



**LDA**

GOAT PRODUCTION AND LIVELIHOOD SYSTEMS IN  
SEKHUKHUNE DISTRICT OF THE LIMPOPO PROVINCE,  
SOUTH AFRICA



Opportunities for commercialising goats and their by-products



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## ABSTRACT

A brief look at the local resources of the study area, Sekhukhune District of Limpopo Province, reveals that goats are the most common livestock of the communal farmers and yet they do not make a significant contribution to the economy of the place, let alone to incomes of the households keeping goats. Goats are not sold through any formal market channel and goat meat is not found in any butchery or shelves of the super markets. The purpose of this study therefore, was to find ways to transform the current subsistence system of producing indigenous goats by communal households in Sekhukhune District in the Limpopo Province of South Africa into a viable system of producing, processing and marketing goats and their by-products through formal markets.

An exploration of the problem situation was done through the Agricultural Research for Development (ARD) method developed by the International Centre for development oriented Research in Agriculture (ICRA), an organisation based in The Netherlands. The field study phase was characterised by village participatory approaches in the form of village meetings, focus group meetings, interviews with key informants, exploration of the area's natural resources through maps and transect walks, activity calendars, and several stakeholder workshops. In order to verify secondary data, information on livelihood options was collected through questionnaires at the household level. Current production and marketing systems were analysed. Stakeholder perceptions on problems and solutions were documented. Finally, future plans were proposed.

Results show that less than 25% of the households in Sekhukhune do own goats. Goat numbers range from 1 to over 200 per household. Goats are more common than other livestock (twice as many as sheep and almost three times as many as cattle). Farmers are not commercialising because the set-up of the goat industry does not promote commercialisation. The potential for farmers to commercialise lies in value addition. This can only happen, however, if niche markets are identified, when farmers are organised, and when the co-operative infrastructure such as butchereries and tanneries are set up to be owned by the farmers at a later stage.

The study concludes that a two-phased action plan needs to be implemented in order to commercialise goats and their by-products:

- Phase I: Establishing the market linkage by formation of a co-operative of the communal goat farmers;
- Phase II: Improving the productivity of goats by targeted group approaches to address the needs of specific groups, taking into account their current socio-economic conditions.



## ACKNOWLEDGEMENTS

The members of 2004 South African ICRA team would like to express their sincere gratitude to the International Centre for development oriented Research in Agriculture (ICRA) for providing the team with the opportunity to share a wonderful experience of participatory research. The team also expresses its deepest thanks to ICRA staff and all resource persons during the knowledge acquisition phase in Wageningen in The Netherlands.

Our special gratitude goes to Limpopo Department of Agriculture (LDA) for hosting this study, developing its Terms of Reference (TOR) and providing suggestions, logistics, and ensuring the welfare of the team. We also express our thanks to all the members of the provincial monitoring group. Their involvement helped to keep the study focused and in improving the quality of the report. Our special thanks to Mr Richard Ramugondo (Deputy Director of DFSR&E) for his continuous involvement. He tried his best to ensure our personal welfare. He also helped us to achieve the desired outputs within the time schedule.

We appreciate the active involvement of all stakeholders through out the study. We express our gratitude to the representatives of LDA, Sekhukhune District Management, Land Bank, Tribal Authority, Municipality, University of the North, University of Venda, Vleissentraal Bosveld, Tompi Seleka Agricultural College (TSAC) and Limpopo Dairy for their useful inputs during the stakeholder interview and workshop. Our appreciation and respect is also extended to the friendly and kind farmers of Mbuzini and Ga-Nchabeleng villages, who spent time to answer our numerous questions and shared their experience with great patience. We hope that the output of this study will help them to improve their livelihoods.

Acknowledgments are due to representatives of the Alfred Nzo Municipality and to Scientific Roets offices (Kokstad) for their involvement in organising a successful study tour of the ICRA team to the Umzimvubu goat co-operative and development project in Eastern Cape.

At national level we would like to thank the Agriculture Research Council - Sustainable Rural Livelihoods (ARC-SRL) division for the invaluable support they provided. We personally thank Dr Aart-Jan Verschoor. He provided scientific information in the form of secondary literature and valuable discussion. We are grateful for his presence and support.

The team is indeed grateful to Tompi Seleka Agriculture College (TSAC) for their incredible support throughout the study period and provision of accommodation, office space and internet facilities. The assistance of the campus staff is greatly acknowledged.

Thanks are also due to the extension officer Mr. Puleng Jackson Kwakwa who fully participated in the team throughout the field study. He played a crucial role in organizing the meetings with the households and other stakeholders and did the interpretation for the team during data collection, focus group and key-informant meetings. We can not forget Mr Abram Siemela, our driver, who was with the team throughout the study period.

We extend our special thanks to our reviewer, Dr Driek Enserink, who gave encouragement, suggestions, and constructive criticism in the process of the study and edited the final report.

Finally, the team says “thank you and good luck” to all others without whose help the study would not have been complete, but who could not be mentioned here.





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## LIST OF ACRONYMS

AKIS	Agricultural Knowledge and Information System
ARD	Agricultural Research for Development
DFSR&E	Directorate of Farmer Settlement, Research and Education
FTA	Free Trade Agreement
IDP	Integrated Development Plan
ICRA	International Centre for development oriented Research in Agriculture
IRDP	Integrated Rural Development Programme
KKC	Kalahari Kid Cooperation
LDA	Limpopo Department of Agriculture
LRAD	Land Redistribution and Agricultural Development
MADC	Mara Agricultural Development Centre
MOU	Memorandum of Understanding
NDA	National Department of Agriculture
NGO	Non Governmental Organisation
RDP	Reconstruction and Development Programme
R & D	Research and Development
SA	South Africa
SANDA	South African National Department of Agriculture
SD	Sekhukhune District
SDM	Sekhukhune District Management
SMMEs	Small, Medium and Micro Enterprises
SARB	South African Reserve Bank
TADC	Towoomba Agricultural Development Centre
TOR	Term of Reference
TSCA	Tompi Seleka College of Agriculture



## EXECUTIVE SUMMARY

### Background and justification

The study was conducted in Sekhukhune District of Limpopo Province in South Africa. Chapters 1 and 2 give the introduction and background of the study area. Limpopo Province has a low annual rainfall of 400 to 600 mm. Evaporation rates are high and soils have low water holding capacities and are susceptible to water and wind erosion. Despite these constraints, the low humidity and bushy vegetation make the area suitable for goat production. Goats prefer to browse and during summer approximately 60% of their diet consists of the leaves of trees. For various reasons, goats have not yet contributed significantly to the household income in the district. No detailed studies are available on the possible reasons for this. Understanding local constraints as well as identifying possible ways of addressing them is urgently required to develop strategies to improve the attractiveness of goats in the communal households in the district. Therefore this study was conducted with the following specific objectives:

- To target those groups of the population in the study area that are involved in goat production
- To analyse the current goat production systems and marketing systems of meat and other by-products
- To analyse the changes that would be required in the supply (production, processing) and marketing systems towards commercialisation of goats and their by-products
- To identify the strategies to achieve the changes under different future scenarios
- To identify research and development activities needed to realise the strategies defined.

### Methodology

Chapter 3 details the methodology used for the study. The study followed the ARD approach developed by ICRA. The ARD approach is demand driven and aims at designing research which responds to the needs of clients and beneficiaries and contributes to poverty alleviation, food security, competitiveness of the farm enterprise and sustainable resource use. The methodology uses an inter-disciplinary and inter-institutional method to integrate and analyze the interest or perspectives of diverse stakeholders to respond to the problem under study, so as to bring sustainable development.

Research in the field was preceded by literature survey and secondary data analysis. The field study started with a reconnaissance survey of the study area, namely Mbuzini and Ga-Nchabeleng villages of Sekhukhune District of Limpopo Province, South Africa. Primary data collection was done through both formal and informal techniques. Formal techniques involved collection of data from farmers with structured questionnaires in two stages. In the first stage, a total of 204 households in Mbuzini and 726 households in Ga-Nchabeleng were interviewed. In the second stage, a stratified sample of 15 goat farmers in Mbuzini and 45 goat farmers in Ga-Nchabeleng was taken. Personal interviews were conducted with other key stakeholders using semi-structured questionnaires and check lists. Thirteen key stakeholders belonging to various research and training institutes, auction centres, municipality, commercial farms, district management office and agriculture departments were interviewed. PRA tools like agro-ecological maps and transects, calendars, key informant interviews and focus group interviews were also conducted. The data obtained were analyzed using SPSS program, stakeholder linkage matrix, stakeholder perception matrix, stakeholder objectives

matrix and SWOT. Based on in depth analysis of the village and household data and the information gathered from stakeholders, driving forces concerning the issue of small stock commercialization were identified. On the basis of analysis of the driving forces, the teams identified the most likely scenarios. Further, different development strategies to address the problem were screened by the team and subsequently prioritized by key stakeholders. In different stages of the study four workshops (introductory, mid-term, priority setting and final workshop) were organized to get feedback from the stakeholders regarding the findings of the team.

Chapter 4 explains the socio-economic status of the households in the study area. It presents the natural set up of the villages of the study area, infrastructure available, natural resources and their access, sources of income for the people, role of crops and livestock in income generation, gender issues in goat management and general problems of the area.

The two villages of the study area are representative for the types of villages in the study area. Mbuzini village is a young settlement with a linear set-up, a homeland that was created for black communities during the apartheid era. Ga-Nchabeleng is an old village which has a nucleated type of settlement. Mbuzini village has more cattle (405) than goats (226); only one farmer has sheep. Ga-Nchabeleng has more goats (2210) than sheep (1161) and cattle (1500). Only 29% of households in Mbuzini practise some form of agriculture; nearly 50% of these “agricultural” households are involved in cropping, but 75% of them have livestock. About 40% of the households in Ga-Nchabeleng practise some form of agriculture; around 40% of these “agricultural” households are involved in cropping, but nearly all of them (98%) have livestock. In both villages it was found that goats were kept by people in the age group of 35-60 years and by those above 60 years, who are pensioners. Contrary to the popular belief that goats are poor man’s animals, wealth ranking by the villagers showed that 70% of the households that owned goats were ranked as average income groups, 22% as rich and only 8% of households as poor. Forty five percent of the goat owners had no education, 23% had primary education and 32% were educated up to secondary level. Sixty three percent of the goat farmers had regular source of income and 37% had no regular source of income. The common problems faced by farmers in goat management are theft and high mortality due to drought and diseases. All decisions related to goats and cattle are made by the male household heads. Women have no access to or control over these household resources. The common problems in both the villages are that of water scarcity in winter, and unemployment. Most households in the village depend partially or completely on pensions and child grants.

Chapter 4 also briefly explains how a project can be better implemented by grouping people with common characteristics and targeting these homogenous groups. A typology was formed using the criteria: sources of income, education, dependence on crops, and type of village. Such a typology is only useful in Phase II of the action plan, as suggested in Chapters 8 and 9.

### **Livestock management and marketing**

Chapter 5 explains the present goat management and marketing practices in the study area. The two villages in Sekhukhune District, Mbuzini and Ga-Nchabeleng, differ in terms of land size, water sources and by-products in the planted fields. As a result, these villages differ in grazing practices or feeding and animal health management. Goat production in Sekhukhune dominates the agricultural activities because of the conducive climatic conditions, followed by cattle and sheep. The major problem in production was shortage of fodder and water due to drought in the area. About 70% of the households interviewed in the villages confirmed that

random mating in flocks and inbreeding among goats is common. Control of breeding is not done and records are not kept. Less than 50% of the livestock owners herds their livestock to the veld and the rest just let them browse freely and kraal them at night. The land is communally owned in the villages but some Ga-Nchabeleng households keep livestock in farmsteads that were part of a collapsed irrigation project.

It was seen that goats are not marketed through any formal market channel. Goat meat is not found in any butchery or in the shelves of any super market. Goats are sold informally between the households within the village and once in a while people from nearby villages purchase them for slaughtering during festivals and ceremonies.

### **Stakeholder analysis**

Chapter 6 gives the various tools used for the analysis and the results of the stakeholder analysis. The relevant stakeholders who were considered crucial for commercialization of goats and their by-products are: Government (LDA, Municipalities), ARC, Sekhukhune households, Agriculture Training and Research Centres (universities and colleges), Markets (auctioneers, abattoirs, supermarkets, Limpopo Dairy), Dept of Water Affairs, private sector (NGOs, consultants etc.), and Financial Institutions (Land Bank).

The stakeholder interviews revealed various reasons for low contribution of goats to the household income. From the objective matrix developed there were conflicting perceptions by stakeholders on the problem situation. Communal farmers said that they keep goats for ceremonial purposes and do not have surplus numbers for sale, the land bank said the problem is due to unavailable markets, and the universities felt that goats do not bring meaningful income to households. SDM said that farmers are not market-oriented and are not interested in selling goats. However, there were shared perceptions of the problem which included:- lack of organized markets for small stock, continuous drought often leading to shortages of feeds and water, negative perceptions (a goat is a poor man's animal, goat meat stinks), goats do not bring any meaningful income, stock theft and high mortality rate in kids, goat numbers are so low that they cannot be sold and cannot give a guaranteed and continuous supply to consumers, poor management practices (no strategies for breeding, feeding and health management) due to lack of production and management skills, communal grazing is difficult to manage, traditional beliefs – goats are associated with ancestors and are slaughtered only at special ceremonies.

Stakeholders' interests, objectives, power and relationships are highlighted and the existing patterns of interaction between stakeholders are shown. Linkages between the stakeholders are identified. Some important linkages that need to be strengthened for better performance include, link between LDA and communal farmers and link between researchers and communal farmers. Some new linkages also need to be formed like between LDA and private consultants with expertise in goats.

## **Scenarios and driving forces**

Chapter 7 explains two scenarios and their driving forces. A scenario is a most likely future situation as a result of various driving forces. Driving forces are the factors external to the system of interest and not within the immediate control of the stakeholders. The various driving forces that were found to have an impact on the commercialisation of goats are: price of goat meat versus beef meat, government policies on investment in infrastructure development and co-operatives and occurrence of drought. It is most likely that the price of goat meat will always remain less than that of beef and hence the competition between beef and goat meat will be low. Investment in infrastructure and promotion of co-operatives of goats will have a positive influence on goat commercialisation.

## **Development strategies**

Chapter 8 deals with the development strategies and with the resulting action plan for the commercialization of goats. The analysis of data reveals that there are two important issues required for commercialisation. One is to link the farmers with the urban market, the other is to improve the productivity of the animals. A prioritization exercise of the strategies with stakeholders revealed that the first step is to create the market linkage and the second step is to improve the productivity of the animals in order to make step one more sustainable.

## **Action plan**

Chapter 9 describes the recommended action plan. As explained, the action plan consists of two phases. For each phase a time frame of five years is recommended.

**Phase I** of the action plan deals with the implementation of three main strategies:

- Identification of a niche market for the goat products
- Formation of a goat farmers' co-operative
- Construction of infrastructure for value addition to the goat products which will be owned and operated by the co-operative

**Phase II** of the action plan deals with the implementation of three subsequent strategies:

- Improvement of veld management
- Improvement of the productivity of goats by targeted group approaches to address the needs of specific groups taking into account their current socio-economic conditions
- Improvement of credit facilities in the villages

However, creating a sense of ownership among farmers of the whole project is essential to make the project successful and sustainable.

## **CHAPTER 1 INTRODUCTION**

### **1.1 Context of the study**

Investigating the constraints and opportunities for economic empowerment of rural communities is currently of paramount importance in South Africa. In the agricultural sector, Agriculture Research for Development (ARD) is perceived by many as a vehicle for economic empowerment of rural households making a living from agricultural activities. Using the ARD procedure to explore opportunities available for communal households in Sekhukhune District to commercialise goats is one of the many interventions that the South African decision makers on agricultural activities have embarked on as a way of coming up with concrete resolutions on appropriate approaches to agricultural development. The proposal for commercialising goats was put across by the Limpopo Department of Agriculture (LDA) together with Agricultural Research Council (ARC) after realising that the problem was so complex and beyond the mandate of only one discipline and/or one institution. These two organisations then developed the terms of reference (TOR) outlining a problem situation which warranted collective action. LDA and ARC forwarded this problem situation to the International Centre for development oriented Research in Agriculture (ICRA) team through the ICRA management in The Netherlands as a research topic.

A team of seven scientists of appropriate disciplines (Livestock, Agronomy, Community Development and Agricultural Economics) was arranged by the ICRA management to research on the South African topic. Exploration of the context of the problem situation revealed the problem to be 'low contribution by goats to incomes of households living in Sekhukhune District'. Ironically, Sekhukhune District is the second poorest district among South Africa's 13 nodal points identified as poor and requiring careful developmental measures. This district has the climate and vegetation that is suitable for goats and the goats are with communal households. Several reasons were identified as to why communal households are not doing business of goats. These reasons range from socio-traditional aspects of goats, through poor management practices to unfavourable marketing environment for concerned households to sell through formal markets. To verify information provided in secondary material, a field study was conducted by the ICRA team together with the following institutions: LDA, ARC, Sekhukhune households represented by Mbuzini and G-Nchabeleng villages, local universities represented by University of Venda and University of the North, abattoirs/auctioneers of livestock represented by Vleissentraal Bosveld, financial institutions represented by the Land Bank, private institutions represented by Scientific Roets, Municipalities of Sekhukhune and Alfred Nzo, the department of water affairs, national goat task team and commercial farmers represented by Limpopo Dairy Farm.

This research was carried out following the ARD procedure developed by ICRA (Figure 3.1). The arrangement of this report also follows the ARD steps as they were used in carrying out the research. This report comprises of nine chapters. Chapter 1 outlines the background of the study specifying institutional framework, justification and objectives of the study. This chapter also outlines the focus of the study. Chapter 2 describes the historical background of South Africa, previous interventions, geographical information, climatic patterns, topography and information on population. Chapter 3 elaborates on a step wise approach that was taken to acquire information, how the field information was analysed and how conclusions were drawn. These steps range from context exploration, through development of the focus of the study, development of strategies and priority setting to the development of research proposals. Chapter 4 describes the socio-economic status of the study area. Chapters 5 and 6

present and discuss findings on issues concerning goat production and marketing processes respectively. Chapter 7 describes the expected future scenario and its driving forces. The prioritised development strategies are presented in Chapter 8. This chapter also explains why a two-phased action plan has been developed. Chapter 9 presents a detailed description of the activities that need to be implemented during the first phase (Phase I) of the action plan.

All identified key stakeholders were involved throughout the research process, from problem identification through the decision making process to priority setting. A final workshop was then held at the end of the study from which key stakeholders assumed ownership of the research process, findings, recommendations and formulated action plan of which if implemented, would result in a business venture of goats that brings reliable income to communal households in Sekhukhune District resulting in goats contributing to the economy of the Limpopo Province.

## **1.2 Client organisations**

The study was carried out as a joint activity by the LDA, ARC, Directorate of Farmer Settlement Research and Education (DFSR&E), Sekhukhune District Management (SDM) and its Extension Services and agricultural institutions as Tompi Seleka College of Agriculture (TSCA), Mara Agricultural Development Centre (MADC) and Towoomba Agricultural Development Centre (TADC).

### **Main activities/mandates and interests of the clientele group**

**LDA:** Controls and executes all government agricultural activities in the Limpopo Province. LDA is committed to agricultural development of all formerly disadvantaged communities in the Limpopo Province. LDA, together with ARC, developed the terms of reference. LDA's role was to organise for the logistics involved during the three months research period. LDA organised all the venues and meetings with stakeholders.

**ARC:** Conducts research for development in all agricultural aspects according to the needs of clients and beneficiaries in South Africa. ARC is committed to the implementation of low-cost technologies to rural communities involved in agriculture. Together with LDA, they developed the terms of reference containing the problem situation. They helped in organising the trip to the Eastern Cape (Alfred Nzo municipality) for the ICRA team to learn from efforts being made by Alfred Nzo municipality on commercialisation of goats, a goat project which was started in 1998.

**DFSR&E:** A directorate of the LDA responsible for the control and execution of Government Agricultural activities within the Sekhukhune District of the Limpopo Province. This is a directorate under which research falls, mainly through commitment to research. They were involved in problem identification and the decision making process.

**MADC:** A research farm in the northern part of Limpopo covering aspects concerning animal production. MADC is directly involved in research of small stock in Limpopo Province. It provided secondary material and it was involved in problem identification as well as the decision making process.

**TADC:** A research farm in the Southern part of Limpopo with a research function covering the entire Limpopo Province. Main functions natural resource management, crops and animal production.

**Sekhukhune District Management:** This is an agricultural district office under LDA responsible for assisting agricultural projects in Sekhukhune through extension services. Their main interest is on rural development and economic empowerment of communities and people living in Sekhukhune.

**ICRA:** is an international organisation founded on the initiative of some European members on the Consultative Group on International Agricultural Research (CGIAR) to assist in Latin America, Africa and Asia to contribute effectively to agricultural research and rural development. ICRA's purpose is to enhance human and institutional capacities in agricultural research for development (ARD) and rural innovation processes through collective action learning rooted in real field situations and problems, and aimed at sharing, consolidating and where needed, generating new knowledge and developing new professional attitudes and skills for more effective research and development contribution to stakeholder innovation processes relevant to improving the livelihoods of resource-poor farmers and broader needs of society. The scope and dimension of this study are based on the terms of reference that are subject of the present document.

### **1.3 Beneficiaries**

Beneficiaries of the findings will include Sekhukhune households with goats and/or those with an interest in business with goats because of the possible interventions which may end-up promoting business with goats; agricultural development centres because of new generated information; All key stakeholders mentioned earlier because of the expected increase in interactions which may lead to more collaboration in future; the government, recommendations will give the government better focus on developmental strategies in Sekhukhune District.

### **1.4 Problem statement and justification of the study**

The Limpopo Province is considered one of the poorest provinces in South Africa with 89% of its population considered rural (Oni *et al.*, 2003) This province is situated on the far northern part of South Africa and shares borders with Botswana, Zimbabwe and Mozambique. The Limpopo Province has a low Human Development Index, relatively high illiteracy and unemployment rates, but has future growth potential in mining, agriculture, trade and tourism. The Limpopo Province has a population of 5.27 million of which 18.33% live in one of the six districts called Sekhukhune (Statistic South Africa, Census 2001 [www.statssa.gov.za](http://www.statssa.gov.za)), a district that was identified as the second poorest in South Africa. There is a general agreement amongst South Africans on the need to address problems arising from poverty, income inequality and disparities in access to services amongst the population ([www.limpopo.gov.za/economy](http://www.limpopo.gov.za/economy)).

Sekhukhune District has a semi-arid type of climate and vegetation that is dominated by thorny acacia bushes. Such conditions favour the production of goats because goats are 60% browsers (Peacock, 1996) and tolerant to dry conditions. In terms of numbers, Sekhukhune

District has the second highest number of goats in the Limpopo Province. Projections in future goat numbers (up to the year 2018), reveal a rising trend for the districts of Sekhukhune, Capricon and Waterberg but a declining trend in the remaining three districts of Bohlabela, Mopani and Vhembe (Oni, *et al.*, 2003). Recently, the Limpopo Province has been subjected to frequent droughts, though not yet scientifically proven that the trend would continue, it is something to worry about for rural development officers. However, if the risk of droughts is to persist, goats will be the least to suffer losses in numbers as compared to other species of livestock because of the nature of their feeding behaviour. In terms of government policies, the Head of State has been giving speeches on promoting rural development through projects run in the form of cooperatives, the philosophy being that, once rural communities get themselves organised through social facilitation, implementation of projects will become easier. As a result, the National Department of Agriculture (NDA) has been advocating empowering rural communities with entrepreneurship skills. One of the proposed areas of focus is improving production and marketing of goats. The research fraternity of South Africa believes that a 40% increase in the selling of goats through formal markets would turn South Africa from a net importer of meat and meat products to a net exporter. After considering all these factors, the major concern of LDA and ARC is therefore, why goats are not making a significant contribution to the income of communal households, especially of those in Sekhukhune District where large numbers of goats are observed as one drives by. The other concern of the two institutions is the opportunities available for communal households in Sekhukhune to commercialise goats.

Results from the analysis of secondary information showed that goats are not making a significant contribution to income of households because they are not being produced with formal market orientation. This means, objectives of the households keeping goats should be considered when coming up with interventions. Another reason was that communal households perceive goats as animals that no one could rear for sale and get a meaningful return out of it. This also partly explains why no goat meat is found in South African butchereries which may further explain why goats are not contributing to the economy of the Limpopo Province. The problem at present is that communal households with goats do not have commercialising goats in their objectives of keeping goats, possibly because the socio-economic environment available does not promote the idea. Other reasons why communal households are not commercialising are listed below:

- *Socio-traditional aspects of goats and wrong perceptions:* The decrease in the use of goat meat in South Africa could have been caused by the sharp decline in the popularity of mohair in the late 1920's (Uys, 1988). This was enhanced by the government policy which urged farmers to replace Angora goats with Merino sheep. The drought and great depression of the 1930's further exacerbated the problem with the government enacting a law for farmers to replace Angora goats with Merino and Persian sheep because of the belief that goats were further ruining the environment. However, goats are tolerant to adverse environmental conditions more than other domesticated livestock which may explain why they were found in degraded environments. Effects of the government policy led to a massive decline in Angora numbers, from 4.3 million in 1912 to 624 261 in 1939 (Uys, 1988), leading to scanty availability of goat meat. This could have resulted in the stigma that was assigned to goat meat by a certain generation of consumers which resulted possibly through lack of knowledge and exposure to the product (Roets, personal communication, 2004). Most consumers of that generation perceive goat meat to be stinking. However, it was learnt that most households would want to sell when the animal is big and old because of the perception that bigger animals would bring them more



money. Unfortunately enough at that age, secondary characteristics of the goat would have fully developed resulting in a characteristic smell that some consumers do not like. Unavailability of goat meat on markets was further worsened by the policies of meat boards which developed a marketing structure for all other livestock species except for goats. This is still reflected by lack of goat meat in almost all abattoirs in South Africa. Socially, goats are perceived as animals which can not be marketed commercially and bring money, they can only be kept for risk cover, traditional use and occasionally, for household consumption. SAMIC (1997) showed that only 0.55% of Limpopo households that rear goats take their goats to a few available abattoirs with, no contribution at all from Sekhukhune District.

- *Lack of suitable facilities:* Selling goats as live animals would not bring encouraging returns to households especially those ones keeping indigenous goats. One way to go is to promote value addition but currently, unavailability of suitable facilities for value addition resulted in lack of competitiveness of goat business for communal households who aspire to sell through formal markets. Some expectations of the marketing as branding and tattooing are too demanding for individual communal farmers with few goats (less than 20) because the practice is expensive if marketing is to be done on individual basis.
- *Unorganised markets:* There are no organised marketing systems for small stock in communal areas. Some of the reasons given for this include unreliable supply of goats because households with goats are said not to be organised enough. Some stakeholders think poor market prices discourage households from commercialising. From the market side, poor prices are a result of poor quality of the supplied product.
- *Lack of organisation within the rural communities:* Farmers are not organised enough to do business with. This comment is common amongst communities of development workers as well as markets. They say it is difficult to come-up with holistic interventions to a community that is not organised. Lack of organisation at community level makes it difficult to have sustainable interventions.
- *Poor management of small stock:* Currently there are no programs for breeding, feeding and health management in communal grazing areas, which explains the reason for high inbreeding rates, poor growth characteristics and the resultant poor quality of the product. Genetic progress is very slow since selection pressure is rarely practised.
- *Lack of information:* Some interviewed stakeholders felt that households with goats are devoid of information pertaining to production, processing and marketing of goats. Initiatives toward proper management, processing and marketing of goats and their by-products have been lacking for long. This resulted in lack of skill and knowledge on commercial aspects of goat farming on the side of the communal household with interests in goats.
- *Poor productivity:* Most households with goats do not give proper care to their animals. Lack of proper husbandry practices leads to poor productivity. Mortality rate is relatively high in kids; growth rates and meat yields are low resulting in poor returns.
- *Limited forage availability:* Due to high stocking rates the pastures have been overgrazed and degraded. Poor management of the pastures, overgrazing, droughts and winter die-offs of the fodder resulted in limited availability of fodder. Nevertheless, improvement in management in communal grazing systems requires formation of village interest groups to come up with workable strategies. If households with livestock can not organise themselves (as is the current situation) then it will be difficult to have interventions on improving veld productivity.
- *Failure of previous attempts by researchers:* It is believed that researchers have often viewed agricultural research from a technical perspective only. However, this approach

has been shown to have some shortcomings with respect to the needs of households who depend on agricultural activities because they do not use purely technical knowledge in managing their farms. Targeted efforts are said to be lacking when interventions are introduced into a community. Generally, there is a consensus that communal farmers have limited resources which they have to prioritise to balance between the various family needs. If development efforts are targeted to the wrong groups of the community then the interventions becomes ineffective, a situation that is normally reflected in the number of projects that have failed before, poor adoption of technologies and rapid deterioration of infrastructure established for community use.

- *Lack of collateral security:* Most of the communal farming households do not have collaterals to obtain loans from the lending institutions, or they do not have enough information on how they could go about the process. The small loans obtained from micro finance institutions are usually consumption loans and are not invested for productive purposes and,
- *Theft, diseases and predation:* Numbers of small stock are declining due to theft, diseases and predation among other reasons.

Communal goats are small in size (25 kg on average for mature ones), and do not fetch good prices if sold on live markets. This implies that the potential for commercialising goats lies in the establishment of niche markets and in diversifying goat products. The prevailing economic environment in Sekhukhune District does not provide with enough impetus for the community to commercialise goats. The appropriate environment has to be identified, described and established if communal households are to commercialise. Commercializing goats and their by-products could improve the livelihood of households with goats and may result in goats contributing more to the economy of the Limpopo Province. In spite of a wide range of opportunities now available for communal households to commercialise, goats have not yet made an impact on the economy of the Limpopo Province, let alone, to the household income of families with goats. The objectives of this study are outlined below.

## **1.5 Objectives of the study**

### *1.5.1 Goal*

The goal of this study is to have increased cash income to communal households of Sekhukhune District in the Limpopo Province.

### *1.5.2 Purpose*

To transform current subsistence system of producing indigenous goats by communal households in Sekhukhune District in the Limpopo Province of South Africa into a viable system of production, processing and marketing goats through formal markets.

### *1.5.3 Expected outputs*

It was expected that this study would result in the following outputs:

- Livelihood options of Sekhukhune villagers analysed and documented
- Distribution of goats in Sekhukhune District identified and categorised
- Current production, processing and marketing systems of goats in Sekhukhune District analysed and documented

- Previous interventions on commercialising goats by communal farmers identified
- Changes required in production, processing and marketing of goats and their products through formal markets identified
- Research and development plans for households with potential to commercialise goats in Sekhukhune District identified and prioritised
- Robust strategies and action plan identified

## 1.6 Focus of the study

The initial stage of trying to understand the problem situation was context exploration using an ARD tool called the rich picture (Figure 3.2). Boundaries of the problem situation (focus of the study, also known as the system of interest) were defined as: Transformation of the subsistence system of producing indigenous goats by communal households in Sekhukhune District in the Limpopo Province of South Africa into a viable system of production, processing and marketing goats through formal markets.

**Change expected:** From subsistence to semi-commercial system of production, processing and marketing of goats and their by-products

This study concentrates on what needs to be done for communal households in Sekhukhune District to start producing goats with the idea of selling them for profit through formal markets. This study assessed the potential marketing structure, market demands and a practical marketing system, production options, organisational systems, information management, institutional reforms, stakeholder roles and training needs.

## 1.7 Research questions

The identified problem was how to change the current system of goat production in communal areas from subsistence to commercial. This central problem was turned into a central question which is ‘how can it be possible for households in communal areas of Sekhukhune District to sell goats through formal markets and make profits?’ To be able to answer this central question, a set of secondary questions were formulated and these are:

- What opportunities are there in the livelihood pattern of communal households which can support commercialisation of goats?
- How can the current socio-cultural environment be utilised to allow for commercialisation of goats by communal farmers?
- How can the existing positive policies be utilised to the benefit of communal farmers to commercialise goats?
- How can the marketing of indigenous goats be made competitive for communal farmers to commercialise?

A set of tertiary questions for each secondary question is given in the research plan (Appendix 3). To conclude this chapter, there is potential in commercializing goats as they are fast breeders, drought tolerant and can have value addition through further processing of meat, hair and skins (Roets, 2004). The breed, the size, and the role of a goat in African

society were some of the reasons identified to explain why goats were not being commercialised. However, a lot of potential exists in Sekhukhune District because the goat numbers and climatic conditions are suitable for commercializing if the production, processing and marketing environment is made suitable. From the point of view of the Sekhukhune community, value addition could improve the value of goats and lead communal farmers into commercialising. Once the proper production, processing and marketing environment is set correctly, objectives of households may shift to keeping goats with the intention of getting a regular income from their sale. One of the motivating factors to commercialisation of indigenous goats is that since 1994 when the new South African government came into power, doors to participate in the global economy opened for all South Africans. It is through government calls for communal development that the LDA, ARC, SDM and ICRA conducted this field study to identify opportunities for increased production and commercialisation of goats and their by-products in Sekhukhune District of the Limpopo Province. This study is meant to form part of the NDA's initiative to promote the export of small stock products as stated in the TOR (Appendix 1). It was therefore found to be necessary to have an in-depth study on the potential that exist in Sekhukhune District for commercialisation of goats.

## CHAPTER 2 SOUTH AFRICA AND THE STUDY AREA

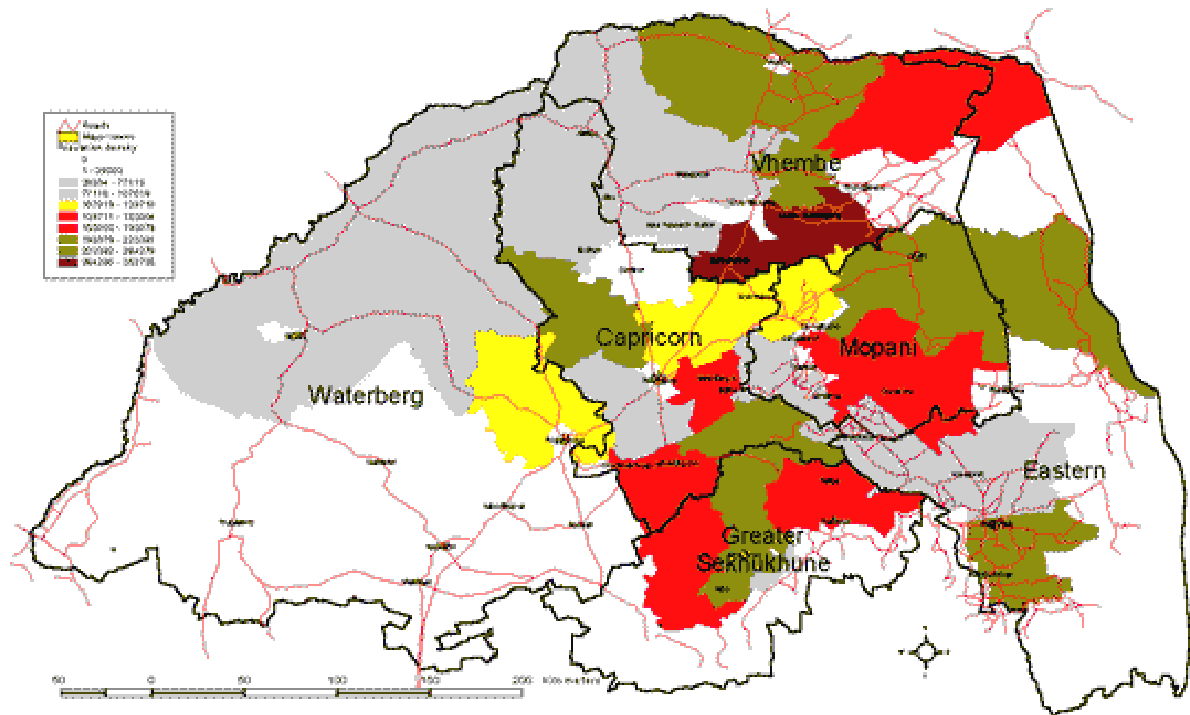
### 2.1 Historical background of South Africa

The republic of South Africa (SA) occupies the southern part of the African continent. It covers an area of 122.3 million ha. The population of South Africa is 44.8 million and is growing at a rate of 10.4% (Oni *et al.*, 2003). South Africa has nine provinces, with Limpopo situated in the far northern part of South Africa, sharing borders with Botswana, Zimbabwe and Mozambique. Northern Cape is the largest province covering 29.7% of total land area, while Limpopo covers only 10.2%. Limpopo is the sixth (11.8%) most populated province (South Africa Statistics, Census 2001, [www.statssa.gov.za](http://www.statssa.gov.za)). The Limpopo Province is made up of six districts (Figure 2.1) of which Sekhukhune is the poorest. The historical background of South Africa may have impacted much on the way the black community in communal areas do farming.

