



IGAD
Livestock
Policy
Initiative

A Living from Livestock

Livestock Livelihoods and Institutions in the IGAD Region

Judith Sandford &
Steven Ashley
theIDLgroup

Table of Contents

Preface	iii
Acronyms.....	Error! Bookmark not defined.
1. Introduction	1
1.1 Livestock and Poverty in the IGAD Region.....	1
1.2 Background to this Study.....	2
1.3 Study Objectives.....	2
1.3.1 <i>Why Focus on Institutions?</i>	2
1.4 Structure of the Report.....	3
2. Livestock and Livelihoods	4
2.1 The Characteristics of Poor Households	4
2.2 Typology of Livelihood Systems in IGAD Involving Livestock	5
2.2.1 <i>Pastoral Area Livelihoods</i>	6
2.2.2 <i>Mixed-Farming Livelihoods</i>	11
2.2.3 <i>Commercial</i>	16
2.2.4 <i>Urban and Landless Livestock-keepers</i>	16
2.3 Why People Keep Livestock.....	17
2.3.1 <i>Income and Trade</i>	18
2.3.2 <i>Food</i>	18
2.3.3 <i>Savings</i>	18
2.3.4 <i>Risk Management</i>	19
2.3.5 <i>Wealth Creation</i>	19
2.3.6 <i>Animal Traction</i>	19
2.3.7 <i>Social Capital</i>	19
2.3.8 <i>Manure</i>	20
2.3.9 <i>Accessing Communal Lands</i>	20
2.4 Key Livelihood Trends	20
2.4.1 <i>Urbanisation and the ‘Livestock Revolution’</i>	20
2.4.2 <i>Spread of HIV</i>	20
2.4.4 <i>Pastoralism Under Stress</i>	21
2.5 So Why Does Understanding this Matter?	21
2.6 In Summary	23
3. Understanding the Importance of Institutions	24
3.1 Typology of Institutions	24
3.2 Enabling and Disabling Institutions	25
3.2 In Summary	29
4. Constraints to the Livelihoods of Poor Livestock Keepers.....	30
4.1 The Broad influences on livestock-keepers’ livelihoods.....	30
4.2 Livestock-specific constraints	30
4.2.1 <i>Access to Livestock Feed</i>	31
4.2.2 <i>Money for Basic Inputs</i>	31
4.2.3 <i>Livestock Health</i>	31
4.3 In Summary	32
5. Pro-Poor Livestock Policy	33
5.1 What Do We Mean by Policy?	33
5.2 Livestock-related Policies and their Impacts on the Poor	33
5.2.1 <i>An Inglorious Track Record</i>	33
5.2.2 <i>Some Notable Exceptions</i>	34
5.2.3 <i>Why have they been different?</i>	36
5.2.4 <i>And a Note of Warning</i>	37
5.3 In Summary	38
6. Conclusion	39
6.1 Factors Likely to Determine Success of Pro-Poor Livestock Policies	39
Bibliography & References	41

FIGURES AND GRAPHS

Table 1: Categories of Livelihood Systems in IGAD Involving Livestock	6
Table 2: Key Differences in Livestock use between Better-off and Poor Pastoral Households	7
Table 3: Key Differences in Livestock use between Better-off and Poor Agro-pastoral Households	10
Table 4: Key Differences in Livestock Use Between Better-off and Poor Draught Animal Using Households	14
Table 5: Purpose of Keeping Livestock in the Maize Belt of Ethiopia.....	21
Table 6: Institutions vs. Organisations.....	24
Table 7: Typology of Institutions	24
Table 8: Examples of Enabling and Disabling Institutions which Relate to Livestock in the IGAD Region.....	26
Table 9: Problem Ranking Results from Three PRA Exercises.....	30
Figure 1: Food and Income Sources from Four Pastoral and Agro-pastoral Livelihood Zones in the IGAD Region	7
Figure 2: Food and Income Sources in the Peri-Urban Livelihood Zone, North Eastern Province Kenya	11
Figure 3: Food and Income Sources from Five Mixed Farming Livelihood Zones of the IGAD Region	12
Figure 4: Proportion of Households Engaged in Dairy, Non-Dairy Agriculture and Non-agricultural Livelihoods as a % of Households Engaged in Agriculture.....	15
Figure 5: Contribution of Various Income Categories to Total Returns from Cattle Enterprise by Production Systems	16
Figure 6: Graph Mapping the Percentage of People Keeping Livestock in Kampala Against Political Upheavals	17

PREFACE

This is the 10th in a series of Working Papers prepared for the IGAD Livestock Policy Initiative. The purpose of these papers is to explore issues related to livestock development in the context of poverty alleviation.

Disclaimer

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of either the Food and Agriculture Organization of the United Nations or the Inter-Governmental Authority on Development concerning the legal status of any country, territory, city or area or its authorities concerning the delimitations of its frontiers or boundaries.

The opinions expressed in this paper are solely those of the author and do not constitute in any way the position of the FAO, IGAD, the Livestock Policy Initiative nor the governments studied.

Judith Sandford and Steve Ashley
TheIDLgroup
www.theIDLgroup.com
steve.ashley@theIDLgroup.com

Date of publication: 2008.

ACRONYMS

ATWD	Abay Tekazzie Watershed (Ethiopia)
CAHW	Community Animal Health Worker
CAPri	Collective Action and Property Rights
CGIAR	Consultative Group on International Agricultural Research
CAP	Chenno Agro-Pastoral Zone (Ethiopia)
CLP	Central Lowland Pastoral Zone (Djibouti)
CPRC	Chronic Poverty Research Centre
DFID	Department for International Development (UK)
DPPA	Disaster Prevention and Preparedness Agency (Ethiopia)
FAO	Food and Agriculture Organisation
FSAU	Food Security Analysis Unit (Somalia)
GLiPHA	Global Livestock Production and Health Atlas
HEA	Household Economy Approach
HSP	Hawd and Sool Pastoral Livelihood Zone (Somali)
IFAD	International Fund for Agricultural Development
IGAD	Intergovernmental Authority on Development
ILRI	International Livestock Research Institute
IP	The Ironstone Plateau (Sudan)
ITDG	Intermediate Technology Development Group (now Practical Action)
IUCN	The International Union for Conservation of Nature
LDG	Livestock Development Group (Reading University)
LID	Livestock in Development (now The IDL Group)
LPI	IGAD's Livestock Policy Initiative
MG	The Market Gardening Livelihood Zone (Djibouti)
MWAP	Mandera West Agro-Pastoral zone, Kenya
NARO	National Agricultural Research Organisation (Uganda)
ODI	Overseas Development Institute

OIE	Office International des Epizooties (World Organisation for Animal Health)
PPLPI	FAO's Pro-Poor Livestock Policy Initiative
PRSP	Poverty Reduction Strategy Paper
RVL	Raya Valley Sorghum and Teff livelihood zone (Ethiopia)
SDP	Smallholder Dairy Project
SNNPR	Southern Nations, Nationalities and Peoples Region (Ethiopia)
SSCSE	South Sudan Centre of Statistics
UNDP	United Nations Development Programme
WCG	Wolayita Ginger and Coffee zone (Ethiopia)
WPDP	Wajir Pastoral Development Project

1. INTRODUCTION

1.1 Livestock and Poverty in the IGAD Region

Poverty remains a critical issue for sub-Saharan Africa and for the IGAD region. While globally poverty is decreasing, the number of poor in Sub Saharan Africa is on the increase. More than 200 million people in Africa live below the \$1 a day poverty line; 56 million of these are living in the seven countries which make up the IGAD region¹. This figure increases to 71 million if one uses the World Bank supported country poverty thresholds. Poverty is about more than just income, and the six IGAD countries which are ranked in UNDP's² Human Development Index³ are all in the bottom 20%.

Livestock are an important part of the economies of the IGAD countries. Excluding Somalia, livestock make up approximately 15% of the GDP of the IGAD countries⁴. Ethiopia and Sudan have the highest livestock populations in sub-Saharan Africa (28.4 and 22.3 million livestock units respectively) with the IGAD region as a whole containing approximately 68 million livestock units⁵. Livestock products feature strongly on the league table of exports in a number of IGAD states: 21.1% of agricultural exports in Sudan are livestock-based; hides and skins alone are Ethiopia's second biggest export; and in Somalia exports of livestock and livestock products account for 80% of exports in normal years.

The IGAD member states have significant pastoral and agro-pastoral populations with around 17% of the population in pasture-based production systems. Djibouti and Somalia have the greatest proportion of their populations in pasture-based production systems (71% and 76% of the populations respectively); while Sudan, Somalia and Ethiopia have the largest pastoral and agro-pastoral populations (8.1, 7.4 and 5.1 million respectively)⁶.

It is estimated that livestock form a component of the livelihoods of at least 70% of the world's rural poor⁷. Thornton et al's study for ILRI estimate that there are 43 million poor livestock-keepers in the IGAD region⁸, around 61% of the poor.

Poverty in IGAD

- 56 million people live on under \$1 per day.
- 36.4% of children under five are under-nourished
- National rural poverty rates range from 42% in Uganda to 86.5% in Djibouti

Livestock and IGAD

- IGAD is home to 68 million livestock units
- Nearly half of Sub-Saharan Africa's cattle, sheep and goat populations are found in IGAD member states.
- 15% of GDP in the IGAD region is derived from livestock
- 53% of the region's cattle are found in pasture based livestock systems and 42% in mixed crop-livestock systems.

¹ The World Bank (2008) and Thornton et al. (2002)

² Somalia was ranked 172 out of 174 countries in 1996, but has been excluded from the ranking since then due to lack of data.

³ UNDP (2007)

⁴ Calculated from page 3 of Knips (2004)

⁵ FAO GLiPHA accessed August 08

⁶ Calculated from Thornton et al. *ibid*

⁷ LID (1999)

⁸ Thornton et al *ibid*

1.2 Background to this Study

There has been growing interest in making substantial achievements in reducing poverty in recent decades. This interest is demonstrated by the introduction of the Millennium Development Goals and the Poverty Reduction Strategy Paper processes along with a multitude of policies and strategies within specific countries. Consistent with this interest has been the development of the FAO Pro-Poor Livestock Policy Initiative and the FAO/IGAD Livestock Policy Initiative. These initiatives have sought to capture the potential of livestock to improve the lives of poor livestock-keepers.

The Overall Objective of the IGAD Livestock Policy Initiative (IGAD LPI) is to enhance the contribution of the livestock sector to sustainable food security and poverty reduction in the IGAD region. The project's Purpose is to achieve this through strengthening the policy formulation and implementation capacity of relevant organisations and stakeholders including IGAD itself and member state governments.

1. Reviews of livestock policy have highlighted a reality that the impacts of many livestock policies either by-pass the poor or, not uncommonly, further constrain their ability to make a living⁹. Poor livestock-keepers are rarely engaged in policy formulation processes; and the apparent assumption that what is beneficial for wealthier, larger-scale livestock producers will also assist poor livestock-keepers, is now being questioned¹⁰.

1.3 Study Objectives

This study aims to be read by a wide range of stakeholders who might expect to be involved in the formulation and implementation of livestock sector and related policies. While it assumes a broad understanding of questions related to poverty and agriculture, the study does not assume in-depth technical knowledge of livestock-related issues.

The study aims to illustrate how livelihood strategies of poor livestock-keepers differ from their wealthier counterparts and how a range of institutions impact both positively and negatively on these strategies. In doing so the study demonstrates the types of policy that would, and would not, be likely to deliver positive outcomes for the poor. The study does not intend to claim that all strategies of poor livestock-keepers are correct or cannot be improved upon. However, the authors do aim to demonstrate that these strategies have a rationale which must be understood if policies and interventions are to meet needs better.

The Purpose of the study is 'Improved understanding among IGAD LPI partners of the defining principles of policies that are likely to benefit poor women and men who seek to derive a livelihood from livestock'. The full Terms of Reference are attached as Annex 1.

1.3.1 Why Focus on Institutions?

The success of development interventions does not depend solely on the quality of a technical solution that an intervention introduces. The history of development is littered with examples where enthusiastically-supported technical innovations have failed; or similar innovations have performed radically differently in differing contexts. This is not to say that technical interventions have no benefit, but that in order for them to achieve the desired impact they should be appropriate, and accompanied by an enabling environment.

Institutions are the key component of this enabling environment. In the context of this discussion the term institutions does not refer to organisations, but rather to the

⁹ LID (1999), Blench et al. (2003), IFAD (2004) and LDG (2003)

¹⁰ As above plus McSherry and Brass (2007)

'rules of the game' which influence actions. These rules may be formal, as laid down in legislation; or informal determined by history or culture. Rules govern access to resources, transactions between individuals, collaboration, and even the food that we eat or the crops that we chose to grow. By explicitly building on an understanding of institutions and how they impact differently on various wealth groups, policies can better expect to achieve the impacts that they aim for¹¹.

1.4 Structure of the Report

This study initially examines what it means to be poor before looking at the roles livestock play in the livelihoods of poor livestock-keepers and the variety of livelihoods involved. It then elaborates on the concept of institutions and gives examples of how institutions in the IGAD region act as enablers and disablers as poor livestock-keepers seek to maintain and improve their lives.

Based on this analysis, the paper then seeks to summarize some of the key factors which constrain the livelihoods of the poor before commenting on the track record of livestock policies in addressing these constraints. In doing so it suggests some common features of policies which have successfully supported the livelihoods of poor livestock-keepers. The study then comes up with recommendations on what factors are likely to determine success in policies aiming to support the livestock based livelihoods of poor livestock-keepers.

¹¹ For more explanation of institutions and their importance to livestock development, see section 4 in this report and LID (1999).

2. LIVESTOCK AND LIVELIHOODS

This section will briefly review some of the distinguishing characteristics of poor households, prior using a livelihoods typology to review the predominant livestock-related livelihoods of the IGAD region. This review will take into account both livelihood systems (pastoral, agro-pastoral, mixed farming etc.) and levels of poverty. This section will wrap up with an assessment of the roles played by livestock in the livelihoods of the poor and a brief conclusion on why an understanding of these issues is important.

