek. Our traffic counters were stationed at the following locations: (1) Ha Mopeli, on the new road to Mphaki, at 30 km from the junction beyond Mt. Moorosi; (2) Ha Ntemere, on the new road to Mphaki, at about 22 km from the junction beyond Mt. Moorosi; (3) Ha Malefane (also called Ha Khanyetsi), about 27 km northeast of Mphaki, where SPR construction will be during 1985; (4) Ha Sekake, at Lesoli's shop, 50 km beyond Mphaki; (5) Ha Mpitl, about 10 km before Qacha's Nek, where the road to Sehlabathebe forks to the left. These locations are shown on the map (Figure 7.1).

A local resident was hired at each location to record all vehicles passing between 6:00 and 18:00 hours two days per week during the data collection period. In the case of Ha Ntemere, half of the observations occurred on Saturdays; in all the other locations, observations were made on weekdays. Each person was trained in the use of simple traffic record forms which are included in Appendix 8. In addition to recording the date, time of observation and type of vehicle passing, they estimated the number of people in the vehicle, recorded type of goods carried if possible, and noted if the vehicle was from the SPRPA or not.

In a few cases, particularly Malefane and Sekake, observations before 6:00 and after 18:00 were also recorded, but we have excluded these cases in order to standardize the data presented below. In the case of Malefane we found that 1.3% of the vehicles observed passed before 6:00 and 9.3% after 18:00; in Sekake 4.5% either passed Sekake or left it as a starting point before 6:00, while 5.6% passed after 18:00. Thus we estimate that we are only reporting about 89% of the vehicles which passed during the long summer daylight hours. Of course there were, in addition, a few vehicles which passed uncounted during the night. In comparable manual traffic counts conducted twice a year throughout Lesotho by the Roads Division of the Ministry of Works, observations are made between 7:00 and 19:00, while in the recent SPRPA traffic survey conducted in February 1985 observations were made between 7:00 and 16:30 hours.

Table 7.1 shows the distribution of vehicles throughout the day for our total sample divided into thirty minute periods. Note that minutes have been converted to decimal fractions of an hour for the sake of accurate computation. Thus "midpoint 5.25" indicates the period from 5:00 to 5:30, while "midpoint 5.75" means 5:30 to 6:00. This table also shows the time period we are reporting (6:00 to 18:00 hours) allowing comparison with the times of the other two surveys.

Table 7.1

DISTRIBUTION OF VEHICLES PASSING THROUGHOUT THE DAY  
 GROUPED BY 30 MINUTE INTERVALS  
 (expressed as decimal fractions of hours)

Frequency	Midpoint	Percent
5	5.25	IX
20	5.75	XXXX ----- 6:00 - our reports begin
73	6.25	XXXXXXXXXX
129	6.75	XXXXXXXXXXXXXXXXXX
125	7.25	XXXXXXXXXXXXXXXXXX
133	7.75	XXXXXXXXXXXXXXXXXX
174	8.25	XXXXXXXXXXXXXXXXXX
177	8.75	XXXXXXXXXXXXXXXXXX
166	9.25	XXXXXXXXXXXXXXXXXX
166	9.75	XXXXXXXXXXXXXXXXXX
158	10.25	XXXXXXXXXXXXXXXXXX
130	10.75	XXXXXXXXXXXXXXXXXX
149	11.25	XXXXXXXXXXXXXXXXXX
143	11.75	XXXXXXXXXXXXXXXXXX
154	12.25	XXXXXXXXXXXXXXXXXX
146	12.75	XXXXXXXXXXXXXXXXXX
142	13.25	XXXXXXXXXXXXXXXXXX
141	13.75	XXXXXXXXXXXXXXXXXX
145	14.25	XXXXXXXXXXXXXXXXXX
156	14.75	XXXXXXXXXXXXXXXXXX
182	15.25	XXXXXXXXXXXXXXXXXX
156	15.75	XXXXXXXXXXXXXXXXXX
210	16.25	XXXXXXXXXXXXXXXXXX
178	16.75	XXXXXXXXXXXXXXXXXX
152	17.25	XXXXXXXXXXXXXXXXXX
148	17.75	XXXXXXXXXXXXXXXXXX ----- 18:00 - our reports end
49	18.25	XXXXXX
28	18.75	XXXX
18	19.25	XX

1.....I.....I.....I.....I.....I.....I.....I.....I.....I
0                    2                    4                    6                    8                    10
Percent

Valid Cases      3753      Missing Cases

The next table (Table 7.2) shows the mean number of vehicles per day recorded at each location in our sample, as well as the mean number of people estimated to have passed at each location per day and the mean number of people