Native South Africans are of the *Bantu* origin said to have emigrated from West Africa, around Nigeria and Cameroon some 2000 years ago. They entered South Africa through Kei river valley and settled around that river. Early farming was introduced by these people around 800 AD. The most common agricultural activities recorded by archaeologists around that time include herding of sheep, cattle and goats and cultivation of crops like sorghum and millet. These people practised mixed farming and cultivated their land with iron hoes. Domestic animals were used as a source of meat and milk. Animals were considered as a form of wealth and were largely slaughtered during periods of transition, such as birth and death. Land and pasture were communally held and water sources controlled by various clans (web site: [www.nda.agric.za](http://www.nda.agric.za)).

By 1840 African agriculturists came into contact with white settlers. Such contact imposed a range of pressures upon indigenous societies, including loss of sovereignty and territory as well as the demands for labour, rents and taxes. Between 1840 and 1870, the Cape colony expanded eastwards into Xhosa territory. However, new opportunities arose; individuals and communities adopted some agricultural techniques from settlers to improve on their traditional agricultural practices. The result was production with market orientation, buying and improving land, and experimenting with new crops and commodities. The most significant technological innovation of that time was the ox-drawn iron plough. This brought in new land into cultivation and increased crop production. In many places enterprising African peasant farmers competed successfully with undercapitalised settler farmers. In the Transkei, Ciskei and Basutoland a prosperous peasant class emerged until around 1880. In 1890, a series of laws were designed to make it more difficult for native South Africans to retain their independence. The 1913 Natives Land Act was enacted. This act prohibited the purchase or lease of land by Africans who then were relocated to outside designated areas known as reserves. Share cropping in the Orange Free State (which had supported thousands of black peasant families) was outlawed. Although the 1913 legislation did not immediately end peasant independence, its long-term impact was detrimental. It fundamentally weakened the terms on which African producers could have access to land outside the reserves (later-on called Bantustans). This meant that Africans living on white-owned land became farm workers, on low wages. The history of African agriculture from the middle of the 19th century to late 20th century is one riddled with problems. Gradually African tenants and sharecroppers lost access to land as white proprietors capitalised their holdings.

**Figure 2.1 Map of the Limpopo Province**



In 1948 under the National Party, the then apartheid government introduced policies that segregated African ethnic groups from one another and forcing them to live in separate tribal areas. The native authority act of 1951 and the promotion of Bantu self government act 46 of 1951 created eight national units, the boundaries of which coincided with the reserve boundaries defined by the land act (World Bank, 1994)

The Tomlinson commission of 1954 was concerned that the quality of the land in the reserves could not support the high number of African families living in these areas. It proposed drastic changes for the homelands and a series of betterment or closer settlement schemes to stop soil degradation through land use planning, relocation of people and livestock, stock-culling, fencing, contour ploughing, water conservation and erosion control. However, due to lack of political will, most of the commission's recommendations were not implemented (World Bank, 1994) and the report was rejected.

In 1968, the administration of the native land trust was handed over to the department of Bantu affairs. This removed the acquisition of land and its allocation from the agenda of the 1936 Land Act and placed it within the agenda of the homelands and industrial development policies. This meant the resettlement of African people in homelands; further allocation of land would be only possible if these homelands opted for independence. Although the stated basis for the exchange of the holding was quality of land, much of the land released for the homelands, often bits on non-contiguous scrublands, certainly did not meet any quality of land standards (World Bank, 1994; Tshenkeng, 1999)

In 1970, the Bantu Homelands Citizen Act was passed, making every African a citizen of some homelands. The Bantu laws (amended) act of 1972 justified forced resettlements of African people and stated that “a *Bantu* tribe” community or individual could be removed from where they lived without any recourse to parliament, even if there was some objection to the removal. The relocation of Africans to the homelands from white rural and urban areas, African owned areas, and from one place to another within the homelands was never voluntary. Land was then held communally in the homelands, which was officially defined by the proclamation R188 of 1969 as “un-surveyed land” or “permission to occupy”. People did not legally own their residential and arable allotments; rather, they were allowed the right of occupation and to cultivate subject to conditions stipulated by the homelands authorities (World Bank, 1994). From 1976, the independence of a number of the homelands did not have a major influence on tenurial patterns and communal arrangements still persisted in many areas. The independence of homelands was based on patriarchal approach with heavy reliance on the then republic of South Africa for fiscal aid and employment. The political situation changed in April 1994 after the first democratic elections. Presently, large capital intensive farms dominate production in the agricultural sector. These farms, which are mainly white-owned, accounts for more than 86% of the agricultural lands, making the economy self sufficient in basic agricultural commodities. Limpopo has 37.7% of the land arable, 50.1% suitable for grazing and 12.2% suitable for wildlife.

## **2.2 Historical background of goats**

Domestication of goats dates back to 9000 years where their ancestors are said to have occurred in south western Asia from eastern Mediterranean to Turkey and the adjacent eastern regions (Roets, 2004). The first records of domestic goats in Africa can be found in Egypt and North Africa where pictures of goats, goat herders and husbandry practices that are found in tombs, dates back to the 5<sup>th</sup> Dynasty, around 2400 years ago. Little is known about the actual breeds but differences in their horn shapes indicate that two or more breeds could have been present (Boessneck, 1988 In: Roets, 2004). Based on the bones found in archaeological deposits, it seems that early goats were similar in stature to the indigenous goats of today.

The *Gwanda-Tuli* goats found in Zimbabwe are similar to Tswana goats of Botswana. They have long, pendulous ears, with turned up tips short and erect horns and could be white, black or brown in colour. *Nguni* goats come from Swaziland and Zululand. Their horns are twisted and their ears flabby, and of medium length, these goats are a crosses between small East Africa goat and the lop-eared types. They may be of any colour. The *Damara* or *Herero* goats of Namibia tend to have medium length horns, with a straight or convex profile, and long wide dropping ears. The coat is short and usually white, red and white or brown and white. They can also be red or grey (ARC, 1999). The *Pafuri* goats of Mozambique are found only on the Limpopo. This is also known as Boer goat, which gives one an indication of its origin. However, its profile is convex. They have well-developed horns and dropping ears (ARC, 1999, Roets, 2004). The origins of the “Boer goat” are somewhat vague, and are most probably rooted in the animals as kept by the *Namaqua Hottentots* and migrating tribes of the “southern Bantu” people (Campbell, 1984; In: Roets, 2004) as stock farmers became more settled and began selecting animals adapted to the distinct characteristics of the Eastern Cape (1800 to 1820), the common Boer or farm goat evolved, which was described as compact, well proportioned and short-haired (Van Rensburg, 1938; In: Roets 2004). The *Savanna* goat

is an arid indigenous, white, registered breed similar to the Boer goat. *Savanna* goats were bred from mixture of coloured indigenous does and white bucks. The Kalahari red breed was selected from red and red-and-white indigenous African goats and has been selected and bred as a separate breed for the past 25 years. They are known for their hardiness, colour, size and mothering abilities. The *Kalahari* reds were bred with an emphasis on carcass mass and growth rate (ARIL; In: Roets, 2004)

“Indigenous goat” is the collective term used for all varieties of native South Africa goat breeds. Specific breed names are usually given according to the geographical areas in which they occur, or names of breeds and types are taken over from the nations or tribes that own them (Maree and Plug, 1993 In: Roets, 2004). According Campbell (1995, In: Roets, 2004), the indigenous goats of South Africa can be classed into; Speckled goats, *Loskop* South indigenous goats, KwaZulu-Natal, *Nguni* goats and *Delftzijs* goats. However, this classification system does not accommodate the thousands of indigenous goats found outside these specific locations throughout South Africa. Nevertheless, the local breeds of goats are well adapted to their varied natural environments. This has influenced their characteristics and also the methods of husbandry practices. Although there are highly specialised breeds, most of them are dual or multi-purpose and in many cases, village flocks are of mixed breeds. Meat, milk, hair and skins are products of first economic value to owners. The indigenous goats of South Africa vary in horn and coat types, colour, ear length and size. They are mostly of medium size. Environmental extremes are mainly responsible for the variation in size between goat types. It is possible to find different variations in the same region and even in the same flock (Roets, 2004).

### **2.3 Recent developments**

After the change in government in 1994, the new South African government has been coming up with policies to address past inequalities in agriculture. The most significant achievement in terms of policy change was the deregulation of the marketing sector to bring it in line with the social and economic democratisation of the country and with international trends towards deregulation and the establishment of the National Agricultural Marketing Council. The transition period was characterised by greater emphasis on small scale agriculture. Progress has been made in land reform, access to credit and market opportunities, household food security, empowerment of women farmers and encouragement of young people to become involved in agriculture.

### **2.4 Past and present interventions on goats**

In 1997 a workshop was held at Irene Animal Nutrition and Products Institute of the ARC on commercialization of indigenous goats and their by-products in South Africa. Possible mechanisms by which indigenous goats could be commercialised were discussed. As part of ensuring that small stock begin to contribute significantly to the economy, the National Department of Agriculture started the national goat task team in 2003, comprising of different stakeholders. The national goat task team was tasked to establish working groups in different provinces and to look at all aspects that might relate to goats commercialisation. The workshop was facilitated by the agricultural committee under the USA-SA bi-national commission. In 1998, Alfred Nzo municipality in the Eastern Cape initiated a project on commercialisation of indigenous goats. Although the project is not yet functional,



development of infrastructure is now at its final stage. Communities have been mobilised to establish cooperatives that will start to sell goat meat and by products and those cooperatives are already functional. In concurrence with commercialisation of indigenous goats, research has been broadened by the ARC to include processing of goat products (value addition) and as well as training of farmers on value-adding to goat products. From 4-9<sup>th</sup> of July 2004, South Africa will be hosting the eighth international conference on goats in Pretoria.

## **2.5 Sekhukhune District: the study area**

The main inhabitants of the Sekhukhune District belong to the greater ethnic group of the Pedi tribe of South Africa. In 1976, when the government of South Africa gave independence to homelands based on ethnic lines, Sekhukhune residence were summarily declared citizens of Lebowakgomo homeland. The homelands system did not bring any comfort to the people as it failed to correct any land disparities that were created by the then apartheid South Africa government. In Sekhukhune, as in the rest of South Africa, there are three different types of land ownership types. There is privately owned land - mainly used for commercial farming purposes - , state owned land - used for both farming and residential purposes -, and tribal land, which is used for residential, cropping, and grazing purposes on communal basis. Inhabitants of state owned and tribal land are usually also subjects of king and chiefdoms. Sekhukhune District is mainly rural, with 94.7% of the total population residing in the rural areas and 5.3% in the urban areas. The majority of the population (56%) of Sekhukhune are youth below 19 years of age. Thirty-eight percent of the population (between 20 and 59 years) is the economically active group while 6% are older than 60 years. Women constitute the majority of the population (52.2%). Unemployment is currently standing at 69%, which is far higher than the country's average of 49%. The Sekhukhune economy needs to create 2800 jobs per year in order to reduce unemployment rate by 1% per year (IDP, 2004). In Sekhukhune District only 36.8% of its population has access to full electricity supply. Few households have land-line telephones, most have cellular phones. However, all basic service structures such as school, clinics, hospital and Tribal Authorities have telephone facilities.

### *2.5.1 Geographical location*

The Sekhukhune District Municipality (SDM) was established in December 2000. It consists of five local municipalities (Groblersdal, Marble Hall, Tubatse, Fetakgomo and Makhuduthamaga local municipalities) spread over both the Mpumalanga and Limpopo Province. The area measures approximately 1 326 437 ha in extent, and lies on the North-West of Mpumalanga and South of Limpopo, making it a cross boundary municipality (IDP, 2004). Sekhukhune District (Figure 2.1) has more than 1600 villages within these two provinces. The two villages under this study: Mbuzini and Ga-Nchabeleng, falls under Marble Hall and Fetakgomo municipalities respectively.

### *2.5.2 Climate*

Sekhukhune District is a hot area, with temperatures varying between 29 and 30°C in summer and between 3 and 23°C in winter. Incidences of frost are rare. Evaporation varies from 1145 to 1550 mm during summer and 1040-1130 mm during winter. Rainfall is estimated at between 350 and 420 mm, falling predominantly between October and March. Between April and September, there is only 70-80 mm.

### 2.5.3 Topography

The topography of the area varies from flat to undulating plains with rare granite inselbergs (isolated rock outcrops) in some areas, as is the case in Mbuzini, to mountainous in some parts, as in Ga-Nchabeleng. The elevation varies from 660-1600m above sea level.

### 2.5.4 Edaphic factors and vegetation

A wide range of soils occur in Sekhukhune District, ranging from deep to moderately deep red sandy loams (usually coarse grained, and rarely medium) to heavier soils on slopes. On dip slopes, *Combretum apiculatum* or *Diplorhynchus condylocarpon* are dominant. Scarp slopes and pediments are occupied by *Kirkia wilmsii*, *Acacia nigrescens* and *Commiphora* spp., while *Catha transvaalensis*, *Combretum molle* and *Vitex* spp. are typical.

### 2.5.5 Population

According to Statistics South Africa, Sekhukhune has a total population of 967 200 (Table 2.1). The population growth rate between 1996 and 2001 was 1.2%.

**Table 2.1 Population distribution in the five municipalities of Sekhukhune**

Municipality	Male	Female	Total
Fetakgomo	40 694	51 98	92 092
Groblersdal	98 689	122 050	220 739
Makhuduthamaga	114 036	148 883	262 921
Marble hall	55 765	65 558	121 323
Tubatse	121 254	148 868	270 122
<b>Total</b>	<b>430 440</b>	<b>536 757</b>	<b>967 197</b>

Source: Statistics South Africa, 2001 (www.statssa.gov.za)

### 2.5.6 Basic infrastructure

In terms of the section 9(1) and 73(1) of the Water Service Act, water provision in Sekhukhune shows that 46.9% of the population is receiving a water service that is below the level of basic reconstruction and development programme (RDP), 33.5% with basic access, 11.3% intermediate access, and full access 8.3%. On road network, most major roads are tarred and others are being upgraded. There is a fair road network that links most areas in Sekhukhune with the major highways of South Africa. On education, Sekhukhune District has 298 secondary schools and 454 of primary schools. However, distribution of these schools among villages is very variable; for example, Mbuzini village has only one primary school, secondary school pupils will have to walk 10 km to the nearest secondary school in Elandskraal village. Villages of Ga-Nchabeleng type have many primary and secondary schools and sometimes a college. Greater Groblersdal has the highest learner classroom schools ratio for primary schools at 1:44, whilst Marble Hall has the lowest at 1:35. The District average learner ratio of all primary schools is 1:39. For secondary schools, Makhuduthamaga has the highest learner classroom ratio of 1:36 and the lowest is Marble Hall with 1:32. The district average for the secondary school is 1: 34. Clinics and hospital are evenly distributed throughout the Sekhukhune District, but accessibility to the residents remains a challenge. At the moment the rural areas are still the most disadvantaged in terms of access to hospitals. The Sekhukhune District has 58 clinics, with 7 hospitals. Clinics are designed to provide preventive and primary health care service to local residents. Out of the

five municipalities, Marble Hall and Tubatse residents have less than 80% accessibility of within 20km radius to hospitals. However, 51% of the population of Sekhukhune has access clinic within 5km radius from their homes.

## **2.6 Conclusion**

The historical events in South Africa played a major role on agricultural practices and potential of Black communities living in communal areas. The greater part of it was detrimental to progress. The past policies also contributed to negative perceptions on goat products. However, the new government came up with policies to redress the previous disparities. In terms of environmental conditions, rainfall and soil type of Sekhukhune are the limiting factors to agricultural activities. Lack of water restricts agricultural production; however Oliphant River is one of the major rivers in Sekhukhune District mostly utilized for crop irrigation. Poor availability of drinking water is a live problem in Sekhukhune, especially in winter when villagers have to depend on rivers far away for water to use for both livestock and household purposes. Land is utilized for mostly field crops, vegetables, grazing, woodland. Only 21.8% of land in Sekhukhune is arable and 53.7% is non arable. Nevertheless, livestock has the strong comparative advantage and provides much of the agricultural output. Livestock kept by farmers in Sekhukhune include cattle, goats, sheep and equines. NDA statistics estimated that at the end of November 2003, South Africa had 6 681 000 goats of which Limpopo is the second largest goat rearing province after the Eastern Cape with 3 022 000 goats and Limpopo with 1 049 000 goats. This makes it logical to further investigate the potential that there is to commercialise indigenous goats in communal areas.



## **CHAPTER 3 METHODOLOGY**

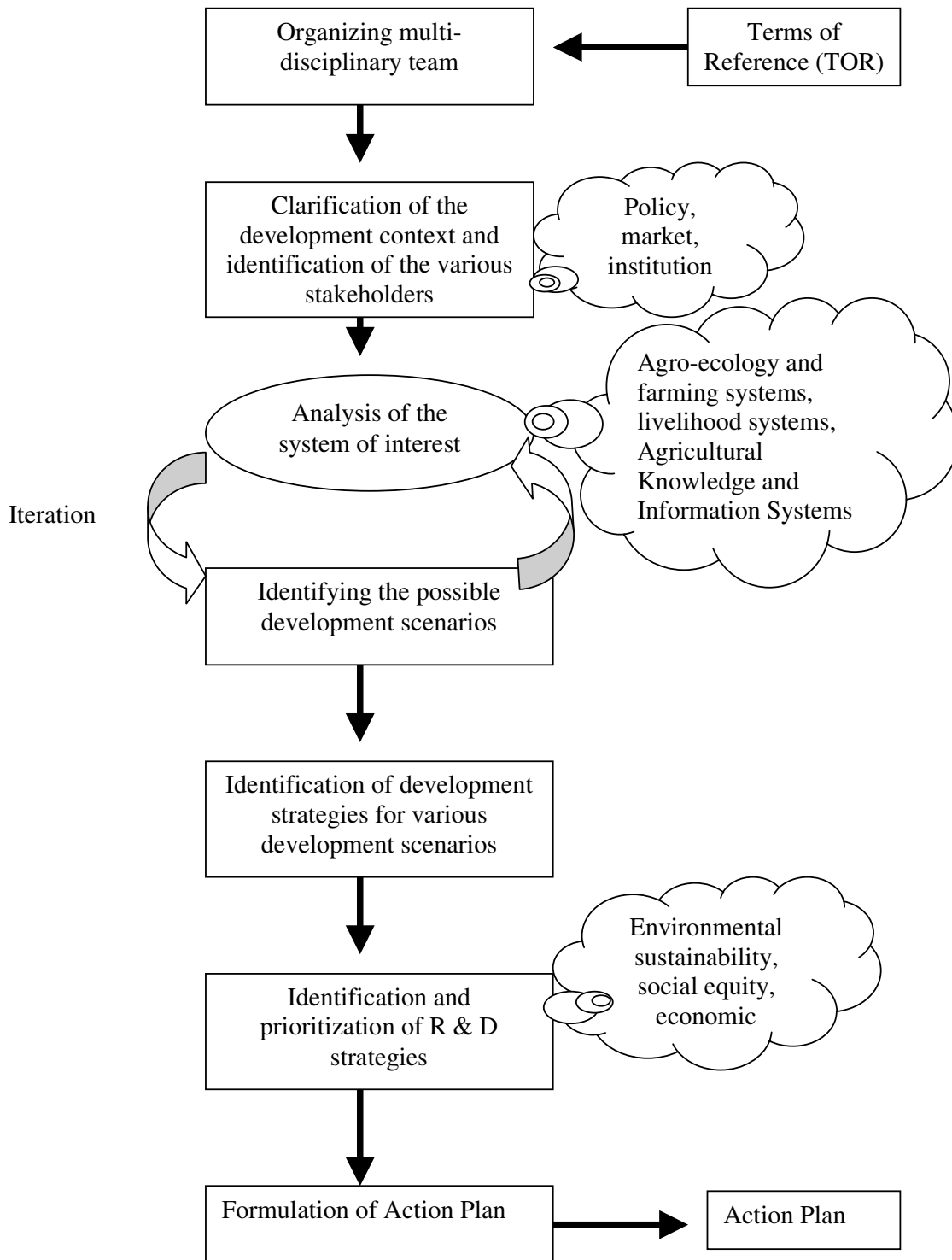
The methodology was divided into two phases. The preparatory phase dealt with context exploration of the problem situation. The field study phase was designed to verify results obtained from the analysis of secondary information. The study was carried out by a team consisting of seven researchers from various disciplines i.e., rural development, agronomy, agricultural economics and livestock breeding and nutrition. The team used the ARD procedure (Figure 3.1; ICRA, 2004a). Initially, an assessment was done to understand the functioning of the broadly defined problem situation. This process resulted in the identification of driving forces which were later on combined in several possible ways resulting in some future scenarios. After assessing and understanding the problem situation (context exploration), stakeholders and the ICRA Team agreed on the focus of the study (also known as the system of interest). This system of interest was further analysed resulting in formulation and prioritization of the development strategies. Subsequently an action plan was developed to spell out how the future development activities should be carried out.

### **3.1 Preparatory phase**

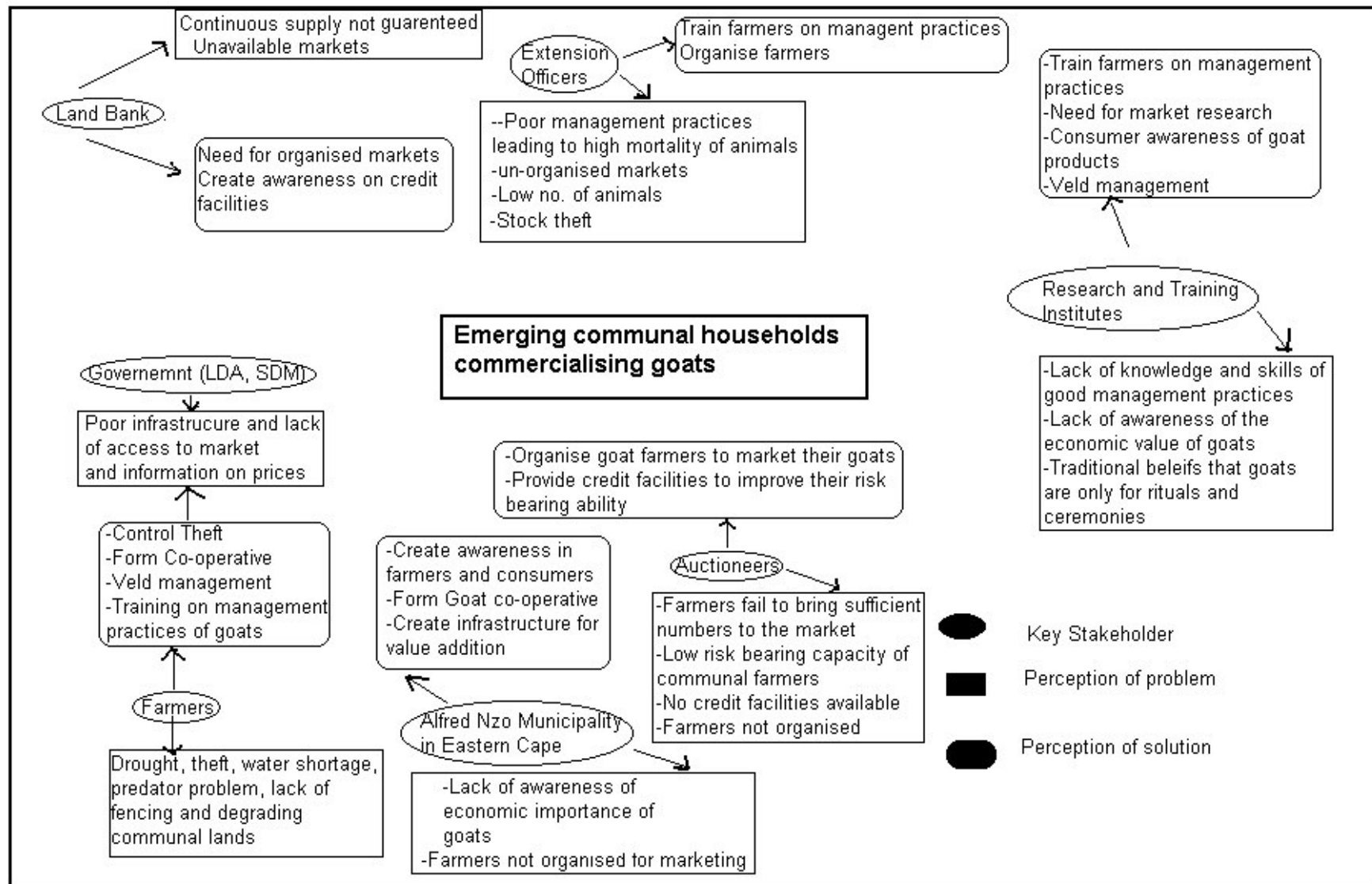
During this phase the TOR (Appendix 1) that was formulated by the task team of the host organization (LDA and ARC) was handed over to the ICRA team together with available secondary materials. The team went on to explore the TOR and the secondary material provided and came out with the first attempt to the definition of the problem. A list was developed showing important factors making parts of the problem and all stakeholders involved. The theme of the desired outcome was identified as ‘emerging commercializing households’. Wider factors of the problem situation were then visualized in the form of a rich picture (Figure 3.2) showing also stakeholders and various relationships existing. Perceptions of stakeholders were shown in the form of call-outs. The team later on used the stakeholder analysis tool to differentiate key stakeholders from other stakeholders using available information from secondary material. This was done by first listing all the stakeholders and later on assessing each stakeholder on why or why not important. The results were used to further enrich the rich picture. Driving forces of the resultant system were included on the rich picture and a flexible boundary was defined to represent the system of interest.

After context exploration, the initial problem (low contribution by goats to the economy of Limpopo Province) was redefined to ‘Low contribution of goats to incomes of households in Sekhukhune District in the Limpopo Province of South Africa: how to change the current system of goat production in communal areas of Sekhukhune from subsistence to commercial?’ The Initial research questions (Appendix 2) were set thereafter and further refined during analysis of the system of interest. The identified central problem was later converted into the central question: ‘how can it be possible for households in communal areas of Sekhukhune to sell goats through formal markets and make profits?’ The team went on to develop a research plan (Appendix 3), containing all questions from the consumer and marketing side, through assessment of stakeholder relationships and information systems to current production systems and livelihood options. The first draft of the field study plan (Appendix 4) was prepared. Preliminary findings were presented to ICRA management staff and other ICRA participants before the team left for the field study in South Africa. Comments that were made after these presentations were used to refine the field plan before meeting with the monitoring team in South Africa.

**Figure 3.1 ARD procedure for interdisciplinary approach to research**



**Figure 3.2 Rich picture for the problem situation of goat commercialisation in Sekhukhune District**



## 3.2 Field study phase

The implementation process of the field study plan started with a meeting with the monitoring team in Lebowakgomo (Sekhukhune District). Matters arising from the original TOR were clarified. The second version of the TOR was verified. The ICRA team presented its initial findings and proposed course of action. After reaching a common understanding the blessing was given to begin the study. One major change was the replacement of the initially selected village of Elandskraal by Ga-Nchabeleng because Elandskraal is more of a township and very close to Mbuzini in terms of proximity. The monitoring team was more interested in selecting villages that are contrasting and truly representative of all villages in Sekhukhune.

The team was introduced to the villages in a meeting with the village head (Mbuzini) or village queen (Ga-Nchabeleng; the queen is also known as the Kgoshi). After these, the team went on to meet the whole village where the purpose of the presence of the team was explained. The team got the blessings of the villagers. Several meetings with focus groups and key informants were held depending on the type of activity. A questionnaire was developed to assess the livelihood options of households in the two villages as well as to identify and list the current households with goats. Preliminary results were presented at the introductory workshop where all stakeholders were appraised about the agreed focus of the study. The team then travelled to the Eastern Cape to visit the Alfred Nzo municipality, which is involved in a project of commercializing indigenous goats. The Eastern Cape experiences were used to refine team's approach. The team went on to make the sampling frame for the second round of household interviews. Various questionnaires, appropriate for different stakeholders were also designed. The team worked in sub-groups that were formed on the basis of the requirements for the task. Results were compiled and presented at the mid-term workshop. The team, together with the stakeholders, then went on to identify strategies which were then prioritized based on the findings from the field study. A final workshop was conducted to present the overall findings. Suggestions were incorporated into the draft report. The report was finalized and an action plan to direct future activities was developed.

### 3.2.1 *Meeting with the monitoring team*

The ICRA team met with the monitoring team in the first week on April 16<sup>th</sup>, 2004 at the SDM, senior manager's office. The monitoring team started by presenting the final version of the terms of reference, highlighting on matters raised by the ICRA team for clarity. The ICRA team then went on to appraise the monitoring team by giving a summary of the process which led to the current outputs. The stakeholders list was updated after the ICRA team and the monitoring team agreed on the focus of the study and the proposed approaches to be used in collecting and analyzing field information.

### 3.2.2 *Meeting the Tribal Authorities and villagers*

In the second week, before starting the actual field work, the ICRA team was introduced to the village leadership. At these meetings the ICRA team explained the purpose of the study and the approaches to be used. The village leadership quizzed the ICRA team on the nature of its activities. The ICRA team explained using examples of different types of approaches before asking the village leadership on what kind of approaches they now want. The village leadership concurred with the ARD approach of sustainable innovations initiated by villagers themselves. The ICRA team also explained that their presence was as a result of the initiatives by the LDA. The ICRA team was then allowed to meet with the whole village



where the same presentations were repeated. It was made clear at these meetings that villagers should not expect any funds or projects at the moment; the ICRA team was only there to assess opportunities available so as to give recommendations to the monitoring team on available opportunities for households interested in goats. Focus groups and key informants were selected at these villages meetings with the help of villagers themselves and local extension staff. The formed groups were balanced for age and sex, for example, in Ga-Nchabeleng; they selected (through consensus) a man and a woman in each category of the following age groups: greater than 60 years old, 36 to 60 years old and below 36 years old. These people were selected based on their knowledge and potential to represent the villagers.

### 3.2.3 *Reconnaissance survey*

After the first village meeting, the ICRA team undertook a reconnaissance survey (with the help of an extension officer) to familiarize themselves with the study area. They drove around the villages and the surrounding cropping fields and grazing lands, taking notes on the general set-up of villages, landscapes, soil types, vegetation, water sources, infrastructure, state of the veld and types of livestock and livestock numbers in grazing fields. This was done to obtain additional information before coming in for interviews.

### 3.2.4 *Focus groups and key informants meetings*

Focus group meetings were conducted to further understand the way villagers live. A checklist was prepared before the meetings, to act as guiding questions for the discussion. The first focus group meeting was done during the second week. The ICRA team had shared tasks of facilitation, notes taking and verification of the facts given. A discussion was initiated on village set-up, livestock options, farming activities, management practices for livestock and crops, entrepreneurship, off-farm work, importance of activities in terms of income to households and indicators of wealth categories (rich, average and poor). Results were used to refine the initial question for assessment of livelihood options. The second focus group meeting was done to assess the natural resource base of the two villages. This was done by drawing maps and transects of the village. The whole process started with a discussion on the natural resources of the village, followed by a visit to the sites of importance for the village. During the walk, ICRA subgroups were quizzing the villagers on management systems of these resources. At one point, men were drawn away from females to offer the females more freedom of expression. The ICRA team and the focus groups then returned to the village to draw the village maps and transect showing their natural resources. Villagers used locally available material as stones and bottle tops to demarcate the maps as well as identifying their natural resources on these maps. After the maps were drawn, villagers went on to draw transect of their village. Results of these maps and transects were used to assess the potential that there is for raising goats and selling them through formal markets.

### 3.2.5 *First round of interviews: household livelihood systems*

The first round of interviews commenced immediately after the village meetings. The enumerators were trained and the questionnaire was tested before implementation. In total 204 households in Mbuzini and 726 households in Ga-Nchabeleng were interviewed. Questions were asked on the name of the household head and age, education and occupation, source of income (percentages from agricultural and non-agricultural activities), source of income from different agricultural activities (crops and livestock), the type and number of livestock owned by the household. Subsequently, the enumerator had to use indicators agreed

on for the wealth ranking to place the household in the appropriate category. The data collection framework for the first interview is presented in Table 3.1. Where percentages were required, respondents were given 10 stones and were asked to distribute them amongst given alternatives. The number of stones allocated to an individual category was used to calculate the percentages. Information collected from the first round of interviews was entered in SPSS and later on transformed to tables and graphs.

**Table 3.1 Data collection framework for assessing livelihood options**

Contribution (in %) by agriculture	Agricultural practice	Contribution (in %) to agriculture by livestock	Availability of goats in household	Perceived wealth	
0	X	X	X	X	
1 to 30	With crops only	X	X	X	
31 to 70	With livestock only	1-30	Without goats	X	
			With goats	Rich Average Poor	
		31-70	Without goats	X	
			With goats	Rich Average Poor	
		71-100	Without goats	X	
			With goats	Rich Average Poor	
	71 to 100	With both crops and livestock	1-30	Without goats	X
				With goats	Rich Average Poor
			31-70	Without goats	X
				With goat	Rich Average Poor
			71-100	Without goats	X
				With goats	Rich Average Poor

### 3.2.6 Introductory workshop

The workshop was held at the University of the North on 14 May 2004. Its main objective was to appraise stakeholders on progress and initial findings before agreeing on the way forward. Power point presentations on the present and the past findings were done by the ICRA team, University of Venda and the Goat Task Team. The approach and focus of the ICRA team was discussed and verified by the stakeholders. The ICRA team was given the stakeholders mandate to continue with the study. This workshop also served as a platform to get different perspectives of various stakeholders on the problem and its solutions and also on their interests in relation to the problematique.

### 3.2.7 *Visit to the Eastern Cape goat commercialization project*

After the introductory workshop, the ICRA team visited the Eastern Cape. Here the team interviewed Scientific Roets, a consultant agency working closely with Alfred Nzo Municipality. That Municipality is working closely with farmers in project on goat commercialisation. The ICRA team visited the central cooperative site and listened to some presentations by the Municipality, Merida Roets of Scientific Roets and a representative of WEZA social facilitators. Experiences from the Eastern Cape were used to give more focus to this study and further screening of development strategies.

### 3.2.8 *Second round of interviews: goat management and marketing of households*

After analyzing the data collected in the first round of interviews, the team developed the sampling frame to focus on only those households owning goats. These households were stratified according to contributions from agricultural activities, age groups and perceived wealth ranks (Tables 3.2 and 3.3). Out of the 26 farmers with goats in Mbuzini, a sample size of 15 households was selected and out of the 168 households with goats in Ga-Nchabeleng, a sample size of 45 household was selected for the second round of in-depth interviews. Stratified sampling was used in both villages with each strata proportionally contributing to the final sample size according to size of the population with goats that it contained.

The main objectives were to get information on:

- Interests, perceptions of problems and solutions, strategies necessary to effect change
- Animal production and management practices (feeding, breeding, housing and health)
- Marketing practices
- Veld management practices (grazing camps, water point, fences and other infrastructure)
- Potential for communal households to commercialise

### 3.2.9 *Interviews of stakeholders*

Interviews of stakeholders were done concurrently with the second round of household interviews. The team designed a checklist and interviews were carried out by sub-groups at the stakeholders' work places. A list of stakeholders who participated is presented in Appendix 5. Information obtained has been summarized in tables (Appendices 6, 7 and 8). Results were used to assess stakeholder linkages, perceptions and objectives by comparing and contrasting relationships and perceptions as given by stakeholders. This information was then used to extract important areas of concern to be used when developing strategies and later on, making recommendations. Field information was summarised into tables and figures that were presented to stakeholders at the mid-term workshop.

**Table 3.2 Mbuzini sample frame**

Contribution (in %) from agriculture sources	1 to 30			31 to 70			71 to 100		
	19-35	36-60	> 60	19-35	36-60	> 60	19-35	36-60	> 60
<b>Age group</b>									
<b>Perceived wealth rank: Rich</b>		1 (1)	1 (1)		2 (1)				
Total no of goats per category		2	2		47				
Average goats per category		2	2		24				
<b>Perceived wealth rank: Average</b>	1	5 (3)	7 (4)		2 (1)	4 (2)			
Total no of goats per category	15	28	46		13	36			
Average goats per category	15	6	7		7	9			
<b>Perceived wealth rank: Poor</b>		2 (1)	1 (1)						
Total no of goats per category		2	3						
Average goats per category		1	3						
<b>Total households with goats</b>	1	7	9		4	3			
<b>Sample size for 2<sup>nd</sup> interview</b>		5	6		2	2			
<b>Total number of goats</b>	15	32	51		60	36			
<b>Average no of goats by age</b>	15	5	6		15	12			
<b>Average goat by contribution</b>	6			13					

Note: Shaded areas are showing categories where most goats are found. Numbers outside brackets show the number of goats in that category; numbers inside brackets show the sample size for that particular cell

**Table 3.3 Ga-Nchabeleng sample frame**

Contribution (in %) from agricultural sources	1 to 30			31 to 70			71 to 100		
	19-35	36-60	> 60	19-35	36-60	> 60	19-35	36-60	> 60
<b>Age group</b>									
<b>Perceived wealth rank: Rich</b>		1 (0)	7 (0)			2 (0)			3 (1)
Total no of goats per category		9	68			50			250
Average goats per category		9	10			25			83
<b>Perceived wealth rank: Average</b>		41(13)	54(16)	1 (0)	9 (3)	10 (3)	1 (0)	8 (2)	2 (1)
Total no of goats per category		299	424	10	146	370	22	328	22
Average goats per category		8	9	10	17	37	22	41	11
<b>Perceived wealth rank: Poor</b>		9 (2)	18 (4)		1 (0)	1 (0)			
Total no of goats per category		61	124		2	25			
Average goats per category		7	7		2	25			
<b>Total households with goats</b>	0	51	79	1	10	13	1	8	5
<b>Sample size for 2<sup>nd</sup> interviews</b>	0	15	20	0	3	3	0	2	2
<b>Total number of goats</b>	0	369	616	10	148	445	22	328	272
<b>Average no. of goats by age</b>		7	8		15	34		41	55

Note: Shaded areas show categories where most goats are found. Numbers outside brackets show the number of goats in that category; numbers inside brackets show the sample size for that particular cell

### *3.2.10 Mid-term workshop*

The mid-term workshop was held at Sekhukhune District Public Works meeting hall. During this workshop, initial results of livelihood options and goat management systems were discussed after a presentation by the ICRA team. Existing types of goat farmers and possible strategies for intervention were also discussed. The next field study phase concerning strategy development and priority setting was agreed upon. Stakeholders were then given summaries of the interview results to verify the information they had given during their interviews.

