LDSG

Restocking and Poverty Alleviation

Perceptions and Realities of Livestock-Keeping Among Poor Pastoralists in Kenya

Claire Heffernan

with

Federica Misturelli and Louisa Nielsen

Veterinary Epidemiology and Economics Research Unit
University of Reading

June 2001

ACKNOWLEDGEMENTS

The research team is indebted to Dr Wyn Richards of DFID's Livestock Production Programme, NRI; Ms Lucy Ambridge, DFID and Mr Guy Freeland, without whom the study would not have been possible. The team is also grateful to the following individuals and organisations for their assistance both in the collection of background material and in the field: Ms. Fatuma Abdikadir, Arid Lands Project, Nairobi; Brian Heath, FARM Africa, Nanyuki; Alex Kirui, Heifer Project International, Nairobi; Dr A. Ratemo, IFAD, Nairobi; Dr Parklea, District Project Co-ordinator, Arid Lands, Baringo; and Daniel Kiptugen, World Vision, Nairobi. The project is further appreciative of the continuing interest and support of the collaborators, particularly Ms. Joyce Turk, USAID, Washington and Dr Ahmed Sidahmed, IFAD, Rome. Finally, the project is indebted to the pastoralist households, who graciously offered their time and assistance.

This publication is an output from a research project funded by the United Kingdom Department for International Development (DFID) for the benefit of developing countries. The views expressed are not necessarily those of DFID.

SUMMARY

The report outlines the findings from the DFID, Livestock Production Programme Study R7402: *The Development of Decision Support Tools for Restocking Projects*. One of the objectives of the study was to evaluate how community and individual-level attitudes and values regarding livestock-keeping influenced the outcome of restocking projects. As livestock among pastoralists are a social and cultural paradigm, as well as a means of deriving financial capital, the study utilised a multi-disciplinary approach. Methods were adapted from the emerging field of livelihood analysis, social psychology and applied linguistics. Clients of five projects in Kenya formed the study group. In total, over 30 communities participated in the research.

The livelihood analysis revealed that for many study participants, drought combined with raids precipitated migration to peri-urban areas. Once settled, households were caught in cycles of dependency and destitution. Access to sufficient child labour was found to be a key factor to the success of livestock-based livelihoods. Interestingly, the vast majority of children were enrolled in school at the time of the study. Restocking provided households with an immediate financial gain that often translated into increased school attendance. Further, the need to generate money for purchased foodstuffs and school fees led to high off-take rates. Thus, for settled communities, restocking did not appear to reverse the decline of traditional livelihoods. To explore the causality of the finding, social psychology and discourse analysis methods were utilised.

The social psychology assessment revealed that participant's perceived 'actual' and 'ideal' selves revolved around livestock ownership rather than the pursuit of a pastoralist lifestyle. Few study participants expressed the desire to return to a nomadic or even semi-nomadic, way of life. Most households identified themselves as peri-urban residents involved in alternate income generating activities. Livestock still had an important role but were increasingly viewed as a means of obtaining wealth and more importantly, social recognition.

The discourse analysis further highlighted changing community values and norms regarding livestock. For the poor, alternative livelihood strategies, particularly employment was viewed as the most stable and secure source of income. However, employment was only possible for the educated. Education was acknowledged to be a factor in the demise of pastoralism, yet was also deemed necessary to help children achieve a 'modern' and 'better' life. Study participants described the emergence of a new social class; educated people who worked in cities and towns and kept livestock in rural areas. Thus, the analysis outlined the advent of a new form of pastoralism in which the urban elite controlled the productive assets of the rangelands via the labour of the rural poor.

Overall, the study demonstrated the influence of aspirations and values on project outcomes. Restocking will have the greatest impact on communities who aspire to a collective future based upon livestock keeping with strong traditional values toward livestock. Furthermore, the study clarified the need for projects and programmes to be

aware of the pressures and forces of social change on potential restocking clients. For the majority of households, livestock-keeping did not meet long-term livelihood aspirations. On a wider level, the research underscored the role of client motivation as a key factor to the success or failure of development projects and programmes.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

Livestock are a vital component of the livelihoods of both the rural and urban poor in developing countries. According to a recent estimate, over 70% of the poor are livestock keepers (LID, 1998). For the households involved, animals are a means of generating capital assets as well as an important source of nutrition. Livestock also have a vital role in cementing social relationships and securing household income. Particularly for pastoralists, the loss of animals is directly related to destitution and the subsequent marginalisation from community life. Thus, livestock and poverty are intricately related. However, until the late 1970's the use of livestock as a tool for poverty reduction was largely overlooked. Indeed, for many pastoralist communities, reliance on livestock was considered to be a contributing factor to their poverty.

Consequently, in the 1960's and 70's, efforts at pastoral development focused upon settling nomads into alternative livelihood strategies. The intention was to decrease the apparent uncertainty of livelihoods based upon livestock and to lower the vulnerability of households to destitution. The majority of projects and programmes supported farming and occasionally fishing activities. Irrigation projects, in particular, became popular options. Historically, agricultural activities are a fallback for destitute pastoralists after drought and raids. Thus, aid for agricultural projects was often justified as a means of supporting the traditional livelihood strategies of the impoverished. Although well intentioned, most efforts at settled agriculture among pastoralists were expensive failures (Fry, 1988; Hogg, 1987). Projects were unsustainable from a number of standpoints. First, crop production in semi-arid and arid environments, like livestock rearing, is a risky venture and the boom and bust cycle of good years followed by drought could not be avoided. Second, projects required large amount of inputs, ensuring that by the end of the project cycle, few schemes could exist without external support (Hogg, 1987).

Given this background of failure, restocking projects were believed to hold great promise. It was recognised that earlier approaches were 'top down' and that for pastoralists living in semi-arid environments, livestock were not an irrational strategy for survival. Therefore, restocking projects were initiated in an attempt to supply the impoverished with a sustainable livelihood. It was recognised that poor pastoralists formed a socially marginalized group and the hope was that after given livestock, households could be reincorporated back in to social and economic fabric of pastoralism. In this manner, the numbers of the peri-urban destitute and the negative social consequences associated with poverty such as alcoholism and prostitution would be lessened. The notion was that households, once restocked, would be able to leave settlement areas and return to a former, more desirable lifestyle, based upon livestock (Oxby, 1994). Furthermore, with the advent of participatory methodologies, restocking was often high on the lists of community-derived priorities. Thus, projects were viewed as a means of supporting traditional livelihoods while fulfilling notions of 'people centred' development. Hence, NGOs largely championed projects during the early years.

With the apparent success of programmes, during the 1980s a wide variety of players began to support restocking activities from donors and NGOs to governments and community-based organisations. The advent of the 'new paradigm' of range management and consequently the 'new directions' of pastoral development, gave further support to projects. By promoting mobility and hence better use of the rangeland, restocking fitted well into current thinking on 'best practice' regarding pastoral resource management. Equally, the rapid uptake of the sustainable livelihoods approach also justified restocking as a mechanism for the rehabilitation of the most vulnerable. By providing households with a means of capital asset regeneration and food security, restocking appeared to be a perfect match with the sustainable livelihood approach.

While project implementation benefited from the more holistic analysis that these frameworks ensured, the long-term impact of restocking remained low. First, attempts to restock the peri-urban destitute or those households, which had fallen out of pastoralism were generally disappointing. Households did not appear to return to a nomadic lifestyle nor did they maintain involvement in livestock keeping. Restocked animals were often sold or consumed early in the project cycle (Heffernan, 1997). Second, projects were highly politicised and reaching the appropriate target population was difficult. By the 1990s, there was an increasing recognition that the elite could easily manipulate projects for political and economic gain. Targeting methodologies were prone to nepotism and some projects were noted to cause community discord. Therefore, restocking, while theoretically sound and fitting well with the tenets of current thinking in development, fared less well in practice.

Although research has demonstrated the practical problems at the project level i.e. poorly defined project objectives, ineffective targeting at the community and individual level etc. (Heffernan, 2001), the deeper issues involved in restocking have been widely ignored. Pastoralist communities are dynamic and subject to a wide variety of forces. Many authors have listed the negative influences impacting pastoralist production systems such as insecure land tenure regimes, land loss due to encroachment and demarcation, political insecurity, population growth, the commercialisation of the livestock economy etc. (Wiggins, 1991; Scoones, 1994; Nopa, 1992). Nevertheless, how the changes, impact values and attitudes and consequently behaviour, at the community and individual level, has been little studied. Hence, prior to addressing the practical issues of restocking, it is vital to understand the context in which projects occur. Therefore, one of the primary objectives of the study is to examine the internal and external influences, which effect attitudes, values and finally, the motivation for livestock keeping. The ultimate aim is to develop decision support tools to enable projects to increase positive outcomes and enhance the impact of restocking as a means of poverty alleviation.

As outlined in the following section, the analytical framework for the research begins from the perspective of the individual. A multi-disciplinary approach was utilised with methods adapted from both social psychology and applied linguistics to assess attitudes and values regarding livestock-keeping. The influence of variables such as household

composition, gender and age was also evaluated. Further, the environmental, economic and personal factors important to success in livestock keeping were explored via in-depth participatory assessments.

The fieldwork took place in Northern Kenya from October to December 1999. Clients of five restocking projects formed the study group. Over 30 pastoralist communities in three districts (Samburu, Baringo and Garissa) participated in the research. The districts varied widely in their exposure to restocking. For example, in Samburu, over the past decade, at least seven restocking projects have been implemented by a variety of different agencies ranging from local CBOs and Missionaries to NGOs and bilateral agencies. Beneficiaries of the two largest projects, initiated by Oxfam and the Samburu District Development Programme (a bilateral programme sponsored by GTZ), took part in the study.

Oxfam, an early player in restocking, began restocking in the district in 1984. Livestock packages were very comprehensive. Households were given up to 70 smallstock, a donkey, jerry cans and a year's supply of food aid. The intention was to ensure that households had all of the necessary food and equipment to quickly return to a nomadic existence. Alternatively, in the Samburu District Development Programme (SDDP), restocking was part of a larger programme of pastoral development. Restocking activities began in 1995 and continued through 1996. Community empowerment and trust were the tenets of the project. Hence, communities were in charge of raising one half of all animals distributed, choosing appropriate beneficiaries and purchasing the livestock. Restocking packages varied from 10-40 animals. Finally, a small number of households, who had been restocked by the local Catholic parish, took part in the study. The parish distributed one to two smallstock were distributed per family.

In Baringo district, restocking was a less well-known intervention and only two projects had taken place at the time of the study. The first project was sponsored by an NGO, Freedom from Hunger. Herds of 2-3 smallstock were distributed to households, who had participated in their child sponsorship programme. The majority of clients were restocked from 1994-1996, although Freedom from Hunger had apparently been restocking households in the district since 1991. The second project, the Arid Lands Programme, was sponsored by the World Bank and began activities in 1998. Restocking was part of a wider initiative supporting pastoral livelihoods. Beneficiaries were required to own 6 animals in order to qualify for the initiative. The project then supplied households with a further 14 smallstock. Prohibitions on the sale of animals were in place for the first two years of the project.

Finally, in Garissa district, none of the households interviewed had been restocked. The aim of including a small cross-section of a non-restocked community was to evaluate the social and economic parameters of communities that had not been exposed to restocking as a form of development. Consequently, the intention of the report is not to evaluate individual restocking projects, but rather to assess the wider factors

influencing the potential success and failure of restocking as a means of supporting livestock-based livelihoods.

The report is divided into three sections. In the first section, the analytical framework and methods are described. In the second section, a background to household livelihood strategies and the economic and social implications of restocking is provided. Finally, the third section of the report examines the motivations and aspirations towards livestock keeping at the individual and community level.

SECTION I: ANALYTICAL FRAMEWORK AND METHODS

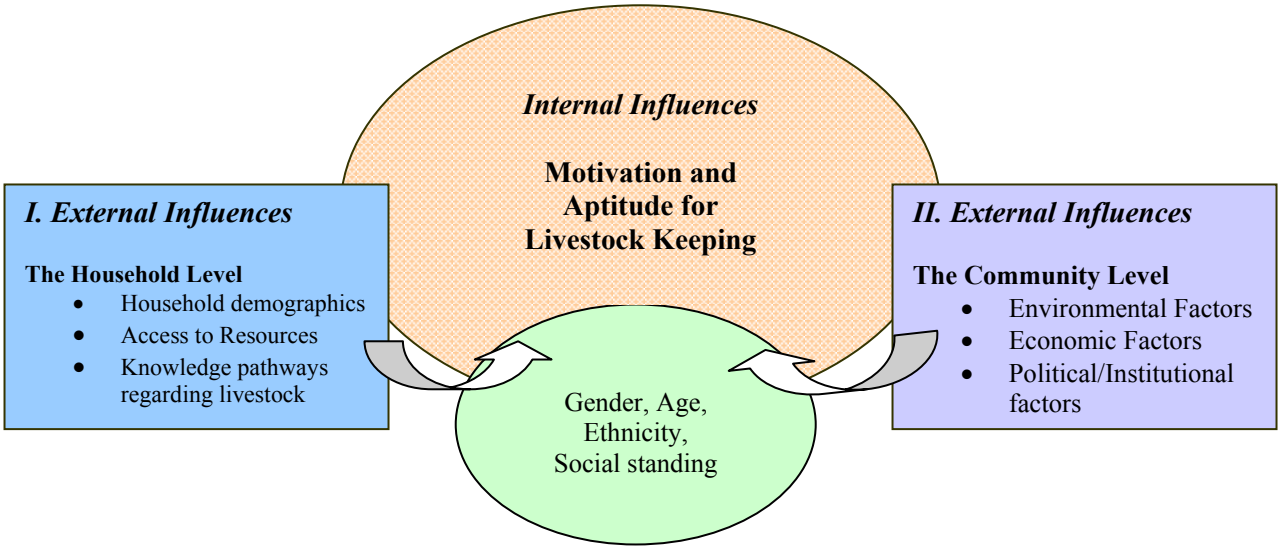
As outlined above, the particular focus of the research was to evaluate the external and internal influences important to restocking. One potential means of analysing external factors important to livestock-based livelihoods is via the Sustainable Livelihoods Approach. As a number of descriptions are offered of the components and structure (DFID, 2000, Carney, 1998), there is little need to review the standard SL framework. However, the aim of the SL approach is worth re-examining. According to DFID (2000):

> …the SL approach offers an opportunity to improve poverty reduction efforts by taking an all round view of the circumstances of the poor, as they themselves view them, rather than jumping to early conclusions and immediately proceeding to conduct isolated, in-depth analysis of particular attributes.

Although as described above, the SL framework is believed to offer a comprehensive and holistic tool to better understand poverty, the framework ignores the most powerful influence on the human condition; the individual's themselves. A sustainable livelihood is not only the result of external factors, but is also a reflection of the motivations and aspirations of the individuals and communities involved. Understanding capital asset acquisition by the poor, while important, does not, by itself, offer a means of assessing the values that communities hold as relevant or a means of assessing individual aims and objectives. Livestock-keeping among pastoralists has social and psychological as well as economic and environmental dimensions.

Consequently, the research devised a framework to explore the internal and external factors important to a successful lifestyle based upon livestock, with the individual as the starting point. One potential reason that restocking has had a low impact may be that individual's no longer desire a lifestyle based upon livestock. Furthermore, previous research has demonstrated that pastoralists consider motivation and dedication key requirements to successful livestock-keeping (Heffernan, 1997). Therefore, the internal influences such as motivation and aptitude were deemed to be first order factors to the sustainability of livestock-based livelihoods with household and community factors classified as second order influences. Figure 1 outlines the tri-partite approach for the assessment of influences regarding livestock keeping.

FIGURE 1: THE TRI-PARTITE ANALYTICAL APPROACH



From the figure, two major types of external factors, at the household and community level were identified as potential influences on the motivation and aptitude for livestock keeping. For example, for the households involved, potential factors that may impact the ability of family members to pursue a particular livelihood include the overall access to resources and the number of persons dependent upon those resources. The availability of information regarding aspects of management and husbandry and herding strategies may also impact an individual's perceptions toward livestock keeping.

Alternately, at the community level, the physical environment and ease of access to sufficient fodder and water may affect the desire to keep livestock. The viability of the livestock economy may also influence notions regarding the overall sustainability of livestock based livelihoods. In addition, political stability i.e. level of raiding and the strength of formal and informal institutions may play a role. In this manner, the intention of the research is to broadly examine the factors important to livestock keeping, in general and restocking, more specifically. Finally, gender, age, ethnicity and social standing, are all inter-linking factors that bridge the external and internal factors and influence motivation and attitudes. For example, an elderly Samburu widow will most likely have very different motivations and perceptions regarding livestock keeping than a younger, unmarried warrior.

1.1 METHODS

The following sections detail the methods utilised for data collection and analysis. The study combined both qualitative and quantitative methods to assess the impact of restocking. In general, qualitative data collection and analysis methods predominated.

1.2.1 Data Collection

Data collection activities were divided into three phases focusing on the project, community and individual levels. Background information was collected at the national level with actors and agencies involved in restocking. Stakeholder meetings were held with representatives from NGOs and donors outlining the processes and problems involved in implementing restocking projects. At the community level, core data collection activities included stakeholder meetings and focus groups. Finally, at the individual level, key informant and semi-structured interviews were held with representatives from restocked households.

In total, 92 households participated in the study. The sample group was kept intentionally small as the interviews were open-ended and within the context of the interview, any and all responses and comments were recorded. Quantitative information was also elicited particularly regarding the restocked herd i.e. livestock numbers, sales etc. The research utilised additional participatory methods to both collect primary data and triangulate information. Box 1 outlines the participatory methods utilised in the fieldwork. Furthermore, given the largely qualitative nature of the research, data collection activities were treated as a phenomenological process. Hence, as issues and questions evolved during the fieldwork, the responses guided the participatory methods and semi-structured interviews.

BOX 1: PARTICIPATORY METHODS

Historical Trend Analysis:

The Historical Trend Analysis examined major events and influences impacting community livelihoods within recent memory. Focus groups of elders were asked to detail both negative and positive events.

Community Resource Maps:

Focus groups mapped access to key resources and delineated inputs and outputs regarding livelihood activities at the community level. Markets, labour availability and access to services were also explored.

Household Compound Maps:

For each informant, the numbers of compound members including age and sex of children was specified via a mapping exercise. Access to resources, livelihood activities and seasonal influences were detailed. Herd maps were also performed to delineate ownership of livestock assets between compound members. The information was crosschecked with data gathered in the semi-structured interviews.

Livelihood Timelines:

Individuals were asked to describe major life events and changes in their livelihoods utilising a timeline. At the community level, key informants detailed major changes in livelihoods utilising Venn diagrams.

Gender Analysis:

a. Livelihood Activities
Focus groups were held with women exploring different issues regarding their livelihoods and the role of livestock and the impact of restocking. 24-hour calendars were charted for both men and women. Individuals were asked to rank their daily activities with regard to preference, difficulty and the time involved. Explanations for the choices were also recorded.

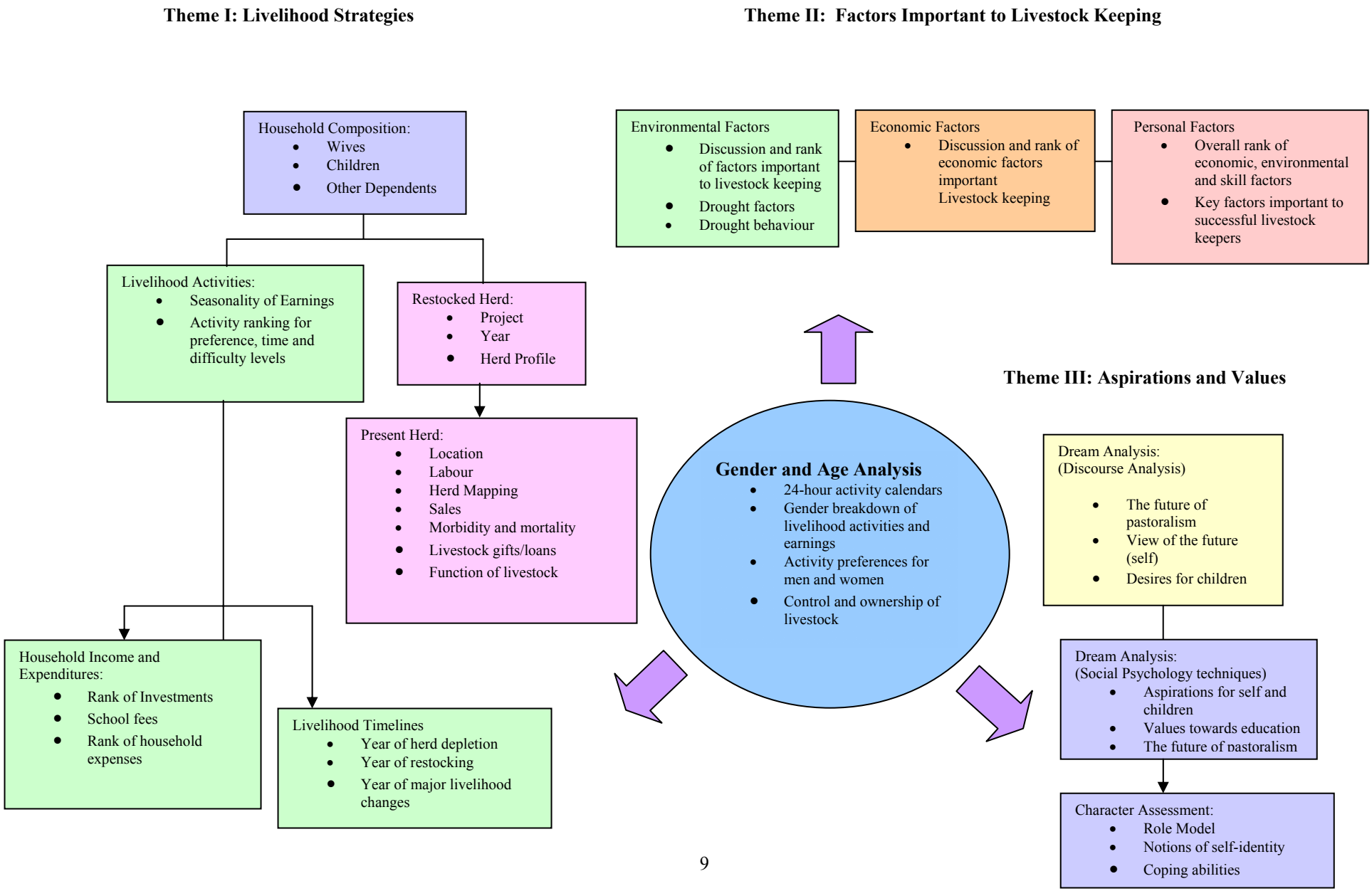
b. Ownership of Assets
Men and women were asked to detail gender differences in the ownership of assets and/or access to household resources with a particular focus on livestock. Rights and obligations and changes in ownership status upon divorce and death were also discussed in focus groups and at the individual level.

1.2.2 Data Analysis

The data analysis also proceeded on three levels. In the first order analysis, the data was broadly grouped according to themes. The following three themes were explored; past and present livelihood strategies, factors important to livestock-keeping and aspirations and perceptions regarding livestock-based livelihoods. Conversely, the second order analysis disaggregated the data at the household, community and individual levels. For the household's involved, basic background information i.e. demographic data, herd size and school attendance was tabulated. At the community-level, notions regarding the environmental, economic and the personal factors required

for success with livestock were evaluated. Discourse analysis techniques were also utilised to assess values regarding pastoralism and education. Lastly, at the individual level, a content analysis was performed to investigate future aspirations, character traits and the response to adversity. The linguistic analysis and social psychology methods are further described in Section III of the report. Finally, the third order analysis examined the influence of gender and age on each of the identified themes. Figure 2 describes the framework for the fieldwork and outlines the relationship between data collection activities and the approach utilised in the analysis.