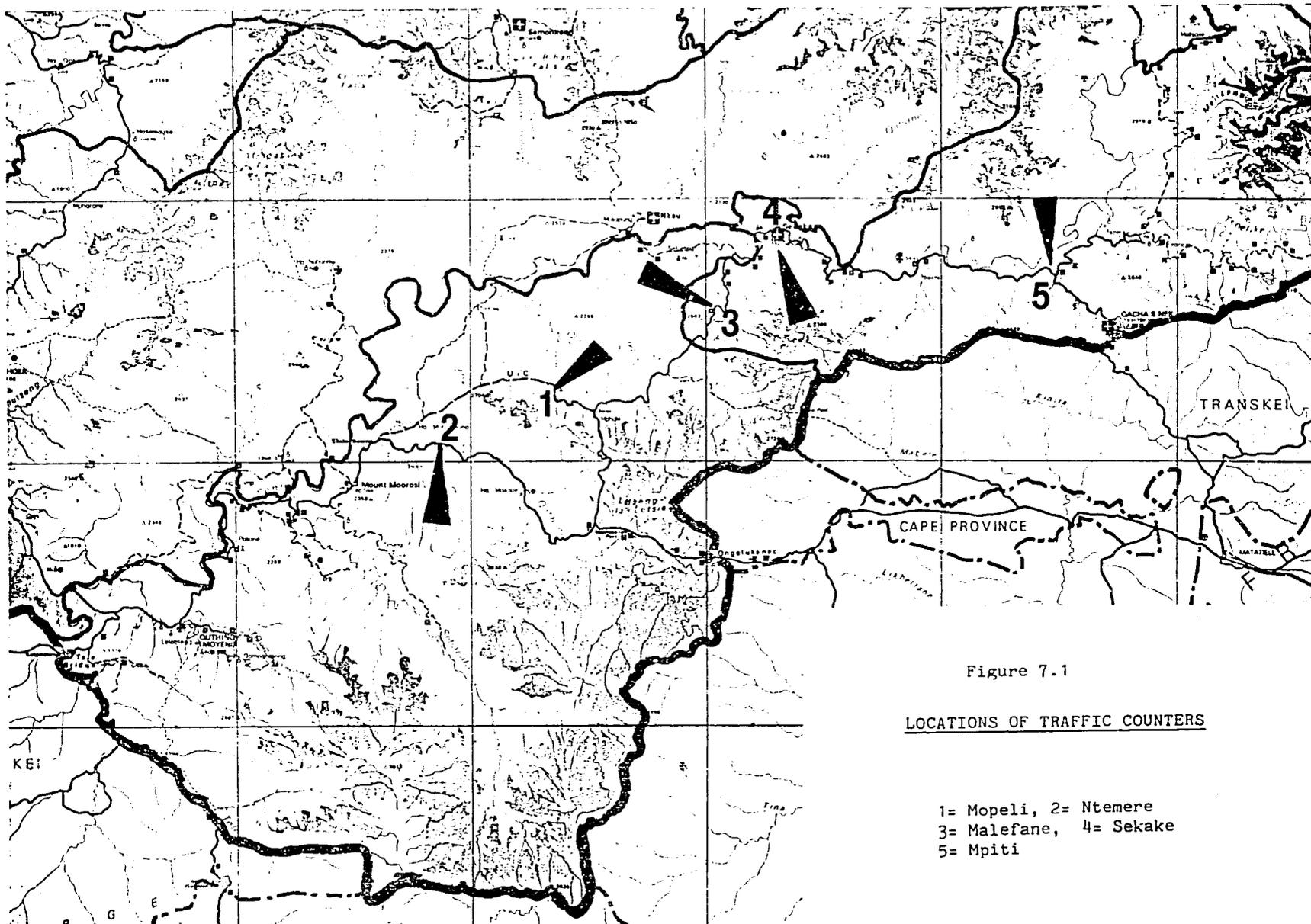


Figure 7.1

LOCATIONS OF TRAFFIC COUNTERS

- 1= Mopeli, 2= Ntemere
- 3= Malefane, 4= Sekake
- 5= Mpiti

per vehicle. At Ha Mopeli nearly a third of the vehicles recorded were actually SPRPA vehicles. This was particularly true during the survey period because the Project was in the process of moving its construction camp from Mt. Moorosi to Mphaki in order to begin the next phase of construction work from Mphaki east. Only one Project vehicle was ever reported at any of the other observation points. Because the number was so high at Ha Mopeli we have noted both the total and the sub-divided means for this village.

Table 7.2

MEAN NUMBER OF VEHICLES COUNTED AND ESTIMATED NUMBER OF TRAVELLERS  
PER DAY AT EACH LOCATION

Location	Mean number of vehicles per day	Estimated number of travellers per day	Mean per vehicle
Mopeli (new road)	89.3	512	5.7
{SPRPA vehicles}	{28.5}		
{non-SPRPA vehicles}	{60.8}		
Ntemere (old road)	13	150	11.5
Halefane	35.9	252	7.0
Sekake	55.7	335	6.0
Mpiti	118.4	1170	9.9

Note that there is a much higher number of passengers per vehicle at Ntemere on the old road, than at any of the other locations. This gives evidence for the problem which "old road" people expressed again and again. They said that there is not enough public transport along their stretch of the road so people must wait a very long time and even then may not find space on the infrequent and over-crowded buses or private vans or trucks willing to take paying passengers.

In order to see the comparison between counts at our location and those from other locations, we have also given the most recent available data from the Roads Branch Traffic Counts made at 5 stations in Quthing and Uacha's Nek Districts (May 1984), and from the SPRPA traffic survey between Moyeni and the road junction just beyond Mt. Moorosi (February 1985). (See Table 7.3.) Since the Roads Branch count includes one station at Mphaki, just 10 km beyond our station of Mopeli, it is particularly interesting to note the tremendous increase of traffic in that area in a year's time. Earlier traffic counts from



Table 7.5

Crosstabulation: TYPE TYPE OF VEHICLE  
By PLACE PLACE OF OBSERVATIONS

PLACE-> TYPE	Count	Mopeli	Intewere	Maierane	Sekake	Mpiti	Row Total
	Col Pct	new road	old road	const		near QN	
		1	2	3	4	5	
1 car, small pickup	68 5.8	89 42.8	231 43.6	110 33.3	472 36.7	970 27.5	
2 landrover or 4x4	707 60.4	41 19.7	149 28.1	126 38.2	321 25.0	1344 38.1	
3 kombi taxi minibs	67 5.7	54 26.0	28 5.3	11 3.3	169 13.2	329 9.3	
4 big bus or coach	48 4.1		12 2.3	10 3.0	74 5.8	144 4.1	
5 big truck	244 20.8	24 11.5	110 20.8	73 22.1	248 19.3	699 19.8	
6 bakery truck	16 1.4					16 .5	
7 tanker fuel water	21 1.8					21 .6	
8 tractor cat grad					1 .1	1 .0	
Column Total	1171 33.2	208 5.9	530 15.0	350 9.4	1285 36.5	3524 100.0	

Number of Missing Observations = 109

In this and other computer generated "crosstab" tables, the actual number of observations of each type of vehicle is the upper number in each box, while the lower number (column %) indicates the percent of all observations at that location which are of that particular type. Down the right side is a summary column giving frequency and percent for all locations combined.

These tabulations include both SPRPA vehicles and others (private and government). It is clear that 4-wheel drive vehicles such as Landrovers, Landcruisers and 4x4 pickup trucks (vans) are most common in the total count,

and particularly so at Ha Mopeli. Note, however, that the majority of vehicles from the SPRPA, which were numerous at Ha Mopeli, were of this type. Although the new SPR stretch passing Ha Mopeli road is becoming heavily travelled, the number of taxis on this section is still very small in relation to the new demand for public transport. At Ntemere, on the old road, small private pickup trucks (vans) are commonest, most of them driven by local shop-keepers. There are a few small kombis used as taxis, and two middle-sized buses making regular trips from Mt. Moorosi, but the big private buses and the Lesotho National Buses do not take this route. Maserane and Sekake both present a pattern of vans, 4x4s, and big trucks making the long trip hauling goods from one end of the road to the other. Mpitso shows a pattern typical of roadside towns not far from large centers: many small trucks and private cars and a large number of 4x4s and Landrovers, many on government service. As shown in Table 7.2, there is a heavy passenger load at Mpitso, with large and small buses and taxis passing frequently. At all points, but particularly where public buses are infrequent, private vans and trucks provide unofficial public transport for people and goods.