### *3.2.11 Driving forces and future scenarios*

Forces that were identified as external to goat commercialisation at local level and outside the direct control of stakeholders in Sekhukhune District of Limpopo Province were regarded as the driving forces. When combined in various possible ways, these driving forces resulted in different possible futures hereinafter called scenarios. Based on the information gathered from stakeholders and the in-depth analysis of the problem situation, three driving forces concerning the issue of small stock commercialization were identified. These include price of goat meat versus beef meat, drought and policies. These driving forces were then combined to come to assess different possible futures for the goat industry. Two contrasting scenarios were then used to develop robust development strategies.

### *3.2.12 Identification and prioritization of development strategies*

Developmental strategies were identified from secondary data analysis, experience from Eastern Cape/Alfred Nzo Municipality, and results from interviews with the communal farmers and other key stakeholders. Accordingly, seven research and developmental strategies were identified. These strategies were then prioritised by the stakeholders. The priority setting workshop was held on 18 July 2004. At the priority setting meeting, stakeholders began by verifying the development strategies and criteria to be used in prioritising them. Priority setting sheets (Appendix 9) were initially given to individuals. A bigger diagram was put at the board and an example on how to go about the scoring was given. Representatives of stakeholders were then asked to complete the sheets individually. Later on stakeholders were put into three sub-groups according to their shared interests as well as their shared perceptions about the problem situation and its solutions. The sub-groups were set as Agricultural Research and Training institutions (University of Venda, ARC, Mara, Towoomba and Madsbandela), Government (LDA, SDM and Municipalities) and Farmers (Mbuzini farmers, Ga-Nchabeleng farmers and Tribal Authorities). The screening and prioritization was done using matrix scoring of 1 to 20. The stakeholders negotiated on their individual score sheets and each group came-up with one common sheet that was presented to the whole group by sub-groups' representatives. Coincidentally, there were no major differences in the results of the final ranks. Priority setting resulted in the strategies being divided into those ones applicable to Phase 1 and those for Phase 2. Nearly all key stakeholders (including farmers and tribal authorities) were represented.

The prioritised strategies were:

- Identification of niche markets
- Formation of cooperatives
- Targeted group approach by extension
- Establishment of infrastructure (e.g., abattoir, tannery) owned and operated by the cooperatives

- Improved veld management practices
- Improved goat management practices
- Provision of credit and inputs.

These strategies were prioritized by the stakeholders based on the following criteria:

- Farmers get higher price per animal through value addition
- Promote/increase market shares
- Employment creation
- Promote institutional linkage
- Encourage social grouping
- Encourage participation of both male and female
- Increases probability of adoption of the concept of commercialization
- Improves standard of living.

### *3.2.13 Formulation of an action plan*

After prioritization, the team formulated an action plan to be implemented during Phase 1 of a proposed development project. The ICRA team began by developing a framework for the proposed action plan. Subsequently, plenary discussions were held to determine the general content of the required activities under this action plan. Thereafter sub-groups drafted the details for specific activities based on the disciplinary competences. Each sub-group was tasked with a specific task. The action plan was finally discussed in plenary meetings to verify its practicability.

### *3.2.14 Final workshop*

A final workshop was held in Lebowakgomo on 22 June 2004. Overall research findings and the phases of the development proposal and the resulting action plan were presented and discussed at this workshop. The most important event that happened was the adoption of the study findings and recommendations by all stakeholders present. The ARD approach had been properly followed with maximum participation of all key stakeholders.

## **CHAPTER 4 SOCIO-ECONOMIC STATUS OF SEKHUKHUNE DISTRICT**

Assessing the socio-economic status of the households in a study area is important for understanding the way people live (livelihoods), the potential for growth (resources available at local level) and change (capacity to utilise the resources). A door-to-door survey was done to collect information on the main sources of income for the households of Ga-Nchabeleng and Mbuzini villages. Focus group interviews were conducted to understand the area further in terms of the way the people live, what problems they face, and what solutions they have for coping with the problems, how they manage crops and livestock, and how decisions are made in a household. Agro-ecosystem maps and transects helped the ICRA team to identify and understand the local agro-ecological resources and different niches that exist.

### **4.1 Resources and their utilisation in Sekhukhune District**

#### *4.1.1 Resource use in Mbuzini village*

Maps and transects were used to explore the resources of Mbuzini village (Appendices 10 and 11). Each household has access to at least one hectare of crop land. Maize is the most common crop grown and it is rain fed. Cropping is, however, done by very few households and at a low scale. After the crop is harvested, the field is left open for grazing by the village livestock. Grazing camps once existed but the demarcation wire has crumbled, allowing for uncontrolled grazing. All camps are now left open for livestock (mainly cattle and goats) to graze freely. Villagers also get their firewood from the bushes in the grazing camps. During dry years, the animals are taken outside the village to an area of a sisal project for grazing. Two ponds are available for livestock to drink water. Both are rain-fed and during dry years they dry up and animals have to be taken to the Olifants River (about 10 km from the village). The villagers face acute problems of water for household use. There are government taps in the village which supply water, but the supply is irregular. Whenever there is no supply of water, the villagers have to fetch the water from the pumping station, which is about 12 km from the village. Sometimes villagers have to buy water. There are three bore holes in the village, but none of them are in use due to problems of non-functional pumps. There is a poultry project in the village that was set up with the help of the government. The project started with 1000 birds. After the withdrawal of the Government support this project is now operating with 500 birds. According to the map, some infrastructure is there but due to poor maintenance, most things are no longer functioning well.

During the rainy season, households may plant their maize crop. During this period, water will be enough for animals to drink. At the time when this study was conducted, the crop fields looked deserted and neglected, implying that very little ploughing had been done in the past year, possibly due to lack of rain. In the dry season, shortages in livestock feed and drinking water are major concerns. Frequent droughts exacerbate this problem. However, some households buy bales of Lucerne to supplement their animals. Water that they usually reserve in the ponds lasts from December to July; otherwise livestock is led to the river. Available earthen dam reservoirs are sandy and silted and cannot store enough water. Lack of coordination by livestock keepers explains the deteriorating infrastructure. There is a reservoir under construction close to the homesteads. If fences are erected, grazing lands could be divided into paddocks and rotational grazing would become possible.

#### 4.1.2 Resource use in Ga-Nchabeleng village

The landscape of Ga-Nchabeleng village varies from mountainous grazing areas through undulating cropping/grazing fields to slopy residential areas. There are three main rivers namely Ngwaritsi, Mohwetse and Lepellane. These rivers are supplied by several streams. One of the streams supplying the Mohwetse River has two fountains. Over 65% percent of Ga-Nchabeleng villagers are said to depend on the Mohwetse River for drinking and washing water. The village stretches from Leolo Mountains in the North East to Mafatle Mountains in the South West and from the Taxi rank in the North West to Rite and Mohlaletsi Mountains in the South East (Appendices 12 and 13). There are several schools from primary to high school but the technical training college is no longer functional. The village is also served by a clinic and tarred roads. Almost all village houses are made of bricks, roofed with asbestos. The type of settlement is nucleated and there is clear distinction between residential areas and grazing/cropping areas. The residential area is Ga-Nchabeleng and the grazing/cropping area where most of the goats are kept in kraals, is called Lepellane. There are defined grazing camps, though not intact, but still active. There is also an abandoned irrigation site with destroyed boundaries but defined irrigation lines. The irrigation site receives water from the dam that is located outside the boundaries of Ga-Nchabeleng village. There is also another dry land cropping area (Ditlokwe project), where mainly sorghum is grown. The current grazing camps are located in Lepellane but there are plans of moving them to the Mogolo Mountain area. Vegetation consists of mainly thick, thorny acacia bushes on sparse grasslands.

From Ngwaritsi River to Mothopong Mountain (i.e. North of Ga-Nchabeleng), the land area is sandy to loamy, entirely covered with trees of *Acacia spp.* Community livestock utilise this area for grazing (Appendix 13). From Mothopong Mountain to Mohwetse River the soil type is clayey. During rainy seasons the community plants crops such as beans, maize and sorghum. From Mohwetse River to Mmatadi Mountain the land area is rocky, with clay soils. This is the area where the community lives. Some households have vegetable gardens at their homesteads. From Mamokalatsane Valley to the Lepellane River the soils are deep and reddish. This area is said to be the most fertile land of the village, and most of the households have their agricultural plots here. This area used to have agricultural projects which stopped functioning in 1995. The community plants crops like cabbage, spinach, maize, tomatoes, watermelon etc.

The opportunities that the community sees in their natural resources are the establishment of grazing camps and the revitalization of Lepellane agricultural scheme. Problems identified are theft of livestock and household goods, drought, lack of running water, conflicts between livestock and crop owners when it comes to the use of natural resources in the Lepellane area since this is the most fertile area of the community.

The two villages mainly differ in development of infrastructure and the way communal households manage their stock and crops (Table 4.1). The agro-ecological village maps and transects (Appendices 10, 11, 12 and 13) support this conclusion. Hence, special care has to be taken to properly target any future interventions.



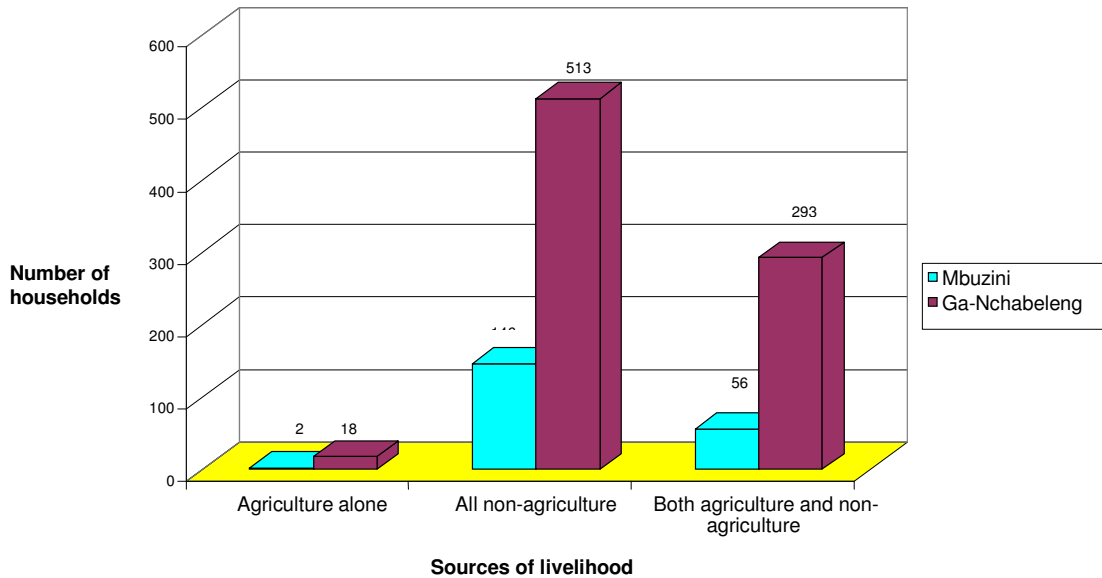
**Table 4.1 Differences in the two types of villages**

<b>Criteria</b>	<b>Mbuzini type of village</b>	<b>Ga-Nchabeleng type of village</b>
<b>Village set-up</b>	Mbuzini is a young settlement in a homeland that was created for black communities during the apartheid era, partly to solve some tribal conflicts and partly to create cheap labour for the nearby white commercial farms. Mbuzini has a linear-type of settlement. It is served by one dust road. There are no clinics, no piped water and no secondary schools and only one primary school. The problem of water is serious in Mbuzini; only one bore hole is functional to serve the whole village. Two unreliable ponds (usually drying-up in early winter) serve the village livestock with drinking water.	Ga-Nchabeleng is an old village having a nucleated type of settlement. It is well established with many primary schools, secondary schools, high schools, a hospital and a college (though presently closed). It is well served by tarred roads and three rivers. A dam located outside the village boundaries was the water source for the now defunct irrigation scheme. Despite many boreholes villagers still complain about water for household use. It is said that about 65% of them depend on the Mowetse River for household water. Its population is 5 times the size of Mbuzini.
<b>Agricultural activities</b>	About 30% of the Mbuzini villagers are involved in some form of agriculture. The rest either work in the nearby town Marble Hall or on nearby white commercial farms. Less than 20% of those involved in agriculture grow field crops though each household has access to at least 1ha of crop land.	About 40% of the Ga-Nchabeleng villagers are involved in some form of agriculture. Although the allocated cropping land sizes per household are similar, Ga-Nchabeleng villagers have access to irrigation water and are more into cropping than their counterparts in Mbuzini
<b>Livestock</b>	Mbuzini has more cattle (>405) than goats (>226); only one farmer has 8 sheep. Most (>90%) goat farmers leave their animals to free range; no herding is practised.	Ga-Nchabeleng has more goats (>2210) than sheep (>1161) or cattle (>1500). Livestock herding is a common feature. Many villagers have second homes in Lepellane, where they keep their livestock.

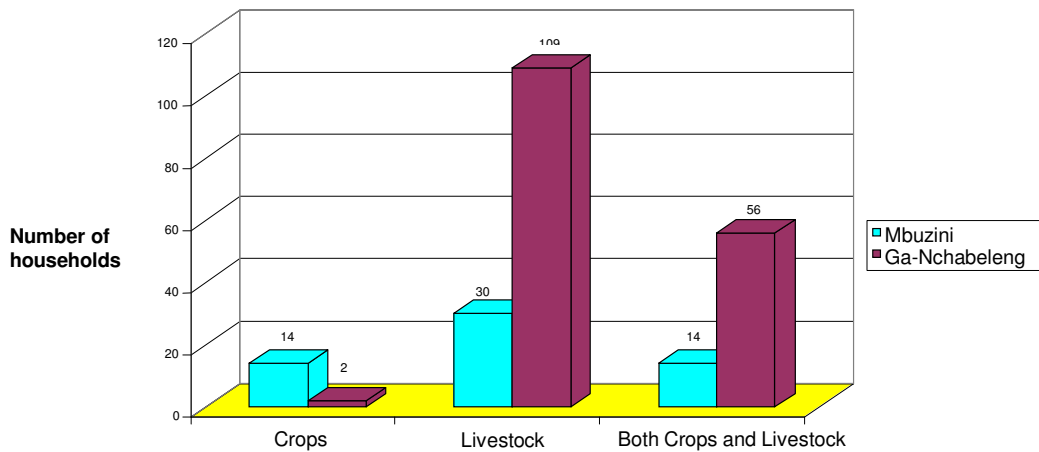
## **4.2 Livelihood options and income sources in Sekhukhune District**

Information that was gathered from villagers was analysed and results showed that 69% of households in Mbuzini are not involved in any form of agricultural activity. In Ga-Nchabeleng, 63% of the villagers are not involved in any form of agricultural activities (Figure 4.1). This means, agricultural innovations should be carefully introduced not to begin with the wrong targets. Of those villagers involved in agriculture, 76% in Mbuzini and 99% in Ga-Nchabeleng, have more contribution from livestock (Figure 4.2).

**Figure 4.1 Sources of livelihood in Mbuzini and Ga-Nchabeleng**



**Figure 4.2 Agricultural sources of livelihood in Mbuzini and Ga-Nchabeleng**



*4.2.1 Livelihood and income sources among Mbuzini villagers*

The focus group interview in Mbuzini revealed that the different sources of income for the Mbuzini residents are: old age pension (R700 per month), child grants (R140 per month per child until the age of 14 years), wages from commercial farm labour, income from members

of family working in the towns and cities, income from employment on the community poultry project and income from sale of crops, vegetables and livestock.

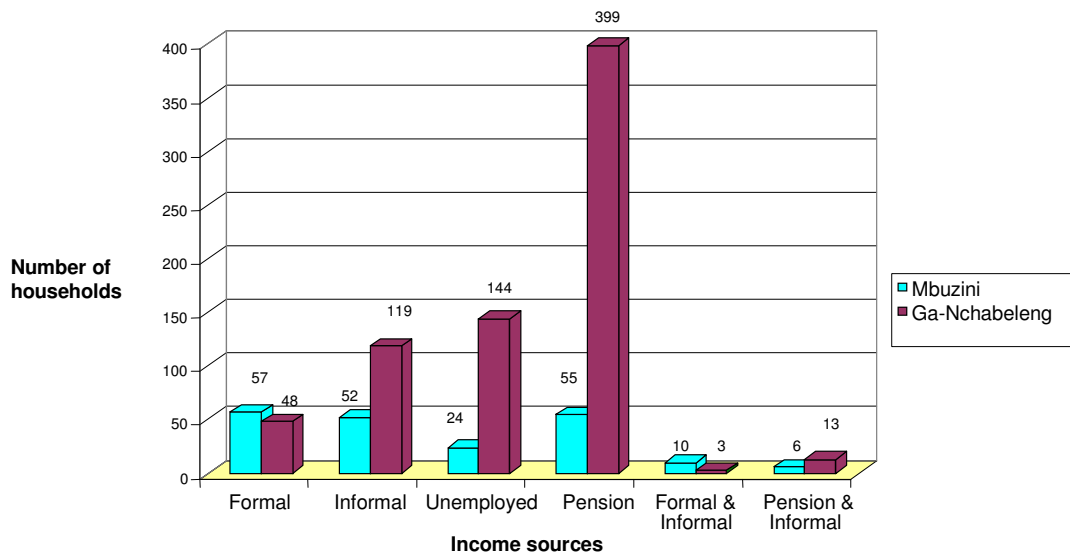
The respondents at the focus group meeting were asked to rank income sources according to income potential. They ranked pension as first and agriculture as last (Table 4.2). Results were similar to findings from individual questionnaire interviews (Figure 4.3)

**Table 4.2 Sources of income in Mbuzini**

Rank	Sources of income
1	Pension & child grants
2	Formal sources (family members with jobs in urban areas)
3	Farm-labour
4	Working in nearby towns and cities
5	Agriculture (crops and sale of cattle and goats)

Figure 4.3 shows the different sources of income and their distribution among Mbuzini households. The formal sources of income include any income that is received by a household on a regular basis or monthly (includes households who receive income from family members working in the towns and cities). However, pensions and child grants were separated from this category and merged into a separate “pension” category. Informal sources of income include income which is not received on regular basis and includes hawking or any other business activity and wages received from work on agricultural farms.

**Figure 4.3 Distribution of income sources among Mbuzini and Ga-Nchabeleng villagers**



#### 4.2.2 *Livelihood and income sources among Ga-Nchabeleng villagers*

The focus group interview in Ga-Nchabeleng revealed that their different sources of income include cropping (sorghum, watermelon and maize), vegetable production, pension, support from adult children working in cities, wages from casual labour on commercial white farms, salaries from formal employment (usually teaching), livestock farming, hawking of fruits, vegetables and firewood. Ranking results by the focus group (Table 4.3) were similar to those from individual assessments through questionnaires (Figure 4.3).

**Table 4.3 Sources of income in Ga-Nchabeleng**

Rank	Sources of income
1	Pension
2	Salaries
3	Hawking
4	Livestock (male respondents); sale of firewood (female respondents)
5	Child grants
6	Off-farm labour
7	Crop farming

Also according to the focus group 50% of the households were perceived to be poor (with a monthly income level less than R2000), 30% of the households to be average (with a monthly income level between R2000-R6000) and 20% of the households to be rich (with a monthly income level above R6000). Most of household decisions are made by the male household and all decisions related to livestock (cattle, sheep and goats) are made solely by him.

### 4.3 Importance of crops and livestock

#### 4.3.1 *Crops and livestock in Mbuzini village*

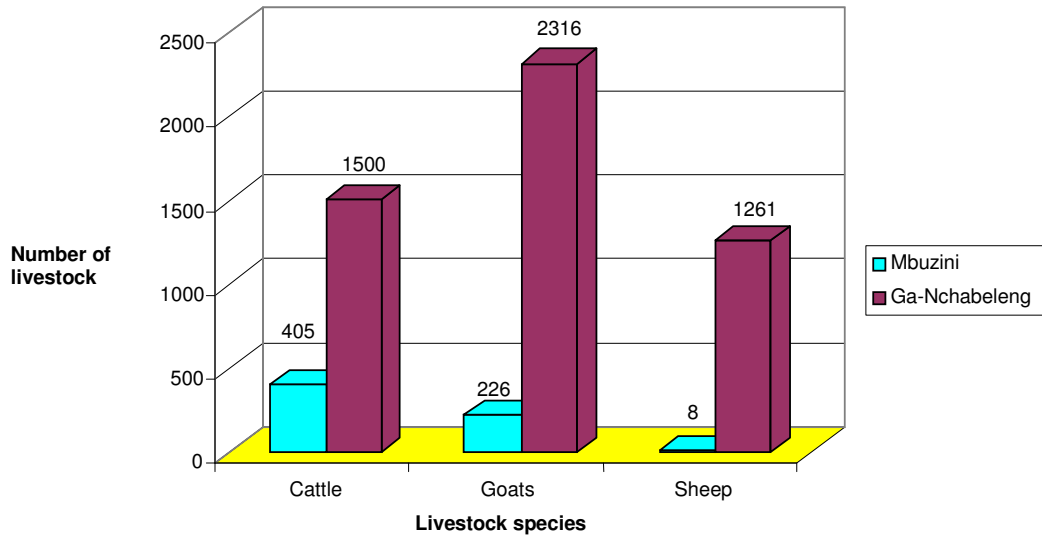
Figure 4.1 shows that only 1% of the households in Mbuzini are solely dependent on income from agriculture. Low annual rainfall (450-600mm), occurrence of consequent droughts and lack of irrigation facilities restrict their income from agricultural activities (crops, cattle and goats). The only crop grown by the villagers in summer is maize. Most of this crop is retained for household consumption. With the increased incidences of drought, livestock is becoming a more important agricultural source of income. Climate and vegetation are, however, more appropriate for goat production because of their feeding habits.

Cattle are the preferred livestock species because they are saleable and one gets more from a unit sale. Goats are considered important and are ranked second. This is so, because goats are hardy and can survive difficult periods. Goats are said to be easy to keep in comparison to other livestock species. The 204 households interviewed in Mbuzini owned in total 405 cattle and 226 goats (Figure 4.4). Only one villager owned sheep. The common breeds of cattle in this village are Brahman, Bonsmara, Nkone and Afrikaner. The preferred breeds are Brahman and Bonsmara. These breeds have good market demand, but unfortunately they have a low drought-tolerance level. The Afrikaner is more drought-tolerant but has less market demand. It can be calculated that among the households with agricultural sources of livelihood, 52% do not have any goats, 19% have 1-5 goats, 17% have 6-10 goats, 9% have 11-20 goats and only 3% have more than 20 goats. However, only 10% of the households actually sell their goats; the rest just use them for household consumption. Most households have goats numbering between 1 and 10 (Figure 4.5).

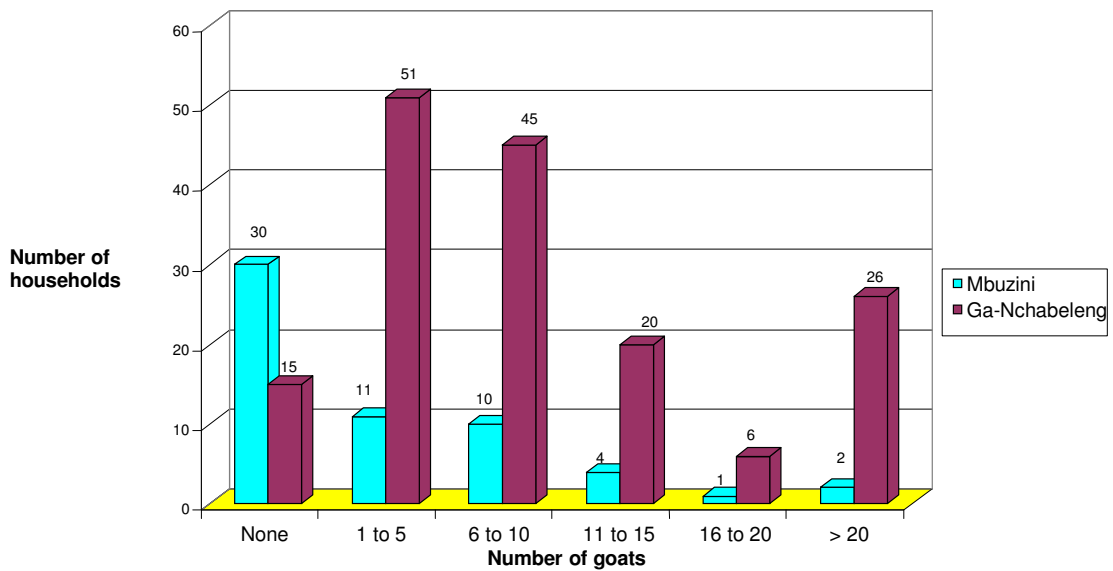
#### 4.3.2 *Crops and livestock in Ga-Nchabeleng village*

An irrigation project that was initiated in 1968 stopped operating in 1989. The project used to help the villagers with cropping activities. This project was under the control of AMS, a private company, whose operations included ploughing of the land, controlling irrigation

**Figure 4.4 Numbers of cattle, goats and sheep in Mbuzini and Ga-Nchabeleng**



**Figure 4.5 Distribution of goats among households with agricultural activities**



cycles, and assisting with the harvesting of the crop. During the lifespan of the project, no skills were imparted on to farmers; in fact, the project created a dependency syndrome. Farmers were provided with money from the sale of the produce after deduction of the

expenses incurred by the project. After the project, however, nobody took charge of this now defunct irrigation scheme. This is indicated by the degree of deterioration of the infrastructure with most villagers waiting for the government to resuscitate the scheme. A lesson that can be learnt is to develop projects together with farmers; involving them in the decision making process would help in creating a sense of ownership. Better still if there is a smooth transfer of ownership to a farming community that has a clearly defined management committee with clearly spelt out roles, would help in having sustainable development projects.

Many households in Ga-Nchabeleng have goats numbering between 1 and 10 (Figure 4.5). Cattle are also here more preferred than other species. Sheep are considered to be more important than goats because they are easy to sell to outsiders. The interviewed 726 households have a total of about 1500 cattle, 2316 goats and 1261 sheep (Figure 4.4). Goats are almost twice in number as compared to sheep. It can be calculated that among the households with agricultural sources of livelihood, only 9% do not have any goats, 31% have 1-5 goats, 28% have 6-10 goats, 16% have 11-20 goats and 16% have more than 20 goats.

Goats are usually slaughtered during ceremonies, unveiling of tombstones and funerals. Most goats are kept for household consumption and any extra production is sold within the village. In addition, people from surrounding villages may buy goats during festivals, ritual, funerals or ceremonies.

#### *4.3.3 Problems in livestock production and perceived solutions*

The major problems in goat production in Sekhukhune District are that of theft, overstocking, high mortality rates, drought leading to poor fodder availability, livestock diseases, and non-availability of a market place for sale of goats and poor demand for goats. Goat meat was also considered to be smelly and less preferred. All these factors are causing a decrease in the number of goats. Respondents gave their own solutions to their problems. To reduce unemployment, the respondents said that the government should initiate projects and training programmes (in making fences, welding, poultry, and vegetable production). This would also help to reduce the problem of theft in the villages. Farmers requested for auction kraals to market their livestock and this was recently commissioned in one of the villages. Provision of livestock camps / paddocks / rotational grazing to ensure a continuous supply of fodder for animals was proposed to decrease the effects of droughts. Reviving or establishing cooperatives at the village level was also considered to be very important by the respondents.

### **4.4 Gender issues in goat management**

All decisions related to the production and sale of cattle and goats in Sekhukhune, are taken by the male household head (Table 4.4). Female members will, however, be consulted before the selling of any livestock. The male members of a focus group said that the woman is considered as the first born in the family. In female-headed households, the woman has control and access over the resources and all decisions regarding their allocation. Tables 4.4 and 4.5 show the results on gender division for labour, decision making in relation to goats as well as access and control of resources. The focus group also revealed that the man, as the head of the household, has access to and control over all resources (Table 4.5), such as land, family labour, livestock and its products and income from crops and livestock.

**Table 4.4 Gender division of labour and decision making**

Activities	Division of labour			Decision making		
	Male	Female	Joint	Male	Female	Joint
Selling of goats	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Purchasing of goats	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Herding of goats			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Milking of goats	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Maintenance of goats	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Off-farm employment	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Fencing kraals	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Cleaning kraals				<input checked="" type="checkbox"/>		
Hired labour	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		

Note: Kraals are not cleaned, but farmers ensure that there no sharp objects like thorns or stones that could hurt the animals

**Table 4.5 Access and control of household resources**

Activities	Access			Control		
	Male	Female	Joint	Male	Female	Joint
Goats	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Family labour	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Hired labour	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Goat marketing	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Income from sale of goats	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Income from sale of goat meat	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Income from sales of milk	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Grazing land	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Cropland	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Crop marketing	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Crop income	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		

#### 4.5 Potential for the use of a farm typology in future development programmes

This chapter assessed the way households in Mbuzini and Ga-Nchabeleng live. Many villagers do not depend on agriculture for a living. Results showed that some attempts to solve problems of the villagers failed because of the way they were introduced. Most blanket development interventions failed due to lack of targeting. Many development workers argue that there are no simple prescriptions to complex problems. Projects must be tailor-made and adapted to specific conditions depending on the local resources available, education level of the people, income levels, cultural and religious factors. Hence one needs to group village households according to their main modes of operation and their common characteristics. Results from this field study show that currently there are 13 types of goat farmers in Sekhukhune District (Appendix 9). But for practical purposes, these farm types have to be clustered to arrive at fewer types that can be managed by development workers. In future, if R&D efforts would focus on improvement of goat production, then types of farmers should be distinguished for the appropriate targeting of development efforts (e.g. by extension staff).

The target groups or types (Appendix 9) can be used by the client organisation for future project interventions in the area. However, the presented typology is of no relevance to the implementation of Phase I of the proposed development project (Chapter 9). However, the typology could be useful (although in a modified format) when Phase II of the proposed



project is implemented. Project interventions to raise the productivity of the indigenous goat and the grazing areas should be properly targeted to address the needs of the different household types.

## CHAPTER 5 INDIGENOUS GOAT PRODUCTION AND MARKETING

In tropical countries there are different goat production and marketing systems. Production systems differ in feeding, breeding and housing as a response to factors such as climate, needs of the owner, standard of living and the level of technology available (Peacock, 1996). Within each system of production goat keepers have developed their own methods of looking after goats, according to their particular circumstances. As for marketing, the existing environment normally influences the forms of marketing. Available markets, prices of commodities, availability of commodities for marketing and marketing strategies possible, all form the marketing environment with the potential to influence the objective of the farmer. Until recently very little attention was given to goats, an animal that is perceived to be of little economic importance by communal households. This chapter deals with the present production and marketing situation in Sekhukhune as well as constraints and opportunities available for households to commercialise goats.

### 5.1 Goat management systems

#### 5.1.1 Feeding strategies and housing

Goats normally rely on browsing and grazing. They thrive on selecting the nutritious parts of the plants. The vegetation in Sekhukhune District is suitable for all livestock but mostly goats. *Hypertheca* spp is the common grass within the bushes of mainly *Mosetha* and *Acacia* (*Moshwana*), which are liked for their pods (*Ditlhwathwadi*), and leaves by goats. *Mohwelere*, *Mongana* and *Moselele* also make a major contribution to the vegetation type. Relying on grazing alone may not be possible during the dry season when most of the vegetation is more fibrous and dry. It is necessary that all livestock species in Sekhukhune be supplemented (at least with some form of protein) during the dry season. The current situation is a different one, though. Over 90% of households with goats in Mbuzini and Ga-Nchabeleng concurred that they do not supplement goats with anything. Goats are left to graze and when there is a drought; villagers just pray that the grace of God would save the animals. Villagers do not de-stock during hard times and are not willing to de-stock even when there is a serious drought. Backyard feeding using various sources, e.g. cabbage leaves, is partly practised.

Households with goats make use of the natural grazing and to a lesser extent, available crop by-products (unprocessed) to feed their livestock. No forms of fodder banks are available at household level save for the Lucerne hay bales that are normally delivered by the government during dry seasons. In Mbuzini, over 80% of the villagers set their goats free in the morning and hope that they will come back on their own for kraaling in the night. If they do not, then someone would go and look for them. Villagers agree that this practice is common because the grazing area is close-by. Having villagers who do not really know the number of their goats is not uncommon since some goats do not come back on their own. Villagers are reluctant to employ someone to herd goats because they do not realize any meaningful income from them anyway. Only when one has a big number of goats one would consider employing someone (Mojapelo, Village Head for Mbuzini, personal communication). Ga-Nchabeleng has a hilly landscape which is browsed in autumn and winter together with crop residues in the fields (Table 5.1). According to Peacock (1996), this is termed 'supply driven' feeding as the owner has little control. Farm types with crops keep their animals on harvested

fields of sorghum in Ga-Nchabeleng and maize in Mbuzini during the winter period. Villagers in Ga-Nchabeleng graze their animals in an area called Lepellane, where over 70% of households with goats have made camps where they stay with their goats for the whole week, only to be relieved by their school-going children on weekends. An attempt was made in this study to come up with calendars showing the current situation concerning goat production in Mbuzini and Ga-Nchabeleng (Tables 5.1 and 5.3).

In both villages, the common type of housing is a kraal on one side roofed with corrugated iron, and left open on the other side. There is no separation between different classes of goats. Most kraals do not have walls to protect kids from the cold during the night.

### 5.1.2 *Breeding*

One of the main factors determining the overall productivity of any animal enterprise is reproduction. Rural households allow their goats to breed freely without monitoring and as a result inbreeding occurs. About 70% of the households interviewed in the villages confirmed that random mating is practised and no records are kept. In this regard households with goats in Mbuzini do not follow any breeding program therefore random mating in the veld by any buck (Table 5.1). Households are unaware of the many disadvantages associated with inbreeding. Inbreeding can result in occasional physical deformities in offspring resulting in low productivity, high mortality and poor fertility. More research could be done in this area, especially on issues concerning mortality in kids, and on suitable breeding programs.

### 5.1.3 *Health and water*

The common diseases that affect goats vary from place to place. The most common problem with goats is internal and external parasites (Peacock, 1996) but drenching is rarely practised in rural areas. In Mbuzini and Ga-Nchabeleng, ticks and internal parasites, ophthalmic disease, abscesses and heartwater cause the major healthy problems in goats. With the shortage of forage the households face, the goats are forced to graze close to the ground and get exposed to diseases. In the villages households do not use expensive drugs to keep their goats healthy as most can't afford them. Most households experience tick problems and use disinfectants, such as Jeyes fluid, engine oil, paraffin and methylated spirit. However, some households remove the ticks by hand using thorns or needles. A small fraction of households get assistance from animal health technicians and follow a vaccination program or go directly to veterinary shops for advice. Very few households use conventional methods, most of them use traditional medicines like leaves, crushed roots and stems of local trees such as *Mogalakane* for diarrhoea, *Leutlwautlwane* for eye infections, *Sekanama*, *Morwesa* for dystocia in cattle, *Segafane* leaves are used for Mad Cow disease and *Sebale* leaves for liver problems. All these traditional medicines are also used to cure human diseases.

Most diseases can be controlled through correct feeding, housing or kraal management, vaccination, dosing and dipping. Unfortunately enough, communal dip tanks are unusable due to lack of maintenance and disrupted water supply systems (Tables 5.1 and 5.3). During high rainfall animals drink from earth dams or ponds in the grazing camps in Mbuzini (Table 5.1), while in Ga-Nchabeleng goats drink from the Lepellane River when scarcities occur in winter. Table 5.2 summarises the management practices.