FIGURE 2: DATA COLLECTION AND ANALYSIS FRAMEWORK



SECTION II: THE LIVELIHOOD ANALYSIS

For the majority of restocked households, livestock comprise one portion of their overall livelihood strategies. Therefore, the objective of the following section is to examine the importance of livestock to the households involved. Hence, to set the context for the analysis, the first section offers a background to participating households. The restocked herd, household demographics and the enrolment of children in school are described. Next, current livestock holdings are evaluated, and the influence and role of gender on herd sizes explored. Livelihood strategies are also assessed in addition to major events impacting livestock-related activities. Finally, perceptions regarding the functions and role of livestock as an investment strategy are examined.

2. THE RESTOCKED HERD

As described in the introduction, clients of five restocking projects formed the study group. Although all of the agencies involved distributed smallstock, projects varied widely in the number of animals given, the year of implementation and the manner in which livestock were distributed. Table 1 further describes the restocking packages.

TABLE 1: RESTOCKED HERDS

District	Project	Year	Households	Informant Reported Restocking Package	Project Reported Restocking Package
Samburu	SDDP	1995-1996	12	(2-40)	(10-40)
	Catholic Mission	1992 -1995	2	(2-20)	(5-30)
	Oxfam	1984	9	(10-70)	(40-70)
Baringo	Freedom from Hunger	1991-1996	2	(2-3)	(2-3)
	Arid Lands	1998-1999	45	(14)	(14)

As the table illustrates, Samburu district had the widest variation in the size of the restocking package, even within the same project. Equally, Samburu households reported the largest variability when asked to detail the number of livestock they had received. The finding may be explained in a number of ways. For example, the variation in the number of animals noted by Oxfam recipients may be attributed to two alternate factors. First, the advanced age of many recipients, combined with the duration of time since restocking, may make the reliability of informant recall regarding actual livestock numbers poor. A second, and perhaps more plausible explanation may be that questions regarding restocking raised expectations of future interventions, hence beneficiaries were keen to downplay their involvement in previous activities. Nevertheless, it is well documented that the first Oxfam project distributed 50 smallstock to beneficiary households. A revolving fund was set up with households required to return offspring in order to restock a second round of beneficiary households, many of whom received 70 animals.

Alternatively, for some projects, the discrepancy is due to the use of differing targeting and livestock distribution methods. For example, in Samburu district, the SDDP project attempted to restock households via participatory mechanisms. As such, communities were required to donate animals for distribution to the poor, which the project would then match. The project was modelled after traditional notions of 'paran' or giving aid to the needy. The idea was that wealthier households would supply livestock to the community, which the project would then supplement thereby sharing project ownership and shoring up traditional support mechanisms for the poor. However, project clients noted two problems with the approach. First, the method tended to put poorer communities, who were unable to raise larger amounts of animals, at a disadvantage. Second, some households complained that they had sold animals to the project in return for a specified number of smallstock, which were never forthcoming. Thus, it appears that in some areas either due to a misunderstanding or unscrupulous dealings, poor households were asked to provide the animals to the community for the fundraising effort in order to participate in the subsequent restocking project. Given the time since restocking, it is difficult to precisely validate the number of animals given. The large discrepancy in the number of animals reportedly distributed by the project (10, 20 and 40 smallstock respectively in the three communities under study) and those received by beneficiaries requires further exploration. Nevertheless, households in Samburu district generally received greater numbers of animals, than those in Baringo. However, as will be discussed in section 4, the overall trend for beneficiary herds was one of decline. The following section describes client households.

3. THE HOUSEHOLD

In the development literature, a household is defined as being composed of family and non-family members. As Oxfam (1995) notes:

> The household and family are distinct social units. A household is a residential unit, some of whose members are related by kinship, while others are not. A family is defined by kinship, marriage and parenthood, and takes many different forms in different cultures.

With reference to pastoralists, the distinction between household and family is equally applicable. Fry (1988) further elaborates:

> In all pastoralist societies the number of people who depend on livestock varies through time not only because of the births and deaths within the family, but also because of the changes in the economic situations of friends and relatives…the number of dependants a herd owner is responsible for is determined by how many people he can support in addition to his own family (wives and children), and by how many poor relations he has.

Nevertheless, few pastoralist households exist independently. Hence, a further level of social grouping is the compound. The compound is comprised of friends, relatives and clan mates, living in close proximity. Herding and migration decisions are made at the

compound rather than the household level. Indeed, livestock labour resources are also often pooled at the compound level, with the sharing of child labour etc.

To further explore the distinction between family, household and compound, for each participant, compound-mapping exercises took place to detail the numbers of households, residents and the flow of resources between households. The results of the mapping exercises revealed that, particularly for the poor, compounds appear to be the most dynamic social grouping. Households may leave a compound due to a change in economic circumstances (i.e. the loss of livestock herds, recent widowhood or differences in opinion regarding livestock herding strategies etc.). Conversely, the household as a social grouping tended to be more stable. Finally, as noted above by Fry, pastoralist families are also subject to the normal fluctuations of membership due to births, deaths, marriages etc.

While acknowledging the differences between household and family is important, for pastoralists, the household forms the consumptive unit that is dependent upon the herd. Therefore, the study focused on the household as the unit of interest. The following section explores the demographic composition of restocked households. Education levels and school expenditure are also evaluated.

3.1 HOUSEHOLD DEMOGRAPHICS

The following table explores the composition of participant households.

TABLE 2: MEAN HOUSEHOLD COMPOSITION

District	Wives	Children	Other dependents	Total Household size
Samburu (n=27)	1.8	7.2	0.5	10.2
Baringo (n=47)	1.1	4.8	0.5	7.1
Garissa (n=18)	1.0	4.4	1.1	7.3

Overall, households in Samburu district had the largest number of wives and consequently children. Perhaps due to a stronger Christian influence among households in Baringo district, polygamy was less common and family sizes reflected the finding. Finally, Muslim households in Garissa district were comprised of the smallest number of persons, however, Garissa households had the greatest number of other dependents such as elderly parents and orphans.

A breakdown by both gender and role in the household is detailed in the following table (Table 3). The study made a distinction between de facto[1]and de jure[2] female-headed households.

TABLE 3: PROFILE OF PARTICIPANTS

District	Male Heads of Household	De Jure Female-Headed Households	De Facto Female Headed Households	Adult Children
Samburu	13	8	6	0
Baringo	24	13	8	2
Garissa	10	1	5	2
Total	47	22	19	4

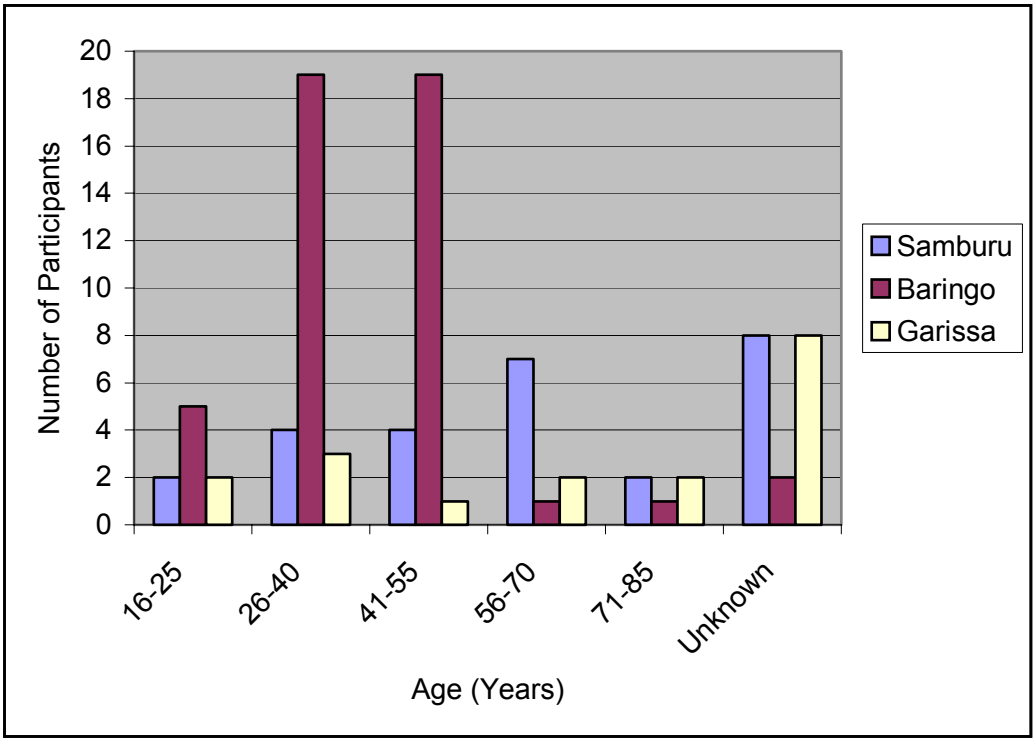
Overall, male heads of households formed the majority of study participants. Approximately ¼ of the sample group were classified as de jure female-headed households with restocking clients in Baringo district recording the highest number. Conversely, de facto female-headed households comprised approximately 20% of the sample. A minority of interviewees were adult children acting on behalf of the household head.

After gender, age was disaggregated with the findings revealed in Figure 3. Not unexpectedly, a small proportion of the population was unable to state their age (8%). Age in pastoralist societies is often related to major events such as famines or circumcision ceremonies rather than in years. As such, knowledge gained in the historical mapping exercises was useful to verify reported age, particularly for the most elderly participants.

FIGURE 3: AGE BREAKDOWN OF STUDY PARTICIPANTS

[1] De facto female-headed households, are defined as those households, which are fully maintained by women, due to an absent or disabled male head.

[2] De jure female-headed households were classified as those households without a male head most commonly due to divorce or widowhood.



Not surprisingly, given the time since restocking, participants in Samburu district had the highest mean age (51 years). Households in Baringo were younger, with a mean age of 41 years. Conversely, the average age of un-restocked household heads in Garissa district was 44 years. Many participants reported that the communities were given guidelines or criteria for targeting. While not explicitly stating age, many guidelines tended to state preferences for beneficiaries who were 'active' or 'able to care for animals'. As such, it appears that restocking projects tend to be biased towards younger, intact households with male heads. Moreover, it is most likely that this group will have children of school age, which impacts the distribution of resources and household labour. The implications of the lack of child labour will be further discussed in section 5.2.

3.2 CHILDREN'S EDUCATION

As pastoralist societies evolve, education is often noted to be one of the primary forces of social change. Of the total number of school-age children, a large proportion was reported to attend school (Table 4). Indeed, as the following table demonstrates, approximately, 65% of the appropriately aged children were enrolled at the time of the study.

TABLE 4: MEAN CHILDREN IN SCHOOL

District	Mean Children/Household	Enrolment of School Aged Children
Samburu (n=194)	1.7	57%
Baringo (n=231)	1.8	72%
Garissa (n=79)	0.6	42%

From the table, non-restocked households in Garissa had the lowest number of children per household attending school and consequently percent enrolment. Whereas the more recently restocked household in Baringo district, had the highest number of children attending school per household. A possible explanation for the finding is that restocking provided households with the resources to send their children to school.

Nevertheless, school fees represented a significant household expense. Table 5 examines the mean expenditure on school fees for each of the districts involved.

TABLE 5: MEAN EXPENDITURE ON SCHOOL FEES (KSH)

	Nursery	Primary
Samburu	135	954
Baringo	234	650
Garissa	100	693

The costs displayed are for the total household expenditure needed to send a child to school for the year. Hence, the figure includes the average household expenditure on school fees, uniforms, books, activity fees and frequently, teacher's salaries. The expenditure on school fees varied across the districts principally due to the varying cost of fees and uniforms. Overall, costs per term of school were lowest in Garissa with nursery education more expensive in Baringo and primary school more costly in Samburu.

Not surprisingly, when gender was disaggregated, attendance was biased towards boy children (Table 6).

TABLE 6: GENDER DIFFERENCES IN SCHOOL ATTENDANCE (NO. OF CHILDREN)

District	Gender	Nursery	Primary	Secondary	Koranic School	Total
Samburu	Girls	9	14	1	0	24
	Boys	4	17	2	0	24
Baringo						
	Girls	8	27	1	0	36
	Boys	10	38	2	0	50
Garissa						
	Girls	1	0	0	1	2
	Boys	4	4	4	7	19

Interestingly, the gender bias was least in Samburu and greatest in Garissa district. Although the sample sizes were small, the figures may offer some insight to the

attitudes toward education in each of communities involved. In Samburu district, small boys are useful in herding calves, which may offer an explanation for the lower enrolment at nursery level. Nevertheless, by primary school, the enrolment of boys exceeds that for girls. For households with cattle, it was often commented that the boys who did not show aptitude for herding would be sent to school. Thus, overall, school attendance was biased towards boys, with few girls reaching late primary.

Surprisingly, gender bias in education, as well as differing across districts, also varied between households. Wealthier households with cattle, tended to keep some children out of school in order to care for herds whereas, households with only smallstock had higher enrolment figures. Although the difference is an indication of the greater labour needs of cattle vs. smallstock, increased labour requirements only partially explain the finding. Households with cattle were invested in the livestock economy and perceived that they were able to offer their children a future in livestock keeping. Conversely, households owning only smallstock could not offer their children sufficient security through the inheritance of the animals to maintain a livestock-based lifestyle. Parental aspirations for children and community values towards education will be further discussed in the psychological and discourse analysis in Section III of the results.

4. LIVESTOCK AND ALTERNATE LIVELIHOODS

The following section explores the overall livestock holdings for the households involved. Past and present livelihood activities are also examined.

4.1 THE CURRENT HERD

For each of the districts involved, Table 7 offers the mean number of livestock of study participants. Obtaining accurate information regarding herd sizes is notoriously difficult among pastoralists. Indeed, in an effort to make monitoring and evaluation efforts easier, many projects distributed animals with the caveat that households would need to disclose herd numbers in the future. To verify livestock numbers, elements of the Participatory Herd Assessment technique (Appendix I) was utilised in addition to herd mapping.

TABLE 7: MEAN HERD SIZE

District	Cattle	Smallstock	Poultry
Garissa	1.1	8.5	2.8
Samburu	6.7	17.7	0.5
Baringo	0.7	20.7	1.2
Overall mean	2.7	19.1	1.3

Households in Samburu had the greatest number of cattle with Baringo pastoralists having the largest holdings of smallstock. Not surprisingly, the non-restocked households in Garissa had the fewest animals. Interestingly, poultry holdings were very low across the study zone. The finding may be due to the traditional prohibitions against eating poultry meat, particularly in Samburu district. Overall, 9% of restocked

households did not own any animals at the time of the interview. Although the loss of animals cut across all projects, the majority of the households, without livestock, were in Samburu district, which may be a reflection of the longer time since restocking.

Within Samburu district, there was little difference noted between the herd sizes of households restocked by SDDP in 1995-1996 and those restocked by Oxfam, approximately 11 years earlier. Table 8 compares the current livestock holdings of Oxfam and SDDP restocked households.

TABLE 8: MEAN CATTLE AND SMALLSTOCK HOLDINGS FOR OXFAM AND SDDP HOUSEHOLDS

Project	Cattle	Smallstock
Oxfam	8.2	17.4
SDDP	7.6	19

Overall, since restocking, the smallstock herds of Oxfam clients had declined on average by 65%. Conversely, the herd size of SDDP recipients (utilising project distribution figures, rather than those offered by informants) had decreased, on average across the study zone, by 41%.

However, when gender was disaggregated, a more complete picture emerged. The following table explores the influence of gender on the total livestock holdings of restocked households.

TABLE 9: GENDER DIFFERENCES IN LIVESTOCK HOLDINGS

Mean No.	Cattle	Smallstock
Male Household Heads (n=38)	2.0	22
Female Headed Households (n=20)	.45	15.0

Hence, it appears that female-headed households are a somewhat disadvantaged group in restocking. Indeed, overall, 85% of female-headed households did not own cattle. A further 15% did not own any animals at all post restocking. However, as the following table demonstrates (Table 10), there was a large variation across the study zone.

TABLE 10: MEAN FEMALE-HEADED HOUSEHOLD LIVESTOCK HOLDINGS

District	Cattle	Smallstock
Samburu	1.4	3.6
Baringo	0.5	21.5

As the table illustrates, restocked female-headed households in Samburu district had larger numbers of cattle and lesser numbers of smallstock than in Baringo district. The

reason for the discrepancy between the two districts is most likely due to the duration of time since restocking, as the majority of Baringo households had been supplied with 14 smallstock during the previous year.

To further examine the role of women in restocking, focus groups and semi-structured interviews with both women and men were held to explore attitudes towards, and control over livestock assets. Across the study zone, the ownership of animals was largely the domain of men, although women were responsible for the majority of livestock care-taking. The following table explores the specific conditions under which women could own livestock (Table 11).

TABLE 11: REASONS OFFERED FOR WOMEN OWNING LIVESTOCK

Reason	Percentage
Widow/Spinster (n=32)	54
If Husband permits (n=7)	12
Poultry only (n=4)	7
At Marriage (n=6)	10
If Given Gift (n=3)	5
If Restocked (n=2)	3
Smallstock (n=1)	2
If She Purchases (n=1)	2

The ownership of cattle by women was mainly given community sanction in the case of widow or spinsterhood. In these circumstances, women were allowed to inherit livestock, but this is not without a caveat. Women, with adult sons, whose husbands had died, generally did not inherit their husband's animals. Normally, the livestock were distributed to the sons. However, women were allowed to 'own' smallstock and poultry. Nevertheless, even in the case of smallstock, women only had total control over those animals that had been given to them as gifts (most often during marriage). Furthermore, many women still had to secure the permission of their husbands to sell their smallstock. Women appeared to have greater control over slaughter, and male permission was not generally needed for animals, which were considered part of the wife's herd. Ostensibly, women were allowed to buy livestock, however, this was noted to be rare and the type of livestock purchased again was mainly smallstock or poultry.

Interestingly, two individuals commented that women could own and control restocked animals. When explored further in focus groups, restocking, like marriage, appears to be a culturally acceptable means for women to acquire livestock. Indeed, informants noted that after restocking, some female-headed households were able to remarry. Nevertheless, the marriages were generally perceived as problematic as it was revealed that the new husbands often absconded with, or sold all of the animals. Thus, it appears that although ostensibly women had control over restocked animals, cultural biases towards male livestock ownership and control still left women vulnerable. Hence, restocking is not a gender-neutral intervention.

4.1.1 Livestock Sales

Over the course of the year, households were involved in a large number of livestock transactions. Table 12 details the total sales of livestock across the study zone for the previous 12 months.

TABLE 12: TOTAL SALES

District	Cattle Sales	Goat Sales	Sheep Sales
Baringo	6	47	2
Garissa	9	44	0
Samburu	11	13	0
TOTAL	26	94	2

Overall, the majority of animals sold were goats, with cattle sales at much lower levels. The numbers most likely reflects the livestock ownership patterns of the poor – few households had cattle to sell. Equally, as will be further discussed below, smallstock are often perceived by pastoralists as 'moving bank accounts', which may be quickly sold in times of need. Restocked households are no exception. Furthermore, although the restocking project in Baringo district had prohibitions in place regarding the sale of restocked animals, it is likely from the figures above that some project animals were sold.

After detailing the number of animals sold, households were asked to offers reasons for the livestock sales. Responses were open-ended and all explanations were recorded. Overall, participant replies fit into the following 10 categories (Table 13).

TABLE 13: REASONS FOR LIVESTOCK SALES

Reason	% Response
To purchase food (n=19)	37
To pay school fees (n=13)	25
To purchase livestock drugs (n=9)	17
To purchase clothing (n=3)	6
To pay medical bills (n=3)	6
To pay for school fees and food (n=1)	2
To pay bridewealth (n=1)	2
To invest in a business (n=1)	2
Difficult to find pasture (n=1)	2
Not specified (n=1)	2

As the table displays, most respondents sold animals to buy food, with the payment of school fees being the next most common explanation. Livestock drugs were also a major household expenditure and one of the primary reasons for off-take. Only one respondent sold animals due to difficulties encountered in caring for his herd. In this particular case, the owner complained that finding sufficient pasture was problematic and hence, sold off much of his smallstock. Nevertheless, it appears that off-take was

primarily utilised to meet household food security needs. The finding will be further discussed in section 4.3.2, which explores beneficiary perceptions regarding the functions of livestock.

4.3 LIVELIHOOD ACTIVITIES

Across the study zone, households performed, on average, 2.7 livelihood activities. Restocked households in Baringo district were involved in the greatest number of activities (3.3). Alternatively, Samburu and Garissa participants participated in fewer activities per household (2.5 and 2.3, respectively). The inclusion of agro-pastoral households in Baringo district may account for the increased number of livelihood activities, as many restocking clients also farmed plots of land. Whereas, in Garissa, the finding may be a function of more limited economic opportunities combined with a lower number of livestock-related activities, as households were not restocked. Furthermore, although participatory tools were utilised to assess the seasonality of labour and livelihood opportunities, it is possible that seasonal activities, which were not performed during the time of data collection, were under-reported.

A large difference in the number of activities undertaken was also noted between the genders (Tables 14 and 15). In general, women outperformed men, with the exception of Garissa district.

TABLE 14: WOMEN'S INVOLVEMENT IN LIVELIHOOD ACTIVITIES

District	Number of Women	Number of Livelihood Activities		
		Minimum	Maximum	Mean
Baringo	22	1	5	2.4
Garissa	7	1	3	1.5
Samburu	13	1	5	2.6
Average	14	1	5	2.3

TABLE 15: MEN'S INVOLVEMENT IN LIVELIHOOD ACTIVITIES

District	Number of Men	Number of Livelihood Activities		
		Minimum	Maximum	Mean
Baringo	25	1	5	1.7
Garissa	9	1	3	1.6
Samburu	14	1	2	1.4
Average	16	1	5	1.6

As the tables demonstrate, the largest division between the sexes was in Samburu district, where women performed almost twice the number of activities of men. Less of a divide was noted in Baringo district, but nevertheless, women were more active than men. Conversely, among the peri-urban destitute population of Garissa district there was slightly more equality between men and women in the number of activities undertaken.

The different types of activities that men and women performed were also explored. Although households took part in a large variety of income generating activities, the following general groupings included the majority of tasks: livestock keeping, livestock related[3], firewood/charcoal; petty trade[4], small business[5], casual labour[6], employment[7] and contributions from relatives.[8] In general, livelihood activities were gender specific, with livestock care-taking the only activity in which men and women could alternate specific tasks with ease. Only a few individuals were able to cross the gender barrier for the other activities listed. Tables 16 and 17 examine the differing levels of involvement of women and men in the aforementioned activities.

TABLE 16: PERCENTAGE INVOLVEMENT IN LIVELIHOOD ACTIVITIES (WOMEN)

	Livestock Keeping	Livestock Related	Firewood/ Charcoal	Petty trade	Small business	Casual Labour	Employment	Contribution from Relatives
Baringo n=22	100%	5%	59%	91%	27%	59%	23%	59%
Garissa n=7	54%	8%	23%	23%	8%	8%	8%	38%
Samburu n=14	79%	14%	71%	93%	0%	14%	7%	64%

TABLE 17: PERCENTAGE INVOLVEMENT IN LIVELIHOOD ACTIVITIES (MEN)

	Livestock keeping	Livestock-related	Firewood/ Charcoal	Petty trade	Small business	Casual Labour	Employment	Contribution from Relatives
Baringo n=25	96%	20%	8%	28%	4%	52%	0%	44%
Garissa n=9	90%	40%	0%	40%	0%	30%	10%	44%
Samburu n=13	100%	8%	0%	23%	0%	8%	23%	62%

As the tables illustrate, overall, men were more active in livestock-related activities than women. However, again there are strict gender divisions in the type of work pursued. For example, livestock marketing and sales tended to be the domain of men whereas women were responsible for the sale of milk. Equally, women were very active in firewood sales, whereas, men were generally involved in the making of charcoal. Casual labour activities also tended to be split down gender lines. Men were more likely to pursue daily jobs in building and construction whereas women collected

[3] The sub-category of livestock-related activities included livestock marketing and trading activities and milk sales.
[4] Petty trade activities included the sale of miraa, sugar and vegetables.
[5] The small businesses category included teashops, market stalls and butcheries.
[6] The casual labour category was comprised of a large variety of activities varying from building houses to cutting thatch and poles to collecting stones.
[7] Employment activities were those in which a stable monthly income was derived.
[8] Included in the 'contributions from relatives' category was income derived from children and other family members such as brothers and sisters. In general, parents received help from their children and not vice versa. The majority of employment was comprised of night watchman jobs.

