

An Analysis of How Livestock Affects the Livelihood of the Villagers in Motseng

Interdisciplinary Land Use and Natural Resource Management – field course at SLUSE

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2. Abstract (Astrid, Ivan, Julio, Sisse)

Livestock has multipurpose uses with both monetary and direct values that influence the livelihood of the owners. In developing countries and rural areas it is very common to have livestock. With this in mind our statement of objective is to describe how livestock affects the livelihood of the villagers of Motseng. The description is done through an analysis of the different uses of livestock and the factors that impact the livestock. These factors are constraints in relation to livestock, the management of the grassland as well as the gender and ethnicity. To have an idea about the size of the livestock we have also outlined the number and composition in Motseng.

Through different methods the information gathered in the field are triangulated. From this main results of the project are that livestock is very important to the villagers of Motseng because of its many uses; and that the management of the grassland is too influenced by the fact that the village does not have official rights over its land to be well managed. The threat of theft and ethnicity do not play a relevant role in the composition of livestock, however, gender does play a role to the composition of the livestock in Motseng.

3. Acknowledgements (Astrid, Ivan, Julio, Sisse)

The realization of this study has been possible thanks to the people of Motseng. They have shared their culture, information and time. Special thanks go to our translator who helped us during the field work. We would also like to thank the University of Kwa-Zulu Natal, our counterparts Riona Patak, Zinhle Ngubane-Strait and Professor Trevor Hill.

4. Introduction (Astrid, Ivan, Julio, Sisse)

Livestock has been commonly associated with rural communities in South Africa through several studies that describe its importance in subsistence farming. These studies focus on how different uses relate with the livelihoods of the rural villagers because livestock is a part of the everyday life in one way or another¹. The livestock may have an important social and financial role in the community, accounting both households with and without livestock². This multipurpose nature of livestock gives high benefits that can possibly exceed those in commercial productions³. Thus in determination of the relevance of livestock on the livelihood, it is important to account both the monetary values and direct-use values⁴.

These multipurpose uses of livestock classified into five different categories (human, financial physical, social, and cultural uses) create an adapted livelihood framework⁵ that helps us to better understand the importance of livestock for the livelihood of the villagers. Livelihoods are shaped by a multitude of different factors that are constantly shifting (DFID, 1999). In relation with livestock these factors are of a very different nature and below we have outlined some interesting opportunities and constraints when working with livestock.

Especially the availability is added to the implementation of new land tenure policies which are still in process bring enormous problems regarding to the establishment of land ownership rights for communities living in this area (REF 10). Boundaries of villages may not be well defined and the lack of ownership can determine the use of the grasslands and led to situations of mismanagement (REF 11). The availability and management of the resources could be listed as a factor as well.

The composition of livestock can also be shaped by gender and ethnic differences. A survey conducted in several South African villages pointed out an association between gender and the ownership of livestock⁶. Sotho farmers have been commonly associated with the possession of cattle whereas Xhosa people are more related to sheep ownership⁷.

Other factors as health can also affect the composition of livestock. In relation with animal health it has been found that in Eastern Cape the treatment of livestock diseases is commonly associated with the use of plants⁸.

Theft has also been related with a decrease in the number of livestock that force farmers to abandon stock rearing and change livelihood approach⁹. On top of that, proximity of borders can exacerbate this situation and lead to conditions that have been branded as “epidemic” or “crisis”¹⁰.

¹ Shackleton et al., 2001; Dovie et al., 2004

² Shackleton et al., 2001

³ Behnke, 1985

⁴ Dovie et al., 2004

⁵ Sustainable Livelihoods Guidance Sheets, 1999

⁶ Bennett and Lent, 2007

⁷ Traum, 2011

⁸ Masika et al., 2000

Having the introduction in mind, the statement of objective, focusing on Motseng village, reads as follows:

Statement of objective

How does livestock affect livelihoods in the village of Motseng?

In order to analyze this statement of objective we are looking at the following research questions:

Research question

- What is the composition of livestock?
- What is the role of livestock?
 - o What are the uses of livestock?
 - o How do livestock relate with the different capitals of the livelihood framework?
- What are the factors that affect livestock?
 - o What are the main constraints in relation to livestock?
 - o How are the grasslands (natural resources) managed?
 - o How does gender play a role in relation to livestock?
 - o How does ethnicity play a role in the choice of livestock?

⁹ Bernett and Lent, 2007

¹⁰ Gary Kynoch et al., 2001

5. Description of Study Area (Julio, Astrid)

The study was undertaken in Motseng, a small village composed by 65 houses. Motseng belongs to the Matatiele Municipality and is located in the Eastern Cape Province, in South Africa¹¹. The area is close to the border of Lesotho, in the Drakensberg Mountains. This fact brings a variation in the climate and temperatures during the day and within the seasons: a wet summer from August to April and a dry winter from May to July.

Land uses in Motseng are mostly grasslands but home-gardens are commonly seen around the houses. Therefore, the primary livelihood activities are related to arable agriculture and livestock, besides the extraction of natural resources, basically wood for fuel. The village is under communal tenure in land that belongs to a catholic Mission (Mariazell). However, there is no official contract that confirms the area ownership by Motseng residents. The community is structured around a social hierarchy where a tribal authority inherits this position. The chief deals with daily activities directly related to their people and represents the face of the community to the outside world.

Motseng is quite remote from the major commercial centres. The only way to access the village is by a 46km-length dirt road that links Matatiele to Lesotho. The employments in the village include a few herders and some people who work in the far-away sugarcane fields, together with some temporary jobs as fire fighters or tourist guides.

Map 1: Map of Motseng village



¹¹ 28°22'30"E; 30°17'30"S

6 Methodology (Ivan, Julio)

During our field work we have conducted several methods in order to obtain the requested data and collect enough information to triangulate the information. A briefly description of the methods used and the reasons why we have chosen them is presented below.

6.1 Questionnaires

A simple questionnaire was conducted in order to get an estimated number of the livestock and its composition in the village (Appendix 3). Therefore, the main questions were what kind of animals do they have, how many and why. Data about gender and ethnicity of the respondents were collected as well to understand its relation to livestock. Finally, some of the questions were about the use of livestock, their management and consequent facts that could be affecting their composition. A systematically random sampling method was chosen in order to collect representative information of the village without any bias. This sampling method resulted in asking every second household.

6.2 Semi-Structured Interviews

Semi-structured interviews were used in order to get more in-depth information about different topics in relation to livestock while being flexible to adapt to the new information brought by the informant. Some of the respondents were chosen from the questionnaire survey, while others were chosen after their status in the village, visibility at agricultural/livestock meetings, gender, age, and ethnicity. See Appendix 1 with purpose and topics specified.

6.3 PRA Methods

The Participatory Rural Appraisals methods (PRA's) were conducted in order to learn about the indigenous knowledge, have a new angle on the topics and let the villagers have their opinion heard. It also allows the villagers to have an active part in helping understanding different issues.

Four PRA sessions (Seasonal Calendar, Ranking, Problem Tree and Timeline) were carried out with 10-15 participants. These participants were not selected, but invited to join the session after a village meeting and a workshop. One of the PRA's (resource mapping) was done with selected people with knowledge about the approached theme of the session.

The seasonal calendar was carried out to better understand the seasons and its' relation and consequences to livestock. The ranking of the uses of livestock was conducted as a way of ranking the uses of each species and rank the species. The problem tree was conducted in order to found out whether the participants had any issues regarding livestock. The timeline was carried out in order to put the major happenings in relation with livestock within a timeframe. And the resource Map was conducted to gather basic information about the village boundaries and availability of natural resources.

Two transect walks were carried out, one following the path that the herders use to take their animals to the summer pastures in the area know as Sekgutlong, and the second following the North boundaries of Motseng and the winter grazing area. In both of them information was gathered about the landscape characteristics as the vegetation, soil erosion and water resources. Also the management of the land was observed. Along the way we made a route on the GPS and we took waypoints in places of interest being fences, border lines, viewpoints and water holes.

6.5 Other methods

Two focus group interviews with random villagers and with a representative group in the village (Livestock Committee) were conducted to discover the interaction within the group. The stakeholder analysis as a tool was not conducted in the field, but while doing other methods we were sampling information to structure and comprehend the relations between different actors and their roles¹².

Observations and informal conversations with different key-informants were done during the stay, which both contributes to the broader understanding of the settings and the more specific routines of the everyday life. Through our locally known interpreter we gained information about relevant and tacit knowledge. (Astrid, Ivan, Julio, Sisse)

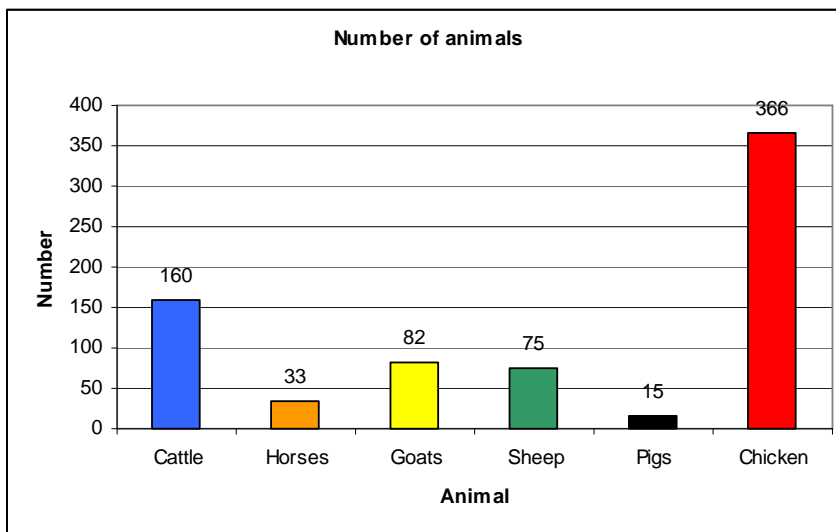
¹² See appendix 4: Stakeholder Analysis.

7. Results and Discussion of Results

In this chapter we analyze and discuss the results from the field work. First describing the number and composition of livestock in the village, then analyzing and discussing the uses of livestock as well as the grassland and the management of the grazing areas. Lastly the issues concerning theft, gender, health and ethnicity are analyzed and discussed.

7.1 Composition of the Livestock (Astrid, Sisse)

The number and composition of livestock gives a basic understanding of the livestock situation in the village. The first table (Figure 1) shows the total number of each livestock from the



questionnaire survey. From this table it is obvious that chicken is most represented animal in the village with 366 chickens, second ranked is the cattle with 160 cows, the number of goats and sheep being almost equal, while the number of pigs is only 15.

Figure 1: Number of animals in the questionnaire survey. Since we did 30 questionnaires in a village of ~60 households the results reflect quite well the total number in the village.

This goes well with the next table (Figure 2) showing the percentage of households with a specific livestock. It gives an idea of the distribution of livestock in the village and reflects the fact that almost every household keep livestock to some extend. The table also shows that not only one household in the village own all the chicken, but 80% of the households have poultry, and half of the households have cattle. The fact that the number of households having pigs is quite high (40%) in relation to the total number of pigs in the village (15) would lead to the conclusion that most households only have few pigs.