**Table 5.1 Calendar of activities for households with goats in Mbuzini**

Activities		Year											
		J	F	M	A	M	J	J	A	S	O	N	D
<b>Feeding</b>													
	Veld grazing												
	Crop residues												
	Feed supplements												
<b>Breeding</b>		J	F	M	A	M	J	J	A	S	O	N	D
	Random mating												
<b>Water for animals</b>		J	F	M	A	M	J	J	A	S	O	N	D
	Olifants River: If dry, depending on rainfall												
	Tap: If the pipes have water												
	Pond												
<b>Health</b>		J	F	M	A	M	J	J	A	S	O	N	D
	No specific Vaccination program												
	No drenching												
	Dipping (previously)												
	Drug purchase												
	Control of foot rot												
<b>Marketing and distribution</b>		J	F	M	A	M	J	J	A	S	O	N	D
	No specific supply of goats to a specific market												
<b>Rainfall</b>		J	F	M	A	M	J	J	A	S	O	N	D
	Rainfall distribution												
<b>Cropping</b>		J	F	M	A	M	J	J	A	S	O	N	D
<i>Maize</i>	Ploughing												
	And Sowing												
	Weeding												
	No fertiliser/manure application												
	No pesticide application												
	harvesting												

**Table 5.2 Management of goats in Mbuzini and Ga-Nchabeleng**

Management topics	Management practices	Households with goats giving this response in Mbuzini (in %)	Households with goats giving this response in Ga-Nchabeleng (in %)
Feeding	Free range only	86%	69%
	Sometimes supplement with Lucerne	14%	31%
	Back yard feeding (kitchen waste)	14%	24%
	Crop residues	19%	0%
Breeding	Free mating all year round	100%	100%
Health	Tick control measure	83%	0%
	Follow a vaccination program	18.6%	0%
	Seek advice from vet clinic and buy drugs	69%	15%

**Table 5.3 Activity calendar for households with goats in Ga-Nchabeleng**

Activities		Year											
		J	F	M	A	M	J	J	A	S	O	N	D
<b>Feeding</b>													
	Hillside grazing												
	Swamp grazing												
	Crop residues												
	No feed supplements												
	Plains and veld												
<b>Breeding</b>		J	F	M	A	M	J	J	A	S	O	N	D
	Random mating												
	Culling												
	Castration												
<b>Water for animals</b>		J	F	M	A	M	J	J	A	S	O	N	D
	Lepellane River												
	Scarcity of water												
<b>Health</b>		J	F	M	A	M	J	J	A	S	O	N	D
	No vaccination												
	Drenching												
	No dipping												
	Drug purchase												
	Spot control of ticks												
<b>Rainfall</b>		J	F	M	A	M	J	J	A	S	O	N	D
<b>Cropping</b>		J	F	M	A	M	J	J	A	S	O	N	D
<i>Sorghum for porridge &amp; beer</i>	Ploughing												
	And Sowing												
	Weeding												
	No fertiliser/manure application												
	No pesticide application												
	harvesting												
<b>Marketing and distribution</b>		J	F	M	A	M	J	J	A	S	O	N	D

Note: Vegetables include spinach, tomatoes, beetroot, onion, cabbage, beans, pumpkin and small plots of maize and cotton

## 5.2 Processing of by-products

Although goat meat and milk can produce a wide range of products, most rural households are not knowledgeable about them. Only goat skins are sometimes kept for use as mats and ceremonial purposes. Most households with goats do not use goat manure in crops; it carries too many weed seeds. Goats are presently marketed as live animals and no slaughtering is done at official abattoirs. Processing milk and meat is one way to make use of surplus production and this can increase a household's income. Goat milk is getting more popular with the high rates of HIV/AIDS infection as goat milk is believed to contain special antibodies for infected children.

### 5.3 Slaughtering age and weight

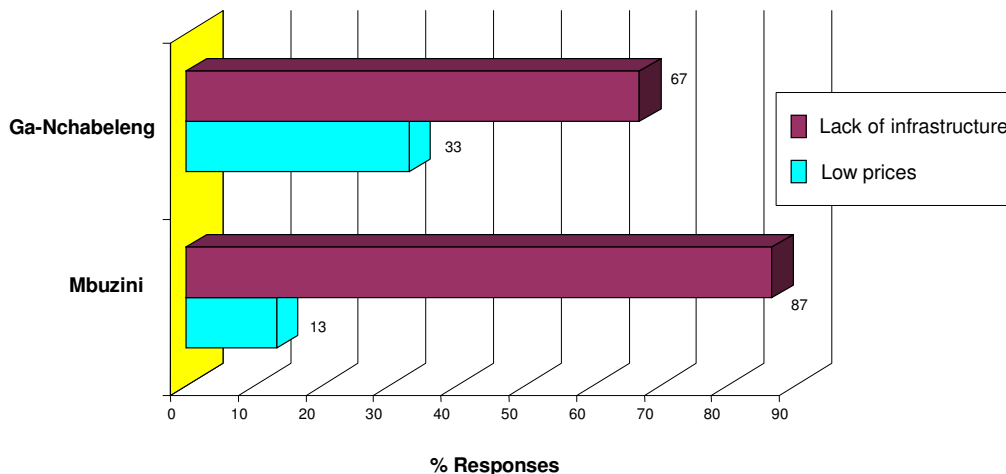
Currently, households in the two study villages are unaware of the right age and weight of slaughtering, thinking that the bigger the animal, the more money they will receive. It is best to slaughter goats at a young age, though, when the meat is tender and tastier without any after smell. Moreover, every culture has its own method of slaughtering, varying according to the state of animals at death and the way it is bled. Ritual slaughtering is practised by Muslims, whereby an animal needs to be conscious when bled. Traditional slaughtering depends on the culture and purpose of slaughtering. Humane slaughtering is done for household consumption; the animal dies quickly without feeling much pain. For traditional slaughtering households consider the colour and the sex of the goat to be of more importance.

### 5.4 Marketing of goats

Marketing is a complex activity which starts with the farmer's decision on how to dispose of his produce to the activities of the intermediaries. Developing of marketing strategies is based on product pricing distribution and market information. Many factors determine the quantity and the quality of the product. Of great importance could be the prices received at the various levels of the marketing process. At the farm level, the input and output prices will be the determining factors, while at the intermediary level determining factors would be market conduct, structure and performance, at the consumer level determining factors would include product price, incomes and substitutes.

In Sekhukhune District, there hasn't been any headway as far as goat marketing is concerned. Almost all goats are marketed as live animals with little value being attached to other by-products. Lack of information, appropriate infrastructure as abattoirs, roads and marketing points were cited by villagers as some of the problems. However 13.4% the households in Mbuzini noted that low market prices were a major contributing factor. Many cited lack of appropriate infrastructure as the problem. Households in Ga-Nchabeleng' held the same sentiments with 33% citing low prices and 60% citing lack of marketing infrastructure.

**Figure 5.1 Constraints associated with goat marketing in Sekhukhune**



The marketing of goats through a formal market in the Sekhukhune District in particular is still very dismal as compared to the total number of goats in the province (LDA, 1998). This can evidently be seen by the number of goats slaughtered in the abattoirs, hence portraying that there exists some kind of informal market. The potential production and off take of goats in the provincial flock is apparently promising but there has not been a very good demand of goats and their by-products on the market. Commercially goat by-products such as milk have been regarded by some households in Ga-Nchabeleng village as a specialty however resistance to consumption is culturally embedded, goats by products such as the hides are not marketed i.e. they are normally used by some households for cultural activities this also applies to manure which is left to pile up in the kraal except for some households who use it on their gardens. Cashmere production by communal farmers is yet to be explored due to the nature of the goats and lack of information on breeding for cashmere production.

#### 5.4.1 Present goat marketing practices

Most of the communal households interviewed mentioned that the farm-gate price they receive is quite low. However in the yester-years the marketing margin was minimized through the government intervention, which took great care of the produce reaching the consumer quickly. The slaughtering of sheep and goats has shown both increasing and decreasing trends, levelling off at about 4.5 million animal units. The mutton auction price has steadily increased from a low R 7.71/kg in 1993/94 to R14.59 /kg in 2000/01 (Table 5.4).

**Table 5.4 Trends in volume and price for small stock slaughtered in Limpopo**

Year	Total slaughtered	Auction price of mutton R/kg
93/94	623900	7.71
94/95	433800	8.77
95/96	4900000	8.26
96/97	4531000	10.57
97/98	4311000	10.65
98/99	4732000	10.13
99/2000	4793000	12.96
2000/01	4232000	14.59.

Source: LDA

Goats sold at around R186/unit while sheep sold at R468/unit. A positive correlation seems to exist between the number of goats slaughtered and the steady increase in prices over the years taking into account that the annual inflation rates decreased over the same period.

#### 5.4.2 Marketing channels

Currently the goats are traded informally i.e., out of hand sales, the buyers in the village buy directly from the farming households whereby no commissions are charged. In the recent years there existed some transactions in the district by means of liaison services whereby agents could bring buyers in touch with sellers on a commission basis; the municipality could facilitate the process by providing the auction grounds for the goats (SDM personal communication). The main buyers of goats in the region are believed to be the rural households. The live goat market is characterized by peak demand periods during the Easter (14%), December (17%) and the winter months (June-July; 69%) when most of the initiation ceremonies take place. However the seasonal demand has weakened during the past years due to the deteriorating economic circumstances (Roets, 2004). Accordingly some of the goat

products like the hides are normally thrown away and not marketed, in some cases though, the skins and hides are collected in these areas and sold to the skins agents, who export the skins as wet blues in pickling solution or in their dried form.

#### 5.4.3 *Supply and demand*

South Africa currently imports 10,000 tonnes of goat meat annually. Most goats are marketed in KwaZulu-Natal. Accurate figures to indicate the size of the market could not be obtained, but it is estimated that approximately 10,000 to 12,000 live goats are sold on average per month in KwaZulu-Natal where goat speculators are the main traders in live goats. Auctions in the producing areas have become less important. According to traders in live goats the demand has diminished during the past number of years. There is a general consensus that goats shipped into KwaZulu-Natal have to be sold within two weeks to avoid mortality losses due to disease. Moreover goats shipped from Namibia suffer much stress and should reportedly be sold within a week of arrival to avoid losses. This further calls for local goat producers to come into play. Locally the goat meat is still popular with the Indian communities in South Africa. The international markets which include the Middle East have not yet been explored for; currently there are no goat products being exported from South Africa. Relatively small quantities of meat type goats are slaughtered in local abattoirs. Official statistics on goat slaughter at abattoirs only shows Angora goats. There is some data provided by SAMIC of goat sales at abattoirs. According to these records, 2829 goats were offered for slaughter in 2000, 1783 goats were offered for slaughter in 2001, and 966 were offered (up until April), in 2002.

The number of goats slaughtered in the abattoirs is less than 5% of the total number (Table 5.5). This clearly reflects the lack of commercialization of goat meat. Utilization of goatskins is currently limited. After ritual slaughter goatskins are often left in the veld to rot. If sold to the skin brokers, the goat owner can obtain R0.50/kg for a dry salted skin. If the skin is cured it can be sold for R50. However if the skins are further processed into leather handbags and other items decorated with rural or tribal motives, the goatskin has a potential value of R1,000 especially in tourism industry (National Goat Task Team 2004).

**Table 5.5 Goats slaughtered in 1997 (in % of total number of goats)**

Province	Number of goats	Number slaughtered	Percentage (%)
Western Cape	259,059	10,381	4.02
Northern Cape	446,925	658	0.15
Free State	74,815	3,273	4.37
Eastern Cape	3,220,618	20,712	0.64
KwaZulu-Natal	833,129	871	0.1
Mpumalanga	81,814	201	0.25
Limpopo	1,017,024	21	0
Gauteng	13,968	81	0.58
North West	727,330	315	0.04
TOTAL	6,674,103	36,511	0.55

Source: Coetzee, 1999.

Official statistics estimate a production of approximately 290,787 kg of goat milk per lactation. The frozen and fresh milk can be sold through health and food stores, some supermarkets and home industry stores, however the demand of these milk products has so far surpassed the supply which has led to imports of around 23,040kg (milk powder) and 13,824 litres of canned milk (Roets, 2003 ). Fairview is the main cheese producer in South



Africa, with the total production estimated at 40,000kg per annum, about 70% of these products consist of Gotino and Rabiola, while the remaining 30% is Chevin and Cammerbent. Goat milk powder is produced by Chevita South Africa Ltd., Klapmuts. Most of the consumers of these products are those with allergy to cow/buffalo milk and mainly used by children. The contribution of Sekhukhune District has however remained dismal in this aspect; amongst the households interviewed a very small percentage (3%) showed interest in milk products with only a few households milking their goats to meet their household needs.

#### *5.4.4 Consumer preferences*

Most of the households have shown both the negative and positive connotations regarding goats and some of their by-products. Some say that goat meat is smelly, stringy and tough while on the positive side; a goat slaughtered at the correct age before secondary characteristics develop, will give meat that does not smell. The households interviewed have shown willingness to buy the goat products like the meat and milk if sold in the local butcheries and stores. Most consumers suggested that it is the price that matters most when buying meat products, but obviously at same price most would prefer beef. This suggestion is important when doing a market survey because one should understand who to target with which products. Furthermore, communal households have a way of processing a goat carcass so that the meat will not smell. This knowledge can be tapped for use in future abattoirs.

#### *5.4.5 Changes required in marketing for commercialization*

Communal farmers, once provided with the necessary information, are keen to improve the production of their goats. However, they wish to maintain a certain part or number of their stock for traditional purposes which they may sell to other villagers during the traditional ceremonies. This wish should not be ignored; a system should be created whereby households with the potential to commercialise goats can still use some of their goats (either by themselves or other community members) for traditional purposes.

The informal nature of the goat market has shown on how differential access to information has created a viable goat industry for some sectors of the population, whereas others without access to information have not developed even though they own the greatest part of the goat resource base. Formal institutions need to be created or existing institutions need to be upgraded to better equip households with the potential to commercialise goats with appropriate knowledge and skills for marketing and quality control. Research needs to shift its focus to areas where the greatest return for farmers can be achieved. This includes product related research, product development and market analysis. Negative consumer perceptions in South Africa can be dealt with in well-planned marketing and advertising campaigns. The underdeveloped export market calls for the involvement of government and policy makers in order to develop the necessary terms and infrastructure. The government should assist the communal households with the development of an appropriate marketing infrastructure for their produce so that these households will be able to produce competitive products.

## CHAPTER 6 ANALYSIS OF STAKEHOLDERS

Stakeholder analysis involves the process of identifying key stakeholders, getting to know how stakeholders perceive parts of the problem and their solutions, identifying shared and conflicting perceptions as well as identifying important relationships that require a particular action if the problem is to be addressed in a certain way. Agricultural development efforts often fail because collaboration between stakeholders is not given enough consideration resulting in interests of different stakeholders not being taken into account and/or roles of key stakeholders not clearly defined. Stakeholders are those individuals or organizations/institutions that have interests in the problem situation, therefore should have a role to play in the decision making process. It also shows existing nature of relationships between stakeholders, shows conflicts and can help find ways to resolve them. By understanding the system, it is possible to facilitate change (ICRA 2003). In this chapter, an attempt is made to identify and understand the objectives and current and future activities of relevant stakeholders and their interactions. Suggestions regarding their future roles regarding the desired situation are proposed.

### 6.1 Key stakeholders and their objectives

During the planning phase of the study, secondary literature was screened to identify stakeholders relevant in the problem situation. The list was then updated during the first meeting with the monitoring team and in both the introductory and the mid-term workshops that were held during the field study phase in South Africa. Two stakeholders (department of water affairs and commercial farmers with goats) who were not previously identified as important actors during the analysis of secondary information phase were later on added during a series of workshops with other identified stakeholders. Table 6.1 shows stakeholders who were identified as key. Reasons behind the decision are presented as well.

**Table 6.1 Key stakeholders for goat commercialisation in Sekhukhune**

Key stakeholders	Reason for being key stakeholder
Government (LDA, municipalities)	Formulation and implementation of agricultural development policies
ARC	Technology development, training transfer
Private sector ( NGO's, social facilitators, consultants)	Technology dissemination; social group formation
Agricultural Development Centres (universities & agricultural institutions)	Research and technology development, training and information development
DFSR&E. (Research)	Identify researchable areas, carry out research and extension services to the farmers
Department of Water Affairs	Provision of infrastructure for animals in the grazing camps
Financial institutions (micro-credit institutions)	Provision of small loans
Tribal Authorities	Assist on decision making for village development
Marketing organisations (National Agriculture & Marketing Council, auctioneers, abattoirs, Limpopo Dairy)	Providers of marketing opportunities
Communal farmers	End users and implementers of various programmes and projects initiated in the area

Objectives, perceptions and interests of these stakeholders were explored through interviewing. The objectives of these stakeholders are listed in Table 6.2. Often conflicts and development projects can be related to the conflicting objectives among stakeholders (ICRA learning materials, 2004). Analysis of different stakeholder objectives can then lead to discovery of the conflicting areas where remedies are necessary. Shared perceptions are important as they represent the platform on which collective action may be built on. All the stakeholders that were identified to be important in this study have their major common objective as sustainable rural development. One of the major outcomes of a series of workshops with stakeholders was the need for strengthening inter-institutional relationships.

**Table 6.2 Stakeholders’ objectives on indigenous goat commercialisation**

Key stakeholders	Objectives
Sekhukhune households interested in commercialising goats	<ul style="list-style-type: none"> <li>execute recommended actions and provide with goats that are required for the commercialisation process.</li> </ul>
Government (LDA,DFSR&E)	<ul style="list-style-type: none"> <li>provide regulatory and administrative framework and services to farmers in Limpopo</li> <li>identify and implement development projects</li> <li>monitor the management of agriculture resources</li> <li>facilitate with the formation of various interest groups in agriculture</li> <li>provide with extension services appropriate for agricultural development</li> </ul>
ARC	<ul style="list-style-type: none"> <li>develop relevant low cost technologies for improving rural livelihoods. These technologies serve as input for agencies involved in development and extension work in rural areas.</li> <li>ensure that agricultural standards are put in place by conducting research with special focus in the field of animal and crop production</li> <li>assist communities in getting funds, initiating projects and in preparing business plans</li> </ul>
Private sector (consultants and social facilitators)	<ul style="list-style-type: none"> <li>provide assistance to farmers on the latest technologies through training and supplying agricultural inputs to the farmers</li> <li>assist the community in mobilization of poverty alleviation projects</li> </ul>
Local universities (e.g. University of the North, University of Venda)	<ul style="list-style-type: none"> <li>provide formal education (human resource development) in agriculture and related fields to prepare students for careers in the agricultural sectors</li> <li>carry out collaborative agricultural research appropriate to the physical, economic and social environment of Limpopo and South Africa</li> <li>plan, design, implement and evaluate training and research programs</li> </ul>
Department of Water Affairs	<ul style="list-style-type: none"> <li>carry out operations and maintenance of water supply and its infrastructure to inhabitants</li> <li>ensure sustainability of the water supply systems</li> </ul>
Financial institutions (Land Bank)	<ul style="list-style-type: none"> <li>provide support to the development of the agricultural sector in the form of long-, medium- and short-term loans required to meet financial needs, including purchasing of land and equipment, improvements on assets and credits on production.</li> </ul>
Tribal Authorities	<ul style="list-style-type: none"> <li>maintain law and order in rural areas</li> <li>play an active role in the development programme in communal areas</li> <li>make decisions on issues concerning land and land use by villagers</li> </ul>
Markets (auctioneers/ abattoirs, supermarkets, Limpopo dairy)	<ul style="list-style-type: none"> <li>provide a marketing platform for goats and their by-products</li> </ul>

## 6.2 Conflicting and shared perceptions

Results of conflicting and shared perceptions of the problems (Tables 6.3 and 6.4) assisted the ICRA team and the key stakeholders with the identification of development strategies by providing with parts of the required actions if communal farmers are to commercialise goats.

**Table 6.3 Conflicting perceptions among stakeholders on problem situation**

<b>Key stakeholders</b>	<b>Conflicting perceptions on the problem situation</b>
<ul style="list-style-type: none"> <li>• Extension officers in Sekhukhune</li> <li>• Local universities</li> <li>• Land Bank</li> </ul>	<ul style="list-style-type: none"> <li>• Goats contribute to the livelihood as they are sold locally; they form part of the way communal farmers make a living. The only setback is poor management practices.</li> <li>• Goats do not bring meaningful income to the households</li> <li>• Unavailable markets</li> </ul>
<ul style="list-style-type: none"> <li>• Sekhukhune communal farmers</li> <li>• SDM</li> </ul>	<ul style="list-style-type: none"> <li>• Farmers want to sell but there are no suitable markets. Goat prices are low to think of marketing, no information on marketing and infrastructure appropriate for goat production (water, grazing camps, dips) is not available</li> <li>• Farmers are not market oriented and are not interested in selling goats, they are not market oriented.</li> </ul>
<ul style="list-style-type: none"> <li>• SDM</li> <li>• Vleissentraal Bosveld</li> </ul>	<ul style="list-style-type: none"> <li>• Interested educated unemployed youths should be targeted, trained and given financial assistance to start the production of the small stock. Then these youth can provide employment to the poorest of the poor.</li> <li>• Communal goat farmers should get organised through the Kgoshi or form a farmers union to sell their small stock at the auction, this will ensure sufficient number of animals for sale and credibility of the farmers</li> </ul>

**Table 6.4 Shared perceptions among stakeholders on problem situation**

<b>Key stakeholders</b>	<b>Shared perceptions on the problem situation</b>
Land Bank, LDA, Local universities, ARC, Sekhukhune communal farmers, LDA, Vleissentraal Bosveld, SDM	<ul style="list-style-type: none"> <li>• farmers are not organised</li> <li>• no suitable infrastructure for commercialising goats</li> </ul>
Sekhukhune communal farmers, Land Bank, ARC, and SDM	<ul style="list-style-type: none"> <li>• no information on production and marketing aspects</li> </ul>
SDM, LDA, Sekhukhune communal farmers	<ul style="list-style-type: none"> <li>• traditional beliefs – goats are associated with ancestors and are slaughtered only during special ceremonies</li> </ul>
Local universities, Sekhukhune communal farmers, LDA, Extension officers	<ul style="list-style-type: none"> <li>• communal grazing is difficult to manage</li> <li>• poor management practices for livestock</li> </ul>
Sekhukhune communal farmers, Local universities	<ul style="list-style-type: none"> <li>• stock theft and high mortality rate in kids</li> </ul>
Vleissentraal Bosveld, SDM,	<ul style="list-style-type: none"> <li>• products from goats are of low quality</li> <li>• goats are very thin and do not fetch good prices at the auction</li> </ul>
Sekhukhune communal farmers, Local universities, SDM, Land Bank	<ul style="list-style-type: none"> <li>• negative perceptions (the goat is a poor man's animal, goat meat stinks, goats do not bring any meaningful income)</li> </ul>
SDM, Sekhukhune communal farmers, LDA	<ul style="list-style-type: none"> <li>• continuous drought often leading to feed and water shortages</li> </ul>

During the process of analysing constraints towards commercialising, stakeholders agreed not to focus on production aspects at the moment, but to focus on creating a favourable environment for communal farmers to commercialise. Initially there were conflicts on who to target, with some rural development organisations thinking of empowering youths and women but in the current situation, goats are with the middle and the old aged who are mainly male. Results from the field showed that decisions on goats are made by the household head and because of the patrimonial nature of the society, empowerment of the youths and women should be considered well after the setting up of the goat industry with those members of the society currently owning goats.

### **6.3 Stakeholder linkages**

A stakeholder linkage is the interaction between two stakeholders which allows for exchange or transfer of information, resources or power. Such a linkage may be formal or informal. Informal linkages could be in the form of joint activities or even personal contacts or friendship whereas a formal linkage may be institutionalized with direct supervision or authority, a joint working committee or a liaison person linking stakeholders together.

In the study area, each organization is linked with the other differently depending on interests and problem situations. For instance, most stakeholders are linked on the ‘working together’ and service provision basis. The criteria used in assessing linkages were based on the relevance of service, intensity and formality of contact and direction of the interaction whether it is a one or two way. Table 6.5 shows the resulting matrix. Linkages are rated from being strong, weak to having no relationship at all.

In this matrix, LDA has strong linkages with ARC, DFR&E, Land Bank, Department of Water Affairs, and Tribal Authorities. The reason is that they all serve the same client; the communal farmer, and carry out some joint developmental efforts. No direct links exist between LDA and the Consultants or Markets. The linkage between LDA and the farmer (through the extension service), is a rather weak one. Most linkages among other stakeholders are positive but there is still scope for establishing strong linkages among many of them which are currently non-existent. For effective implementation of programmes, the need to improve linkages with the Tribal Authorities and the farmers is crucial.

### **6.4 Proposed improvements in the roles of different stakeholders for better services**

Various government departments dealing with farmers require a better co-ordinating mechanism for optimal use of scarce financial resources which are otherwise spread thinly over the farmers by each department. If goat commercialisation is to take place, then there should be harmonisation of activities being carried out by different organisations/institutions that will be working with communal farmers in Sekhukhune District. Roles of each stakeholder should be clearly spelt out to avoid duplication. There is need to establish a forum that links the different stakeholders not only at the management levels but more importantly at the field level where the actual delivery takes place. Such a forum has to make both short and long-term strategic plans based on the achievements of specific targets and milestones. It has to monitor the progress of activities in achieving these targets and milestones as well as evaluate its efficiency and effectiveness for future improvements. This will ensure a better co-ordinated approach which avoids duplication and conflicts of interest.

**Table 6.5 Linkage analysis for stakeholders involved in goat commercialisation in Sekhukhune**

	<b>Government: municipalities &amp; LDA</b>	<b>ARC</b>	<b>Private sector (soc. facil.&amp; consultants)</b>	<b>Agricultural Development Centres</b>	<b>DFSR&amp;E</b>	<b>Financial institutions</b>	<b>Tribal Authorities</b>	<b>Markets (auctioneers abattoirs)</b>	<b>Farmers</b>
<b>Government: municipalities &amp; LDA</b>		(+) collaborative research	No linkage.	(+) in training.	(+) collaborative activities	(+) no funds, only information	(+) interventions	(-) sale yards not well maintained	(weak)
<b>ARC</b>	(+) collaborative research		(+) fund training and small projects	(+) collaborative research and farmer training	(+) collaborative research and technology transfer	(+) Land Bank provides small loans to farmers	(+) interventions & technology transfer.	(+) quality checks and animal disease control	(weak) do not know them
<b>Private sector. (social facilitators &amp; consultants)</b>	(+) collaborative efforts; heifer project	(+) farmers, unions private banks.		(+) collaborative research and farmer training	(+) collaborative research and technology transfer.	(+) for funds	(+) interventions & technology transfer.	(-) blames for mishandling of animals	(weak) do not know social facilitators
<b>Agricultural Development Centres</b>	(+) collaborative activities	(+)	(+) collaborative research		(+) collaborative research	(+) funds training and research.	(-) do not know them	(weak) quality checks & disease control	No direct linkage
<b>DFSR&amp;E</b>	(+) collaborative activities	(+) collaborative research	(+) collaborative research	(+) farmer training		(+) funds for their projects	(weak) lie and disappear	No relationship	(weak) do not know them
<b>Financial institutions</b>	(+) small loans to farmers	(+) funding	(+) for funds	(+) funds training and research.	(+) project funding		No strong relationship	No relationship	No linkage due to lack of info
<b>Tribal Authorities</b>	(+) intervention & technology transfer	(+) intervention & transfer of technology	(-) to (weak) relationship when it comes to R&D.	(+) for technology transfer	(+) intervention & transfer of technology	No relationship / linkage		No relationship	
<b>Markets (auctioneers abattoirs,)</b>	(weak) at the moment.	No relationship	No relationship	No relationship.	No relationship	No relationship.	(-) to (weak)		(weak) not organised
<b>Farmers</b>	(weak)	(weak) not familiar	(weak) not familiar	(weak) no contact	Linkage only via extension	No linkage		(-) poor prices	

Notes: (+) strong relation; (weak) weak relation; (-) negative relation. In first row and column stakeholders are listed. Perspectives on other stakeholders are presented inside

As reflected in the linkage matrix, strong and weak linkages among key stakeholders have been identified. It is of paramount importance for stakeholders to strengthen the weak linkages and where possible try to establish new linkages for the purpose of implementing the proposed strategies that would bring the required changes in the commercialization of goats in the Limpopo Province. Some of the linkages that require immediate attention include:

#### **LDA and communal farmers**

This linkage is important as both will play a key role in the implementation of the proposed action plan to increase the household incomes by goat commercialisation. The farmer, being both implementer and beneficiary, requires a favourable environment and appropriate knowledge and skills to participate in the project that will be coordinated by LDA.

#### **ARC and Government Extension Department**

This relationship may be potentially conflicting. ARC feels that the extension service does not cooperate with other service departments that seek collaboration. They also feel that the word extension worker has been detrimental to the service delivery system since many perceive it to mean people who only get information from someone and then transfer it to the end user. Yet the truth is that the extension service also generates very useful field information. The extension service feels that other service providers always want to get to the farmers first and later on seek collaboration when it is too late. A good working relationship needs to be worked on since research is needed but its focus and findings need targeting.

#### **LDA and social facilitation groups**

It is proposed that LDA establishes a link with other social facilitation groups who can play a key role in organising and training farmers on the importance of social groupings. Through LDA, social facilitators can fulfil the role to mobilise farmers and form groups. This may lead to the registration of co-operatives at municipality and district levels.

#### **LDA and the private sector (consultants and NGOs)**

NGOs and consultants play an important role in availing resources and services that farmers require in the implementation of projects. It is important that this link is established and strengthened as they jointly could provide capacity building and training needed by farmers so that they can be able to form and sustain the co-operatives and their activities.

#### **LDA and other research and training institutions**

For training, technology development, and transfer and advisory services, concerted efforts by all stakeholders are required. Linkages should be strengthened for co-ordination of project activities. This reduces duplication of activities and enhances efficient resource utilisation.

#### **ARC and communal farmers in the study area**

Currently, there is no link between ARC and communal farmers in at least the two villages that represented Sekhukhune District. This link needs to be established to provide the communal farmers with an opportunity to participate in the ARC training programmes.

#### **Markets and communal farmers**

For the proposed strategies, the link between markets (e.g. supermarkets and abattoirs) and communal farmers currently does not exist. For communal farmers to meet market requirements, they will need market information which can be provided through their link with the markets. However, markets prefer to deal with a social organisation rather than with individuals. This means farmers need to organise themselves first.

## CHAPTER 7 DRIVING FORCES AND FUTURE SCENARIOS

### 7.1 Driving forces

Driving forces are factors external to the focus of the study, in this case commercialization of goats at a local level, and hence are not under the control of the stakeholders in Sekhukhune. These forces can cause changes in livelihood, agricultural and political systems and as such determine the future situation. However, in this study the following factors were considered as internal: unorganized markets, theft, predation, diseases, high mortality rates and land degradation. The team believes that local stakeholders may have some influence on these factors. The external factors were identified through semi-structured interviews with different stakeholders including farmers. Identified external forces outside the control of local stakeholders included:

- Government policies, such as formation of cooperatives, land redistribution, agricultural development and initiatives on 13 nodal points identified by the government and Limpopo Kid of Kalahari Kid Corporation (KKC) as a brand for exports.
- Market issues, such as price of goat meat versus price of substitutes and
- Population structure (age composition and impact of HIV/AIDS epidemic) in relation to goat ownership
- Drought, and its effect on livestock numbers and productivity.

#### 7.1.1 Government policies

Prior to democracy in 1994, the agricultural policies were designed and implemented by the former South African government to provide considerable government support and assistance to the whites while the black farming sector was destroyed (Oni *et al.*, 2003). The change in government in 1994 resulted in a shift in the government policies such as changes in the black farming sector now known as the small, medium and micro enterprises (SMMEs). In an effort to achieve the goals of promoting agriculture and rural development the following policies were identified as to affect goat commercialisation:

- Rural Infrastructure policy
- Animal Identification Act of 2002, through branding and tattooing.
- Land Redistribution for Agricultural Development (LRAD) and Land Restitution
- Formation of cooperatives and farmer organizations.

These policies give emphasis to the development of rural agriculture in moving communal farmers into commercial production through the provision of infrastructure and land and the setting up of social organisations. As part of production policies, the provincial governments are providing essential infrastructure to rural areas. Such infrastructure includes roads to facilitate access to production areas and electricity which is essential for efficient agricultural production and processing systems. Some stakeholders felt that a competitive marketing chain for goat products needs to be available if communal farmers are to commercialise. If the infrastructure necessary for value addition is put into place and under the control of farmers themselves, then it could promote commercialization of goats by communal farmers.

Through the Animal Identification Act (2002), a directorate within the Department of Agriculture enforces identification and traceability by branding or tattooing livestock as a way to secure external markets as well as a measure against theft. Communal farmers are



expected to brand and tattoo their stock. Households interested in commercialization will have to register their livestock and have them tattooed. If members in the cooperatives do not register their animals then they won't enter local or export markets. Formation of market oriented cooperatives from village to district level, as the governments' vehicle to skills and market development is a positive driving factor to commercialization of goats. Therefore commercializing of goats will now and in the future be influenced by ownership or membership rights in cooperatives drafted by the government.

Sekhukhune District was identified as one of the 13 nodal points that requires more carefully planned development initiatives. As a result, the government of South Africa initiated an Integrated Rural Development Programme (IRDP) for the 13 nodal points of which Sekhukhune is ranked as the second poorest. The idea behind the identification of nodal points was to identify initial targets for a rural development programmes and strengthening of infrastructure. The benefits of this include investments through cooperatives and in nodal areas through infrastructural development, provision of funds to assist with development of emerging households. One setback is the issue of communal land ownership that makes veld management systems difficult as it still remains an open access resource. Land Redistribution and Agricultural Development can help households to commercialize considering the fact that a sense of land ownership would bring better management of land resources. The public sector in SA needs to release land to emerging farmers and provide LRAD grants for them to engage in goat farming. If not, then tribal authorities need to develop policies on land use that may facilitate improved livestock production. Part of LRAD is the Land Restitution Policy where people claim back their disposed land which might affect sites identified for infrastructure construction and also communal grazing land.

Agricultural policies as driving forces may be perceived as types of state intervention in the agricultural sector. These interventions may be designed to influence input and output prices and income of households (Oni *et al.*, 2003).

#### 7.1.2 *Marketing issues*

Commercialisation of goats will be affected by marketing aspects such as the prevailing inflation rates, exchange rates if export markets are targeted, demand and supply of substitute products among many others. Although the South African Reserve Bank (SARB) only met its 3-6% inflation rate target in 2003, this might be affected by depreciation of the rand and high consumer spending (Brouwer, 2004). As higher inflationary pressure is expected for 2004, price increases for agricultural products might become a reality leading to competition between red and white meat. The price of goat meat and its by-products versus the price of substitute products will therefore be a driving factor toward commercialization. The effect of price changes for goats or substitute products will depend on consumer preferences and imports. Presently the price per kilogram of mutton is higher than that of beef or pork and highly consumed and imported. Goat meat is healthier with low cholesterol but rarely stocked in retail stores because of lack of awareness. Goats are not a high fibre value animal therefore value addition to meat, milk and skin are an option. The products have unique, sellable and high value characteristics that yield good profit margins than unprocessed or live meat. The price of goat meat or products compared to substitutes will be competitive if value is added. But lack of processing infrastructures such as cooperative abattoirs, and knowledge on goat management are some of the factors limiting the exploitation of the available markets on goats. As an example, Limpopo Kid of the Kalahari Kid Corporation (KKC) aimed at creating a viable commercial goat industry in Limpopo can assist in local or export markets

for these products. If the products are branded through recognised systems then marketing of goat products will be achieved.

Other factors that are closely related to the market forces and can limit commercialisation of goats are:

- Provision of subsidies to farmers in developed countries,
- Dumping of these subsidised products in South Africa or other countries,
- Adherence by farmers to complicated and strict international export and regulations,
- Outbreak of goat diseases negatively affecting the demand of goat meat and by-products.

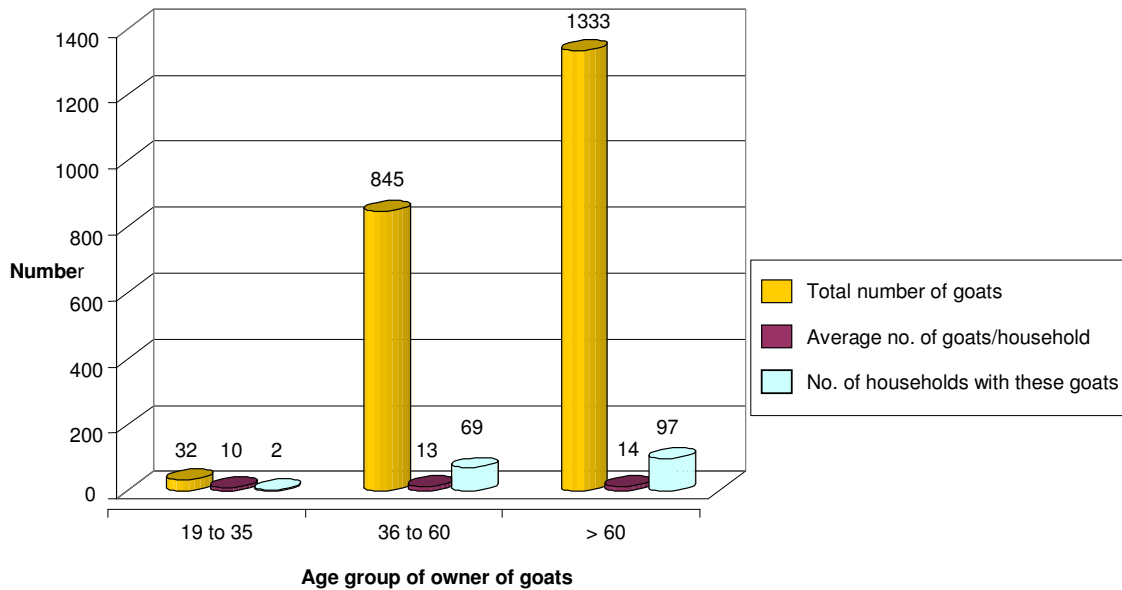
Large amounts of red meat are imported annually due to the country’s exposure to the international markets and droughts. This has been one of the major inherent factors that led the country to have a low performance in the goat and cattle processing industries.