2.1 The Characteristics of Poor Households¹²

There is growing understanding that poverty is more than just a lack of income but rather encompasses a broader range of features including ownership and access to assets, locality, social status, and vulnerability to shocks. These features interact and reinforce each other with short-term consequences as well as affecting opportunities and outcomes in the long-term. The following section summarizes some of these key features:

1. **Income.** Poor households have significantly less income than their wealthier counterparts. This limited income affects their ability to meet food requirements and constrains potential to secure other basic needs such as shelter and health care, with the result that children are malnourished and all family members face increased health risks.
2. **Assets.** This lack of income is usually a result of limited assets. In rural areas these assets often include land, livestock or other means of production; but also include skills and labour (often affected by ill-health and high dependency ratios)¹³. Degraded natural resources or poor and unreliable rainfall also directly impact on people's ability to make ends meet.
3. **Locality.** Poorer people are often found in poorer communities, whether this is a result of degraded natural resources or geographical remoteness. Remoteness affects both the ability of poor households to access markets (reducing the prices of products produced and increasing the price of products purchased) but also impacts on the quality of services received and the ability of communities to advocate for greater or more appropriate support.
4. **Social status.** While social networks are often an inherent part of rural life in the IGAD region, poorer households tend to have weaker networks than their wealthier counterparts (either because those they network with also tend to be poorer, or because their inability to fulfil social responsibilities limits their access to some networks). As a consequence of this and because of their low status, poor households find it more difficult to represent themselves even at local levels.
5. **Shocks and Risk.** Natural disasters and other shocks are a key cause of increases in poverty. Many households can attribute their decline into poverty to a few specific events such as major droughts or the death of a family member. However, poverty also increases households' susceptibility to shocks. With fewer assets, poor households tend to have very limited buffers against crises. This can lead to a vicious circle of destitution from which it is difficult (although not impossible) for households to break free. Poorer households are often more affected by downward trends.

¹² In addition to specific citations, this section draws heavily on Barrett and Swallow (2003) CPRC (2005), CPRC (2008), LDG (2003), Little et al (2008), Okidegbe 2001 and World Bank (2000)

¹³ For a full discussion on the Sustainable Livelihoods Framework and the Asset Pentagon see DFID (1999)

These crises, unfortunately, are common in the IGAD region which is susceptible to unreliable rainfall leading to both large-scale droughts, and occasional disastrous flooding. Conflict and political stability is widespread in the region with the resulting displacement of populations, loss of assets through raiding and interruption to livelihood strategies. Health risks are significant in the IGAD region and can have devastating consequence with the need for expensive medical intervention or the loss of a household head or adult labour. Poorer households are often disproportionately dependent on markets for food, so increases in the price of staple foods - such as inflation caused by the current global food crisis - can have devastating consequences on the poor.

6. **Limited Opportunities.** Poverty not only affects current realities (such as income sources) it also severely limits opportunities. As already mentioned low asset holdings reduce households' ability to withstand shocks increasing the chances of them becoming poorer. Poor households cannot afford to send their children to school affecting future earnings potential and livelihood options. The widespread incidence of childhood stunting has long-term consequences on productivity - as children fail to achieve their physical and mental potential.

Because the constraints and strategies of the poor differ from those who are better off in the ways discussed above, poor people need particular attention to enable them to rise out of poverty. It is not sufficient to assume that growth and wealth-creating policies will be appropriate and helpful to the poor. Key to an effective response to this reality is understanding the nature of poor people's livelihoods and how they differ from other groups. The next section applies a livelihoods analysis to livestock-keeping strategies which includes an analysis of the different strategies of the poor in comparison to their better-off counterparts.

2.2 Typology of Livelihood Systems in IGAD Involving Livestock

With temperature and rainfall so significantly influencing the potential for production systems, the majority of efforts in categorising livestock-related livelihoods have been agro-ecological. This approach is very useful when considering certain technical aspects of livestock production (for example species types or disease risks). What this approach does not do is help us to understand what roles livestock play in people's livelihoods and how these roles differ between wealthier and poorer smallholders. If policies are to support the livelihoods of the poor then they need to understand the strategies people are pursuing, and base policies on this understanding.

1. Table 1 below therefore categorises livelihoods by their different use of livestock. This provides a description of these livestock-related livelihoods, but also helps us to understand the relative importance and the range of roles livestock play in these livelihoods. This table and the discussion that follows do not aim to catalogue every variation in livelihoods present in the IGAD region, but rather to provide a broad overview of the predominant categories present.

Table 1: Categories of Livelihood Systems in IGAD Involving Livestock

Category Groupings	Categories
Pastoral Area Livelihoods 26 million people (17% of rural population) ¹⁴	Pastoral Livelihoods Agro Pastoral Livelihoods Pastoral Drop-Out
Mixed-Farming 106 million people (67% of rural population) ¹⁵	Crop and livestock with draught animals a key component of agricultural production Crop and livestock with little to no use of draught animals Crop and livestock with intensive dairy production Stockless
Large-scale Livestock Enterprises	
Urban/Landless	Dairy Non-Dairy

2.2.1 Pastoral Area Livelihoods

Pastoralist livelihoods¹⁶

Pastoralism can be considered to be both an economic and a social system, highly dependent on the raising and herding (including migration) of livestock. Pastoral livelihoods include those with set seasonal patterns of migration (transhumance) alongside those whose search for pasture and water is less fixed (and often more extensive). Pastoralism differs from ranching both through its separate identity, and because of its dependence on communal land¹⁷.

Livestock are core to pastoral livelihoods and pastoral identity. As can be seen from Figure 1 below, livestock and livestock products contribute significantly as a food source and are usually the main source of income in pastoral livelihoods. Sheep, goats, cattle, camels and donkeys are the predominant holdings; poultry are uncommon in pastoral areas. In recent decades most pastoralists have significantly diversified both food and income sources. Whereas in the past milk often made the greatest contribution to the diet, in all the pastoral examples shown below purchase, usually of cereals, now make up the bulk of diets. In order to finance these purchases, pastoralists exchange high value livestock and livestock products for low cost grain. Furthermore, trading, sale of wood and charcoal as well as non-timber forest products (doug palm leaf products or gums and resins) and, in many cases, daily labour have all become important income sources.

Livestock are also the key buffer to withstand shocks, particularly the frequent droughts which occur in areas where pastoralists live. Large herd sizes prior to a drought ensure viable herd sizes after a drought despite mortality. Livestock are integral to the identity of the population and are key in developing and maintaining social networks. Camels and donkeys often play a key role as pack animals supporting trade, carrying water and allowing migration of all or parts of the household as they move with their herds in search of pasture.

¹⁴ Calculated from Thornton et al. (2002)

¹⁵ *ibid*

¹⁶ In addition to specific citations, this section draws heavily on Birch and Halima (2001), Fratkin et al. (2006), Galvin et al 1994, Lybbert et al (2002), McPeak (2006), McPeak et al. (2006), Rass (2006), Scoones (1994)

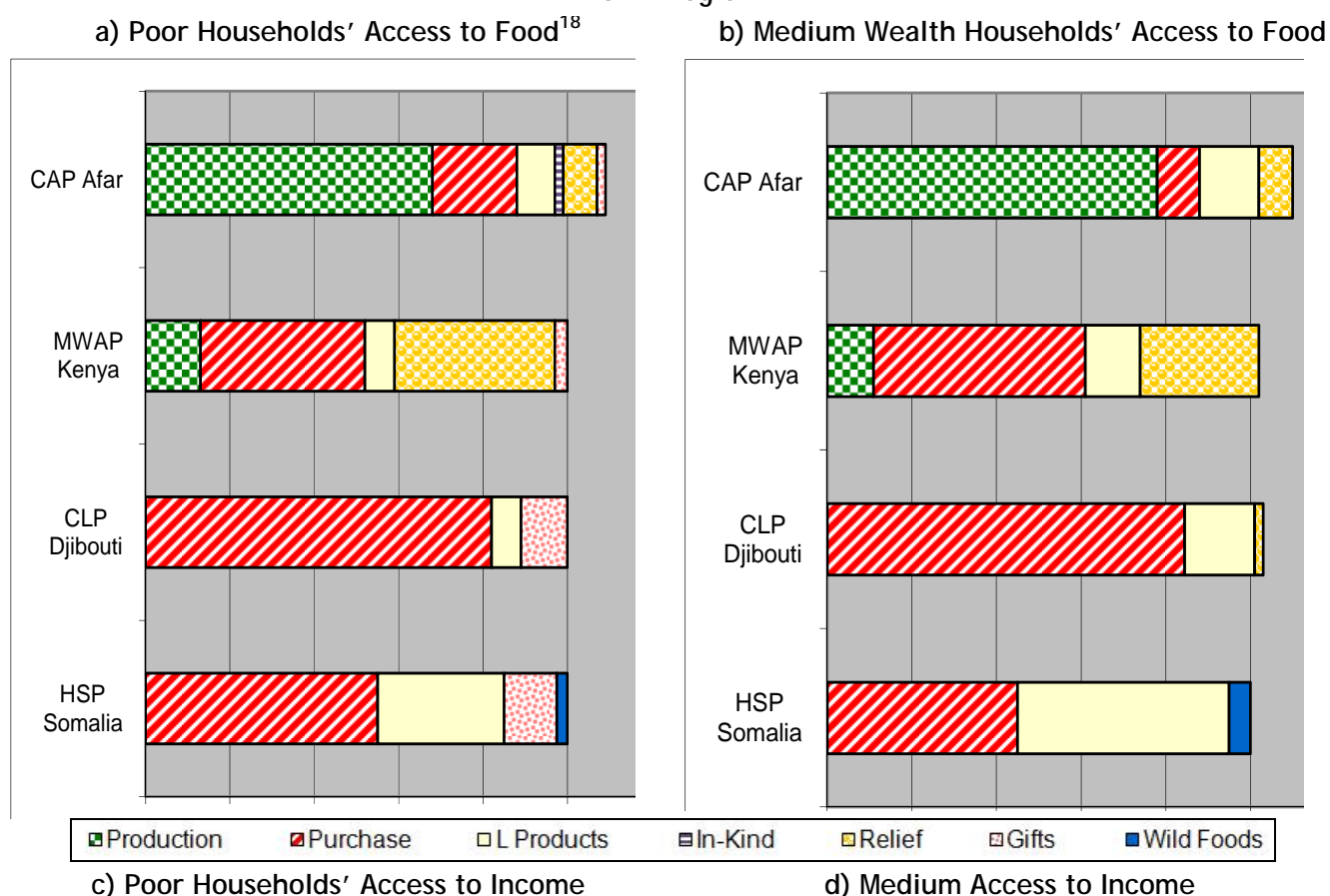
¹⁷ <http://www.thefreedictionary.com> (accessed August 2008) and Adano and Wittsenberg (2008)

Table 2: Key Differences in Livestock use between Better-off and Poor Pastoral Households

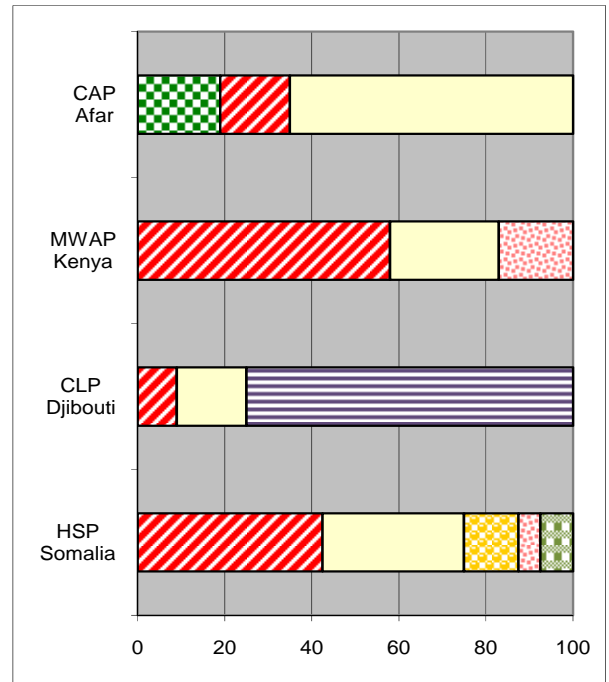
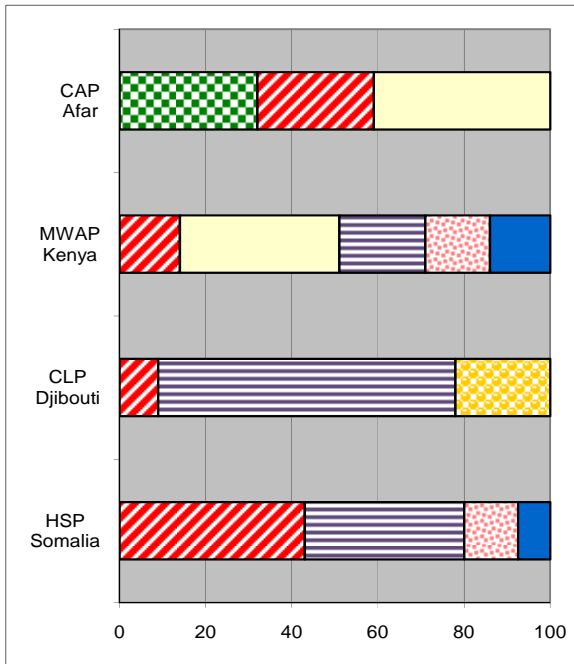
Better Off	Poor
Better-off households have larger herd sizes with livestock and livestock products making up a higher proportion of food and income (in the graph below there is only one example where livestock-related income does not exceed 75% of income sources). Better-off households will sell livestock both to meet immediate needs and enable the purchase of consumables.	Reduced herd sizes of poorer households mean they are usually reliant on a wider range of income sources, with non livestock income sources making up more than half of the incomes of the poor in the examples shown below. But livestock remain critical to their livelihood strategy: preserving and building up herds is such a priority that households will reduce consumption in order to avoid selling animals. The poorest households tend to drop-out of pastoralism as herd sizes become unviable.