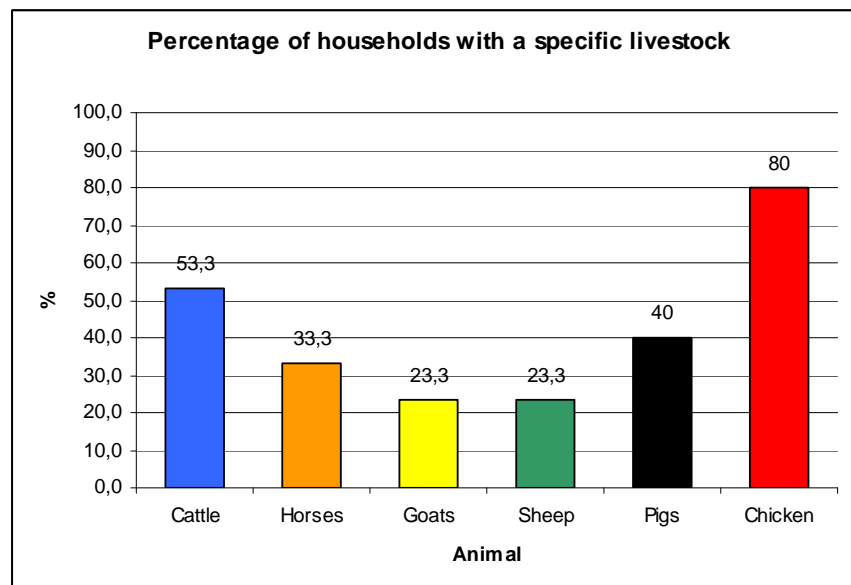


Figure 2: Percentage of households with a specific livestock

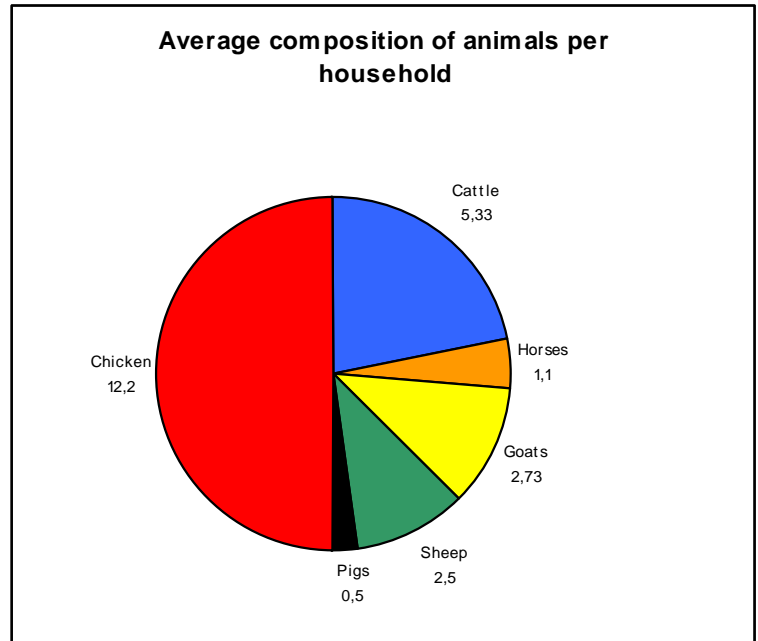
Figure 3: Average composition of animals per household

Figure 3 shows exactly this point by putting only 0,5 pigs as part of the average composition of livestock per household. It is also obvious that chickens are a very important part of every household as they represent half of the average household's composition of livestock.

7.2 The Role of the Livestock to the Villagers' Livelihood

The uses of livestock go beyond the monetary value and even influence households that do not own livestock¹³. We have identified these uses for each species and evaluated its repercussion to the local livelihoods. For a more clear analysis we

have grouped them in five categories that can be related it with the different capitals of the livelihood framework (Figure 4 of uses below).



Capital	Uses
Cultural	Lobola, Ceremonies (funerals, circumcision, dreams, welcoming of newborns and wives)
Social	Networks and status
Human	Meat, milk, eggs skins, wool
Physical	Transportation and ploughing
Financial	Selling of the livestock and products

Figure 4: Uses of livestock

7.2.1 Cultural Uses (*Ivan, co. Sisse*)

Cultural uses comprise lobola¹⁴ and different kind of ceremonies (Figure 4) and results from the questionnaire¹⁵ show that cows, goats and sheep are essential to the villagers' execution of these ceremonies (Figure 5).

¹³ Dovie et al. 2004

¹⁴ The 'price' that the man pays his fiancé's family for his hand.

¹⁵ Questionnaire, questions 11, 28.022011

The questionnaire shows that 69% of all households that own cattle use them for ceremonies; a number that is reduced to 50% and 43% respectively for goats and sheep (Figure 5). Among the households we asked none used chicken, pigs or horses for ceremonies.

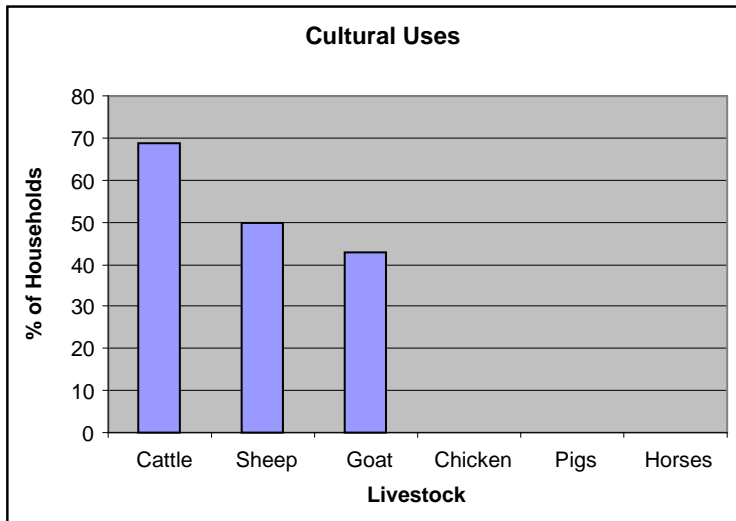


Figure 5: The percentage of households with

one kind of livestock that use this animal for cultural uses

And as one man had stated, “*Whenever there’s a ceremony I use my livestock.*”¹⁶

Only 7% of the households with livestock got them through lobola what is identified as cultural asset. This low proportion could be due to the fact that livestock that was obtained in the past through lobola was no longer there because of theft, demise, etc.

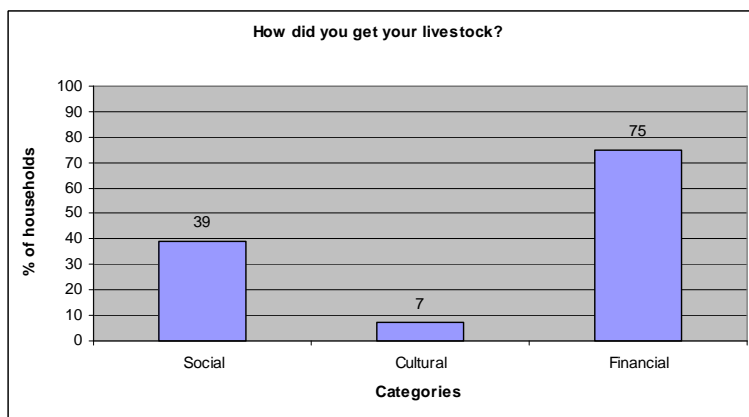


Figure 6: Sources of livestock

During a PRA ranking session we asked the participants what they use their animals for. The results of the ranking seem to fit with the results from the questionnaires since the use of cows for ceremonies was ranked as the most important use for the cows whereas the use of sheep and goats for ceremonies were only ranked second for both species¹⁷.

¹⁶ SSI, livelihood, 04.03.2011

¹⁷ PRA, Ranking, 01.03.2011

In one occasion we came across a scene that showed the significance of livestock as a cultural asset. The chief and several men were busy preparing the skin of a cow slaughtered just hours before. After our inquiries he told us secretly that he forgot to put that skin on top of the coffin of his sister, that passed away months ago, so she had started ‘visiting’ him asking for ‘her skin’¹⁸.

After the circumcision¹⁹ a bull is killed, and its legs are one of the few things the boys take with them to the mountains. When the boys are back an ox will be killed²⁰.

However even if the role of the livestock as cultural asset is still rooted in their daily lives, it seems that it is less than it used to be.

“Before you needed to give 24 cattle for your wife, now one cow is enough or even nothing”²¹

7.2.2 Social Uses (Ivan, co. Sisse)

Social uses of livestock can be identified as gifts like animals or animal-products as well as inheritance from relatives. Also the possession of some animals affects your status in the community.

According to the chief and to the chairman of the community there is an order that determines the status: first comes the cow, then the horse, next equally the goat and the sheep, and finally the pig and the chicken. *“The more cattle you have the more status you have”²²*

However the results from the questionnaires²³ did not show the use of livestock as a social asset and none of the answers were identified as a social use. This obvious discrepancy could be explained by the fact that it can be difficult for the villagers to identify this consequence as a conscious use, or even it can be uncomfortable to admit that you would prefer to have more cattle just for the sake of increasing your social status. Therefore it is necessary to analyze the information arisen from different methods to be able to understand the magnitude and importance of this use.

From the questionnaire²⁴ we found out that in 39% the answer was social related (Figure 6) and that was specially significant in relation to chicken where 37% of the households that had chicken got at least some of them as gifts. And regarding pigs 27% got them through some kind of arrangement that involved shared maintenance of the saw and distribution of the piglets.

¹⁸ Informal Conversation: chief, 05.03.2011

¹⁹ The circumcision is carried out as part of the initiation of the boys becoming men (Ukuwalusa).

²⁰ Focus Group Interview, 05.03.2011

²¹ Focus Group Interview, 05.03.2011

²² Mapping, 01.03.2011

²³ Questionnaire, Question 11, 28.02.2011

²⁴ Questionnaire, Question 10, 28.02.2011

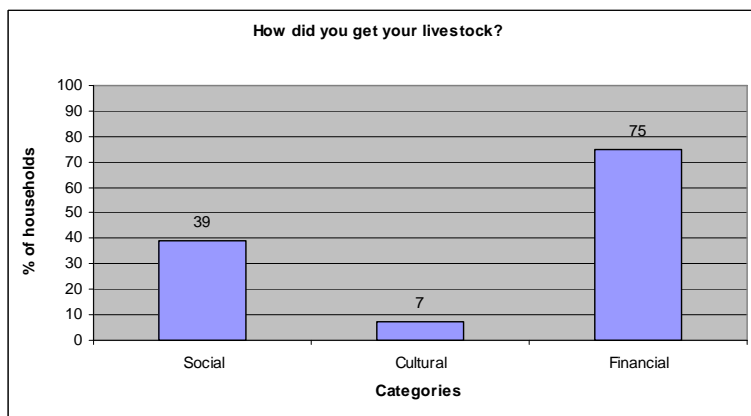


Figure 7: Sources of livestock

In one of the questionnaires a man answered that if he could not sell his eggs to anyone, he just gave them to his neighbors²⁵ and another respondent said that he will slaughter his horse once it gets too old and he will distribute the meat between less favored neighbors²⁶. Even if these actions have not economical retribution it will influence their status and it will strengthen relationships.

