



# Orange-Senqu River Basin

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## **Socio-economic Baseline Survey**

### **Demonstration Project on Community-Based Rangeland Management in Lesotho**

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## **Socio-economic Baseline Survey Demonstration Project on Community-Based Rangeland Management in Lesotho**

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# 1. Introduction

Land degradation due to human activity is a critical trans-boundary concern in the Orange-Senqu River basin. This is a particular challenge in the Senqu Catchment in Lesotho, where land degradation is being driven by factors such as grazing on marginal grasslands and steep slopes, as well as very high stocking rates. Attempts to address and reverse rangeland degradation must therefore involve the land users and needs to offer tangible benefits so as to incentivise changes while avoiding deterioration in food security and increased in poverty. The rangeland management demonstration project is focussing on four villages under the Telle Community Council in Mount Moorosi, in the Quthing District of Lesotho. The four villages are: Ha Koali, Ha Mantsoepa, Ha Moqalo and Ha Sekhonyana.

The aim of this socio-economic baseline survey is to:

- Provide information that can be used to influence and facilitate informed decision making about rangeland management interventions; and
- Provide a baseline that can be used to measure changes associated with the Project's interventions.

Issues of relevance, to be covered under the survey are therefore:

- Assessing the strength and effectiveness of community based institutions responsible for rangeland management;
- Assessing the social and economic importance of livestock to households and herding;
- Reviewing traditional knowledge, culture and beliefs informing and influencing livestock and rangeland management by households;
- Investigating the economic impact of rangeland degradation and current rangeland management and overgrazing practices;
- Identifying impacts of demographic changes and shifts in gender roles on rangeland management practices;
- Exploring community based efforts and interventions towards rangeland rehabilitation;
- Assessing alternative income generation options that could reduce dependence and pressure on the rangelands; and
- Investigate community perceptions of potential solutions to rangeland degradation and changes towards more sustainable practices.

This survey draws on existing data and information sources as well as a participatory rural appraisal and a socio-economic baseline household survey conducted in the early phases of the Project.

## 2. Survey methods

The survey was undertaken over a three day period, from 21st to 23rd May 2012. Meetings were held with the area chiefs as well as local chiefs ahead of the survey to inform them about the survey and to gain their permission to conduct the household interviews. A formal questionnaire that included both open-<sup>1</sup> and closed-ended<sup>2</sup> questions was prepared and used for the survey. The questionnaire was initially developed in English and the questions were then translated into Sesotho, and the interviews were conducted in Sesotho. The survey team comprised four staff members from Serumula Development Association. The survey team was briefed on the questionnaire and survey methods. They undertook the first household interview as a group to ensure that they would all use the same style and approach when conducting the household interviews individually. The team of four shared the interviews at Ha Sekhonyana (where the largest number of households were sampled) and then split into two teams, with one team covering Ha Mantsoepa and the other covering Ha Moqalo and Ha Koali. The 2006 Lesotho National Census indicates that there are approximately 442 households across these four target villages (Table 1). The target was to survey approximately 10% of the households, and this was slightly exceeded with a total of 50 households interviewed (Table 1).

*Table 1: Breakdown of households per village across the four target villages in Mount Moorosi (Source: Lesotho Bureau of Statistics, 2006).*

<i>Village</i>	<i>Total number of households</i>	<i>Number of households interviewed</i>	<i>Number male household representatives interviewed</i>	<i>Number female household representatives interviewed</i>
Ha Koali	68	8	6	2
Ha Mantsoepa	94	11	3	8
Ha Moqalo	30	7	1	6
Ha Sekhonyana	250	23	15	8
<b>Total</b>	<b>442</b>	<b>49</b>	<b>25</b>	<b>24</b>

<sup>1</sup> Open-ended questions are designed to encourage a full, meaningful answer using the respondents' own knowledge and feelings.

<sup>2</sup> Closed-ended questions limit respondents with a list of answer choices from which they must choose to answer the question. These questions are typically multiple choices (where one or a number of the answers apply) but they also can be in scale format where the respondent will rate the situation along the scale continuum.

A random stratified sampling technique was used to identify the households to be surveyed. That is, the stratification took into consideration sampling the different rangeland user groups within the villages, and a representative number of households were sampled across all four villages. The selection of households within each village was random.

The survey included a sample of 54% male survey respondents 46% female respondents. The survey also captured a varied sample of households in terms of the length of time they have resided in the area (and therefore observed changes in the condition of the rangelands (Figure 1).

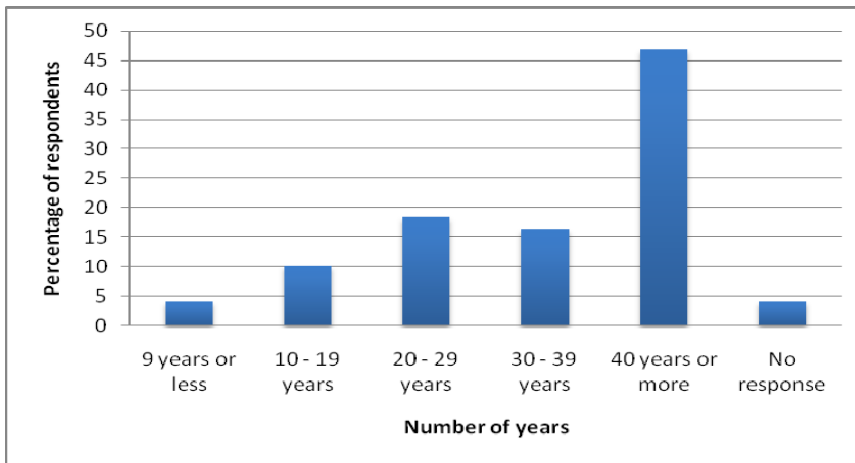


Figure 1: Years that respondents have been resident in the area.

While the majority of respondents have been residing in the area for 40 years of more (47%), the sample also included respondents who have resided in the area for only nine years or less. Respondents' ages ranged from about 20 years to over 60 years of age (Figure 2).

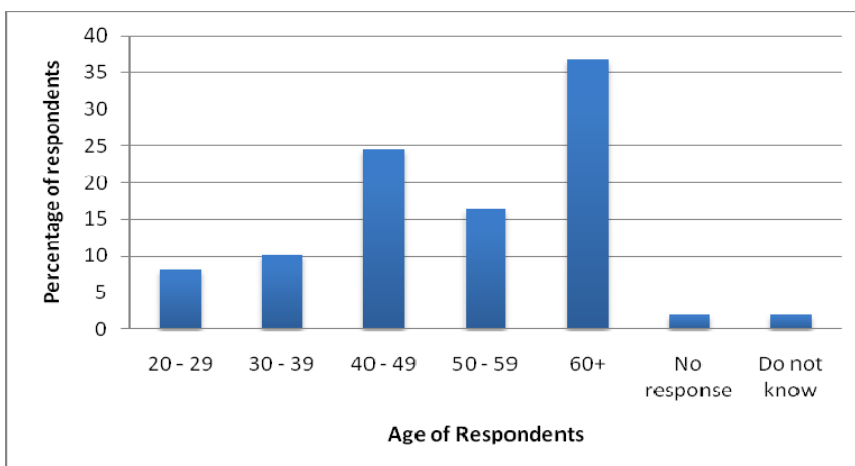


Figure 2: Range in ages of survey respondents.

Respondents' qualifications also generally reflected typical demographics for Lesotho, with more than 67% having only completed or partially completed, primary level education. This translates into very low levels of literacy characterising the area (Figure 3).

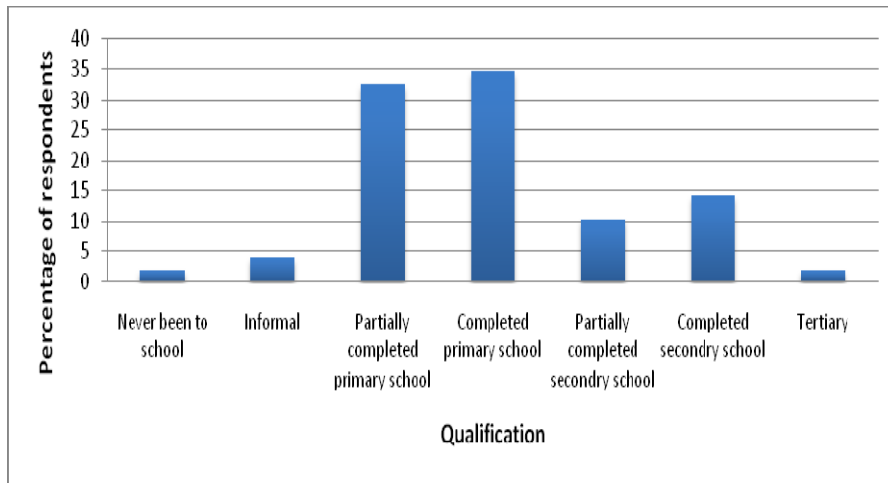


Figure 3: Range in formal education levels of respondents.

The occupations of the respondents also reflect the typical demographic profile of the area with the majority of respondents being in the agricultural sector (including those characterising themselves as housewives) and home based enterprises (business owners/self-employed) (Figure 4).