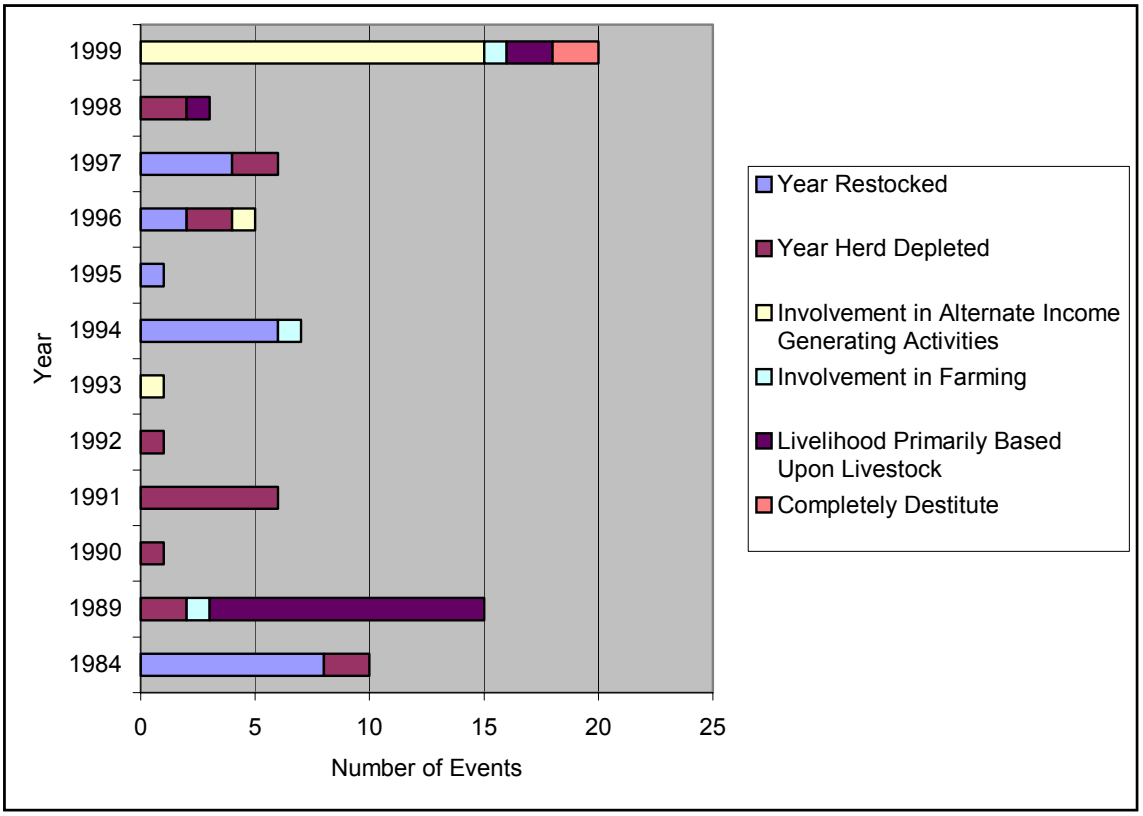
water and cut thatch. Finally, livestock care-taking activities were also gender specific, although greater flexibility was noted with core activities such as herding. For example, many households reported that if the husband was not available for herding, than the wife would assist (however, the flexibility was only noted mainly for smallstock herding). Women were responsible for milking and the daily counting smallstock herds. Men generally administered treatments, and for those households with cattle, focused on herd management. Young men and warriors were generally responsible for herding cattle.

Gender domination of specific activities, however, varied somewhat by district. For example, in Baringo District, women were more involved in petty trade and firewood selling than their male counterparts, whereas in Garissa District a more even distribution was noted. Furthermore, gender involvement also appears to be related to the level of organisation of activities and hence, potentially the amount of income earned. In Baringo, women were most often involved in water selling, which entailed delivering jerry cans to specific households. However, in Garissa District, water selling was generally done by donkey cart, was highly organised and was noted to provide a reasonable income. Thus, men typically undertook water selling in Garissa. Interestingly, the districts proved opposites in reporting contributions to household income received from relatives. In Garissa more men than women reported assistance from relatives, whereas in Baringo District, the contrary was found. Finally, gender divisions of labour were the largest among Samburu men and women with very little overlap between male and female activities. For instance, petty trade and firewood selling appear to be solely the domain of women. The findings on gender have important implications for restocking projects, and will be further discussed in section 5.2, which further examines issues in household labour.

4.3.1 Livelihood Timelines

In order to evaluate changes in livestock-based livelihoods, herders were asked to detail changes in their livelihoods over a ten-year period. Most study participants utilised the exercise to detail major life events such as marriages, major raids and droughts. The years in which households were restocked also figured prominently in the assessment. The information was then collated at the district level, and livelihood timelines were created which detailed the specific number of events that were recorded for each year. The timelines examined five types of livelihood influences or occurrences: herd depletions, restocking, involvement in farming, participation in non-livestock related activities, dependence primarily on livestock and complete destitution. Figure 4 outlines the results for Samburu district.

FIGURE 4: LIVELIHOOD TIMELINES: SAMBURU DISTRICT



As the figure demonstrates, clusters of restocking activities occurred in the district beginning in 1984. Similarly, herd depletions were also grouped around specific years. The reasons offered for herd depletions were numerous and included the paying of bridewealth to the impact of major droughts and raids. Many herders reported that prolonged droughts tend to precipitate large-scale raiding and instability. For example, after the drought in 1991, many households reported that their surviving livestock were subsequently raided. Herders were keen to volunteer the scope of their livestock losses as if to demonstrate their previous success and the level of their current ill fortune. Therefore, to account for the most likely exaggeration of previous herd size, the analysis ignored the herd figures offered, but rather focused on trends or changes in livelihood activities.

As the timelines illustrate, in the late 1980s, the majority of Samburu households were reportedly heavily involved in the livestock economy. Although it is likely that a decade ago most households were also participating in alternate income generating activities as well, the overall perception was that livestock played a greater role in their livelihoods than in recent years. By 1999, however, the reverse was true and most herders reported that alternate income generating activities comprised the majority of their daily activities. When asked to offer an explanation why the changes had occurred, many attributed the transformation to a greater involvement in the cash economy. However, there was a large amount of political instability in the area at the time of the fieldwork and a number of households had migrated closer to towns for greater security. Thus, the level of insecurity may also play a role in the greater

reliance on alternate income generating activities. Figures 5 and 6 graphically depict the trend.

FIGURE 5: 1989 LIVELIHOOD TIMELINE: SAMBURU

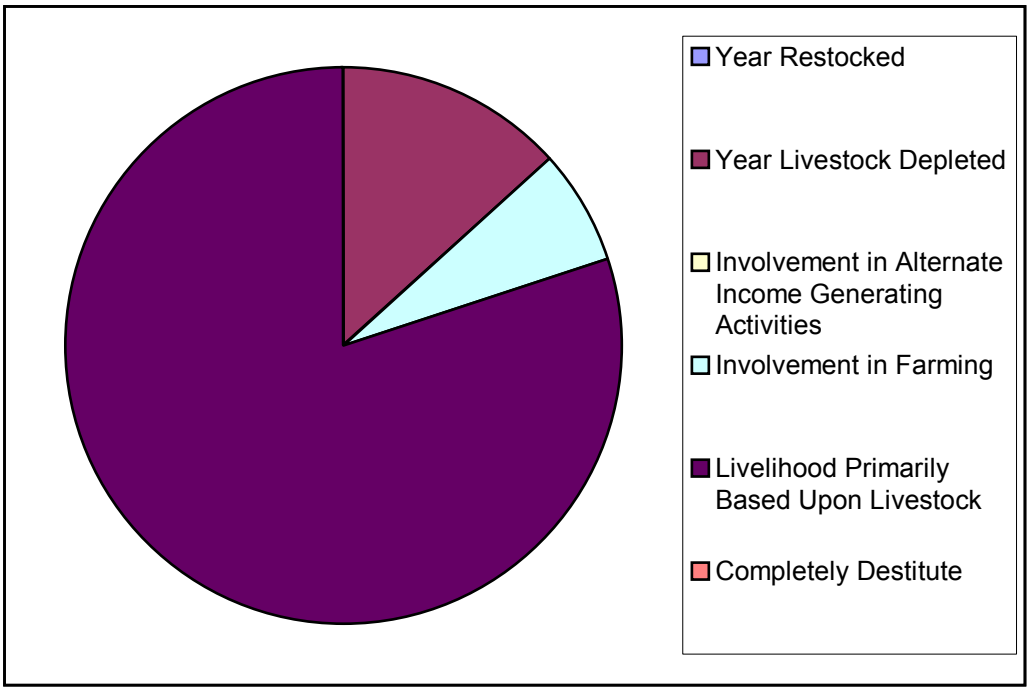
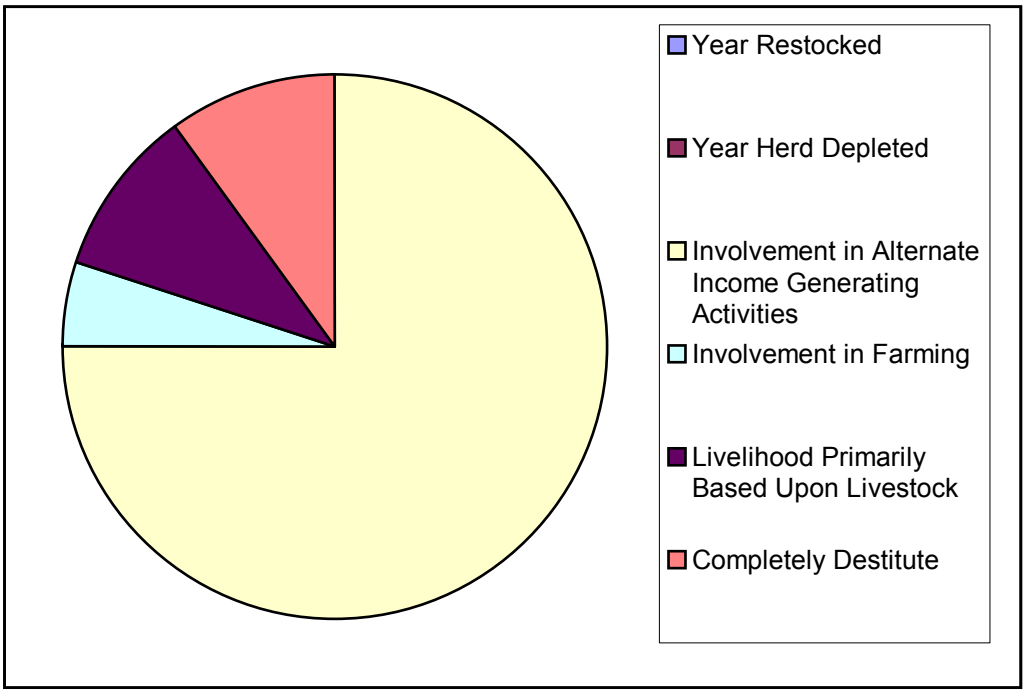
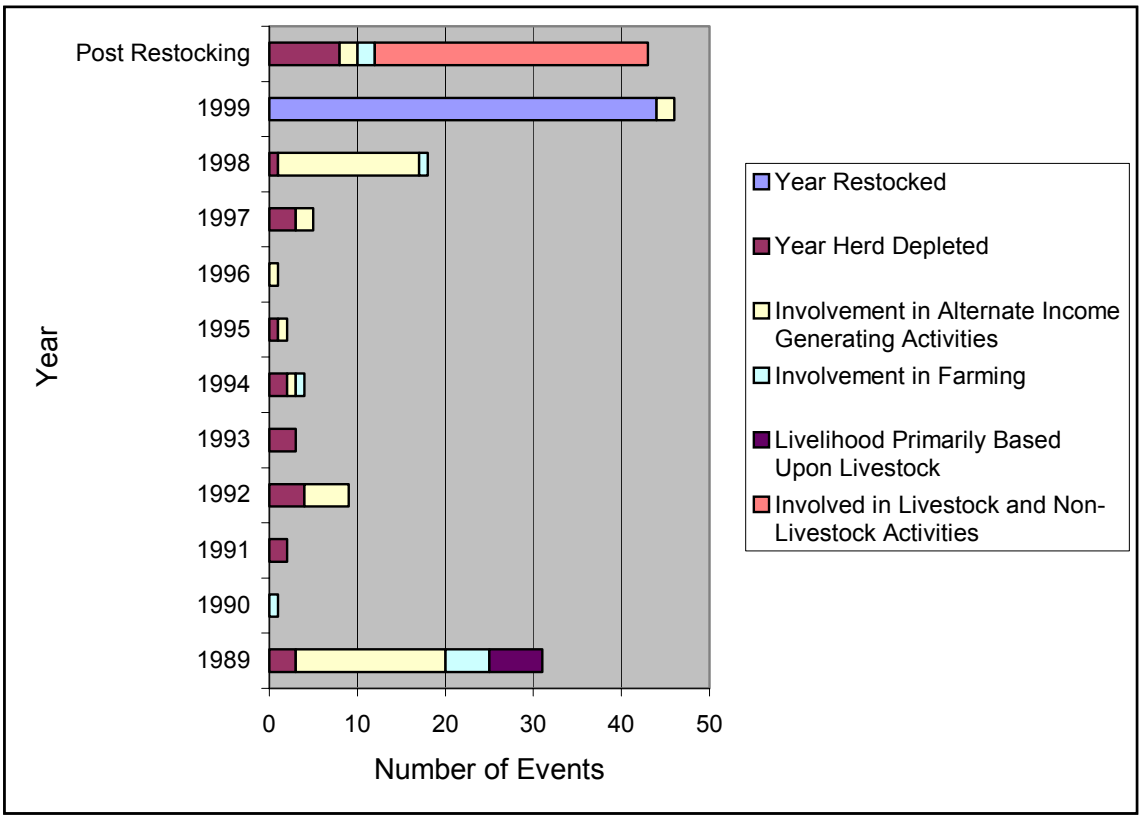


FIGURE 6: 1999 LIVELIHOOD TIMELINES: SAMBURU



Conversely, in Baringo district, less of a dichotomy was noted in overall activities. Figure 7 outlines the collated livelihood timelines for Baringo district.

FIGURE 7: LIVELIHOOD TIMELINES: BARINGO DISTRICT



As the figure displays, livestock played a lesser role in overall livelihood strategies for study participants in Baringo District. The finding is not surprising, as the study group was mixed and included both pastoralist (Pokot) and agro-pastoralist (Tugen) households. Moreover, the proportional involvement in alternate income generating activities was generally the same in 1989 as it was in 1998, the year prior to restocking. Equally, post-restocking households maintained a consistent involvement in these activities. However, the project had a prohibition on selling animals for the first two years. Thus, after restocking, many herders noted that their households were forced to have a continuing reliance on alternate income generating activities.

The finding has implications for the design of restocking projects. From the perspective of the project, prohibitions on the sale of animals are generally instituted in order to prevent households from depleting their herds. Nevertheless, if the goal of restocking is to support livestock based livelihoods, barring short-term gains from sales will necessarily maintain a household's involvement in alternate income generating activities and decrease the labour available for livestock herding. Hence, preventing sales may be counter-productive for those households seeking a return to livestock-based livelihoods. Households, who are not interested in livestock keeping, will generally finds alternate means of disposing of animals such as reporting predation to cover up for actual sales. Therefore, prohibitions on sales are difficult to police and

may force households to spend less time with their livestock and more time pursuing alternate income generating activities.

Unlike in Samburu district, in Baringo events that depleted herds were more evenly spread throughout the decade. The following figures compare the reported number of livelihood events in 1989 and 1999 in Baringo district.

FIGURE 8: 1989 LIVELIHOOD TIMELINES: BARINGO

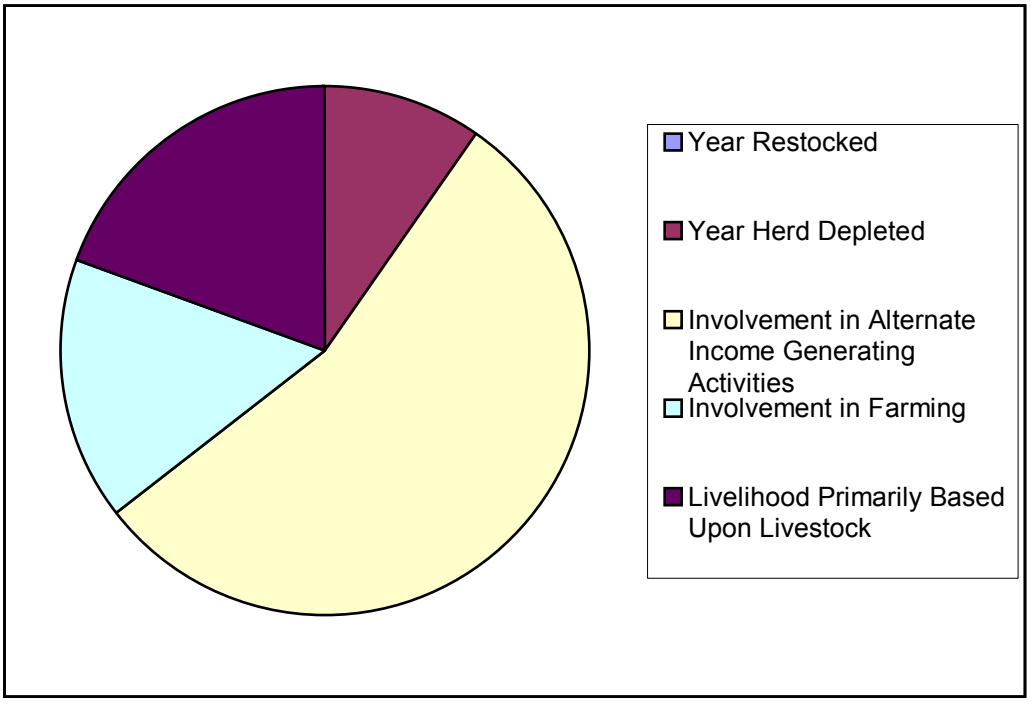
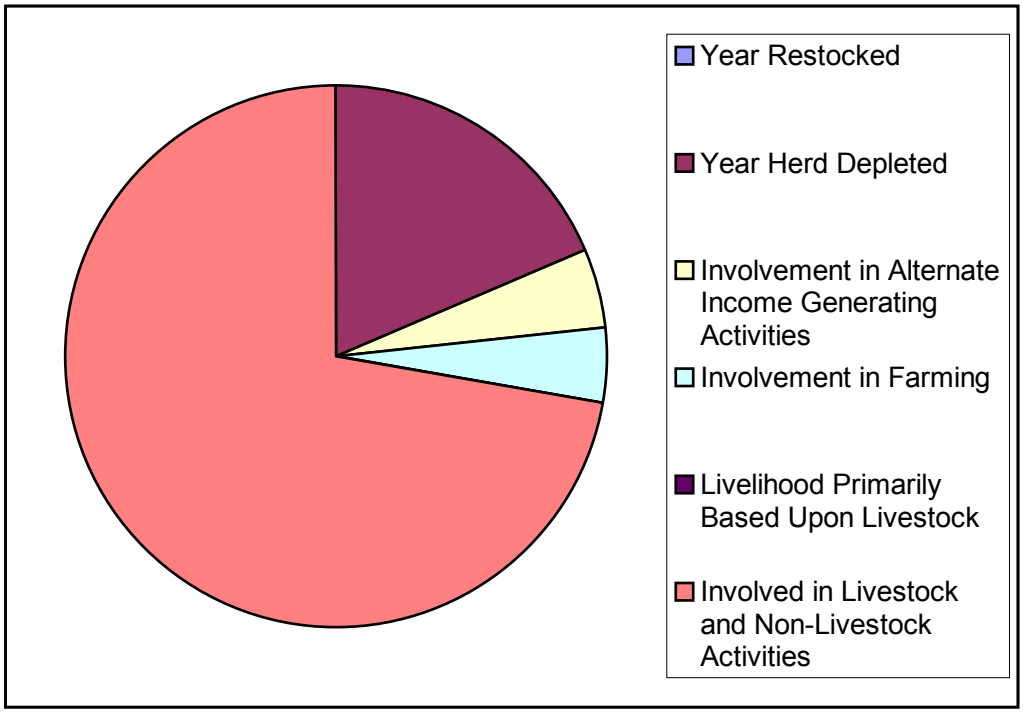


FIGURE 9: 1999 LIVELIHOOD TIMELINES: BARINGO (POST RESTOCKING)



As the majority of households were restocked in 1999 and with the ban on livestock sales, most households reported involvement in both livestock and alternate income generating activities. However, the rise in herd depletions may also be a response to the prohibition on sales and as mentioned above, in order to off-take animals it is possible herders were reporting alternate catastrophes such as raiding and predation.

Nonetheless, raiding was a significant problem across the study zone. The following table examines the explanations offered by herders for herd depletions.

TABLE 18: REASONS FOR HERD DEPLETIONS

	Marriage	Raiding	Drought	Drought and Raids	Livestock Disease	School Fees	Divorce	Human Illness
Samburu	8%	23%	31%	38%	0%	0%	0%	0%
Baringo	0%	52%	19%	7%	11%	4%	4%	4%

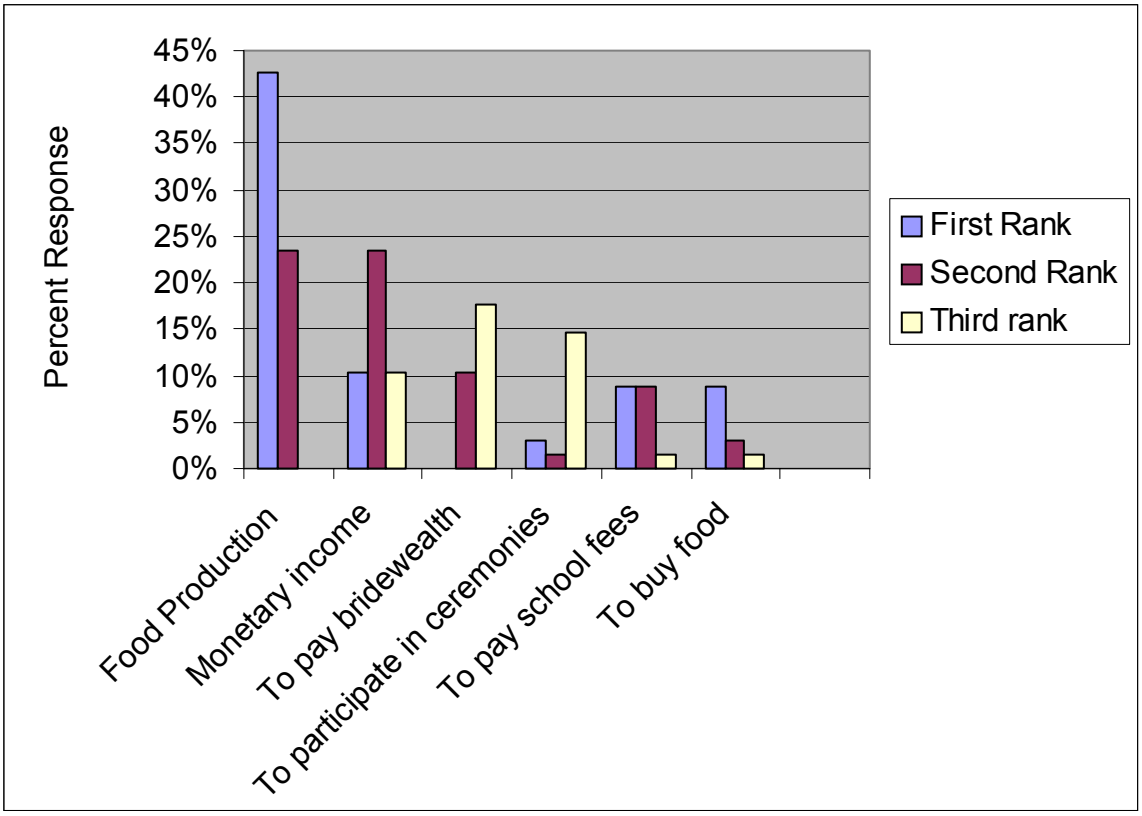
Although livestock losses were attributed to a number of other factors such as bride wealth payments, livestock disease and divorce, overwhelmingly drought and raids accounted for the majority of events. Indeed, in Samburu District, most respondents believed that the combined effects of droughts and raids were the primary causes of destitution. Whereas, in Baringo, raiding accounted for over 50% of the catastrophic herd losses noted. Indeed, some households had been raided more than once. Other reasons included high mortality due to disease, the need for off-take to pay school fees and/or hospital bills. Divorce was also a problem mentioned by female-headed

households. Although most herders noted that droughts and raiding had been around for centuries, there was a general perceptions that the severity of the raids had increased due to the influx of automatic weapons from neighbouring countries. Coping responses and adaptations to large-scale livestock losses will be further discussed in Part III.