Ceremonies and cultural uses also have a strong social repercussion, not only for sharing a common understanding of life but also because the process of slaughtering and butchering requires the help of the neighbors who might get paid with part of the meat.

*"I asked for two men to help me with the cow, but they came all of them and now I have to feed them"*²⁷

In the same way the selling of livestock products is done mainly within the village and the existence of a social network is required to get in touch with buyers and sellers²⁸. Also during the transaction their relationship and social position play a role in the final agreement.

We can see how the existence of livestock requires social structures like the Livestock Committee which would decide in neighbor's disputes and will help the less favored people²⁹, or the Chief³⁰, who manages the use of pastures, the water resources for the animals and even the dipping of the cattle. Very often a herder would take care of the livestock of different neighbors, and this makes him a relevant social figure in the community as well as a link between the villagers.

²⁵ Questionnaire, Question 10, 28.02.2011

²⁶ Questionnaire, 28.02.2011

²⁷ Informal Conversation: chief 05.03.2011

²⁸ Questionnaire, Question 1, 28.02.

²⁹ Focus Group Interview, 05.03.2011

³⁰ SSI: chief, 27.02.2011

Figure 8: Picture from transect walk, March 2nd 2011



And now even if the theft of livestock is not an issue anymore³¹ it is still impacting the management of the livestock, which is never left unattended by the herders and all of them are branded (see Figure 8). In many occasions people from Lesotho was blamed for the stealing but there were also suspicion of the nearby villages³²

So we can see how livestock is at the social core of the village, and its issues can threat their social structures and its relation with other communities.

Perhaps, the increasing importance of other sources of income like grants or jobs in the city (Figure 16) is affecting its relevance.

7.2.3 Human Uses (Sisse, Ivan)

Aspects that could satisfy the villagers' human basic needs like food, drink, clothing and other necessary attributes are considered to affect the human capital. The results from the questionnaires³³ show that all the households (100%) having pigs use them for meat, and 94% the households having cows use them for milk or slaughtering (Figure 9 below). For chicken, goats, sheep and horses the numbers are: 88%, 71%, 67% and 0%. The very high percentages for pigs, chicken and cows show the big relevance of human uses and the importance of the livestock to the villagers. The figure also shows that cows and chicken for instance are multi-purposes animals.

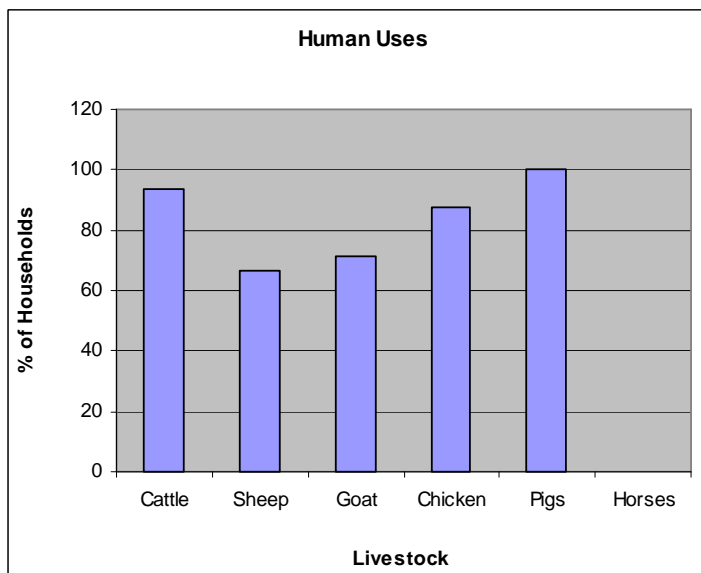


Figure 9: The figure shows the percentage of households with one kind of livestock that use this animal for human uses like meat, milk, eggs, skins etc..

³¹ Questionnaire, Question 15, 28.02.2011

³² Informal Conversation, 01.03.2011

³³ Questionnaire, 28.02.2011

Actually the figure is more correct in one part of the year than other. Concerning the pigs the summer between November and February is more productive as the households slaughter pigs in this period as visualized in the Seasonal Calendar (Figure 11 below)³⁴. On the contrary, meat production of the cows goes up in the wintertime between May and June. The fact that the Seasonal Calendar shows that the milk production of cows goes up in the summertime (January to March) goes well with the statement of a farmer who says that they have more milk in the summertime than the wintertime. He told us that there is a big difference in how much milk he gets depending on the season, but it is about enough to support the consumption of his family. This is also supported by another woman stating:

*“I have the cow so I can give milk to my children everyday “*³⁵

³⁴ PRA. Seasonal Calendar, 01.03.2011

³⁵ Woman from questionnaire, 28.02.2011

	January	February	March	April	May	June	July	August	September	October	November	December
Cattle												
Mating Period								
Birth times								
Seasonal grazing
Diseases		
Plant Fodder
Product ↑/↓
Sheep												
Mating Period
Birth times
Seasonal grazing
Diseases
Plant Fodder
Product ↑/↓
Horses												
Mating Period
Birth times
Seasonal grazing
Diseases
Plant Fodder
Goats												
Mating Period
Birth times
Seasonal grazing
Diseases
Plant Fodder
Product ↑/↓
Pigs												
Mating Period
Birth times
Diseases
Plant Fodder
Product ↑/↓
Chickens												
Mating Period
Birth times
Diseases
Product ↑/↓

Figure 10: Results from the PRA session, Seasonal Calendar.

The fact that meat and milk are important to the villagers can also be confirmed with the statements of the respondents of the questionnaires. When asked why they answered cows as the most important livestock (as 34% did) (Figure 11 below), they had the production of meat and milk as the explanation³⁶. The chicken is ranked as ranked second with 29%. Again the main reason was its asset as food security, and 88% of the households owning chicken said that they used them as a source of food³⁷.

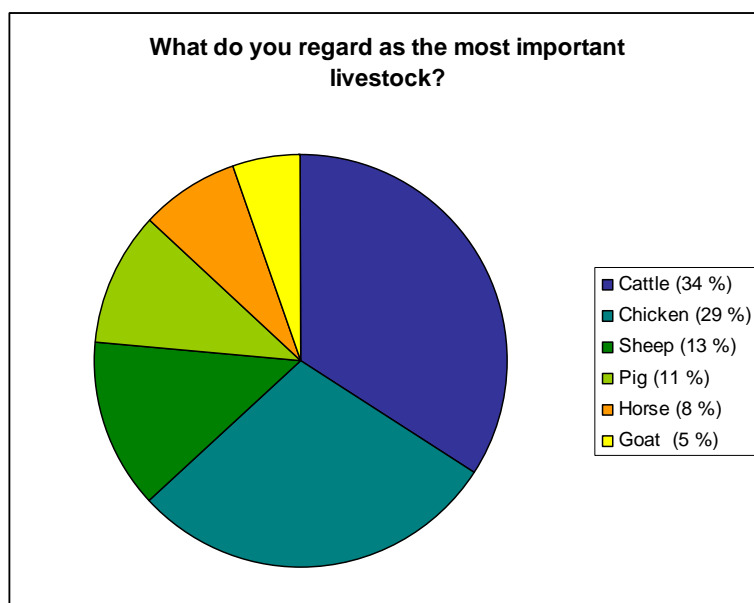


Figure 11: The figure shows the percentage of the respondents' preferences in relation to which kind of livestock they think is most important to them.

In the PRA session of the ranking, milk was identified as the main use of cattle closely followed by the use of skins and meat for consumption (Figure 12 below). Concerning the goats the most important use of the animal was hair and skin. This is very similar to the sheep that has wool as the most important use. For the chicken a human use (meat) is also ranked as the most important asset followed by eggs³⁸.

Animal Ranking	Cattle	Goats	Sheep	Chicken
1	milk + ceremonies	hair and skin (carpets, jackets, shoes and socks)	Wool (used for pillows)	meat
2	ploughing + selling + skins	ceremonies	ceremonies	eggs

³⁶ Questionnaire, question 14, 28.02.2011

³⁷ Questionnaire, question 11 + 14, 28.02.2011

³⁸ PRA, Ranking, 01.03.2011

3	carry water and wood + meat + blow the horn	selling	meat	selling
4		meat	selling	feathers + gizzard
5		milk	milk	manure + alarm clock
6			skin	

Figure 12: PRA session, Ranking, March 1st 2011.

The fact that the human uses are ranked this high for every animal shows that this way of using the livestock is very essential to the villagers. It is also important to highlight the livestock's asset as a form of food security; some animals to a greater extent than others, but at least the chicken represent an important source and an easy way of getting protein. Thus, this might also be the explanation that 80% of the households from the questionnaire had – if not any other livestock, then at least – chicken³⁹.

7.2.4 Physical Uses (Sisse, co. Ivan)

Among the answers from the questionnaires a percentage of 80% of the households owning horses said that they used them for transport (Figure 13 below). This gives the horses a very specific role.

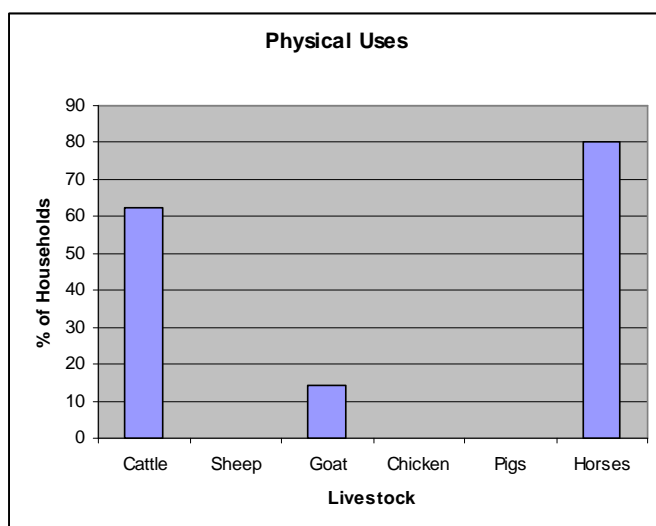


Figure 13: The figure shows the percentage of households with one kind of livestock that use this animal for physical uses like transportation and ploughing.

As one of the respondents in the questionnaire says:

³⁹ Questionnaire, 28.02.2011. See also figure 2

“With the horse I can go to another village and I can go to the doctor.”⁴⁰

Concerning cattle 63 % of the households owning cattle said that they used it for ploughing, carrying wood or water⁴¹. Despite the general increasing use of machinery and decreasing importance of agriculture some households (at least in Motseng) are still very dependant on cattle for this purpose. Ploughing was also identified as the second most important use of cattle in the ranking session (see Figure 12 above)⁴².

The goats only apply for 14 % of the households with goats that use it for physical uses, which maybe accounts for some kind of carry of wood or water.