### 7.1.3 Population structure

#### Age composition of potential households

Figure 7.1 shows that households with goats mainly consist of the middle aged and the old aged people. Capacity building on goat value addition and better management practices will have to be carefully targeted. Designing of the knowledge and skill development must take into consideration the nature of people with goats.

**Figure 7.1 Age groups of owners of goats in Ga-Nchabeleng**



A large proportion of the Limpopo population is female (55%). About 45% of the total population is less than 15 years of age. This implies that the population of the province has a high potential for growth from natural population expansion. The effect of population growth on commercialization of goats is that, it is likely to increase the land use intensity by reducing

the available land per capita for grazing and cropping. About 27% of the population of working age (age: 15-65) is employed, 16% are unemployed and 57% are not economically active (S. Africa Statistic, 2001; www.statssa.gov.za). The result is that the province has the second highest unemployment in South Africa and hence a high rate of migration by the youth to the cities in search for jobs. The rural-urban migration is usually among the youths, an age group which currently does not own goats.

### **HIV/AIDS epidemic**

Another factor to consider is the effect of HIV/AIDS on middle aged groups. Over 10% of the total population in Limpopo is infected with HIV and the prevalence in adults (age: 15-49) in South Africa is expected to reach 25% in 2010 from 5% in 1996 (Erasmus, 1995). It is the active group, mainly the youths that is being affected more by aids in South Africa. Ironically, goats in communal areas are with the more stable group (the middle aged and the old). To sustain formation of cooperatives and commercialization, a stable or settled group that is neither too old nor highly affected by HIV is better targeted. The effect of the HIV epidemic does not only influence population growth but also the ratio of active versus inactive people.

#### *7.1.4 Drought*

Agricultural production in Limpopo was found to be vulnerable to drought and other natural disasters (Oni, 2003). Drought was mentioned as a threat beyond human control by households and a crucial factor for commercialization. A constant supply of fodder and its reserves are of importance to all livestock in dry periods, except in severe situations where goats are less affected than cattle or sheep because of their hardiness. Then, as part of the agricultural policies, communal farmers affected by drought are assisted by the provincial government in developing dryland livestock farm management systems under risky climatic conditions. In order to qualify, households have to reduce their stock numbers which will affect the maximum numbers of goats to be slaughtered daily. Cooperatives will be affected as they will under supply abattoirs and tanneries with optimum goats for processing.

Drinking water for animals was also mentioned as a major problem in Sekhukhune villages which is a setback on all development initiatives. Households have shortage of both human and animal drinking water leading to competition for water as a basic resource. As one of the agricultural production policy, optimal use of water resources for production is promoted by the Limpopo Provincial Department of Agriculture (LDA) together with national Department of Water Affairs and Forestry (DWAF). This is to ensure an adequate and consistent supply of water for agricultural purposes but it is still not being practised in rural areas.

Sekhukhune was said by communal farmers to be frequented by both lack of fodder and water due to low amounts of rainfall. The president confirmed this by declaring Limpopo as part of the six drought-stricken provinces, disaster areas (Stuart, 2004). Sekhukhune municipality received a R5.5 million drought relief fund which was for subsistence and commercial farmers (BuaNews, 2004). Through targeting of livestock households the funds can be invested equally to the needy farmers. Drought is an external factor that can be predicted by meteorologists but can't be prevented from occurring.

## 7.2 Future scenarios

A future scenario is a future possible situation as a result of a combination of driving forces. It is also a vision of what the future might be like. It may be regarded as a hypothesis that needs to be validated through further research. Scenario planning is about exploring alternative pathways into the future. Different scenarios are possible based on the nature and combination of the driving forces which might be negative or positive. One combination of the driving forces may result in a positive scenario where all driving forces are favourable for a goat commercialization environment. For example, the household income and contribution of goats to the economy of Limpopo will increase, only if there is a stable population structure, no drought, good markets and more favourable government policies. This will happen if the government spends more on law and order, infrastructure, HIV/AIDS programme, and other social services. Another combination may delay the process of commercialization if conditions are not favourable. Based on the expected combination of these driving forces two extreme developmental scenarios were identified for the target area:

### 7.2.1 *The “growth” scenario*

#### **Government policies**

Policies on rural infrastructure, land restitution and local economic development (such as RDP and LRAD) will enhance the commercialisation of goats. Since the policy on rural infrastructure is aimed at providing the necessary infrastructure for development of the rural areas agricultural households stand to benefit. Policies such as LRAD and land restitution might lead to increase in availability of communal grazing land which will enhance the production from small stock.

#### **Productive population increase**

The trends in HIV/AIDS may subside in future. The proportion of agricultural population suffering from this disease may decrease, resulting in an increased number of productive rural populations engaged in goat production. Better health conditions and less labour shortage which will help the farming community to reap more benefits from commercialization of goats. The demand for products is expected to increase with the stable population.

#### **Price of beef and goat meat remains constant**

Increase in population will lead to increase in demand of goat and beef meat. With value addition the price going to households might as well increase. The prices of both goat and beef are expected to be constant, because an increase in livestock will be offset by an increase in population demanded for such products.

#### **No drought**

This is positive condition for increased biomass production. This would provide more feed for animal production and if combined with better management, then the number as well as the productivity of goats would increase. This will also ensure continuous supply of goats and their products. Contract buying and venturing into new markets can be possible which is ideal for commercializing. However there will be a competition between livestock and human population in natural resource utilisation, in particular land.

### 7.2.2 *The “no-growth” scenario*

#### **Government policies**

The 1996 Agricultural Marketing Act (that promoted the deregulation of marketing boards that existed during the apartheid regime) failed to put in place the necessary structure to capacitate the previously disadvantaged farmers. Another policy that will affect commercialisation of goats is SA’s partnership or Free Trade Agreement (FTA) with countries that are still subsidising their agricultural sectors (e.g. EU). Currently, SA is negotiating a FTA with the USA and other countries.

#### **Productive population decrease**

The impact of AIDS will be high and will increase even further in the near future. The proportion of agricultural population suffering from this disease will increase, resulting in a decreased number of productive rural populations engaged in goat production. The demand for products is expected to decrease with a decreasing active population. The gap between the old age, middle and young generation will widen resulting in smaller proportion from the middle and young rearing small stocks.

#### **Price of red meat will decrease but more for beef than for goat**

Decrease in productive population may lead to decrease in demand of red meat. The price of beef meat will decrease as people start to de-stock because of droughts. This will then push the price of cattle down and rational consumers are likely to buy/prefer beef meat due to a decreased price. However, in the long run it is expected that the price of goat meat will decrease less than of beef. This is due to its carcass quality that is not so much affected by droughts under communal grazing systems. Moreover goats are drought tolerant and they will still kid.

#### **Drought**

This is the worst condition for both human and livestock population. The goat population will decrease but at lower rates than the cattle population, because goats are drought tolerant. Drought may hinder continuous supply of goats and their by-products, affecting contract buying and venturing into new markets, hence affecting commercialization. There will be severe competition between livestock and goats on the utilisation of available natural resources. But goats are the hardier species.

### 7.2.3 *Conclusion*

The “growth scenario” will promote the activeness of the goat “production-marketing” chain. The “no-growth” scenario is clearly affecting other livestock species more than goats. Under the “no-growth scenario”, however, the goat “production-marketing” chain may be made more active and competitive if value addition is put into place. This would result in diversification of goat products and widens the chain to a goat “production-processing-marketing” chain. Because this chain becomes longer, the processing should be done by the farmers themselves so that the benefits go directly to them. However, for farmers to be able to process, a cooperative infrastructure needs to be put in place. This cooperative infrastructure has to produce products that are demanded by specific niche markets that need identification. If the preconditions (identification of niche markets, cooperative organisation and infrastructure) can be put in place, then both scenarios will show a promising future for the commercialisation of indigenous goats in the Sekhukhune District.

## **CHAPTER 8 DEVELOPMENT STRATEGIES**

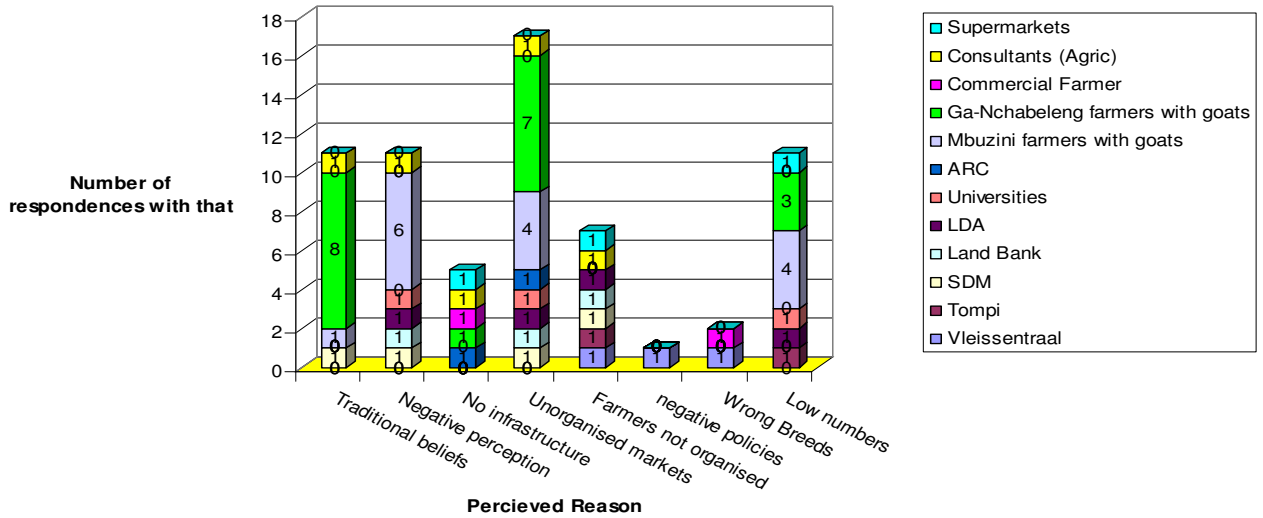
A strategy may be defined as the combination of processes (plans, decisions and acts) that an individual or a group of individuals (a firm, a family, etc.) develop purposively, and which aims at changing their social, economic and/or physical environment. Such processes combine resources and/or techniques and/or knowledge and know-how (Olivier de Sardan, 1995). Development strategies are those proposed activities, which if implemented can help in improving the problems under investigation. A development strategy is said to be sound if it meets the three criteria namely: minimize the risk, make use of the locally available resources and exploits future opportunities. If it is required to pursue several strategies at the same time in order to change the environment, these strategies will form the basis for the development and implementation of an action plan.

### **8.1 The development of strategies**

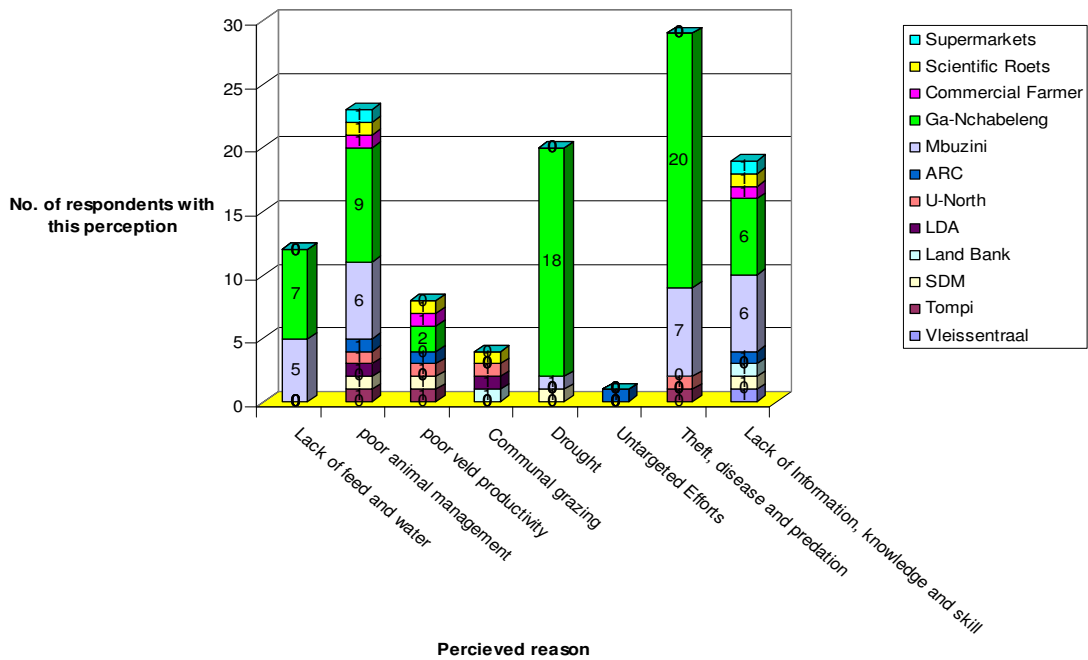
Strategy development began with analysis of the problem situation. Key stakeholders were interviewed (including the households with goats) and the results of how they perceive the problem are summarised in Figure 8.1. Problems that were cited by at least 50% of the stakeholders are: negative perception by both the communal farmers and the consumer, lack of infrastructure, unorganised markets, farmers not organised, poor animal management, poor veld productivity and lack of information, knowledge and skills. At various workshops with key stakeholders it was agreed that the main focus should be on reasons that affect farmers' objectives to commercialise. Such problems need solid solutions that may require long-term planning. During the initial process of the team's search on solutions for communal farmers to commercialise, some potential strategies were given as summarised in Figure 8.2. Most stakeholders believed that a robust action plan should incorporate strategies such as having organised farmers, markets and infrastructure, create awareness among farmers and consumers about the value of goats, and train farmers to have the correct knowledge and skill for commercialising goats.

The two scenarios that resulted from different combinations of relevant driving forces (Chapter 7), have also been used to screen the different potential strategies (or solutions). This resulted in the identification of a manageable number of relevant strategies. The implementation of these relevant strategies in a combined action plan will result in a community-based value addition system that incorporates the organisation of farmers and provides a good economical environment for the marketing of indigenous goats by communal farmers. This robust action plan was agreed on after it was tested and found to fit under the best and the worst predicted scenario. Because of the small size, all stakeholders agreed that selling indigenous goats as live animals for meat will not encourage commercialisation of goats because of the inferior carcass weight and quality of meat expected under the current situation. Value addition analysis produced some encouraging results which led stakeholders into advocating for a strategy that would encourage value addition. Infrastructure development was identified as another strategy but with a caution that, if value addition is to be done by an outsider (outside the control of the communal farmer) then the communal farmer will not benefit and this will not solve the problem in any way.

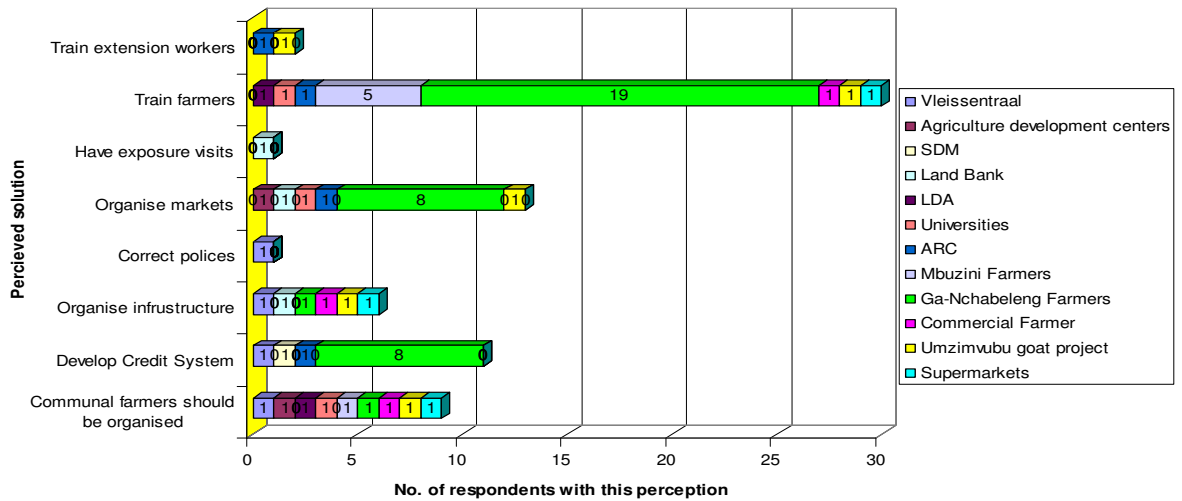
**Figure 8.1 Perceived reasons for communal farmers not to commercialise goats**



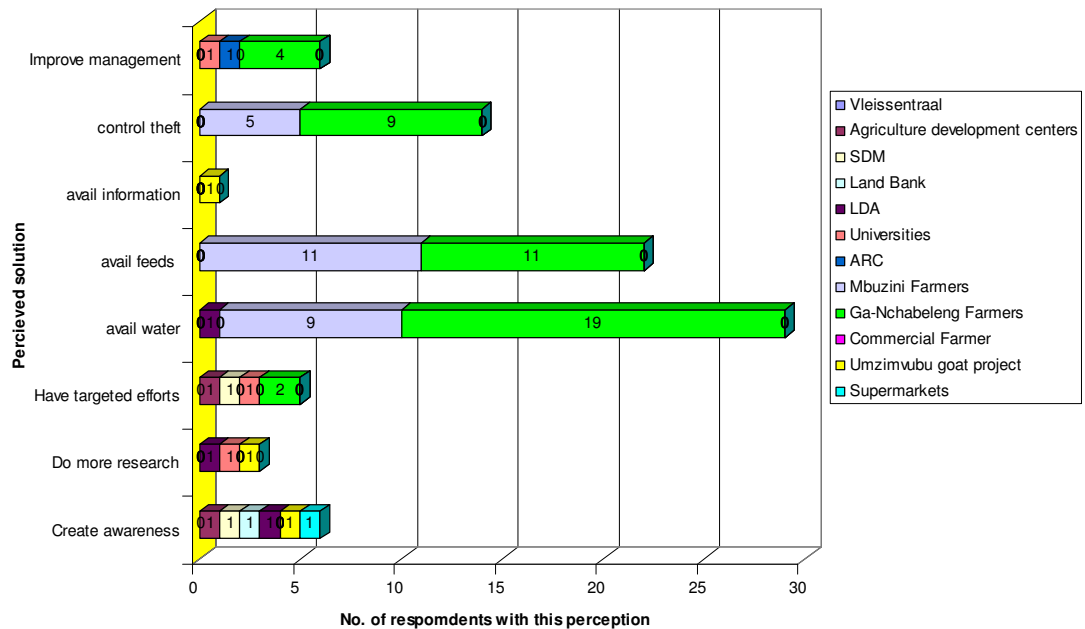
(Continuation; please note change in scale of Y-axis)



**Figure 8.2 Perceived solutions for communal farmers to commercialise goats**



(continuation)



Tables 8.1 and 8.2 show how value addition from a co-operative infrastructure through which farmers will be share holders would help in increasing the value of indigenous goats. The expected value of a goat (that has been looked after well) when sold live for meat is presented in Table 8.1. The value of the same goat when sold in the form of diversified products is presented in Table 8.2.



**Table 8.1 Value of goat sold live for meat without any value addition**

Live weight of a goat (7months old)	35kg
Weight of the carcass(with bones)	17.5kg
Price per kg	R15
Total cost of the goat (meat)	(17.5kg x R15) =R263

Source: ARC– Animal Nutrition and Products Institute

The value realized from a goat whose meat has not been processed is only R263. However this value can be doubled when value addition is pursued as shown in Table 8.2.

**Table 8.2 Income from goat with value addition**

Processed product	Retail meat (kg)	Extend/loss (kg)	R/kg	Income (R)
Leg + loin: biltong	5.80	-50% = 2.90	68.90	199.81
Rack: marinated	1.00	1.00	45.99	45.99
Rest of carcass: mince meat	5.10			
Hamburger patties	5.10	+20% = 6.12	19.90	121.79
Fresh sausage	5.10	+10% = 5.61	15.90	89.20
Dried sausage	5.10	+15% -15% = 2.93	48.90	143.00
Cabanossi	5.10	+20%-40% = 3.67	59.40	218.00
Total	11.9	7.57		463.80

Source: ARC – Animal Nutrition and Products Institute

During the development it was agreed that the following strategies need to form part of the robust action plan:

- Identification of niche markets
- Formation of co-operatives
- Targeted group approach by extension
- Establishment of co-operative infrastructure (e.g. co-operative abattoir and tannery)
- Improved veld management practices
- Improved goat management practices
- Provision of credit and inputs

Because of the agreed study focus of dealing with issues influencing the setting of priorities by farmers but taking into consideration various interests of key stakeholders; the following criteria were used to rank these strategies:

- A higher price per animal through value addition
- Promotes / increases market share
- Employment creation
- Promote institutional linkage
- Encourage social grouping
- Encourage participation of both male and female
- Increase probability of adoption of the system
- Improves standards of living

## 8.2 Prioritization of development strategies to formulate a robust action plan

Research management is a constant process of deciding which strategies should be implemented given the infinite possibilities and limited resources. The methods and criteria chosen to set the priorities depend on who is involved in the process. With this in mind, a prioritization process was done involving the identified stakeholders including the communal farmers from the study area, representatives from LDA, SDM, and Research and Training Institutions.

The selected stakeholders were clustered into three different groups:

- Research and Training Institutions (providing research training inputs)
- Farmers from Mbuzini and Ga-Nchabeleng and Tribal Authorities (being beneficiaries)
- LDA and SDM (possible the key implementers).

A lot of negotiating amongst stakeholders within and among the clustered groups resulted in prioritisation shown in Table 8.3.

**Table 8.3 Prioritisation of strategies to goat commercialisation by different groups of stakeholders**

	Identify niche markets	Formation of co-ops	Targeted group approach by extension	Establish co-op infrastructure (abattoir, tannery)	Improved veld management (grazing camps & water points)	Improve goat management practices	Provide credit and inputs
Farmers	1 (35)	3 (32)	6 (13)	4 (18)	1 (35)	5 (16)	7 (11)
Research and Training Institutes	3 (42)	1 (45)	2 (43)	4 (26)	3 (3)	5 (11)	7 (0)
LDA and SDM	3 (23)	1 (49)	6 (11)	2 (39)	5 (13)	4 (15)	7 (7)

Table 8.4 presents the overall ranked strategies. It is based on the ranking results as presented by each group of stakeholders.

During the priority setting process, development strategies were divided according to two phases for implementation of the action plan. Both phases are expected to last for five years. Phase I of the action plan is expected to address issues dealing with the setting up of the appropriate marketing environment for communal farmers to commercialise. Phase II will deal with issues to raise the productivity of goats.

**Table 8.4 Overall ranked strategies to goat commercialisation by all stakeholders**

<b>Strategies</b> <b>Criteria</b>	Formation of co-ops	Identify niche markets.	Establish co-op. infrastructure	Improve veld mngt	Improve goat mngt practices.	Targeted group approach by extension.	Provide credit and inputs
Farmers get higher value per animal.	9.4	12.4	5.8	14.5	10.2	4.6	2.6
Promotes/increases market share	11.6	15.7	11.1	7.2	7.5	5.3	2.4
Employment creation.	11.6	10.4	17.1	6.9	7.5	2.9	3.6
Promotes institutional linkages	16.2	9.8	6.6	6.7	5.3	8.4	6.6
Encourage social grouping	17.1	6.6	7.5	7.7	5.8	10.8	4.9
Encourage participation of both male and female	17.3	7.7	8.1	6.7	7.3	10.5	1.7
Increases probability of adoption of the concept.	13.3	12.1	8.6	7.5	7.7	5.3	3.3
Improves the standard of living.	8.6	12.6	12.8	8.2	7.9	3.8	5.6
Overall points	13.1	10.9	9.7	8.2	7.4	6.4	3.8
Overall rank	1	2	3	4	5	6	7

### 8.3 Action plan - Phase I: Getting access to the market

In Phase I of the action plan attention should be focused on the implementation of three strategies. Their objective is to get access to the market by identification of niche markets, by lowering the transaction costs (formation of co-operatives) and by tapping the extra profits from value addition (for which new cooperative infrastructure is needed).

#### 8.3.1 Identification of niche markets

A niche market is a focused portion of a market. By definition, then, a business that focuses on a niche market is addressing a need for a product or service that is not being addressed by mainstream providers. A niche market is a narrowly defined group of potential customers. The idea is to find or develop a market niche that has customers who are accessible, that is growing fast enough, and that is not owned by one established vendor already. Establishing a niche market gives opportunities to provide products and services to a group that others have overlooked (<http://sbinfocanada.about.com/cs/marketing/g/nichemarket.htm>). The need to identify a niche market was ranked as the second step towards commercialization of goats by all the stakeholders. In the study area there is not only the problem of organized markets but also the problem of access to market information about prices and the best periods for sales. The study also found out that, for farmers to increase their income from goats, there is need to add value to the goats and their by-products since sales from the live animal or meat alone will not bring a meaningful income due to the size and the type of breed kept. Identification of niche markets involves establishing locations of markets (where to sell), the different kinds of products that can be sold, the pricing of the products and possible strategies for creating

awareness about the products. Stakeholders felt that if niche markets are identified, the communal farmers could be organized and trained on how to enter these markets.

### 8.3.2 *Formation of co-operatives*

People need to achieve self-sufficiency in social and technical skills that enable them to meet their own needs by getting the appropriate training and exposure. Such skills would sustain internal operations at peoples own pace and space without having to resort to dependency on external expertise except when most necessary (Mutisya S.M 2002). As individuals, it will be difficult for the communal farmers to acquire such skills which will enable them to commercialise their goats. Since the flock size of most communal farmers is small, hiring private vehicles for transport to the auction centres is not economically viable for them. Also individual farmers cannot provide a continuous supply of goats or its products that satisfies the market demands. Hence, the ideal solution for this is for the communal farmers to form co-operatives.

*“A co-operative is the undertaking whereby a group of individuals strive on a voluntary basis to meet their mutual economic and social needs in such a way that the economic advantages derived there from are greater than that which the individual could achieve on his own” ( Handout on co-operative by ARC)”*

A co-operative will help communal farmers not only to produce and market goats and their products but will also provide other direct and clear benefits. The steps to forming a co-operative (details are presented in Chapter 9) can be summarised as follows:

- Initial meetings to create awareness
- Membership and formation of steering committees
- Developing constitution for operation and maintenance
- Formal registration of the co-operative as a legal entity
- Inaugural meeting
- Training and planning of activities

Farmers should be assisted in this process of co-operative formation. Social facilitation is not an easy job and requires qualified people who understand the requirements of this process. If the extension service can play a role in this process needs to be carefully studied; many argued that this should be left to professional social facilitators (e.g. from the private sector, consultants).

### 8.3.3 *New co-operative infrastructure to deliver value added products to niche markets*

For the co-operative to deliver the value added products to the niche markets, it needs certain infrastructure facilities such as an abattoir, a tanneries, workshops, office spaces, and cold rooms for storage (details are presented in Chapter 9). The various steps in construction of the infrastructure (details are presented in Chapter 9) are as follows:

- Site surveying
- Designing
- Invitation for tender
- Construction (abattoir, tannery, workshops, office space, storage space)
- Operation and maintenance of infrastructure

## **8.4 Action plan - Phase II: Improving the productivity of goat production systems**

Phase II will focus on improving the productivity of the goats by targeted extension approaches. Phase II will mainly deal with the implementation of three strategies that are described below. Implementation of this phase will depend on the progress and success of Phase I. The institutional changes during Phase I will support the desired changes that need to be addressed during Phase II.

### *8.4.1 Improve veld management practices through community based interest groups*

Issues that may be considered in veld management would include: - establishment of grazing camps, fencing the grazing areas, controlled grazing, establishment of water points, ways of controlling land degradation and measures to control livestock predation and theft. It will be easy to manage veld due to the fact that goat farmers (who are now members of a social interest group) are organised and can interact with the other livestock owners to manage the communal grazing lands and also the fact that Tribal authority and Municipality can interact with the organised groups better. Accountability of the system will also become possible.

### *8.4.2 Improve goat management practices of targeted interest groups*

The results showed that the communal farmers do little to carry out management practices in terms of feeding, breeding, housing, and disease control. Over 70% of the goat farmers interviewed said that they let their goats to roam about during the day and they come back in the evening sometimes on their own. In the two villages visited, all the goats are housed in open kraals and only 15-20% of the goat farmers said that they dip their animals to control ticks and none had any breeding programme for their goats. During Phase II, extension efforts should be targeted to specific farmer groups. Some potential criteria for grouping the communal farmers into homogeneous interest groups are shown in Appendix 9.

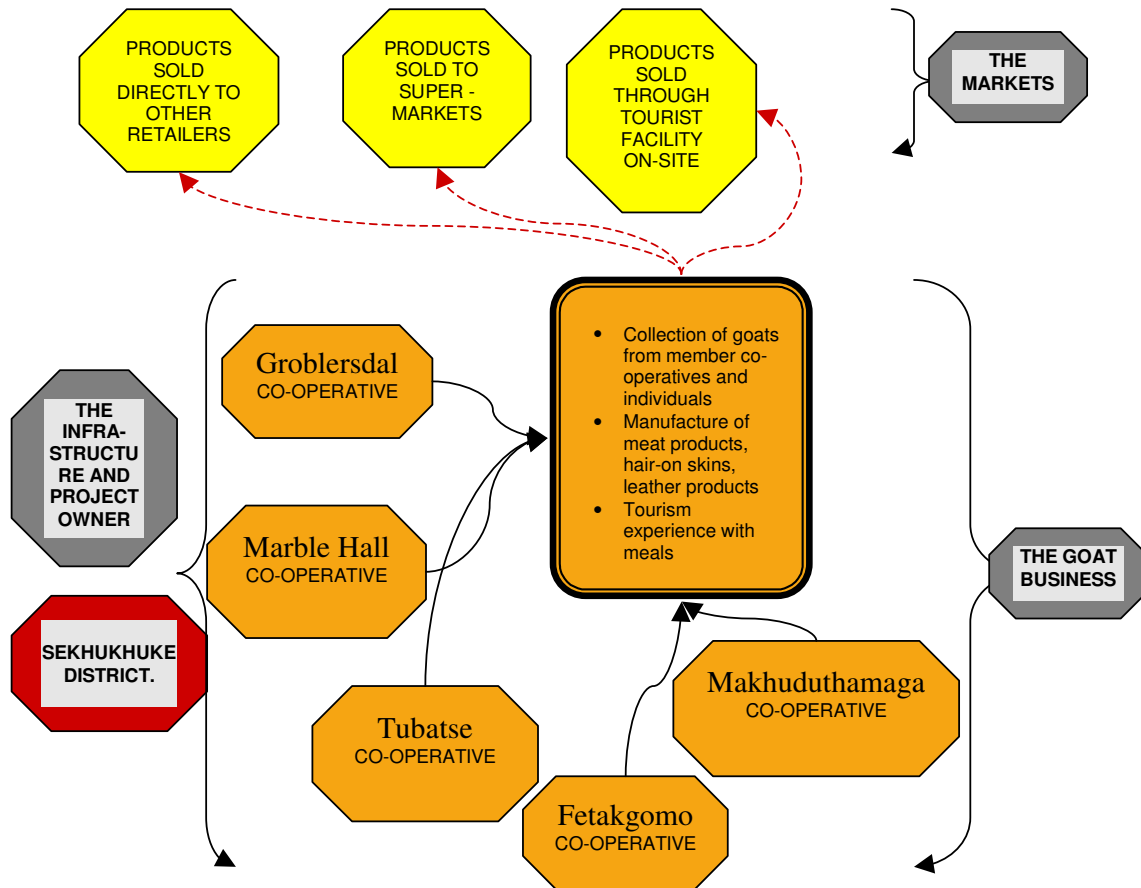
### *8.4.3 Provision of credit and inputs to targeted groups and individuals*

Once interest groups have been organised and give relevant training and are busy with implementing their plans, specific groups can be targeted for credit. Co-operatives can play an important role in targeting groups for the credit and its purpose. An appropriate investment plan should also be considered into plans in Phase II because farmers will be expected to be selling goats.

## **8.5 Organisation structure for goat commercialisation efforts in Sekhukhune**

The Sekhukhune District consists of five local municipalities (Groblersdal, Marble Hall, Tubatse, Fetakgomo and Makhuduthamaga) spread over both the Mpumalanga and Limpopo Provinces. Implementation of the action plan has to start with the organisation of activities at the village level. Subsequently issues at the local municipality level need to be addressed and finally those at the district level. At each of these levels transactions will take place regarding the goat business. From the central cooperative at district level the goat products will be sold to the identified niche markets. The proposed organisational structure therefore reflects the need for new co-operative institutions at municipality and district levels. However, it should be realised that the voluntary social group formation at village level is the mainstay of the business.

**Figure 8.3 Sekhukhune District Goats Organisational Structure**





## CHAPTER 9 ACTION PLAN - PHASE I: PROPOSED PROJECT ACTIVITIES

<b>Project title:</b>	Enterprising Goat Farmers in Communal Areas of Sekhukhune District
<b>Executing agencies:</b>	LDA, ARC, private sector
<b>Project team:</b>	LDA, ARC, NDA, social facilitation consultants, emerging farmers.
<b>Goal:</b>	Increase the contribution of agriculture to the Limpopo economy
<b>Location:</b>	Sekhukhune District
<b>Starting date:</b>	1 <sup>st</sup> January 2005
<b>Duration:</b>	5 Years
<b>Estimated budget:</b>	ZAR 5.7 million
<b>Funding source:</b>	Government of South Africa

### 9.1 Problem statement and the developmental situation

The contribution of goats to the income of households in Limpopo is low and hence LDA perceives it as an area for intervention to increase the contribution of agriculture to the Limpopo economy. Commercialization of goats and its by-products is seen as a way forward.

Sekhukhune is the second poorest district in South Africa with an unemployment rate of 46% (Census, 1996), but with the highest number of goats in the Limpopo Province. Ninety percent of these goats are owned by communal farmers. In spite of good climatic conditions (low humidity) and a bushy vegetation type for goat production, the goat numbers in this area are decreasing. Goats are sold by one farmer to the other within the village and sometimes, sold to people from neighbouring villages, but never to the formal market. Goat meat is never seen in an abattoir and no super market was found to sell goat meat or any other goat product. The study by the ICRA team revealed various reasons for the decreasing numbers and problems in commercialization of goats. A summary of the reasons is presented below.

#### **Small stock are kept for ceremonies and rituals**

Many households in Sekhukhune District keep at least six small stock for ceremonies, rituals and as a source of cash for unforeseen events since small stock are highly liquefiable assets. Traditionally households grew-up knowing that a household ought to have some form of livestock and that such livestock are not meant for business. Hence they keep a low number of small stock for other reasons than selling. Also goats are associated with the ancestors and not seen as an animal for normal meat consumption as beef or chicken.

#### **High mortality rate**

There is a high mortality rate of goats as a result of frequent droughts, lack of water and fodder, poor management and limited knowledge on management practices by local farmers.

#### **Theft and predator problems**

Theft of goats is a major problem in the area. This de-motivates the farmers. In drought years, goats are hunted by predators (e.g. jackals and wild cats) and hence the goat population is decreased even further.

#### **Unorganized markets**

The lack of organized market channels for sale of goat meat was found to be another reason. This concern was mainly raised by those households having more than twenty goats.



However the study team felt it was not the lack of market per-se, but lack of know-how on selling and market information. Super markets do not sell goat meat as communal farmers cannot guarantee a continuous supply.

### **High transport costs**

Many communal households are far from sale yards where auctions take place. They have a small stock size and hiring of vehicles for transport to the auction centres is not economically viable. There is little co-ordination among communal farmers to share these transport costs. As a result households sell their small stock within the village or to surrounding villages.