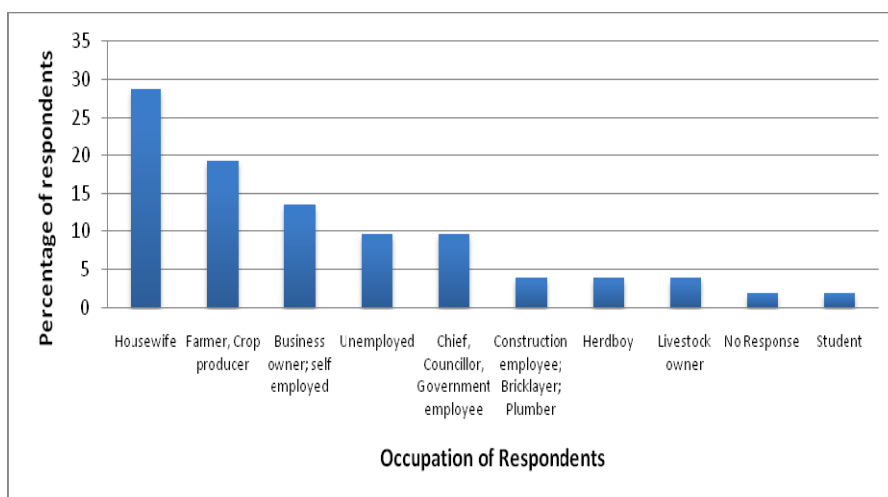


Figure 4: Occupations and livelihood strategies of respondents

The main challenges experienced during the survey were:

- Accurately translating technical terms and concepts relating to rangelands from English into Sesotho and explaining this during the interviews.
- Some respondents struggled with the analytical questions that required them to justify or substantiate their answers, particularly those dealing with economic data. As a result some of these questions were poorly answered with respondents unable or unwilling to provide the detailed raw data.
- Some respondent were unable to provide answers that justified some of their opinions relating to contentious issues such as causes of the condition of the rangelands.

## 3. Results

### 3.1 Awareness about the condition of the rangelands

The rangelands in Lesotho are locally divided into three areas:

- **A areas:** Summer grazing areas with cattle posts in the upper catchments areas located outside the boundaries of the Community Councils. Grazing management under the jurisdiction of the Principal Chiefs
- **B areas:** Grazing areas and cattle posts in the middle catchments located inside the Community Council boundaries with recommended grazing between May and September. These areas are theoretically controlled by the Community Councils but, due to capacity and logistical constraints, these areas are supposed to fall under the jurisdiction of the Principal Chief
- **C areas:** Grazing areas located close to the villages with recommended grazing between June and November and controlled by the Community Councils

The baseline survey highlights that the households' perceptions regarding the condition of the A, B and C areas varied considerably (Figure 5):

- 34% of the respondents thought that the condition of the A areas is either very good or good, with 14% saying the condition is fine, and only 26% saying it is bad or very bad:
  - 4% said did not know because they have never visited the A areas;
  - 18% were unable to provide a response to this question.
- 44% of the respondents believe that the condition of the B areas is either good or fine with only 22% saying it is bad or very bad:
  - 4% said did not know because they have never visited the B areas;
  - 28% were unable to provide a response to this question.
- 82% of the respondents said that the condition of the C areas are either bad or very bad, with the majority (48%) saying the condition of the C areas is very bad. Only 14% of the respondents thought that the condition of the C areas was good or fine.



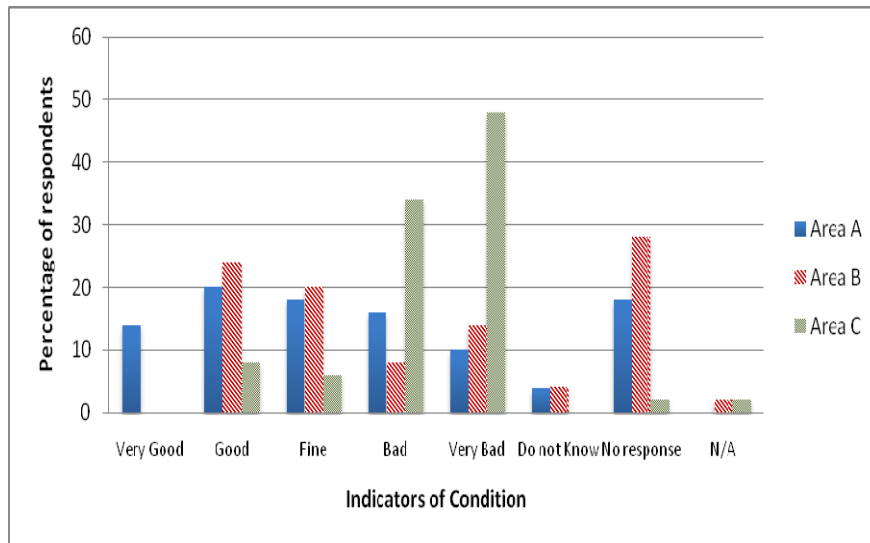


Figure 5: Perceptions relating to the condition of the rangelands.

While there is general consensus that the C areas are degraded, there is divided opinion on the condition of the A and B areas. There are also a large percentage of households who are unable or unwilling to express an opinion on the condition of these areas. This varied opinion could pose challenges for rangeland management as this divided opinion is an indication that there is unlikely to be agreement on the need for a change on the management of the rangelands, or in how they should be managed in future. Effective rangeland management may therefore need to be introduced with awareness raising and vision building among the local households in order to build consensus and widespread recognition of the problems, and to establish a collective commitment to finding and implementing management solutions.

The main indication that households used to inform their decision on condition of the rangelands in A, B and C areas varied (Tables 2, 3 and 4).

Table 2: Main reasons given as indicators of the condition of A areas.

<i>Indicators of improvements</i>		<i>Indicators of degradation</i>	
Good grass cover; diverse grasses; good vegetation	5.6%	Not enough grass cover/overgrazing	4.8%
Sufficient water for animals	5.2%	Less water for animals	2.4%
Less erosion; no dongas; no erosion	4.8%	Wetlands getting degraded	2.4%
Wetlands in good condition	3.6%	Less palatable grass	2.4%
		Increasing number of animal units	3.2%
		Alien species encroaching	4.8%

Table 3: Main reasons given as indicators of the condition of B areas.

<i>Indicators of improvements</i>		<i>Indicators of degradation</i>	
Presence of good grazing	2.8%	No palatable grasses	2.0%
Minimal dongas; limited erosion	2.4%	Erosion increased	2.4%
Good source of water	2.0%	Shrub infestation	2.4%
		Less palatable grass	2.4%
		Increasing number of animal units	3.2%
		Alien species encroaching	4.8%

Tables 2 and 3 illustrate that conditions in the A and B areas are sometimes interpreted in opposites by respondents, e.g. some households are reporting good grass cover while others report that the grass cover is decreasing; some suggest wetlands are in good condition and others report wetland degradation. This re-enforces the earlier observation that there are contradicting perceptions about the overall condition of the rangelands, and the interpretation of these conditions by local households.

In the C areas there is, however, fair consensus about the conditions and the indicators of degradation (Table 4)

Table 4: Main reasons given as indicators of the condition of C areas.

<i>Indicators of degradation</i>	
Dongas, erosion, gully erosion	17.6%
Bush encroachment, shrub infestation	7.6%
Insufficient, dried up water	6.8%
Rocks and poor soil	6.4%
No palatable grasses	6.0%
No wetlands, drying up and degraded	5.2%
No soil cover, no vegetation	4.0%
Grasses in poor condition, no grazing areas	3.6%
Increasing numbers of alien species	3.2%

Households perceived the following to be the most important causes of these changes in the condition of the A, B and C areas:

- The main causes of degradation or improvements in A areas
  - Causes of degradation:
    - Drought; climate change (2.0%);
    - Bad grazing management; overgrazing; stock not rotated (4.8%);
    - Burning grasses; veld fires (2.0%);
    - Shrubs; bush encroachment (1.2%).

- Causes of improvements in condition:
  - Good grazing management (2.0%);
  - People obey and follow regulations (1.2%).

The majority of those interviewed (71.2%) did not provide a response to this question. A large percentage of those who responded (10.4%) said they did not know the reasons for these changes in condition, while 8% said they thought these changes were occurring naturally.

- The main causes of degradation or improvements in B areas
  - Causes of degradation:
    - Bad management practices; over grazing (2.4%);
    - Overstocking (1.6%);
    - Burning grasses (1.2%);
    - Stock theft (0.5%).
  - Causes of improvements in condition:
    - Good grazing management (1.0%);
    - People obey and follow regulations (1.0%).

However, 79.6% of the respondents were unable to provide a response to this question. A large percentage of those who responded (10%) said they did not know the reasons for these changes in condition, while 1% said they thought these changes were occurring naturally because of drought.

- The main causes of degradation in C areas.
  - Natural causes such as erratic rainfall; floods; climate change (9.6%);
  - Rangeland not well managed; over grazing (9.6%);
  - Overstocking (8.0%);
  - Soil erosion; water run off (6.0%);
  - Poor law enforcement; people not obey laws (3.2%);
  - Human settlements; overpopulation (2.4%);
  - People do not care (1.6%);
  - Poor planning of grazing areas (1.2%);
  - Burning grasses (1.2%).

Motivations were provided only for perceived causes of degradation. However 50% of the respondents were unable to provide a response or give an opinion on what is causing this degradation of rangelands.

Therefore, while a small number of households could provide examples of what they think the causes of the changes in rangeland condition, the majority of households were unable to substantiate or motivate the reasons for their thinking:

- In A areas 71.2% did not provide an answer, and 10.4% said they did not know;
- In B areas 79.6% did not provide an answer, and 10% said they did not know;

- In C areas 50% did not provide an answer.