Household economy data on food and income sources are presented in Figure 1 below from four pastoral and agro-pastoral areas throughout the IGAD region. They have been selected to illustrate a range of pastoral related livelihoods within the region. The Hawd and Sool Pastoral (HSP) and Central Lowland Pastoral (CLP) Livelihood Zones are both pastoral, whereas Manderla West Agro-Pastoral (MWAP) and Chenno Agro-Pastoral (CAP) Livelihood Zones are predominantly agro-pastoral.

Figure 1: Food and Income Sources from Four Pastoral and Agro-pastoral Livelihood Zones in the IGAD Region



¹⁸ Data for these graphs are taken from FSAU and Save the Children (2000), FewsNet 2004, Save the Children (2007) and FewsNet and DPPA (2005)



■ Production
 ▨ Livestock
 ■ L Products
 ▨ Employment
 ▨ Self Employment
 ▨ Gifts
 ■ Wild Foods/Bush Products
 ▨ Water

Income from livestock and livestock products are combined.

- Hawd and Sool Pastoral Livelihood Zone (HSP Somalia) is made of the Hawd plateau which borders (and merges with the wider Hawd zone of) Ethiopia and the higher Sool Plateaux. located in Somalia. Pastoralism is still the main source of livelihood in this area.
- Central Lowland Pastoral Livelihood Zone (CLP Djibouti) which is the largest livelihood zone in Djibouti. With the size of the non-rural economy in Djibouti combined with the pressures face in rural areas, many pastoralists have become absorbed into a temporary labour economy.
- Mandera West Agro-Pastoral zone (MWAP Kenya) in which covers more than half of the Mandera district in the North East Province Kenya. The role of drought induced livestock losses has been significant in increasing the extent of agro-pastoralism in this area.
- And the Cheno Agro-Pastoral Zone (CAP Ethiopia) on the border between the Afar and Amhara regions in Ethiopia. A combination of crop-production and herding have long formed components of the Argoba ethnic group who inhabit this area.

Pastoralists have developed specific livelihood strategies to cope with the high risk nature (low rainfall, significant variation in rainfall) of the vast majority of pastoral areas. The following two strategies are amongst the most critical:

- **Mobility.** There is strong evidence that more mobile pastoralists are better able to withstand droughts than those who have become partially or completely sedentarized¹⁹. Travelling long distances with animals to graze and water animals is a key strategy to adapt to droughts. In years of poor rainfall, localized showers can result in available pasture and water which pastoralists can make use of; or they can travel to areas where there is permanent water and grazing for example near rivers.
- **Herd accumulation.** Large herd sizes perform two critical functions for pastoralists. Firstly they allow pastoralists to meet needs while maintaining productive assets (through a mixture of milk sale and consumption and animal sales). Secondly large herds act as insurance for surviving droughts. Livestock

¹⁹ Fratkin et al. (2006)

mortality rates are similar regardless of herd size²⁰, but those with smaller herds are at greater risk of their herd size becoming unsustainable post drought than those with larger herds²¹.

- **Sharing of Livestock.** A range of livestock tenure arrangements exist in pastoral societies including outright ownership as well as a number of loaning and sharing arrangements. In the Maikona area of Maribit district nearly 42% of camel and cattle herds were under some form of livestock sharing agreement in 1998 (including loans)²². Livestock sharing both enables post drought restocking (which might be reciprocated in a future crisis) and helps risk management during a crisis by facilitating access to a wider geographic spread of pasture and water by ensuring that livestock are spread among a wider number of herds.

Agro Pastoralist livelihoods²³

Agro-pastoralism is a form of livelihood that combines crop production with pastoralism²⁴. Its main differences from mixed farming include the level of dependence on livestock for food and income, the extensive use of common lands, levels of mobility and the identity of those who practice it. Agro-pastoralists can include those who have historically practiced both crop-production and pastoral animal husbandry, as well as those for whom crop production is a coping mechanism of those forced to diversify income sources due to unviable herd sizes. While camels, cows, sheep, goats and donkeys are the most numerous livestock kept, in some areas poultry are also kept.

As demonstrated in Figure 1 above (focusing on the bars representing the Mandera West Agro-pastoral and the Chenno Agro-pastoral livelihood zones), livestock remain an important income source for better off agro-pastoral households, but frequently become a minor income source for the poor. But their importance is not limited to income: livestock are also the key means of insurance against shocks, particularly drought. However, crop production can play an important part in recovery, particularly in areas where agro-pastoralism is seen as a temporary activity employed to enable the build-up of herds and re-entry into full pastoralism. In addition to their role as pack animals, livestock (whether camels or oxen) are often also used for ploughing.

It is more complex to identify consistent differences in livestock use by better-off and poorer households in agro-pastoral communities across the IGAD region as the history and nature of crop production obviously influences significantly these characteristics. In areas where there is large-scale reliable irrigation, then often better off households are found among those who have access to larger areas of irrigable land and crop production is a major food and income source for this group. In areas where crop production is primarily seen as a means of rebuilding herds after a crisis or is employed opportunistically as a result of a very good rainy season, own production features less as a food or income source for better-off households, as in the West Mandera (MWAP) example.

²⁰ Lybbert et al. (2003)

²¹ Again, the authors are not aiming to judge this strategy (either positively or negatively) but merely to explain its rationale.

²² Roba and Witsenburg (2004) Chapter 11

²³ Birch et al. (2001), Devereux (2006) Knips (2004) and Save the Children (2007)

²⁴ Adano and Witsenburg (2008) and FAO (2003b)

Table 3: Key Differences in Livestock use between Better-off and Poor Agropastoral Households

Better Off	Poor
<p>Better-off households have larger herd sizes with livestock and livestock products making up a higher proportion of food and income. Where irrigation is available, better off households may also have greater access to irrigated land. Better-off households will again sell livestock both to meet immediate needs and enable the purchase of consumables.</p>	<p>With lower herd sizes, and often lower quality land, poor households are usually reliant on a broader range of income sources (most often encompassing labour and sale of bush products) than their better-off counterparts. Livestock, however, remain critical to people's identity and livelihood strategy and remain the key asset which can be used to survive droughts and other crises. As such the poor will prioritise the preserving and building of herds, often using temporary crop production as a means to do so.</p>

Pastoral Drop-Outs²⁵

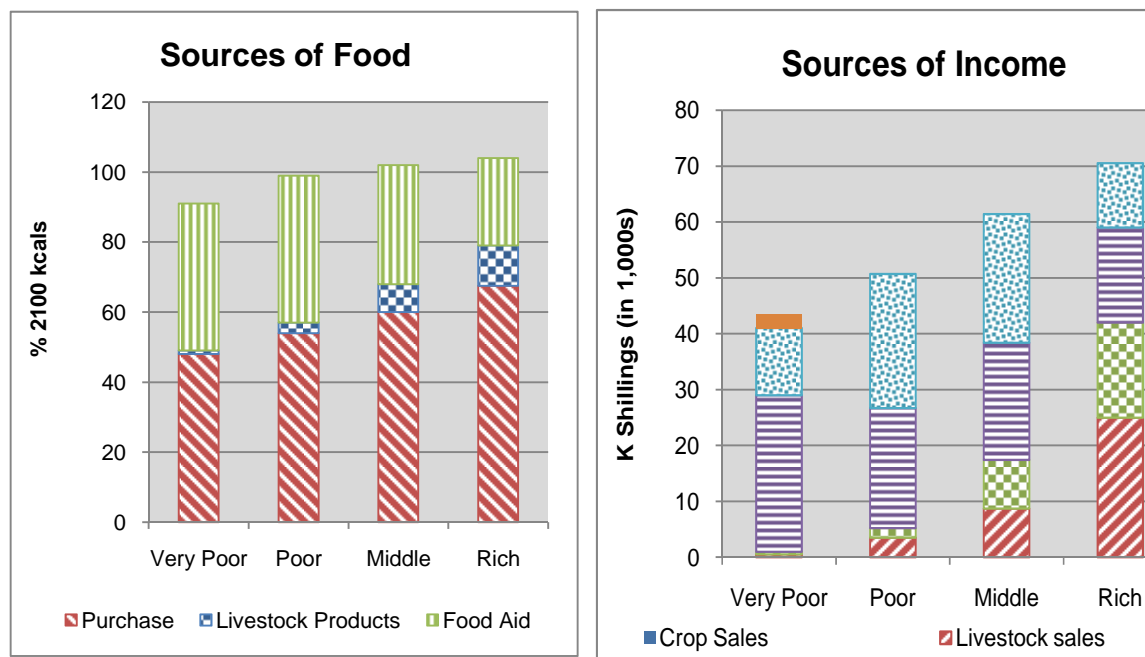
Pastoral drop-outs are usually the poorest group in pastoral areas. Left with virtually no assets other than their labour, pastoralists who have lost their herds often migrate to urban and peri-urban areas. Here they have access to the only income opportunities available to them, (see graph below), and, often, food aid. Although they often have better access to services, due to their settlement near towns, they have extremely limited and unreliable income sources. Female headed households often make up a significant number of pastoral drop-outs as do elderly households; with high dependency ratios both types of household tend to suffer labour constraints, particularly for traditional livelihood strategies.

Sheep and goats are often the only livestock owned, although in some areas poultry are also kept. Even though livestock ownership is important for income, savings and in maintaining people's identity, the level of destitution found amongst pastoral drop-outs make a return to pastoralism unlikely. It is interesting to note that customary restocking mechanisms within pastoral societies rarely target those who have dropped out of pastoralism, rather they focus on those who still have herds, but whose herd sizes have fallen to a level at which the rationale for mobility is compromised. Customary mechanisms aim to lift this target group back up to a more viable threshold²⁶. Restocking interventions by customary or external institutions are rarely sufficient in value to 'rehabilitate' back into pastoralism those who have lost their herds.

²⁵ Devereux (2006), Little et al. (2008); Lybbert et al (.2002) and Santos and Barrett (2006)

²⁶ Little et al. (2008), Lybbert et al (.2002) and Santos and Barrett (2006)

Figure 2: Food and Income Sources in the Peri-Urban Livelihood Zone, North Eastern Province Kenya ²⁷



2.2.2 Mixed-Farming Livelihoods

Those who practice mixed-farming are those who use a single farm for multiple purposes including the growing of crops and the keeping of livestock²⁸. While distinct from agro-pastoralism due to levels of dependence on livestock, degree of extensiveness, identity and degrees of mobility; in reality the cut-off point between an agro-pastoralist and a mixed farmer will not always be obvious.

Draught Power-Dependent Crop and Livestock²⁹

Cereal production using oxen drawn plough is typically the most important food and income source for populations in this form of mixed farming. The range of crops grown will vary enormously depending on agro-ecology and market access. By using ploughs, farmers are both able to increase the amount of land cultivated and also improve yields of certain crops which require more intensive soil preparation. In Ethiopia, so valued is the contribution of ploughing to production that households without oxen will sharecrop their land to someone with oxen, giving up 50% of the harvest to the oxen owner. Although wealthier households have more livestock overall in Ethiopia, the dramatic impact of oxen ownership can be seen in Figure 3 below by comparing the food and income sources of poor households (who commonly have no oxen) and medium wealth households (who will always have at least one) in the Abay Tekazzie Watershed (ATWD) and Raya Valley Livelihood zones (RVL). The increased proportion of income derived from own crops is amplified by the greater incomes earned (sometimes double the incomes of poor households).

Household economy data on food and income sources are presented below from five mixed farming areas from within the IGAD region; due to data availability three of these are from within Ethiopia. The examples selected aim to show a variety of mixed farming livelihoods with different levels of dependence on draught animals, cash crops, livestock ownership and market access.

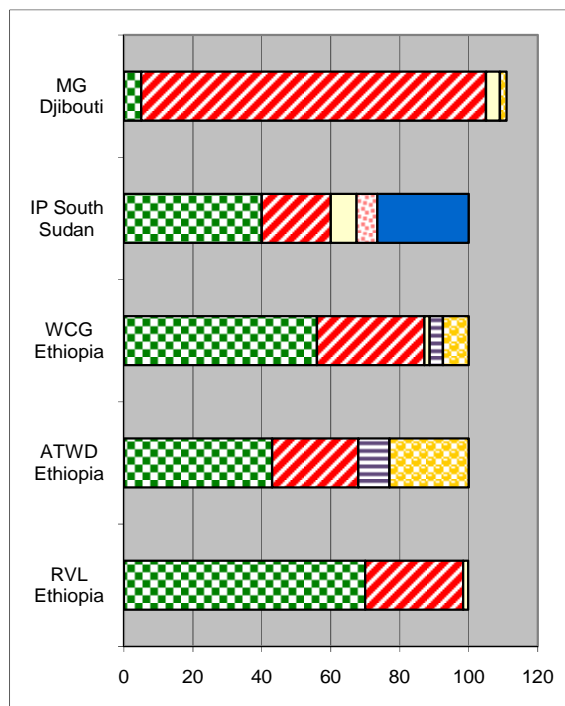
²⁷ Data taken from Save the Children (2007)

²⁸ <http://www.thefreedictionary.com> (accessed August 2008) and Knips (2004)

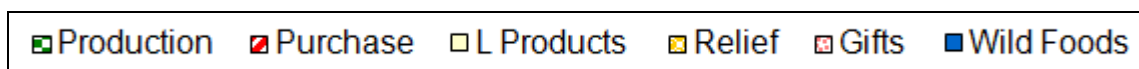
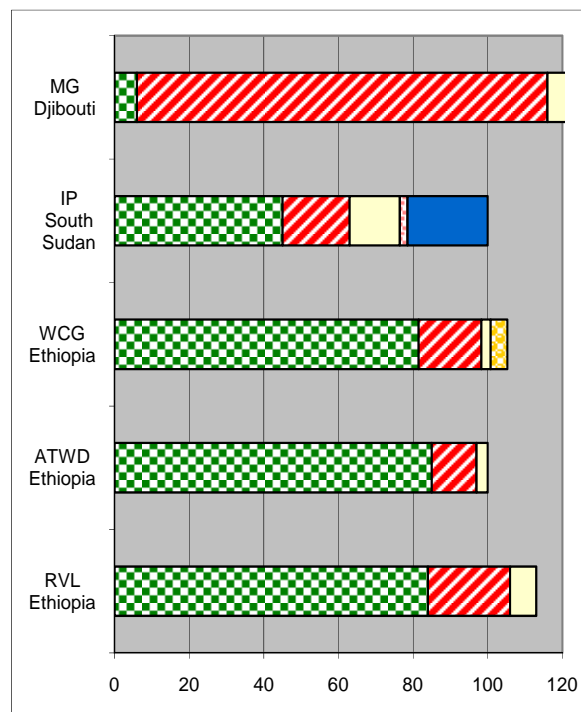
²⁹ Asfaw and Jabbar (2008), FewNet and DPPA (2005) Ouma et al (2004), and Sharp et al (2003)