### **Other factors:**

- Lack of awareness among communal farmers and LDA on social organisational structures such as co-operatives, farmers groups, community based organisations
- Lack of awareness among communal farmers on the economic value of goat products
- Lack of awareness among consumers on the nutritive value of goat meat and milk
- Stigma attached to goat meat (wrong perception that goat meat smells).
- Lack of awareness among communal farmers on regulations and availability of credit

## **9.2 Justification**

Most of the households in Sekhukhune argue that their livestock and especially their goats have long been reared not for commercial purposes but for other uses such as in rituals and risk aversion. The contribution of goats to the Limpopo economy has therefore remained negligible. However, the cause is shrouded by a myriad of issues ranging from poor goat management to lack of formal markets. During interviews in Mbuzini and Ga-Nchabeleng, it was established that communal farmers prefer beef to goat meat. However, in lieu to whether butcheries should sell goat meat, the households stated that they would be willing to buy goat meat because it would be cheaper.

According to communal households the extension service has never (or at least not fully) addressed issues in relation to small stock. Households claimed that the focus of the extension staff has been mainly on other livestock species (cattle, sheep). Infrequent contact is another constraint. Many households with goats claim that they have the necessary resources to get involved into goat commercialization but they lack the knowledge and experience on how to get involved. It is therefore recommended that the LDA (and its extension wing) will coordinate and target the development efforts in order to get these interested households involved in commercialising their goats based on sustainable and economic viable approaches.

The current situation also came into existence due to the lack of information on the part of the communal farmers as far as value addition is concerned. None of the households interviewed cited knowledge about other goat by-products apart from milk. Only 11% of the households had some knowledge on milk.

The power of the Tribal Authorities to relieve some of the effects of the current problem situation is limited. However, they can ensure that villagers come together in forums where collective action can be taken in addressing some of the issues pertaining to goats. But, as the results of the ICRA study shows, the livestock farmers are only a small fraction of the total village population. Hence, the establishment of more targeted social interest groups (e.g. goat

farmer co-operative) should be encouraged. . In addition, the former dependency syndrome still has a large impact on the attitude of many a household. However, villagers now start to feel the need for reviving some of the former projects that have come to a standstill (e.g. the irrigation scheme in Ga-Nchabeleng). They want to claim ownership.

Collaboration with several other stakeholders is required in order to collectively address the issue of commercialisation of goats in Sekhukhune District. For effective implementation of the action plan, strong linkages between different institutions should exist, and those linkages that are said to be weak or non-existent should be strengthened or created.

### **9.3 Goal, purpose and expected outputs**

The goal of the proposed development project is to have increased contribution by agriculture to the economy of Limpopo Province. The marketing of goats and their by-products through formal markets will result in an increase in the contribution of the agricultural sector to the Limpopo economy. Proposed changes are expected to start having an impact in 2012 if all activities are carried out timely. Households of in Sekhukhune District are expected to benefit from the proposed project. This project is expected to increase contribution to the agricultural sector by at least 10%. The Limpopo Department of Agriculture and Agriculture Research Council (ARC) should take the lead in this project and all other identified key stakeholders should play their role.

The purpose of this proposed development project is to have communal households in Sekhukhune District regularly selling goats and their by-products through formal markets by 2010. For this to happen, the production, processing and marketing environments should be conducive enough for the households with goats to sell.

The expected outputs are:

- Niche markets for goat products identified
- A functional co-operative organisational structure (through social facilitation) established
- A co-operative infrastructure established, designed to deliver specific goat products to niche markets
- A functioning system of goat collection from farms to a central co-op established

### **9.4 Beneficiaries and participatory monitoring of project activities**

Community participation is fundamental in implementing and establishing a cooperative organisation and its infrastructure. A participatory approach needs to be followed to ensure a sense of ownership and responsibility among the beneficiaries. The beneficiaries of this development action plan are the communal goat farmers and their municipalities.

A joint committee should be established to monitor the implementation of the action plan. This committee should set milestones for the proposed 5 year implementation period. Indicators for the project progress have been proposed in a log frame (Table 9.2)

## 9.5 Activities for Phase I

For implementation of the action plan it is important that all relevant stakeholders (implementers, beneficiaries, municipalities and Tribal Authorities etc.) participate. In addition, there are issues that need collaboration at the national level as they are of interest to development efforts in many provinces. In collaboration with actors at the national level (Trade and Industry Department, NDA) a system should be put in place that should regularly supply updated key information to goat business development efforts in Limpopo and other provinces. This system at national level should service provincial, district and local goat initiatives via the Provincial Departments of Agriculture with current market information on:

- Business linkages (buyers and sellers of goat products). This is especially important to the current goat business development projects e.g. Kgalagadi pudi and Uzimvubu.
- Assessment and improvement of market infrastructure e.g. local livestock auctions required to improve market accessibility.
- Develop a website and other software and communication systems for getting easy access to the market information.

### 9.5.1 *Identifying niche markets, marketing trends and quality control requirements*

In identifying niche markets LDA's marketing and trade division should play a leading role in conducting market research on goats and their by products that can meet consumer taste and preference. Provision of market information and trends is needed to guide business decisions. Information should be gathered in Limpopo to provide required data on and to the current buyers of live goats. This should comprise both the informal and formal business sector in the goat industry.

#### **Niche market surveys**

Limpopo comprises of six municipality districts each with a variety of agricultural products and varying tenure systems and marketing opportunities. However, such opportunities do not exist in the case of the goat production and marketing. The only kind of trade that reigns in Sekhukhune is through informal sale of live goats amongst communal households which all depends on the agreement between the buyer and the seller.

Hence, there is need to establish sustainable goat production and marketing systems that will capture a higher market share. At the micro level the informal nature of existing markets should be explored. Niche markets for goat meat or its derived products as well as for the goat by-products should be identified at the provincial and national levels within South Africa. Answers to questions such as "what products are the supermarkets willing to sell" and "what products are consumers and tourists willing to buy" are of paramount importance. Once the products on the demand side are known they can be produced for which the construction of relevant infrastructure is needed as well as the formation of cooperatives to mobilise the goat producers.

This calls for the implementation of focused in-depth market survey which can be carried out through access committees established by LDA in 1997. Major tasks should include:

- Investigate what goat products can be explored and what value adding is possible.
- Investigate which local markets can be explored and what rules and regulations apply.
- Recommend the manner in which emerging commercial farmers could integrate into the marketing system in a viable and sustainable manner.
- Train farmers on those skills that will help them to exploit the niche markets that would be identified and on value adding.

- Localize profit gains by improving farmer and community input and control (localized business allows for competitive prices, improved household food security and income generation).

### **Consumer surveys.**

Trends in consumer behaviour in Limpopo and South Africa have not been studied in detail yet. The cyclical fluctuations in the buying of live goats in Sekhukhune are related to peak demand periods around Easter, in December and in June-July (initiation ceremonies). To sustain the niche markets there should be a survey into consumer behaviour at the provincial and national levels. Consumer awareness should also be raised through advertisement campaigns to address the current misperceptions on goats and their by-products.

### **Quality control systems**

Quality control systems and standards ought to be set for each step in the production and marketing chain covering issue such as breeding, feeding, health care, sale of live animals, and products' processing, packaging, distribution and sale.

A system to monitor and implement quality control standards needs to be established at the provincial and national levels.

Central facilities for sale of live animals as well as product collection should be considered to ensure efficient delivery especially with respect to the perishable products.

#### *9.5.2 Formation of co-operatives*

Individual farmers cannot provide a continuous supply of goats to the market. As has been elaborated in Chapter 8.3.2, the ideal solution to tackle this supply constraint is through the formation of co-operatives for communal goat farmers. A co-operative helps them not only to produce and market goats but provides other benefits as well (Draaijer, 2002), such as:

- More income through direct markets access
- Ability to pull resources for activities that otherwise might not be possible: e.g. pooling of services, start of credit schemes
- Pooling of labour to carry out labour-demanding jobs
- Economies of scale: cheaper investments and inputs, lower credit and marketing costs
- Better access to outside support services: social groups are easy contact points for other organisations providing support services, e.g. social facilitation, health care services.
- Savings and credit, information and advisory services and training
- Risks are shared e.g. in relation to investments and credit
- Communal goat farmers can learn from each other and exchange useful information
- Communal goat farmers have more status and power as a social group
- Development and enforcement of rules is easier in case of a conflict e.g. grazing rights
- Members can provide social support to their fellow members in case of crisis

However, the formation of co-operative for communal goat farmers should be done slowly using a step by step approach. LDA (as the client organization) will need to identify the persons to carry out social facilitation and community mobilisation that will lead to the formation of these co-operatives. These persons could be the extension officers or hired professional social facilitators. An overview of what steps need to be taken in the formation of a co-operative is given below.

### **Initial meetings to create awareness**

Each social group should start with an idea or a vision, which is shared with other groups and stakeholders who share a common concern. The best starting point is an informal meeting with a small group (5-10) of goat farmers; this gives farmers the chance to express their views. A larger meeting which involves all goat farmers in the village (and may be other interested stakeholders) is organized. An outside facilitator or resource person will be useful to guide the meeting. The agenda should include the following issues:-

- What is a co-operative?
- Why for a co-operative?
- Who will be the members of the co-operative?
- What will be the activities of the group?
- What is the plan to set up the group?
- What resources are needed?
- Where do these resources come from?
- What facilities are needed?
- When is the co-operative going to be set up?

### **Membership and formation of steering committees**

This involves calling for a vote to find out how many people are prepared to start the co-operative accepting the responsibilities that membership would involve. If those present at the meeting decide democratically to set up the co-operative, the meeting should elect a village steering committee. Subsequently, steering committees from all villages will be linked to and be represented in their respective Municipal co-operatives. Finally these Municipal co-operatives will be linked to the district co-operative as the one central co-operative. The infrastructure will be constructed at the central co-operative level.

### **Developing constitution for operation and maintenance**

A constitution is a set of written rules made by the group members and it is a legal document. It sets out what is expected from the members and what the members can expect from the co-operative. When developing the constitution, the following items should be considered:

- Full official name, objectives, activities and the location of the co-operative.
- Definition of the membership of the co-operative
- Leadership and election procedures
- Contributions
- Disciplinary actions
- Meetings
- Record keeping
- Bank accounts
- What happens if members decide to stop the activities?

### **Formal registration of the co-operative as a legal entity**

Once the draft rules have been agreed, the formal registration can take place. This involves sending completed application forms to the national authority together with copies of the constitution, registration forms, evidence of funds and payment of a prescribed fee. This is followed by formal approval and acknowledgement by the registrar.

### **Inaugural meeting**

After registration of the co-operative, an inaugural meeting can be called where the provisional management committee will report on the tasks carried out and subsequently will

resign as provisional committee. The meeting should then appoint a management committee or Board of Directors as set out in the rules.

### **Training and planning of activities**

After the inaugural meeting, both the members and the new management committee require to be trained on their roles. Planning and implementation of activities are carried out as per agreed schedule.

### **Further enhancement of farmer capacities**

Once the process of co-operative formation is completed, it is important that communal farmers are given training on relevant issues that are geared towards commercialisation of goats and their by-products. Training courses in entrepreneurship and business skills, meat processing, leather tanning and crafting, and if applicable cashmere spinning and weaving, should be developed and offered to interested individuals or social groups of farmers.

Financial and resource management of farmers should be strengthened to improve ownership and the production capacity. This in turn will further decrease the dependency on the government. However, this will only be possible if interested social groups of goat farmers fully participate in strategic business decisions on policies and marketing.

#### *9.5.3 Construction of infrastructure*

Concurrently with cooperative formation and identification of markets for possible products, activities for infrastructural development will be carried out. An institutional arrangement need to be made that also requires the involvement of the private sector (e.g. engineers). LDA (engineering and veterinary divisions), the Departments of Water Affairs and Public Works and the Municipalities should take the lead in the development of a detailed contract for the construction of the necessary infrastructure needed for proper operation of the co-operatives. They should also ensure that funds are made available for such constructions. The Tribal Authorities should be involved in identifying relevant sites for the infrastructure constructions.

A budget is drawn with the constructor and an agreement and milestones are set for different buildings. Services are rendered after the tender has been awarded to an experienced constructor and the site is set up. Box 1 presents some specific details on the recommended contract awarding procedure.

The following activities are required towards the development of an appropriate infrastructure for the co-operative goat production and marketing chain.

### **Construction of handling pens and loading ramps**

Relevant stakeholders should work together to ensure the establishment of a functional system for goat collection from farms to the central cooperative. Before transportation goats need to be registered, checked and weighted. This cannot be done at each individual farm but should be done at a central point in the village. Construction of handling pens (with crushes) is required to facilitate checks on sick and deformed animals and registration of live weights. Construction of a ramp will facilitate the loading the goats into the co-operative lorry. It is however necessary to contract appropriate skills in designing desirable structures capable of handling the expected number of goats to be transported at one time. Handling pens and loading ramps should be constructed at the village level (where goats are produced) and at the Central Co-op level (where goats are processed).

### **Box 1 Specific details on the recommended contract awarding procedure**

#### **Site surveying**

This is an investigation phase where an engineer checks out the suitability of the site for the infrastructure required. An engineer has to find out whether the site is close to existing roads, water, drainage tanks and electric wires. The survey will also involve analysis of social aspects as job creation, physical structure of the site. A geo-technical survey and analysis will look at the effluents and what effect they will have on the environment.

#### **Designing**

The scope of works will be determined and the engineer will find out the infrastructure available or needed for re-establishment. A preliminary design will be drawn including water points, electricity and drainage pits if necessary. A drawing will be handled by the engineer at the end.

#### **Invitation for tenders**

The design has to be approved by the municipal inspectors before an advert is placed for tenders. Then the papers are processed and a tender is placed preferably to local construction companies and specialists according to the engineers' recommendation. This step takes longer as the engineer will interview applicants' for quality assurance.

#### **Operation and maintenance of infrastructure**

The specialist will be involved in this stage and staff will be trained on different machineries in the abattoir or tanneries to ensure good maintenance.

### **Construction of dip baths**

External parasites are a problem in Sekhukhune District. Animals require regular dipping as a control measure, therefore, a cement dip bath should be constructed at the village level. The dip should have a soak-away drain or septic tank to dispose of the waste dip wash, and be close enough to a water source to allow for easy filling of the trough.

### **Construction of holding pens**

Holding pens will be necessary at both the village and the Central Co-op levels. At the village level, goats should be held somewhere awaiting transportation either to the Central Co-op or to an auction site. The holding pens should be properly fenced to handle goats. At the Central Co-op site, the holding pens should be equipped with feed troughs and water troughs under shed; the facility should also have a separate quarantine place for sick animals. Holding pens at the Central Co-op level should have some excess capacity to take care of unexpected delays in processing at the co-op abattoir or in case of shortages or excesses in the goat delivery system.

### **Construction of facilities at the Central Co-op site (abattoir, tannery, workshop, office, feed stores, incinerator and manure pit)**

The specific details for the abattoir and the tannery will need to be based on the results from the surveys on niche markets and consumer trends. Determining what the market demands must have a large impact on what the facility will produce. It is therefore necessary to contract appropriate skills (see Box 1) in designing desirable structures capable of:

- handling the expected number of goats
- producing the required number of products which meet the agreed quality standards

The office would be used to keep records, reference books, and other valuable equipment. It is handy to have a store near the office where bulky supplies and equipment such as feed and tools can be stored securely. Hay barns are required for storage of hay to be fed to the delivered goats.

It is expected that many goats will be delivered for processing. Some may be diseased and may die at the Central Co-op facilities. In addition, there may be some unwanted refuse (e.g. condemned carcasses and used syringes) requiring disposal. These should be incinerated to avoid contamination of the processing facility. Much gut contents are expected and a proper manure pit needs to be dug.

#### **Purchase of transportation facilities**

For the co-operative to function properly, it should have its own facilities for the timely transportation of the required material. Two trucks will suffice at the beginning of the project. One truck should perform specific duties as transportation of goats and goat products; the other should be for general use (building materials, carrying farmers to training workshops etc). The truck for ferrying goats could be bought at a later stage once the Central Co-op facilities start to function.

#### **Encouragement of the development of a proper road network system**

The development of the proper road network system will facilitate the smooth transportation of goats from the villages to the Central Co-op.

### **9.6 Estimated budget**

The required budget for Phase I of the action plan is presented in Table 9.1. The total estimated project costs will stand at ZAR 5.7 million. The total estimated project costs will be ZAR 7.1 million, including 14% VAT and 10% for contingencies.

**Table 9.1 Required budget to implement activities under Phase I of the action plan**

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
1. Market research	200 000	20 000	20 000	20 000	20 000
2. Cooperative formation					
• Social facilitation per village	300 000	300 000	300 000	0	0
• Training of steering committee 5 members per each of the ten villages on running a cooperative.	150 000	150 000	150 000	150 000	150 000
3. Infrastructure construction					
• 1 x central coop	0	2 565 000	0	0	0
• 5 x district coops	0	1 200 000	0	0	0
<b>Total</b>	<b>650 000</b>	<b>4,235, 000</b>	<b>470,000</b>	<b>170, 000</b>	<b>170,000</b>

For practical reasons the team decided to subdivide the construction of infrastructure into two sub-categories. The first sub-category deals with the infrastructure required to establish a functional system of goat collection from farms at village level to the Central Co-op. The second sub-category deals with the establishment of infrastructure needed at Central Co-op level in order to be able to deliver the required products to the identified niche markets.

Table 9.2 presents the resulting logical framework for Phase I of the Action Plan on the commercialisation of goats.



**Table 9.2 Logframe for Phase I of the Action Plan on goat commercialisation**

<b>Objectives</b>	<b>Indicators</b>	<b>Means of verification</b>	<b>Critical assumptions</b>
<b>Goal</b> Increase contribution of agriculture to the Limpopo economy	10% increase in contribution of agriculture by the year 2012		
<b>Purpose</b> More farmers sell goats through formal markets	Diversified goat products in the market No. of farmers selling goats through co-operative to formal markets	Market reports Annual / AGM reports Abattoir record book	Central and district co-ops will be functioning properly Environment will be favourable for selling goats through formal markets Niche markets remain active
<b>Outputs:</b>			
1. Niche market identified	Number of niche markets documented	Market record	Diversified markets exist
2. Co-operative of goat farmers formed	Co-operatives (5) formed at Municipal level, connected to the Central Co-op	Annual / AGM reports	Communal goat farmers are ready to join the co-operative
3. A functional system of goat collection from farms to the Central Co-op is established	Loading rumps Hay barns Handling pens Sick bays Co-operative trucks Crush and holding pens Office & water system	Co-operative records Physical inspection	Budget allocation sufficient Proper construction plan in place Construction material available in time Road system will be further developed and maintained
4. Central Co-op infrastructure to deliver products to niche market established	Specialized abattoirs, tannery, handicraft shop and office constructed	Site engineer report Physical inspection	Budget allocated and fund released on time
<b>Activities:</b>			
1.1 Market survey conducted	Number of niche markets identified within 8 months of project implementation	Market survey records	Implementation depends on: Budgeted funds released Staff availability Timely execution of all activities
2.1. Initial meetings to create awareness	Five co-operatives formed and registered by end of Year 1	Records of registration	Implementation depends on: Budgeted funds released Staff availability Timely execution of all activities
2.2. Membership and formation of steering committees	30 members trained and 5 management members within 8 months of Year 1	Training record	Implementation depends on: Budgeted funds released Staff availability Timely execution of all activities
2.3 Developing constitution for operation and maintenance	Constitution for co-operative formed within Year 1 of the project.	Constitution documents / book	Implementation depends on: Budgeted funds released Staff availability Timely execution of all activities

<b>Objectives</b>	<b>Indicators</b>	<b>Means of verification</b>	<b>Critical assumptions</b>
2.4 Formal registration of the co-operative as a legal entity	Sending application form to a national authority by the beginning of Year 2.	Completed application forms	Implementation depends on: Budgeted funds released Staff availability Timely execution of all activities
2.5 Inaugural meeting	Provisional management committees formed by end of Year 1.	Functional management committee.	Implementation depends on: Budgeted funds released Staff availability Timely execution of all activities
2.6 Training and planning of activities	New management committee are trained by mid of Year 2	Committees formed	Implementation depends on: Budgeted funds released Staff availability Timely execution of all activities
3.1 Construction of infrastructure to collect and handle goats at village and Central Co-op levels	Holding and collection pens are constructed at village and Central Co-op levels	Public works reports  Key informants	Implementation depends on: Budgeted funds released Staff availability Timely execution of all activities
3.2 Purchase of transport facilities to connect villages to Central Co-op	Two or more trucks bought to transport goats from villages to central co-op	Public works reports  Key informants	Implementation depends on: Budgeted funds released Staff availability Timely execution of all activities
4.1 Site survey	Site selected	Social, physical, chemical (effluents) analysis reports	Implementation depends on: Budgeted funds released Staff availability Timely execution of all activities
4.2 Designing and construction	Abattoir for slaughtering 60 goats per day and tannery designed and constructed	Architect designs and tender reports	Implementation depends on: Budgeted funds released Staff availability Timely execution of all activities
4.3 Operation and maintenance of infrastructure	Staff recruited and trained for operation and maintenance by the end of Year 3	Staff records Production records	Implementation depends on: Budgeted funds released Staff availability Timely execution of all activities

Note: Basic assumption for the project to take place: LDA takes the responsibility to implement the project

Table 9.3 presents the proposed work plan for activities that are required to achieve the first formulated output. It deals with the surveys on niche markets and consumer behaviour.

**Table 9.3 Work plan for surveys on niche markets and consumer behaviour**

Activities	Schedule (year, month)																			
	2005				2006				2007				2008				2009			
Conduct market surveys on types of goat products that can be prepared, locations for sale and pricing of the products	X	X	X	X																
Identify the micro trends in goat meat production	X	X	X	X																
Further surveys on consumer preferences	X	X	X	X																
Identify butcheries and abattoirs that can stock goat meat	X	X	X	X																

Table 9.4 presents the proposed work plan for activities that are required to achieve the second formulated output. It deals with the formation of cooperatives for goat producers.

**Table 9.4 Work plan for the formation of cooperatives for goat producers**

Activities	Schedule (year, month)																			
	2005				2006				2007				2008				2009			
Conduct awareness meetings	X	X	X																	
Make a list of people willing to join the cooperatives																				
Formation of village steering committees		X	X	X	X															
Formation of co-ops at Municipal level		X	X	X	X	X														
Formation of Central Co-op at district level		X	X	X	X	X	X	X												
Developing constitution for operation and maintenance				X	X	X	X													
Registration of Co-op as a legal entity a. selection of Board of Directors b. Constitution c. Business plan d. Postal address e. Registration fees f. Company structure			X	X	X	X	X	X												
Training of all members of the co-operative						X	X	X	X	X										
Training the management committee at all levels									X	X	X	X								

Table 9.5 presents the proposed work plan for activities that are required to achieve the third formulated output. It deals with the establishment of a functional system of goat collection from the farm level to the Central Co-op.

**Table 9.5 Work plan for establishing a functional system of goat collection from farms to the Central Co-op**

Activities	Schedule (year, month)																			
	2005				2006				2007				2008				2009			
Fencing																				
Construction of collecting and holding pens			X	X	X	X	X													
Installation of crush pens and weighing equipment			X	X	X	X	X													
Construction of loading rumps			X	X	X	X	X													
Buying a truck for transporting goats			X	X	X	X	X													
Construction of water and feed troughs			X	X	X	X	X													
Construction of an office (recording place with a lockable drug cup-board)							X	X	X	X	X	X	X	X						
Construction of hay barns			X	X	X	X	X	X	X											
Construction of incinerator and manure pit					X	X	X	X	X	X	X									
Construction of a sick bay						X	X	X	X	X	X	X								

Table 9.6 presents the proposed work plan for activities that are required to achieve the fourth formulated output. It deals with the construction of infrastructure at the Central Co-op to deliver the required products to the identified niche markets.

**Table 9.6 Work plan for construction of infrastructure at the Central Co-op to deliver products to niche markets**

Activities	Schedule (year, month)																			
	2005				2006				2007				2008				2009			
Site survey			X	X																
Designing																				
Invite tenders													X	X	X					
Construction (abattoir, tannery, workshop, office spaces, storage space)					X	X	X	X	X	X	X	X								
Operation and maintenance of infrastructure													X	X	X	X	X	X	X	X



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## APPENDIX 1: TERMS OF REFERENCE (TOR)

### 1. Topic of the study

*Livelihoods in the Sekhukhune District of the Limpopo Province South Africa: opportunities for producing and commercialising goats and sheep and their by-products*

### 2. Justification

The study will form part of the South African National Department of Agriculture (NDA) initiative to promote the export of goats and sheep products. Indigenous goats and sheep have always been part of agriculture in communal areas of the rural South Africa, but these animals for various reasons never made a significant contribution to the economy. Pedi are loathing slaughtering sheep and goats merely for their meat, and they are normally eaten only after being slaughtered ceremonially or when they die of natural causes. Economically, the value of sheep and goats is similar to that of cattle. Their hides are used for clothing, and the milk of goats is a considerable source of food. Their value as a source of meat is limited, however. Sheep and goats are used mainly for ceremonial and ritual purposes. They are used extensively as equivalent of cattle in exchange of marriage goods and also figure prominently in other ceremonies and rituals. Goats, in particular are used far more frequently than cattle and sheep for sacrificial purposes (Monnig, 1966). From the above it is obvious that the Pedi have never considered goats or sheep as money making options. Goats are also used in short-term bush eradication programmes as a control measure to maintain a balance between bush and grass.

Goats and sheep have not yet made an impact on the northern provinces of South Africa, despite excellent conditions for goats. A large part of Sekhukhune land and the Limpopo Province in general is bush veld or woodland savannah, the preferred diet of goats is browse and approximately 60% of their diet consists of the leaves of trees during summer. Goats tend to eat more grass during winter. This makes Sekhukhune land ideal goat country. This can probably be attributed to predator problems in the area. Only in communal farming areas, local management procedures have limited predator problems. Sheep and goats are herded and kraaled together but separately from the cattle. The kraal for sheep and goats is built outside, separate from the gathering place of men and does not form a functional unit with the village. They are kept close to the village and kraaled (penned) every night. It is this practice that reduces predator problem and makes keeping goats a practical option (Monnig, 1966).

The goats are very similar to the small east African goats, are very hardy, but have a poor carcass quality. The local sheep called Pedi sheep is a hairy sheep hardy with poor carcass quality; however this breed is increasing in popularity. A Pedi breeders club has recently been established but, animals are difficult to obtain due to low numbers. There are indications that Pedi sheep numbers are decreasing while goat numbers remain static. This is the opinion of the veterinary officials active in the district. However, Monnig (1966) states that the Pedi do not have many sheep, even the poorest men do have goats.

Their excellent hardiness, small size and adaptation to climate and conditions suggest that they have the potential to develop into a commercial enterprise in the future.

Recently the national department of agriculture initiated a programme to develop an export initiative for goat meat to the Middle East. This created an environment where a goat meat industry can be promoted in Limpopo (See addendum 1 on the national goat initiative).

Goats and sheep are unlikely to make significant contribution inroads into the commercial livestock sector of Limpopo, as game and cattle fair the main enterprises in this sector with especially game farming expanding rapidly. However an emerging commercialized small stock industry to increase incomes from the communal grazing areas has potential. The local market for goats has two potential groups of customers. Traditional slaughtering for ceremonial purposes, even people in the cities often look for goats for this purpose. The Muslim Market especially around feast times also has a potential to expand, but may require better carcass quality than presently on offer from indigenous goats.

### **3. Geographical area and target population**

The Limpopo Province of South Africa is with few exceptions a dry region with frequent droughts. Therefore a main limiting factor is fodder, due to the limited rainfall and also over utilization of grazing resources. Goats in particular make efficient use of grass and tree leaves obtaining up to 64% of their forage from non-grass plants. Despite popular conceptions goats are far less destructive of vegetation than cattle.

The Sekhukhune District of the Limpopo Province, South Africa is one of the national nodal points for the development and job creation to alleviate poverty in the country. It is for this reason that the Sekhukhune District was selected as a study area.

#### **Site and target group selection**

District officials who know the area selected two communities, the Elandskraal and Mbuzini villages, which together represent a sample of approximately thousand families. A sample of approximately thousand families, communities of this type consists of people with widely divergent interest ranging from families who derive most of their income from family members earning money in the towns and cities, to pensioners who have a fixed income and who used the land to supplement it. There are also many jobless persons and female headed households that baffle to make a living. Many livestock owners live and work in the city, but keep cattle, sheep and goats on the rural land and employ people to take care of the animals. They are hard to reach and usually are only in community on weekends.

The two communities are reasonably representative of the described target population and small stock ownership is a significant part of the local rural livelihoods in these communities. This means that goat ownership especially plays an important socio-economic role in the daily lives of these communities. The following quote from Monnig (1966) gives some perspective. "The Pedi do not have many sheep, but even the poorest men have goats. On an average there is approximately one sheep to every second family, but they are approximately four goats per family. The Pedi value sheep more highly than goats, partly because of their scarcity, but mainly because the Pedi admire sheep for their tranquility and they usually do not bleat when being slaughtered. Their relative value is clearly apparent, when during negotiations for marriage goods, the equivalent of one beast is accepted as five sheep or ten goats."

### **4. Team composition**

The team will consist of one South African researcher, who speak the local North Sotho language and be familiar with local customs and institutions. In addition to making a scientific contribution to the field study, he will also be the liaison person between the ICRA team and the local population and local institutions. The disciplinary background of the expatriates will preferably be one animal scientist, one environmental scientist specialising in the use of natural vegetation by livestock, one pasture agronomist, one agricultural economist or marketing specialist, and a sociologist. MADC, TADC, agricultural colleges, Sekhukhune District Officials, and if needed the local Universities, will provide support with expertise when and where it is needed.

### **5. Objectives of the study**

To target those groups of the population in the target area that are involved in goats and sheep production

- To analyse the current goat and sheep production systems and the marketing systems of the small stock, meat and other by products
- To analyse the changes that would be required in the supply (production, processing and marketing systems towards commercialisation of goats, sheep and their by-products)
- To identify the strategies to achieve the changes under different future scenarios
- To identify research and development activities needed to realise the strategies defined.

### **6. Form of the final report**

Before leaving South Africa, the team will produce and hand over a report which will include an executive summary, an abstract and a main document not exceeding 100 pages. This document should contain figures, tables and graphics. Its value will be greatly enhanced if it is structured to be of use to non-scientists, such as provincial legislators and municipal offices, responsible for local government.

## **7. Other interested institutions**

Besides those institutions that have been listed in the institutional framework, other parties likely to benefit from the field study are, SANDR and ARC, district officials in Sekhukhune, municipalities, NGOs and service providers operating in the province/districts.

## **8. Field study process**

Shortly after arriving in the study area, the team will, following a brief reconnaissance of the study area, present its field study research and work plans to the LDA, DFSR&E, SDM and other interested stakeholders in an introductory workshop. The purpose of this presentation is to enable the study team to receive feedback from the stakeholders on the proposed research plan and approach.

The team shall organise regular feedback sessions with a monitoring group that will be formed prior to the team's arrival. The monitoring group shall comprise of officials from LDA, DFSR&E and SDM. This group will provide support as needed and monitor the progress of the team. The feedback sessions will also present an opportunity to highlight issues on which the team could focus. If deemed necessary, a mid-term workshop will be held at which the team will present its early findings and its views on potential developmental strategies.

Final results of the field study will be presented in the form of a draft final report. This will be discussed at a final workshop including all stakeholders. This workshop will be held approx two weeks before end of field study to allow the incorporation of useful comments into the final version that will be submitted before the team leaves South Africa.

A senior ICRA officer will review the field study in the two visits of approximately 10-12 days each (includes traveling). The first visit will be after 4-5 weeks in the field to participate in the fieldwork and in the analysis of the first findings. The second visit will be scheduled to assist the team in organizing the report and conducting the final workshop.

## **9. Field study responsibility**

The team is collectively responsible to LDA, DFSR&E, SDM and ICRA for respecting the terms of reference and for the use made of the resources that these institutes provide for the field study. The team will maintain regular contact with the monitoring group and LDA.

The team will be responsible for its own internal management. Within the limits specified in the terms of reference and in the budget, the team is free to decide its own approach, methodology, tools and action plan, as well as the use of resources provided. Important questions concerning the terms of reference arising during the field study should be clarified in a discussion with the monitoring group.

## **10. Means**

ICRA, LDA and the monitoring team are responsible for the provision to the ICRA team of the means specified in the Memorandum of Understanding (MoU).



## **APPENDIX 2: INITIAL RESEARCH QUESTIONS**

1. How the initial ideas on commercialising goats and sheep did come about (Who initiated the ideas on finding ways to increase numbers and commercialise goats and sheep in Sekhukhune)?

### **Baseline Questions**

2. How do households in Sekhukhune live? (What are the livelihoods of the population in Sekhukhune?) Which part of populations depends on small ruminant production and has the potential to commercialisation?
3. Which policies are likely to hinder progress towards commercialisation of goats and sheep in Sekhukhune and what opportunities exist for revising these policies?
4. Which cultural beliefs/practices are likely to conflict with commercialisation of goats and sheep in Sekhukhune and what opportunities are there for such beliefs/practices to allow for the success of commercialisation of goats and sheep in Sekhukhune?
5. What is the general decision making process on implementation of projects like in Sekhukhune and how effective and efficient is this process? (what about changing to: how successful have been the previous projects on small stocks in Mbuzini and Elandskraal)
6. What is the decision making process on (small stocks) (Mbuzini and Elandskraal)
7. What are reasons for the declining numbers of small stock in the target area?
8. What are the perceptions of the target communities regarding commercialisation of small stock?
9. Which off farm activities are likely to affect the research activities both positively and negatively?
10. Which production systems exist in Sekhukhune and to which of those would the proposed study target?
11. Within different shooat production system in Sekhukhune farmers would prioritise their activities? (how do farmers in target area prioritise their activities)
12. Which other interventions on small stocks production have been introduced in the past, by whom and what has been the impact of such interventions?
13. How do the targeted households manage small stocks
14. Which marketing systems involves small stocks and their by-products in the target area
15. Which funds are available for the farmers who want to do projects and how accessible are these funds?
16. Which (if any) functional organised farmer groups would facilitate the implementation of the small stocks research activities?
17. Which other farmer associations existed in the recent past (10yrs) and were abandoned for which reasons?
18. How possible is it to organise farmers for projects in this district? Same as question 5
19. Which services (if any) are in existence for the benefit of small stock farmers in
20. Sekhukhune?
21. Which information networks are in existence in this district and how efficient and effective are these information networks?
22. Which communication networks would support the proposed research activities in the target area?
23. Which forage systems already exist that would promote goat and sheep production in this area, what opportunities are there for improving these systems?
24. Which infrastructure available would facilitate the implementation of the research study and how can this infrastructure be improved to allow for commercialisation of small stocks in the target area?
25. Which predators are a threat to goats and sheep? Merge 24 and 25 (what measure do households use to reduce predation and theft of small stocks)
26. What measures do farmers use to reduce predation and theft of goats and sheep?

### **Questions most likely for the monitoring group**

27. What are the driving forces behind the expected boost in emerging small stocks farmers market and choice of Mbuzini and Elandskraal for these research activities?
28. What kind of relationship is there between the institutions proposing the research activities and the small stocks farmers in Mbuzini and Elandskraal?
29. Which products are targeted for by the proposed markets?
30. What are the product specifications for the already identified markets?
31. What is the demand for small stocks and their products in proposed markets and who are the other players in these markets?
32. How reliable are the identified small stock markets?

33. What are the existing initiatives by research on the proposed activities
34. How profitable is proposed commercialisation of small stocks expected to be?
35. Which are the most likely potential financing institutions for the implementation of the research initiatives in Mbuzini and Elandskraal?

**ARD-teams' headache**

36. What changes need to take place in the current small stocks production system(s) to meet demands of the project as well as proposed market expectations?

**Questions which still require attention**

37. How are the already existing production systems of small stocks in Mbuzini and Elandskraal?
38. What is the likely impact of emerging small stock farmers on the natural ecosystem?
39. How does the current carrying capacity of the proposed study area compared with the current livestock population?
40. By how much can the carrying capacity of grazing land in Sekhukhune be improved by which possible interventions?

### APPENDIX 3: RESEARCH PLAN FOR POTENTIAL CONTRIBUTION OF GOATS TO THE INCOMES OF HOUSEHOLDS

Central question: What could be the potential contribution of goats to the incomes of farmers in Sekhukhune District: To whom should development efforts be oriented/targeted to increase efficiency/effectiveness?