This is potentially an indication that not only do people not have clarity on the changes in condition of the rangelands, but they also do not have a widely held view of what is causing these changes. In conclusion, this highlights the need to build consensus among households on what the real trends in rangeland condition are, and what the causes of this change in condition is. This consensus could then be used as a foundation on which to establish a widely supported and collectively implemented community based rangeland management programmes.

Other reasons given for the general decline in the condition of rangelands included:

- No rehabilitation measures are being put into place;
- Nobody cares or takes initiatives;
- High population density and spread of human settlement;
- Poor enforcement of the law.

Land use management and governance are therefore locally recognised as key factors to be considered for sustainable community based natural resources management.

Perceptions about the timeframes over which these changes have occurred also vary considerably:

- 64% of respondents said the changes are happening slowly;
- 34% said they were sudden.

Some respondents (60%) believe that these changes in rangeland condition started to occur since they have been adults, 26% think the changes have started to occur since they were children, and 6% said that the changes started happening before they were born. In addition, the majority of the respondents (76%) suggest that the rate of change is increasing, while 12% suggest that the rate is slowing down, and 6% of the respondents indicated that the rate of change has remained the same.

### **3.2 Changes in demographics and gender roles and responsibilities**

Population growth is widely seen by respondents as being a major factor influencing the change in rangeland condition. An increase in the number of households is reported to also result in an increase in the number of livestock being kept in the area, which is increasing pressure on the rangelands. Approximately 66% of the respondents said that the number of households in the Mount Moorosi area has increased, with many (40%) suggesting that there has been a very big increase in the number of households in the area over the past 10 to 20 years.

Basotho culture is traditionally strongly paternalistic, and women have typically not played significant decision making roles in relation to rangeland use and management. However in relatively recent times, the leadership role of women has increased with a number of women now filling roles of leadership such as village chiefs and councillors. About 60% of the respondents

thought that the role of women in rangeland management has changed, providing the following examples:

- Women play an advisory role to their male counterparts in the management of rangelands;
- They contribute in planning and in the selection of grazing areas to be reserved;
- At community level, women take a leading role in the implementation of rangeland rehabilitation activities;
- The decentralization policy encourages active participation of women in leadership positions i.e. in community councils; therefore many women who are in such leadership roles play an active role in the management of rangelands and natural resources at council level.

A large percentage of the respondents (34%), although suggesting that the role of women has changed, could not provide examples of how the role has changed.

Perceptions about the impacts of the involvement of women also vary. Some believe there have been positive impacts, for example:

- There has been an improvement on rangelands, some rangelands recovering;
- Grazing is better controlled e.g. no more animal grazing reserved areas;
- Women are good at settling disputes and conflict management;
- Women are involved in rehabilitation work.

However 36% of respondents said that they did not think the role of women in rangeland management has changed, while others suggested the input of women was insignificant or even negative:

- Very little change, no real impact, too early to determine;
- No bearing; no change; no contribution; they don't know anything;
- Women easily get into conflict;
- Women slow down development;
- Women lack initiative.

### **3.3 Impact of rangeland condition on livestock based livelihood strategies**

#### **Traditional and cultural importance of livestock**

The survey illustrates that the traditional and cultural importance of livestock over the past 20 years is largely unchanged for most households (66%). However 16% of the households say that it has changed and examples of these changes are listed in Table 5.

Table 5: Example of key changes in traditional and cultural uses of livestock.

<i>Past</i>	<i>Present</i>
Cattle and goats were slaughtered for funerals and ancestral rituals.	Livestock reared as a source of livelihoods mostly, as some people no longer observe those rituals due to their various religious affiliations.
Slaughtering sheep to mark the birth of babies.	Some people have no sheep and have stopped slaughtering for newly born babies since they earn their livelihoods from the sale of wool.
Payment of lobola (bride price).	Lobola is more commonly paid in cash.
Used horses and donkey for draught power & transport.	Mechanized draught power and other modes of transport are widely used as most people no longer have horses/donkeys.

Overall, however, the value of livestock as a livelihood strategy has not decreased and households are still driven to increase their livestock holdings as a livelihood strategy.

#### **Main contributions of livestock to livelihoods**

The most important contribution of cattle to livelihoods is the provision of draught power, with milk production also rating highly (Table 6). The high percentage of no response is an indication of the fact that many households do not own cattle.

Table 6: Contribution of cattle to households' livelihoods.

	<i>% of respondents</i>	<i>Importance of contribution</i>	<i>Estimated value (per annum)</i>
<b><i>Meat</i></b>	4	Nice to have but not important	No estimate given
	8	Not important	No estimate given
	18	No Response	No estimate given
	70	Not applicable (not owned/used)	No estimate given
<b><i>Milk</i></b>	2	Extremely important	<M1,000
	20	Very important	No estimate given
	10	Nice to have but not important	No estimate given
	16	No Response	No estimate given
	52	Not applicable (not owned/used)	No estimate given
<b><i>Draught animals</i></b>	32	Extremely important	M5000 - M1000
	8	Very important	M3000- M5000
	2	Nice to have but not important	No estimate given
	16	No Response	No estimate given
	42	Not applicable (not owned/used)	No estimate given

	<i>% of respondents</i>	<i>Importance of contribution</i>	<i>Estimated value (per annum)</i>
<i>Savings, wealth accumulation</i>	4	Extremely important	M8000- M10000
	10	Very important	M5000- M1000
	6	Nice to have but not important	M5000- M8000
	4	Not important	M5000- M8000
	14	No Response	No estimate given
	62	Not applicable (not owned/used)	No estimate given
<i>Spiritual</i>	2	Nice to have but not important	No estimate given
	6	Not important	No estimate given
	16	No Response	No estimate given
	76	Not applicable (not owned/used)	No estimate given
<i>Traditional, culture</i>	2	Extremely important	No estimate given
	8	Very important	M5000- M10000
	12	Nice to have but not important	No estimate given
	2	Not important	M5000- M8000
	20	No Response	No estimate given
	56	Not applicable (not owned/used)	No estimate given

Goats are an important income earning strategy for households through the sale of mohair (Table 7) they are also rated as relatively important in terms of meat and savings, and to a lesser extent traditional and cultural role. As in the case of cattle, many households did not respond as they do not own goats.

*Table 7: Contribution of goats to households' livelihoods.*

	<i>% of respondents</i>	<i>Importance of contribution</i>	<i>Estimated value (per annum)</i>
<i>Meat</i>	2	Extremely important	No estimate given
	16	Very important	M1000- M3000
	6	Nice to have but not important	No estimate given
	14	Not important	No estimate given
	12	No response	No estimate given
	50	Not applicable (not owned/used)	No estimate given
<i>Milk</i>	4	Very important	No estimate given
	32	No response	No estimate given
	64	N/A	No estimate given

	<i>% of respondents</i>	<i>Importance of contribution</i>	<i>Estimated value (per annum)</i>
<i>Savings, wealth accumulation</i>	6	Extremely important	M1000- M3000
	10	Very important	No estimate given
	6	Nice to have but not important	No estimate given
	2	Not important	No estimate given
	18	No response	No estimate given
	58	Not applicable (not owned/used)	No estimate given
<i>Mohair</i>	24	Extremely important	M1000- M5000
	8	Very important	M3000- M5000
	2	Not important	No estimate given
	12	No response	No estimate given
	54	N/A	No estimate given
<i>Spiritual</i>	2	Very important	No estimate given
	8	Nice to have but not important	No estimate given
	4	Not important	No estimate given
	28	No response	No estimate given
	58	Not applicable (not owned/used)	No estimate given
<i>Traditional, culture</i>	6	Extremely important	No estimate given
	6	Nice to have but not important	No estimate given
	2	Not important	No estimate given
	26	No response	No estimate given
	60	Not applicable (not owned/used)	No estimate given

Households rate the most important contribution from sheep to be the sale of wool which is an important source of cash incomes (Table 8). They also provide an important source of meat and are relatively important in terms of savings. They are also reported to have some significance in terms of spiritual, traditional and cultural practices.

*Table 8: Contribution of sheep to households' livelihoods.*

	<i>% of respondents</i>	<i>Importance of contribution</i>	<i>Estimated value (per annum)</i>
<i>Meat</i>	4	Extremely important	M1000- M3000
	8	Very important	<M1000.00
	6	Nice to have but not important	None Given
	4	Not important	None Given
	10	No response	None Given
	68	Not applicable (now owned/used)	None Given



	<i>% of respondents</i>	<i>Importance of contribution</i>	<i>Estimated value (per annum)</i>
<i>Milk</i>	28	No response	None Given
	72	Not applicable (now owned/used)	None Given
<i>Savings, wealth accumulation</i>	6	Extremely important	<M1000- M8000
	8	Very important	None Given
	2	Nice to have but not important	None Given
	16	No response	None Given
	68	Not applicable (now owned/used)	None Given
<i>Wool</i>	16	Extremely important	<15000.00
	6	Very important	M1000- M8000
	2	Nice to have but not important	M3000- M5000
	12	No response	None Given
	64	Not applicable (now owned/used)	None Given
<i>Spiritual</i>	2	Nice to have but not important	None Given
	4	Not important	None Given
	22	No response	None Given
	72	Not applicable (now owned/used)	None Given
	<i>Traditional, culture</i>	2	Very important
2		Nice to have but not important	None Given
2		Not important	None Given
24		No response	None Given
70		Not applicable (now owned/used)	None Given

The only importance attributed to horses and donkeys was their role as transport and pack animals, and in terms of this role they were rated as extremely important.