Table 7.6

## TYPES OF GOODS BEING TRANSPORTED

Value Label	Frequency	Percent	Valid Percent	Cum Percent
people & luggage or no loads	2275	62.6	68.8	68.8
goods-miscellaneous or covered	505	13.9	15.3	84.1
building material and furniture	144	4.0	4.4	88.4
food, bread, bags of grain, drinks	150	4.1	4.5	93.0
wool, mohair, livestock	37	1.0	1.1	94.1
road const materials, machinery, sand	48	1.3	1.5	95.5
fuel, paraffin in drums, water tanks	148	4.1	4.5	100.0
missing	326	9.0	MISSING	
	-----	-----	-----	
TOTAL	3633	100.0	100.0	

Table 7.6 shows the frequency of different types of goods being carried, reported for the entire sample of observations. Table 7.7 presents detailed information on the type of loads observed at each location.

Table 7.7

## TYPES OF GOODS BEING TRANSPORTED, BY PLACE OF OBSERVATION

PLACE-> RECGOODS	Count	Mopeli	Ntemere	Malcziane	Sekake	Mpiti (n	Row Total
	Col Pct	(new road)	(old road)	(const)		(near QN)	
		1	2	3	4	5	
people luggage or empty	1	922	125	350	5*	873	2275
		78.3	66.1	65.5	3.8	68.4	68.8
goods misc or covered	2	91	54	86	51	223	505
		7.7	28.6	16.1	39.2	17.5	15.3
building mater- ials, furniture	3	34	1	22	14	73	144
		2.9	.5	4.1	10.8	5.7	4.4
food grain drink	4	34	6	44	10	48	150
		2.9	3.2	8.2	13.8	3.8	4.5
wool mohair animals	5	5	1	5	11	15	37
		.4	.5	.9	8.5	1.2	1.1
road const materials	6	26	2	8	2	10	48
		2.2	1.1	1.5	1.5	.8	1.5
fuel, drums water tanks	17	66		19	29	34	148
		5.6		3.5	22.3	2.7	4.5
Column		1178	189	534	130	1276	3307
Total		85.6	5.7	16.1	3.9	38.6	100.0

Number of Missing Observations = 326

- \* Note that missing values actually includes a number of vehicles carrying people and their luggage which passed at Sekake's. Because of a confusion about coding, the enumerator at Sekake's did not record details of loads when busses and taxis passed, so these appear as "missing values" in this table.

With the exception of Sekake's, there is a fairly consistent pattern: people and their luggage are most frequent. Sekake's might appear similar except that the enumerator coded such loads simply as groceries or miscellaneous goods (category 2) or as missing if he couldn't be sure (so they were excluded from the tabulation). The category of miscellaneous goods is composed primarily of small quantities of groceries, vegetables, fuel and other assortments of consumer goods being transported from the wholesale dealers at either end of the

road to small shops and cafes along the way. Since loads were mixed, items could not be identified separately. Building materials such as zinc roofing and rairers, as well as furniture were frequently observed, although often combined with other items and hence recorded as miscellaneous goods. Fuel (paraffin, petrol and diesel) are important items, as well as grain, flour and other bulk food for sale, or as "food aid" to schools, clinics, food-for-work programs and for emergency drought relief. Most of the food-aid for Uacha's Nek comes by rail to Matstiele and is then trucked throughout the districts. There is a mill at Sekake, and one at Malefane, which may explain higher food counts in these locations. A daily trip is made by a commercial bread delivery truck coming all the way from Mafeteng to serve small cafes along both roads as far as Mphaki. Wool and mohair is an important product reported at Sekake's, because Lesoli's shop is a center for shearing, purchasing, packing and transporting wool and mohair to be sold in the Durban and East London markets.

## Appendix 8

## DATA PLANNING MATRIX AND QUESTIONNAIRES

## DATA PLANNING MATRIX

TYPES OF DATA NEEDED TO MEASURE IMPACT OF SPR ROAD		LEVELS AT WHICH INFORMATION CAN BE OBTAINED SPECIFIC QUESTIONS TO BE ASKED AT EACH LEVEL			
data class	data category	HOUSEHOLD SURVEYS---	VILLAGE INTERVIEWS---	PUB REPORTS	
		indiv household	instituti	business	district
demographic	marital status	x			
	sex	x			x
	age	x			x
	migrant/resident	x			x
settlement	patterns, land use				
	getting sites, fields	x		x	
	house and shop constructn	x		x	
	changes in land use	x		x	
	value, demand	x		x	
economic	employment	x	x		x
	income, sources	x			
	agric and livestock production				
	crops ylds sales	x			x
	fertilizer use	x		x	
	tools, tractors	x			
	livestock owned	x			x
	livestk sales	x			x
	wool/mohair sales	x	x	x	x
	other productive activities				
	handicrafts	x			
	sale cooked food	x			
	chickens/eggs	x	x		x
	skilled builders etc.	x		x	
retail	sales - purchase of goods				
	where, what, price	x		x	
	esp food, building materials				
	major expenditures	x			
credit	and cooperatives	x			x

travel	how, where, why	x		x (taxi)	
	N vehicles		(traffic count)		x
	cost of travel	x		x	
	N of petrol stations, mechanics			x	
education	N of schools		x		x
	level of educ	x			x
	N attending sch	x	x		x
	N qualified teachers		x		x
	N educated residents	x			
	school buildings equip		x		
	non-formal education				
health	N clinics		x		x
	use of health facilities	x	x		x
other development activities and services					
	village water supply		x		x
	village health workers		x		x
	agric extension workers	x	x		x
	Food-for-work projects	x	x		x
	Feeder road construction		x		x
	communal gardens		x		x
	level of education of community workers			x	
commercial activities, services					
	N of shops, butchers			x	
	N of hotels, restaurants			x	
	recreation: concerts, discos etc				

-----

Samples of the various questionnaires and interview forms follow.

VILLAGE INFORMATION, SPR BASELINE STUDY - FEBRUARY 1985

Village \_\_\_\_\_ Dates of work in village \_\_\_\_\_  
District \_\_\_\_\_ Interviewer/mobotsi \_\_\_\_\_

1. Name of chief/headman (village level) \_\_\_\_\_

Also give name if there is an acting village chief \_\_\_\_\_

2. Name and village of senior chief in this area \_\_\_\_\_

3. Total number of households in this village \_\_\_\_\_

List sub-village names and number of households in each:

\_\_\_\_\_  
\_\_\_\_\_

4. Do the following projects or public services exist in the village?  
Circle NO or YES. Give date the project began, and other details.