Figure 3: Food and Income Sources from Five Mixed Farming Livelihood Zones of the IGAD Region

Poor Households' Food Sources as a % of 2100 kcals³⁰



Medium Wealth Households' Food Sources as a % of 2100 kcals



³⁰ Data for these graphs are taken from FewsNet (2004), SSCSE (2007), FewsNet (2005), Save the Children UK (2002) and LIU (2007)

Poor Households' Income Sources as a % Medium Households' Income Sources as a %



- RVL - Raya Valley Sorghum and Teff livelihood zone located in the south-east part of Tigray region in Ethiopia. Land preparation is done using draught oxen and there are significant levels of livestock ownership.
- ATWD - The Abay-Tekazzie Watershed is found in eastern Amhara region of Ethiopia. Again land preparation is done almost exclusively by draught oxen and livestock ownership is significantly less than that found in the Raya Valley
- MG - The Market Gardening Livelihood Zone is comprised of scattered locations within reach of the Addis-Djibouti railway. Agriculture is dependent on irrigation and is largely made up of vegetable and food production. Staple foods are purchased from the market. Small-stock ownership is very common.
- WCG - Wolayita Ginger and Coffee zone is found in South West Ethiopia in an area where the staple crops are maize, sweet potato (and other root crops) and enset³¹. In addition to these staple food crops, ginger and coffee are major sources of cash income. Ploughing is important for cereal production but is not required for cash crop production. Landholdings are very small, livestock ownership is significant.
- IP - The Ironstone Plateau located towards the south of South Sudan. Crop production is largely by hand and includes staples such as sorghum and root crops as well as cash crops such as Sesame and Shea Butter. Households also gain significant amounts of food and income through wild foods and bush products. Livestock ownership is moderate.

Draught animals are by no means the only livestock kept. Smallholder farmers usually own a mixture of cattle, small ruminants and poultry taking advantage of and managing risk through their different products, breeding rates and disease susceptibility. However, as can be seen in the above graphs, livestock and livestock products are not a significant food source for poorer households; and make up an even smaller proportion of income. Despite the heavy dependence on crop production for food and income, livestock usually remain the most important repository of savings (whether short or long-term) and are an important buffer against risk. Livestock are therefore central to the sustainability of these livelihoods, even if this does not

³¹ Ensete ventricosum, also known as false banana, is perennial food crop only known as a food source in Ethiopia.

appear to be the case from income and consumption data alone. This observation is at the heart of the neglect of poor people's needs in livestock policy: a misunderstanding of the systems practiced leading to the conclusion that livestock for the poor are less important and less worthy of attention than they really are.

Livestock management is usually well integrated with crop production: crop residues are used to feed livestock; livestock are used for ploughing, threshing or transporting crops; and livestock manure is used to enrich the soil used for agriculture and a variety of other uses.

Some of the key differences in the role of livestock in livelihoods for poor and better off households are indicated in the table below:

Table 4: Key Differences in Livestock Use Between Better-off and Poor Draught Animal Using Households

Better Off	Poor
<p>Better off households own their own oxen. If they have sufficient number they can also rent out oxen when not needed either in a simple renting arrangement or through a share-cropping arrangement. In addition better off households tend to have a higher number of other animals, including dairy cows. Similar to their counterparts in pastoral areas, they will fairly frequently sell livestock (usually small-stock) to meet a range of expenses, including items which could be considered luxuries.</p>	<p>The poorest households are forced to rent in draught oxen to cultivate fields often at significant costs which dramatically reduce the productivity of farms. Poor households are usually intent on building up stocks, using poultry and small stock (which reproduce quicker than their larger counterparts, but are also more 'liquid' forms of capital if there is a need to cover cash expenses). Once sufficient savings have been accumulated as poultry or small stock, some of these will be traded-up for larger stock (often first a cow and then moving up to oxen). Due to their lower livestock holdings and their reduced income from crop production, poor households are often dependent on a wider number of income sources than their better of counterparts.</p>

Crop and Livestock with Little to No Use of Draught Power³²

Although it is rare to find mixed farming communities where draft oxen are never used (the Market Gardening Livelihood Zone in Djibouti is one such rare example), there are a significant number of areas where it is not prioritised (outside Ethiopia the use of the draught plough is often a relatively recent introduction). Hand cultivation is the most important means of cultivation in many areas and there are areas where mechanized cultivation is used (through renting of tractors etc.). Despite this, and their small contribution to food and income, investments in livestock are still prioritised by small holders. They are the main form of savings, a critical mechanism for risk reduction, and the limited livestock products consumed are from own production (with consumption both valued during ceremonies and an important factor in household well-being and nutrition).

As mentioned above poorer households have fewer livestock holdings, and hold a greater percentage of their livestock holdings as small ruminants or poultry.

Dairy Intensive Crop and Livestock³³

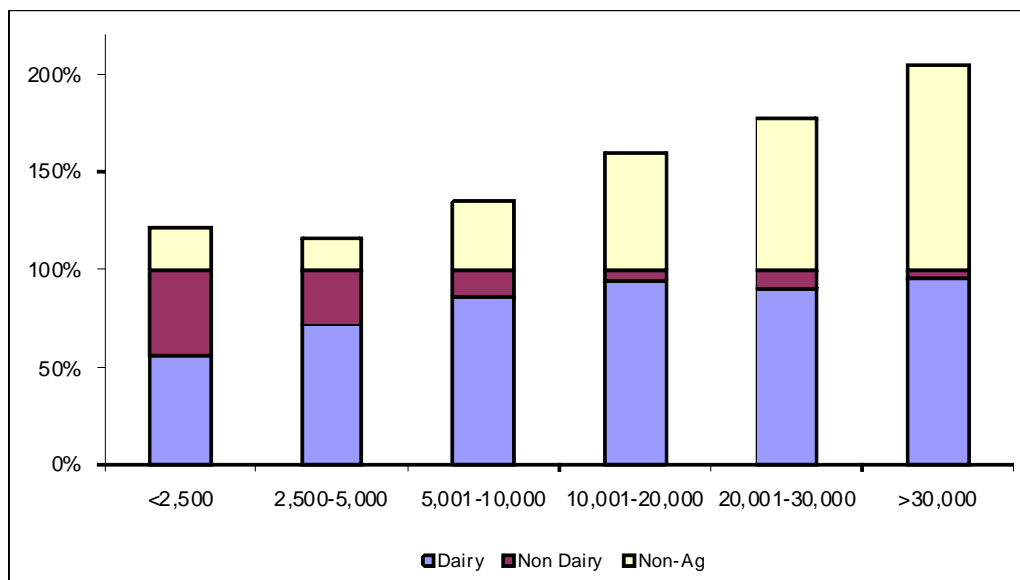
Cattle are kept for dairy throughout the IGAD region (in both pastoral and mixed agriculture areas); but there are specific locations where more market oriented small holder dairy enterprises are found. Most famous is the area known as the Greater

³² This section draws extensively on Ashley and Nanyeenya (2002), LDG (2003) and Ouma et al (2004)

³³ Main sources of information include Knipps (2004), Leksmono et al (2006) and Staal et al. 2001

Nairobi Milkshed in Kenya, but Uganda has a growing dairy sub-sector and dairy production has grown in importance for areas surrounding the capital city in Ethiopia. Even in the Greater Nairobi Milkshed there are significant differences in participation in the dairy sector between households with different incomes. The following graph based on data collected by the Smallholder Dairy Project³⁴ shows that dairy is important for all income categories engaged in agriculture, but that participation in dairy increases with higher incomes.

Figure 4: Proportion of Households Engaged in Dairy, Non-Dairy Agriculture and Non-agricultural Livelihoods as a % of Households Engaged in Agriculture



Not only does participation in dairy increase, but per-household ownership of dairy cattle increases with greater wealth, as do other investments (specialized feed, use of veterinary services, etc), and consequently milk yields and milk sales³⁵. In turn, more of these milk sales go through cooperatives and other formal systems. This highlights the greater potential wealthier households have to specialize their production, and the concentration of dairy amongst better off households.

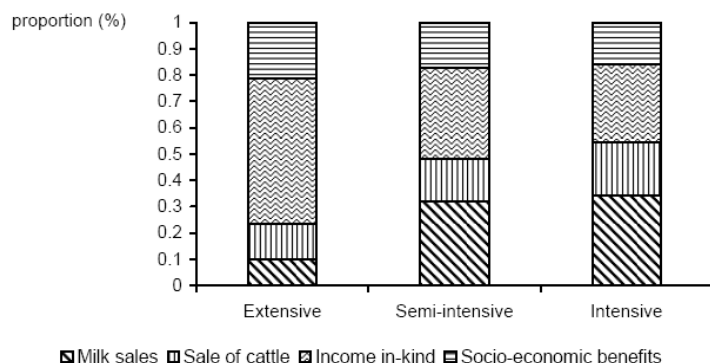
Even with more specialized production and greater market orientation, smallholders in this area still make multiple uses of livestock. Estimates from Western Kenya³⁶ suggest that even in intensive systems, with significant income coming from milk, milk sales make up only 30% of the value of the 'cattle enterprise'; and with most households engaged in dairy also owning other livestock an even smaller proportion of the overall benefits of livestock ownership.

³⁴ Staal et al. (2001) p39

³⁵ ibid p44

³⁶ Ouma et al. (2004) p10

Figure 5: Contribution of Various Income Categories to Total Returns from Cattle Enterprise by Production Systems



Stockless³⁷

Throughout the IGAD region are a number of households so poor that they do not own any livestock at all. They are often sub-categories of the above production systems, falling in the same geographic areas - but are often the destitute of their societies (similar to the drop-outs in pastoral areas). Importantly this situation may be temporary, and in all IGAD countries people may fall into and move out of this status, depending on life events. Although these households do not own any livestock yet, they may still access some livestock products through livestock sharing agreements; and their first priority if any cash is available for investments is to get themselves onto the livestock-keeping ladder, initially by purchasing poultry before trading up to sheep and goats. Share-rearing, or borrowing, livestock is another common way of gaining access to livestock where people's social capital allows.

Again female headed households are often over-represented amongst the destitute. A study in Ethiopia's Amhara region³⁸ found that female headed households made up 54% of destitute households, while they were only 21% of the overall population. In fact 34.5% of female headed households were destitute.

2.2.3 Commercial³⁹

Owners of such enterprises will usually be very wealthy, with significant power (as a group) to influence policy debates in their favour. However, poor households may be employed on large scale livestock farms as labourers. However, unlike horticulture enterprises, livestock enterprises tend not to be very labour intensive and therefore opportunities are limited. This is one of the reasons that while creating an enabling environment for large scale livestock enterprises may be supportive of growth and support balance of payments, such a move can rarely be seen as pro-poor. Support to such an approach can still claim indirect 'trickledown' of benefits, but there is little evidence that these are anything other than an inefficient means of reaching the poor. As such, investments and policies which support the commercial sector should be balanced with those which directly and in the short-term are likely to bring benefits to the poor.

2.2.4 Urban and Landless Livestock-keepers⁴⁰

Throughout the IGAD region there are significant numbers of livestock within urban boundaries, including within capital cities. In addition there are a number of landless

³⁷ This section draws on Barrett and Swallow (2003) as well as the Ethiopia based HEA profiles from Amhara region (Save the Children UK (2002), Tigray (LIU 2007) and Southern Nations (FewsNet and DPPA (2005))

³⁸ Sharp et al. (2003)

³⁹ LID (1999)

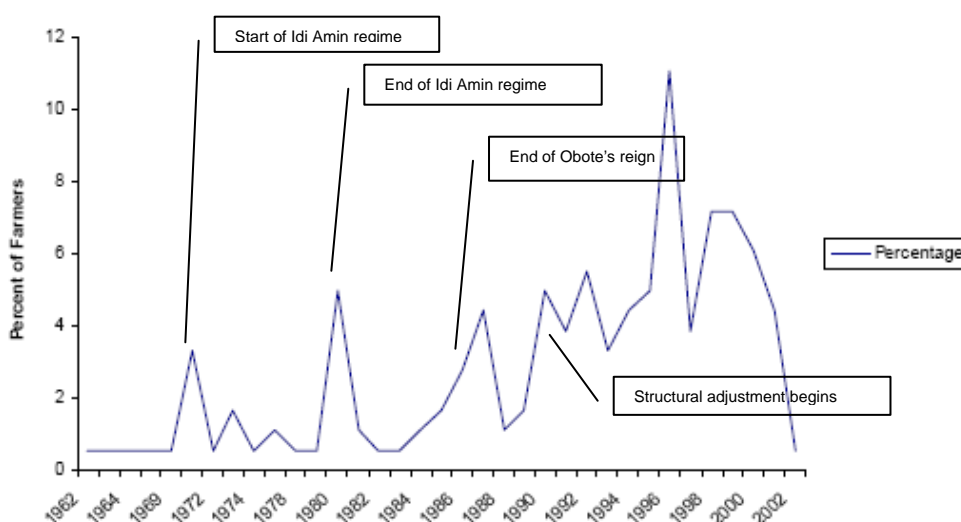
⁴⁰ Main sources include Azage et al. (2003), Foeken et al. (2001) and Ossiya et al (2003)

households which tend to be found in small towns and villages scattered throughout the region. Reliable estimates of the number of animals kept in cities or of number of urban livestock-keepers are difficult to find.

In Ethiopia in 2001 it was estimated that 169,264 cattle, 87,397 sheep and goats and more than 400,000 chickens were kept in urban areas⁴¹. In Nakuru, a district capital, it is estimated that one fifth of households keep livestock, with chickens the most frequently owned livestock⁴².