### **Changes in number of livestock owned by households**

Approximately 82% of the survey respondents reported that the number of livestock that they own has changed in recent time. The direction of this change varies between households as well as livestock types. The general trend appears to be a decrease in the overall number of cattle, with a decrease in large herds of sheep and goats, but an increase in number households with smaller herds (and therefore an increase in overall number of sheep and goats).

There appears to be a decrease in herds of over six6 cattle, and an increase in herd sizes of one to five cattle. There has also been a big increase in the number of households who no longer own cattle (from 20% to 30%) (Figure 6).

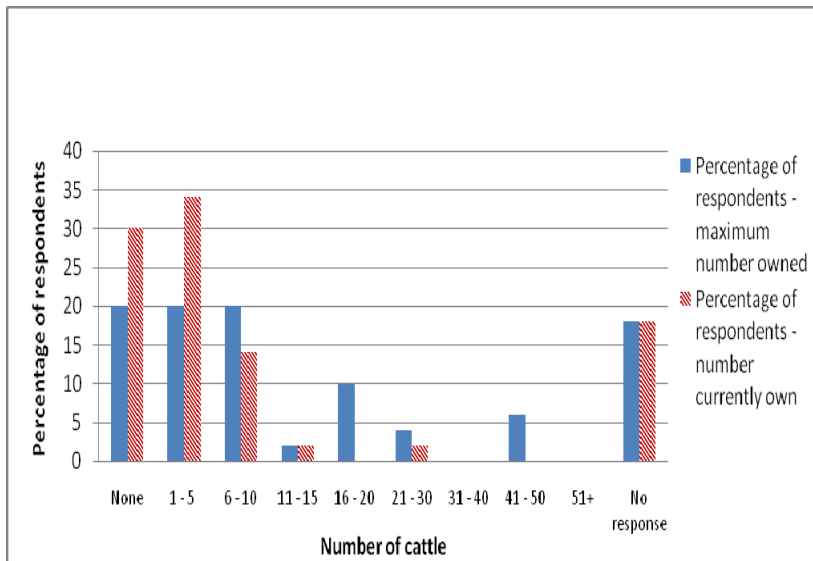


Figure 6: Changes in herd sizes of cattle.

Almost 21% of the households reported that their herd sizes have decreased because some of their cattle had died. The other main reasons given included:

- Sold to earn income (16%);
- Stolen / stock theft (12%);
- Difficult to manage / management issues (6.2%);
- Poor rangeland condition (4.2%).

The biggest impacts reported by households who have decreased their cattle numbers was a loss of income and livelihood security, and also a loss of draught power which affects their ability to plough fields for food production. Some also suggested that they are no longer able to slaughter cattle for cultural practices and now have to buy livestock for this when needed. However others suggested that they had decreased their herd sizes intentionally in order to make them more manageable and the impact to them was insignificant.

Households that increased their herd sizes suggested that this has helped them to cover household expenses such as school fees, and they now have increased cash incomes which provide security and improved well-being.

Fewer households now own goats (increased from 30% in the past to 38% now no longer owning goats), but there is an apparent trend of an increase in herd sizes among those who do still own goats, i.e:

- 6% own herds of 1-5 goats (up from 4%);
- 6% own herds of 11-15 goats (up from 2%);
- 10% own herds of 21-30 goats (up from 6%).

There is however a reported decrease in very large herds (over 41 goats) (Figure 7).

Those respondents reporting a decrease in herd size said it was mainly because the animals had either died (13%), been sold (13%), or stolen (13%). Others said they had slaughtered animals for cultural purposes (17%), or exchanged them for sheep (2%). The livelihood impact of this decrease was mainly reported to be a decrease in the income yield of mohair. Others said that the main challenge was that they no longer had sufficient goats for cultural practices, but some said that the decrease has been insignificant for them.

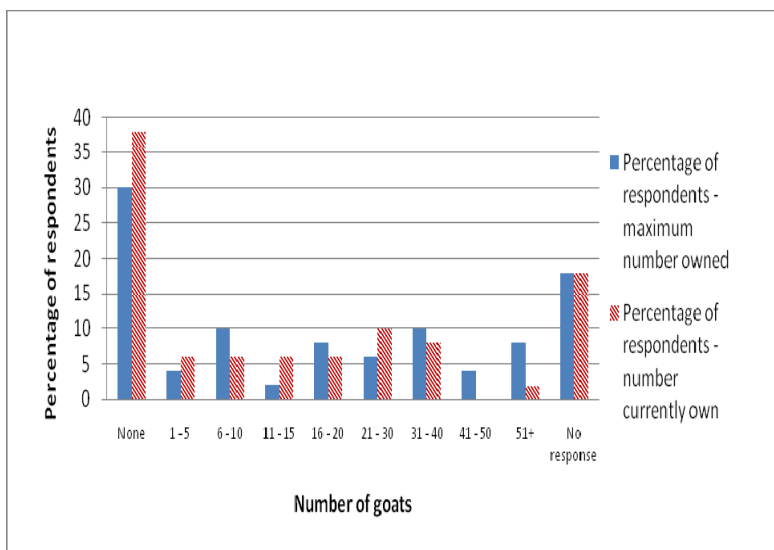


Figure 7: Changes in herd sizes of goats.

Households reporting increased herd sizes said that it was mainly as a result of natural growth of their herds, and reported that they now have more income earned from the sale of mohair, which helps them to meet livelihood needs and increase their well-being (e.g. payment of school fees etc.).

While fewer households report that they now own sheep (up from 42% to 50%), there appears to be a significant increase in the number of sheep owned by those still have herds of sheep, particularly among households with herds of between 31-50 sheep (Figure 8). However there is a reported decrease in herds of over 50 sheep.

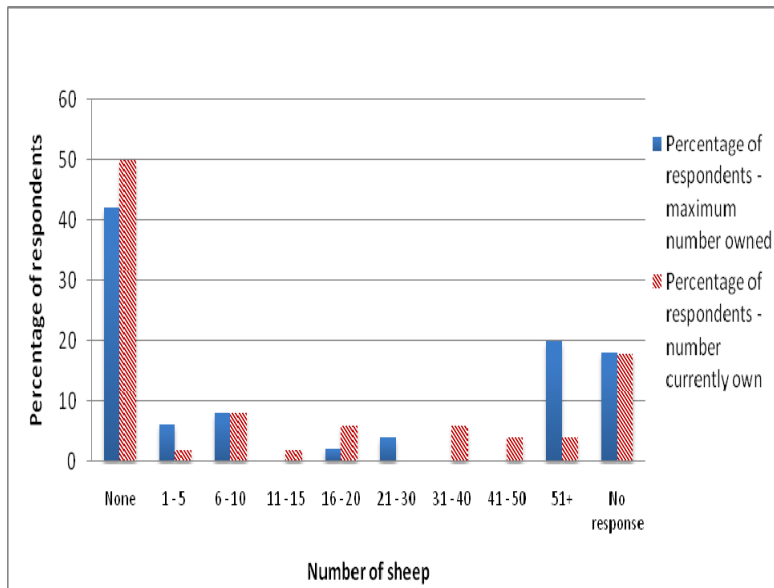


Figure 8: Changes in herd sizes of sheep.

Stock theft was a widely reported problem (19%), while others said main reasons their herd sizes were reduced was because animals had died (11%), or been sold as a livelihood strategy (14%). Others said they had slaughtered sheep for cultural/religious purposes (4%). Some reasons given by households for reducing sheep stocks were directly related to poor rangeland condition and management issues (6%). The main consequence of the reduction in sheep was a decrease in household income.

However, households who reported an increase in the number of sheep they own said that this was a positive impact to their livelihoods because they could earn more income from the sale of wool and meat.

Households report a decrease in larger herds of horses and donkeys and an increase in herds of 1-5 animals. The number of households owning horses and donkeys has however not changed much (54% to 56%) (Figure 9).

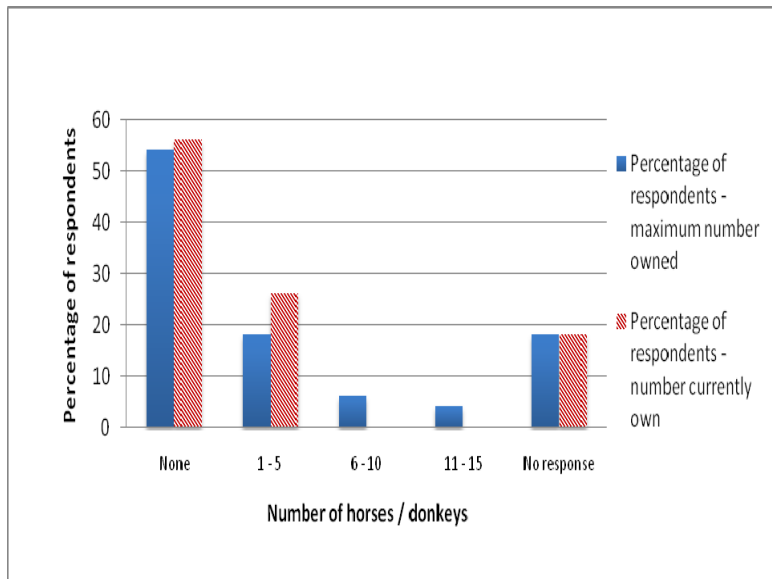


Figure 9: Changes in herd sizes of horses and donkeys.