DATE

NO/YES \_\_\_\_\_ village water supply (what type? \_\_\_\_\_)

NO/YES \_\_\_\_\_ community garden (Fencing OK? \_\_\_\_\_; Number members \_\_\_\_\_)

NO/YES \_\_\_\_\_ woodlots/forestry (Is it producing yet? - NO/YES)

NO/YES \_\_\_\_\_ food-for-work projects (doing what work? \_\_\_\_\_)

NO/YES \_\_\_\_\_ drought relief

NO/YES \_\_\_\_\_ credit union (how many members? \_\_\_\_\_; Activities \_\_\_\_\_)

NO/YES \_\_\_\_\_ handicraft center or project (Making what? \_\_\_\_\_)

NO/YES \_\_\_\_\_ other cooperative groups (Purpose \_\_\_\_\_ N Membs \_\_\_\_\_)

Purpose \_\_\_\_\_ Number members \_\_\_\_\_

5. How many of the following institutions or businesses are in the village, When was the first one started? If there is none in this village, tell where the nearest one is.

INSTITUTION	HOW MANY IN VILLAGE	DATE OF FIRST ONE	NEAREST OTHER PLACE (if none in this village)
post office	-----	-----	-----
bank	-----	-----	-----
local court	-----	-----	-----
police station	-----	-----	-----
passport office	-----	-----	-----
air landing strip	-----	-----	-----
school (primary)	-----	-----	-----
school (secondary)	-----	-----	-----
clinic	-----	-----	-----
village health worker	-----	-----	-----
wellshed	-----	-----	-----
dip tank	-----	-----	-----
agric project	-----	-----	-----
agric worker	-----	-----	-----
co-op Lesotho	-----	-----	-----
store (gnl dealer)	-----	-----	-----
cafe	-----	-----	-----
butchery	-----	-----	-----
restaurant	-----	-----	-----
clock making	-----	-----	-----
vehicles	-----	-----	-----
tractors	-----	-----	-----
petrol station	-----	-----	-----



9. How many people are there in the village with the following skills?

NUMBER	
.....	building houses (trained masons using stone or cement)
.....	roofing houses (carpenters, putting on metal roofing)
.....	carpenters (making furniture etc.)
.....	sheet metal workers (making bins, paclas, roof caps etc.)
.....	mechanics (motor vehicle and tractor repair)
.....	welders
.....	radio or TV repairman
.....	tailors or dressmakers using sewing machines
.....	people using knitting machines

10. In the past year how many families have moved away from this village?.....

Where did they go?.....  
.....

Why did they move away?.....  
.....

11. In the past year how many families have moved into this village?.....

Where did they come from?.....  
.....

Why did they move here?.....  
.....

12. How many requests for sites are there now awaiting action?

Residential sites?..... Business sites?.....

QUESTIONS FOR CAFES AND SHOPS - SPR ROAD

Date of interview \_\_\_\_\_  
Name of village \_\_\_\_\_  
Name of interviewer \_\_\_\_\_

1. Who is owner of the shop? \_\_\_\_\_ Sex \_\_\_\_\_
2. Who is manager? \_\_\_\_\_ Sex \_\_\_\_\_
3. Name of person interviewed \_\_\_\_\_ Sex \_\_\_\_\_  
Relation to owner \_\_\_\_\_ Work \_\_\_\_\_
4. How many workers in the shop now and in the past?  
family members (unpaid): now \_\_\_\_\_ 1983 \_\_\_\_\_ 1980 \_\_\_\_\_ 1975 \_\_\_\_\_  
other employees (paid): now \_\_\_\_\_ 1983 \_\_\_\_\_ 1980 \_\_\_\_\_ 1975 \_\_\_\_\_
5. Find out about typical pay for different type of employees, if possible:  
\_\_\_\_\_
6. Tell about how the business got started: Date it was begun \_\_\_\_\_  
Why the owner began in this place \_\_\_\_\_  
Where did he/she come from before starting the business? \_\_\_\_\_  
What other work was he/she doing before? \_\_\_\_\_  
How he/she got the money to begin \_\_\_\_\_  
Is this now a General Dealer \_\_\_\_\_; General Cafe \_\_\_\_\_; Other \_\_\_\_\_?
7. How did you transport goods in the past, particularly before there was any road (if you can remember) and what transportation problems did you or other cafe and shop owners have in those days? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
8. Has the improvement of the SPRPA Road (Guthing to Mphaki) made any difference in your business? If so, tell what differences: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9. If you have ever had a vehicle for your business, use the lines below to state make, type, size, date purchased, and whether each is still working:

- 1) \_\_\_\_\_
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_
- 4) \_\_\_\_\_

10. From where and how often do you purchase different type of stock?

TYPE OF GOODS	FROM WHAT PLACE	DEALER	HOW OFTEN?	MEANS OF TRANSPORT
paraffin				
mealie meal				
groceries				
cabbages				
clothing				
bakery bread				

11. Do you go yourself? \_\_\_\_\_ or send someone? \_\_\_\_\_ or place order? \_\_\_\_\_

12. How many maloti per day do you usually take in (gross intake)? \_\_\_\_\_

13. What is your typical monthly profit (income less expenditure)?

now \_\_\_\_\_ 1983 \_\_\_\_\_ 1980 \_\_\_\_\_ 1975 \_\_\_\_\_

14. What types of goods are selling most at your shop? \_\_\_\_\_

15. What other kinds of businesses do you think it would be good for someone to start in this area in order to make life better for people.

16. Draw shop (each room) on reverse side, give measurements and year built.

SPR - RURAL CONSUMER PRICE STUDY - MAY

VILLAGE \_\_\_\_\_  
 SHOP NAME \_\_\_\_\_  
 GNL DEALER \_\_\_ / CAFE GROC \_\_\_ / OTHER \_\_\_ /  
 INTERVIEWED? YES \_\_\_\_\_ / NO \_\_\_\_\_ /

HOW MANY MINUTES WALK FROM THE ROAD \_\_\_\_\_  
 SIZE OF SHOP ROOM: \_\_\_\_\_ X \_\_\_\_\_  
 meters X meters (1) \_\_\_\_\_ X \_\_\_\_\_  
 (2) \_\_\_\_\_ X \_\_\_\_\_  
 (3) \_\_\_\_\_ X \_\_\_\_\_  
 (4) \_\_\_\_\_ X \_\_\_\_\_

ITEM	DESCRIPTION AND SIZE	STANDARD ITEM PRICE	PRICE AND DESCRIPTION OF OTHER SIZE OR TYPE
MAIZE MEAL	25 kg Induna		
	12.5 kg Induna		
WHEAT MEAL (sifted)	25 kg LFM		
	12.5 kg LFM		
BREAD LOAF	brown loaf		
SUGAR	2.5 kgs LSP		
	1 kgs		
SALT	500 gm Cerebos		
MILK	.75 litre Long Life		
MILK (baby)	250 gms Lactogen		
FAT	125 gm Pret		
FISH	155 gms Lucky Star		
COFFEE	62.5 gms Ellis Brown		
TEA	250 gms Five Roses		
FROZ CHICKEN	1 kg Rainbow		
BEER	350 ml Black Label		
VASELINE	50 gms Blue Seal		