ISSUES	Potential answers	Info needs	Info source	Choice of method	Expected analytical outputs
<b>I. LIVELIHOOD ISSUES</b>					
What are the different livelihood options for the households in Sekhukhune?					
1. What are the main sources of income to the household?	Crop farm, Livestock farm, Off-farm (e.g. per commodity)	Level of contribution of each source to total household income	Individual households in the study area	Informal interviews	Livelihood sources defined and characterised
2. How do different target groups prioritise their farm activities?	Goat enterprise, cattle enterprise	Income level derived from each enterprise	Target households	Ranking and scoring, calendar	Table of priorities and activity calendar produced
3. How are decisions taken on goats regarding the use of different resources in the household?	Male, female, children	Who makes what decisions?	Heads of households in specific target groups	Formal interview	A table with decision making units in the family developed
4. How is family labour used by different target groups?	Feeding livestock, herding livestock, growing crops	Who is to be affected by changes	Head of household within a specific target group	Labour calendar	Labour calendar developed
5. Who owns goats?	Men, women and old people are involved more in goat husbandry	Time spent and money earned by women and old people from goat production and reasons for their choice	woman-headed households	Two case studies of woman headed households in Ga-Nchabeleng and Mbuzini	Profile, advantages and constraints of goat farming identified for a women headed household
6. How is the land owned?	Communally, privately, state owned	How much control do they have over the land			
7. What opportunities are there which can facilitate commercialisation of goats?	Roads, markets (abattoirs), vet services, dip tanks, feed companies	Infrastructure assessment	District statistics office, extension, planning department	Formal interviews, maps, transects	List on infrastructural facilities and their condition and how they affect the livelihoods
8. What are the current management practices of goats within each target group?	Routine vaccinations, supplementary feeding, tethering, stall feeding	Potential of target groups to commercialise	Household head in each target group, extension services	Informal interview, focus group discussion	Management practices identified
9. What are the households' views on commercialisation of goats?	Good idea, interesting, doesn't work here	Views of households on commercialisation	Households	Semi-structured interview	Collection of attitudes
10. Which are the target groups to promote goat commercialisation?	Farm types	Types with potential to commercialise	Households	Semi-structured interview	List of potential households



<b>ISSUES</b>	<b>Potential answers</b>	<b>Info needs</b>	<b>Info source</b>	<b>Choice of method</b>	<b>Expected analytical outputs</b>
<b>II. INSTITUTIONAL ISSUES</b>					
What are the different institutions which contribute to goat production/marketing?					
1. Which institutions are currently playing an important role in production of goats?	Research and development centres, colleges and universities	Current development initiatives and research implemented	Institutions, extension and households	Key informant interviews	
2. What kind of changes can be brought about in these institutions to contribute to commercialisation?	Good coordination, client-oriented research, have goats and sheep on institutional agenda	Roles played by different institutions	Stakeholders	Informal interviews	List of roles, activities, budgets and time frames specified
<b>III. CULTURAL ISSUES</b>					
What are the cultural beliefs and perceptions affecting goat production?					
1. What are the current cultural beliefs and perceptions affecting goat production?	e.g. goats are not saleable, are reserved for ceremonial purposes	How can existing perceptions affect commercialisation?	Households in Ga-Nchabeleng and Mbuzini	Informal interview	List of beliefs that affect commercialisation and how they can be tackled
2. Will cultural and ritual aspects allow full commercialisation of goats farming?	cultural and ritual aspects will not affect goat commercialisation	Which cultural beliefs can be positively used for commercialisation?	Households in Ga-Nchabeleng and Mbuzini	Focus group discussion	List of beliefs that positively affect commercialisation
<b>IV. POLICY ISSUES</b>					
What kind of policy environment exists in SA for goat commercialisation?					
1. What is the existing government policy for commercialising goat?	None, subsidies	Information on policies that may affect goat commercialisation	Client organisation, Ministry of Agriculture	Informal interview	List of policies affecting goat production, processing and marketing
<b>V. GOAT HUSBANDRY ISSUES</b>					
<b>Breeds</b>					
1. What are the reasons for the low number and quality of goats?	Poor feeds, diseases, poor husbandry practices, lack of markets, etc	Feeding standards, husbandry practices, available markets, etc	Households, researchers, extensionists	Focus groups discussions	Concrete information text written
2. What are the current and suitable breeds kept by targeted groups? Why or why not?	Indigenous goat breeds Crosses of indigenous & exotic	Boer and its crosses (F1) goats	Households and extension officers	Key informant interviews	Breeds adapted to the conditions of Sekhukhune
3. What is the potential calving and survival rate of young ones and mature weight of sale?	Single (>30%) and multiple (50%) births, From normal to high mortality rates (7-11%)	Twinning, reproductive and ancestral recording schemes	Households and extension officers	Surveys using questionnaire	Records for production of the flock

<b>ISSUES</b>	<b>Potential answers</b>	<b>Info needs</b>	<b>Info source</b>	<b>Choice of method</b>	<b>Expected analytical outputs</b>
4. What or how can goat households is targeted for semi-commercial lines?	Households with large flocks, Good previous kid crop or mothering records	At least 25- 50 does and two rams in the herd (1:25).	Extension officers	Transect walks & semi- structured interviews	Analysed typology and zonation of farms
<b>Feed</b>					
5. What are the present sources of feed for goats?	Range, Fields (crop residues and fodder),	Veld condition, grass types, bush types,	Sekhukhune District	Transect walk, key informants	Table with feed sources produced
6. What measures have been taken up in the past to improve veld condition?	Veld reinforcement, land reclamation, controlled grazing	Land repair, veld reinforcement, management of grazing lands	Households, local extension	Key informants	
7. How do different programs for managing goats and/or sheep affect the production system of the household?	Range foraging requires the services of the young and energetic, tethering is popular with women, etc	Who owns goats in Sekhukhune, who looks after goats, what methods are used?	Households in Sekhukhune	Formal interviews (questionnaire)	Table with ownership and management practices of goats in Sekhukhune
8. How can disease of small stock management be improved by specific households?	Health programs	Traditional methods of controlling diseases	Households, local veterinary services, research stations	Informal interviews with key informants	Table with common diseases and how they are managed
9. What is the extent of predation of goats and how they deal with?	Restricting wild animals' access to grazing lands	Herding, fences, paddocks, kraals	Households, national parks	Informal Interviews with key informants	Text on prevention methods produced
<b>Diseases</b>					
10. What are the different goat diseases prevalent in the region and preventative measures?	Bacterial and viral diseases, internal and parasite causal diseases,	Foot rot, pneumonia, brucellosis, blue-tongue. Vaccines	Veterinarians and households	Informal key informant interviews	Vaccination records or diagnosis reports of animals
<b>Labour</b>					
11. How does labour affect oat enterprises?	Labour calendar	Methods being used by households on herding	Households	Formal interviews	Calendar
<b>Management</b>					
12. What knowledge and skill do households have for managing goats for commercialisation?	Management	Methods used for feeding goats and sheep by households	Households	Formal interviews	Tables and graphs on management practices
13. What form of training do households require to improve their knowledge and skill on issues concerning goats?	Formulating balanced rations, mating strategies, accessing information	Level of education, courses attended	Households, Local extension	Formal interviews	Table with educational levels and other forms of training

ISSUES	Potential answers	Info needs	Info source	Choice of method	Expected analytical outputs
<b>VI. MARKETING ISSUES</b>					
What are constrains and opportunities for marketing goats products?					
1. What are the current product market sources for small stocks?	International markets Local (Sekhukhune) National markets	Current markets sources Market chains	Households, NAMC LDA: marketing and business	Interview: Key informants	
2. What are major goat by-products and their demands	Milk, capriot, hides manure	Demand on markets	Households, processors, LDA	Interview: Key informants	
3. What are the major household production enterprises?	Sheep, goats, cattle pigs, vegetable etc	Key enterprises	Households	Interview Stakeholder	
4. What is the market value for small stocks?	Selling price	Prevailing prices	Households, processors, traders	Formal interview	
5. What is the expected market value for goats?	30% higher than the normal selling	Perception on expected market value of goat	Households	Interview	
6. What are the possible future markets for goats and their by-products?	Perception on future trends	Possible future markets	Households, LDA, Traders, households	Formal interview to Stakeholder	
7. What is the current demand for goats?	Demand is low	Determine the potential demand	Interview households, and markets		Table with annual demand
8. What is the other farming enterprises competing with small stocks products?	Beef, pork, poultry, game	Competitiveness of the goat by-products.	Processing industries, traders, households	Interviews with key informants.	Ranking matrix
9. What measures have been taken in the past to improve the existing marketing systems?	Trainings, demonstrations Households field days. Framers exchange visits.	Information flow	Extension officers Households LDA	Interview with key informants.	
<b>VII. TECHNOLOGY &amp; SUPPORT ISSUES</b>					
1. What research technologies are available for goat production, management and processing?	Improved breeds, Low cost management, practices, Value addition	Developed technologies	Households, extension researchers	Interview, stakeholder, meetings	
2. Which research technologies have been implemented and adopted by the target group?	Cross breeding	Adoption levels and impact	Households Extension researchers	Formal interviews	
3. What are the reasons for adoption of research technologies?	Improved and low cost management practices	Reasons for adoption	Households	Interviews	
4. What are the reasons for rejection of research technologies?	High cost	Reason for rejection	farmers		

<b>ISSUES</b>	<b>Potential answers</b>	<b>Info needs</b>	<b>Info source</b>	<b>Choice of method</b>	<b>Expected analytical outputs</b>
5. What forms of support have been made available to the farming households of Mbuzini and Ga-Nchabeleng villages?	Credit Extension services Information	Support available	Households Extension, research institutions, LDA	Interviews	
<b>VIII. CONSUMER ISSUES</b>					
1. What are consumers' preferences when buying goats and their by-products?	Taste of milk, mutton skin, price and packaging	Consumers perceptions	Households, Consumers Abattoirs	Interviews	
2. What are the factors that determine/affect the prices of goat products?	Cultural, Imports, markets demands, quality lending rates	Price and market determining forces	Households, traders, Abattoirs, consumers	Interview Key informants	
3. What are market information sources?	Extension, households organizations, traders		Extension, households traders	Interview	
4. How effective are the market information sources?	Positive or negative	Reasons	Households extension	Interview	



**APPENDIX 4: FIELD STUDY TIME TABLE**

<b>Date</b>	<b>What</b>	<b>Where</b>	<b>How</b>	<b>Who</b>	<b>Outputs</b>
Sunday 11/04/04	Leave Wageningen for South Africa	Schiphol Airport	By plane	ARD-ICRA team	<b>Team in South Africa</b>
Monday 12/04/04	Settle in South Africa	Tompi SCA	Familiarising/ascertain accommodation issues	ARD-ICRA team	<b>Accommodation granted and confirmed</b>
Tuesday 13/04/04	Meeting the cleaner and cook Shopping	TSCA Pietersburg	Discuss terms Buy according to list	ARD-ICRA team	<b>Contracts signed Food and stationery items bought</b>
Wednesday 14/04/04	Voting day  Revise livelihood analysis tools  Get to know each other with ICRA local counterpart (Aart-Jan Verschoor)	TSCA	South African members go for voting Share and read tools for livelihood analysis Quiz local counterpart on SA and study area	SA members  Other team members ARD-ICRA team and counterpart	<b>Livelihood analysis tools listed  Relationship with local ICRA coordinator concretised</b>
Thursday 15/04/04	Revise team research plan and timetable  Plan for meeting with monitoring team  Preparing data collection sheets	TSCA	Incorporate comments from Wageningen Assign roles on who will do what in meeting Draft questionnaire for livelihood options (1 <sup>st</sup> round of interviews)	ARD-ICRA team (work in three sub-groups then share)	<b>Field study plan finalised, printed and filed Gaps on TOR confirmed and roles assigned Questionnaire for first round of interviews completed and printed for pre-testing</b>
Friday 16/04/04	Meeting the monitoring group Getting the secondary data from the monitoring group	Lebowakgomo (Senior Manager's Office)	Present progress, discussion on TOR and collect secondary information	Monitoring Team and ARD-ICRA team	<b>Focus of study confirmed, TOR revised stakeholder list updated and secondary information collected</b>
Saturday 17/04/04	Review and summarize minutes of meeting with the monitoring team Contract enumerators Create awareness among stakeholder institutions List tools to be used for the field study	TSCA	Incorporate suggestions in field study plan Sign contracts e-mail stakeholders  Follow framework stages of data collection	ARD team	<b>Updated field study plan  Signed contracts with enumerators Awareness letters drafted and sent  List of tools to be used in the next four weeks</b>
Monday 19/04/04	Testing questionnaires developed for first household interview on enumerators  Meeting the tribal authority	Office  Mbuzini	Using questionnaires developed for first household interview Introducing objectives of the study	ARD team and enumerators  ARD team and tribal authority	<b>Questionnaires developed for first household interview teased on enumerators Objectives of the study introduced to tribal authority</b>

<b>Date</b>	<b>What</b>	<b>Where</b>	<b>How</b>	<b>Who</b>	<b>Outputs</b>
Tuesday 20/04/04	Meeting focus group of Mbuzini Focus group interview of Mbuzini	Mbuzini Tribal office	Semi-structured interviews	ARD team and focus group and extension officers	<b>Data related to the study area from focus group collected</b>
Wednesday 21/04/04	First interview of households in Mbuzini	Mbuzini	Semi-structured interview	ARD team and enumerators	<b>Data on livelihood options of Mbuzini village collected from focus group</b>
Thursday 22/04/04	First interview of households in Mbuzini	Mbuzini	Semi-structured interview	ARD team and enumerators	<b>Data on livelihood options of Mbuzini village collected</b>
Friday 23/04/04	First interview of households in Ga- Nchabeleng Focus group interview in Ga-Nchabeleng	Ga-Nchabeleng	Semi structured interview	ARD team and enumerators	<b>Data on existing livelihoods of Ga- Nchabeleng village collected</b>
Weekend	Rest				
Monday and Tuesday 26-27/04/04	First interview of households in Ga- Nchabeleng continued Summarize data collected from Mbuzini households and from focus group in Ga- Nchabeleng	Ga-Nchabeleng Office	Using SPSS programme	ARD team and enumerators ARD team	<b>Livelihood data of Ga-Nchabeleng collected Livelihood data collected from Mbuzini households and focus group meeting in Ga-Nchabeleng summarized</b>
Wednesday 28/04/04	Meeting Senior Manager of Limpopo Department of Agriculture	LDA	A brief discussion about the study and its progress	ARD team and senior manager of LDA	<b>Common understanding of the study</b>
Thursday to Friday 29-30/04/04	First interview of households in Ga-Nchabeleng continued Entering data of Mbuzini into computer	Office	Semi structured interview Using SPSS	Enumerators, ARD team (sub-group)	<b>Livelihoods data of Ga-Nchabeleng collected Data from Mbuzini captured in SPSS</b>
Saturday 01/05/04	Prepare check list of questionnaire for various stakeholders	Office	Using baseline questionnaire	ARD team (sub- group)	<b>List of questions for interviewing stakeholders developed</b>
Monday 03/05/04	Making agro-ecological map and transect walk for Mbuzini together with the focus group of the village	Mbuzini village	Making transect walk through Mbuzini village	ARD team (sub- group) and focus group	<b>Map and transect of Mbuzini drawn</b>
Tuesday 04/05/04	Entering data from first round interview from Ga-Nchabeleng into computer	Office	Using SPSS	ARD team (sub- groups)	<b>Livelihood data of Ga-Nchabeleng captured in SPSS programme</b>
Wednesday 05/05/04	Entering data collected during the first household interview from Mbuzini and Ga-Nchabeleng into the computer	Office	Using SPSS program	ARD team (sub- group)	<b>Livelihood data of Mbuzini and Ga- Nchabeleng captured in SPSS programme</b>

Date	What	Where	How	Who	Outputs
Thursday to Saturday 06-08/05/04	Making agro-ecological map and transect walk of Ga-Nchabeleng Village. Entering data collected in the first household interview from Mbuzini and Ga-Nchabeleng into the computer. Planning for trip to Eastern Cape trip.	Ga-Nchabeleng Office Office	Transect walk through Ga-Nchabeleng. Using SPS programme.	ARD team (sub-group), focus group and extension officer ARD team (sub-group)	<b>Map and transect walk of Ga-Nchabeleng drawn</b> <b>Data collected on livelihood from Mbuzini and Ga-Nchabeleng captured in to the SPSS program</b> <b>Trip to Eastern Cape planned</b>
Sunday 09/05/04	Prepare for introductory workshop	Office		ARD- team	<b>Slides for introductory workshop presentation prepared</b>
Monday 10/05/04	First interviews of households of Ga-Nchabeleng continued Interviewing stakeholders (Tomp, LDA, SDM, Land Bank, University of North)	Ga-Nchabeleng Stakeholders' offices	Semi-structured interview Follow questionnaires developed	Enumerators ARD team	<b>Livelihoods data of Ga-Nchabeleng collected</b> <b>Stakeholders interviewed</b>
Tuesday-Wednesday 11-12/05/04	Second interview of households of Mbuzini Meeting with ICRA reviewer	Mbuzini Office	Semi-structured interviews	ARD team (sub-groups) and enumerators	<b>Data related market, perception of the problem and solution from Mbuzini household collected</b>
Thursday 13/05/04	Introductory workshop	Pietersburg	Presenting the study to stakeholders	Stakeholders & ARD team	<b>Common understanding of the study achieved</b>
Friday 14/05/04	Revise team outputs and discuss typology and targeting with ICRA reviewer	Office		ARD team	<b>Team output revised</b>
Weekend 15-16/05/04	Travel to Eastern Cape	On the road and in Kokstad		ARD team and ICRA reviewer	
Monday 17/05/04	Meeting with Director Scientific Roets Interview Mount Ayliff goats Cooperative Board of Directors at Mount Ayliff Municipality Office	Scientific Roets Office, Kokstad Mount Ayliff	Semi-structured interview	ARD team and ICRA reviewer	<b>Presentation and discussion about Umzimvubu goat project made</b> <b>Mount Ayliff goats Cooperative Board interviewed</b>
Tuesday 18/05/04	Presentation by WAEZ Social Facilitators Visit to abattoirs under construction in Mount Ayliff and to some goat farmers	Scientific Roets Office, Kokstad Mount Ayliff		ARD team	<b>Presentation and discussion made with WAEZ Social Facilitators</b> <b>Understanding of infrastructure required</b>
Wednesday 19/05/04	Travelling back to Pretoria			ARD team and ICRA reviewer	
Thursday to 20/05/04	Interviewing stakeholders (ARC- Animal Nutrition and Range and Forage Institutes)	Respective stakeholder offices	Semi-structured interview	ARD team (sub-groups) and stakeholders	<b>Data on goats interventions in the study area collected</b>
Friday to Saturday 21-22/05/04	Rest	TSCA			
Sunday	Analyse data from first interview of	Office		ARD team (sub-	<b>Data from first interview of</b>



Date	What	Where	How	Who	Outputs
23/05/04	household of Ga-Nchabeleng Village Revise report writing outline and allocate chapters to members for writing			groups)	<b>households of Ga-Nchabeleng analysed</b> <b>Report writing outline revised and chapters to members for writing allocated</b>
Monday 24/05/04	Second interview of household of Mbuzini continued	Mbuzini	Semi-structured interview	ARD team and enumerators	<b>Data related market, perception of the problem and solutions from Mbuzini household collected</b>
Tuesday 25/05/04	Entering data of first interview of household of Ga-Nchabeleng Village into the computer Summarize stakeholder interviews	Office	Using SPSS  Using data collected from stakeholders	ARD team	<b>First interview household of Ga-Nchabeleng captured into the SPSS program</b> <b>Stakeholder interviews summarized</b>
Wednesday-Thursday 26-27/05/04	Second interview of household in Ga-Nchabeleng	Ga-Nchabeleng	Semi-structured interviews	ARD team and enumerators	<b>Data related market, perception of the problem and solution from Ga-Nchabeleng household collected</b>
Friday 28/05/04	Rest				
Saturday 29/05/04	Summarize data from second interviews at Ga-Nchabeleng and Mbuzini Summarizing stakeholder interviews continued	Office	Using data collected from households and stakeholders	ARD tem (sub-groups)	<b>Summery of data collected from interviews of household and stakeholders</b>
Sunday 30/06/04	Rest				
Monday 31/05/04	Capture Ga-Nchabeleng village agro-ecological map in the computer Make stakeholder analysis	Office	Using the collected information	ARD team (sub-groups)	<b>Agro-ecological map of Ga-Nchabeleng village captured in the computer</b> <b>Stake holder relations and linkage, objectives and perceptions analysed</b>
Tuesday 01/06/04	Prepare presentation for mid-term workshop	Office		ARD team (sub-groups)	<b>Slides for presentation of midterm workshop prepared</b>
Wednesday 02/06/04	Conduct midterm workshop	Lebowakgomo	Presenting the team findings	ARD team and stakeholders	<b>Presentation of first team outputs and discussion on typology</b>
Thursday to Friday 03-04/06/04	Incorporating suggestion from midterm workshop Writing the first draft of the report	Office		ARD team	<b>Suggestion from the mid-term workshop incorporated into the report</b> <b>Writing of first draft report continued</b>

<b>Date</b>	<b>What</b>	<b>Where</b>	<b>How</b>	<b>Who</b>	<b>Outputs</b>
Weekend 05-06/06/04	Travel and visit to Kruger National Park				
Monday 07/06/04	Making calendar of Mbuzini and Ga-Nchabeleng villages	Mbuzini and Ga-Nchabeleng	Semi-structured interviews	ARD team and key-informant	<b>Calendar of Mbuzini and Ga-Nchabeleng produced</b>
Tuesday 08/06/04	Interview stakeholder (Limpopo Diary) Capturing data on calendars for Mbuzini and Ga-Nchabeleng into the computer	Office	Semi-structured interview	ARD team (3 sub-groups)	<b>Limpopo Diary interviewed Calendars on Mbuzini and Ga-Nchabeleng captured</b>
Wednesday 09/06/04	Listing possible driving forces Interview the Municipality	Office Marble Hall	Use collected data Semi-structured interview	ARD team	<b>Driving forces for study listed Municipality of Marble Hall interviewed</b>
Thursday 10/06/04	Prioritizing the driving forces Developing scenarios	Office	Using the data collected	ARD team (sub-groups)	<b>Driving forces prioritised Scenarios developed</b>
Friday 11/06/04	Writing story for typology, driving forces and scenarios	Office		ARD team (sub-groups)	<b>First draft of story for typology, driving force and scenarios written</b>
Saturday 12/06/04	Different sections of the report writing continued	Office	Using summarized data	ARD team (sub-groups)	<b>First draft of report writing continued</b>
Sunday 13/06/04	Rest				
Monday to Tuesday 14-15/06/04	Writing the different section of the report continued	Office	Using the summarized	ARD tem (sub-groups)	<b>First draft report writing continued</b>
Wednesday 16/06/04	Compile first draft of Chapters 1-8 Formulation of strategies continued Meeting the ICRA reviewer	Office		ARD team (subgroup)	<b>First draft of chapters 1-8 compiled Strategies formulated</b>
Thursday 17/06/04	Briefing team progress for reviewer Discuss on typology and strategies with ICRA reviewer	Office	Briefing on outputs Proposed typology and strategies	ARD team and ICRA reviewer	<b>Team progress discussed Discussion and comments on typology and strategies developed by the team</b>
Friday 18/06/04	Priority setting workshop	Lebowakgomo		ICRA team and stakeholders	<b>Strategies prioritized</b>
Weekend 19-20/06/04	Editing the first draft of the report by team members	Office	Using first draft of the report	ARD team	<b>The first draft of the report edited</b>
Monday 21/06/04	Revise slides for final workshop Editing first draft of the report continued	Office	Using slides prepared for presentation	ARD team and ICRA reviewer	<b>Slides for the final workshop revised First draft of the report edited</b>
Tuesday 22/06/04	Conducting final workshop	Lebowakgomo	Presenting the team outputs	ICRA team and stakeholders	<b>Team outputs presented Comments and suggestions collected</b>
Wednesday 23/06/04	Editing the first draft of the report by team members continued	Office	Using first draft of the report	ARD team	<b>The first draft of the report edited</b>

<b>Date</b>	<b>What</b>	<b>Where</b>	<b>How</b>	<b>Who</b>	<b>Outputs</b>
Thursday 24/06/04	Discussion on the action plan continued	Office			
Friday to Wednesday 25-30/06/04	Report writing and red threading continued	Office			
Thursday 01/07/04	Presentation of research output in ARC	ARC meeting hall			
<b>Friday to Saturday 02-03/07/04</b>	<b>Return travel back to The Netherlands</b>				

## APPENDIX 5: LIST OF STAKEHOLDERS VISITED AND DESIGNATION OF INTERVIEWED OFFICERS

Stakeholder visited	Designation of interviewed officers
Government (LDA & SDM)	Manager: DFR&E Senior Manager: SDM
ARC	Manager: Sustainable Rural Livelihoods Goat Nutrition Information Centre
Private sectors (NGOs, Consultant, commercial farmers and social facilitators )	Managing Director: Scientific Roets, Consultants
Financial institutions (Land bank)	Manager: Land bank
Communal farmers	Household head, focus group and key informant
Tribal Authority and Mbuzini Village Head Man	Kgoshi of Ga-Nchabeleng village
Market (National Agricultural and Marketing Council, abattoirs, auctioneers, supermarket, Limpopo Diary)	Managing Director: Vleissentral Bosveld Farmer who owns Limpopo Diary
Agricultural research and training institutes centres (universities and colleges)	HoD, Lecturers and Researchers from University of the North
Municipalities	Manager, Technical services, SDM Nandipa Bam: Alfred Nzo District Municipality

## APPENDIX 6: SUMMARY OF QUESTIONNAIRES ADMINISTERED IN GA-NCHABELENG; 2ND ROUND OF INTERVIEWS

Name(s) of interviewer(s):

Date: \_\_\_\_\_ Household name: \_\_\_\_\_ Gender (HHead): \_\_\_\_\_

Name of respondent: \_\_\_\_\_ Relationship of respondent to household head:

Purpose: To find out what challenges being faced by communal households with interest in having goats making more income contribution to their way of living

Questions	Info needs	Answers provided
1. May you tell us the total number of people living with you in this household. How many man and how many women?	Gender distribution	The range of females (f) and males (m) per household is 2-7 f 1-7 m but the majority is women.
2. How many of these are still below 18 yrs?	Potential labour force	0-4 labour force
3. I understand that you keep some livestock, what factors determine the type and numbers of livestock you can keep at any given time and why?	Factors influencing farmers objectives	The livestock selling prices determine the number you can afford to buy (1) Goats are easy to manage having high numbers is not a problem (1) Cattle are a means of ploughing in the fields this determines the type and number (1) Labour particularly for cattle and space (3) Money to maintain the family (school children) & buy more stock (5) If the theft rate is too high then there is no use keeping large numbers (4) The demand to perform cultural rituals (2) Good vegetation and water are factors determining the number of livestock (drought) (1)
4. You also keep some goats, what do you do with them?	Reasons for keeping goats	Kept for sales (in exchange for cash) and home consumption or for food security (6) To perform cultural rituals (6) They keep them for milking (1) There are households that keep the animals for consumption only and they do not sell (1)
5. Who owns the goats/sheep of this household and where does this person normally live (here or he/she is working somewhere (e.g. in town). How are decisions on what to do with goats made?	Decision maker and his availability, decision making units	Household heads (mostly men) make decisions (12) Both the wife and household head make decisions (1) Elder sons or daughters (4)
6. How do you keep your goats? Who takes care of them?	General management practices (tethering, stall feeding, free ranging, herding) and person(s) to be affected by decision on changes	The goats are herded to the veld in the morning and kraaled in the evening by the household head, children or the herdsman (14) No stall feeding is practised nor supplemental feeding done

Questions	Info needs	Answers provided
7. How do you manage your goats in terms of breeding, feeding, health and housing? Where do you graze your animals and does your grazing management change with seasons?	Management practices	<b>Breeding:</b> Natural and inbreeding [33]; Sometimes borrow males for mating [1]. <b>Feeding:</b> No specific feeding, goats are herded to the veld, and no grazing camp management [37]; In wet season goats browse in the veld, feed is supplemented in winter, kitchen wastes [6]; They graze on harvested fields [2]. <b>Health:</b> Dipping to control ticks [4]; Advice by veterinarians from the government [8]; Seeks advice from veterinary shops where he buys medicines [3]. <b>Housing:</b> The goats are housed in kraals in the night [21].
8. How do you manage your livestock during dry season and drought years?		Both backyard feeding using various sources e.g. cabbage leaves and browsing [5]; They buy Lucerne bales or some use macadamia nuts to supplement in the dry season [6]; No supplemental feeding is provided they survive on what is in the veld or pods (ditlhwatlwadi) from Acacia (moshwana) are given [30].
9. What are the major threats to successful goat farming in this village	Threats of goat farmers (e.g. diseases, theft, mortality; find when it normally occur if that is the case)	Theft [22]; Diseases e.g. footrot, heartwater [13]; Mortality due to hunger, collisions with cars, low temperatures [16]; Government supply Lucerne for cattle owners only not small stock [1]; As there are no camps goats tend to graze further than other livestock and there is no clinic to treat animals [3]; Predators e.g. jackals [5].
10. Which traditional ways do you use to treat which diseases of livestock?	Local health care methods	None [31]; Use traditional plants (mogalakane for diarrhoea, leutlwautlwane for eye problem, sekanama, potassium permanganate, morwesa for dystocia in cattle, segafane leaves for mad cow disease, sebale leaves for liver problems) [13].
11. Do you have a health care program (such as vaccination) that uses conventional ways of disease prevention and/or cure	Conventional health care methods	None [34] Extension officers give livestock owners a vaccination program to follow [7]
12. Ticks are said to be a problem in this area, how do you control them?	Control measures for ticks	Household farms use Jeyes fluid as a solvent to dip the animals [24]; They spray with anti tick spray four times a week [7]; They use oil, menthylated spirit, racho batteries [3]; Ticks in between hooves are removed by hand [2]
13. Literature on goats of this area says that the numbers of goats and sheep has not been increasing for years and may remain like that or even decline in coming years, do you agree? If that is so, what could be the possible reasons?	Reasons why goat/sheep numbers are not increasing	Not true – goat number increase all the time (3); High mortality rate (6); Severe drought hence lack of sufficient feeds and water at certain times of the year (18); Diseases (13); Stock theft (20); Predators Jackals (6); Poverty (1); No idea (2); No good care/poor mgt (9); No organised grazing systems (2); Lack of training/ knowledge (2).
14. Do you now, or have you at some other time, produce(d) goats specifically as a business venture? Do you have other things you do for business purposes?	Experience on commercialisation or business	Farmer kept goats for sale (6) Kept as a bank (1) No and no other business activity (35)
15. What are the reasons to why most households in this village do not produce goats as a business venture?	Reasons for not commercialising (problems)	No idea (9); No formal markets for goats (7); Markets are too far from the village (4); Risk aversion (1); They keep few numbers that cannot be sold (3); They are kept for other reasons like consumption, traditional ceremonies and for sale (6); Traditional beliefs that goats belong to ancestors and are to be used for rituals and passed on from generation to generation and not for sale (8); Theft (6); Lack of appropriate infrastructure (1); Feed and water shortage (7); Lack of production and management skills/knowledge (6).

Questions	Info needs	Answers provided
16. What do you think should be done for households in this village to start producing goats/sheep as a business venture that is expected to bring regular income to the household ( <i>For interviewer please seek for perceived solutions on each identified problem</i> )	Suggested solutions to problems influencing farmers objectives	Farmers to be educated on importance of keeping goats for sell and be equipped with the techniques of proper management (19); Provision of fodder/water during the dry/winter season (11); Government to control theft (9); People to be motivated through trainings and financial support (8); No idea (10); Improve the local infrastructure (1); Training farmers on kraal management (1); Avail extension services (2); Organise markets within a reasonable walking distance (8); Improve on grazing systems /camps (4); Govt to provide subsidies for farmers to start a stock and fence kraal (4); Formation of farmer groups, then the govt to provide training and info on goat mgt (1); Establish animal health clinics (3); Empower women to be decision makers (1).
17. Personally, do you think households in this village would commercialise goats/sheep if all these things that you have mentioned are put in place, give reasons?	Factors that motivate farmers to change their objectives	Yes, if trained, more people will increase goat numbers (5) Yes, if they have the knowledge and production skills (5) Yes, if they have good and organised markets (9) Yes, if they get good prices for their goats and if there is no competition (4) Yes, if theft is controlled (2) Yes, if people can change their attitudes (2) For more income to the household (6) Target men as well as boys and not only women (1) No idea (7)
18. Again, If these things that you have mentioned are put in place, what do you think will happen to the future structure of livestock distribution in this village? <i>Which species do you think would increase in number, decrease in number, increase the fastest and why?</i>	Future trends in livestock numbers	Less goats after 5 years as they will be divided (1) Goat numbers will increase as they kid twice per year and survive in harsh conditions (17) There will be more cattle because more goats will be sold to bring more money to cattle (3) Sheep will increase because more people prefer mutton than goats meat (3) Number of sheep will decrease because it is difficult to manage them (2) Increased number of sheep, goats & cattle (if mgt will improve) (9) Traditional breeds are more preferred than exotic breeds and are also suitable to the area (7) Boer goats will increase faster because they grow and multiply fast (4) No idea (5)
19. For sure, environmental conditions of your area ( <i>Sekhukhune</i> ) are appropriate for producing goats/sheep, but these animals are still considered not important sources of household incomes. Who then should be blamed on why these species are not contributing much to the household income?	Weak link/support	The system is to be blamed [3]; Owner of the livestock for not managing the goats very well. We take the animal to the natural grazing in the morning and collect at night and keep them in the kraals. Even some of them they do not know how much goats they have [14]; The government not providing market for livestock, extension services that will give as info and training how to breed, feed, manage the goats and how the camps maintain and how treat our animals when diseased (no animal clinic in the village). Shortage of water in the village particularly in the dry season. The government do not raise awareness about the importance of goats. Lack of formal established market [23]; Price of goats is less [1]; Theft and jackals [1];No one to blame [1]
20. Which organisations/institutions normally assist you on matters concerning livestock?	Linkages with stakeholders	None existence [30]; Extension officers by providing advice and technical support for cows not for goats[11]; Veterinary service [1]; Yes the government provide service [1].

Questions	Info needs	Answers provided
21. Are you happy with the way, government, research and extension assist farmers on matters concerning livestock in this village, support your answer? If not what should they be doing?	Good and weak linkages	Not happy [39] (the government does not provide the service required e.g. feed during drought season, water, disease control, no extension service, no training). Some of them do not know the word researcher and extension officers. Happy [3] (they get support in terms of disease control from extension).
22. By the way, do you belong to any farmer groups/organisations? Why? Do you think cooperatives are helpful, if so in what ways)	Opportunities for households to be organised	No [39]; Yes I belong to a FU which is very helpful in assisting farming [1]; Belong to burial society [1]. Knowledge about cooperatives: Yes [13] (they provide feed, medicine, provide info on market and prices); No [22].
23. Which other farmer groups still exist and which ones existed in the past for the benefit of people living in this village? Are/were they helpful? In what ways?	Active participation of farmers in organised activities, perception about cooperatives	There is a group which helps in providing security of cows in case of theft [2] No [35]
24. If the business of goats is to be active, which organisations should be doing what in this village?	Stakeholders and their perceived roles	Government provide camps and Lucerne during dry season, extension services, establish animal health care clinic, provide water to the village, train farmers how to manage goats and breed, establish formal market for livestock in the village [31]; Improve on land ownership [1]; Community group mobilise local materials to solve own problem [1]; Butcheries or slaughter house [1]; Auctioneer to be active [2]; The community comes together and work together then the business of goats can be much improved [1]; Cooperatives for crops[1]; Unity among the farmers[2]; Land bank[2]; Research [1].
25. What do you think should be the major activities at household producing goats as a business venture? What do you think the management should be like?	Perceptions on type of a commercialising farmer	Provision of the auction places (1) Good management practices (herding in a camp, disease control and proper feeding) (38) Co-operation amongst the farmers (unity of the farmers) (1)
26. Currently, where do you buy goats and where do you sell them if you want to do? Is it easy to buy a goat if you want one?	Available markets	No defined market. Hardly buys any goats. Only from the fellow villagers if need arises (29) It is quite easy and cheap as farmers offer fair prices during the festival periods.
27. Is it easy to sell a goat here, give reasons?	Market situation	Yes only if a buyer comes forth (29); At times through auctions which are quite rare (1); Not so easy to sell a goat in the village because you cannot establish who wants to buy and sell (lack of information) (2).
28. If you have both meat goats and milk goats, and all conditions that favour production of goats for business purposes are put into place, what do you think most farmers would opt for, which other <b>products</b> from goats and sheep could bring money to the household if introduced? Give reasons.	Preferred goat business	Goat meat (36) Milk not commonly used however its at times used by some households (9) Skins are used for the initiation purposes.
29. If butcheries would start selling goat meat do you think consumers would buy it? How about goat milk? Goat skins?	Assessment of local markets/consumer tastes	Those who like goat meat buy, but many do not like goats meat due to the bad smell (19); Some will buy goat milk (7); Goat skins are not normally sold (only in the nineties), they are only used for the traditional purposes (11).