4.3.2 The Functions of Livestock

In order to assess the importance of livestock to the livelihood security of the communities involved, participants were asked to rank the primary functions of livestock in the communities in which they lived. Figure 10 outlines the results of the exercise.

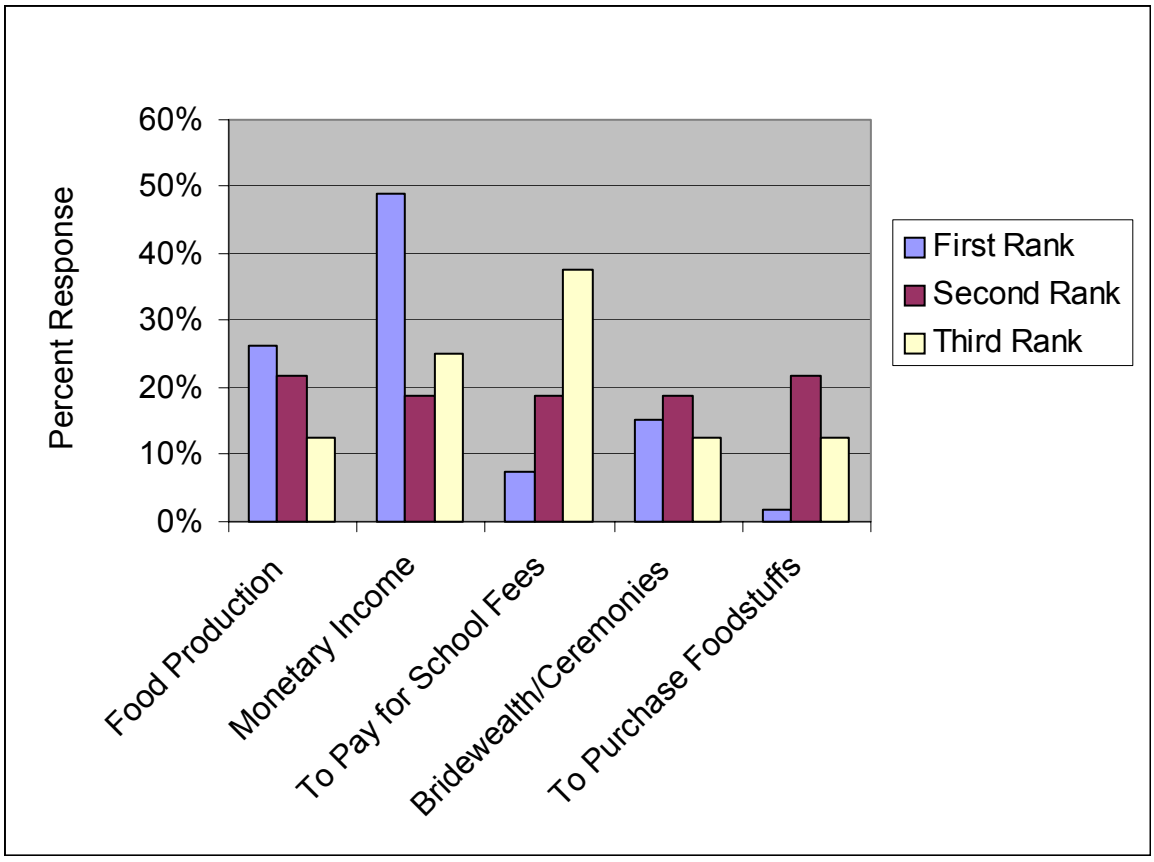
FIGURE 10: THE FUNCTIONS OF LIVESTOCK (COMMUNITY LEVEL)



Overall, livestock were perceived primarily as a means of securing household food production. Second, livestock were viewed as a source of monetary income, which subsequently enabled households to pay school fees or purchase food (the two most frequent associations). Finally, livestock allowed households to participate in community level social rituals, such as weddings, circumcision ceremonies and the payment of bridewealth.

However, when the functions of livestock were explored at the household level, different results were obtained (Figure 11).

FIGURE 11: REASONS FOR KEEPING LIVESTOCK (HOUSEHOLD LEVEL)



At the household level, livestock were primarily kept as a source of income with food security a secondary consideration. The finding was corroborated by the reasons offered for the sale of livestock as described in section 3.2 (Table 13). The majority of livestock across the study zone were sold in order to purchase foodstuffs (37%), with the payment of school fees (25%) and the need for livestock drugs (9%) the next most frequent reasons offered. Hence, at the community level, there was a belief that livestock were a major means of obtaining food security, whereas at the individual level, livestock off-take was required to purchase commercially produced foodstuffs.

The contradiction may be explained in a number of ways. First, for the poor, it may be that perceptions regarding the functions of livestock for themselves and wealthier households i.e. the wider community differed. Second, the finding may be an indication that of the changing attitudes towards and functions of, livestock within the communities in question. As one respondent explained:

> '…in the past livestock were used for milk, blood and meat, now livestock are sold and exchanged for other things.'

The finding has important implications for restocking projects. If livestock are perceived primarily as a means of monetary income for the group in question, restocked animals may simply be utilised as a means to generate needed cash, thereby lowering the sustainability of projects and programmes.

Furthermore, as table 19 demonstrates, when asked to rank the best investments, households rated livestock second overall to business activities, with education the third most frequent response.

TABLE 19: RANK OF INVESTMENTS

Type of Investment	Total
Business (n=26)	30%
Livestock (n=20)	23%
Education (n=18)	21%
Livestock-Related Business (n=11)	13%
Housing (n=7)	8%
Bank (n=4)	5%
Agricultural Land (n=1)	1%

Although livestock-keeping scored lower than business activities, livestock trading businesses accounted for approximately 12% of the total business responses. According to study participants, purchasing livestock in outlying markets and driving the animals to major market centres was considered a profitable activity. Given the general volatility of livestock markets, the finding describes the willingness of poor households to assume risk. Nevertheless, it is important to view the results within the context in which they occurred, 89% of households reported that they were unable to have any form of savings. As such, the finding most likely outlines perceptions rather than the reality of the investment choices for the households involved.

Finally, as illustrated in table 20, women's responses were disaggregated. Large differences with the overall study group were not noted with the exception of attitudes toward livestock keeping and banking. Interestingly, livestock were believed to be less safe an investment than education.

TABLE 20: GENDER DISAGGREGATED RANK OF INVESTMENTS

Type of Investment	Total
Business (n=6)	27%
Education (n=5)	23%
Livestock (n=4)	18%
Livestock-Related Business (n=3)	14%
Housing (n=2)	9%
Bank (n=2)	9%
Agricultural Land (n=0)	0%

Although the study sample was small, the ranking of investments provides some useful insight into the perceptions regarding livestock and the viability of investment in the livestock economy. By ranking business activities over livestock, the findings corroborate the earlier analysis of the livelihood timelines. Overall, the dependence on livestock for the communities involved appears to be in decline. The following section examines community perceptions regarding factors important to livestock keeping.

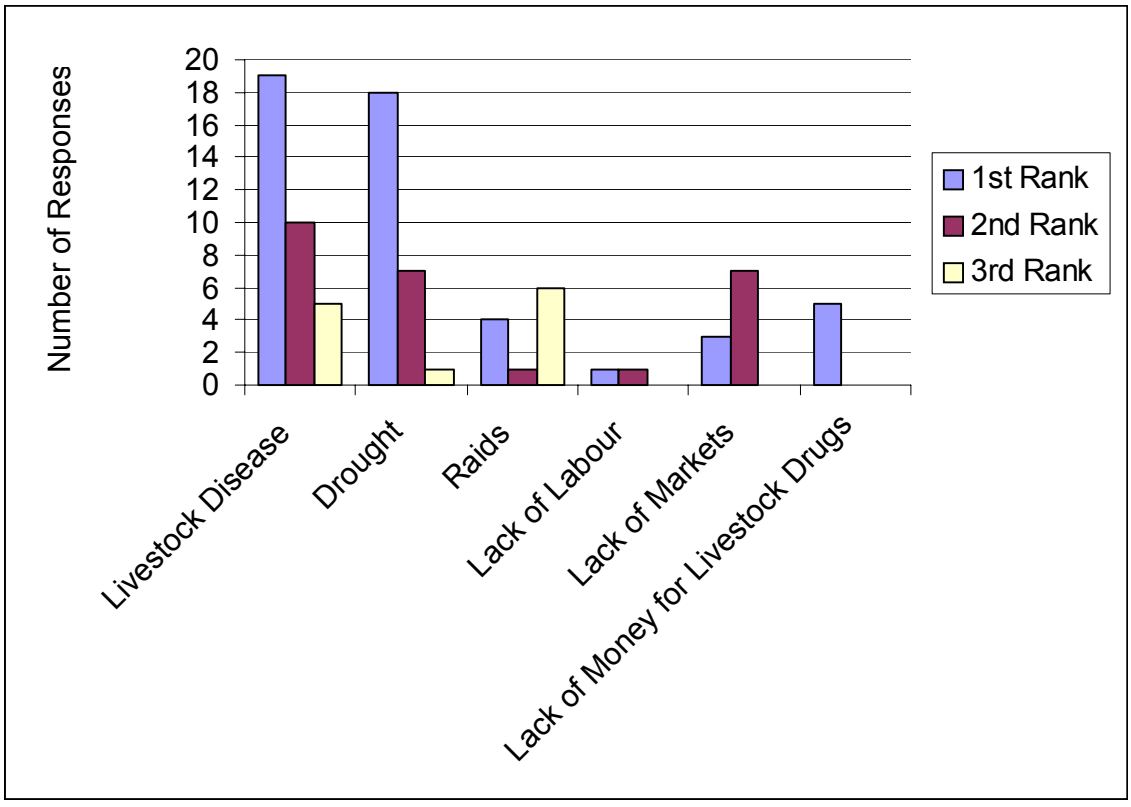
SECTION II: FACTORS IMPORTANT TO LIVESTOCK KEEPING

The majority of participatory needs assessments focus on the prioritisation of problems and constraints. Hence, the section explores the results of four different ranking and descriptive exercises that allowed participants to detail both negative and positive factors to livestock keeping on both a general and more personal level. Again, questions were open-ended and all answers were coded for analysis.

5. CONSTRAINTS TO LIVESTOCK KEEPING

To evaluate the issues impacting livestock keeping at the household level, participants were asked to rank and describe the major problems encountered with their herds (Figure 12).

FIGURE 12: RANK OF LIVESTOCK-RELATED PROBLEMS



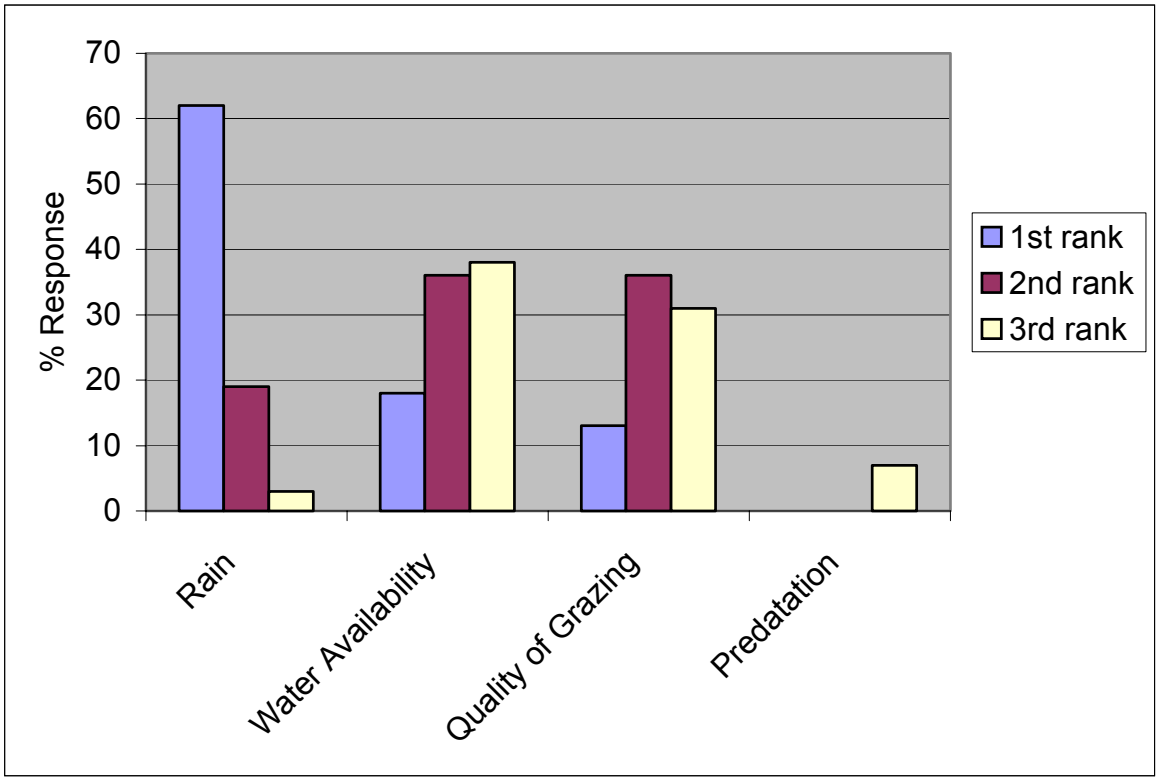
Overall, livestock disease and drought were the largest concerns expressed by herders. As drought was becoming an increasing worry for households, at the time of the study,

the response rate is not surprising. However, when the livestock mortality rates were evaluated, the mortality rate was still low (3% for goats) across the study district. Hence, perceptions regarding the impact of livestock disease, outstripped the reality. A possible explanation is as follows. Many restocking clients had recently participated in an animal-health training course sponsored by the project, and it is likely that the bias toward animal health related responses was influenced by course attendance. Indeed, some participants were keen to note their participation in the training and detailed the diseases learned during the ranking exercise. Hence, from a methodological standpoint, ranking exercises may be prone to external influences of which researchers need to be aware. Nevertheless, the results did yield some interesting findings, particularly in relation to livestock marketing. With the onset of drought, driving animals to markets, rather than price, was noted to be a major problem due to the lack of fodder and water on route. Thus, it was difficult for herders to off-take animals, while they still remained valuable, prior to what was assumed would be worsening environmental conditions.

5.1 ENVIRONMENTAL FACTORS

To further explore the external influences on livestock keeping, households were asked to detail the environmental factors important to a successful livestock based livelihood. In general, four categories of responses were noted. Figure 13 outlines the findings.

FIGURE 13: RANK OF ENVIRONMENTAL FACTORS



As the figure illustrates, it is apparent that participants deemed the amount of rainfall as the most significant environmental factor for livestock keeping. Indeed, most respondents related the lack of rain to the other factors mentioned. In general, it was believed that water availability was the critical factor during drought and that many livestock could survive on less than adequate grazing. Finally, predation was not deemed a big constraint across the study zone and hence ranked lowly.

Although rain was noted to be the most vital factor for keeping livestock, few households across the study zone moved with their animals or followed the rains. It appears that involvement in alternate income generating activities and children in school prevented widespread movement of both livestock and people. Nevertheless, some households did move animals away from settlements. Furthermore, the separation of cattle and sheep from goats during times of drought was noted to be a key survival strategy. Discussions revealed, however, that surviving drought was often related to the characteristics of individual animals rather than purely a function of external factors. Therefore, the following section examines herder's perceptions regarding the drought survival of their livestock.

5.1.1 Livestock and Drought

As the following table demonstrates, herders had strong notions regarding the factors important to animals surviving drought. Table 21 explores the majority of responses obtained among study participants.

TABLE 21: FACTORS IMPORTANT TO LIVESTOCK SURVIVING DROUGHT

Reason (n=80)	Percent Response
Species of Livestock	50%
Health of Animal	19%
Food Consumption Levels	16%
Browsers vs. Grazers	15%
Water Availability	14%
Skill of Livestock Keeper	8%
Breed of Animal	3%
Age of Animal	1%

Not surprisingly, the species of livestock was the most important feature to drought survival. Camels and goats were preferred to cattle and sheep in adverse situations. As browsers, herders related that camels and goats had access to an additional food sources. Equally, goats were deemed to be riskier grazers and willing to take more chances to obtain food in rocky or mountainous areas.

Interestingly, the skill of the livestock keeper was not a large factor in keeping herds alive through drought. Drought was perceived as a great equaliser, generally impacting the community in equal measure. The finding illustrates that the 'blame' for impoverishment after drought is rarely levelled at the individual. Rather external

factors and the traits of the animals' involved were more important than the skill of the livestock keepers themselves.

Specific qualities of individual animals that were considered better for surviving drought included low levels of milk production, leanness and a smaller size. Indeed, 92% of herders noted that cows, with higher milk yields were more susceptible to drought and had higher mortality rates during periods of stress. Equally, those animals that were perceived to be 'hungry' and entered drought in good condition, generally fared less well than leaner animals. The size of the individual animal was also noted to be a factor in survival with larger animals faring poorly. Finally, ill health was considered a negative factor, with high mortalities noted early in the drought cycle for animals that began the drought in poor condition.

5.2 ECONOMIC FACTORS

The economic factor analysis focused upon the labour resources available to restocked households. In general, in most pastoralist production systems, children are responsible for herding smallstock, with warriors and young men in charge of cattle. Overall, labour for livestock herding was noted to be a problem among 57% of respondent households. Table 22 details a breakdown of the reasons offered for the shortages.

TABLE 22: REASONS OFFERED FOR LIVESTOCK-RELATED LABOUR PROBLEMS (N=43)

Reason	Percent Response
Children in School	37%
Conflict with Alternate Income Generating Activities	16%
Children Too Young for Herding	7%
Lack of Trust in Hired Labour	9%
Parents/Owner Elderly	5%
Must Hire Labour	16%
Must Borrow a Child	9%
Total	100%

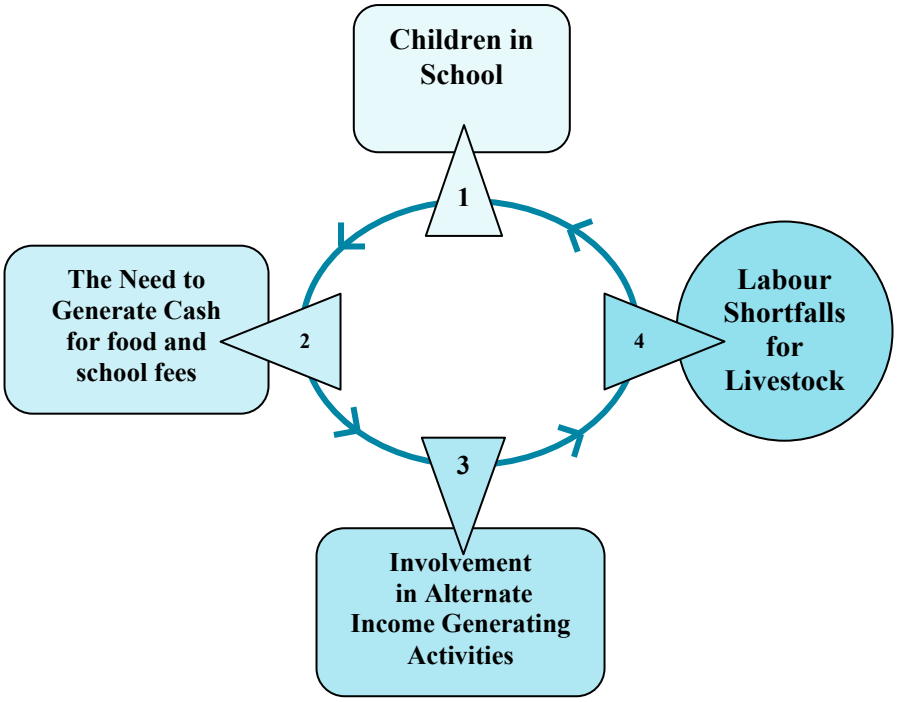
Not surprisingly, children attending school were effectively precluded from livestock care-taking duties. However, most households noted that labour shortages had a seasonal dimension and that during school holidays; most children returned to herding smallstock. Conflicts with alternate income generating activities were recorded with the next highest frequency. Many participants reported that their activities prevented their involvement in livestock care-taking. Young children and the elderly are also generally excluded from livestock herding, hence household demographics was also a factor in sufficient labour. Overall, 25% of restocked households hired labour either in the form of a paid herdsman or borrowed a relative/neighbours child. Indeed, some participants reported that their children were loaned out in this manner to cover other household's labour shortages. In general, for the poor, loaning out children relieves the household from feeding an extra mouth and enables the household to acquire capital assets as the children are often paid in-kind.

However, families appeared to participate in both formal and informal child sharing arrangements. Households living in the same compound often shared children to care for the collective herd. In these cases, individual households did not need to pay the children either in-kind or in-cash. Nevertheless, there was a general mistrust of hired labour obtained by both formal and informal channels. Children who were not directly related to the owner were often accused of being less vigilant and prone to losing animals. As one widow noted: 'borrowing children is less than ideal as they can be careless, equally you need to feed them and give them a goat to keep them happy'. Hired herdsmen were also considered risky as participants complained that hired help would often consume smallstock and then falsely claim the animal was lost or taken by predators.

As previously noted (section 3.3), women made up the shortfall in those households without sufficient child labour for herding duties or who were unable to afford hired help. Many women reported that they would take the goats to pasture and then leave them to collect firewood or perform other activities. Thus, herds were left unsupervised for periods of time during the day and consequently at risk to theft and predation.

Thus, for those households with inadequate labour, all three factors: children in school, involvement in income generating activities and the need for hired labour appear to be inter-related (Figure 14).

FIGURE 14: THE CYCLE OF HOUSEHOLD LABOUR SHORTFALLS



Generally, households with labour shortages also tended to have the greatest need for cash income. In order pay for school fees, uniforms etc., most households pursued

alternative income generating activities. Having children in school, in addition to involvement in non-livestock activities created labour shortages for part or all of the year.

Conversely, 43% of the study subset did not report labour shortfalls for livestock herding. Table 23 explores the reasons outlined by households for not having a problem with labour.

TABLE 23: REASONS OFFERED FOR SUFFICIENT LABOUR FOR LIVESTOCK KEEPING

Reason	Percent Response (n=33)
Children Herd	76%
Owner Herds	15%
Relative Herds	9%

From the figure, the majority of households with no reported labour problems had children of a suitable age, who were not attending school. The remaining 25% of herd owners either took care of the animals themselves or shared responsibilities with a spouse. Nevertheless, a further 9% of households gave the animals to relatives for care-taking thereby most likely losing the productive assets of the herd.

However, when the study group was further examined, the preponderance of households who did not report a problem with labour owned cattle. There are a variety of reasons for the finding. First, cattle tend to be more labour intensive than smallstock as such, households with cattle tended to have lower numbers of children in school. On average, households owning cattle had 1.6 children in school, whereas families owning only smallstock had 2.2 children in school. Indeed, it appears common that households owning cattle send some children to school and as one herder noted 'keep others behind for the animals'. The solution, however, was not without problems. Jealousies and discontentment between the educated and uneducated children were noted to be growing social problem. Smallstock owning households, on the other hand, tended to send all of their children to school with the exception of children loaned for labour to other households.