SOAP POWDER	150 gms	Omo		
BAR SOAP	125 gms	Sunlight		
TOILET SOAP	50 gms	Lux		
TOOTHPASTE	50 gms	Colgate		
HAND LOTION	300 ml	Dawn		
AMBI SPECIAL	100 ml	blue box lotion		
PARAFFIN	1 litre			
CANDLES	pkt. of 6	Diamond		
MATCHES	1 box	Lion		
CIGARETTES	pk of 20	Lexington		
BLANKETS	1 adult size (155 x 165)	lifate		
CEMENT	1 pocket	(50 kg)		
PAINT	250 ml	Hippo		
ENAMEL MUG	7 cm hi x 8 cm dia			
PRIMUS STOVE		silence		
CAMEO SET	Kitchen table + 4 matching chairs			
SHEET OF ZINC	12 ft			
SA Pine Rafters	1 1/2" x 4 1/2" (price per meter)			

QUESTIONNAIRE FOR CONSTRUCTION WORKERS ALONG THE ROAD - January 1985

Be sure to tell the person that this information is confidential

Date of interview \_\_\_\_\_  
Place of interview \_\_\_\_\_  
Name of interviewer \_\_\_\_\_

1. Name of person \_\_\_\_\_
2. Sex \_\_\_\_\_
3. Age \_\_\_\_\_
4. Marital status \_\_\_\_\_
5. Village where person lives while employed on SPR \_\_\_\_\_  
Give actual home village if it is different \_\_\_\_\_

6. Number of people in the household:

number of working people \_\_\_\_\_  
number of adults not working \_\_\_\_\_  
number of children \_\_\_\_\_  
total people in household \_\_\_\_\_

7. Education:

Highest grade reached in school \_\_\_\_\_

Other technical training/certificates/diplomas/qualifications  
\_\_\_\_\_

8. Previous work experience:

TYPE OF JOB	PLACE	DATES: FROM--TO

9. Place(s) on road where the person has worked: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. Type of work done on SPR \_\_\_\_\_  
\_\_\_\_\_

11. Length of time employed so far:  
hours per day \_\_\_\_\_  
days per week \_\_\_\_\_  
total number of weeks worked \_\_\_\_\_

12. SALARY ( \_\_\_\_\_ / PER \_\_\_\_\_ ) X (total time worked) =  
TOTAL PAY RECEIVED FOR ALL WORK DONE ON SPR SO FAR \_\_\_\_\_

13. Net monthly pay according to person being interviewed: \_\_\_\_\_

14. How have you used your wages from SPR so far?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

15. How do you plan to use your wages from SPR in the future?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

16. What new skills have you gained by doing this work?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

17. In what other ways do you think you have benefited from this work?

-----  
 -----

18. Have there been any problems about the work, or problems at home because you were doing this work? If so, what were they?

-----  
 -----  
 -----

19. Do you plan to seek work after the SPR job is finished?

no  
 yes...IF YES, ASK ABOUT THE PERSON'S EMPLOYMENT PLANS:

What type of work do you want to get? -----  
 Where will you go to find it? -----  
 Do you think you will succeed?  
      no,    yes,    I don't know

20. Does anybody else in your family have WAGE EMPLOYMENT?

no  
 yes.....IF YES, ASK THEM TO GIVE DETAILS ABOUT OTHER WORKERS:

SEX	RELATIONSHIP	TYPE OF WORK	PLACE

21. Does anyone else in your family do any income-generating activities?

No  
 Yes...If yes, list all other SOURCES OF INCOME earned by family members, including farming, sale of wool or mohair, handicrafts, brewing, cooked food sales, etc.

SEX	RELATIONSHIP	TYPE OF ACTIVITY	PLACE

HOUSEHOLD QUESTIONNAIRE, SPR BASELINE STUDY, 1985

Date of interview \_\_\_\_\_  
Interviewer/mobotsi \_\_\_\_\_  
District \_\_\_\_\_

Hid Number \_\_\_\_\_  
Village \_\_\_\_\_

LL L A H HH

1. Name of person interviewed \_\_\_\_\_ Sex \_\_\_\_\_

2. Name of household head \_\_\_\_\_ Sex \_\_\_\_\_

3. Number of household members:

		resident members
+		absent members
=		total members

4. What are the main CHANGES which you have already seen because of the improvements made on the road from Quthing to Mphaki?

-----  
-----  
-----

5. What are the main BENEFITS and PROBLEMS which building new roads and improving old roads brings to villages in rural Leaotho?

BENEFITS: \_\_\_\_\_

-----  
-----

PROBLEMS: \_\_\_\_\_

-----  
-----

6. HOUSEHOLD MEMBERS

NAME	SEX	AGE	RELATION TO HLD HEAD	MARITAL STATUS	EDUCATION LEVEL	NOW IN SCHDOL (✓)	TYPE OF EMPLOYMENT	OTHER INCOME ACTIVITY	USUAL RESIDENCE
1			HLD HD						
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									

RELATION TO HOUSEHOLD HEAD:  
 Wife = wife of household head  
 Ch = child or grandchild of household head  
 Par = parent of household head, or other older people  
 Rel = any other relative  
 U = other unrelated person (herdboy, servant etc.)

MARITAL STATUS:  
 — = not yet married  
 M = married  
 W = widowed  
 S/D = separated or divorced

RESIDENCE:  
 HERE = living and studying or working here at home  
 RSA = living and/or working in South Africa, Transkei etc.  
 Name specific towns in Lesotho like MASERU, QUTHING, QACHA etc.

7. For any household members who are migrant workers, tell how often they came home on leave or short visits in the past year:

number on chart \_\_\_\_\_, place of work \_\_\_\_\_, number of visits \_\_\_\_\_

number on chart \_\_\_\_\_, place of work \_\_\_\_\_, number of visits \_\_\_\_\_

8. Has any member of this household ever worked for SPRPA?  NO;  YES

If YES, What type of work did he/she do? \_\_\_\_\_

How many months did he/she work? \_\_\_\_\_

ROAD TRAVEL

9. How many trips have you or members of your household made by vehicle on the road since Christmas? \_\_\_\_\_

10. For five of these trips, tell where you went, why, and what the trip cost:

MONTH	FROM WHERE / TO WHERE	PURPOSE	COST SINGLE TRIP
1			
2			
3			
4			
5			

11. If you have not made any trips since Christmas, when was the last time you made a trip? Where did you go and why?

DATE \_\_\_\_\_ FROM \_\_\_\_\_ TO \_\_\_\_\_ PURPOSE \_\_\_\_\_

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**POSSESSIONS** - How many of each of these items does the family own?