Livestock is also relevant as a source of material for their houses as we observed in the village while doing questionnaires. Cattle dung is used as the main component of walls together with straw and clay and the inside walls of some of the traditional houses⁴³.

We have observed that the horses was widely use by young boys within the village, but it is also true that cars are common too, so the adduced dependency upon horses as transportation can not be shared by everyone.

7.2.5 Financial Uses (Sisse, co. Ivan)

The financial uses of livestock are the fact that people are able to sell livestock and get money in return. The livestock that is not being sold yet can therefore be perceived as a form of banking. The amount varies according to each species, but even though it is only a chicken, the household can slaughter it and have some easy protein, whereas cows can be sold when the fee for the children's school has to be paid. If you have livestock you are always able to sell it and in exchange buy what you need right now, and this way each livestock represent one kind of stocks in itself. A woman from a semi-structured interview⁴⁴ confirms this by saying:

“The cow – you can sell it and get money, it's like a bank to me. It's a security to have livestock.”

In the figure below (Figure 14) the results from the questionnaire with the question whether the villagers sold their livestock are put in⁴⁵. Among the households that have cows, only 25% sell them. Almost all households that own goats sell those (86%), and at the other end of the scale only 10% of the households that have horses sell them. The horses and the cows are quite big animals that you get a lot of money for and have a high weight in the household account. That is perhaps the reason why they are not sold as often as the smaller animals like goats, sheep (67%), chicken (46%) and pigs (55%) which do not influence the household's amount of animal and money as much.

⁴⁰ Questionnaire, question 14, 28.02.2011

⁴¹ Questionnaire, 28.02.2011

⁴² PRA, Ranking, 01.03.2011

⁴³ Informal conversation, 28.02.2011

⁴⁴ SSI, Livelihood, 04.03.2011

⁴⁵ Questionnaire, 28.02.2011

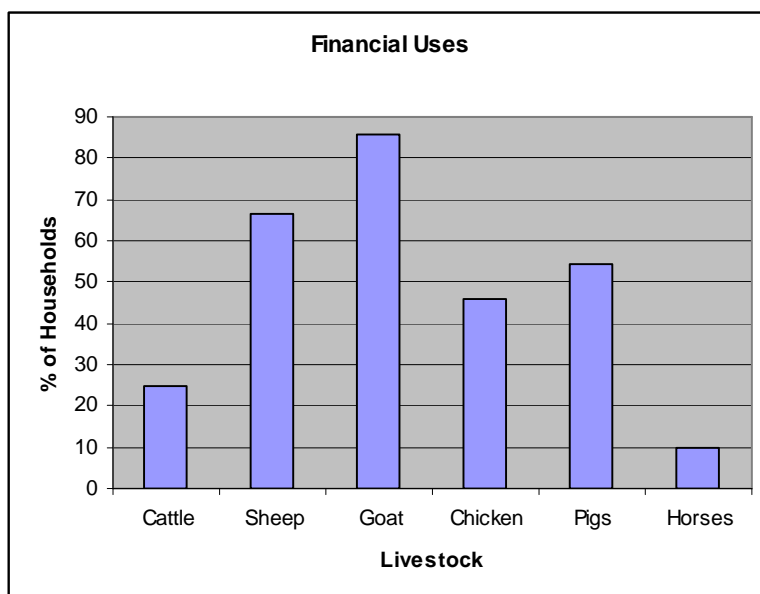


Figure 14: The figure shows the percentage of households with one kind of livestock that use this animal for financial uses like selling.

The financial aspect of livestock is also dependent on the access to markets, and even though most of the trade is done locally in Motseng and in nearby villages it is also true that the distance to markets is identified as a constrain in the PRA session of the Problem Tree⁴⁶.



Figure 15: Picture of the Problem Tree

Here the villagers stated that they had difficulties selling their animals, as well as they expressed concern for the fact that they did not get the right price for the livestock because the buyer from the town had the possibility of putting a lower price than at the market.

The Ranking⁴⁷ also showed that livestock was often sold as an easy way to get money. Selling is ranked as the second most important feature

for the cattle (see Figure 12 above), and it is ranked third for the goats and the chicken, while selling of sheep is ranked as number four.

This data support the role of livestock as a very important financial asset to the villagers. However, put into perspective we know that 30% of the households did not use livestock only for this purpose

⁴⁶ PRA, Problem Tree, 03.03.2011

⁴⁷ PRA, Ranking, 01.03.2011

and none of the households were relying exclusively on livestock for their income⁴⁸. Also 77% of the households were relying on government grants (pensions and child grants) with two of them being fully dependent on it (Figure 16 below). This means that the villagers depend more on the grants than on the livestock as a means of survival in their everyday life.

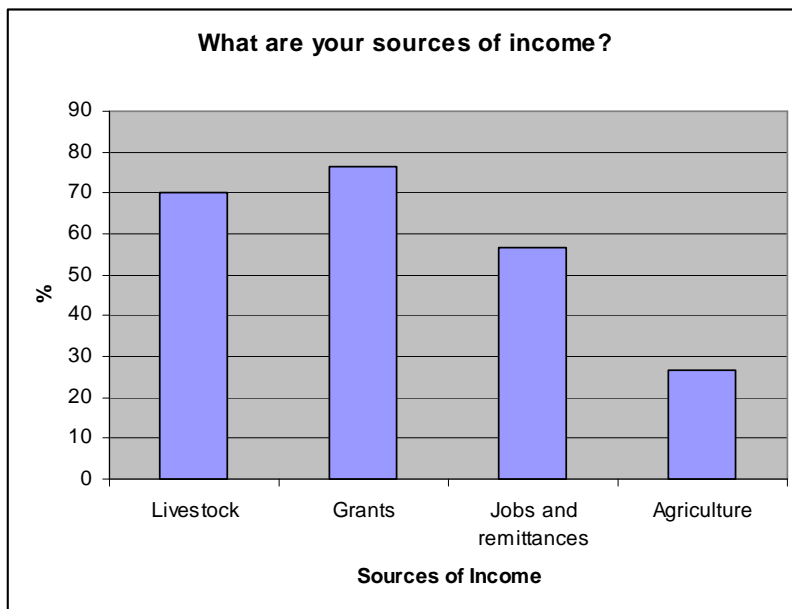


Figure 16: The figure shows the respondents' sources of income. As many have several sources there is more than 100 % in total.

How the reliance on the government grants shapes the villagers relationship with other assets than livestock is not fully understood, but it seems that without the pressure of the survival (without the support of the grants) people do not commit themselves in more strenuous activities as agriculture. While conducting the questionnaire and our daily routines we observed that several of the home gardens were not well taking care of, and we could often see people from the early afternoon engage in socializing activities rather than working. As our locally known interpreter said:

*“People are lazy”*⁴⁹

But very likely this needs to be followed up by a more detailed study of the local approach to work if we are to state any conclusion on this. It might as well be that people either are socializing to expand their social networks within the community or that they are rather resignedly than lazy because of the fact that there are no jobs to get in the village. Though the jobs are difficult to find, the income from this source also plays a relevant role with 57% of the households mentioning them as a source of income. This might as well be because of the fact that this category also includes temporary jobs (for instance Working for Water or Meholoding Trail). Of course also the permanent jobs (as for instance Mariazell Mission) are a part of this category, but as far as we are aware their relevance are questionable, as they are rarer than the temporary jobs are. As a young man said:

⁴⁸ Questionnaire, 28.02.2011

⁴⁹ Informal conversation, 03.03.2011

“There are no jobs here”⁵⁰

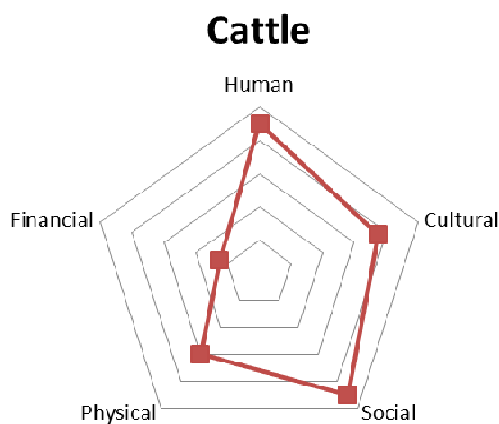
This quote also shows that it is a matter of lack of job opportunities. Since there are few jobs available in the village the young people would have to migrate to town and that would affect their livelihood markedly. We believe that remittances from relatives working in cities like Durban or Johannesburg play an important role to the households in Motseng, as we came across several informants receiving remittances from family members in the city. We interviewed young people that liked having livestock as well as people wanting to leave the village. The general idea we got was that most of them did not see a future taking care of livestock in the village. But of course there are also opponents:

*I couldn't picture myself without having livestock. That's my work. My life would be worse without them. You must have livestock! I've had livestock all my life. I would probably have to find a job in town then.*⁵¹

The young man that is quoted above is the exception to the rule. He prefers a future with a lot of livestock.

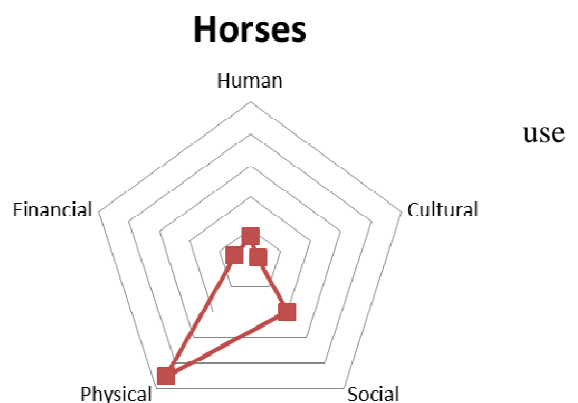
7.2.6 Pentagons (Sisse, Ivan)

In order to give a visual understanding of each livestock and its uses we have put the different assets into pentagons. We have analyzed the results from both quantitative and qualitative methods and synthesized the findings in the 6 pentagons.



This figure visualizes that the cattle are multi-purposes and that almost every of the uses are essential for the villagers. The high value of the social asset is related with the uses for ceremonies, the status, and the link it provides between neighbors. The high values in most of the assets could partially explain why more than 50% of the households have cattle (**figure X**) (**percentage of households**).

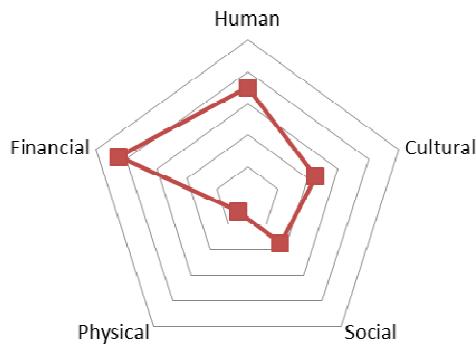
Horses on the other hand mainly fall into the physical although their use as transport also carries consequences to the social life.