Urban households often have diverse reasons for keeping livestock: income, dietary supplementation, a desire to continue practicing traditional livelihood activities, and inflation proofed savings. A study in Kampala⁴³ clearly showed how increases in urban livestock ownership were correlated with periods of political and economic upheaval; as people felt a need to manage risk by diversifying income sources and securing access to animal products.

Figure 6: Graph Mapping the Percentage of People Keeping Livestock in Kampala Against Political Upheavals⁴⁴



Livestock are usually a secondary income source, supplementing existing incomes. Investments in meat production are more common than investments in dairy, although urban dairy farming is often an important source of milk in urban areas.

As in rural areas, poor households are represented in all types of livestock-keeping but most commonly keep poultry and small stock apparently for meat (and egg) production but in many cases for sale to provide small amounts of household income and support purchases. Better-off households are more likely to use a higher level of inputs including making greater use of formal veterinary and other less formal animal health services (81% of better households against 36% of poorer households used veterinary drugs in Nakuru⁴⁵).

2.3 Why People Keep Livestock

As can be seen from the discussion above on the different livelihoods systems, livestock perform critical functions and play multiple roles for both poor and non-poor

⁴¹ Ministry of Agriculture (2001) in Azage Tegegn et al. (2003)

⁴² Foeken and Owuor (2001)

⁴³ Ossiya et al. (2003)

⁴⁴ ibid

⁴⁵ Foeken and Owuor 2001

livestock-keepers. These roles go far beyond the usual focus of projects and policies, which tend to prioritise increasing productivity and incomes. The subsections below categorise the main roles of livestock for poor livestock-keepers before highlighting critical conclusions.

2.3.1 Income and Trade

Outside of pastoral areas, livestock and livestock products tend to be a minor income source for small-holders. While some of this income may come through the renting of animals, the majority of it comes through trading livestock products and live animals. For poor households, livestock-related incomes are even lower. Even in the fairly livestock intensive examples shown in Figure 3 above, livestock-related incomes do not exceed 30% for poor households. However the relatively small proportion of income provided does not necessarily reflect the importance of this income, which is often the critical contribution required for a sustainable livelihood in combination with contributions from other sources.

The smaller incomes of poor livestock-keepers not only reflect their lower livestock holdings, but also their differing priorities. The poor often prioritise savings and asset accumulation over income, only selling animals when the need arises and selling the smallest amount possible to cover that need. Better off households have the luxury of being more profit-oriented having already acquired a more stable livelihood portfolio.

In pastoral and agro-pastoral areas livestock are a significant income source for the majority of households. However, even this importance is reduced for poorer pastoralists and becomes negligible for households who have dropped out of pastoralism and into destitution.

2.3.2 Food

As, in the case of income, animal products only make a minor contribution to overall food intake of smallholders, and of the poor in particular. Although more significant, even for pastoral and agro-pastoral populations the contribution is small. However, as with income, this small contribution often has a nutritional importance beyond its calories. Livestock products contain some of the most easily digestible forms of protein, Vitamin A, iron as well as other key components of a healthy diet. Regular inclusion of livestock products is linked with much lower incidences of child malnutrition. In particular, the rural poor are less likely to purchase meat and animal products for consumption than the better off; what little they consume is usually from own production (and frequently linked to festivals)⁴⁶.

2.3.3 Savings

Livestock are the most common form of saving in much of the IGAD region. Livestock are considered by smallholders to offer much better rates of return (through appreciation, reproduction and through the products and services they provide) than interest from banks or credit and savings institutions. They are also more accessible as a form of savings by many small holders who are poorly serviced by savings institutions⁴⁷.

Livestock savings are frequently liquidated to meet both planned and unplanned expenditure. Households will sell the smallest animal type adequate to meet the required expenditure. For example small-stock sales are common at the time of year the land tax is due in Ethiopia.

⁴⁶ Maltsoğlu (2007)

⁴⁷ LID (1999), Ashley (2002) IFAD (2004) and LDG (2003)

2.3.4 Risk Management

Livestock savings are also liquidated during times of crises. One of the key reasons for livestock accumulation and savings is the need to create reserves as buffers to withstand crises. The sale of small stock can become a critical source of income during crises whether illness of a family member or drought. Having access to cash - through livestock - at the time it is needed gives this income a value above its apparent financial worth.

Even in normal years, livestock can be sold during the hungry season enabling households to ensure at least survival levels of consumption throughout the year⁴⁸. As part of a risk management strategy, households often maintain a diverse range of livestock suitable to their agro-ecology.

The role of livestock in risk management is even more marked in pastoral areas. Pastoral areas are more prone to variations in rainfall and so the frequency with which droughts occur is higher. But in addition, evidence shows that pastoralists need to have large herd sizes going into a drought if they are to have viable herds in the post drought period⁴⁹.

2.3.5 Wealth Creation

Livestock accumulation is a key aim for a majority of rural households as it is seen as the key route out of poverty⁵⁰. In most rural parts of the IGAD region levels of livestock ownership are the key determinant of wealth⁵¹. Poor households will initially procure and breed small-stock until they can begin trading up for larger species. Households will frequently forego consumption in the short-term in order to prevent asset depletion until they achieve a potentially stable level of assets.

2.3.6 Animal Traction

In the highlands of Ethiopia oxen have been used to pull ploughs for thousands of years, while in Somalia camels are critical as beasts of burden to carry shelter, water and food to enable people to accompany their animals in search of pasture⁵². Horses and donkeys also play important roles carrying people and goods, and in some cases horse drawn ploughs. In areas where animal traction is used extensively for agriculture, ownership of draught oxen has dramatic implications for access to food and income (as shown above in Figure 3).

2.3.7 Social Capital

Important social occasions are usually marked by the consumption of livestock and livestock products, with sometimes an ox being slaughtered communally by a group of households⁵³. Weddings or the birth of children are also often commemorated with gifts of livestock and in some areas dowries or bride-price are paid before weddings can proceed. The ability to participate in these activities is often essential in establishing and maintaining the social networks through which risk is managed.

Lending livestock is also a frequent occurrence between households. Sometimes the benefits to participating households are obvious - the lender receives benefits from another household's labour, grazing and fodder, while the borrower gains access to animal products and a share in the offspring of the animal. However, there are also occasions where the benefits are less obvious or only obvious for one of the parties.

⁴⁸ LID (1999), Ashley (2002) Barrett and Swallow (2003), IFAD (2004), LDG (2003) and Sharp et al 2003

⁴⁹ Lybbert, Barrett, Desta and Coppock (2002);

⁵⁰ LID (1999), Ashley and Nanyeenya (2002) IFAD (2004) and LDG (2003)

⁵¹ FewNet (2004), FewNet and DPPA (2005), Save the Children UK (2002), Save the Children UK (2007) and SSCSE (2007)

⁵² Ouma et al (2004)

⁵³ Devereux (2006), Ashley and Nanyeenya (2002), LDG (2003)

2.3.8 Manure

Livestock manure is often one of the most highly valued products from livestock production, most commonly used as a fertilizer it is also in some areas a critical source of fuel - particularly for the poorest. Homestead gardens, or particularly prized crops, benefit from livestock waste collected from the overnight resting place of animals. Livestock are encouraged to graze on crop residues in the post harvest period in the knowledge that they will also add fertility to the soil⁵⁴.

2.3.9 Accessing Communal Lands

The keeping of livestock enables the productive use of large areas of communal land in the IGAD region. Pastoral areas, in which the vast majority of land is accessed communally, makes up 51%⁵⁵ of the land area of the IGAD region. A large proportion of grazing in predominantly agricultural areas is also communal.

2.4 Key Livelihood Trends

Livelihoods in the IGAD region are far from static. They are impacted by and respond to a range of positive and negative influences. Four important trends, and their impacts on poor livestock-keepers are discussed below:

2.4.1 Urbanisation and the 'Livestock Revolution'⁵⁶

Population growth is already increasing demand for livestock products and growing levels of urbanisation are likely to have an impact on per-capita meat and milk consumption in the future. Elsewhere in the world urbanisation has led to dramatic increases in consumption and therefore demand for livestock products (including demand for imported livestock products) leading to talk of a livestock revolution. To date *per capita* consumption has not changed significantly in Sub-Saharan Africa, an indicator of stagnating poverty rates, but in the future this larger urban population is likely to start demanding increased quantities of animal products.

Increased demand is having the greatest impact on intensive peri-urban livestock production facilities. Small-holder producers, who frequently reside far from urban centres are both more distant from relevant markets but also have difficulties meeting the quality standards expected by both urban markets and export markets⁵⁷. Poor small-holder producers therefore face particular constraints in accessing new markets and may in fact suffer reduced demand for products as a consequence of the changing structure of livestock product markets.

2.4.2 Spread of HIV

HIV prevalence rates range from 0.9% in Somalia to 6.7% in Uganda⁵⁸. HIV/Aids can have significant effects on household livelihoods with direct impacts on labour availability (as a result of death or chronic illness) and health expenditure. These direct impacts have important knock-on effects influencing cropping patterns, asset ownership and income earning potential. Changing labour availability affects households' preferences for different species of livestock. Households without male labour are less likely to own plough oxen or large stock; while overall labour shortages will push households towards owning less animals and easier to manage livestock.

⁵⁴ Ouma et al (2004), Berhanu et al. (2007) and Ashley and Nanyeenya (2002)

⁵⁵ Calculated from Thornton et al. (2002)

⁵⁶ The Livestock Revolution is a phrase used to describe the dramatic increases in demand for livestock products over the past 30 years often fuelled by urbanisation.

⁵⁷ Section 5.2.2.2 provides an example of how this trend, which was excluding small-holder dairy producers in Kenya, was successfully reversed improving their access to urban markets.

⁵⁸ World Bank (2007)

Increased health expenditure, or funeral expenses, can also directly lead to the sale of productive animals with subsequent impacts on livestock asset holdings and livestock-related income..

2.4.4 Pastoralism Under Stress

Pastoralism is widely recognized as coming under increasing pressure from a combination of factors. Population growth and the loss of pasture to expanding agriculture, and in some areas national parks, are creating severe population pressure. A period of frequently recurring drought has reduced herd sizes and fuelled growing incidents of conflict. Conflict and the expansion of agriculture are decreasing access to grazing lands and restricting movement. Restricted movement, increased population pressure and inappropriate site selection and management of waterpoints are having impacts on environmental degradation and, in certain areas, leading to overgrazing. Pastoralists are responding by changing their herd composition (keeping larger numbers of small stock), making greater use of the market (selling high value livestock and products for cheaper cereals) and, in some areas, engaging in crop production.

2.5 So Why Does Understanding this Matter?

This section illustrates how an understanding of the livestock-keeping strategies of poor people reveals a number of behaviours which are not well reflected in policy measures. These include:

1. **Multiple roles.** Livestock perform multiple functions simultaneously for poor households, as indicated in Table 4 below. Livestock generate income, food and provide labour, earn interest, allow accumulation, buffer against shocks and play a part in the social life of a household all at once. It is precisely this ability to play so many important livelihood roles that explain livestock's widespread and enduring popularity, especially amongst the poor who struggle for such services from other sources.

*Table 5: Purpose of Keeping Livestock in the Maize Belt of Ethiopia*⁵⁹

Purpose	% of users for each livestock group				
	Sheep	Goats	Donkeys	Cows	Oxen
Draught power	-	-	89	7	99
Milk	-	37	-	96	-
Meat	56	63	-	8	51
Cash	79	89	92	97	97
Manure	6	9	8	69	67
Savings	32	37	25	57	52
Prestige	-	3	3	32	38
Reproduction	76	80	31	97	-

2. **Livestock's multiple roles hold livelihoods together.** It is not that livestock keeping is secondary or supplementary to other sources of income, but rather that it is complementary. The multiple roles - whether savings, risk management, income or manure - are 'the glue that holds people's livelihood strategies together'⁶⁰.

⁵⁹ Berhanu et al. (2007)

⁶⁰ Ashley and Annor-Frempong (2003)

3. **Multiple species.** Poor people aim to keep more than one species of livestock. Poor households do not specialise on a particular animal type, but aim to diversify to both spread risk with and to take advantage of the different roles and characteristics of different livestock species.
4. **Accumulation through small animals.** Smallstock and poultry are the most frequently kept livestock by poor households. This is partly because of their affordability, and partly as they are seen as building blocks towards larger animals. Smallstock frequently have shorter breeding cycles which make them particularly suitable for this purpose.
5. **Difference.** It is critical to differentiate between smallholders. There are significant differences in the nature and level of dependence on livestock of people pursuing different livelihood strategies, and people of different wealth status. For the poor in particular the reasons for livestock keeping are not as simple as profit maximisation, and the poorer people are the more complicated it tends to be.

For example, when considering policies and interventions to support pastoral areas one might identify livestock marketing policies as a mechanism to support better-off pastoralists along with policies which ensure that they can employ their risk management strategies. However, to reach poor pastoralists one might be more focused on policies which support the retention and building of herds such as improving access to animal health interventions or ensuring that restocking mechanisms can function. Restocking mechanisms are unlikely to enable the rehabilitation of pastoral drop-outs back into a pastoral way of life; instead ensuring an environment in which drop-out households can develop viable livelihoods outside of pastoralism (but maybe with links to their heritage) through education or credit is likely to be the most successful approach.

6. **Dependence on a greater number of income sources.** As can be seen in Figures 1 and 3 above, the poor have significantly more diversified income sources than their better-off counterparts. Unfortunately this is not a sign of better adaptation of risk-prone livelihoods, but rather an indication of the struggle by poor households to make ends meet. Many of these income sources are low status and time consuming, generating limited income when compared to the effort expended. Livestock holdings enable better off households to focus on a more limited number of income sources, with more efficient and effective use of resources. Critically this means that poor people in this situation may not act in ways that a profit-maximising household with a greater reliance on livestock may act.