A possible explanation for the findings may be that households owning cattle can provide a future for the children, whereas households owning only smallstock may not. As one father noted:

> '…before I inherited animals from my father and now all my animals have been stolen, the children can get nothing from me but education and I have to try all means for them to reach standard 8…'

A similar sentiment was shared by a number of participants. Thus, in recent decades, with continuing droughts and raids, the livestock population is believed to have declined, as such, education is viewed as a safer bet for children.

However, in order to successfully participate in the cattle economy, male labour is needed for herding duties. Consequently, it appears that the most successful livestock keeping households kept sufficient male children out of school to take care of cattle herds. Nevertheless, the wealthiest households also viewed education as an important form of risk mitigation. As one cattle owner stated:

> '…it is good to educate some children but not all. This is because when you educate children opportunities are diversified. If the ones that go to school succeed, they will assist the ones that didn't go to school. If the ones that take up livestock keeping succeed, then they will assist the ones that went to school and failed…'

Conversely, the poorest households in the study group had most or all of their children in school and by necessity utilised restocked animals to pay for school fees. For the poor, education was perceived as offering the best future for the children. Thus, on first inspection, it may appear that poor households prioritise education, whereas better-off households put more resources into livestock keeping. However, this may be too simplistic a conclusion as such, the findings will be further explored in Section III.

5.3 PERSONAL FACTORS

To identify personal factors that were considered important to success in livestock keeping, herders were asked to describe persons or clans, which were recognised as being highly skilled in livestock care-taking. In general, individuals were not keen to describe friends and neighbours as successful with livestock, but rather the majority of responses indicated neighbouring clans or groups. Indeed, approximately, 60% of respondents identified a nearby group as being particularly good with livestock. Table 24 details the explanations offered for the apparent success with livestock.

TABLE 24: REASONS OFFERED FOR SUCCESS WITH LIVESTOCK

Reason	Percent Response
Personal Commitment (n=18)	43
The Environment (n=11)	26
Skill (n=8)	19
Unknown (n=3)	7
Low Off-take Rates (n=2)	5

Interestingly, personal commitment and dedication to the animals were the highest ranking distinguishing features. Next, neighbouring groups were often considered to have a superior environment with either greater access to water or decreased tick burdens. Skill was deemed to be a lower order characteristic than dedication to the animals. In general, it was believed that through dedication to the animals, skills could be acquired. Finally, some groups reportedly did not have to sell animals as frequently, as their income generating activities were considered to be more successful. Hence, high levels of livestock off-take were noted to be a negative factor in livestock keeping.

Although, humans across the globe often feel envious of their neighbours, nevertheless, the findings do offer some insight into the personal characteristics required to be successful livestock keepers. Overall, a good pastoralist is one who is completely dedicated to his or her animals.

The following section explores individual and community-level values regarding livestock keeping.

SECTION III: VALUES AND ASPIRATIONS

The objective of the following analysis was to first, illuminate study participant's aspirations towards the future for both themselves and their children and second, to gain an understanding of collective values regarding pastoralism and the future of livestock-related livelihoods. Therefore, to assess individual beliefs, attitudes and hence, motivations, the data was initially analysed utilising methods adapted from social psychology. A content analysis was performed to better understand the personal factors related to success in livestock keeping. Given the inherent risk associated with livestock-based livelihoods, personality factors such as coping responses were also investigated.

Conversely, to evaluate community-held values regarding livestock keeping, the data was further analysed utilising methods adapted from the field of applied linguistics. The topical and associational content of conversations with study participants was assessed in order to provide base-line information regarding perceptions towards both livestock and alternative livelihoods. Therefore, the following section is divided into two parts. The first part offers the methods and results for the psychological assessment whereas, in the second part, the discourse analysis is described.

By utilising two different methods to assess the data, the intention was to gain a more holistic understanding of the value and belief structures of the individuals and communities involved. Equally, by combining approaches the study attempts to offer a cross-disciplinary perspective while flagging methodological issues for future research.

6. THE SOCIAL PSYCHOLOGY ASSESSMENT

According to motivational theory, beliefs and attitudes play a major role in determining behaviour at the individual level. As such, the following section examines the expectations and desires regarding livestock keeping and is divided into two parts: the 'dream analysis' and the 'character assessment'. In the 'dream analysis' the aspirations and goals of the study participants were evaluated. The results were then related to an investigation of personality in the 'character assessment'. The following sections outline the approach utilised in both sections.

6.1 THE DREAM ANALYSIS

The dream analysis sequence was comprised of the following five, core questions:

1. *Where do you see yourself in the future?*
2. *What good events do you wish for in the immediate future?*
3. *What do you think is the future of pastoralism?*
4. *What kind of life do you want for your children?*
5. *Why do people educate their children?*

The questions were asked in an open-ended format to enable study participants to offer his or her unique vision for the future. The rational for, and the relationship between the questions are as follows.

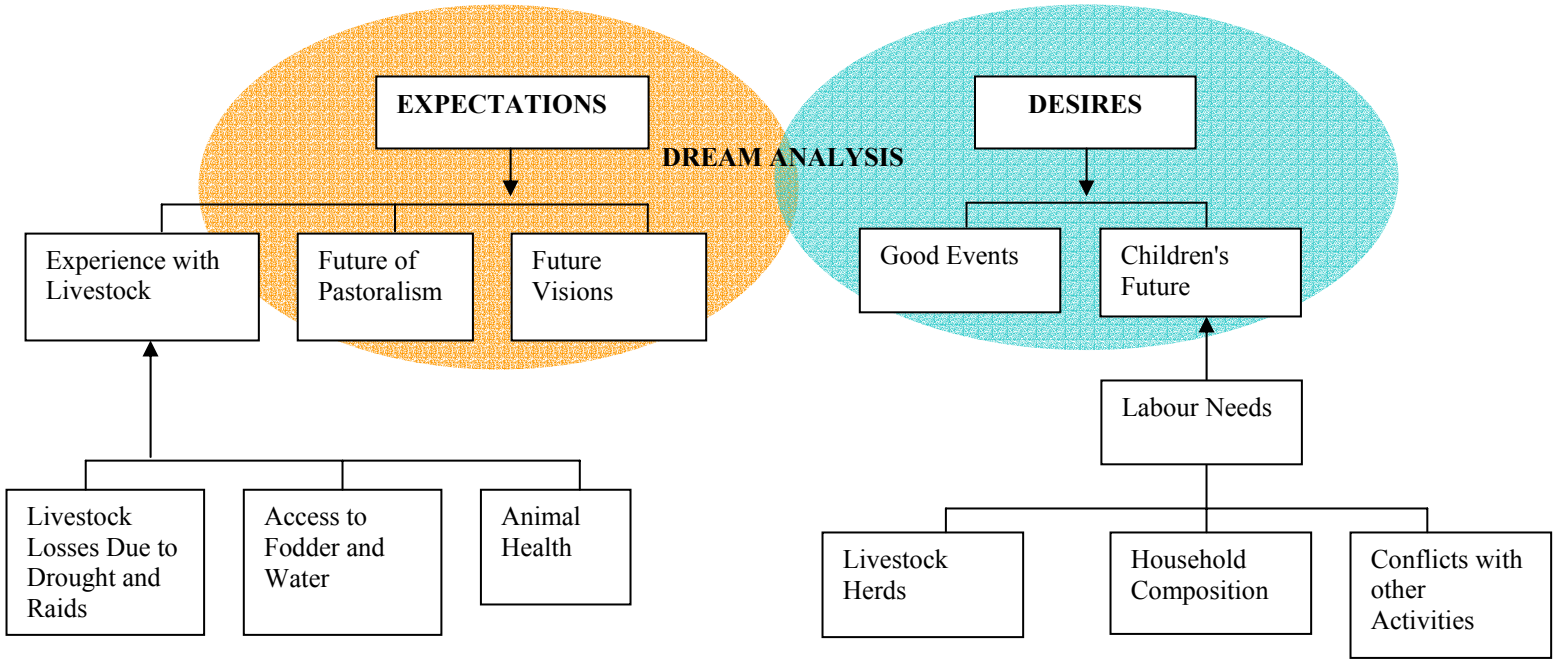
By asking participants where they see themselves in the future, the response may give an indication of long-term plans and personal goals regarding livestock-based livelihoods. Thus, do households expect to continue keeping livestock with little change or do they expect to diversify livelihood activities? Therefore, how participants view their future may be an indirect expression of what they would like to be doing, tempered by what may be possible. Furthermore, how individuals view the future should be related to the good events they wish for, as the happenings should facilitate the means of obtaining a desired end goal. Equally, the events desired may be on a community as well as an individual level. Consequently, the relationship between responses to the future vision and good events questions may be direct as well as indirect.

What participants feel is possible with regard to livestock should be reflected in their judgement regarding the future of pastoralism. For example, a respondent may wish for more livestock in the good events question but in the future they see themselves owning a business and living in a town. The contradiction may be explained by an overall negative view of the future of pastoralism. In this case, it is not that the individual does not value livestock keeping, but rather a distinction is required between livestock ownership and viability of a lifestyle based upon livestock. Furthermore, prior negative experiences with livestock, such as losses due to raids, drought and disease may also influence expectations of success and notions regarding the future of pastoralism.

The final two questions examined values towards education and further corroborated views on the future of pastoralism. Education is frequently seen as an anathema to a nomadic lifestyle. Thus, if households choose to educate their children in order to qualify them for a movement out of pastoralism into other sectors, it may offer a framework to assess the perceived value of other livelihood activities over livestock keeping. However, what a respondent may feel is appropriate for their children may not be the same as for themselves. For example, the rewards expected from non-livestock activities may be perceived as high for the educated, while at the same time unattainable for the uneducated. Obviously, the level of disposable income and household labour requirements also affects whether a child will be sent to school Therefore, the responses must be interpreted in relation to the household livelihood strategy as a whole, as detailed in previous sections of the report.

The following figure (Figure 15) details the components of the dream analysis and outlines potential contributing factors to the expectations and values regarding a livestock-based livelihood.

FIGURE 15: THE DREAM ANALYSIS FRAMEWORK TO ASSESS EXPECTATIONS AND DESIRES



6.2 THE CHARACTER ASSESSMENT

The aim of the character assessment was to examine the personality factors that may influence the motivation to keep livestock. Responses to the following questions comprised the data for the character assessment:

1. *How do you identify yourself?*
2. *Who is your role model?*
3. *If you lost your animals to drought what would you do?*

The intention of asking questions one and two was to explore differences in the perceived *actual* and *ideal* self. Conversely, question three examines the ability to cope with stress and the participants' attribution style for positive and negative events. In this manner, perceptions of control and social cognition were evaluated.

By analysing the perceived *actual* and *ideal* self, one can assess not only how participants view themselves but also how they would *like* to be viewed. It has been argued that to fully understand human motivation one needs to include the *self* in the analysis. As Weiner (1989) states:

> Many actions serve to sustain or enhance self-esteem; one's self-concept frequently determines ones thoughts and behaviours; individuals tend to maintain self-consistency in their actions; and self-perception provides one thread to the stability of personality and behaviour over time.

Furthermore, according to some of the major personality theories (Rogers, 1951; Lecky, 1945) people behave in manners that are consistent with, and further confirm their self-concept or self-views. Thus, if participants identified themselves as pastoralists it would indicate that they would be motivated to act according to this self-concept and therefore pursue a livestock-based livelihood.

The *ideal* self was further explored by investigating the stated role models of study participants. According to self-enhancement theory, to improve self-esteem, people generally seek opportunities to acquire positive feedback regarding characteristics that are perceived as valued (Weiner, 1989). By assuming that an individual's valued characteristics will be reflected by the stated characteristics of their role model, one would expect people to be motivated to display or aspire to their role model's characteristics. For example, if a participant identified a role model associated with livestock keeping we would assume that the participant would be motivated towards a livelihood based upon livestock.

By comparing an individual's actual vs. ideal self, other factors, which may influence motivation can be analysed. For example, if someone identified himself or herself as a destitute pastoralist but their role model was a successful businessperson, it may indicate that they do not wish to pursue behaviour, which reflects or perpetuates their destitution. Therefore, such a person will be motivated to change their present

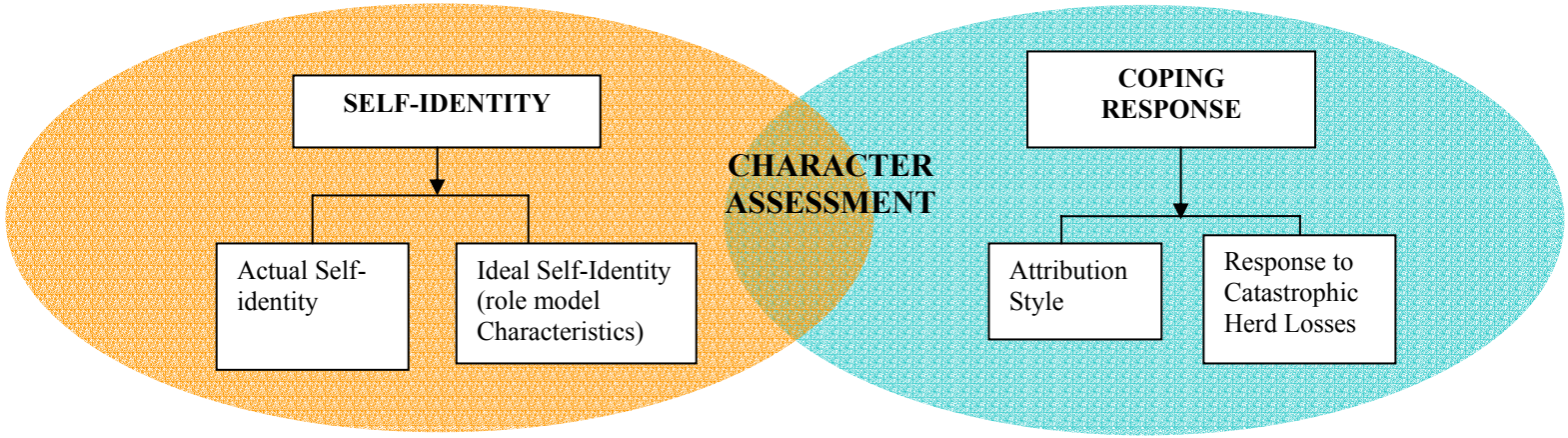
situation. As such, ‘negative’ or less appealing self-identities coupled with contrasting role model characteristics may be an indication of the aspiration or motivation of the individual to change current conditions.

Further, by analysing individual responses to catastrophic herd losses, the study hoped to explore how persistently participants would defend their livestock-based livelihood when under duress. For example, after drought, do participants expect to rebuild herds or are alternative livelihood activities perceived as the best livelihood option. If the response were the former, it would indicate a determination to defend the continuation of a pastoral lifestyle.

The final question also explores the attribution style of successful livestock keeping. The attribution style refers to how a person perceives the causality of events or situations in question. It is well known that the perceptions of causality of previous events, affects future expectations or aspirations concerning the same event (Montenelli & Hill, 1969; Zajonc & Bruckman, 1969, Cohen & Hansel, 1956; Weiner, 1989). According to theorists, the causality of an event involves the identification of the locus (internal vs. external), stability and controllability of the origin (Heider, 1958; Rotter, 1966, Weiner, 1989). For example, if a participant responded that the environment was the most important factor determining the success of livestock keeping, the locus would be external, and therefore would be unstable and uncontrollable. Alternatively, if the commitment of the livestock keeper were deemed the most important factor to the success of livestock keeping, the locus would be internal, and therefore fairly stable and within an individual’s control. Weiner (1989) argues that the stability of the cause is the key factor affecting future expectations. Thus, a stable cause such as personal commitment leads to expectations of success following previous achievements. Conversely, an unstable cause such as the environment, may lead to uncertainty about future expectations. Thus, according to the expectancy-value theories of motivation, expectations of future success with livestock will indicate a motivation for livestock keeping.

Figure 16 graphically depicts the overall relationship of components of the character assessment.

FIGURE 16: THE CHARACTER ASSESSMENT FRAMEWORK TO ASSESS SELF-IDENTITY AND COPING RESPONSE



6.3 METHODS

To investigate individual aspirations, identities and coping responses, regarding livestock keeping, a content analysis was performed.[9] The raw data for the analysis consisted of direct quotations from participants' responses to the questions outlined above. As Patton (1987) notes regarding qualitative data analysis:

> Direct quotations reveal the respondents' level of emotion, the way in which they have organised the world, their thoughts about what is happening, their experiences, and their basic perceptions…The task for the qualitative evaluator is to provide a framework within which people can respond in a way that represents accurately and thoroughly their point of view.

Thus, the open-ended questions in the dream analysis and character assessment provided the framework within which people could express their beliefs and attitudes for the subsequent derivation of motivational factors and influences.

There are a variety of approaches to qualitative data categorisation. For example, Dey (1993) describes 'holistic, bit-by-bit, and middle order' approaches to text categorisation. Use of any of the three approaches varies depending on the degree of structure present in the text. The holistic approach advocates a general overview of the data in order to make very broad categories and then later refining ('splitting') the groupings based upon the interconnections. Conversely, the bit-by-bit approach recommends first identifying small groups in the data and then making broader categories ('splicing') based on links/relationships in the databits.[10] Finally, in the middle order approach (which is recommended for semi-structured interviews), the data is initially categorised according to the structure of the interview and then later split or spliced according to the relationships found between the databits.

The analysis utilised the middle order approach and the following four levels of categorisation:

1. Topic category defined by the question (e.g. future aspirations).
2. Response category defined by data (e.g. expectation of herd growth).
3. Theme category defined by data analysis (e.g. overall aspirations and expectations).
4. Motivation category defined by interpretation (e.g. highly motivated for livestock rearing).

Finally, the associations between the databits were examined. Patton (1987) refers to the procedure of examining relationships between databits as 'logical analysis'. Based upon the associations, the manner in which participants perceived themselves and their

[9] Content or narrative analysis is 'a technique used to extract desired information from a body of material (usually verbal) by systematically and objectively identifying specified characteristics of the material (Smith, 2000).

[10] A databit is a portion of a response, which has been grouped according to the meaning or reference.

environment may be illuminated. Further, by examining the frequency of occurrence, an attempt was made to judge the strength of the associations. Lastly, the variance and strength of the identified associations were evaluated for different participant subgroups based upon gender, age and the ownership of cattle vs. smallstock.

In the following section, the results are offered in three parts. In the first part, the findings of the Dream Analysis are presented and discussed. Alternatively, in the second part, the Character Assessment results are detailed. Finally, conclusions are offered.

6.4 RESULTS OF THE DREAM ANALYSIS

The analysis begins by examining the future aspirations of study participants. In this manner, the future aspirations question formed the basis by which all other responses could be compared.

6.4.1 Future Aspirations

When study participants were asked to relate what good things they would like to happen to them in the future, four response categories were identified: rural, peri-urban 1, peri-urban 2 and urban. The 'rural' classification denoted those individuals who stated the desire to live with their livestock and pursue a purely pastoral livelihood. Conversely, 'peri-urban 1' described individuals who aspired to livestock ownership while still maintaining alternative income generating activities. Individuals in this category often expressed the desire to own greater numbers of livestock but wished to reside close to settlements and towns. Alternatively, 'peri-urban 2' described individuals who expressed the desire to remain in peri-urban areas expressly pursuing non-livestock alternate income generating activities. Finally, the 'urban' category included study participants that wished to pursue a business or employment opportunity in town and did not wish to continue keeping livestock.

Thus, the four categories could be further divided and weighted by the involvement in livestock keeping. For example, for the 'rural' category respondents, livestock were viewed as both a lifestyle and a livelihood. Whereas, the 'peri-urban 1' category saw livestock ownership as a means to an end, often with social connotations. Thus, for peri-urban 1 respondents, livestock were often related to paying school fees or buying houses or being rich. On the other hand, neither peri-urban 2 nor urban respondents mentioned livestock as a part of their dreams for the future. Hence, the aspiration categories are seen to represent various degrees of motivation towards livestock keeping. Table 25 offers the results of the analysis.

TABLE 25: FUTURE ASPIRATIONS

	Rural	Peri-Urban 1	Peri-Urban 2	Urban	Total
Number of Responses	21	35	5	6	67
Percentage	31%	52%	7%	9%	100%

From the table, close to one third of the respondents desired to return to a pastoral livelihood. A minority of participants did not aspire to livestock keeping in any form (16%). Thus, the majority of study participants belonged to the Peri-urban 1 category and as such, viewed livestock as one part of their livelihood strategies. Consequently, there is a need to distinguish between livestock ownership and livestock keeping. Most of the households in the study expressed the desire to own more livestock but were not interested in pursuing a pastoral livelihood. However, when the associations for livestock were analysed, a more nuanced picture emerged. Table 26 explores the associations for livestock among the Peri-Urban 1 respondents.

TABLE 26: FIRST ORDER ASSOCIATIONS: LIVESTOCK (PERI-URBAN 1)

First Order Associations	Number of Associations
Livestock and Wealth	13
Livestock and Herd Building	10
Livestock and Money to fund further Livestock Purchases	10
Livestock and School Fees	3
Livestock and Milk Sales	2
Livestock and Animal Sales	12

As the table illustrates, in the majority of instances, owning livestock was equated with being rich or well-off. Livestock acquisition was also associated with herd building i.e. many respondents dreamed of their livestock multiplying and thereby increasing capital assets. Interestingly, the wish for livestock was also directly related to obtaining sufficient money to purchase further animals, most often to initiate a livestock trading business. Surprisingly, a minority of respondents wanted livestock in order to pay for school fees. The least number of participants desired livestock in order to sell milk (a means of generating income). Finally, owning livestock was also related to livestock sales. Thus, respondents frequently expressed the desire to own livestock in order to sell those animals. Although ostensibly, it would appear that households desired animals to raise cash, an analysis of the second order associations revealed the opposite finding (Table 27).

TABLE 27: SECOND ORDER ASSOCIATIONS: LIVESTOCK SALES (PERI-URBAN 1)

Second Order Associations	Number of Associations
Sales for School Fees	1
Sales to buy Cattle/Camels	8
Sales to Aid Family Member	1
Sales to Start Trade Business	1
Sales to Get Rich	1

Thus, for the majority of participants, who associated livestock with sales, the off-take was related to the purchase of cattle and or camels. Hence, households most frequently expressed the desire to upgrade herds via smallstock sales. Cattle and camels offer a variety of benefits from increased milk sales to greater drought resistance. Among certain pastoralist communities, it is a well-known risk mitigation strategy to diversify livestock holdings. However, the desire for cattle and camels among the poor, who are generally not greatly involved in the livestock economy, nor highly dependent upon livestock for food security, may have a greater relation the perceived status and social acceptance of owning such animals. The finding requires further exploration.

Thus, although the majority of restocked households did not deem a pastoralist lifestyle desirable, livestock ownership still figured prominently among aspirations for the future. While few of the study participants expressed a desire to return to livestock keeping, for the most marginal, livestock are still viewed as the best means of acquiring capital assets and social standing.

To further examine aspirations for the future, firstly, gender (Table 28) and secondly, age (Table 29) was disaggregated.

TABLE 28: FUTURE ASPIRATIONS DISAGGREGATED BY GENDER

	Rural	Peri-Urban 1	Peri-Urban 2	Urban
Women (n=28)	29%	64%	7%	0%
Men (n=29)	34%	55%	3%	7%

As the table displays, more men than women desired a return to a pastoral livelihood. Indeed, the most women appeared keen to stay in peri-urban areas and pursue both livestock and non-livestock related activities (71%). Surprisingly, more men than women expressed a wished to live in urban areas. Nevertheless, overall, there is not a huge gender gap in regard to aspirations for the future. However, when age was disaggregated, a greater influence on future desires was noticed.

TABLE 29: FUTURE ASPIRATIONS DISAGGREGATED BY AGE

Age	Rural	Peri-Urban1	Peri-Urban2	Urban
18-25 (n=6)	17%	67%	0%	17%
26-40 (n=20)	20%	70%	5%	5%
41-55 (n=18)	39%	56%	0%	6%
56-70 (n=6)	83%	17%	0%	0%
71-85 (n=3)	67%	33%	0%	0%

Not surprisingly, the desire to return to a pastoral livelihood was highest in the oldest age groups of the study sample. Equally, the majority of individuals 40 years and younger wished to remain in peri-urban areas. The finding may be a reflection of the greater educational levels of the younger age groups combined with a lack of exposure to a pastoralist lifestyle. Although many of the older participants wished to return to a pastoral livelihood, the majority did not desire for their children to do so. Indeed, most respondents were educating all of their children. The following section explores values towards education.