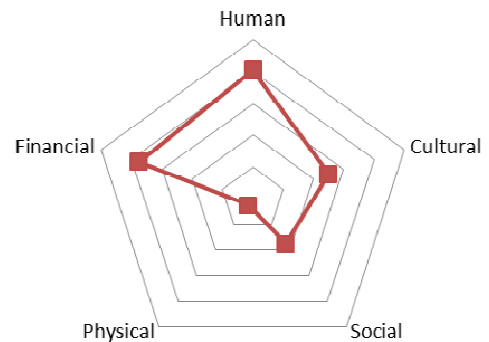
⁵⁰ SSI, 05.03.2011

⁵¹ SSI, 04.03.2011

Goats



Sheep

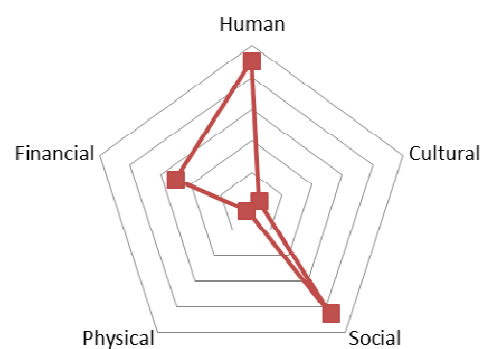


The goats and sheep are very similar. They have almost the same amount of financial use, because the villagers sell the animals to the same extent; they have the same amount of social use as they link the villagers through the herders and they are used for ceremonies that give a sense social belonging.

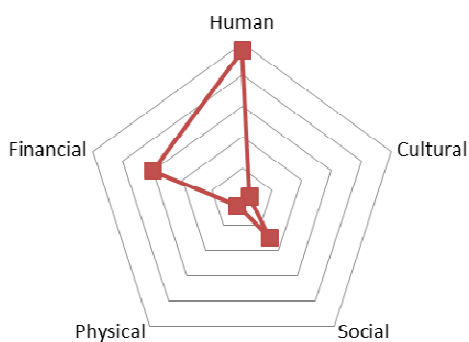
The chicken has a very high value in human uses since it provides the household with food security. As neighbors give each other eggs and the chicken walk around freely in the village the social asset is very high as well.

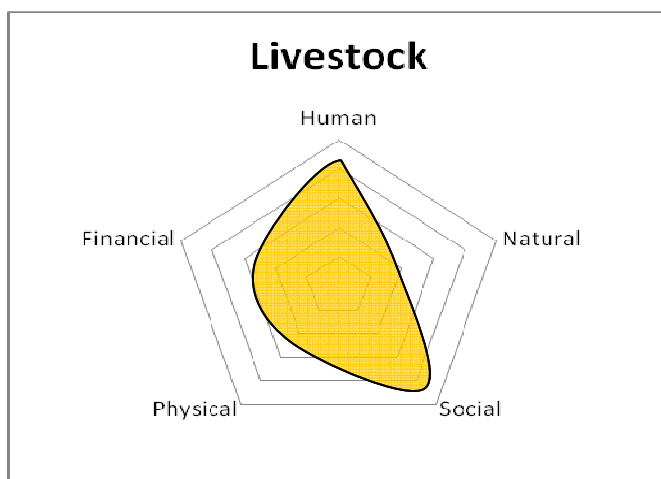
Pigs are an important asset mainly as a human use for the feeding of the family, but they also allow the household to obtain some income with selling.

Chicken



Pigs





The livelihood framework enables us to represent the different assets that the livestock provides and show how it affects the livelihood of the villagers. Through the use of the pentagon we represent the livestock's influence on the livelihood of Motseng and its villagers. Originally, the natural capital was not taken into account since we could not relate it with the uses of the livestock, but with a broader perspective we can see its effects on the grazing areas, water resources, soils etc., degrading the environment in an unsustainable

way. The social capital is very pronounced since we have considered both the social and cultural uses. In the physical capital ploughing and transport are the most relevant assets although there is not dependency on them. The financial capital is not as high as we thought it would be because of the fact that the villagers rely more on grants and remittances, even though incomes from selling and the use as savings still plays an important role. Finally the food security provided by the livestock is still very significant and results in a high value in the human capital of their livelihoods.

From this pentagon it is obvious that livestock has an important role in every single capital. The villagers are dependant on their livestock and their everyday life shapes around it. As the young woman express herself:

*"Without livestock my life would be incomplete. We cannot survive without our livestock, we depend on it."*⁵²

7.3 Management and quality of grazing areas (Astrid and Julio)

In order to obtain a first overview through of the village area and understand the main constrains in relation to livestock and how the natural resources are managed in the area, a resource map was created by the village leaders. From the mapping session it became clear that Motseng has two different grazing areas, one for summer and another for winter. The two areas are approximately the same size (see Figure 17 below). The summer area, known as Sekgutlong, is far from the houses in the village. The winter area is composed of the area around and between the houses, followed by a steep area up mountains nearby⁵³ (see Appendix 5: Resource Map).

⁵² SSI, 04.03.2011

⁵³ PRA: seasonal calendar, 02.03.2011 and SSI: herder 01.03.2011

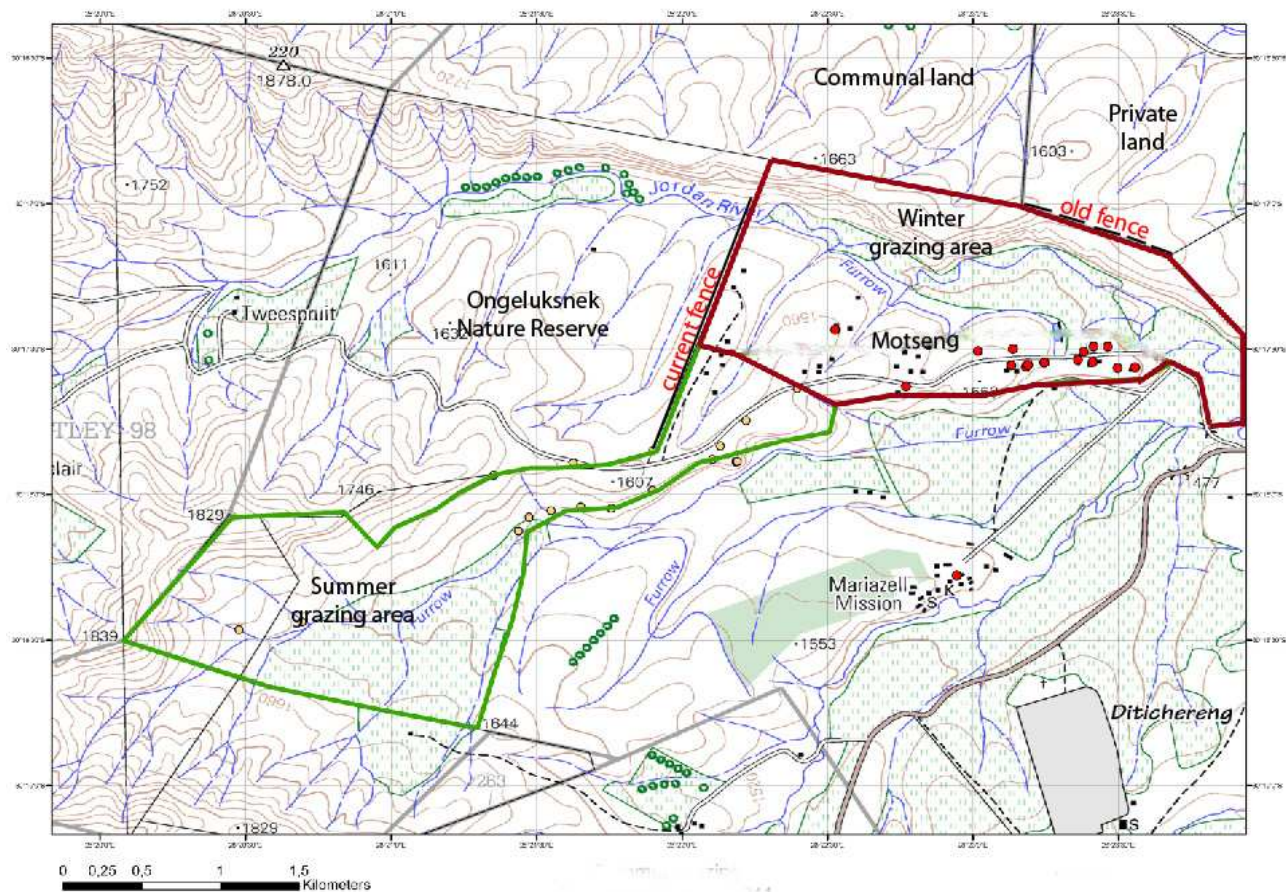


Figure 17: Map of Motseng and grazing areas

During the PRA session we could not estimate the size of the grazing areas because there are different understandings about the boundaries of Motseng. In the border shared with Ongeluksnek Nature Reserve (ONR) there is a fence placed wrongly. According to Motseng leaders, the current fence should be replaced in a way that would expand their summer grazing area. However, the ONR manager stated that there is no plan to change it. Actually the ONR is negotiating directly with the Mariazell Mission a change in this boundary. The idea is to keep building fences all along the frontier, but avoiding the steep areas. As a result of this logistic adaptation, the summer grazing areas of Motseng will be more reduced, but its people are not aware about this negotiation⁵⁴.

Two transect walks were conducted through the grazing areas in order to better understand their characteristics and boundaries. The first transect walk followed the cattle path to the summer area. The Mariazell-Motseng border zone is not fenced and, thus, not accurate⁵⁵. However, the livestock from Motseng do not cross the border between Mariazell and vice-versa⁵⁶.

The summer grazing area is not managed, which means that livestock graze freely in this area throughout the season. The quality of the summer area grass is better than the winter area. Thus, the

⁵⁴ SII: manager 0403

⁵⁵ TRA: herder 0203

⁵⁶ TRA: herder 0203

animals gain weight by grazing there⁵⁷. However, we have seen a dense cover of shrubs in the area and almost no indication of red grass (*Themeda triandra*), which is commonly considered as an indicator of grasslands in good condition. In comparison, in the ONR side, the grass was denser and with visual indication of red grass (see Figure 18)⁵⁸.