Questions	Info needs	Answers provided
30. What breed is your goats/sheep and why these breeds? Any colour preferences & why	Current breeds (types) kept	Only the indigenous breeds are available (31); Prefer having all colours for different traditional ceremonies performed in the village (10).
31. If keeping goats as a business becomes active, which breeds of goats/sheep could be appropriate for this village, why?	Preferred breeds	Indigenous breeds because they are resistant to diseases and drought (26); Boer goats because they have larger size s and can fetch good market prices (2); Saanen goats for milk production (1).
32. If you are to be involved in a business for goats and sheep production, how would you deal with issues of labour in face of increased demand for management of these animals?	Contingency plan for labour	Part of the labour for herding will be provided by the family members. In case of shortage it is still cheaper to hire labour from the village to herd the goats (36); For management practices like vaccination, a veterinarian from the dept of agriculture can be consulted (4).
33. If goats/sheep really becomes profitable to you, how many goats do you think you can handle at any one time, taking into consideration space, labour and other activities you are normally involved in?	Capacity for scale of production	20 [13], 30 [10], 50 [3], 70-75 [2], 100 [2], 150 [2], 200 [2]; Depend on the capacity of his farm; If I have money I will expand [4].
34. What do you do with the manure that you get from your livestock? How about the skins after slaughtering for home consumption?	Use of products	For crops [13]; for garden [6]; for sale [3]; to neighbours [2]; no longer using manure [8]; I used the skin for mat and wearing; no longer using the skin [8].
35. Are there livestock products (e.g. milk, meat, hides, fur) that are accessible to some individuals and not to others in your family?	Who has access to what product(s) in the household?	Household head; Milk for female; Meat for men; Heart if for men; Kidney for old women.
36. If you want to start a business that can give you some profits in future, who do you approach for financial assistance or for a loan? Is the procedure easy for you?	Knowledge on financing institutions and procedure	Not aware [29]; Money lender in the village [8]; Bank [6]; There were some money lending organization who used to come in the village but they charge interest.
37. What do you think could be a major threat in the future of the goat/sheep industry?	Driving forces to goat entrepreneurship	Theft; Shortage of feed during dry season; Disease; Capital; Transportation; Age of the household; Drought; Home consumption; Reduction in the grazing area; Training on livestock production and management; Absence of market; Wild animals (predators); Lack of herding (labour).
38. Are you aware of how and where to get information on production and marketing of goats and sheep, prices etc?	Access to information	No access [33]; Extension [7]; Department of Agriculture [2] Supposed to be the department but not doing anything.
39. If you were the government, what would be the first problem that you would solve in this village?	Major problem	Dividing the grazing area in to camps; Solving the water problem; Minimising the theft problem; Establishing a market; Electrification of some households; Creating employment opportunities; Providing fence for the kraal; Establishing animal health.



## APPENDIX 7: SUMMARY OF QUESTIONNAIRES ADMINISTERED IN MBUZINI; 2ND ROUND OF INTERVIEWS

Name(s) of interviewer(s) \_\_\_\_\_

Date \_\_\_\_\_ Household name \_\_\_\_\_ Gender (HHead) \_\_\_\_\_

Name of respondent \_\_\_\_\_ Relationship of respondent to household head \_\_\_\_\_

Purpose: To find out what challenges being faced by communal households with interest in having goats making more income contribution to their way of living

Questions	Info needs	Answers provided
1. May you tell us the total number of people living with you in this household. How many man and how many women?	Gender distribution	The range of females (f) and males (m) per household is: 1-6 (f) 2-6 (m); but the majority is men.
2. How many of these are still below 18 years?	Potential labour force	The availability of labour ranges from 0-4 with one household having a potential of 9
3. I understand that you keep some livestock, what factors determine the type and numbers of livestock you can keep at any given time and <i>why</i> ?	Factors influencing farmers objectives	If the management practices are good then the numbers should grow (1) Demand to perform cultural rituals (4) Labour particularly for cattle and space (3) Money to maintain the family(school children) & buy more stock (9) Theft and mortality (3) Family size, as they grow the number of livestock should increase Good vegetation and water are factors determining the number of livestock
4. You also keep some goats, what do you do with them?	Reasons for keeping goats	They are kept for sales (in exchange for cash) and home consumption or subsistence (14); for cultural ceremonies (10); as heritage from the great-grandparents; for milking, for consumption only (no selling); for payment of dowry.
5. Who owns the goats/sheep of this household and where does this person normally live (here or he/she is working somewhere e.g. in town). How are decisions on what to do with goats made?	Decision maker and his availability, decision making units	Pensioners headed households (women or men), Husbands even when they work in cities decisions are taken by them Both the wife and household head make decisions
6. How do you keep your goats? Who takes care of them?	General management practices (tethering, stall feeding, free ranging, herding etc) and person(s) to be affected by decision on changes	Goats are herded to the veld in the morning and kraaled in the evening by the household head, children or the herdsman; 1% of the households stall feed their livestock and macadamia nuts are used as supplements.

Questions	Info needs	Answers provided
7. How do you manage your goats in terms of breeding, feeding, health and housing? Where do you graze your animals and does your grazing management change with seasons?	Management practices	Breeding—natural (9); Feeding, natural grazing, free range (9); Buy Lucerne (4); Use kitchen waste (3); Vegetable waste from town (1); Health care, no treatment (9); Buys medicines and treats them (2); Housing, kraal (13); House (1); Grazing does not change with season (10).
8. How do you manage your livestock during dry season and drought years?		No special attention given (8); Water is provided (8); They buy Lucerne, fodder (3); Fed with leftovers (2).
9. What are the major threats to successful goat farming in this village	Threats of goat farmers (e.g. diseases, theft, mortality; find when it normally occur if that is the case)	Drought, lack of feeds & water (3); Theft (11); Lack of markets/low prices (1); Predators (2); High mortality (2); No idea (2); Diseases (4).
10. Which traditional ways do you use to treat which diseases of livestock?	Local health care methods	None (17)
11. Do you have a health care program (such as vaccination) that uses conventional ways of disease prevention and/or cure	Conventional health care methods	Yes (3); No (8); Buys medicine (5); Gets from neighbours (2).
12. Ticks are said to be a problem in this area, how do you control them?	Control measures for ticks	Spot application by use of Jeyes fluid (6); Use cattle spray (1); Use paraffin (2); Do hand dressing (1); Dipping (3); None (1); Use old engine oil (1).
13. Literature on goats of this area says that the numbers of goats and sheep has not been increasing for years and may remain like that or even decline in coming years, do you agree? If that is so, what could be the possible reasons for this?	Reasons why goat/sheep numbers are not increasing	Not true – goat numbers increase all the time (2); High mortality rate (2); Severe drought hence lack of sufficient feeds and water at certain times of the year (3); Diseases (4); Stock theft (7); Predators Jackals (6); No good care/poor mgt. goats are kept as scavenging animals (6); No organised grazing systems (2), Lack of training/ knowledge (1); Lack of market (1).
14. Do you now, or have you at some other time, produce(d) goats specifically as a business venture? Do you have other things you do for business purposes?	Experience on commercialisation or business	Farmer kept goats to sale when they need money (2) No and no other business activity (13)
15. What are the reasons to why most households in this village do not produce goats as a business venture?	Reasons for not commercialising (problems)	No idea (1); No formal markets for goats (3); Lack of market information (1); Markets are too far from the village (1); They keep few numbers that cannot be sold (4); They are kept for other reasons like consumption, traditional ceremonies and for sale (6); Traditional beliefs that goats belong to ancestors and are to be used for rituals and passed on from generation to generation and not for sale (1); Theft (3); Feed and water shortage (1); Lack of production and management skills/knowledge (6).

Questions	Info needs	Answers provided
16. What do you think should be done for households in this village to start producing goats/sheep as a business venture that is expected to bring regular income to the household ( <i>For interviewer please seek for perceived solutions on each identified problem</i> )	Suggested solutions to problems influencing farmers objectives	Farmers to be educated on importance of keeping goats for sale and be equipped with the techniques of proper management (5); Provision of fodder/water during the dry/winter season (11); Government to control theft (5); Govt to provide water to the village (1); People to be motivated through trainings and financial support (1); Provide market information (2); Control of Jackals (1); Improve local infrastructure (1); Training on kraal management (1); Avail extension services (1); Organise markets within a reasonable walking distance (1); Improve on grazing systems /camps (5); Govt to provide subsidies for farmers to start a stock and fence kraal (4); Formation of farmer groups, then the gov't to provide training and info on goat mgt (4); Provide grazing camps (2); Establish animal health clinics (6); Involve youth in goats (2).
17. Personally, do you think households in this village would commercialise goats/sheep if all these things that you have mentioned are put in place, give reasons?	Factors that motivate farmers to change their objectives	Yes, if trained, more people will increase goat numbers (1); Yes, if they have the knowledge and production skills (1); Yes, if they have good and organised markets (2); Yes, if they get good prices for their goats and if there is no competition (4); Yes, if theft is controlled (1); Yes, if people can change their attitudes (2); For more income to the household (5); Target men as well as boys and not only women (1).
18. Again, If these things that you have mentioned are put in place, what do you think will happen to the future structure of livestock distribution in this village? <i>Which species do you think would increase in number, decrease in number, increase the fastest and why?</i>	Future trends in livestock numbers	Goat numbers will increase as they kid twice per year and survive in harsh conditions (8); There will be more cattle because more goats will be sold to bring more money to cattle (3); Number of sheep will decrease because it is difficult to manage them (2); Increased number of sheep, goats & cattle (if mgt will improve) (5); Traditional breeds are preferred more than the exotic breeds and are also suitable to the area (7); No idea (3).
19. For sure, environmental conditions of your area ( <i>Sekhukhune</i> ) are appropriate for producing goats/sheep, but these animals are still considered not important sources of household incomes. Who then should be blamed on why these species are not contributing much to household income? <i>Support your answer</i>	Weak link/support	Government no extension services, no training on goat mgt, no good markets, no market info (8); Youth for not participating in goats keeping (1); Cultural practices (1); The Kgoshi (chief) they have a say on peoples property (1); Nobody (1); The system (1); Farmers for not doing their duty well (4).
20. Which organisations or institutions normally assist households in this village on matters concerning livestock?	Linkages with stakeholders	No idea (2) Dept. of Agriculture (providing funds, veterinary services, medicines training, markets, extension officers, etc.) (6); NGOs –(BIC) (2)
21. Are you happy with the way, government, research and extension assist farmers on matters concerning livestock in this village, support your answer? If not what should they be doing?	Good and weak linkages	No, no support (14) Yes (2)
22. By the way, do you belong to any farmer groups/organisations? Why?	Opportunities for households to be organised	Farmer groups, none in this village (15); Social burial groups (5); No (8)

Questions	Info needs	Answers provided
23. Which other organisations are in existence or existed in the past for the benefit of people living in this village?	Active participation of farmers in organised activities	None (14) Co-operatives are good as they provide services, medicines, markets etc. to farmers (10)
24. If the business of goats is to be active, which organisations should be doing what?	Stakeholders and their perceived roles	The government to provide feeds, medicines, training, markets (2); Dept. of Agriculture and Extension to provide vaccines, training and markets (2), Water affairs to provide water to this village (2); Nature conservation to divide camps for the villagers (1).
25. What do you think should be the major activities at household producing goats as a business venture? What do you think the management should be like?	Perceptions on type of a commercialising farmer	Provision of the auction places (3) Good management practices (herding in a camp, disease control and proper feeding) (11)
26. Currently, where do you buy goats if you want one and where do you sell goats. Is it easy to buy a goat if you want one?	Available markets	No defined market, hardly buys any goats (9); Only from other villagers if need arises (5); It is quite easy and cheap because of the fair prices that farmers offer during the festive seasons.
27. Is it easy to sell a goat here, give reasons?	Market situation	Yes only if a buyer comes forth (10); At times through auctions which are quite rare (1); Not so easy to sell a goat in the village because you cant establish who wants to buy and sell (lack of information) (4).
28. If you have both meat goats and milk goats, and all conditions that favour production of goats for business purposes are put into place, what do you think most farmers would opt for? Give reasons.	Preferred goat business	Goat meat (12); Milk not commonly used however its at times used by some households (1); Skins are used for the initiation purposes (4).
29. If butcheries would start selling goat meat do you think consumers would buy it? How about goat milk?	Assessment of local markets/consumer tastes	Those who like goats meat can purchase but most of the people do not like goats meat due to the bad smell (10); Some will buy goat milk (2); Goat skins are not normally sold (only in the nineties) and are only used for traditional purposes (10).
30. What breed is your goats/sheep and why these breeds?	Current breeds (types) kept	Only the indigenous breeds are available (13); Prefer having all colours for different types of traditional ceremonies (1); No colour preference (1).
31. If keeping goats as a business becomes active, which breeds of goats/sheep do you think would be appropriate for this village and why?	Preferred breeds	Indigenous breeds because they are resistant to diseases and drought (11); Boer goats because they have larger size s and can fetch good market prices (2); Saanen goats for milk production (0).
32. If you are to be involved in a business venture for goats and sheep production, how would you deal with issues of labour in face of increased demand for management of these animals?	Contingency plan for labour	Part of the labour for herding will be provided by the family members. In case of shortage it is still cheaper to hire labour from the village to herd the goats (10); For management practices like vaccination, a veterinarian from the dept of agriculture can be consulted (4).

Questions	Info needs	Answers provided
33. If goats/sheep really becomes profitable to you, how many goats do you think you can handle at any one time, taking into consideration space, labour and other activities you are normally involved in?	Capacity for scale of production	150, 200 goats in 6 ha of land and plant Lucerne, 15 but I say this number because I do not have the experience to take care of the goats, labour shortage, space shortage, 30-40, 50, 20, 10, 70, 40, 70, 15, not more than 10 because of labour shortage, 10 because of labour problem, 20-30.
34. What do you do with the manure that you get from your livestock? How about the skins after slaughtering for home consumption	Use of products	For crops (2); For garden (4); Sometimes for sale (1); No longer use manure (3); I give the manure to fellow farmers free (1); I used the skin for mat, wearing, sale, decoration; No market for goat skins, I throw the skin of goats away.
35. Are there some products from your livestock: (e.g. milk, meat, hides, fur, etc) that are accessible to some individuals and not others in your household?	Who accesses what product(s) in the household?	Household head in case of sale; Meat is accessed by all family members; In some household all the family members take decisions.
36. If you want to start a business that can give you some profits in future, who do you approach for financial assistance or for a loan? Is the procedure easy for you?	Knowledge on financing institutions and procedures	Not aware of any financial institution (11); Borrow from each other (3).
37. What do you think could be a major threat in the future of the goat/sheep industry?	Driving forces to goat entrepreneurship	Disease; Management practices if not improved; Theft; Drought; Market price of sheep and goats; Lack of market; Consumption
38. Are you aware of how and where to get information on production and marketing of goats and sheep, prices etc?	Access to information	Department of Agriculture (breeding info and training); Vleissentraal Bosveld (auction board); No source except the farmers who sell sheep and goats; No access to info (price decided by themselves) (6); Department of Agriculture (extension).
39. If you were the government, what would be the first problem that you would solve in this village?	Major problem	Grow Lucerne for sheep, goats and cows; Fence the grazing camps; Provide the grazing areas into camps; Provide fencing materials for kraals; Solve the problem of drinking water; Establish animal health clinic; Establish formal market for livestock in the village where people can buy and sell.





## APPENDIX 8: SUMMARY OF STAKEHOLDER INTERVIEWS.

Stakeholder	Mandate	Objectives	Perception of the problem	Perception of the solution	Links with other stakeholders	Driving forces and scenarios	Other interventions
Land Bank, and others as mentioned by Land Bank: - Development Bank of SA - Dept of Land Affairs - Commercial Banks	Support development programs to all types of farms (loans, grants, training, literature for farmers)	Development	Unavailable markets; High transport costs to market (due to distance); Lack of information and awareness; No guaranteed continuous supply of goats/sheep and their by-products.	Establish markets; Put markets closer to producer; Exposure visits; Maintain production chain.	Universities (strong grants); LDA (good information); Department of water affairs and forestry (good financial support); ARC (good grants for research).	Market prices for goat meat compared with meat from other species	Intensification of the awareness campaign (started 3-4 yrs ago)
Limpopo Department of Agriculture (LDA)		Poverty alleviation	Social structures not positive enough for households to commercialise; Unavailability of organised markets; Water shortages; Farmers must be more serious; Animal feed and feeding.	Create awareness, establish district committees; Farmers to be organised; Water department to be more involved; Train farmers; More research.	Heifer International (very good live animals); ARC (good collaborative research on crops, livestock & management of natural resources, MOU with ARC ready for signing).	Income anticipation	Limpopo Kid and the current research (ICRA)
University of the North	Training and Research	Knowledge, skills technology development and empowerment (Centre for Rural Development; outreach programs of university)	Perceptions (goat is a poor man's animal, goat meat stinks, goat does not bring meaningful income); Poor management (no strategies for feeding, breeding, health mgt (Heart water); No organised markets; Long distances from markets; High mortality in kids; Enhance competence of municipalities; Communal grazing (difficult to manage); Improve planning.	Educate farmers (attitude and skills); Genetic potential is available (cross breeding); Improve formal markets; Guarantee reliable supply; Improve management of goats (breeding season, feeding, health); Improve quality and quantity of goat meat; Research to understand perceptions of farmers; Veld improvement; No land; Baseline surveys. Research on mortality	ARC (collaborative research); Other universities (collaborative research); Land Bank (grants) weak relationship; LDA (collaboration); Goat study group (weak link); Local government, municipalities identify projects for them; Increase numbers as solution to theft.	The system; Numbers decrease but productivity increase; Reduced grazing (population increase).	Communal outreach by Centre for Rural Development); Lebowakgomo District was advised on stocking rates, but idea failed due to farmers' perceptions.

Stakeholder	Mandate	Objectives	Perception of the problem	Perception of the solution	Links with other stakeholders	Driving forces and scenarios	Other interventions
ARC Animal Nutrition and Product Institute; ARC SRL Division	Assisting communities in getting funds; Initiation of projects and preparations of business plans	Promotion of agricultural and related sectors through research, technology dev & transfer to support an informed society, and encourage the national growth and development	Lack of awareness on the economic importance of goats (goats do not bring any income); Insufficient funding; Lack of organised markets for goats hence low prices; Farmers have no knowledge on other products from goats.	Train farmers on improved goat management practices; Awareness creation on economic value of goats; Train farmers on product & by-product dev & value addition; Financial support to farmers that start to add value to goat meat.	Municipalities; Farmers Unions; Dept. of Agriculture; Dept. of Land Affairs; Land Bank; Private banks; Universities & Technical Institutes.	Lack of markets,	
ARC Range and Forage Institute (Dr. Aucamp & Brian)			Lack of organised markets; Insufficiencies in the production system; Shortage/sources of feeds; Lack of funds; Poor infrastructure, roads & distance to markets.	Improve markets by involving stakeholders; Increase production 40% Improve veld mgt & goat husbandry practices Provide loans to farmers; Make land a common property; Target the middle class; Create awareness on the contribution of goats.			
SDM Mr. Marishane (Marketing manager)	Sekhukhune District	Assess small scale & subsistence markets; Formulation of business plans; Formation of co-operatives; Promote livestock production & health care; Poverty eradication; Implementation and monitoring; Capacity building of rural communities; Farmer support services; Land reforms.	Low goat meat <b>demand</b> : Lack of consumer awareness; Butcheries not selling; Goats associated with ancestors; slaughtered only during ceremonies; Thin animals not fetching good prices at auctions; Cheap import substitutes (chicken) are available.  Low goat meat <b>supply</b> : Farmers are not market oriented (not selling); Numbers are low due to high mortality & theft; Drought; Sheep meat is preferred; Markets are not organised.	Raise goat numbers by: Create awareness among farmers and consumers; Government should hold village meetings (awareness campaigns) to create interest and motivate people to go for goat production; Poorest of the poor are now targeted making projects unsustainable; Interested educated unemployed youth should be targeted, trained and given financial assistance to start goat production. They can then provide employment to others.	Land bank comes to Municipality office twice a month from where farmers can avail loans and training on financial management; SDM is in touch with farmers through the Municipality. It has insisted on the necessity for farmers to form groups (co-operatives); Hierarchy and linkage between SDM and other offices.	Liberalisation and opening-up of markets (product dumping by developed countries kills local initiatives and markets);  Drought;  Increasing population will provide demand for meat products. So, there is a huge potential for small stock production.	Creating awareness;  Establishment of interest groups in: Egg and milk production schemes; Communal and kitchen gardening; Capacity building in fish production.

Stakeholder	Mandate	Objectives	Perception of the problem	Perception of the solution	Links with other stakeholders	Driving forces and scenarios	Other interventions
Tompi Seleka College of Agriculture	Formal agric. training to Diploma level; Short courses for farmers on production of poultry, pigs, vegetables, dairy & beef.	Capacity building of farmers through appropriate interventions (mainly training)	This was answered by extension officers because no specific research has been done by the college on the issue under investigation.	Marketing chains should be strengthened; Co-operatives need to be formed in the villages.	<b>Strong linkages with:</b> Farmers; ARC; Depts of Agric, Public Works, and Health; Police. <b>Weak linkages with:</b> Depts of Welfare, Public Works and Education; Farmers and Financial organisations; Land care.	Education policies and government; No subsidies for poor farmers training; Markets; Stock theft and large- scale farms.	Development projects by Africare (an NGO); Research conducted by the Agricultural Research Council (ARC).
Extension officers, Sekhukhune District	Liaise with Tompi on farmer training by identifying interest groups & dev needs; Farm visits to identify problems & interventions.	To have all farmers involved in specific management programmes especially on health care; Facilitate village co-operative formation.	Goats are perceived to contribute to the rural livelihoods as they are sold to local people increasing the farmers' income. The only setback is the current poor management practices.	Interest groups on commercialisation should be selected per village as part of the awareness creation on the potential commercial benefits of goat production.	<b>Strong linkages with:</b> Farmers; Depts of Health and Welfare; Police.  <b>Weak linkages with:</b> Farmers organisations; Dept of Education; Financial institutions; Land care; Breeder Societies.	No cooperatives (medicines for livestock), High rainfalls in summer then internal parasites  No subsidies for communal farmers,	
Vleissentraal Bosveld Mr Johan Vosser, Mr Rwan Viljoen	To provide a platform where buyers and sellers can meet to facilitate the process of auction		Farmers do not realise what the buyers need. Few goats brought for sale have the right age; Farmers often fail to bring the promised number to the auction. Reasons are: Sale of animals to speculators outside the yard to avoid paying the auction's commission; Low risk bearing capacity. In need of cash they sell before the date of auction to speculators Only branded and tattooed animals can be sold in the yard. This is cumbersome and more expensive. So, farmers prefer to sell informally. This affects the credibility of the auction system.	Farmers should get organised through the Koshi or form a farmers union to sell their small stock at the auction. This will ensure a sufficient number of animals for sale and credibility of the farmers; A village credit system should be developed, so that farmers do not sell out their animals at lower prices when they need cash; The process of tattooing and branding should be made simpler and easier; Government sale yards should be maintained well.	<b>Strong link with:</b> farmers who want to sell animals at the auction; buyers who buy animals at the auction yard; <b>Weak links with:</b> LDA (marketing officers from the LDA visit the auction yards to gather info on no. of commercial farmers and communal farmers, livestock composition and assess the auction situation); ARC; AgriLinks, an overseas company; SPCA often blames Vleissentraal for bad treatment of animals. But VC blames the sale yard people for not providing well-maintained facilities.		Vleissentraal takes the risk of ensuring that the checks that farmers receive do not bounce.

<b>Stakeholder</b>	<b>Mandate</b>	<b>Objectives</b>	<b>Perception of the problem</b>	<b>Perception of the solution</b>	<b>Links with other stakeholders</b>	<b>Driving forces and scenarios</b>	<b>Other interventions</b>
Ga-Nchabeleng farmers	Results from interviews with households on these and other related topics have been presented into a separate appendix (Appendix 6)						
Mbuzini farmers	Results from interviews with households on these and other related topics have been presented into a separate appendix (Appendix 7)						

## APPENDIX 9: TYPOLOGY OF THE SMALL STOCK COMMUNAL FARMERS IN SEKHUKHUNE DISTRICT

All Mbuluzi type village communal small stock farmers				
Types	Characteristics	Wealth Ranking (% of total no. of hh*)	Range (no. of animals)	Average
Type A	Regular income Basic education No cropping (60%) Cropping (40%)	Rich – 45% Average – 55% Poor – 0%	7 – 25 (100% hh)	13
All Ga-Nchabeleng type village communal small stock farmers				
Types	Characteristics	Wealth Ranking	Range (no. of animals)	Average
Type B	Regular income Basic education No cropping	Rich – 20% Average – 50% Poor – 30%	8 – 20 (60% hh)	13
			40 – 100 (40% hh)	60
Type C	Regular income Basic education Cropping	Rich – 30% Average – 70% Poor – 0%	7 – 20 (46% hh)	13
			25 – 50 (54% hh)	37
Type D	No regular income Basic education No cropping	Rich – 20% Average – 80% Poor – 0%	12 – 20 (80% hh)	13
			50 – 100 (20% hh)	75
Type E	No regular income Basic education Cropping	Rich – 0% Average – 100% Poor – 0%	9 – 13 (100% hh)	11
Type F	Regular income Secondary education No cropping	Rich – 37% Average – 63% Poor – 0%	9 – 12 (88% hh)	11
			25 – 50 (12% hh)	37
Type G	No regular income Secondary education No cropping	Rich – 12% Average – 88% Poor – 0%	11 – 30 (50% hh)	15
			25 – 50 (50% hh)	37
Type H	No regular income Secondary education Cropping	Rich – 0% Average – 100% Poor – 0%	8 – 10 (100% hh)	9
Type I	No regular income Basic education No cropping	Poor – 100%	< 7	

\* hh = Household

The second round of interviews among households with small stock showed that a household would require a maximum of 10 goats to cover demands for cultural festivals, household consumption and risk aversion. It was said that a family would use a maximum of three goats for cultural activities, two for household consumption and five for risk aversion. However, later it was assumed that when commercialising small stock becomes a reality, households would not require as many goats for risk aversion if an investment plan is put in place. Hence, it was concluded that the number above the sum of household consumption and allocation for cultural activities would be the baseline for determining households with the potential to commercialise (includes types AH). All households with 6 or less goats were included in Type I. It was agreed that such households would not have the potential to commercialise in the near future.

### Assumptions

Before different types of goat farmers were identified, some assumptions were made. These were drawn in view of the study that should focus on households with the potential to commercialize. The assumptions included:

- Only households with small stock should form part of this study:  
The basis for this assumption is that households who already own small stock appreciate the value of these animals and have the interest and motivation to commercialize small stock.
- Households herding their livestock have the best potential.

Households which herd their livestock pay more attention to the day to day care and requirements of their livestock. They also guard them against theft and predation which is a major problem in Sekhukhune District. Poor management is one of the main reasons perceived by many stakeholders as causing poor productivity of communal livestock. This assumption can further be explained as those households which herd their livestock have the potential to manage their livestock well if the correct environment to commercialise is put into place because they already have a strong base on which knowledge and skill could be built on.

**Criteria used:**

The criteria used to group the farmers were:

**Infrastructure:**

The villages Mbuzini and Ga-Nchabeleng are representative of Sekhukhune District (Harry Ramaboea, SDM, personal communication) and significantly differ in their set up and infrastructure that could affect a development intervention or project differently. Infrastructure includes village set up and agricultural activities. The differences mentioned in Table 4.1 can be considered in grouping goat farmers for project interventions as those that belong to a “Ga-Nchabeleng type” and those that belong to a “Mbuzini type” of a village.

**Income:**

The types were grouped on the regularity of the incomes of the households since households with regular income may be able to employ and buy animal feeds and drugs according to plan which could be different from their counterparts with no guaranteed income. The two categories based on this criterion are:

- Regular income: Households receiving pension or any other regular income sources such as salaries;
- No regular income: Households not receiving pension or other regular income sources.

**Wealth ranking:**

Wealth of a household helps in determining the affordability, risk taking ability and extent to which individual households can divert their resources for the success of a project or enterprise. Hence the households were categorised as rich, average or poor based on certain criteria:

- Rich: The households with regular source of income, no. of household members employed and possession of physical assets like big house, car, television, good furniture were perceived as rich.
- Average: The households with at least part of income assured and possession of physical assets like medium sized house, television and furniture were perceived as average.
- Poor: The households with RDP houses, no regular source of income and possession of no physical assets like television and furniture were perceived as poor.

The perceptions of the interpreters, who are local people of this area, were also considered when ranking the household as rich, average or poor.

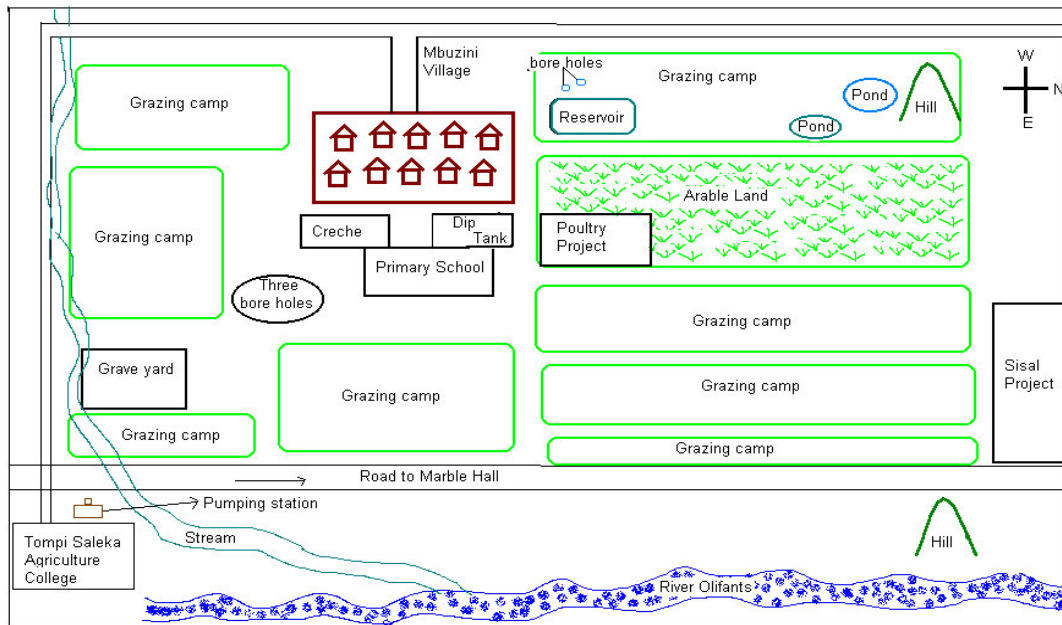
**Education:**

Level of education of the household head determines the extent to which a new initiative is accepted. Education level also plays an important role in commercializing especially when it comes to training, adoption and use of acquired knowledge. Research done by Zinzombe (2004) on adoption of beef technologies by Zimbabwean communal farmers showed that farmers with secondary level of education upwards, adopted and were still using most of the technologies that were introduced to them 4 years earlier. This was the same situation with middle aged communal farmers (36-60 years old). In contrast, farmers who had no formal education or had only primary level of education were still using only one (protein supplementation) of the five technologies that were introduced to them. Considering these findings level of education was considered as an important criterion. On analysis of data, it was found that the household heads fell in the categories of (i) No formal education, (ii) Primary level, (iii) Secondary level, (iv) Tertiary level. For convenience of understanding and grouping, household heads with no formal education and those with primary level of education were fused into one category of basic education. Household heads with secondary level education and those with tertiary level of education were fused into one category of secondary level education.

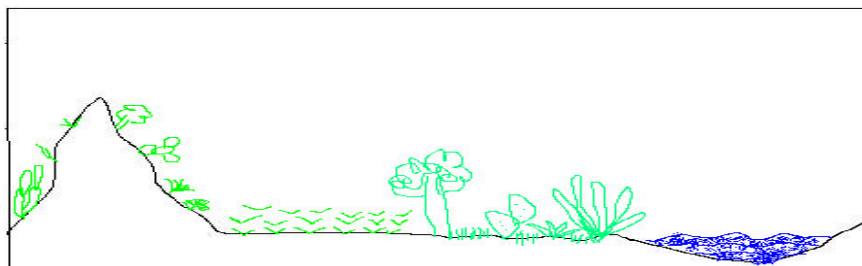
**Cropping:**

Some households in the area are involved in cropping and others are not. This difference may affect the labour allocation for livestock and crops as well as the access to crop residues and the potential link between manure and cropping. So the households were grouped into those that cropped and those that did not.

**APPENDIX 10: MBUZINI: MAP OF THE VILLAGE**



**APPENDIX 11: MBUZINI: TRANSECT OF THE VILLAGE AREA**

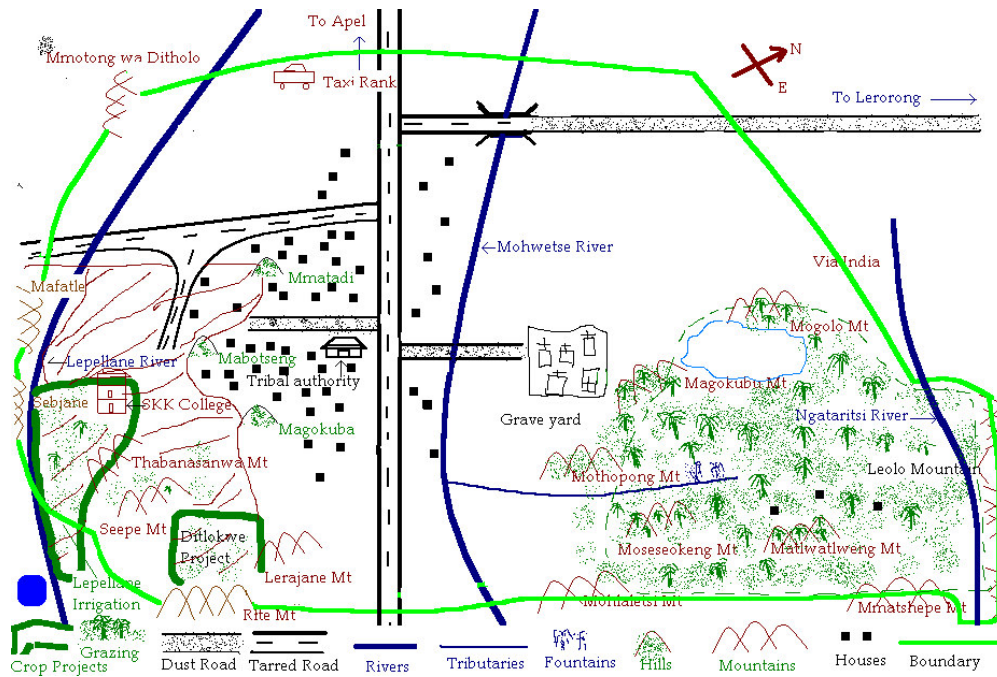


Niche	Hilly area	Flat arable	Flat grazing	River
<b>Land use</b>	For grazing & firewood collection Homesteads and school	For growing crops in summer (Sept-Feb)	Eleven grazing camps, people also collect their firewood here	Olifants River
<b>Soil type</b>	Sandy loam to sand	Red sandy loam	Black clays and loams	
<b>Water source</b>	Rainfall	Rainfall	two earth dams collecting/storing rain water for livestock	River flows throughout the year
<b>Livestock</b>	Generally grazed by goats	Grazed by cattle and goats round the year, except in cropping season (Sept-Feb)	Cattle, goats and sheep grazing, but no fencing between camps	Livestock drink water from the river during droughts when the village ponds go dry

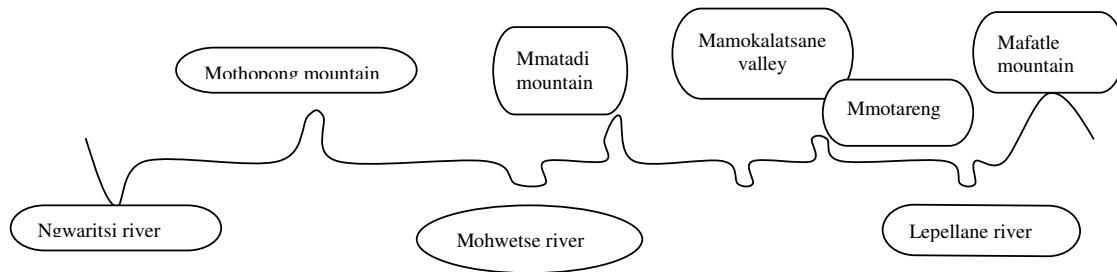




**APPENDIX 12: GA-NCHABELENG: MAP OF THE VILLAGE**



**APPENDIX 13: GA-NCHABELENG: TRANSECT OF THE VILLAGE AREA**



Soil type	Sand and clay ( <i>Seloko</i> ), rocky		Loam	Sandy clay/sand
<b>Land use</b>	Grazing (Ngwaritsi, Mohwetse) Clay plots	Grave yards and gardens (Mohatse and Mmatodi)	Shops, houses, school, vegetable gardens	Cropping and grazing (Temo le phulo)
<b>Livestock</b>	Cattle and goats	Goats, cattle and sheep		Goats, cattle and sheep
<b>Crops</b>		<i>Mabele</i> (sorghum) beans, maize	Spinach, cabbage, tomato, onion, beetroot	Watermelon, tomato, cabbage, maize ( <i>Legapu, Mabele, Mafooh</i> )
<b>Opportunities</b>	Dam, grazing camp, mines, better roads, bridge to grave yard		Running water, library, hall	Land improvement and projects, revitalization dam & irrigation scheme
<b>Problems</b>	Baboons, theft, drought, jackals, silting-up of dam	Lack of water, soil erosion	Bridge needed, theft, no jobs unfertile soils, salty water	Lack of fence, theft, interest conflict among livestock and crop owners, soil nematodes?