### Impacts of changes in rangeland condition on livestock production

Approximately 74% of the respondents said that the negative change in rangeland condition has impacted on their livelihoods, while only 4% said it has no impact (32% did not respond to this question). The main impacts reported by those respondents who said that the condition of the rangelands was decreasing was:

- Decrease in wool and mohair production;
- Increasing livestock mortalities from insufficient food;
- Creates the need to invest scarce incomes to buy fodder for livestock;
- Decrease in milk production.

Perceptions are that an improvement in rangeland condition will benefit livelihoods by enhancing livestock production. The following potential benefits were anticipated:

- Healthier livestock;
- Good quality animal products;
- Increased yields in animal products;
- More and better quality wool and mohair;
- More income from sales of animal products;
- Ability to sustain increased numbers of livestock and generate more income from sales of live animals;
- Increased milk and meat production;
- More cattle for ploughing fields.

### **3.4 Impacts of changes in rangeland condition on non-livestock based livelihood strategies**

Rangelands currently contribute to households' livelihoods through the provision of the following:

- Fuel materials and firewood;
- Medicinal plants;
- Thatching grass;
- Wild fruits and berries;
- Small animals for hunting;
- Raw materials for handicrafts (e.g. fibre plants).

Most respondents recognised that degradation of the rangelands is a threat to the on-going availability of these resources, while an improvement in rangeland condition would improve the well-being of households by increasing the quantity and quality of these resources available to households.

### **3.5 Indigenous knowledge, traditions and community based efforts towards rangeland management**

#### **Influence of culture and traditions on the way households currently use rangelands**

Cultural and traditional practices were suggested to influence aspects of the way in which rangelands are managed, and sometimes contribute to the decline in the condition of the rangelands. Examples given included (Figure 10):

- Burning of grass in winter;
- Harvesting certain plants for medicine (especially by traditional healers) without replanting;
- Traditional initiation schools' practice of burning the veld;
- Overstocking / rearing many animals as a symbol of wealth;
- Hunting wild animals to extinction;
- Repeated use of certain routes to access certain grazing areas (e.g. A areas);
- Indiscriminate harvesting of range resources;
- No rotational grazing.

Only one cultural, i.e. setting aside reserved areas to rest grazing land, was reported to have a positive influence on the condition of rangelands.

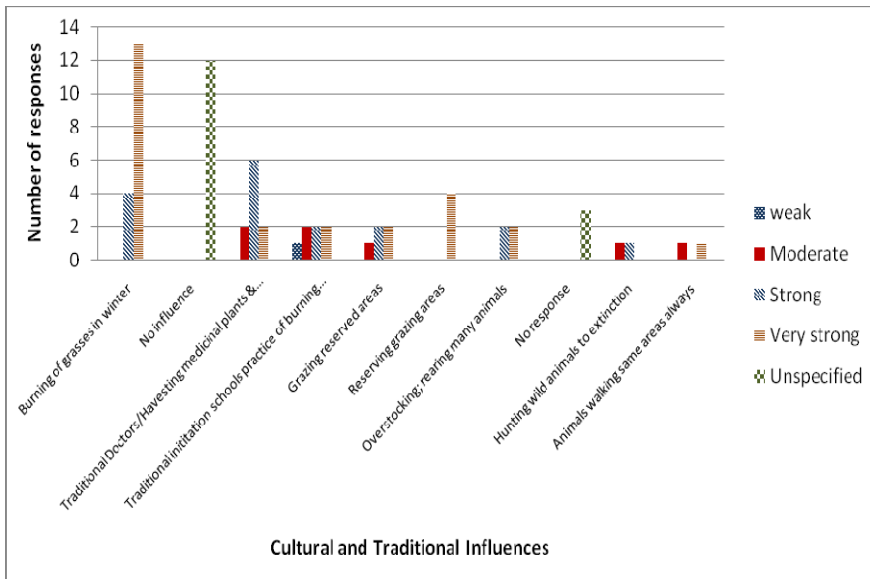


Figure 10: Cultural and traditional practices influencing rangeland condition.

### Degradation that households recognise as requiring rehabilitated

The following signs of degradation were reported by respondents as being indications that rangelands needed rehabilitation (Figure 11):

- Evidence of soil erosion;
- Wetland degradation;
- Bush encroachment;
- Invasive alien plants;
- Loss of palatable grasses.

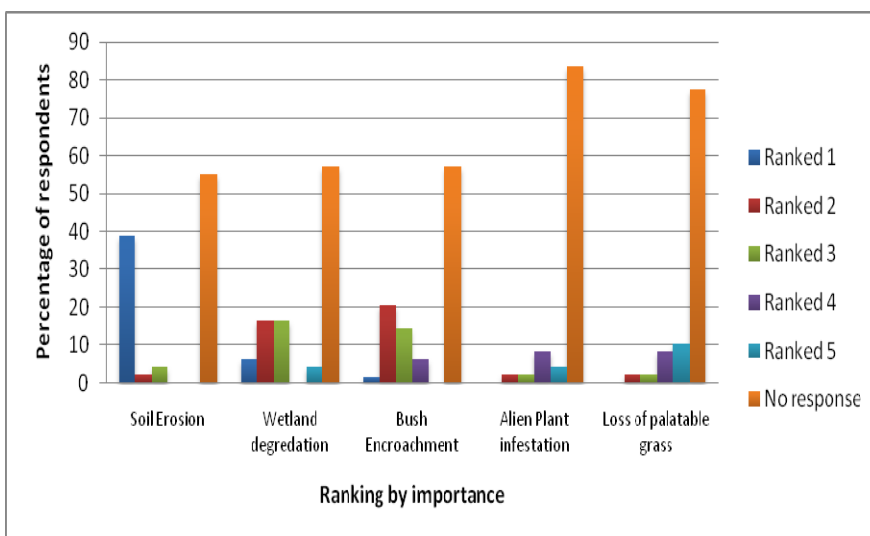


Figure 11: Perceptions about rangeland degradation problems.

Most respondents suggested that erosion and the loss of palatable grasses is very widespread, with wetland degradation fairly widespread. The problem of bush encroachment was perceived by respondents to be moderately widespread (Figure 12). There is an indication that issues of alien invasive plants is not clearly understood with some households saying it is a very widespread problem while most were unable to rate the problem.

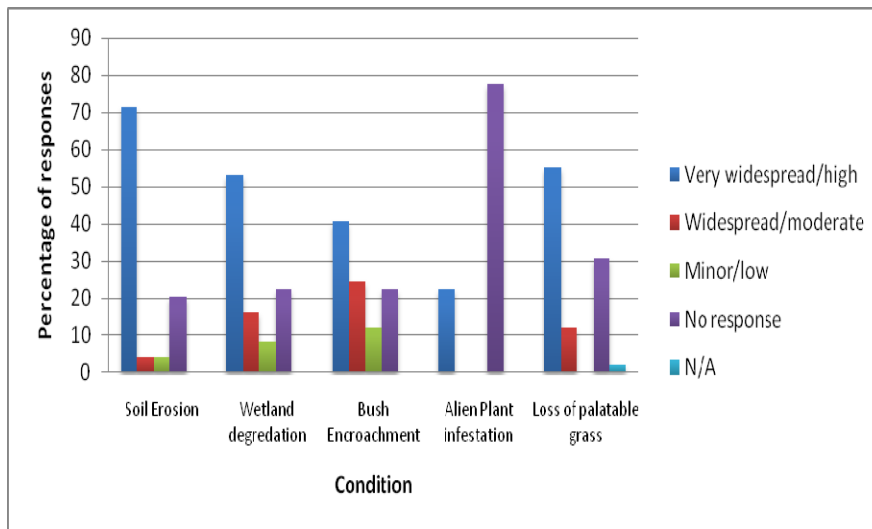


Figure 12: Perceptions about the extent of rangeland degradation.

### Community activities currently undertaken to rehabilitate rangelands

Most respondents indicated that there was very little being done by local households or communities to address the degradation of rangelands before the activities introduced by the demo project. Actions that were being implemented by the communities themselves primarily focussed on grazing management, and included:

- Closing off certain areas to rest them;
- Rotational grazing with livestock being moved between A B & C in winter and summer;
- Issuing of permits for grazing;
- Establishment of a grazing committee.

But little was being done to address erosion, wetland degradation, bush encroachment or alien plants despite widespread recognition of the problems. The following activities implemented through the demo project were however recognised as being constructive:

- Stone lines; silt traps;
- Gully reclamation;
- Reseeding grass species;
- Uprooting bushes to combat bush encroachment.



### 3.6 Institutional strength and effectiveness for rangeland management

#### Current roles and responsibilities for rangeland management

The respondents suggested that many different people or organisations have a responsibility to ensure the rangelands are managed, including:

- Households in the community itself;
- Livestock owners;
- Herders;
- Headmen;
- Councillors;
- Chiefs;
- Committees (where they exist);
- Government authorities (e.g. Departments for Forestry and Rangeland Management).

Perceptions about their effectiveness however vary. While some responsibilities were reported to be carried out well, there is an indication that the respondents were unwilling to comment on the effectiveness of some authorities particularly senior authorities in the community; this may be an indication of an unwillingness to criticize leadership (Table 9). Livestock owners were however fairly widely criticised for their livestock and rangeland management activities.

#### Perceptions on what should be done to improve rangeland condition

A range of management and rehabilitation activities were proposed and suggestions were made on who should be responsible for implementing these activities (Table 10). Some of the most widely suggested actions included:

- Reseeding (7%);
- Controlled grazing control (7%);
- Erosion control and gulley reclamation (6.5%);
- Tree planting (5.2%);
- Reduce stocking rates (2.5%);
- Strengthen governance systems (2%).