6.4.1 Values Towards Education

As the following table demonstrates, values regarding the education of children could be divided into three main response categories; households that educated all of their children, those which educated some children, while others were left at home and finally, families who did not send their children to school at all.

TABLE 30: EDUCATION LEVELS

	Percentage
All Children Educated (n=45)	64%
Some Children Educated (n=18)	26%
No Children Educated (n=7)	10%

From the table, the majority of households, who participated in the study, sent all of their children to school. A much lower proportion (26%) enrolled some children, while others were kept at home. The finding can be partially explained by the expense of school fees and partially by the need for livestock-related labour. School fees were frequently associated with the necessity to sell livestock and with being expensive or a burden. Nevertheless, the majority of households who sent some children to school while others stayed at home owned cattle (Table 31).

TABLE 31: HERD COMPOSITION AND ATTITUDE TOWARDS EDUCATION

	All Educated	Some Educated	None Educated
Cattle owners (n=19)	9	8	2
	47%	42%	11%
Smallstock owners (n=41)	28	8	5
	68%	20%	12%

For smallstock owners, increased school attendance was often linked to the lack of livestock to inherit. As one participant noted:

> '…nowadays the only thing is education because before whether educated or not there were animals to inherit but due to changes the animals are few.'

Further, as will be illustrated below (Table 32), the desired effect of education was gainful employment. Thus, for the majority of households owning only smallstock, a livestock-keeping was not viewed as a viable future for children. Consequently, the 32% of smallstock owning households, which sent some or none of their children to school, were more likely constrained by school fees than labour needs. Whereas, owning cattle gave households a different perspective of the future and the viability of livestock based livelihoods. For the majority of cattle owning households, the need for labour appears to have directly influenced the attendance of children at school. Children were often 'kept back' to care for the livestock. The following table examines the first order associations for education.

TABLE 32: FIRST ORDER ASSOCIATIONS AND EDUCATION

Association	Number of Responses
Education and Employment	39
Education and Success	3
Education and Personal Development	3
Education and Asset Acquisition	2
Education and Urban Lifestyle	1
Education and Help for the Family	3
Education and Earnings	1
Education and Self Sufficiency	2
Education and Opportunities	1
Education and Literacy	3
Education and Business	1

Nevertheless, education was not only viewed as beneficial for monetary gain through employment. Secondary associations included factors such as insight, knowledge, intelligence, open-mindedness and literacy. The finding indicates parental motivation for the general well being of the child and more importantly, that the aforementioned

traits are desirable attributes. Education was also linked to the personal development of the child and an increased ability to cope in a changing world. As one study participant noted:

> 'One who has no education is like a blind man…being able to read is important for everything…even going to hospital and being able to follow directions if you don't know where it is, or being able to read drug instructions.'

Education was also perceived to be an important alternative to the decline in both pastoralism, generally and the fortunes of individual families more specifically. The following excerpt is from a widow in Baringo district:

> '…before people were grazing and the animals got finished but with education you have it until death…[if a person is] educated and the animals are finished one will use the brain to get a job and the money to buy new animals.'

When the second order associations were evaluated, employment was most frequently linked with future help for the family (Table 33). Most commonly, parents expressed the desire for their educated and hence, future employed children to purchase livestock for them. This is an important finding and further indicates the changing individual values of many pastoralist societies. Although a pastoralist lifestyle was not deemed desirable for the majority of parents and children, *owning* livestock remained sought-after for the older generations. The following table illustrates the second order associations for employment.

TABLE 33: SECOND ORDER ASSOCIATIONS EMPLOYMENT

Association	Number of Responses
Employment and Self-Sufficiency	11
Employment and Help for the Family	16
Employment and Livestock	5
Employment and Settled Lifestyle	7
Employment and Business Opportunities	3
Employment and Stable Salary	3
Employment and Marriage	1
Employment and Money to Purchase Livestock Drugs	1
Employment and Government Job	1

As the table demonstrates, a large number of households also associated employment with the self-sufficiency and independence of their children. Equally, employment was also related with a settle lifestyle in towns or in places 'far away'. Hence, education was perceived as allowing children wider opportunities away from their natal areas.

6.4.1 The Future of Pastoralism

When study participants were asked to detail their perceptions regarding the future of pastoralism, three general response categories were noted: those who felt positive about the continuation of pastoralism, those who believed that pastoralism would remain unchanged, and those who stated that pastoralism was in decline. Although answers were often qualified, the study categorised replies based upon the overall theme of the response.

TABLE 34: PERCEPTIONS OF THE FUTURE OF PASTORALISM

	Future Positive	No Change	Future Negative
Number of Responses	8	4	36
Percent	17%	8%	75%

Overwhelmingly, the majority of study participants believed that pastoralism was under threat. As more than one reason was often given, all responses were recorded (Table 35).

TABLE 35: REASONS OFFERED FOR NEGATIVE PERCEPTIONS

Reason	N respondents
Drought	16
Insecurity	4
Children's Education	4
Herds Declining	8
Livestock Disease	2
Employment	2
Population Growth	1
Difficult Lifestyle	1

The majority of respondents cited drought as the major cause of the decline of pastoralism. In general, droughts were believed to be both increasing infrequency and severity. Interestingly, insecurity was cited in only 11% of cases, even though a number of study participants had been impacted by raids. Equally, livestock herds were also believed to be in decline due to the variety of environmental and social factors listed above.

However, although responses were often categorised as negative, the majority of respondents did not believe that pastoralism was ending, but rather that it was changing form. The following quote illustrates the finding:

> 'Pastoralism [will continue] employed people will have money to get labour for looking after their livestock. Those people who are not educated will look after the animals of those who are educated.'

Thus, for many, the future of pastoralism was viewed to be the domain of the rich, with the poor relegated to livestock care-taking. Further, as the following quote demonstrates, educating children enabled them to be part of the wealthy 'absentee' herd owners.

> 'It will continue [pastoralism] because even if more children go to school they will learn more about livestock diseases. Even though they get employment, they can employ people to handle their animals and pay them. Their parents can also take care of the animals.'

Conversely, reasons offered for a positive view of the future, often incorporated or accepted the aforementioned negative factors (Table 36).

TABLE 36: REASONS OFFERED FOR POSITIVE PERCEPTIONS

Reason	N respondents
Educated People will Continue to Own Animals	6
Drought will End/Environment will Improve	2
The Samburu/Pokot will Stay the Same	2
Lack of Viable Alternatives	1

In general, two types of positive respondent were noted; those that believed that external factors such as the environment would improve and those that felt factors such as education would not have a lasting impact on social norms and customs regarding livestock. Thus, only a minority of study participants did not relate changing environmental and social conditions to a decline in livestock-related livelihoods.

Finally, views regarding the future of pastoralism were compared to the above-described educational groups (Table 37).

TABLE 37: THE FUTURE OF PASTORALISM AND ATTITUDES TOWARDS EDUCATION

Children's Education	Future Positive	No Change	Future Negative
All Educated	5	2	22
Some Educated	1	2	9
None Educated	1	1	4

Not surprisingly, households that sent all of their children to school had a negative view of the future of pastoralism. Interestingly, those households, who kept children out of school expressly to take care of livestock, also shared the view. The finding gives a further indication of the strength of the beliefs regarding the sustainability of livestock-related livelihoods.

Thus, the analysis confirms the association between attitude towards education and perceived future of pastoralism. Education appears to operate as a safety net against the adverse conditions of pastoralism. The greater the fear of these adverse conditions the

more negative or uncertain the view of the future of pastoralism. The more negative or uncertain the view of pastoralism the more likely that children are sent to school even at the expense of selling livestock or incurring labour shortages within the household.

Positive associations with livestock keeping include pride, respect, strength and wealth, which indicate the values associated with a livestock-based livelihood. Such motivating attributes, however, are countered and often overwhelmed by the uncertainty, risk and insecurity faced by livestock keepers in their attempt to combat livestock disease, drought and raids. The aforementioned negative factors are associated with the motivation for livelihood diversification and a decreased investment in the livestock economy.

6.5 RESULTS OF THE CHARACTER ASSESSMENT

The objective of the character assessment was to further understand the influence of an individual's values and expectations on the pursuit of livestock and non-livestock related livelihoods. Hence, the study analysed associations with the 'actual' and 'ideal' self as stated by study participants. Notions of the 'actual' self were derived from questions regarding self-identity whereas; perceptions regarding the 'ideal' self were obtained from study participant's stated role models.

6.5.1 The Perceived Actual and Ideal Self

For the majority of respondents, the perceived 'ideal self' and 'actual self' were associated with livestock or non-livestock-related livelihood characteristics exclusively or elements of both. Strongly associated livestock-related characteristics included being a pastoralist, owning many or different types of livestock and being committed to livestock keeping. Whereas, non-livestock-related livelihood characteristics included being a successful and good businessperson and having children who are educated and employed. In addition, being a clan member was associated with keeping livestock (Samburu) and involvement in alternative income generating activities (Pokot).

The following quotes illustrate examples of self-identity responses and their subsequent classification.

> '…I would identify myself as a livestock keeper and a businesswoman.' (*Both*)

> '…not a real pastoralist but I am a person who likes to improve, even if to keep animals I have to engage in other things.' (*Livestock-related/livestock owner*)

Table 38 explores the actual self-associations of study participants.

TABLE 38: ACTUAL SELF-ASSOCIATIONS

Actual Self Associations	Percentage
Livestock -Related (n=29)	48%
Alternate Income Activities (n=13)	22%
Both Livestock and Non-livestock Activities (n=18)	30%

As the table illustrates, most participants considered their self-identity to be livestock related. However, of the total percentage (48%) approximately 23% of respondents identified themselves as livestock owners, whereas the remaining 25% allied themselves with a traditional pastoralist lifestyle. The findings corroborate the results of the future aspirations analysis, where approximately ¼ of the respondents desired to return to a pastoralist lifestyle.

Conversely, role model associations were utilised to assess the 'ideal' self-identity of participants. The following responses offer examples of participant's role models:

> '… local Shopkeeper -because he has so many things; animals, vehicles, and children are educated - this is what I see as successful.'
>
> '…Mr. Enoch Chelimo - he is a successful businessman. He has a wholesaler and also has about 300 goats.'
>
> '…a fellow businessman - because since there is a market place here, he can make lots of money. He also has animals and takes care of them well'.

Again, as with the actual self-identities offered above, many traits or characteristics involved both livestock and non-livestock characteristics. However, as Table 39 illustrates, overall, livestock-related characteristics dominated.

TABLE 39: IDEAL SELF-ASSOCIATIONS

Role Models	Percentage
Livestock-Related (n=32)	57%
Alternate Income Activities (n=14)	25%
Both Livestock and Non-Livestock Activities (n=10)	18%

Role models with a livestock association such as being dedicated or good with livestock or owning large herds, accounted for over half of the responses. Whereas, role models with only business characterisations accounted for ¼ of the replies. Finally, only a minority of participants described role models with both business and livestock-related characteristics. Interestingly, particularly in Samburu district, beneficiaries often chose the same role model, but emphasised different qualities. For

example, many of the role models were wealthy community members, who had diversified livestock holdings, businesses and highly educated families. Participants generally related specifically to only one of the aforementioned features. Further, although the well-off community members were often admired principally for their large herds, most could no longer be considered pastoralists. Hence, again a distinction must be made between livestock ownership and the pursuit of a pastoral lifestyle.

Not surprisingly, actual and ideal self-perceptions were most often directly correlated. For example, those with livestock related *actual* associations most frequently identified livestock-related *ideal* associations. Equally, individuals involved in petty trade and small businesses most frequently cited businessmen as their role models.

Although the character traits could be largely divided into livelihood related features, study participants noted a large number of additional, more personal qualities. For example, among the Samburu, being generous is the hallmark of social acceptability (Lesorogol, 2001). As such, generosity was frequently mentioned as a desirable trait in Samburu district. Whereas, in Baringo district, other factors such as 'not quarrelling with others', sharing food and educating all of their children were commonly cited as attractive role model qualities.

Following the overall assessment, gender was disaggregated (Table 40).

TABLE 40: GENDER DISAGGREGATION OF ACTUAL ASSOCIATIONS

	Livestock-Related		Livestock and Non-Livestock	Alternate Income
	Livestock Owning	Pastoralism		
Women (n=30)	27%	20%	27%	27%
Men (n=30)	20%	33%	30%	17%

From the table, more women than men stated their self-identity as livestock owners rather than pastoralists. Further, more women than men identified themselves via their involvement in alternate income generating activities.

Interestingly, when the ideal associations were disaggregated by gender, large differences were noted only with regard to alternate income generating activities, i.e. more women that men identified with role models having business related characteristics (Table 41).

TABLE 41: GENDER DISAGGREGATION OF IDEAL ASSOCIATIONS

	Livestock Related	Livestock and Non-Livestock	Alternate Income
Women (n=30)	57%	23%	20%
Men (n=27)	59%	26%	15%

A possible reason for the finding may be the large number of widows and female-headed households, of which the study group was comprised. Many of these households, who traditionally make up the most marginalized of pastoralist society, lack the social networks to return to pastoralism or full time livestock keeping and consequently appeared to strongly identify with alternate income generating activities.

Large differences in the actual and ideal selves were also noted when cattle owners vs. smallstock owners were compared (Table 42 and Table 43).

TABLE 42: HERD COMPOSITION AND ACTUAL SELF

	Livestock-Related		Livestock and Non-Livestock	Alternate Income
	Livestock Owning	Pastoralism		
Non-Cattle Owners (n=54)	32%	42%	24%	3%
Cattle Owners (n=17)	33%	22%	44%	0%

Surprisingly, non-cattle owners identified themselves more strongly as pastoralists than the cattle owning group. Equally, a large proportion of cattle owners related themselves to both livestock and non-livestock activities.

However, when the ideal self or role models were analysed (Table 43), the majority of non-cattle owners desired to emulate individuals based upon non-livestock livelihood characteristics.

TABLE 43: HERD COMPOSITION AND IDEAL SELF

	Livestock-related	Livestock and Non-Livestock	Alternate Activities
Cattle Owners	60%	27%	13%
Non-Cattle Owners	33%	24%	44%

It is impossible to understand the finding without first understanding cultural attitudes toward livestock owning and destitution for the communities involved. For both of the communities, livestock ownership is a necessary condition for being a respected member of society and having a voice in community affairs. Nevertheless, although livestock ownership offers a general criterion, there is a hierarchy among most pastoralist societies and social divisions can be based upon the type of livestock owned. In general, cattle owners among cattle-keeping cultures such as the Samburu and Pokot, have more social standing than households who own only smallstock. Equally, it appears that the consequent reparation of livestock herds through externally-funded restocking programmes, does not accord full social acceptance for the households involved (Heffernan, 2000).

Hence, for cattle owners, there is little need to state their 'actual' identity as pastoralists since this is intrinsically obvious for the individuals in question. Conversely, households without cattle, who are considered among the least well off and socially most marginal, may need to emphasise what is no longer an obvious part of their self-

identity. Nevertheless, in relation to their 'ideal' selves, the purported notions of self-identity were less relevant for smallstock owners. Indeed, given the length of time that most of the restocked households had been settled and pursuing alternate income generating activities, it was not surprising that a large proportion of smallstock owners admired other settled people. Thus, it appears that most of the poor wished to portray themselves as part of a livestock keeping culture, to which the majority can no longer claim to be a significant part.

6.5.2 Coping Strategies

The following section explores respondents' ability to cope with catastrophic herd losses. Individuals were asked to detail their post-crisis behaviour in response to livestock losses due to drought or raiding. The intention was to evaluate participant's psychological resiliency to duress and the consequent impact on the pursuit of livestock-based livelihoods. As many of the study participants had actually lost their herds in this manner, the stated responses were often direct descriptions of the reality that many participants had faced and not merely descriptions of potential reactions. As such, the replies give an indication of the range of adaptive mechanisms available after disaster and the level of commitment by the individuals in question to pursue a livestock-based livelihood.

Overall, it appears that adaptive strategies to herd losses were limited to two basic reactions; attempts to gain income through alternate income generating activities or drawing on social capital in the form of livestock loans from friends and relatives. Therefore, for most study participants, positive coping strategies revolved around accessing social and financial capital. As one study participant commented:

> '…I would not lose hope in having animals and I will try to restock myself again…'

Conversely, negative coping responses were those associated with a belief that rebuilding herds was not possible or that one must accept the inevitable. As one Samburu widow offered:

> '…I would die if I lost all my animals…I would follow them to the grave.'

Among those respondents, who did not offer a positive adaptive strategy to herd losses, relating the death of the owner to the loss of animals was quite a common theme. Thus, it appears that expectations of success in adverse circumstances is highly influenced by perceptions of access to capital assets in particular, human, social and financial capital.

The distribution of positive and negative coping strategies were investigated and illustrated below. Overall, three categories of responses were found (Table 44).

TABLE 44: COPING RESPONSES TO CATASTROPHIC HERD LOSSES

Response (n=68)	Percentage
Perform Alternate Activities Only	56%
Borrow Livestock from Relatives	31%
Unable to Rebuild Herds	13%

The majority of study participants indicated that when faced with catastrophic herd losses, they would pursue alternate income generating activities such as firewood and charcoal selling and casual labour. Alternatively, the first response of approximately 1/3 of the study sample was to ask friends and relatives for livestock. Interestingly, borrowing livestock, particularly in Baringo district was noted to be possible only once. Hence, traditional means of herd reconstitution are not a consistent mechanism of restocking for the poor. As one Pokot woman commented:

> '…its shameful to borrow [livestock] again because you can only be helped once…I will try my best to work and buy other animals…'

Furthermore, the majority of households that stated they would attempt to borrow livestock, listed alternate income generating activities as a fallback strategy. The finding gives an indication of the strength of social capital ties and linkages, few households believed wholeheartedly that sufficient livestock loans would be forthcoming. Finally, 13% of respondents were unable to offer any adaptive response to livestock losses.

However, overall positive coping responses (82%) dominated the study sample. The strength of the association indicates an expectation of success in livestock keeping even given the risky or adverse conditions. Thus, the expectation of success or goal attainment is another indication of motivation to own livestock.

When gender was disaggregated, slightly more women than men stated their reliance on alternate income generating activities in times of duress (Table 45). Equally, gender appears to influence the overall perception regarding the ability to rebuild herds.

TABLE 45: COPING RESPONSE AND GENDER

Response	Men (n=35)	Women (n=33)
Perform Alternate Activities Only	51%	57%
Borrow Livestock from Relatives	37%	24%
Unable to Rebuild Herds	11%	18%

The findings may be a reflection of the large number of de facto and de jure female-headed households in the study sample. Female-headed households are traditionally among the most vulnerable and marginalized, hence it is not surprising that fewer women than men were able to borrow livestock from friends and relatives and believed that pursuing alternate income generating activities was their best option for

restocking. The sense of marginalisation may also explain the larger percentage of women who perceived herd rebuilding to be beyond their capabilities.

Subsequently, smallstock and cattle owners were disaggregated (Table 46).

TABLE 46: COPING RESPONSE AND HERD COMPOSITION

Response	Smallstock Owners (n=51)	Cattle Owners (n=17)
Perform Alternate Activities Only	59%	47%
Borrow Livestock from Relatives	33%	24%
Unable to Rebuild Herds	8%	29%

Not surprisingly, for the majority of smallstock owners (59%), the first response to herd losses was to pursue alternate income generating activities. Interestingly, more smallstock than cattle owners reported that obtaining loans of livestock from friends and relatives was a possibility. Finally, a much larger percentage of cattle owners believed that restocking after disaster was impossible. A variety of explanations may be offered for the findings. First, cattle, unlike smallstock represent an expensive asset. Therefore, after disaster, households with cattle may believe that their friends and relatives may not be in a position to restock them. The perception may also influence beliefs regarding the possibility of rebuilding herds. Second, it is also possible that many of the cattle owners had been restocked through traditional mechanisms previously and as such were no longer eligible for future aid. A number of respondents, particularly in Baringo district, noted that approaching friends and relatives for livestock was only socially acceptable once. Further solicitations for animals brought shame upon the individuals and families involved.

Finally, the coping responses of the different age groups were evaluated (Table 47).

TABLE 47: COPING RESPONSE AND AGE

Age Group	18-25 (n=8)	26-40 (n=20)	41-55 (n=26)	56-70 (n=9)
Perform Alternate Activities Only	63%	45%	65%	33%
Borrow Livestock from Relatives	25%	35%	31%	33%
Unable to Rebuild Herds	13%	20%	4%	33%

Not surprisingly, age had the largest impact on negative coping responses and one third of the oldest age group believed that rebuilding herds after disaster would be impossible. Interestingly, borrowing livestock was fairly evenly divided across the age groups.

As the above focused on the individual, the following section explores community-level aspirations and values.

7. THE DISCOURSE ANALYSIS

According to Fowler *et al.* (1997) language incorporates 'specific views or theories of reality'. Thus, language usage reflects the cultural constructions, principles and philosophies of individual societies. Indeed, the correlation between variations in language patterns and structure and social change, has led to an increasing appreciation of the importance of language analysis in social appraisals (Fairclough, 1992). Hence, Discourse Analysis (DA), which comprises 'the theory and analysis of text and talk,' has been applied in a wide variety of disciplines in the humanities and social sciences (Van Dijk, 1997).

In recent years, the applicability of DA techniques to development studies has been recognised (Hanak, 1998). Discourse analysis, by focusing explicitly on the 'expansion' of participant responses, can demonstrate the underlying meaning and how notions and ideas expressed by respondents work together. One of the main tenets of participatory data collection and analysis is to capture the 'expansion' of participant's responses. Nevertheless, participatory methods often miss the connections between the information offered.

Therefore, objective of utilising DA tools, in the context of the research, was to assess the forces of social change by analysing the forms and relationships between utterances on livestock-related issues. As the previous analysis demonstrates, individual attitudes and motivations toward keeping livestock appear to be changing. Livestock are often viewed solely as a financial or social asset rather than as a way of life. Hence, the aim of the assessment was to determine how the changes are influencing aspirations and values at the community level. Consequently, as will be described further below, the analysis identified topics and collated the themes revealed in participant responses.

7.1 METHODS

Historically, in the study of discourse, the terms topic and theme have been used interchangeably creating some confusion.[11] Alternatively, the study makes a distinction between the two concepts. As such, the *topic* of a text, as stated by Keenan and Schiefflin (1983) is a 'proposition about which some claim is made or elicited'. As there may be more than one topic per sentence, the topic can be described as the constituent(s) of a single proposition. Therefore, the topic of the sentence may be depicted by the sequence of subjects presented by the respondent. Conversely, the topics themselves and the links between them, infer the *theme* of the sentence.[12]

However, a further distinction is required between theme and 'architheme'. According to Rubin and Rubin (1995), an architheme is the overall theme of the text in question

[11] For example, Tomlin *et al.,* (1997), in their study on discourse semantics, equate *topic* to *theme,* and offer the following definition: '…. there are essentially three basic ideas of what constitutes a clause level theme or topic: (1) the theme is what the sentence is *about,* (2) the theme is the *starting point* of the sentence, and (3) the theme is the *centre of attention* for the sentence.'

[12] Thus, the research utilised Van Dijk's (1985) definition of a 'global theme' as the starting point for the conceptual notion of theme. Van Dijk describes the global theme as that what gives coherence to a piece of discourse**,** and it is derived by the collection of the sentences that compose the text.

that incorporates all of the particular themes represented in each response. The distinction was particularly useful in gaining an overall understanding of study participant's views particularly regarding perceptions of their own futures and the future of pastoralism. Thus, identifying archithemes helped to illuminate the general motives and factors that influence livestock keeping at the community level.

The analysis proceeded in four stages. In the first stage, responses were disaggregated into topics. For example, in the following statement three topics have been identified: education, employment and independence.

> 'It is important to educate the children (**topic 1: education**) so that they can get jobs (**topic 2: employment**) and be self-sufficient (**topic 3: independence**).'