2.6 In Summary

There are three critical reasons why understanding how people use livestock to support their whole livelihood matters:

1. Poor small-holder households often have very rational reasons for taking actions which are different from those a wealthy and commercial livestock producer may take. This is not to say that people's livelihood strategies cannot be improved upon. Rather, by understanding the rationale for existing actions, it is more possible for policies and interventions to support livestock-keepers in ways that will make a difference.
2. Misunderstanding these actions leads to perceptions that poor and small-holder households behave in ways which are irrational, based on ignorance and which need to be combated. Policies and interventions then act at odds with people's strategies rather than supporting them. Experience from livestock development to date is clear that this is ineffective.
3. Furthermore, interventions built on misunderstandings tend to be simplistic and ineffective - both failing to target the poor and to address their constraints. For example, many programmes aiming to introduce improved livestock breeds are not taken up by the poor. The poor are more concerned with the higher expense and greater risk of keeping improved breeds (which are often more susceptible to disease and have higher feed requirements) than they are interested by the prospect of increased productivity.

Livestock development is really about people and it is therefore critical to appreciate how institutions and policies may vary greatly in their impact, depending on the wealth of the livestock keeper concerned as a result of the very different livelihoods options available to different wealth groups. The following sections will demonstrate how poor livestock-keepers' livelihoods are influenced by institutions and how it is possible to shape these institutions with policies to ensure significant lasting benefits.

3. UNDERSTANDING THE IMPORTANCE OF INSTITUTIONS

Although the terms ‘institution’ and ‘organisation’ are sometimes used interchangeably, in the field of economics they have very different meanings. Institutions are “structures and mechanisms of social order and cooperation governing the behaviour of a set of individuals”⁶¹; whereas organisations are “a group of individuals pursuing a set of collective goals with established roles, methods of coordination, procedures, culture and space”⁶². To put it most simply institutions are the ‘rules of the game’ whereas an organisation is, for example, a football team playing the game.

Table 6: Institutions vs. Organisations

Institution	Organisation
Markets, trade barriers and contractual agreements	Businesses, cooperatives and regulatory bodies
The rights to practice veterinary medicine, and the codes of conduct and rules which govern its behaviour.	Private veterinary clinics, NGOs or government departments which deliver veterinary services.
Marriage, the role of women in society and property rights	The household and the family run farm or herd.

Institutions govern our access to resources, our transactions with each other, whether and how we collaborate, and even the food that we eat or the crops that we choose to grow. Institutions may be formal (as laid down in legislation and enforced by courts), or informal (determined by history and culture, governed by our desire to be liked and respected by our peers and furthered by our need to have good relationships in order to prosper).

3.1 Typology of Institutions

The following typology of institutions which affect the livelihoods of poor livestock-keepers is largely derived from LID’s *Livestock in Poverty-Focused Development* (1999). It organises institutions into a hierarchy according to the level at which they operate and the scale at which they apply, and separates out formal from informal institutions.

Table 7: Typology of Institutions

	Formal	Informal
International	Trade barriers OIE Standards for disease control Definition of national boundaries Trade rules that allow dumping of subsidised products Trade rules that provide preferential agreements to certain countries.	Historical links and relationships between countries manifested in favourable trading relationships Common professional values Political affinities which influence levels of cooperation.
National	Property rights Environmental legislation	Attitudes towards pastoral populations Need of countries to earn foreign currency to pay for fuel and other

⁶¹ North and others as précised in Wikipedia (accessed August 2008)

⁶² *ibid*

	Formal	Informal
	Rights to practice veterinary medicine and sell veterinary drugs Intellectual property rights Government policies setting levels of prices, subsidies and taxes	inputs Suspicion of technology or government Attitudes towards collective versus individual activity.
Organisational	Staff appraisal procedures Working procedures Terms and conditions Membership rules Rules against free-riders Rules for disbursing credit	Attitudes towards working with poor livestock-keepers as opposed to more commercial livestock industries Patron-client relationships Vested interests of employers or a category of employees Market transactions, trader behaviour
Local	Local movement controls Local disease control policy Access to resources of different kinds - forests, village grazing, private land, water points, etc.	Position of women Religious taboos on consumption of meat Food consumption preferences Customary value of animals

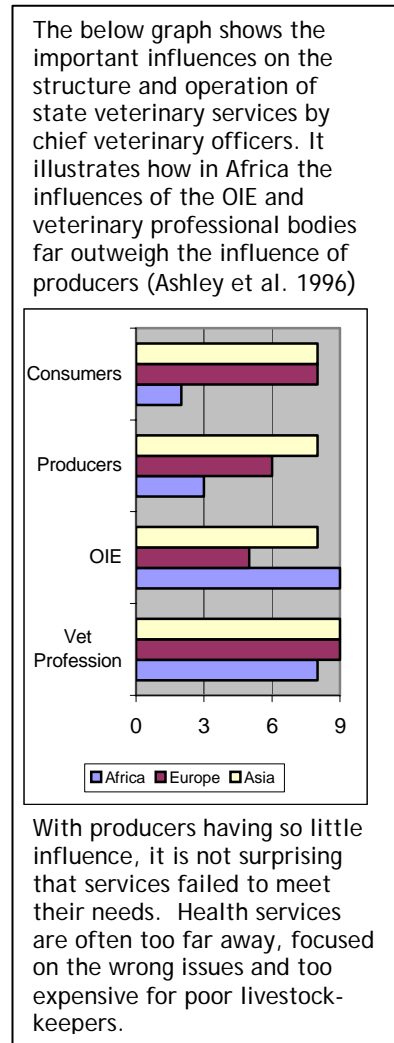
3.2 Enabling and Disabling Institutions

There is a growing interest in the role of institutions in determining economic growth and in influencing how and whether this growth impacts on the poor. Sometimes this influence is positive and **enabling** in which case it helps poor people to achieve their objectives. Sometimes it is negative and **disabling**, in which case it constrains poor people's ability to achieve their objectives. Although not aiming to be comprehensive, the following table aims to illustrate how various institutions present in the IGAD region can be enabling or disabling for the poor (or categories of the poor).

Table 8: Examples of Enabling and Disabling Institutions which Relate to Livestock in the IGAD Region

Institution	Enabling	Disabling
Markets	<ul style="list-style-type: none"> Markets allow pastoralists to subsist on lower herd sizes by enabling them to exchange high value calories (milk and meat) for cheaper calories (cereals). Markets are critical in ensuring that poor households meet food needs through the exchange of goods and services for money which can then be used to purchase staple food. The poor are frequently more dependent on markets than their better-off counterparts. Commercialisation of milk production is resulting in increased income opportunities. 	<ul style="list-style-type: none"> Application of international trading bans linked with disease outbreaks (such as Saudi Arabia's live animal bans) High transaction costs in market systems (the need for permits, and other documentation) usually exclude the poor who find it difficult to navigate complex systems. The poor are unable or can't afford to meet exacting quality standards. Poor integration of markets in remote areas result in low prices for items farmers' produce for sale, but high prices for those items farmers wish to buy (inputs, staple foods in deficit areas). Control of milk income is, in some cases, shifting from women to men as it becomes more of a commercial commodity. Loss of income of women is associated with reduced expenditure on food and on children.
Services	<ul style="list-style-type: none"> Significant reductions in animal mortality have been demonstrated in areas where animal health services are accessible and have extensive coverage. 	<ul style="list-style-type: none"> Highly-qualified professionals such as vets are often unwilling to live in remote areas in which they are unable to access an expected standard of living or services for them and their children. The income earning potential for highly qualified professionals will be constrained in areas of scattered populations (and therefore travel between site visits is expensive and time consuming) and where clients are unable to pay much for services. The result is few animal health service providers. Veterinary professionals are more influenced by the priorities of international bodies (such as the OIE) than the needs of poor smallholders. Incentive structures within government organisations often fail to reward pro-poor behaviours. In some cases promotions have more

Pastoralists living in the Gabra area of Marsabit district show significant changes to their marketing patterns. Sales of female goats have increased from 10% of stock holdings in 1982, to 28% in 2000-02. In 2000-02 pastoralists stated that the overwhelming reason (88% of respondents) for selling animals was to obtain cash to buy food (McPeak 06).



Institution	Enabling	Disabling
Attitudes towards pastoral populations	<ul style="list-style-type: none"> Growing recognition of the differing needs and priorities of pastoral populations has led to the setting of specific pastoral parliamentary committees (PPC) in a number of countries. In Uganda the PPC negotiated access by pastoralists to a National Park during a severe drought, while in Kenya the PPC has secured increased budget allocations for boarding schools in pastoral areas⁶³. 	<p>to do with patronage or political factors, than achieving grass-root results</p> <ul style="list-style-type: none"> Perceptions that pastoral livelihoods are primitive has led to settlement policies and the introduction of inappropriate ranch-style interventions. A belief in the existence of a 'tragedy of the commons' in which pastoralists irresponsibly over-exploit pastoral areas has justified the privatisation of higher potential grazing lands for ranches or irrigated agriculture (rather than the reality where there is managed access to common lands and high stock levels actually maximise use of pastoral areas). The perception that conflict is inevitable in pastoral areas has limited action and the building of institutions which could better resolve differences. The low regard for pastoralism has limited the interest of national governments to resolve international trade issues (such as the Saudi Arabia live animal bans).
Risk management	<ul style="list-style-type: none"> Social networks provide key support during times of crisis: relatives send remittances; communities offer reciprocal grazing rights; and neighbours provide support to cover funeral expenses or labour in the event of illness. The stronger and more diverse the networks the more potential support available. Governments and the international community provide critical life saving support during large community or country wide 	<ul style="list-style-type: none"> Poor households are less able to maintain social networks or tend to have networks with other poor households. This limits the support that can be called upon (and which they can offer). The cost of maintaining social networks can limit expenditure on investments or result in relief resources being shared by both poor and rich community members in the event of an outside response to a crisis. The time and effort required to get a large scale relief operation financed and mobilized means that support often comes late, after people have sold assets. This means that while relief efforts save lives they often have limited impact on

"Charity begins at home. So when you are rich enough to give *zakaat*, you first look after your poor relatives, then others in the clan who need assistance. After that you might give something to beggars in the street. If you have no one to give to, there are people collecting at the mosque who redistribute to the poor, so you can give to them".
"Zakaat is for rich people and those who know them; it is not for people like us"
 Informants quoted in Devereux 2006

⁶³ Morton et al. (2007)

Institution	Enabling	Disabling
	<p>shocks.</p> <ul style="list-style-type: none"> • Customary conflict resolution systems play a key role in avoiding disputes or resolving them. Inter-marriage between groups can strengthen these systems or increase the incentives to resolve conflict. 	<p>livelihoods.</p> <ul style="list-style-type: none"> • Markets cannot always take up increased supply of livestock in a crisis contributing to a crash in livestock prices and reducing the effectiveness of livestock as a buffer against shocks. • A range of factors or incentives may trigger or sustain a conflict: scarce grazing resources during a drought, the need to restock after a crisis, political interests both within and external to the country, the increased availability of small arms, or distrust and resentment remaining from a previous conflict. As a result conflicts become more difficult to resolve.
Gender roles	<ul style="list-style-type: none"> • Income earned by women is often primarily managed by women. This economic 'power' both commonly results in increased expenditures on food and child focused investments (health and education); but can also empower women to contribute more in both household and local level decision making. Increased incomes for women increases these effects. 	<ul style="list-style-type: none"> • Some interventions can result in activities previously managed by women, coming under the control of men (such as the example cited above concerning milk marketing). This can result in a loss of primary control over the income by women with wider impacts on the influence of women. • Women are often culturally excluded from certain activities (ploughing in northern Ethiopia, livestock management among the Beja in North-East Sudan). This exclusion can have particularly negative effects for women headed households (who make up a greater proportion of the poor) who then become dependent on others to fulfil basic economic functions. • Women may be barred from key decision making forums or, due to cultural constraints, reluctant to express themselves in public. This in turn limits their ability to influence policies and actions which affect their lives.

This exclusion can be more insidious. A study by Maarse (1995) found that only 19% of those first provided with information on zero grazing technology were women, yet women undertook most dairy activities.

3.2 In Summary

It can be seen from the table above that, although institutions can act as enablers, for poor livestock-keepers the disabling actions of institutions tend to outweigh the enabling actions. This is not surprising when one appreciates that amongst the characteristics of the poor is their marginalisation and limited social and political capital. The poor are usually less able to influence institutions in their favour.

It is not that there is one institution operating and having effects at any one time, but rather an interplay of institutions and their effects. Policy setting processes, the low status of poor livestock-keepers, service delivery incentive procedures and market structures can reinforce each other in ways which disadvantage poor livestock-keepers. The Saudi Arabia live animal ban provides an example. While this is clearly an issue of how the international markets are structured it also reflects institutional constraints in service delivery (which did not manage the disease outbreak rapidly enough) and policy prioritisation (there were limited actions by national governments to negotiate the over-turning of the livestock ban, many believe because of the poor prioritisation of pastoral issues).

Often very powerful are the informal institutions within delivery organisations, but as these are often invisible they are sometimes the most challenging to address. These informal institutions include attitudes towards different categories of poor livestock-keepers; poor motivation of delivery organisation staff; top-down planning; and staff appraisal and promotion systems which are not geared to reward people for meeting the needs of poor clients. Failing to address these institutions can undermine apparently pro-poor policies and programmes.

It is clear that it is necessary to change institutions (including altering organisations) as well as to identify technical solutions if we want change to be effective, sustainable and widespread. It is also important to focus on informal institutions as well as formal. Policies are well placed, and the most effective mechanism, to ensure that an enabling set of institutions exist for all categories of livestock-keepers, including the poor.

4. CONSTRAINTS TO THE LIVELIHOODS OF POOR LIVESTOCK-KEEPERS

4.1 The Broad influences on livestock-keepers' livelihoods

Many of the factors which constrain the livelihoods of poor livestock-keepers and their livestock-keeping activities have little to do with livestock, even in pastoral areas. The following problem ranking exercises indicate the wide range of constraints faced. In none of them do livestock focused constraints feature as the highest ranked problem.