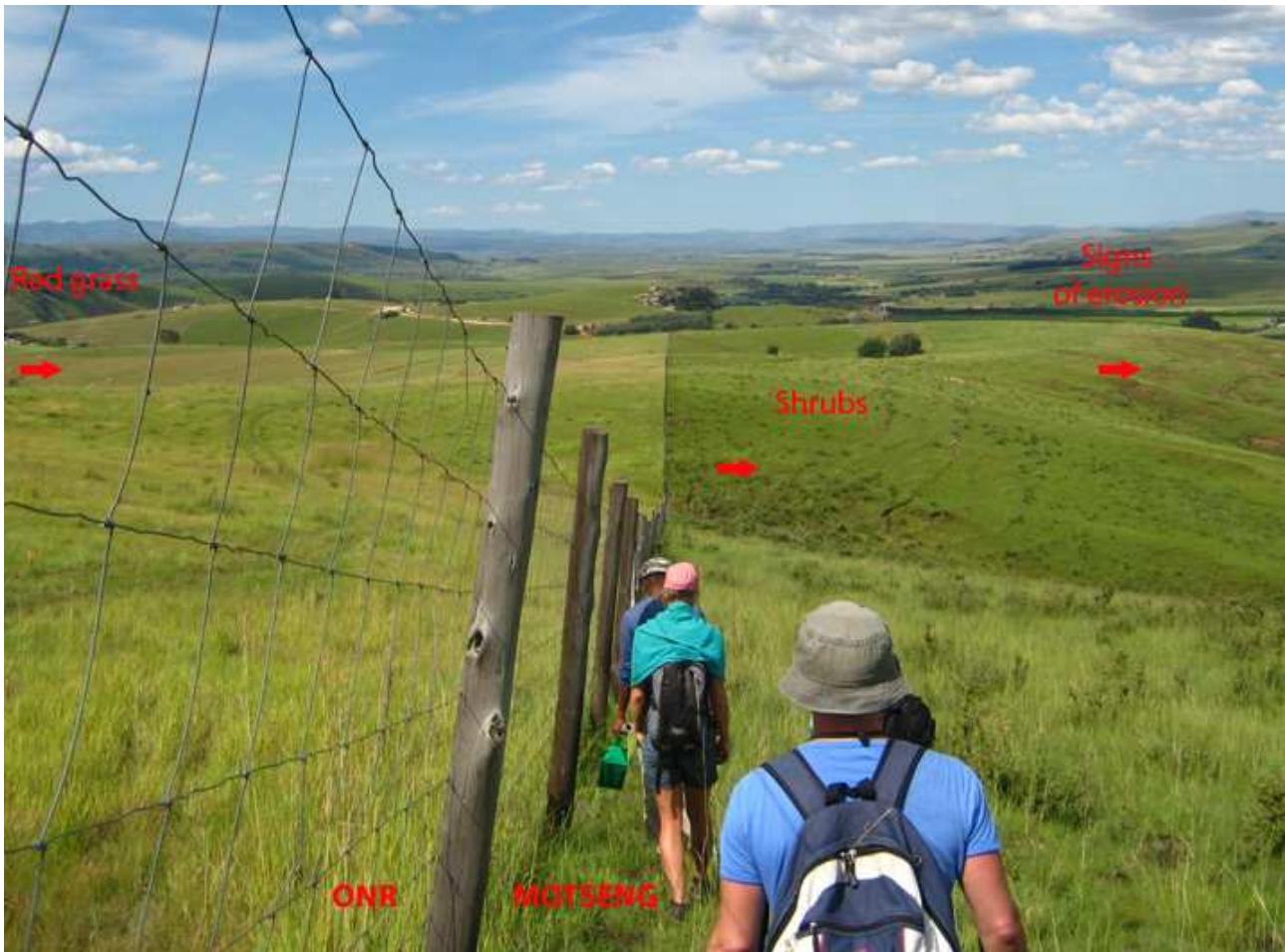


Figure 18: Visual indicators of grassland quality (Motseng vs. ONR)

Another reason to bring livestock to Sekgutlong is to avoid conflicts between households since the animals can eat home-garden crops in the neighbourhood⁵⁹.

The second transect walk followed the cattle path to the winter grazing area up the mountains, where the village share its boundaries with communal and private lands and again with the ONR. The bad situation of the fences across the private land leads to a lack of control in the transit of animals from the surrounding areas to Motseng grazing areas and vice-versa⁶⁰.

The communal land is a large grazing area between the ONR and the private farm. This are is important for Motseng because during winter the amount of good quality grass decreases because of

⁵⁷ SSI: Herders 0203

⁵⁸ SSI: Ongeluksnek Nature Reserve Manager, 04.03.2011

⁵⁹ Informal Conversation: Matete 02.03.2011 and Chief 28.02.2011

⁶⁰ Transect: herder 05.03.2011

drought and fires⁶¹. Even though the grazing areas are managed after season, there is not enough grass available because of the winter⁶². Therefore, Motseng villagers make agreements with neighbouring villages in order to share the grazing areas further down the mountains⁶³.

Another important factor related to the management of grasslands is the burning of pastures. The winter is very dry and grassland fires often occur. These are either set on by people from Lesotho or Motseng⁶⁴. Fires are both a threat and a way of improving the grass quality. It is ideal to burn the grassland every third year in order to preserve the natural characteristics of the local grassland ecosystem. Otherwise, the fields would be transformed into bush land⁶⁵. There is an awareness of building firebreaks to avoid the spread of fire. However, according to the ONR manager, uncontrolled fire that takes place every year during the dry season is the biggest factor contributing to decreasing soil and grassland quality⁶⁶. The fire destroys vegetation cover and leads to soil erosion and facilitate growth of shrubs and invasive species (like wattle)⁶⁷.

7.3.1 Discussion (*Julio and Astrid*)

Land tenure is a widespread problem in South Africa - an ongoing process of giving back and reclaiming land after the end of the apartheid period. Not differently, it is also a constraint to Motseng and affects directly the management of its livestock. The three different perceptions⁶⁸ regarding to its boundaries exemplify how bad consequences the lack of ownership rights can bring.

The unofficial situation of Motseng's rights brings instability to their people in the sense that there is no guarantee about the future of their land. A good example about how things can change is the supposed mistake during the establishment of the ONR fence⁶⁹. The current negotiation between Mariazell and ONR shows how vulnerable and subjected to changes the land tenure of Motseng still is. Inhabitants of the village states that there are not enough grazing areas available and a new loss of land would reduce the availability of grass⁷⁰.

The owners of livestock from Motseng can be fined if their animals cross the boundaries and graze outside the limits of the village. Contrary, if livestock from the private farms graze in Motseng, their excuse to not pay the fine is based in the fact that Motseng is part of the national territory. The area, thus, belongs to all South Africans. The required land ownership would help to solve this kind of misunderstandings.

Apart from the boundaries, the use of different grazing areas through the seasons affects the management of livestock. Reasons to keep livestock in the "summer area" during the summer could

⁶¹ SSI: herder 02.03.2011; Albert 02.03.2011; Informal Conversation: Matete 02.03.2011

⁶² SSI: Selected households 02.03.2011 and PRA, problem tree 03.03.2011

⁶³ Informal Conversation: Andreas 03.03.2011

⁶⁴ Informal Conversation: Matete 03.03.2011 and SSI: Ongeluksnek Nature Reserve Manager, 04.03.2011

⁶⁵ SSI: Ongeluksnek Nature Reserve Manager, 04.03.2011

⁶⁶ SSI: Ongeluksnek Nature Reserve Manager, 04.03.2011

⁶⁷ SSI: Ongeluksnek Nature Reserve Manager, 04.03.2011

⁶⁸ SSI: Ongeluksnek Nature Reserve Manager, 04.03.2011 and mapping 01.03.2011

⁶⁹ SSI: Ongeluksnek Nature Reserve Manager, 04.03.2011

⁷⁰ SSI: selected households, 02.03.2011

be related to a combination of two main factors: 1) the high availability of grass make it worth the effort to go there 2) there is a necessity in avoid livestock to graze the winter areas nearby the houses since they are cultivated with crops during summer. The unauthorized grazing often leads to problems between villagers. From results of the questionnaires, at least two persons who do not have any goats state that the reason is because goats often eat maize and other crops from the neighbourhood.

On other hand, it is expected that the availability of grass is lower during winter since fire and snow as a natural feature of the local climate conditions take their role in the environment. Therefore it is not worth walking long distances to the summer area why it is more convenient to keep the animals around the houses in the winter area. Furthermore, it is not season for cultivating crops, which could be destroyed by animals. Other people, though it is few, have tried to adapt to the lack of grass by sowing rye grass and turnips for fodder to avoid livestock from loosing weight during the winter⁷¹.

A potential consequence of having cattle grazing in the summer grazing area throughout the whole summer is that in the end of season the uptake of nutrients will leave its soils more fragile compared to the winter area, which is kept ungrazed for a while. Thus, the spared winter grazing area will be in better conditions and quality, if animals from other village are not grazing in the winter area in the intervening time. Therefore the lack of fences also plays an important role determining the quality and availability of grass in Motseng.

The transect walk to the summer grazing areas showed signs of erosion and an area covered by dense growth of *Leucosidea sericea*⁷². The presence of this shrub is often related to areas disturbed by constant fires, overgrazing or erosion. Hence, management practices like rotation of grazing areas or cultivation of fodder could be options to deal with the lack of grass and improve its quality.

7.4 Theft (Astrid)

According to the literature theft has been a problem in the area for several years⁷³. However, the questionnaire survey showed that the villagers of Motseng have not had any troubles with this phenomenon in several years. Apparently, before 1996, it was not unusual that thieves came from Lesotho to steal the animals⁷⁴. From the timeline the same result appeared and also semi-structured interviews confirmed this year as the turning point of stealing. A herder stated that in 1996 they started to guard the borders with soldiers to avoid stealing⁷⁵. From the Focus group interview with the livestock committee new information about theft came up⁷⁶. The livestock committee is the link between the villagers and Lesotho or other villages in the area that owns livestock. It is their job to contact prospective thieves and sort out a return of the animals. It is not always concerned theft; sometimes animals simply run away or get lost.

⁷¹ SSI: Albert 02.03.2011

⁷² Transect: herder 05.03.2011

⁷³ Kynoch, 2001

⁷⁴ Statements from questionnaire, 28.02.2011

⁷⁵ SSI: Herder 02.03.2011

⁷⁶ Focus group interview, 05.03.2011

7.5 Health (Ivan)

Bibliographies state that different approaches like the use of medicinal plants is widespread in Eastern Cape Province.

When we asked the respondents of the questionnaire⁷⁷ how they treated their animals, only 7% called the veterinarian if their animals fall ill. This little use was justified on the grounds of the price and how far the veterinarian was from the village what it was also identified during the Problem Tree as one of the constraints of the livestock⁷⁸. These reasons would explain why 39% respondents have rely on their own knowledge or neighbour's advice to use medicaments, 46% have used local remedies to treat diseases⁷⁹, and 18% didn't treat the animals or they did not know how to do it.

Diseases were identified as a problem by the villagers in the problem tree⁸⁰. In addition, the health status of livestock was assessed during the questionnaire⁸¹ and 29% answer that some of their animal died of some disease. However, the question did not identified losses in production or decrease in fertility due to diseases.

The government intervention regarding the health of animals is mainly in relation to the dipping, that is compulsory for cattle and the government provides the means to carry it out once or twice per month⁸². The inspector provides the chemicals used and he is also required at the village if a virulent disease affects the local livestock⁸³. Otherwise the presence of the inspector is yearly and no data regarding vaccination campaigns has been founded. During our stance in the area training in poultry management conducted by the extension officer took place, however we got the impression of a top-down training disconnected with the local situation⁸⁴. Training in general but also training on diseases was recognized as a problem by the farmers⁸⁵.

Health is an important constraint for the livestock in a community affected by diseases, where mortality is not uncommon and there is little intervention by the government. Access to the veterinarian is restricted and medicaments are far away and expensive⁸⁶. On top of that the level of knowledge regarding livestock is considered low though treatment is mainly given by the own farmers.