Once the topics were elucidated, their argumentative representation, or how the topics relate to each other was determined. The objective of looking at the relation between the topics was to discover the underlying meaning of the participant's responses. To this end, a number of *relations* were identified. The relations between or juxtaposition of topics were classified as *causal*, *consequent,* and *contrasting*. As illustrated in the following sentence, a relation was identified as *causal* when one topic was indicated to be the origin of another.

> 'The future is uncertain because with the high level of uncertainty with livestock more people are turning to other activities.'

The topic 'the future is uncertain' is caused by the fact that pastoralism is risky and people are looking for alternative livelihoods. Therefore, the second and third topics are in a causal relationship with the first. Alternatively, a *consequent* relation was defined as one where one topic was considered the consequence of the previous. The following sentence illustrates a consequent relation.

> 'I want to save money from brewery and borrow money so I can have more livestock.'

In the above example, the consequence of 'saving money' and 'borrowing money' is being able to buy livestock. Finally, a *contrasting* relation describes the juxtaposition where one topic presents either an affirmation or negative belief, which is then contrasted by the following topic. For example:

> 'I don't see any problem, unless the rain does not come.'

The statement 'unless the rain doesn't come' contrasts the positive affirmation 'I don't see any problem'. In the example, the second topic invalidates the first by presenting a potential situation that tempers the initial positive statement.

Obviously, the type of relation has implications in the identification of future aid i.e. projects and programmes may address causal relations. For example, if the future of pastoralism is related to the lack of livestock then restocking projects may be the best

form of aid. If, on the other hand, the future of pastoralism is contrasted to the deepening severity and frequency of drought, then livestock-related aid may be less effective or require additional inputs. Therefore, the technique may be used to identify potential indicators of project sustainability. Although it may appear that participatory techniques may elicit similar responses, the subtleties of the relations may be missed or lost in the process.

After identifying topics and relations, the *expansion* of the responses was analysed. An expansion is any additional information, presented by the respondent, which elaborates on a particular topic or explains his or her point of view. Expansions are particularly relevant, as they normally introduce a topic that has not been directly elicited by the question. The following sentence offers an example of an expansion:

> 'I want more livestock, when you have enough animals you can sell them and eat them.'

The main topic of the sentence is 'I want more livestock'. Whereas, the second part of the sentence completes the thought of the respondent, by associating the number of livestock with potential uses. Hence, by identifying the expansion, the intention and relationships between ideas could be assessed.

In the fourth part of the analysis, the study coded the discourse into themes and architemes. For example, if a respondent stated that droughts are occurring with increasing frequency, the prices for livestock are consistently declining and that now herders prefer to send the children to school, the architheme would be 'pastoralism is changing'. To identify the architheme, participant responses were contextualised by analysing the personal story of each respondent. By specifically collating themes and architemes, the study attempted to gain an insight into the collective perceptions of the communities in question.

7.1 THE RESULTS OF THE DISCOURSE ANALYSIS

The discourse analysis began by assessing individual responses regarding the future of pastoralism. The question was analysed first, as it provides a background against which all other questions could be compared and collectively the responses offered direct insight to values regarding the sustainability of livestock keeping. Subsequently, views of the future and aspirations for children were examined.

7.1.1 The Future of Pastoralism

In order to gain an understanding of perceptions regarding the future, responses were classified as positive, negative or mixed. Therefore, replies that stated that livestock keeping would continue despite difficulties were classified as positive. Conversely, statements that allowed for the end of pastoralism, or that listed all the problems affecting livestock keeping, were categorised as negative. Whereas, responses that were classified as 'mixed' represented a combination of positive and negative topics. The following statements offer examples of the classification procedure.

> ‘The weather is influencing the survival of livestock, if it doesn’t change all of the animals will die.’

In the above sentence, two topics were identified. The first topic is that weather is an element that determines livestock survival and the second topic is that the drought will kill all of the animals. Furthermore, the two topics are in a consequential relationship. Therefore, the theme was identified as ‘drought determines the survival of livestock.’ As the only point of view offered was one with a negative outcome (i.e. all of the animals will die), the statement was classified as negative.

In contrast, the following sentence offers an example of a mixed theme.

> ‘It (the future of pastoralism) could be good but drought is a menace to everything, including livestock.’

Again, two topics were identified. The first topic offers a view on the potential of pastoralism, whereas the second topic declares that drought is a menace. Therefore, the theme of the sentence is that ‘drought is a menace to livestock’. Thus, the theme was determined by the *contrast* relationship that links the two topics. Finally, as the first topic is positive, and the second is negative, the theme was classified under the mixed category.

The following table presents the results of the analysis.

TABLE 48: RESPONSE PATTERNS

Pattern of Topics	Response
Negative + Negative (n=20)	42%
Negative/Positive or Positive/Negative (n=19)	39%
Positive + Positive (n=9)	19%

As the table demonstrates, overall, a negative view of the future predominated. As with the psychological assessment, participants view pastoralism to be under threat. However, it may be argued that by determining the relationships between the topics, a more nuanced understanding of the community-level view may be obtained. Approximately 40% of the sample believed in the possibility of change and attempted to qualify the future of pastoralism. The finding demonstrates that community values regarding the issue are not absolute. As such, it is not surprising that households continue to own livestock and pursue livestock keeping rather than a purely pastoral lifestyle. The finding also is indicative of a community or culture under the influence of change. Individuals are not ready to completely discount a previous way of life, yet appear to be hedging their bets and moving away from a pastoral existence.

When the negative response pattern was further analysed, not surprisingly, three general causal themes emerged: drought, drought combined with raids and sending

children to school. Hence, overall, the more temporary climatic and political conditions were deemed more damaging than lasting changes such as educating children. However, many study participants believed that the frequency and duration of drought was increasing which did not allow livestock herds' sufficient time to recover. Equally, raiding appeared to be one of the after-effects of drought. Therefore, the level and intensity of raids were not viewed as decreasing in the future. To cope with the uncertainty, households turned to other activities, which were perceived to offer more stability. Finally, education was viewed as an alternative to pastoralism, and the general perception was that children who attended school would no longer be interested in keeping livestock.

Conversely, the causal themes of the positive responses included the following. First, good livestock management could overcome adverse conditions. Second, family members in rural areas could look after the livestock of children who are employed in urban areas. Third, educated children would eventually return to livestock keeping when they themselves have children. Hence, all of factors that threatened livestock-based livelihoods could be overcome.

With regard to livestock management, particular emphasis was put on the personal commitment of the herder. Households, who moved with their animals, were noted to be able to overcome drought. For example, as one Pokot women commented:

> '…[pastoralism] will continue because if one moves with the animals to different places to graze, he can be successful.'

Education was also perceived as having a positive rather than a negative impact. Many of the positive respondents recognised that not all children would be able to attend school. Therefore, some children would always be left behind thereby offering a continuum for livestock keeping. Equally, education did not always represent a permanent separation from a pastoral lifestyle. As one Pokot women commented:

> '…[pastoralism] will continue. My children will go back to a pastoral life once they have children themselves. Children get trained on animals when they come home [from school holidays] with the grandparents, which is how they continue the knowledge.'

Moreover, education was strongly association with employment, and employment was viewed as a means of providing money that could be used to buy livestock (generally for the parents of employed children). The finding will be further discussed in section 7.2.2. Consequently, the individuals who relayed positive responses appeared to accept the fact that pastoralism was evolving and embraced the change.

Finally, the themes relating to the mixed patters were analysed. The emerging themes of the mixed responses offer perhaps the most insight to dynamics of change within the communities under study. Similar to the positive themes described above, mixed responses accepted the adverse factors and offered additional factors to mitigate the negative consequences. For example, the impact of drought could be lessened by the

commitment of the herder. Whereas, other mixed themes included the notion that pastoralism would continue in a different form e.g. most people would live in towns but their livestock would remain on the rangelands. As one Samburu widow noted:

> 'We will never have as many livestock as it used to be. If drought ends, the pastoralist life will continue. People will have livestock in the rural areas and live in Nairobi, their relatives will look after the animals.'[13]

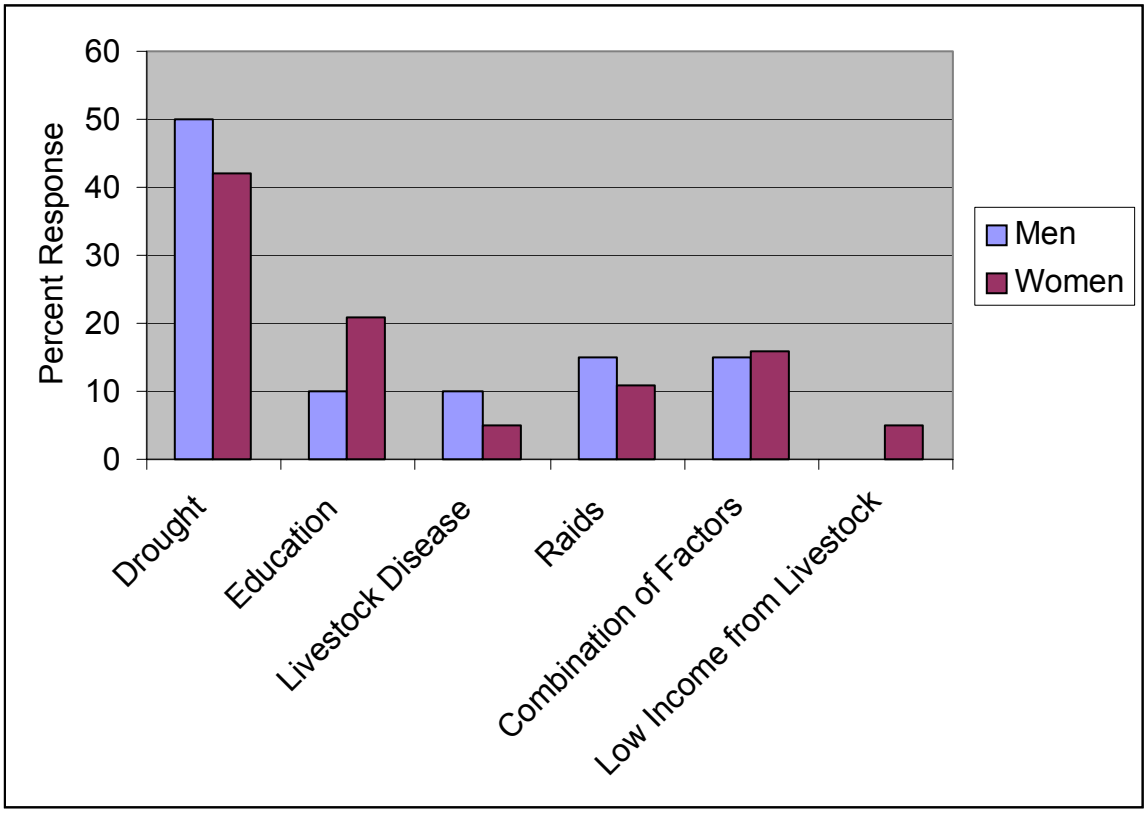
Furthermore, education was perceived as a benefit to livestock keeping and educated people were better able to cope with livestock disease threats, raiding and drought. Finally, the mixed themes appear to represent the conflict between the past and present. As one Pokot man stated:

> '…[Pastoralism] will end because livestock numbers are becoming less and less and…people do not find it paying to keep livestock, therefore they are moving to others activities or business. If environment become better the livestock keeping will improve because people will buy many animals.'[14]

To analyse the impact of gender on perceptions regarding the future of pastoralism, the identified topics were then categorised according to gender (Figure 17).

[13] The topics of the response were classified as negative + positive + positive.
[14] The response was classified as negative+ negative+ positive.

FIGURE 17: REASONS GIVEN FOR DECLINE OF PASTORALISM



As the figure illustrates, although drought was perceived by the majority of both men and women to be the primary threat to the future of pastoralism, more men than women believed that recurring drought was a major factor in the decline. Interestingly, drought, livestock disease and raids were larger concerns for men than for women. Alternatively, women tended to focus upon education and the lowering incomes from livestock. Hence, men blamed external factors beyond the responsibility of the individual, whereas, women implicated changing personal factors, such as sending children to school, which are clearly within an individual's locus of control.

Finally, the archithemes from the responses were identified. Overall, in both study districts, the traditional pastoral lifestyle was undergoing a process of change, which was perceived as mainly negative. Adverse climatic conditions, particularly in Baringo district, which was in the second year of drought, were believed to seriously undermine the future of extensive livestock production. Equally, for many (particularly women) livestock keeping was no longer viewed as financially viable. The risks were perceived as high, given the threat of raids and many commented that livestock prices were too low. Finally, sending children to school was also recognised as irretrievably changing the face of pastoralism. Educated children were generally removed from the livestock economy although, as detailed above, there were some attempts to teach school children livestock herding skills. Thus, what appears to be emerging is a new form of

pastoral production with the urban educated funding the livestock keeping of the increasingly marginalized, rural population.

Given the negative views regarding the future of pastoralism, the study then explored if alternative strategies were viewed in a more positive light. Hence, to further explore the desired future, at both the community and individual level, the following section examines self-perceptions of the future and the aspirations for children.

7.1.2 View of the Future and Desires for Children

To examine self-perceptions of the future and desires for children, the following open-ended questions were asked. First, 'where do you see yourself in the future?' Second, 'what life would you like for your children?' and third, 'what good things would you like to happen to you in the present/future?' The first question hoped to illuminate personal goals and how achievable the ambitions are in relation to present activities whereas, the second question examine the differences between self vs. goals and aspirations for their children. Finally, the third question explores study participants' notions of a *preferable* life vs. their *actual* life.

Collectively, understanding the differences between self-desires and desires for children is very important, as it may help to illuminate the shifting role of livestock within current livelihood strategies. Indeed, the distinction also illustrates the changing values and social norms of the communities involved. Although it is important to remember that the sample size contained only restocked households, by analysing general themes and archithemes, it may be possible to infer more general changes to the communities and cultures in question.

As detailed above, the responses were broken down into topics and the relationship between the topics analysed and the themes and archithemes subsequently determined. As often single responses were not sufficient to justify the selection of a theme, answers from all of the questions were often utilised. For example, when asked where she saw herself in the future, a Pokot widow commented:

> '…I want to continue to have my hotel business and I want to buy more animals. I want to keep both sheep and goats.'

Two topics are easily identified; having a business and keeping livestock. Nonetheless, deciding upon a theme was problematic, as from the reply she seemed equally keen on both livestock and non-livestock activities. Nevertheless, when asked: *What good things would you like to happen to you in the future?* The women clearly stated that she would like to stay in the town where her business was, and she would prefer that her children to return to her natal village to care for her livestock. When her present situation was analysed, it was found that her herd was already kept in her natal village, which was 20 km away. Therefore, the theme identified was business-related; as for her livestock were a means of security and not a viable lifestyle.

The following section first analyses the future visions of participants and then examines the desires for children. The responses were then compared to those regarding the future of pastoralism.

7.2.2 View of the Future and Desires for Self

Six prominent themes emerged from responses regarding individual views of the future: livestock-related (which included owning more livestock and initiating a livestock-trade business), business-related, education for the children, living in town, and self-improvement. However, in many cases, the themes were often associated with a sub–theme. For example, study participants often commented that they wished to live close to town in order for their children to attend school. The desire for livestock, in these cases, was related to the payment of school fees. Nevertheless, the overall theme was subsequently coded as 'living in town'. Equally, in some instances, the theme was difficult to determine, as the topics were presented in such a way that a cohesive summary was difficult. In this case, a 'global theme', as defined by van Dijk (1985) was adopted. The following example is offered from a Samburu woman:

> 'I would like to be rich (topic 1: wealth) and have many cows (topic 2: livestock). I want to educate the children (topic 3: education for the children - juxtaposition) so they can build a house on a plot for me (topic 4: permanent housing).' Relation: consequent.

As topic 1, 2 and 3 do not appear to be in any consequential relationship, it cannot be concluded that the respondent is rich because she has livestock; neither does she want livestock in order to send the children to school. Nevertheless, topic 3 is clearly related to topic 2: education would enable the children to gain employment, and therefore, will have the resources to be able to build a house for their mother. The obvious theme here would be that education enables people to change their lives. However, if this theme would be chosen, it would not take into account the first two topics. Therefore, the global theme of 'improvement' was adopted.

The following table offers an overview of the identified themes.

TABLE 49: INDIVIDUAL VIEWS OF THE FUTURE

Theme	Percent Response
Livestock-related (n=24)	45%
Self-Improvement (n=8)	15%
Education for the Children (n=6)	12%
Living in Town (n=5)	10%
Business-related (n=4)	7%
Unknown (n=3)	5%

Overall, owning more livestock played the biggest role regarding individual's view of the immediate future, followed by a general wish for self-improvement. However, the responses regarding livestock had a strong district-level association. Indeed, when the

total number of topics regarding livestock was tallied, 88% were attributed to respondents from Baringo district. As the majority of the beneficiaries were restocked between 1998 and 1999, the strong livestock associations were probably derived from the recent acquisition of restocked animals. Herders were enjoying the advantages brought about by the ownership of livestock. Furthermore, households in Baringo district tended to reside in more rural areas, away from settlements and towns thereby having a more traditional outlook. Beneficiaries of the Arid Lands Programme offered the following comments:

> '…I might become rich now that I have the animals… I intend to sell some goats and buy cows and camels. Then I want to open a shop to take care of the family needs, so I don't have to sell the animals to buy food.' (Pokot widow)

> '…I will be rich with the animals, because the goats multiply faster and produce milk. Cows also produce milk. I will not have to sell animals, but only milk, so the herd will increase.' (Male Head of Household)

Thus, livestock were viewed as a means to an end, and for some participants, like those above, an end in and of themselves.

The above examples also offer insight to the changing role of livestock for the communities participating in the study. When the relations between the topics were analysed, four principal consequent relations were discovered (Table 50). First, livestock were related to wealth and status and as such, were viewed as a vehicle for escaping poverty. Second, livestock were believed to be the easiest means of generating capital to initiate an alternate activity. Third, livestock were desired in order to pay school fees. Finally, animals were related to food and livelihood security.

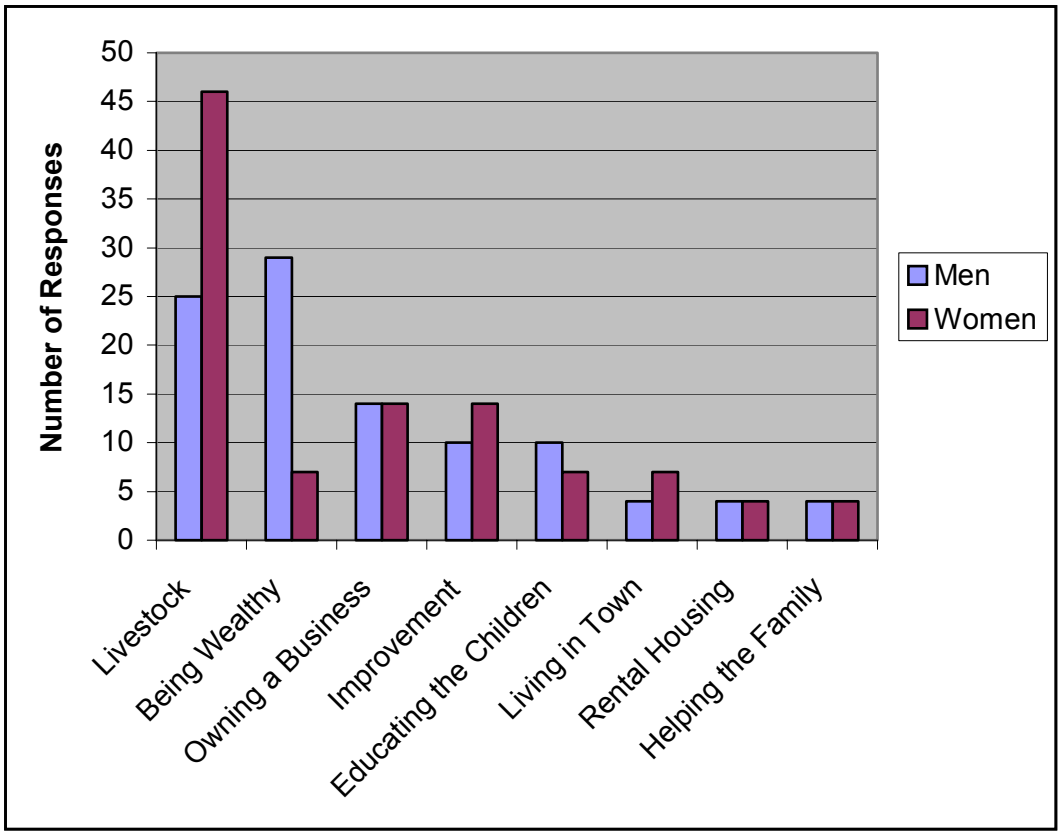
TABLE 50: THE ROLE OF LIVESTOCK

Role of livestock	Percent response
Improvement	63%
Basis for a Different Activity	19%
Means to Pay School Fees	11%
Means of Survival	7%

The table illustrates that for the majority of study participants, livestock acquisition was viewed as a means of improving their present condition. Participants emphasised the fact that the community discriminated against households who did not own livestock. Livestock were required in order to participate in common ceremonies and were needed to obtain credit. Thus, the improvement desired had both economic and social connotations. Interestingly, only a small minority of responses desired livestock as a means of survival or food security.

When participant's desires for himself or herself were evaluated, two additional themes were raised: providing help for the family and owning rental houses in town. The following figure disaggregated men and women's responses (Figure 18).

FIGURE 18: GENDER DISAGGREGATION OF DESIRES FOR THE FUTURE



As the figure illustrates, more women than men desired livestock, whereas more men than women, desired to be rich. Equally, women placed stress on overall improvement and on living in town. When the relations between the topics were examined, the themes 'improvement' and 'being wealthy' were realised by a string of juxtapositions. For example, in the responses below, the desires expressed by the two men were classified as 'being wealthy', as both presented a list of goods that they would like to possess.

Pokot Man #1:

> '…[I would like] to be a business man, to keep a shop, to have a good shamba to cultivate and to keep an upgraded cow because it has more milk and at that time I will be busy and there will be no time of going here and there.'

Pokot Man #2:

> '…[I would like] to have a vehicle, a shamba, a shop, and many animals.'

On the contrary, the desire expressed by the woman below was classified as 'improvement', as she clearly hopes to achieve a higher quality of life.

Pokot Woman:

> '…[I would like] to have a shop, shamba, car, permanent house, to have utensils and to live a high standard of life and to have animals.'

In the above example, the theme 'livestock' is realised through consequent or causal relationship in the majority of women's' responses, whereas in the men's responses the theme is realised through a juxtaposition relation. The following examples further illustrate the finding.

Samburu Woman:

> '…I would like to have more cattle (topic 1: livestock)
> to produce more milk (topic 2: milk).' Relation: consequent

Pokot Woman:

> '…I want more livestock (topic 1: livestock). When you have enough animals you can sell them, eat them (topic 2: livestock as food and livelihood security).' Relation: consequent

Samburu Man:

> '…I want my herd to grow and eventually I want to have lots of livestock. (topic1; herd growth).' Relation: juxtaposition.

The differences in the type of relations found suggest that women are more concerned with the practical aspect of keeping livestock, i.e. food and livestock sales. On the contrary, men, appear to be more concerned with the status and security that livestock ownership implies.

When the above responses were compared to those regarding the future of pastoralism, there was no obvious association between a negative view of future of pastoralism and a desire for a future based upon alternative activities. Indeed, the opposite was found. The majority of respondents with a negative view of the future of pastoralism desired livestock in their immediate future. The finding further underscores the changing notions of livestock-related lifestyles. Although the future of pastoralism was considered doubtful, livestock ownership was still deemed socially and economically beneficial. Equally, a positive view of the future of pastoralism did not necessarily mean that beneficiaries wanted to possess more livestock, or to continue to be herders, although for some participants this was obviously true. The following examples illustrate the finding:

Example #1 from a Pokot Woman:

> Regarding the future of Pastoralism:
> '…it will continue because if one moves with animals to a different place to graze, he can be successful.'
>
> Regarding desires for self:
> '…In the future I would like to expand my hoteli business into two neighbouring towns.'