Table 9: Problem Ranking Results from Three PRA Exercises

Adwari Corner Village ⁶⁴		Balahamo (pastoral), Afar ⁶⁵		Gemeto Gale ⁶⁶	
Problem	Ranking	Problem	Ranking	Problem	Ranking
Insecurity	1	Human health	1	Shortage of rain	1
Poor soils	2	Floods	2	Land fragmentation	2
Famine	3	Animal diseases	3	Lack of seed	3
Diseases	4	Lack of skills on crop production	4	Asset depletion (cattle sold for food)	4
Poor education	5	Lack of safe water	5	Malaria	5
Lack of safe water	6	Poor pasture	6	Lack of alternate income sources	6
Lack of money	7	Poor communication to access services	7		
Drought	8				
Pests	9				
Poor Housing	10				

Constraints to livestock-keeping should be kept in this broader context if we are to meet the needs of livestock-keepers and to work in accordance with their priorities. It is unrealistic to expect high levels of expenditure on animal health services, for example, if meeting immediate food needs has become a priority and income is limited.

There is however a commonality between many of the problems above and problems associated with livestock-keeping. Amongst the devastating effects of drought are the impacts on livestock production, the reduced terms of trade for livestock, and the loss of livestock savings through high mortality. Insecurity and conflict, with its immediate threat to human life and well-being, also has significant implications on livestock-keeping. Livestock are subject to raiding and access to grazing areas can be severely constrained during periods of unrest.

4.2 Livestock-specific constraints

The poor demonstrate the priority they give livestock by foregoing consumption in order not to have to sell critical livestock assets and using micro-finance most commonly to invest in livestock. Acquiring maintaining and expanding livestock herds remain important objectives of the poor and it is therefore appropriate that we prioritise the constraints they face as they seek to achieve these objectives.

Where livestock-keepers face constraints in their livelihoods and in their livestock production, it is usual that poor people experience them more severely. These constraints affect their ability to acquire livestock; their ability to maintain and expand herds; and their ability to market livestock and their products.

⁶⁴ Onweng Angura et al. (2004)

⁶⁵ Goal – Ethiopia (2003)

⁶⁶ *ibid*

Analyses of constraints to livestock-keeping by the poor most commonly conclude that lack of access to livestock feed, money for basic inputs and poor animal health are the most important problems faced⁶⁷. These constraints, and their underlying causes are further discussed below:

4.2.1 Access to Livestock Feed

Lack of private grazing land, limited crop residue and lack of income are all poverty related factors limiting access to livestock feed. In addition environmental factors related to poor soil types, low rainfall and the impact of droughts often play a huge role in reducing the food available. Institutional factors which effect property rights play huge roles, particularly those which impact on access to grazing land. Privatisation of grazing land can have significant impacts on the poor who have limited alternatives to access livestock feed⁶⁸. Conflict often has a huge affect on limiting mobility and therefore constraining access to grazing lands. In fact studies show that even the fear of conflict can have significant effects over and above the impact of the conflict itself, as it is the fear almost as much as the conflict which affects behaviour⁶⁹.

4.2.2 Money for Basic Inputs

Limited income (and a need to prioritise the use of income to meet immediate needs) obviously affects households' ability to purchase livestock inputs⁷⁰, but so do a number of underlying institutional factors. Where markets are structured in ways which only allow a few large uncompetitive enterprises to participate, prices can be prohibitively high and the supply unreliable⁷¹. Poor market infrastructure has the same impact. In addition the poor often have limited access to credit to purchase inputs. Should credit services be available, a lack of collateral can exclude poor households from these services⁷² or, without insurance, the poor maybe unwilling to take the risk of a loan when their ability to repay is uncertain.

4.2.3 Livestock Health

Poor animal health service provision combined with an environment in which diseases flourish conspire to inflict a significant disease burden on poor livestock-keepers. Poor service provision can mean that services are simply not available (or reliably available); are inappropriate; are difficult to access because of distance; or that they are prohibitively expensive. With so many animals untreated further infections are more likely⁷³.

Livestock disease reduces yields and causes mortality - impacting on savings, reducing herd sizes and increasing risks for poor households. Mortality rates usually equal or exceed off-take through livestock sales, highlighting its devastating effects on households. Even during drought periods, it is disease rather than pure starvation which is the greatest contributor to mortality, a situation which is exacerbated by the fact livestock often accumulate around areas of scarce pasture and water during droughts, providing ideal conditions for the spread of disease; and which accounts for the higher mortality rates of livestock as a drought breaks and the rain brings disease outbreaks⁷⁴.

⁶⁷ Ashley et al. 1996, IFAD (2004) and LDG (2003)

⁶⁸ Reist et al. (2007)

⁶⁹ Devereux (2006) and

⁷⁰ Foeken (2001)

⁷¹ Di Gredorio et al (2008)

⁷² *ibid*

⁷³ Grahn and Leyland (2005) and Leonard (2000)

⁷⁴ Perry et al (2002)

4.3 In Summary

The real question is 'why do poor people face these livelihood constraints'? Appropriate interventions - low cost, which focus on the actual roles of livestock in the livelihoods of the poor, and which moderate risk - can play a role in addressing these factors. But underlying or exacerbating these factors are constraints related to disabling institutions.

It should come as no surprise, therefore, that the poor face these and other constraints more severely. We have already seen how the disabling actions of institutions tend to outweigh the enabling actions for poor livestock-keepers and understood that the poor are usually less able to influence institutions in their favour.

This further emphasizes the need for policies, alongside appropriate technical innovation⁷⁵, to address institutional constraints and to establish a level playing field for all livestock-keepers.

5. PRO-POOR LIVESTOCK POLICY

This study has already looked at poverty, livelihoods and institutions, but the key question of this study and the IGAD Livestock Policy Initiative is how can we enhance the contribution of livestock to the livelihoods of the poor. The way to do this is to develop and implement effective policies which enable poor livestock-keepers to succeed.

In this section we will review what exactly we mean by policy before briefly examining the track record of livestock policies in addressing the constraints mentioned above. In doing so, this section will identify some common features of policies which successfully support the livelihoods of poor livestock-keepers.

5.1 What Do We Mean by Policy?

The word 'policy' has a broad meaning. It can refer to broad guidelines or to a set of laws. It can mean either a complete package of decisions covering all aspects of a sector (PRSP or Livestock Policy) or a particular set of decisions dealing with a single aspect (a national animal health policy or, more specifically, a disease control policy dealing with Rift Valley Fever)⁷⁶.

Generally speaking the term policy can be seen to refer to a set of decisions and related actions to implement them. Policies are likely to include broad statements of goals, objectives and means. Such a definition includes important concepts of **policy objectives** (what the policy is attending to achieve) and **policy instruments** (the methods by which the policy will achieve its objectives)⁷⁷.

5.2 Livestock-related Policies and their Impacts on the Poor

5.2.1 An Inglorious Track Record

Both the Pro-Poor Livestock Policy Initiative (PPLPI) and the IGAD Livestock Policy Initiative have undertaken extensive reviews of the role of livestock in PRSP processes and other pro-poor processes. The PPLPI policy brief concludes that 'many of the poorer countries depend on livestock to a considerable extent, an extent that is hardly reflected in the PRSP documents'⁷⁸. While the countries in the IGAD region appear not to be the worst offenders, there is still a tendency for the livestock sector in the PRSP to be more growth and export oriented, with a shopping list of interventions, than specifically linked to poverty reduction.

The PRSP documents are not the only policies which relate to livestock. Policies relating to land tenure (and therefore access to private or communal grazing land), international trade, veterinary service provision, and food safety among many others all have strong implications for livestock-keepers. Generally analysts conclude that there has been a poor track record of policies and interventions with little to no emphasis on poverty reduction, and even less impact.

The record of policies in pastoral areas has been particularly poor. In some cases policies have actively sought to disrupt pastoral livelihoods by restricting movement and encouraging settlement. Amongst their failings has been that they have attempted to constrain existing livelihoods, making pastoralists poorer rather than enabling pastoralists, providing them with greater opportunities. An approach which provides opportunities, even within an existing livelihood system, is likely to result in

⁷⁶ Derived from ILRI (1995) p6

⁷⁷ Ibid.

⁷⁸ FAO (2003a)

more people diversifying livelihoods away from pastoralism through trade or education.

What has gone wrong?

The following are problems which have been observed with the delivery of livestock development:

- The greatest number of interventions has been technological projects focused on increasing national supplies of livestock products, rather than focusing on the needs of the poor and the functions that livestock perform for them⁷⁹.
- Where scarce services have been provided free or at reduced cost, those with more influence - and therefore better off - receive disproportionately high level of services. Better-off households are more able to access free animal health services, are first in line to receive credit; and can be prioritised in receiving improved breeds (as 'early adopters' or just because of the belief that they will be best able to make use of the service provided)⁸⁰.
- There has been a limited focus of policies on building enabling institutions and even where such a focus has been present its application has been undermined by the slow process of change. Staff attitudes have remained inconducive, as new approaches run contrary to what staff are used to or what they have learned during professional training. Organisational incentives often fail to adjust and so new skills are not applied and the old system of planning, setting targets and assessing performance remain⁸¹.
- Policy formation processes tend to involve limited consultation, are complex, lengthy and the decision-making processes opaque. The poor are rarely consulted, often have limited ability to organise themselves and are unable to create or maintain the kind of pressure needed to ensure favourable policies. Only those with significant influence, which they can single-mindedly apply, are able to push through policies⁸².
- Policies have not recognised and understood the differences between poor people and non-poor livestock-keepers and so not taken account of their varying livelihood strategies and priorities.
- Policy processes have been based on negative attitudes towards supposed clients. Poor populations in general have been affected, but pastoralists as a category have been particularly marginalised by negative attitudes.

5.2.2 Some Notable Exceptions

Although these exceptions are notable because of their impacts on smallholder livestock-keepers in general, positive impacts that were shared by poorer members of the community, they were not necessarily designed to focus on poor livestock-keepers. As already demonstrated by this study, not all smallholders are poor and the strategies followed and constraints faced by poor livestock-keepers differ from those followed and experienced by their better off peers.

The Growth in the use of Para-Professionals in Animal Health Services

Throughout the past twenty years there has been growing interest in the use of para-professionals (paravets or Community Animal Health Workers) in the provision of animal health services⁸³. Such approaches were frequently introduced by NGOs at a very small scale but have become more widespread in application and are beginning

⁷⁹ LID (1999)

⁸⁰ Ibid, IFAD (2004) and LDG (2003)

⁸¹ Ashley et al. (1996) and LID (1999)

⁸² McSherry and Brass (2007)

⁸³ Ashley et al. (1996), Leonard (2000) and Grahm and Leyland (2005)

to find themselves acknowledged and incorporated into policies. The Community Animal Health Worker (CAHW) approach partly came about in response to the decline in government service delivery following structural adjustment programmes. The approach sought to provide low-cost services, close to the point of need and from service providers whom poor livestock-keepers would find approachable. CAHW are usually members of the community who provide a limited number of services in which they have been trained. They cover costs and earn income through the provision of these services and the sale of drugs. They also often act as a referral point (referring livestock-keepers to other service providers in the event that the CAHW lacks the skill to treat a specific health problem), and as disease notification agents (informing government veterinary professionals of outbreaks of nationally important diseases). CAHWs have played particularly strong roles in pastoral and agro-pastoral areas where populations are scattered, but have also serviced un-met needs in many agricultural areas.

Their impacts have been significant. Oxfam's programme in Wajir district of northern Kenya resulted in mortality rates of 20%, 17% and 18% for camel, cattle and shoats in project areas compared to 31%, 32% and 25% in nearby non-project areas a reduced loss of livestock valued at approximately \$350 for each household⁸⁴. Despite concerns that CAHWs would result in un-safe administration of medicines and therefore increased resistance to drugs, research has found that adherence to standards of drug administration have actually improved in areas where CAHWs are operational. This is because private pharmacies are the main source of drugs in areas where CAHWs are not functioning, with livestock-keepers therefore often responsible for deciding and administering dosages.

Smallholder Dairy Industry Holding its Own in Kenya

By the year 2000 informal milk traders supplied an estimated 70% of the milk consumed by Kenyans. These informal traders were in turn supplied by the hundreds of thousands of smallholder farms often with one or two dairy cattle each. In late 2003 a coalition of formal milk processors joined forces to launch a widespread 'Safe Milk Campaign' which argued that only their processed milk was safe to drink. This campaign threatened the livelihoods of both smallholder producers and traders as it both aimed to discourage consumers from purchasing their milk and to force the government to enforce laws against informal milk trade⁸⁵. The Smallholder Dairy Development Project saw the campaign as an attempt by these companies to increase their market share regardless of the accuracy of the information and held a conference which demonstrated the exaggerated claims of the Safe Milk Campaign on the dangers of the informal milk trade and provided evidence of the potential damage to the livelihoods of the hundreds of thousands of smallholder dairy producers.

Following much struggle, a new Dairy Bill has been proposed aimed at legalizing informal traders and recognizing the role of small-holder producers. Although the passing of the bill has stalled, efforts have been made to begin licensing (and no longer harassing) small-holder producers and an Improving Quality Assurance in Milk Markets Program has begun the incorporation of small scale producers into the formal market through the regulation of milk bars, formalization of milk transports and training in sanitation and marketing. The result is in many ways a de facto legalization of the informal trade.

⁸⁴ Grahn and Leyland (2005)

⁸⁵ Leksmono et al. (2006) and SDP accessed August 2008

5.2.3 Why have they been different⁸⁶?

They have supported people within their existing livelihood strategies

Neither example has sought to radically change people's livelihoods or use of livestock, but rather to build on the capabilities and aspirations poor had. The smallholder dairy example sought to protect people's existing livelihood strategies (and then further build on them), whereas the CAHW approach provided people with the animal health services they required from community members who shared their needs. In order to do this, the programmes needed to understand the livelihoods of the target groups and how these differed from those covered by mainstream policies and services.

The interventions sought to change the institutional environment

Although there were technical components to both interventions, these were embedded in programmes which were about changing the institutional environment to one which was enabling to poor livestock-keepers. CAHWs are not there to serve the needs of the government or the livestock export industry, but rather the livestock producers who surround them (and who they are). The incentive structure for the CAHWs is such that in order for them to earn an income (sustainably) they need to successfully meet the needs of their clients.