7.6 Gender (Julio)

A gender bias was identified in Motseng. Results from the questionnaire show that almost every household use herders to take care of the cattle, sheep and goats, while pigs and chickens are looked

⁷⁷ Questionnaire, question 20, 28.02.2011

⁷⁸ Problem Tree, 03.03.2011

⁷⁹ Some of the treatments were at the least suspicious (from our point of view), "for the swollen joints I mix plants with toilet cleaner and I force the cattle to drink it". SSI: herders 03.03.2011

⁸⁰ Problem Tree, 03.03.2011

⁸¹ Questionnaire, question 19, 28.02.2011

⁸² SSI, Dairy woman, 27.02.2011

⁸³ Last outbreak of Red water disease. SSI, chief 27.02.2011

⁸⁴ Observations Poultry Training, 03.03.2011

⁸⁵ Problem Tree, 03.03.2011

⁸⁶ Problem Tree, 03.03.2011

after by everyone in the household, but mostly women or children. Horses were used for transport, but mostly by men (observation).

Results from two semi-structured interviews conducted in households dominated by women showed that a male figure it is necessary to take care of cattle, sheep or goats. The fact of both of families do not have a male figure living in the house was pointed was the main reason for do not have any of this animals. However, in a hypothetic situation when money would not be a constraint in buying these animals and paying a herder to take care of them, both of the respondents answered that so they would like to have cattle, sheep and goats.

Therefore, the gender differences can play a very important role in Motseng since the economical situation of most of its inhabitants does not compensate the absence of male figures in the households.

7.7 Ethnicity (the relation between Xhosas and Sothos in Motseng) (Sisse)

In five semi-structured interviews we asked some of the villagers (designated through questionnaires) about their routines and aspects about possible differences between the ethnic groups. We correlated this data with the data from the questionnaires showing the numbers of livestock that the specific households had. As far as we are aware of the languages do not differ that much, and the children learn Sotho in school, resulting in the fact that there were no problems understanding each other in the village. What we found out – to our surprise – was that the difference between the ethnic groups within Motseng is not that evident. Actually the villagers do not perceive any difference at all. As one man (Xhosa) in one of the semi-structured interviews said:

*“There is no difference in what kind of animals Xhosas and Sothos own; it is a matter of personal preference.”*⁸⁷ (Man, 22)

Besides the quotes we got from the semi-structured interviews and the questionnaire we can also correlate the quantitative data from the questionnaire ei. the number of livestock with the ethnic groups (Figure 19 below).

⁸⁷ SSI, 02.03.2011

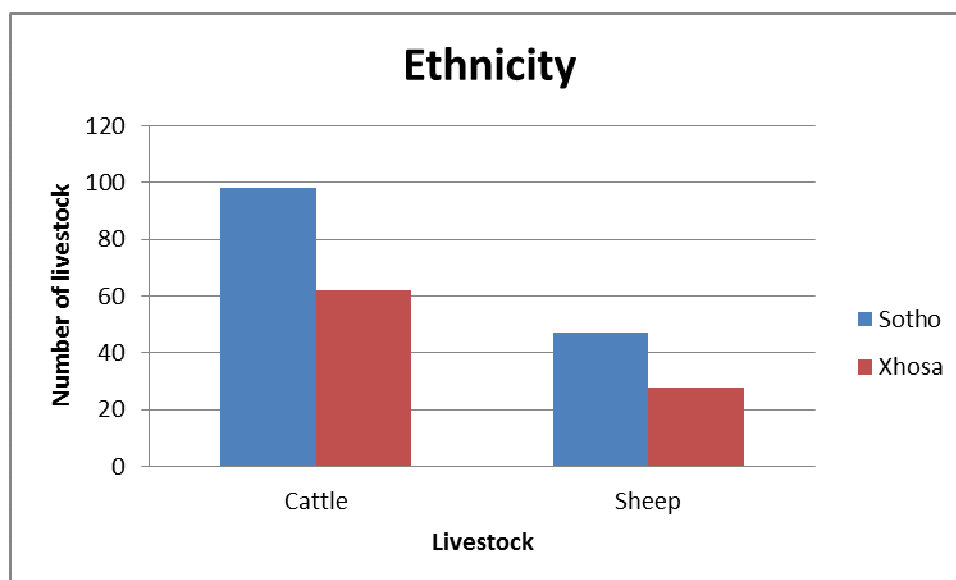


Figure 19: The figure shows

the relation between Sothos and Xhosas having cattle and sheep.

Before we went to Motseng we were told by Bryan Traum⁸⁸ that the livestock could be divided according to ethnic groups: the Xhosas are mainly related with sheep, whereas the Sothos are linked with cattle. Figure 19 visualizes that in only one of the cases this data match with the results from Motseng; the Sothos having more cattle *and* sheep. But this result can also be influenced by the fact that during the questionnaires we asked 11 Xhosas and 19 Sothos, which gives a slightly bigger representation of the Sothos within Motseng and therefore bias the result⁸⁹.

However, in Motseng the ethnic groups do not matter that much. The impression we got was that they do not have strong affinities regarding their ethnic groups. Our perception from the qualitative data is that they do not think of this fact too much and that it does not have any influence on which kind of livestock they own.

⁸⁸ Presentation at ILUNRM February 18th 2011

⁸⁹ If you put the same numbers in % it will turn the picture all around with Xhosas owning more cattle *and* sheep in relation to the number of households having cattle and sheep. Unfortunately the extent of the report does not allow to look further into this point.

8. Discussion and Reflections of Methods (Astrid, Sisse)

It is also important to stress that the question about cultural uses (ceremonies) was not asked directly to find out how many households that use the livestock for ceremonies – the question was more unspecific (what do you use your livestock for?). If the question had been: do you use your livestock for ceremonies?, the percentage might have been higher than this.

The setting and the cultural differences are always challenges to go about when working with methods in an unknown area. Factors as African timing, language barriers, people in inadequate conditions and subjective interpretation as well as shortage of experience and time are only some of the factors that you have to be aware of and work with in order to conduct the desired methods.

8.1 Questionnaire

Conducting questionnaires were a good way to begin with the field work because we got a nice overview of the livestock in the village since we had asked roughly half of the village and we got in touch with many informants. Some of them were used again later during the week to elaborate further on different kind of topics in semi-structured interviews. Sometimes we had to ask several households in succession because nobody was home or other constrains as too drunk people or only children at home. We also counted the households without any livestock as a result of the method.

The fact that two groups did the questionnaires must influence the results in them being less identical in the way that questions can be phrased or answers can be interpreted differently. Also along the way you might discover improvements of the questionnaire, and it is question whether to change it for the better or leave it as you started out with. The challenge is also to keep on repeating yourself even though you often tend to rephrase the questions in a new way in questionnaire number 15.

Overall, we got the information that we were looking for in the questionnaire from the questions we had prepared. Some of the reasons for this outcome are perhaps that we rephrased the questions many times and that we did pilot studies. One thing that we did not overcome to measure was the household's status of wealth both because of the sensitivity of the question and the fact that we did not have the time to gain the trust of the respondents.

8.2 Semi-Structured Interviews

The challenge of semi-structured interviews is to forget the answers you are looking for and let the respondents do the talking. However, we found out that it was difficult to get them to talk. Often they only answered short and did not elaborate much. When asking them open ended questions they often did not understand how to answer. For instance: what does livestock mean to you? Sometimes it made them uncomfortable. But this is also influenced very much by the language barrier.

An advantage of the semi-structured interviews is that you are able to prepare the questions just before doing the interview after gathering information earlier in the field work that relates to the subjects to touch upon. This gives a "snowball-function" where you use the data that you already have to further elaborate on and dig deeper into your themes of interest.

8.3 PRA Methods

In all of the PRA sessions the way of the participation was an issue, and several times we used previous community meetings to gather participants. This meant that the duration of the session had to be limited because the participants were already tired. The setting might also play a role in the participation as we were sitting outside – some participants in the sun because of lack of space in the shadow. It would have been an advantage to conduct the session in a more convenient setting, but this is not always a possibility in these surroundings. So a cultural-sensitive use of time and space should always be in mind, and not always rigid appointments are the best option. The facilitation of the methods was fairly appropriate with one person leading and the others supporting. Especially in the case of PRA sessions experience, creativity and flexibility are important abilities to manage in order to apply this kind of method. Below each of the used PRA methods are briefly discussed.

8.3.1 Mapping

It was a benefit that we had invited the chief and the manager and other people from the village with knowledge about Motseng to do the mapping session, because they – while drawing the map – were able to tell us stories about the village and explain the issues regarding the borders. To ascertain the different attributes in the map they had different colours of markers that made it easier to read and manage. Afterwards we tried to triangulate the data with transect walks and SSI's which gave us diverse clarifications of the sensitive subjects about the location of the borders though.

8.3.2 Ranking

After the participants had listed the uses of each animal the ranking of the uses was conducted, but this took place in different ways from one animal to another, which made it more difficult to rank the species. At first we tried to get everyone to talk by pointing at one at a time and let them give their views. However, when they did not feel too comfortable with this method, we addressed a “democratic” way where everyone could raise their hand to agree. It was difficult to organize and structure the session because a lot of the participants stated that all of the uses that they had listed was important. Another way to do it could have been to make a consensus with all agreeing on one use as the most important (for instance with stones on the ground instead of a board).

8.3.3 Seasonal Calendar

Unlike the ranking session the categories to be answered for each animal in the seasonal calendar were fixed from the beginning. This resulted in a less detailed reflection of each animal. It might have been an advantage to let the participants come up with the factors to describe as they know better what is relevant for each animal.

8.3.4 Problem Tree

We created a draft of a problem-tree that could help us during the process. Having these quite precise conceptions beforehand might have misled the development of the method. We facilitated the process too eagerly and some of the questions were maybe also leading. Sometimes rephrasing was needed and this might have led to wrong results. Ideally we should have carried out the method with plenty of time and less direct questions trying to promote the identification of as many problems as possible.

8.3.5 Timeline

The timeline was conducted just after the problem tree and many of the same topics was used accordingly. This influenced the result markedly as the participants had these topics present in mind. Before starting out we had found local data about rainfall and temperatures which gave us some idea about whether the year of the drought that the participants pointed out was identical with the year from the data and so on. Another good thing was to draw a line before starting the session and put in some reference points to take a bearing.

8.3.6 Transect walks

One of the most important aspects of the transect walks is to have a qualified guide with you that knows the area and the factors affecting it. An expert of grassland and livestock with local knowledge would have been preferable in order to better understand the conditions of the grassland but this was not the case. A very nice aspect of the transect, though, was to walk with the herders on their route and in their pace. This “fly on the wall”-approach made the setup more comfortable, and the resulting pleasant atmosphere made it easy to talk with the herders and follow the animals.

8.4 Other methods

The focus group interviews have more participants which will have an influence on the answers; and an answer from one person can lead another person to remember more about an interesting topic that you would not have touched upon without them interacting.