12. Household possessions:

NUMBER

	thatched roof buildings
	zinc roofed buildings
	other buildings (specify what it is _____)
	wire fence
	latrine (____VIP; ____other type)
	water tank and gutters
	coal stove
	gas stove
	sewing or knitting machine
	radio or TV
	number of sofas and big stuffed chairs
	number of beds

13. Agricultural and transportation possessions:

NUMBER

	fields
	fruit trees
	other trees
	plough
	planter, cultivator, rake
	ox cart
	bicycle
	private car, truck, taxi, tractor (underline type; is it working?____)

14. Livestock ownership:

NUMBER

	cattle
	sheep
	goats
	horses
	donkeys
	pigs
	chickens

**HISTORY OF BUILDINGS**

15. Is the household head someone who moved into this village (mojaki)?

NO;  YES      If YES, explain

When did he move here? \_\_\_\_\_  
 Where did he come from? \_\_\_\_\_  
 Why did he move here? \_\_\_\_\_

16. Does he/you have other land applications still waiting for allocation?

NO;  YES      If YES, explain

for what purpose \_\_\_\_\_  
 in what place \_\_\_\_\_

17. CONSTRUCTION DETAILS for each building this family owns: (✓)

DATE IT WAS BUILT	SHAPE		TYPE OF ROOF		TYPE OF WALLS			METAL DOOR FRAMES	GLASS WIN-DOWS	NUMBER OF ROOMS
	ron-davel	sqv are	thatch	metal	stick + mud	stone + mud	cemnt brick			

18. PURCHASE OF BUILDING MATERIALS AND FURNITURE: When, where and how did you get each of the following items if you have them?

ITEM PURCHASED	YEAR	PLACE	SHOP	HOW TRANSPORTED
ZINC (IRON) ROOFING				
WOODEN PLANKS				
CEMENT BLOCKS				
POCKETS OF CEMENT				
METAL DOOR FRAMES				
DOORS				
WINDOWS				
COAL STOVE				
GAS STOVE				
LATRINE MATERIALS				

(Use back of previous page if there is more than one modern house)

AGRICULTURE - CROPS

19. For LAST YEAR, give information about all field and garden crops planted.

MAIZE SORGH WHEAT PEAS BEANS POTAT FODDR CABAG VEGS OTHER  
what?

write F if this was planted in FIELD or G if in GARDEN									
total production last year (bags/tins)									
amount sold last year (bags/tins)									
where was it sold and to whom?									
how transported for sale?									
amount sold as meals or loads									

(✓)

20. THIS YEAR, how did you plough your fields?

- we do not have fields
- did not plough any of them
- dug with hand spade only
- oxen only
- tractor only
- oxen and tractor

21. THIS YEAR did you use any of the following inputs?

(✓) INPUT	PLACE OBTAINED	(✓) SHOP/CO-OP/PROJECT			HOW TRANSPORTED
----- improved seed ----- for field crops					
----- fertilizer					
----- insecticide					

LIVESTOCK

22. Wool and mohair production LAST YEAR:

	WOOL	MOHAIR
Where was it sheared?	-----	-----
How much was sheared? (weight)	-----	-----
To whom was it sold and where?	-----	-----
How was it transported to sale?	-----	-----
What was cost of transport?	-----	-----
How long did you wait for payment?	-----	-----

23. Animal production and sale LAST YEAR:

	CATTLE	SHEEP	GOATS	HORSES	DONKEYS	PIGS
Number of live animals sold						
Number slaughtered animals sold						
Where were they sold						
How transported to sell						

24. Other animal products sold (give amount per month)

	CHICKENS	EGGS	MILK	OTHER
Amount sold				
Where sold				
How transported				

25. Did you buy any of the following items for use in livestock production during the past year, and if so, where and how did you get them?

INPUT	FROM WHERE?	(✓)				HOW TRANSPORTED
		SHOP/CO-OP/PROJECT/AGRIC				
✓) chicken food						
animal food						
fodder						
fencing						
medicine						

26. Concerning agriculture and livestock, what problems do you have about transportation and how do you think they could be solved?

-----

-----

-----

-----

INCOME

27. How much money does this household usually get from each of the following sources? Also list money from other sources not mentioned here:

MONTHLY INCOME  
IN MALUTI

TYPE OF WORK OR INCOME-GENERATING-ACTIVITY

	migrant work of men (in South Africa, Transkei etc.)
	migrant work of women (in South Africa, Transkei etc.)
	wages of men working in Lesotho
	wages of women working in Lesotho
	earnings from building, roofing, bloc. making, fencing
	earnings from taxi, truck, tractor
	piece jobs (what? .....
	earnings from ox team with cart, plow, planter
	sale of livestock (alive or slaughtered for meat)
	sale of wool and mohair
	sale of chickens and eggs
	sale of crops - produce from fields or gardens

	earnings from own gate or shop
	re-sale of fruit, vegetables, cooked foods
	sale of beer
	sale of handicrafts, sewing, knitting
	Food-for-work projects
	pension or insurance
	gifts or "help" from friends, relatives
	any other sources of income: What? .....

OTHER PUBLIC SERVICES AND TRANSPORTATION-RELATED QUESTIONS

28. How many times in the past year have workers from government or projects visited your village, and did they come by foot, horse or vehicle?

TYPE OF WORKER	NUMBER OF VISITS	MEANS OF TRANSPORT
livestock, veterinarian	-----	-----
crops, gardens, forestry	-----	-----
nutrition, home economics	-----	-----
health, nurse, doctor	-----	-----
MINRUDEV, water supply	-----	-----
other:-----	-----	-----
other:-----	-----	-----

29. CLINIC ATTENDANCE:

Where is the nearest clinic?-----

How many times did someone from your family attend last year?-----

For what purpose did they most recently go?-----

How did they travel? foot\_\_\_; horse\_\_\_; taxi or bus\_\_\_; other-----

If they went by taxi/bus, how much did a single trip cost?-----

30. CHILDREN AWAY AT SCHOOL

How many children in this household are away for schooling?-----

Where do they attend?----- District-----

----- District-----

How do they travel?-----

If they go by taxi/bus, how much does each one-way trip cost?-----

31. DAY SCHOLARS TRAVELING BY VEHICLE

How many children use vehicles to get to school each day?-----

How much does each single trip cost?-----

32. Where do you usually go for the following purposes?

PURPOSE	VILLAGE	NAME OF SHOP	MEANS OF TRANSPORT
To buy bags of flour "U sela kae?"			
To buy paraifin			
To grind your grain "U sila kae?"			
For the post office			