However 2% of respondents said that they had no ideas about what could be done to improve rangeland condition, while 4% said no action was required.

*Table 9: Current roles and responsibilities for management of rangelands.*

	<i>Responsibility</i>	<i>Effectiveness</i>
<b>Issuing grazing permits</b>	Headman	Very good
	Chief	Good
	Councillor	No response
	Committee	No response
	Chief	Very good
	Committee	Good
	Community	No response
<b>Plans for grazing; range planning</b>	Livestock owners	Good
	Herders	Bad
	Headman	No response
	Chief	No response
	Councillor	No response
<b>Rotational grazing</b>	Livestock owners	Very good
	Chief	Good
	Councillor	Very bad
	Committee	No response
	Community	No response
	Forestry officer	No response
	Chief	Very good
<b>Reserving areas - rest areas</b>	Committee	No response
	Chief	Very good
	Committee	No response
	Chief	Very good
	Committee	No response
	Livestock owners	Good
	Volunteers	Bad
	Community	No response
	Livestock owners	Good
Community	Bad	
<b>Identifying areas to be used</b>	Community	Good

Table 10: Proposed management actions and responsibilities.

<i>Management action</i>	<i>Responsibility</i>	<i>Management action</i>	<i>Responsibility</i>
Reseeding	Community	Establish grazing plans	Community
	Chiefs		Chiefs
	Councillors		Councillors
	Livestock owners	Enforce compliance to grazing plans	Community
	Herd boys		Councillors
Tree planting	Community		No response
	Livestock owners	Source funding for grass seed	Community
Fodder production	Community	Provide incentives to those who show initiative	Government
	Chiefs	Good land use practices	Community
	Councillors		Livestock owners
	Livestock owners	Revise laws especially land tenure	Government
Stop burning grasses	Community	Livestock owners should be forced to stall feed for 3 years	Livestock owners
Establish controlled grazing areas	Community	Introduce system where people have their own farms	Livestock owners
	Chiefs	People to pay taxes for having certain number of animals	Government
	Councillors	Train farmers in management of livestock	Chiefs
	Government		Government
Erosion control; gully reclamation	Community	Establish grazing committees	Livestock owners
	Livestock owners	Improve range policy and laws	Community
Keep right number of livestock	Community	Rest grazing areas for 5 years	Community
	Chiefs		No response
	Livestock owners	Uproot shrubs (control bush encroachment)	Community
	Herd boys	Construct waterways in fields	Community
Strengthen governance systems for range management	Law enforcement bodies	Construct dams	Community
	Chiefs	Training and capacity building	No response
	Law enforcement bodies		

Respondents were asked to suggest what they would do if they could manage rangelands differently. The following interventions were proposed:

- Livestock and grazing management:
  - Would force livestock owners to reduce numbers;
  - Ensure compliance with rangeland grazing plans;
  - Encourage livestock owners to plant fodder crops;
  - Reserve areas and rest certain areas for grazing in future (rotational grazing);
  - Get livestock owners to contribute to rehabilitation;
  - Encourage livestock owners to reduce stock;
  - Only allow improved animals (livestock improvement) to graze in certain areas.
- Rehabilitation:
  - Plant kikuyu grass on degraded areas;
  - Designate certain areas as pilot to show how to rehabilitate;
  - Encourage people to construct silt traps;
  - Stone lines to fix gullies;
  - Tree planting e.g. plant fruit trees in dongas;
  - Re- seed with more palatable grass.
- Resource harvesting:
  - Plan resource harvesting wisely;
  - Stop people from harvesting indiscriminately;
  - Make traditional doctors plant medicines at homes.
- Governance and planning:
  - Form a range management association;
  - Zone the land properly;
  - Involve everyone in planning,
  - Principal chief to take leading action;
  - Strengthen governance;
  - Instil elements of respect and compliance;
  - Law enforcement.
- Incentives:
  - Give effective farmers land;
  - Give incentives to people who show rehabilitation initiatives.
- Education and awareness raising:
  - Educate people in range management;
  - Introduce natural resource management in schools;
  - Training for herders and livestock owners;
  - Organise study tours to best practice areas.

A few respondents suggested that no change in management was required, and nothing new needed to be done.

### 3.7 Alternative livelihood opportunities

Respondents indicate that their livelihood strategies comprise a diverse range of income generation activities. However 8.1% indicated that they do not currently undertake any activities that generate a reliable source of income (Figure 13). The primary income generating activities range from selling livestock to home based enterprises (such as brewing beer, selling firewood, selling handicrafts) to non-resource dependent activities such as providing labour, renting out accommodation, laundry, building and receiving remittances.

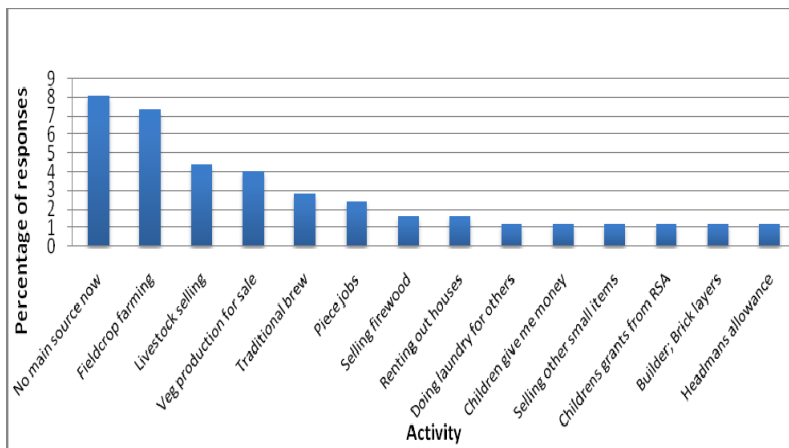


Figure 13: Main livelihood activities currently undertaken by households.

While many respondents have not tried any other income generating activities, a number of respondents indicated that they have attempted, unsuccessfully, a number of other income generation activities to try to increase the households' cash income. Examples of the unsuccessful enterprises include starting spaza shops (small shops, usually from a room in the house, selling basic supplies), farming to sell surpluses, brewing and selling traditional beer, hawking (buying certain products in town and trying to selling them locally), and broiler production (Figure 14).

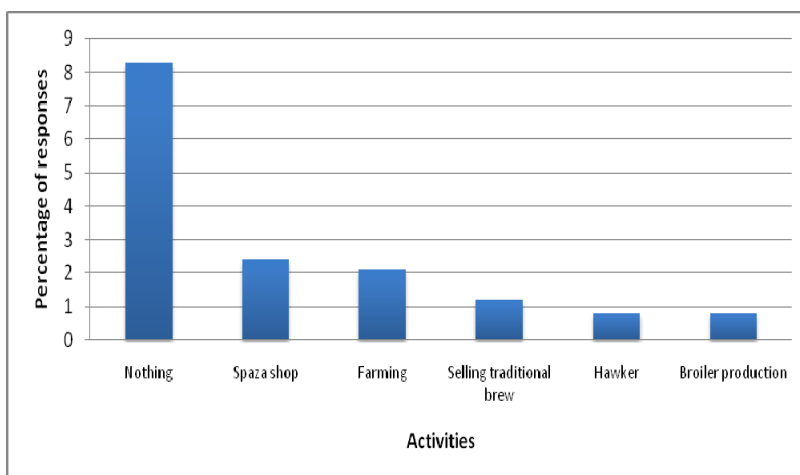


Figure 14: Income generating activities that have been unsuccessful.

The main reason given for the failure of these activities was a lack of market. With a local scarcity of cash incomes, local households are unable to provide enough of a market to create enough demand to sustain the activity, while the remoteness of the area means that transporting products to the markets outside of the immediate area is usually not commercially viable. The other main reasons given for the failure of these activities include (Figure 15) insufficient capital or cash for operations, lack of management skills, theft and an increase in input costs.

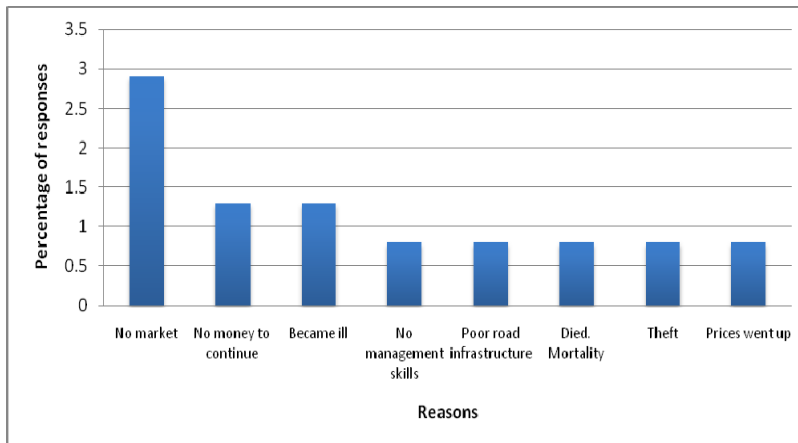


Figure 15: Reasons for failure of some income generating activities.

Approximately 76% of the survey respondents did not respond to this question, while another 3.7% said they did not have any ideas. The most preferred enterprise was poultry production (layers at 2.9%, dual purpose chickens at 1.2%, and broilers at almost 1%), production of vegetables (2%), piggeries (1.6%), wool and mohair production (1.6%), dairy farming (1.2%) and fruit production (0.8%) were also listed as agriculture based enterprises. The only non-agriculture based enterprises suggested were sewing (1.2%) and property production (0.8%) (Figure 16).