The stakeholder analysis allowed us to understand the management of the livestock better as well as finding suitable and reliable informants. A sooner use of this method it would have facilitated our research.

9. Conclusion and Perspectives (Astrid, Ivan, Julio, Sisse)

The importance of livestock to Motseng goes beyond the monetary value and influences households that even do not own livestock. Thus, livelihood and livestock are closely interlinked. They affect each other in many ways; the well-being of the villagers, the status in the village, the financial leeway of each household, the improvements or constraints for the future. The villagers do not live of the livestock exclusively. Contrary they rely mostly on grants and pensions from the government. However, the villagers still depend on livestock for financial security, to conduct ceremonies, to give status and in general to improve the well-being of the household.

The main factors affecting the number of livestock in Motseng are related to the use and management of grazing areas. A deficient management may be affecting the quality of grass but do not bring consequences to the number of animals. On the other hand, the lack of fences in the boundaries of the village affects the traffic of livestock. The consequences of this uncontrolled grazing of the area lead to a lack of forage.

One constraint to the livestock in the village was the health conditions of the animals because of restricted access to medications, veterinary support and knowledge regarding diseases. Stealing of animals is not a threat to the livestock in Motseng nowadays. The gender bias plays a role in the choice of livestock while the ethnicity does not.

Further research could bring more knowledge on how grants and other government supports are affecting the livestock influence on the people's livelihood. Furthermore a determination of pasture quality could help the understanding of whether it is overgrazed and therefore in lack of land.

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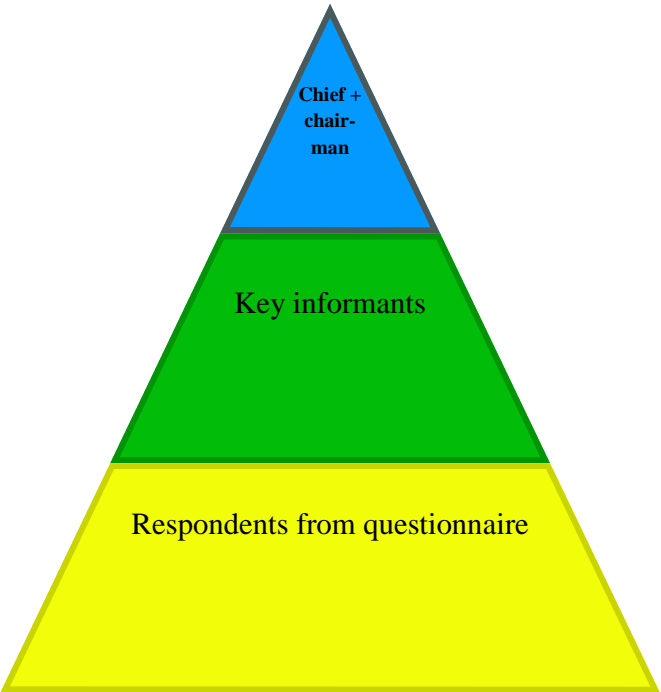
11. Appendices

Table of applied methods and synopsis.

Appendix 1: Table of applied methods in the field

Method	Number	Specified	Purpose and topics
Semi-Structured interviews with key informants	13	1 with “dairy-lady” at the mission	Dipping procedures, treatments and control
		1 with the chief	Village size, status and livestock composition
		5 with households (known from questionnaires)	Management of the animals, gender and ethnicity issues
		2 with herders	Management, routines and seasonality
		3 with households (known from questionnaires)	Livelihood, future
		1 Nature Reserve manager	Boundaries, quality and management of grassland
Questionnaires	30	2 groups with 15 each with households	
PRA's	5	Seasonal calendar Ranking Mapping Problem tree Timeline	
Transect walks	2	1 with herder 1 along the border of the village	
Focus group interview	2	1 with livestock committee in the village 1 with young people from the village	
Participatory and direct observations + informal conversations	-	Walking with the cows, the goats and the sheep Riding the horse Milking the cows Attending village meetings about how to handle and improve conditions for livestock With Matete (locally known interpreter) With the chief (members of the group stayed with him) With Andreas (chairman of the Community Trust) (he was around all the time)	

Appendix 2: Triangle of informants



Appendix 3 : Questionnaire

Questionnaire number: _____

Village: Motseng

Date: Monday Feb 28th 2011

Interviewer: _____

Waypoint number: _____

Introduction:

Hello ... Nice to meet you! We are happy to be here and grateful that you will take your time of to help us answer some questions. Your answers will be kept confidentially and anonymous.

We are students from Denmark and the University of Pietermaritzburg here in South Africa, and we are doing a field work course to learn how to approach the methods in the field. We have chosen to look into the importance of livestock for the livelihood in a rural village like this one.

1. Name?
2. Gender, age, role in the family?
3. How many are living in this household? (females, males, children, adults)
4. Have you finished highschool/matric?
5. Are you Xhosa or Sotho?

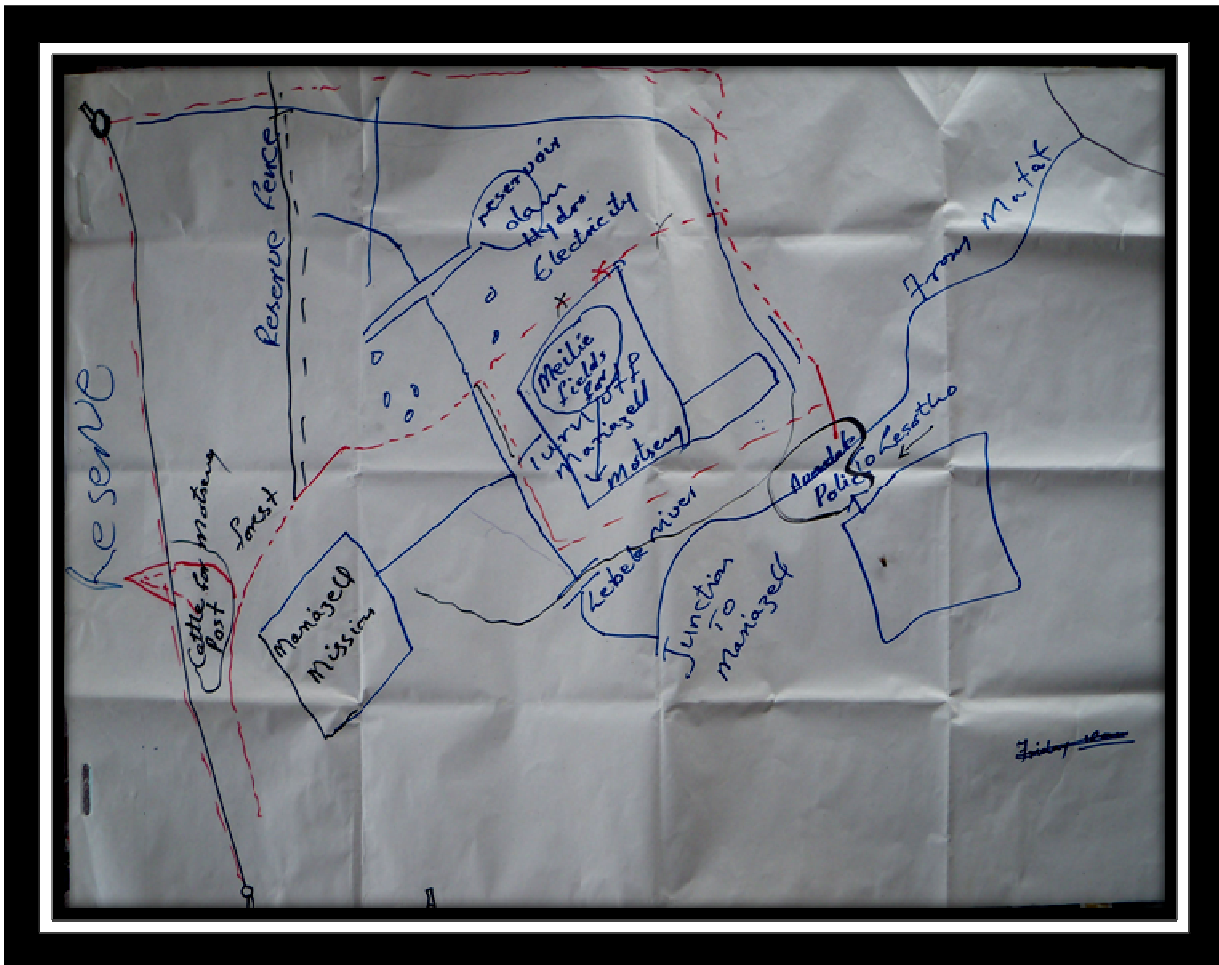
6. Do you have any livestock?
7. What kind of animal do you have?
8. How many?
9. Why don't you have _____ (the kind of animals that (s)he doesn't have)?
10. How did you get it? (bought, traded, inherited, lobola)
11. What is your _____ (each kind of animal that (s)he has) used for?
12. Is livestock the only way you earn money? Do you have any other income? Which?
13. Who takes care of _____ (each kind of animal that (s)he has at home)?
14. What do you think is your most important livestock? Why?
15. Have you experienced any stealing of your animals? When? What kind of animal? How many?
16. Do you sell products of your _____ (each animal that (s)he has)? Which?
17. How do you find customers?
18. What do you do if there are no buyers?
19. Do you remember if some of your animal died because of some disease or other reason?
What animal? How many? What disease?
20. How do you treat it?

Thank you so much for your help! We really appreciate it!

Appendix 4: Stakeholder Analysis

Stakeholders	Role
Extension Officer Eastern Cape	He gives Agricultural training to the community
Control Agricultural Dev. Tech.:	Related with the formation and development of the community in Agriculture matters.
Manager Ongeluksnek Wildlife Reserve	Manage the lands of the Reserve that has boundaries with Motseng. He is in conversation with Mariazell for the use of some lands now used by Motseng
Chairman Motseng Trust Committee (Andreas)	He deals with authorities and he is the one contacting the inspector and controlling the information.
Chief Motseng (Leisa)	He is the man who deals with the community and in charge of daily issues. He has the trust and respect of the community.
Livestock committee	They deliver in case of disputes, neighbours in help, management of the lands.
Regional Chief	Traditional authority. Disputes between communities are brought to him by the Motseng Chief
Father Mariazell Mission	Mariazell has the ownership of Motseng lands and he is in conversations with the Reserve.
Manager livestock Mariazell	He manages the dipping tank and a cattle herd of Mariazell
Inspector	He supervise the use of the dipping tank and he is in charge he will be contact in case of desiasies or to update the census.
Herders	Important figure. Very often from Lesotho, they take care of the livestock of several households.
Sotho farmers	Culturally asociated with cattle
Xhosa farmers	Culturally asociated with sheep

Appendix 5: Resource Map



The blue colour identifies key points as the main road that links Matatiele to Lesotho, the Mariage Mission, the Lebele River, a dam, etc. The red colour shows the original boundaries of the village while the black colour specifies the actual boundary and the summer grazing area, following the Ongeluksnek Nature Reserve (ONR) fences.

Appendix 6: Synopsis