33. If any household members have attended TRAINING COURSES OR OTHER DEVELOPMENT ACTIVITIES outside of the village in the past year, explain what type of courses or activities, where they were held, and how the people travelled: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

34. In general, what other problems do members of your family face concerning transportation and how do you think they could be solved?  
 \_\_\_\_\_  
 \_\_\_\_\_

35. What three things do you think would make your village a better, nicer, more enjoyable place to live?

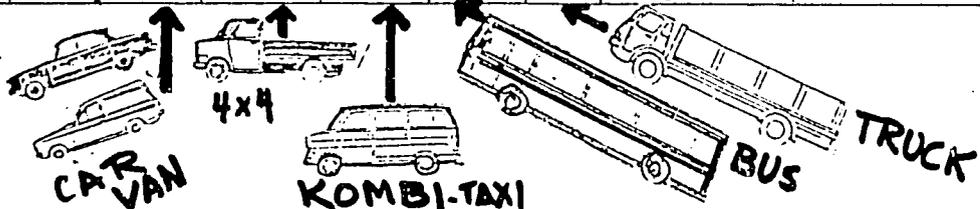
- (1) \_\_\_\_\_
- (2) \_\_\_\_\_
- (3) \_\_\_\_\_

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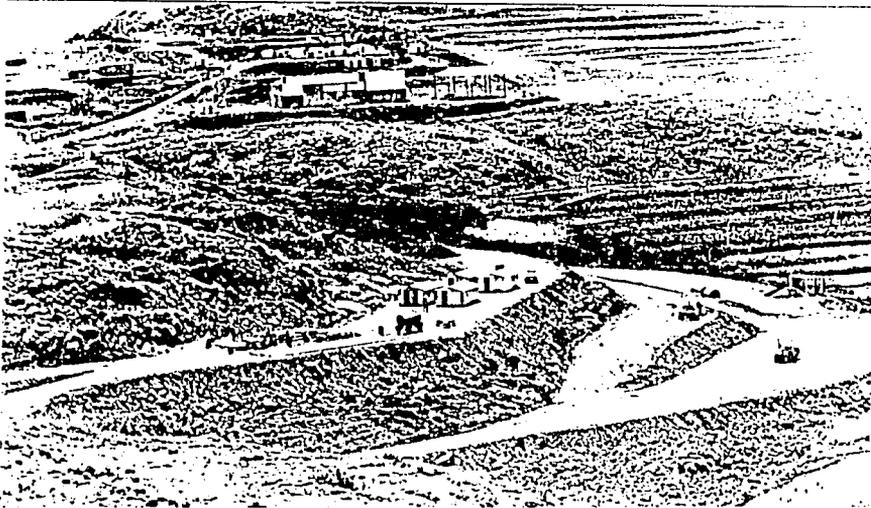
SPR BASELINE STUDY - TRAFFIC COUNT - 1985 [from 6 am to 6 pm]

Date \_\_\_\_\_ Place \_\_\_\_\_ Observer \_\_\_\_\_

time	check the type of vehicle you see						number of people in the vehicle	Type of goods carried, or other information about purpose of the trip	check here if the vehicle is from SPRPA
	private car or small van or pickup	land rover, cruiser or 4x4 truck	taxi - kombi or minibus	big bus	big truck	O T H E R			
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
	CAR	4x4	TAXI	BUS	TRUCK	OTHR	PEOPLE	GOODS CARRIED	SPRPA
11									
12									
13									
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18									
19									
20									



THE SPRPA MOVES ITS ROAD CONSTRUCTION CAMP FROM MT. MOOROSI TO MPHAKI

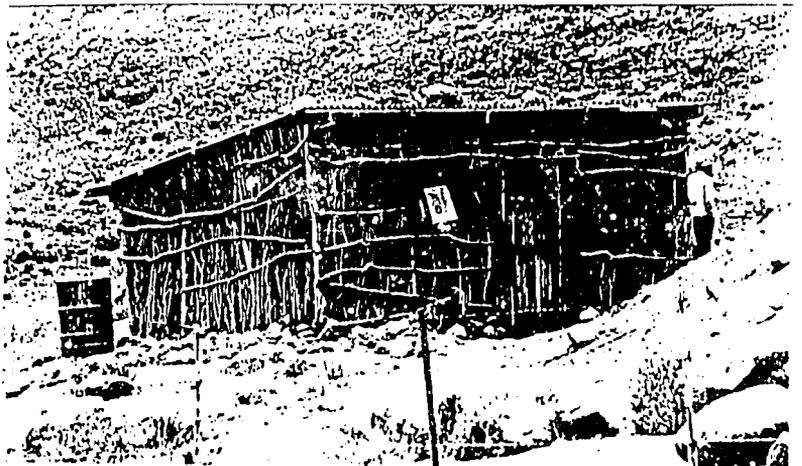


With the move come new employment opportunities for men and women along the road (right).

Mphaki is now a boom town with new houses and businesses going up, some in very quick construction styles like this in the bottom photograph, some with much more substantial doors, windows and cement block walls. Note rain water collection drum and wire fencing in the bottom photo.



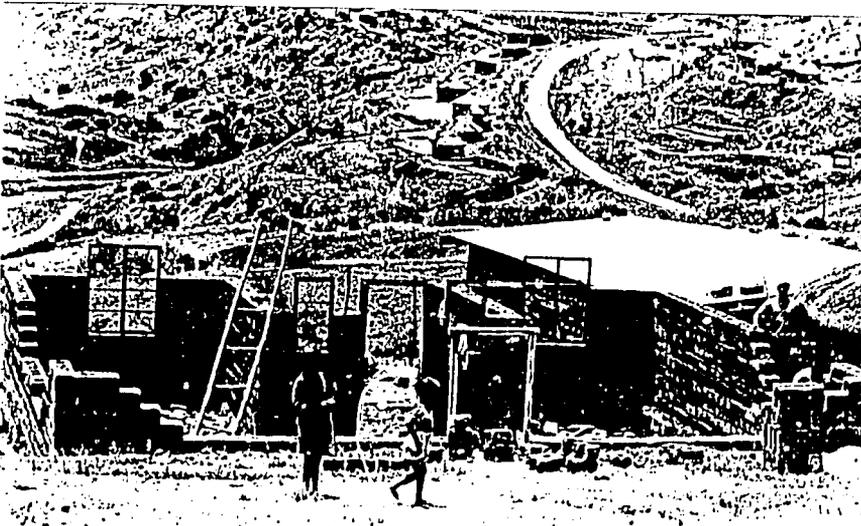
Such a "quick-quick" building may be the start of a homestead to which larger and more permanent buildings or business establishments are subsequently added.