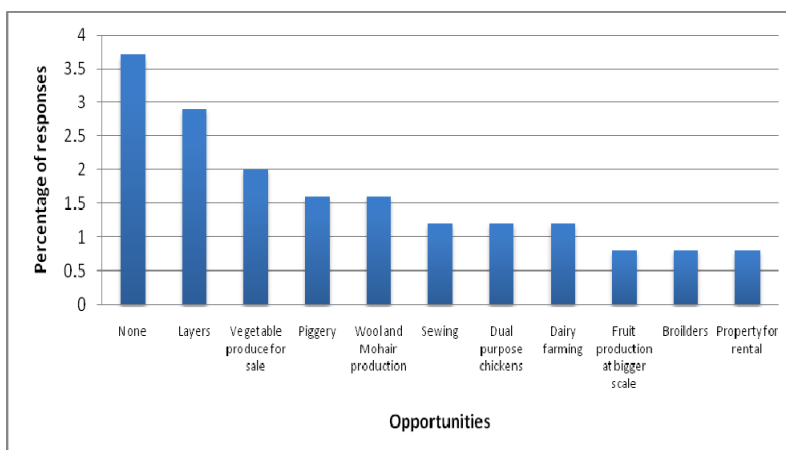


Figure 16: Enterprises respondents listed as potential income generating opportunities.

Factors that respondents reported had prevented them from engaging in these activities included a lack of start-up capital, inability to secure a suitable site, lack of necessary skills, and a lack of input and equipment.

## 4. Summary of key issues

### 4.1 Demographics and gender roles in rangeland management

The survey highlighted that the majority of the respondents are not formally employed, and most support themselves and their families through agriculture and home based enterprises. Poverty levels are very high, particularly in the village of Ha Moqalo. Households have a high dependence on livestock as a primary livelihood strategy, yet a very large percentage of households do not own their own livestock.

Most of the respondents suggested that the human population has increased significantly over the past 10 to 20 years, and this is resulting in too much pressure on the rangelands. As an example, some areas that were open rangelands in the past have now been encroached for human settlement and crop production. Furthermore, they suggest that the increasing human population is also resulting in an increase in the number of households with livestock, which is leading to much higher numbers of animals per unit area on the rangeland.

Many of the women who were interviewed in the survey said that they feel that they are marginalized when it comes to making decisions relating to range management. They feel their male counterparts are still driving the decisions and actions relating to rangeland management. These women indicated that they only have an opportunity to become involved if they become widowed and therefore take over the households' livestock herd.

However, conversely, a large percentage of the men believe women nowadays are involved in decisions about rangeland management. Only a small percentage of the men said that the involvement of women is limited.

Some of the men said that they thought that that increased involvement of women in rangeland management is positive because they say, for example, that women are better than their male counterparts when it comes to conflict management and resolution around the use and management of resources. However, conversely the majority of men suggest that women should not become more involved in rangeland management because they believe that women know nothing about livestock and rangelands and that their involvement would therefore only make matters worse.

The project therefore needs to carefully consider its approach to greater involvement of women in rangeland management and rehabilitation activities to avoid creating tensions within the communities.

## 4.2 Local perceptions about the condition of the rangelands

While there is general consensus that the C areas are degraded, there is divided opinion on the condition of the A and B areas. There are also a large percentage of households who are unable or unwilling to express an opinion on the condition of these areas. This varied opinion is an indication that there is unlikely to be agreement on the need for a change on the management of the rangelands, or in how they should be managed in future, which could hinder the widespread uptake and implementation of rangeland management and rehabilitation initiatives.

Appropriate rangeland management interventions may therefore need to be introduced in conjunction with awareness raising in order to gain widespread recognition of the problems and build support for implementing management solutions.

Other reasons given for the general decline in the condition of rangelands included suggestions that there is poor planning and control or enforcement of rules that already exist. This highlights the need for governance issues and structures to also be addressed in the community based rangeland management initiatives.

## 4.3 Impact of current rangeland condition on local livelihoods

Most households keep livestock primarily as a form of wealth (savings), either buying or selling the animals as need arises (e.g. to pay children's school fees), or by selling the products from the animals (e.g. wool and mohair). Cattle also play an important role in households' livelihoods as a source of draught power while horses and donkeys are important for transport and as pack animals. In general the cultural importance of livestock for cultural practices does not seem to have changed significantly over the past 10-20 years although there does appear to be a slight decline in the slaughter of animals to mark certain culturally important events (e.g. funerals and births). There does however appear to be a slightly bigger change in the types of livestock used for these events, for example with fewer large cattle being used and more sheep and goats used. Many respondents also indicated that while they do still attach an importance to livestock for performing cultural activities, they are unable to perform these activities because they do not own enough or cannot afford to lose any livestock.

There is also a strong link between cattle and crop production, which impacts on household food security. The use of cattle for draught power is a critical livelihood strategy, and a decrease in cattle compromises households' ability to plough their fields as there is very little if any access to tractors for ploughing. Exploring alternative technologies or opportunities for ploughing could be a new approach considered to reduce the dependence on cattle and therefore create an opportunity to encourage an increase in the cattle offtakes and a reduction in cattle numbers on the rangelands.

Stock theft, poor condition of the rangelands, and the death of animals were most often cited as the main factors contributing to the loss of livestock by households. The livestock owners widely agreed that the poor condition of rangelands has had a major negative impact on livestock production. They indicated that livestock production levels, especially wool and mohair production,



has declined sharply. They believe that if the condition of the rangelands could be improved they would be able to harvest more wool and mohair per animal and thereby boost their livelihoods.

In addition to the benefits that improved rangeland condition would have for livestock production, households also believe that there would be increased availability of important natural resources such as thatch grass and firewood. Some suggested that this would create new livelihood opportunities (e.g. harvesting and selling natural resources) especially for those who do not own livestock.

#### **4.4 Local rangeland management actions**

Many households recognise that the current burning practices, driven by the hope that it will help to regenerate the grass cover, is a bad practice that is causing rangeland degradation. However respondents suggested that it is difficult to stop these practices as they are now seen as a traditional practice by those who practice it.

While there are a number of activities that are aimed at coordinating or managing the use of the rangelands (e.g. grazing committees and grazing permits), there are no community based interventions aimed at rehabilitating the degradation that is recognised in the rangelands. However since the introduction of rehabilitation activities introduced by the UNDP-GEF Community Based Rangeland Management Demonstration Project, such as gully reclamation, clearing of alien invasive species and reseedling, local households are starting to recognise the improvements and the need for these types of interventions. Many of the households and volunteers involved in the rehabilitation are motivated to continue and expand these rehabilitation activities. They do however require on-going support, such as the provision of seeds and materials, as they are unable to afford to purchase these themselves. The introduction of incentives such as livelihood activities that could generate incomes for the participants, would likely help to expand the support base and buy-in for these interventions across the communities.

#### **4.5 Households' participation in the baseline survey**

Households were very cooperative and willing to be interviewed as part of the baseline survey. All the participants were willing to freely discuss the matters raised in the questionnaire, and openly expressed their perceptions of the way they see things happening. They were even willing to offer a lot more information than what was covered in the questionnaire.

It was also clearly evident that the respondents were making the effort to give their information to the best of their knowledge and understanding of range management issues, e.g. how they believe activities should be directed and who has to take responsibility. However in many cases respondents were unable to substantiate or identify causes for the changes in rangeland condition which they have observed. Many also had no suggestions on what could be done to rehabilitate them. There may therefore be a need for awareness raising and capacity building in support of the implementation of the rangeland rehabilitation activities.

## 5. Conclusions and recommendations

In summary, the following conclusions and recommendations have been highlighted through the socio-economic baseline survey:

- a) Basotho culture is strongly paternalistic and while women are increasingly taking on leadership roles in their communities, there are still differing opinions on this within the communities. In particular the involvement of women in rangeland management, which has traditionally been the jurisdiction of men, does not always have support among men. The project therefore needs to carefully consider its approach to greater involvement of women in rangeland management and rehabilitation activities to avoid creating tensions within the communities.
- b) There are very diverse opinions on the trends in the condition of the rangelands, particularly the A and B areas, with some households suggesting the rangelands are degrading while others say the condition is improving. Rangeland management interventions may therefore need to be introduced in conjunction with awareness raising in order to gain widespread recognition of the problems and build support for implementing management solutions.
- c) Some of the drivers that have been identified as contributing to the degradation of rangelands are associated with a lack of enforcement and control, or simply because people do not care. This highlights the need for governance issues to also be addressed in the community based rangeland management initiatives.
- d) In some cases current use patterns are driven by a lack of access to alternatives by local households, for example the need to keep cattle to be able to use them as draught power to plough fields. Exploring alternative technologies or opportunities for ploughing could, for example, be a new approach to reduce the dependence on cattle and therefore create an opportunity to encourage an increase in the cattle offtakes and a reduction in cattle numbers on the rangelands.
- e) Many of the households and volunteers involved in the rehabilitation are motivated to expand these rehabilitation activities. They do however require on-going support, such as the provision of seeds and materials, as they are unable to afford to purchase these themselves. The introduction of incentives such as livelihood activities (e.g. home based enterprises to community based enterprises) that could generate incomes for the participants, would likely help to expand the support base and buy-in for these interventions across the communities.