Example #2 from a Samburu Man:

> Regarding the future of Pastoralism:
> 'Education will not undermine the livelihood of a pastoralist. The children who are not educated will continue with pastoralism.'
>
> Regarding desires for self:
> '…I want my herd to grow. I want to have a lot of livestock in the future.'

Hence, participants, who were engaged in a business activity that was not livestock related, appeared to be more positive regarding the future of pastoralism than those more directly involved in the livestock economy.

7.2.3 Desires for Children

Regarding desires for children, participants' responses could be organised into the following six themes: education and subsequent employment, the desire that some children would attend school while others would be livestock keepers, pastoralism, independence, owning livestock and finally a modern or better life. However, a clarification of the theme categorisation is required. For example, many respondents stated that they wanted their children to be educated. As education was conceived as the only means for their children to obtain jobs, all such responses were coded under the education and employment category. Conversely, when a respondent suggested that they wanted their children to be employed, the response was also coded under the aforementioned category, as the common belief was that employment was the ultimate result of education. Moreover, when responses stated the connection between education and employment, and it was indicated that having a job allows children to provide for themselves, the theme selected was independence. Finally, study participants made a distinction between pastoralism and owning livestock. Table 51 offers an overview of responses.

TABLE 51: DESIRES FOR CHILDREN

Theme	Percent Response
Education and Employment (n=34)	52%
Some Educated, Some Livestock Keepers (n=19)	19%
Pastoralism (n=6)	9%
Modern and/or Better Life (n=6)	9%
Independence (n=4)	6%
Livestock owners (n=3)	5%

Overall, education and subsequent employment was the most common desire for children, followed by a division within the family between children who are educated and those who look after livestock. However, as previously demonstrated in section 6.1.2, the majority of households who did not desire education for all of their children owned cattle and as such had greater livestock-related labour requirements. As one women noted:

> 'I would like some of the children to get education, and some to look after livestock. If all go to school nobody will be left to look after the livestock.'

Nevertheless, education was a sub-theme for almost all of the responses with the exception of pastoralism. Education was also perceived as allowing children to pursue an independent existence and a 'better' or 'modern' life. As one Tugen man related:

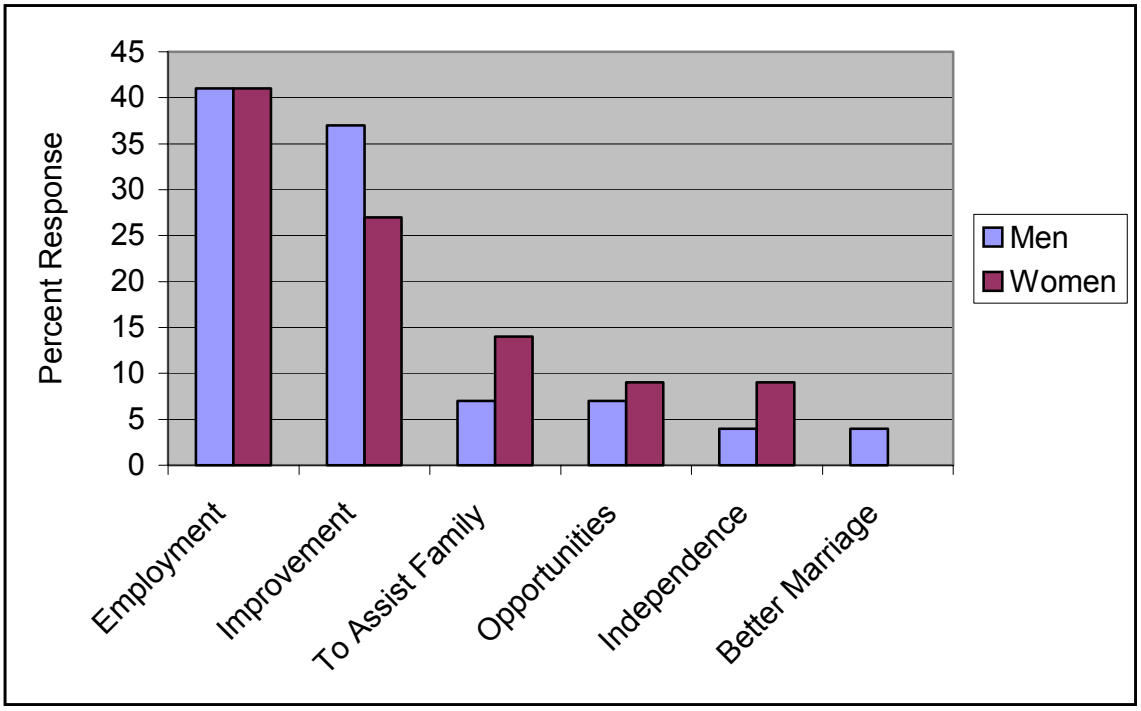
> '…[I want the children] to have education so they marry, get good jobs and buy land to build good houses, to have a better life rather than this that I have.'

Hence, it appears that there is an emerging polarity between a traditional i.e. pastoralist lifestyle and the 'modern' life of the educated. Pastoralism was often viewed as a difficult way of life. As another respondent concurred:

> '[I want my children] to do business rather than living a nomadic life as I do.'

The above response also underlines the changing social roles and differences between the generations. Subsequently, the responses were disaggregated by gender, to assess the potential influence on desires for children.

FIGURE 19: GENDER AND THE IMPORTANCE OF EDUCATION



Although overwhelming, both men and women consider education as the only means to obtain a job, men tended to stress the fact that education allowed children to improve their life in general whereas, women were more concerned with getting help for the family. However, women also tended to focus more on education as a means of providing children with opportunities and as a source of independence. Nevertheless, independence was always related to employment. Hence, as the following examples demonstrate, education was viewed as tool for empowerment for both the individual and the community. As a Pokot man commented:

> '…[education is important] for children to depend on themselves. To know how to read and write, before I inherited animals from my father. My children cannot get anything from me, except education and I have to try all my means to see them reach Standard 8. Once the children are educated they will claim for demarcation to have their own land and without it pastoralism will end completely.'

On the other hand, education was perceived as providing security against the uncertainties of a traditional pastoralist life. As offered by a Pokot woman:

> '…[with education] the child will get a job. Before people were grazing and the animals got finished, but with education you have it until death. When you are educated and the animals are finished, you will use the brain to get a job and the money to buy new animals.'

Nevertheless, both men and women noted the importance of diversifying activities within the household in order to mitigate risk. As there was no guarantee that education automatically leads to success as the following comment from a Pokot women demonstrated:

> '…It is important to educate the children, but not all. This is because when you educate the children, opportunities are diversified. If the ones that go to school succeed, they will assist the others who do not go to school. If the ones who take up livestock keeping succeed, they will be able to help those who went to school and failed.'

Therefore, for both men and women, education provided both increased opportunities and protection from the risks of pastoralism.

By comparing the results of the three questions, the following archithemes were derived. First, study participant's individual goals vs. their desires for their children were clearly in opposition. Most respondent's desired to own livestock, whereas for their children education and employment were the most frequently stated aspirations. However, a clear distinction was found between wanting to own more livestock and the pursuit of a pastoralist lifestyle. Livestock ownership was most often related to social acceptance and wealth rather than food or even livelihood security.

With regard to children, education was considered the best means of improving the family's circumstances long-term. The expectation being that once employed the child would assist the family. The assistance most frequently centred upon the purchase of livestock for the parents. Consequently, for the individual's involved, a *preferable* life was one with the social and economic benefits of increased livestock ownership, often derived from an employed child. Thus, the analysis of individual goals vs. aspirations for children revealed communities undergoing significant social change. The following section explores the finding within the context of project implementation and offers conclusions to the study.

8. CONCLUSIONS AND RECOMMENDATIONS

Restocking can be a successful means of poverty alleviation. However, the study demonstrates the need to better understand the dynamics of change impacting pastoralist communities, prior to project implementation. The lives and livelihoods of the communities and individuals, who participated in the study, were in a period of transformation. In addition to the predictable external forces such as drought and political instability, the communities in question were also changing internally with the emergence of new values and social mores. No longer was a livestock-based lifestyle considered the best manner and means of making a living. Education and the consequent employment of children were the overarching goals for the majority of study participants. Longing for a return to nomadism and a simple life was relegated to the elderly. Education was believed to bring 'modern' and 'better' living standards for the entire family.

Nevertheless, with the increasing levels of education, a new social class appears to be emerging; educated people who work in cities and towns and keep livestock in rural areas. A one respondent stated, '…very soon only the rich will be able to own livestock'. Many participants believed that in the future the uneducated and the poor would be relegated to be livestock caretakers for the rich. Thus, the changing face of pastoralism is the urban elite and educated controlling the productive assets of the rangelands via the labour of an increasingly marginalized rural population. As generations of educated children move out of pastoralism and into employment, the social polarisation is predicted to worsen.

Furthermore, although attitudes and behaviours regarding a livestock-based lifestyle were changing, the desire to own livestock remained. Livestock were associated with wealth and status. Participants still wanted livestock for themselves and for their children. Indeed, most respondents aspired to stay in peri-urban centres, pursuing non-livestock activities, while owning greater numbers of livestock. Hence, livestock were viewed as means to end rather than an end in and of themselves. Although external behaviours regarding livestock had changed, animals still remained a large-part of both the actual and self-identities of the study participants. The majority of participants aspired to role models, who owned large herds. Interestingly, for the poor, the traditional pastoralist ethos of sharing and treating the impoverished with respect, also scored highly as desirable traits for role models. Although pastoralism was changing, customary notions regarding the value of livestock and what constitutes a person of value, remained. Therefore, in a social environment of great flux, certain cultural mores remain the same, and should be built upon and supported by external interventions such as restocking projects.

Given the change and instability for the communities in question, it is not surprising that across the study zone, there was a wide variability of success of restocked households. Overall, however, restocked herds had declined mainly due to high off-take rates. The primary reasons for livestock sales included the need to purchase foodstuffs and the payment of school fees. The finding was further corroborated by

responses regarding the functions of livestock. Most study participants reportedly kept smallstock in order to sell when a specific need arose. Hence, smallstock were perceived as easily disposable assets. Although some projects had placed prohibitions on the sale of restocked animals, it is apparent that the restrictions were difficult to enforce and may be counterproductive to the long-term success of recipient households. The study identified a number of suitably motivated herders who desired to sell their smallstock in order to purchase cattle and camels, a well recognised traditional strategy for herd building. Not surprisingly, cattle were perceived as providing greater sustainability for a livestock-based lifestyle. Therefore, restocking packages that only distribute smallstock, may be perceived to be economically beneficial in the short-term but insufficient for households to pursue livestock-keeping in any meaningful way. Consequently, projects and programmes must evaluate the feasibility of mixed species livestock packages for those households with the appropriate motivation and access to labour.

Across the study zone, access to labour was a major constraint to livestock-based livelihoods. In particular, child labour was a key limitation and households without sufficient child labour found it difficult to maintain herds. The most frequent reason offered for labour shortfalls was school attendance. Interestingly, households with cattle generally had adequate manpower as some children were kept out of school specifically for livestock care-taking. Thus, the study found that the majority of poor children attended school, whereas better-off families did not enrol all of their children in order care for the animals, thereby investing in their livestock assets. Nonetheless, some poor children were part of the 'borrowed' labour pool, where children from destitute families were loaned to wealthier families for herding and other duties. Approximately, ¼ of households hired labour in the form of 'borrowed' children or a paid herdsman.

In those households without sufficient resources to hire labour, women generally made up the deficits. Many women reported that herding conflicted with their other income generating activities; hence, livestock would often be left unattended for periods of the day. The causation of livestock labour shortages appeared to follow a cyclical pattern. Sending children to school required monetary income. To generate the needed cash for school fees, most households participated in alternative income generating activities. The activities generally require extensive time commitments lowering the time and resources available for livestock herding. Therefore, the problem for women regarding livestock-keeping is twofold; one is the constraint on labour resources and secondly, livestock care-taking impacts the ability to gain cash income through alternate activities.

However, labour resources should not only be examined at the household level. Restocked households lived in compounds, together with friends and relatives. Livestock were often herded collectively, with shared labour resources, at the compound level. Thus, although individual households may not have adequate labour, those households, who could access labour at the compound level, could still maintain herds. Therefore, the household as a unit for restocking must be considered within the

context of the compound. Labour is a key constraint that needs to be evaluated by restocking projects and programmes, prior to distributing livestock. Without sufficient labour, restocked herds are destined for early off-take, as clients need to generate income to pay school fees and meet food needs.

The analysis of the livelihood timelines revealed the strength and frequency of the external factors that impacted restocked herds. Herd depletions were overwhelmingly due to drought combined with raids. In regard to environmental factors, lack of rain was considered the primary problem, which is not surprising given the onset of drought across the study area. However, susceptibility to drought was viewed as a function of the species, size, health or milk production capabilities of the livestock themselves. The finding has implications for restocking projects, as local notions regarding the hardiness of particular breeds and species, may be helpful in the livestock procurement process. Interestingly, livestock losses were rarely considered to be a function of the skill of the herder. Nevertheless, when the personal factors important to successful livestock keeping were examined, commitment and dedication to livestock comprised the majority of responses. Raiding appeared to be one of the expected after effects of drought, which is another consideration for restocking projects. After severe drought, the political conditions must be sufficiently stable for restocking to commence. Furthermore, knowledge of the personal factors important to success with livestock may aid projects in developing appropriate targeting criteria.

However, a positive finding was discovered when considering the influence of gender on the potential outcomes of restocking projects. In general, women were found to have limited rights over the ownership and control of livestock resources. Restocking, helped redress the bias, and enabled women to have a greater jurisdiction over project livestock. The findings have important implications for projects and programmes. As community sanction for ownership and control over restocked animals is given directly to the beneficiary of either sex, by focusing projects on women clients, restocking may be able to more directly improve household food and livelihood security. The results however, do not support the restocking of female-headed households exclusively, as noted above, sufficient household labour is a key criterion to success. Moreover, in light of the findings, projects need to consider and account for gender bias in the control of restocked herds. A potential means of addressing the findings would be for projects to support the joint ownership of restocked herds between husbands and wives, where possible.

In conclusion, given the forces of change impacting pastoralist communities, restocking projects need to account for shifting community values, norms and behaviour regarding livestock-keeping. The study demonstrates that restocking may not be the most suitable intervention for largely, settled communities with a heavy reliance on alternate income generating activities. Although by assessing attitudes and values, it is still possible to identify individuals living in these circumstances that are suitably motivated for a return to a livestock-based lifestyle. Nevertheless, overall, communities with strong livestock-related values and traditional economies are better bets for projects and programmes. Carefully planned and targeted projects can have a

major impact on poverty alleviation. However, the results clearly illustrate that without an understanding of both the internal and external influences that impact livelihood choices, then restocking projects in particular, and pastoral development more generally, will continue to have less positive outcomes.

REFERENCES

Brown, G.; Yule, G. (1983). *Discourse Analysis.* Cambridge University Press, Cambridge.

Carney, D. (Ed.) (1998). *Sustainable Rural Livelihoods: What contribution can we make.* DFID, London.

Cohen, J., & Hansel, C. (1956). *Risk and Gambling*. Longmans Green, London.
Denscombe, M. (1998). *The Good Research Guide for Small Scale Social Research Projects*. Open University Press, Milton Keynes.

Dey, I. (1993). *Qualitative Data Analysis: A user-friendly guide for social scientists*. Routledge, London.

DFID (2000). *Livelihood Outcomes*. Sustainable Livelihoods Guidance Sheets, http://www.livelihoods.org.

Fairclough, N. (1992). *Discourse and Social Change.* Polity press, Cambridge.

Fowler, R.; Hodge, B.; Kress, G.; and Trew, T. (1979). *Language and Control.* Routledge and Kegan Paul, London.

Halliday, M. (1994). *An Introduction to Functional Grammar.* Arnold, London.

Hanak, I. (1998). Chairing Meetings: Turn and topic control in development communication in rural Zanzibar. In *Discourse and Society,* vol.**9**, 1, pp.33 – 56.

Heffernan, C. (1997). The Socio-Economic Impact of Restocking Destitute Pastoralists: A Case Study from Kenya. ESCOR, ODA, London

Heffernan, C. and Rushton, J. (1998). Restocking: A critical evaluation. *Nomadic Peoples:* **4** (1).

Heffernan, C. (2000). *The Socio-Economic Impact of Restocking Destitute Pastoralist: A case study from Kenya.* PhD thesis. The University of Reading, Reading, UK.

Heffernan, C. (2001). Restocking Best Practice Recommendations. Forthcoming.

Heider, F. (1958). The Psychology of Interpersonal Relations. John Wiley, New York

Hogg, R. (1986). The New Pastoralism: Poverty and dependency in Northern Kenya. *Africa*, **56** (3).

Hussein, K.; Sumberg, J. and Seddon, D. (1999). Increasing Conflict Between Herders and Farmers in Africa: Claims and evidence. *Development Policy Review* **17** (pp. 397-418).

Lecky, P. (1945). *Self-consistency: A theory of personality*. Long, New York.

Lesorogol, C. (forthcoming). Building on Paran: Restocking among the Samburu. In *Livestock and Livelihoods: Current Perspectives on Restocking* (Ed. C.Heffernan)

Livestock in Development (1998). *Strategies for Improving DFID's Impact on Poverty Reduction: A review of best practice in the livestock sector*. Livestock in Development, Crewkerne, Somerset.

Livestock in Development (1999). *Livestock in poverty-focused development.* Livestock in Development, Crewkerne, Somerset.

Locke, G. (1996). *Functional English Grammar: An introduction for second language teachers.* Cambridge University Press, Cambridge.

Montanelli, D.S., & Hill, K. (1969). Children's achievement expectations and performance as a function of two consecutive reinforcement experiences, sex of subject and sex of experimenter. *Journal of Personality and Social Psychology*, **13**. (pp.115-128).

NOPA, 1992. *Pastoralists at a cross-roads: Survival and development issues in African pastoralism*. UNICEF/UNSO Project for Nomadic Pastoralists in Africa. Nairobi, Kenya.

Oxby, C. (1994). *Restocking: A guide*. VETAID, Midlothian.

Patton, M. (1987). *How to Use Qualitative Methods in Evaluation*. Sage Publications, London.

Rogers, C. (1951) Client-Centered Therapy. Houghton Mifflin, Boston.

Rotter, J.B. (1966) Generalised expectancies for interval versus external control of reinforcement. *Psychological Monograph*, **80**:1 (No. 609)

Rubin, H.; Rubin I. (1995). *Qualitative Interviewing: The art of hearing data.* Sage Publication, London.

Scoones, I. (1994) (Ed.). *Living with Uncertainty*. Intermediate Technology Publications. London.

Smith, C. (2000). Content Analysis and Narrative Analysis. In *Handbook of Research Methods in Social and Personality Psychology* (Ed. H. Reis and C. Judd), Cambridge University Press, Cambridge.

Tomlin, R.; Forrest, L.; Ming Pu, M.; Hee Kim, M. (1997). Discourse Semantics. In *Discourse as a Structure and Process.* (Ed. T. Van Dijk), Sage Publication, London.

Van Dijk, T. (Ed.) (1985). *Handbook of Discourse Analysis.* Academic Press, London.

Weiner, B. (1989). *Human Motivation*. Lawrence Erlbaum Associates Inc, New Jersey.

Wiggins, S. (1991). Pastoralism in Crisis. *Appropriate Technology* **18**(1): 1-4.

Young, J. and Njery, F. (1989). Evaluation of Garba Tulla restocking project. Report to ITDG, Nairobi.

Zajonc, R., & Brickman, P. (1969). Expectancy and feedback as independent factors in task performance. *Journal of Personality and Social Psychology*, **11** (pp.143-156).

APPENDIX I: THE PARTICIPATORY HERD ASSESSMENT

Among pastoralists, questions regarding animal numbers are sensitive and prone to misleading or inaccurate answers. Furthermore, visual verification of herd size is also fraught with difficulty. Livestock are often herded collectively and distinguishing between different households' animals is extremely difficult for an outsider. More importantly, livestock are often inaccessible during field visits. Consequently, it is frequently acknowledged that much of the data on pastoralist livestock production is less than accurate. As previously mentioned, gaining precise information on restocked herds is even more difficult, as herders have a vested interest in providing project staff and researchers with the perceived correct answers. In response to the problems, the study devised and tested a participatory methodology for more accurately estimating livestock numbers and herd structures. Referred to as Participatory Herd Assessment or PHA, the technique relies on a basic knowledge of herd structure and the seasonality of lambing and kidding in a local area. Therefore, prior to instituting PHA, researchers or project staff must have an understanding of key livestock reproduction parameters. Using this information, an in-depth life history of the herd as a whole can be obtained. Furthermore, verification of numbers is built into the methodology and triangulation with other sources is less integral to the process than with other participatory techniques. Although the method is may be used for any livestock species, this research concentrated mainly on smallstock.

A. THE PHA METHODOLOGY

As mentioned above, the initial stage in a PHA assessment is determination of basic livestock reproduction parameters in the locality. Therefore, the first step of a PHA is identifying key informants with knowledge of livestock. Through open-ended and semi-structured interviews, a Livestock Reproduction Profile of the community or area under study may be created. Box 2 outlines the key parameters in a Livestock Reproduction Profile.

BOX 2: COMPONENTS OF A LIVESTOCK REPRODUCTION PROFILE

1. The seasonality of calving, lambing or kidding: The time of year and the environmental considerations e.g. during the long rains etc.
2. Average litter size: For example, in sub-Saharan Africa, twinning is rare among smallstock.
3. Neonatal mortality: _____high or _____low
4. Major disease of young stock:
5. Recent history of epidemics or abortion storms:
6. Recent or current history of drought or other event that may influence livestock reproduction.

From the Livestock Reproduction Profile, an overview can be gleamed of the factors influencing livestock production in a local area. The next stage of a Participatory Herd Assessment is individual interviews with farmers or herders. Utilising semi-structured and open-ended interviewing techniques quantifiable data on livestock herds may be obtained. Two interviewers more easily perform the process. For example, the initial question begins with the number of adult female animals of the species in question. Next, the number of offspring from those animals during the past year is obtained. The number of deaths of those offspring is also recorded at this time. The number of immature female animals is then tabulated, along with the number of males, both immature and mature. Finally, the herder is asked the total number of animals owned. Among many pastoralist cultures, it is considered rude and importunate to ask the number of animals owned initially. The feasibility of the question will have to be determined prior to the fieldwork. For most farming or sedentary communities this is not a problem. The final stage of the participatory livestock assessment involves exploring any discrepancies in the total number of animals given and the herd structure as described above. In this manner, livestock sales and home consumption of animals can be discussed. Equally, inaccuracies may be evaluated and false information discounted at this time. Exploring the differences in actual numbers also allows for insight into livestock mortalities in the different age cohorts of animals in addition to the marketing strategies of herders i.e. the average age at offtake. Furthermore, herders and farmers are given time to detail any problems encountered over the course of the previous year with the herd. Box 3 details the herd parameters required to perform a PHA.

BOX 3: BASIC HERD PARAMETERS FOR A PARTICIPATORY HERD ASSESSMENT

1. Number of Adult Females:
    a. Number of female offspring (during the past year):
    number died, sold, consumed
    b. Number of male offspring (during the past year):
    number died, sold, consumed
2. Number of Immature Females (below age of first reproduction):
(number died, sold, consumed)
3. Number of Mature Males:
(number died, sold, consumed)
4. Number of Immature Males:
(number died, sold, consumed)
5. TOTAL HERD SIZE:

B. CHANGE IN HERD SIZE

With regard to restocked households, the first step in determining overall herd size was estimating the mean number of animals owned prior to project implementation. Although apparently straightforward, obtaining accurate numbers on previous herd sizes was often difficult. As some projects had been implemented up to 16 years prior to the research, memories of former herd sizes were often dim. For more recent projects, corroborating the numbers of previously owned livestock was possible by analysing the existing herd structure and discussing in depth the life history of the herd as described above. For example, a herder who reported owning 7 animals prior to restocking would then have to account for the offspring and morbidity and mortality rates of those animals. Consequently, informants soon corrected any discrepancies in herd size. Once the animals owned prior to restocking were determined, the restocked herd was then added, to obtain a total starting herd size. Finally, gains or losses over the time since restocking were calculated.