PRODUCTIVE POTENTIAL ALONG THE ROAD

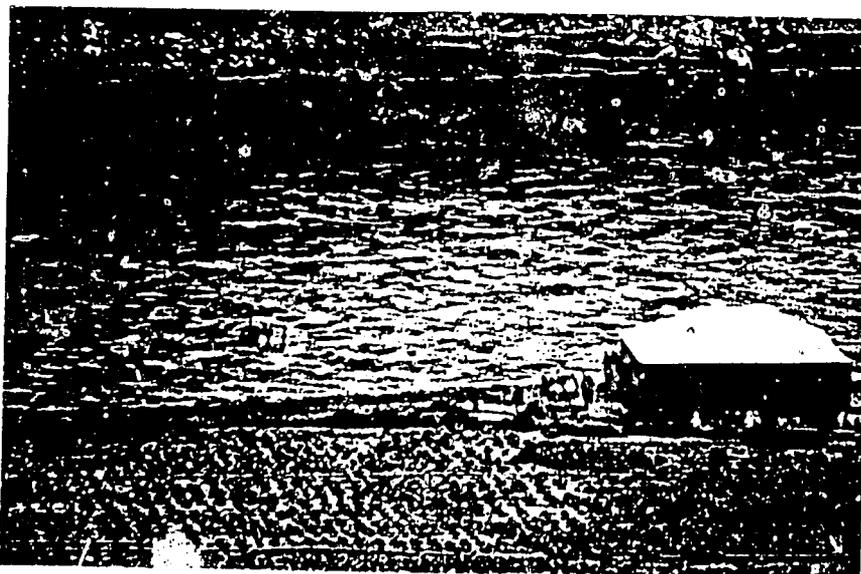


Cement block making is developing at many places where transport is now possible, and new houses are going up. This is at Mohlakoana, on the newly opened SPRPA road between Mt. Moorosi and Mphaki, near a newly opened shop bringing in other building materials for new residents.



Building contractors are in great demand in many of the growing roadside towns.

Trained builders, skilled in using modern materials and working from plans have far more work than they can handle.



Here in Ha Noosi, along the Senqu River between Whitehill and Qacha, a village cooperative agricultural project grows vegetables on irrigated plots by the river. Note also cable car taking goods from storehouse to the Rapase Store across the River. In times of flood, this cable or airplane are the only way to bring supplies over

COMMERCIAL ACTIVITY ALONG THE SOUTHERN PERIMETER ROAD - NEW AND OLD



Left:

A research staff member visits new business complex being built in Pokane, on the SPR between Quthing and Mt. Moorosi. A new "disco", hotel, bar, supermarket and mechanic's work shop, all run by one local businessman with an eye for the changing needs which the newly upgraded road brings.

Middle: A typical small cafe along the roadside.

Bottom: The road passes through the complex of buildings which belong to Lesoli's Shop at Sekake, one of the oldest and most influential traders in the southern part of Lesotho.



TRANSPORTATION ALONG THE SOUTHERN PERIMETER ROAD  
AND REMOTE FEEDER ROADS



The feeder road to Ralebona, 24 km south of Mt. Moorosi, has so few vehicles on it that people still must depend on donkeys and horses and headloading for most of their purchases and, like this shop-keeper, for taking goods to more distant villages.

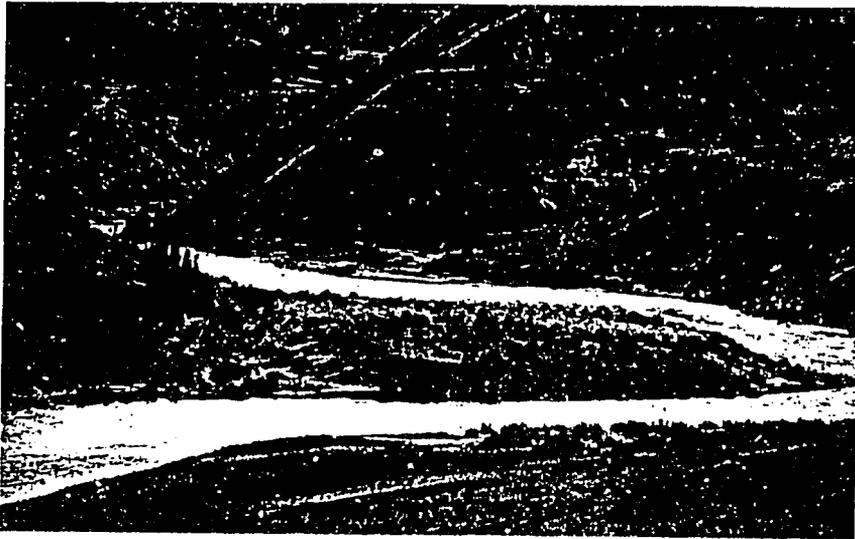


Eager villagers on the new SPR road between Mt. Moorosi and Mphaki wait for public transport to take them to the clinic and shops. The new road was opened four months before this photo.



Through traffic like this truck bring mohair or wool from Qacha's Nek benefit from the shortened trip even though construction work has not yet reached this stretch at Noosi.

THE SENQU RIVER - LESOTHO'S GREAT POTENTIAL RESOURCE IS ALSO A GREAT BARRIER TO THOSE LIVING ON ITS NORTHERN SIDE



Above: The Senqu winds along in the valley between Sekake and Qacha's Nek.



Left: School-girls in Ha Stirling, near Tebelling, struggle for two hours to bring their belongings to the river, then must find a boatman to take them across, and then wait, sometimes for hours, for a bus or taxi to take them to boarding schools in other parts of Lesotho.

Bottom: At Tebelling, opposite Whitehill, donkey owners provide regular transport services for shopkeepers and individuals who have brought goods across by boat. The climb up from the river to the villages is very long and steep.



THE URGENT NEED FOR AN ALL-WEATHER ROAD TO QACHA'S NEK PERSISTS



Left: Field research staff must wait until the water subsides in the main road leading into Qacha's Nek town.

Below: A bus edges past a taxi washed over the edge of the Qanya River bridge, on the main road between Quthing and Qacha's Nek near Whitehill. During our research period we had to wait for several hours for the water to go down so that we could cross



Right: The Lesotho National Bus makes the trip to Qacha, but often with breakdowns. At this narrow winding part where SPR construction has not begun, such breakdowns can block the road for hours. We built our own bypass on right.