## **Annex 1: Survey questionnaire**

# 1. AWARENESS OF DEGRADED RANGELAND CONDITIONS

1.1. On a scale of 1-5 how would you define the condition of the rangelands in your area (surrounding village, and grazing areas A, B and C)

	Very good (All Un-degraded)	Good (small area that is slightly degraded)	Fine (some degraded areas but mostly in good condition)	Bad (Mostly degraded but some areas in good condition)	Very Bad (All areas are degraded to some extent)
Grazing area A	1	2	3	4	5
Grazing area B	1	2	3	4	5
Grazing Area C	1	2	3	4	5

1.2. What are the 5 main characteristics (signs of condition) that make you describe the rangelands to be in this condition (how is the condition now that makes you say it is e.g. very bad) (rank order of importance by placing number next to answer)

Describe how the condition of the rangeland is now in area A	Describe how the condition of the rangeland is now in area B	Describe how the condition of the rangeland is now in area C

1.3. What are the 5 most important causes of these changes in the condition of the rangeland (rank order of importance)?

Causes in Area A	Causes in Area B	Causes in Area C

1.4. Have the changes to rangeland condition been .....

Sudden changes (changed within 5-10 years)	1
Happening slowly (changed gradually over generations (parents/ grandparents time)	2

1.5. When did these changes start happening and start having significant impacts on local livelihoods?

Category	Time period during which changes in rangeland started to happen
1	Before I was born
2	When I was a child
3	Since I have been an adult
4	During my grandfather's time
5	Before my grandfather's time

1.6. Is the rate at which the changes in rangeland condition is occurring the same as in the past or is it changing?

Category	Rate of change	Why do you think this is happening
1	Slowing down	
2	Same	
3	Getting faster	

**2. CHANGES IN DEMOGRAPHICS AND GENDER ROLES AND REPONSIBILITIES**

2.1. How do you think the number of households/people in this area has changed (increased / decreased) over the past 10-20 years:

Increased	1 Very little	2 Quite a lot	3 A very big change
Decreased	4 Very little	5 Quite a lot	6 A very big change
7 Stayed the same / no change			

2.2. Has this changed the way that rangelands are used and managed (including info on number of livestock): YES / NO?

If YES how has it changed:

.....

.....

2.3. Has the role of women in rangeland management changed? YES / NO

If yes how has the role of women changed.....

.....

And how has this changed the way rangeland and grazing is managed (how/what)

.....

.....

### 3. CONTRIBUTION OF RANGELANDS TO HOUSEHOLD / LOCAL LIVELIHOODS AND ECONOMICS

3.1. What are the main roles/contributions of livestock for your household (economic as well as non-economic eg culture, spiritual etc) –rank importance to your household

Ranking	Role / contribution	Rate importance of this contribution for your household 1 = extremely important 2 = very important 3 = nice to have but not important 4 not important / does not matter if lost	Estimated value / income (specify whether reported as value per month or per year)
<b>Cattle</b>			
	Meat		
	Milk		
	Draught animals for ploughing		
	Savings / banking for wealth		
	Spiritual (eg for sacrifice)		
	Tradition / culture (describe)		
	Other		
<b>Goats</b>			
	Meat		
	Milk		
	Savings / banking for wealth		
	Mohair		
	Spiritual (eg for sacrifice)		
	Tradition / culture (describe)		
	Other		

Sheep			
	Meat		
	Milk		
	Savings / banking for wealth		
	Wool		
	Spiritual (eg for sacrifice)		
	Tradition / culture (describe)		
	Other		
Horses/donkeys			
	Transport / pack animals		
	Savings / banking for wealth		
	Spiritual		
	Tradition / culture (describe)		
	Other		

3.2. Has the traditional / cultural *importance* of livestock for your household changed over the past 10 – 20 years? If yes how (give examples for different animals)

Rank	Past	Now
1		
2		
3		
4		
5		
6		
7		
8		
9		



<b>10</b>		
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**3.3. Have your numbers of livestock changed? YES / NO**

**If yes, when and why and what was impact**

<b>Livestock</b>	<b>What is the maximum number you have ever owned</b>	<b>How many do you currently own</b>	<b>If number changed – Why have you changed you herd size?</b>	<b>What have the negative impacts / or benefits been for you / household’s livelihood as a result of this change in herd size</b>
<b>Cattle</b>				
<b>Goats</b>				
<b>Sheep</b>				
<b>Horses/ donkeys</b>				

**3.4. Has the change in condition of the rangeland (eg degradation) impacted on your livelihoods/ economics?**

**3.4.1. Does rangeland condition affect your livestock production – if yes what are the five most important impacts for you (rank importance of 1 -5)?**

Ranking	How do livestock currently contribute to your livelihoods with the Rangelands in their current condition (try quantify the benefit)	What would you get from livestock if Rangelands were in better condition	Try quantify the difference Very much more (>100%) Much more (75-99%) A lot more (50-74%) More (25-49%) A little more (1-24%) No different

**3.4.2. Does the change in rangeland condition affect other livelihood economic activities (non- livestock) – if yes what are the 5 most important impacts to you (rank 1-5)?**

Ranking	How do other non-livestock activities using the rangelands currently contribute to your livelihoods with rangelands in their current condition (try quantify the benefit)	What would you get from these other activities if Rangelands were in better condition	Try quantify the difference Very much more (>100%) Much more (75-99%) A lot more (50-74%) More (25-49%) A little more (1-24%) No different


**4. INDIGENOUS KNOWLEDGE AND COMMUNITY BASED EFFORTS TOWARDS RANGELAND MANAGEMENT**

4.1. How do your culture/ traditions and beliefs influence the way you currently use and rangelands and graze your livestock?

Describe the culture/traditional practice or belief and how it influences the way you manage livestock/grazing	Strength of influence			
	Weak	Moderate	Strong	Very strong
	1	2	3	4
	1	2	3	4
	1	2	3	4
	1	2	3	4
	1	2	3	4
	1	2	3	4
	1	2	3	4

4.2. What do you think are some of the sign of rangeland degradation that you are aware of that need to be fixed / rehabilitated (rank importance)?

Rank	Condition	Extent of threat / problem 1 = Very widespread/high 2 = widespread/moderate 3 = Minor/low	Rating of importance for rehabilitation 1 = high 2 = moderate 3 = low
	Soil erosion		
	Wetland degradation		
	Bush encroachment (causing loss of grazing)		
	Alien plant infestation		
	Loss of palatable grass species for grazing (replaced with less palatable grass species)		


**4.3. What activities do you (and people in your village) currently undertake to rehabilitate this degradation of the rangelands**

<b>Condition / Problem</b>	<b>What is <u>currently</u> being done to fix / rehabilitate</b>	<b>Is it effective 1 = Very 2 = Moderate 3 = Not effective</b>	<b>Where did you find out/learn how and why to do this rehabilitation?</b>
<b>Grazing management</b> - Rotational grazing (area)			
- Seasonal rotation (time)			
<b>Soil erosion</b>			
<b>Wetland management / rehabilitation</b>			
<b>Bush encroachment</b>			
<b>Alien plant control</b>			
<b>Loss of palatable species</b>			

**4.4. How is what you are currently doing manage / rehabilitate rangelands now different from what your grandfathers and great grandfathers did, and why is it done differently now?**

<b>Condition</b>	<b>How was it managed / rehabilitated in the past</b>	<b>It is same as now / different</b>	<b>If it is different – Why?</b>
<b>Grazing management</b>			
- Rotational grazing (area)			
- Seasonal rotation (time)			
<b>Soil erosion</b>			
<b>Wetland management / rehabilitation</b>			
<b>Bush encroachment</b>			
<b>Alien plant control</b>			
<b>Loss of palatable species</b>			

## 5. INSTITUTIONAL STRENGTH AND EFFECTIVENESS FOR RANGELAND MANAGEMENT

5.1. What are the current roles and responsibilities in the community to implement rangeland

Management Action / responsibility	By Whom (list more than 1 if needed) Livestock owner 1 Herdboy 2 Headman 3 Chief 4 Other (list) 5 Other 6	General Level of effectiveness Very good 1 Good 2 Bad 3 Very bad 4
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

5.2. What do you think should be done to improve rangeland management and by whom

5.2.1. Action interventions for improved management (rank importance)

Management Action / activity	By Whom (list more than 1 if needed)
1	
2	
3	

4	
5	

**5.2.2. What rehabilitation activities (rank importance)**

Rehabilitation action	Who responsible (list more than 1 if needed)

**5.3. Do the following CURRENTLY affect decisions that are currently taken about rangeland management and if so how do they affect decisions (If yes then how):**

<b>a) Culture and Traditional practices</b>	
-Livestock grazing and numbers	
-Crop production	
-Resource harvesting	
<b>b) Religion and Beliefs</b>	
Livestock grazing and numbers	
Crop production	
Resource harvesting	

5.4. If you could manage the rangelands differently what would you do differently and why? (Rank in order of importance/priority)

Rank	What different	Why



## 6. ALTERNATE ECONOMIC OPPORTUNITIES

6.1. What are the 10 main activities your household undertakes to support itself (rank importance)

Rank	Description of Activity	Undertaken regularly / seasonally/seldom

6.2. Are there alternative income generating activities you have tried that you have stopped because they have not been successful?

	What tried	When tried (year)	Why was it not successful
1			
2			
3			
4			
5			

6.3. Are there non-rangeland based income generating opportunities you know about that you would like to try but have not yet tried?

	What idea	Why not tried
1		
2		
3		
4		
5		