The changing structure of livestock product markets, as has been the case in many countries (as discussed in section 2.4.1), was threatening to result in the exclusion of smallholder milk producers who traded informally. The support SDP provided not only halted the campaign of commercial milk processors against the informal trade, but capitalised on the momentum generated by this to create greater recognition of the importance of the sector and to improve the organisation of those engaged in it.

They empowered poor livestock-keepers

Successful CAHW programmes followed participatory design processes, often gave community representatives control over the selection of CAHW trainees and, by the changed incentive structure and the close proximity between service provider and client, put livestock-keepers in charge by ensuring that services were provided according to demand. SDP's intervention gave small-holder dairy producers and traders a voice and began the process of them organising themselves and facilitated collective action.

There was a compelling reason for change

Structural adjustment and the decline in government veterinary services left significant and obvious gaps which needed to be filled⁸⁷. Greater private participation in animal health service provision became inevitable raising the issue that such services were often not economically sustainable in many of the places where poor livestock-keepers live. The development of the para-professional approach grew out of this gap.

The actions of the large-scale commercial milk processors forced a confrontation (albeit unwittingly) on the issue of the informal milk trade. With the support of the SDP informal traders and small-holder farmers were able to demonstrate that negative claims concerning their product were exaggerated and that the economic impact of the destruction of the informal milk trade would be devastating. This situation created an impetus not only to prevent the increasingly disabling

⁸⁶ This section draws heavily on framework provided by Ashley et al. 1996, Ashley and Nanyeenya (2002) and de Haan (2002). Evidence from case-studies are drawn from Grahn and Leyland (2005) and Leksmono et al. (2006)

⁸⁷ Leonard (2000)

characteristics of institutions in the milk trade, but to reverse the situation and create an enabling environment.

In both examples, policies did not seek to maintain the status quo and fight against longterm trends. Instead policy shifts acknowledged the dynamic nature of livelihoods and sought ways support livelihoods to accommodate and benefit from these trends.

They focused on people not livestock or products

The programme objectives statements did not talk about increasing production, or reducing livestock deaths, rather the talked about 'improvements to the livelihoods of poor Kenyans' or "reduced[d] poverty and vulnerability among pastoral and settled population[s]". The following extracts from project documents and logframes illustrate the point:

"The Smallholder Dairy Project (SDP) carried out research and development activities to support sustainable improvements to the livelihoods of poor Kenyans through their participation in the dairy sub-sector"⁸⁸

"The aim of the WPDP [Wajir Pastoral Development Project] is to reduce poverty and vulnerability among both the pastoral and settled population of the district"⁸⁹

5.2.4 And a Note of Warning

In both case studies the story is not yet finished. In many instances professional veterinary bodies are resistant to the use of paraprofessionals remaining sceptical of their efficacy in the delivery of veterinary services and protective of the skills and qualifications for which they have fought so hard⁹⁰. The legal environment for the use of CAHWs also remains mixed, with drug administration by unqualified technicians illegal in many countries. The passing of the proposed new Dairy Bill in Kenya has stalled and with the closure of the SDP programme it is not clear that there will be individuals or organisations willing or able to push it to the top of the agenda and ensure that it remains favourable to the interests of poor producers.

This reality highlights the challenge of converting the rhetoric of pro-poor policy formulation into reality and into implementation. Institutional change tends to be slow, but is necessary if we are really going to reorient policy making processes in ways which put poor livestock-keepers at the centre. It is not only the institutions which determine how policies are put into practice that need to be altered, but the institutions which determine what and how policies are formulated.

⁸⁸SDP (accessed August 2008)

⁸⁹ Birch et al.(2001)

⁹⁰ Ashley et al. (1996)

5.3 In Summary

The history of pro-poor livestock policies and interventions has been poor. Policies have often been designed to meet the needs of better off - frequently large-scale - livestock-keepers; and it has been assumed that such policies will also support the needs of the poor. In reality, poor livestock-keepers have failed to benefit from these policies and have sometimes lost out as they are squeezed out of markets. Too often these livestock policies have focused on the animals rather than the people who keep them.

In reality, poverty-focused livestock development is about people; people who are engaged in a range of livelihood strategies and whose strategies are affected by their levels of poverty. The section above has demonstrated that policies and interventions which recognise this and which create or modify institutions which support livestock-keepers can enable poor livestock-keepers to significantly improve their livelihoods. The following conclusion chapter summarizes key factors which are likely to determine the success of policies which aim to be pro-poor.

6. Conclusion

As has been demonstrated by this study, there is huge diversity in livelihood strategies within the IGAD region. Livestock play a number of roles within these strategies and poverty significantly affects the strategies of the poor. All smallholders make multiple uses of livestock, but for poor smallholders this characteristic is intensified.

Poor households try to minimise and diversify risk, and one of the ways in which they do this is to diversify the livestock they keep. Although still important, livestock often make up a smaller proportion of food and income of poor households than their better off counterparts. This both reflects the lower livestock holdings and the fact that the poor are often focused on asset accumulation and saving rather than profit maximisation. Despite this, livestock are both critical to the livelihoods of the poor and the poor aspire to better and increased livestock production.

Institutions are instrumental in governing access to resources and how people interact and transact with each other. Institutions may be formal (defined by legislations) or informal (a product of history or culture) and both formal and informal institutions inform our objectives and help and hinder us to achieve these objectives. The poor, with their limited social and political capital, are less able to influence institutions in their favour. Disabling institutions exacerbate the constraints that poor livestock-keepers face.

The track record of the impact of livestock policies and interventions on the poor has been weak. Policies and interventions have assumed that increased production will most effectively impact on the poor, rather than being built on an understanding of the multiple functions livestock perform and the need to address this in policy making. The strategies and constraints of the poor have been misunderstood and therefore policies have failed to influence them greatly. Policies and interventions have also frequently been unsuccessful at reaching the poor, either failing to target them or finding themselves subject to political capture by better-off households. Many of these failures can be attributed to the fact that policies and interventions have not sought to change the institutional environment, or have failed to succeed in true institutional change.

Turning this situation around will not be easy and the number of examples where institutional change for the benefit of the poor has been achieved are limited. It is not only necessary to identify what needs to be done, but to devise ways of ensuring that new strategies and approaches are followed. The following section lays out the key factors likely to determine the success of policies which aim to support the livestock-related livelihoods of the region's poor livestock-keepers. It builds on the evidence presented in section 5.2.3 and elsewhere in the report.

6.1 Factors Likely to Determine Success of Pro-Poor Livestock Policies

1. Policies should be relevant to the livelihoods of the poor:

- They should **build upon poor people's existing livelihood strategies** and be based on an understanding of the rationale for these strategies which are likely to be less profit focused and more centred on the multiple roles played by livestock.
- They should be **based on an understanding of livelihoods and the livestock poor households keep**. This will include understanding the differences between livelihoods and the differences between the strategies followed by the poor and those followed by their better-off counterparts. This is critical if

policies are going to successfully address the actual needs of the poor as opposed to the perceived needs.

- They should focus on the actual constraints of poor livestock-keepers: the root causes - not just symptoms. Many of these root causes reflect institutional constraints, and disabling institutions, rather than technological constraints which have traditionally been the focus of past interventions. For each constraint one must identify the institutions which create or impact on it, and craft policies to moderate these institutions or their impacts.
- They should reflect the broad priorities of poor livestock-keepers, not only livestock-related constraints. These broader priorities both recognise the real needs of poor livestock-keepers but are also likely to provide pointers to root causes.
- The best approach for achieving the above is by ensuring that poor people genuinely participate in the policy formulation process. They should be engaged in identifying key problems, root causes and agreeing major priorities. The interaction between institutions and livelihoods is complex and it is critical that policies are built on the knowledge of poor livestock-keepers on factors which constrain them.

2. Policies should ensure that incentives enable poor people to benefit from livestock development:

- They should be based on an understanding of existing enabling and disabling institutions and the issues driving the existence of these institutions.
- They should seek to change both formal and informal institutions to address the barriers encountered by poor livestock-keepers and to create an enabling environment for pro-poor livestock development.
- They should recognise that the strategies of poor livestock-keepers may be different than for the non-poor so that enabling institutions for the poor may be different than for wealthier counterparts.
- They should promote change by increasing opportunities rather than constraining existing strategies.
- They should identify not only what change is needed, but also how to make this change happen. Achieving the second will require changes in both the formal and informal institutional environment in ways which ensure that the rural poor are valued as citizens and clients; that their needs are considered valid; and that service delivery agencies become more client driven⁹¹.
- They should review the role of government from one focused on delivering services to one which enables a variety of organisations to make appropriate contributions.
- They should build upon and make the case for compelling reasons for change. This will likely include identifying and supporting potential champions of change to ensure that there is a growing constituency to push for and follow up the changes needed. It will also include supporting research which can provide evidence of the need for and potential of change.

⁹¹ Ashley (2002)

BIBLIOGRAPHY & REFERENCES

- Adano, W. R., and Witsenburg, K. M. (2008) **Pastoral Sedentarisation, Natural Resource Management, and Livelihood Diversification in Marsabit District, Northern Kenya**, Edwin Mellen Press
- Asfaw Negassa and Jabbar, M. (2008) **Livestock Ownership, Commercial Off-take Rates and their Determinants in Ethiopia**, Research Report 9. ILRI, Nairobi
- Ashley, S (2002e) **Pro-Poor Livestock Development**, (first draft), The IDL Group, Crewkerne. Available from www.livelihoods.org
- Ashley, S. and Annor-Frempong, I. (2003) **New Directions for Livestock Policy in Ghana**, theIDLgroup, Crewkerne
- Ashley, S. Holden, S. and Bazeley, P (1996) **The Changing Role of Veterinary Services: A Report of a Survey of Chief Veterinary Officers' Opinions**, LID, Crewkerne
- Ashley, S. and Nanyeenya, W (2002) **More than Income: Pro-Poor Livestock Development Policy in Uganda**, The IDL Group, Crewkerne
- Azage Tegegne, Million Tadesse, Mengistu Alemayehu, Dereje Woltedji, Zinash Sileshi (2003) 'Scoping study on peri-urban and urban livestock production in Addis Ababa, Ethiopia' in Richards, J.I. And Godfrey, S.H. Eds. **Urban Livestock Keeping in Sub-Saharan Africa: Report of a Workshop Held on 3-5 March 2003 in Nairobi, Kenya** (pp 9-20), Natural Resources International Ltd, Aylesford
- Barrett, C. and Swallow, B.M. (2003) **Chapter 2: Dynamic Poverty Traps and Rural Livelihoods**, Cornell University WP 2003-44, New York
- Berhanu Gebremedhin, Fernandez-Rivera, S., Mohammed Hassena, Mwangi, W. and Seid Ahmed (2007) **Maize and livestock: Their inter-linked roles in meeting human needs in Ethiopia**, Research Report 6, ILRI, Nairobi
- Birch, I. and Halima A.O Shuria (2001) **Perspectives on Pastoral Development**, Oxfam
- Blench, R., Chapman, R. And Slaymaker, T (2003) **A Study of the Role of Livestock in Poverty Reduction Strategy Papers**, FAO PPLPI Working Paper No. 1, Rome
- Brass, J.N. (2007) **The Political Economy of Livestock Policy: The Case of Djibouti**, IGAD LPI Working Paper No. 02-08
- Court, J. and Young, J. (2003) **Bridging Research and Policy: Insights from 50 Case Studies**, Working Paper 213, ODI, London
- CPRC (2005) **The Chronic Poverty Report 2004-05**, Chronic Poverty Research Centre, Manchester
- CPRC (2008) **The Chronic Poverty Report 2008-09: Escaping Poverty Traps**, Chronic Poverty Research Centre, Manchester
- Devereux, S. (2006) **Vulnerable Livelihoods in Somali Region, Ethiopia**, IDS
- DFID (1999) **Sustainable Livelihoods Guidance Sheet 2: Framework**, DFID
- Fahey, D.E. (2007) **The Political Economy of Livestock and Pastoralism in Sudan**, IGAD LPI Working Paper No. 06-08
- FAO **The Pro-Poor Livestock Policy Initiative: A living from livestock**, FAO, Rome
- FAO (2003a) **Livestock - A Resource Neglected in Poverty Reduction Strategies**, FAO PPLPI Policy Brief

- FAO (2003b) **Multilingual Thesaurus on Land Tenure**, FAO, Rome
- FAO (accessed August 08) **Global Livestock Production and Health Atlas**
<http://www.fao.org/ag/aga/glipha/index.jsp>
- FewsNet (2004) **Djibouti Livelihood Profiles**, FewsNet
- FewsNet and DPPA (2005) **Southern Nations Nationalities and People's Region (SNNPR) Livelihood Profiles: Regional Overview**, FewsNet
- Foeken, D.W.J. and Owuor, S.O. (2001) **Urban Farmers in Nakuru, Kenya**, City Farmer
- Fratkin, E., Nathan, M.A. and Roth, E.A. (2006) **Is Settling Good for Pastoralists? The Effects of Pastoral Sedentarization on Children's Nutrition, Growth, and Health Among Rendille and Ariaal of Marsabit District, Northern Kenya**, Presentation for "Pastoralism and Poverty Reduction in East Africa: A Policy Research Conference", ILRI, Nairobi
- FSAU and Save the Children (2000), **Livelihood Baseline Profile. Hawd and Sool, Pastoral: Camels, Goats, Sheep and Cattle**, FSAU
- Galvin, K.A., Coppock, D.L. and Leslie, P.W. (1994) 'Diet, Nutrition and the Pastoral Strategy', in E. Fratkin, K.A. Galvin and E.A. Roth ed. **African Pastoral Systems: An Integrated Approach**, Lynne Rienner Publishers, Boulder
- Goal - Ethiopia (2003) **Participatory needs Assessment Report, Drought Recovery Programme Development**, Goal - Ethiopia, Ethiopia
- Grahn, R. and Leyland, T. (2005) 'Complementarity between Community-Based Animal Health Delivery Systems and Community-Based Wildlife Management? An Analysis of Experiences Linking Animal Health to Conflict Management in Pastoralist Areas of the Horn of Africa' in S.A Osofsky ed. **Conservation and Development Interventions at the Wildlife/Livestock Interface Implications for Wildlife, Livestock and Human Health**, IUCN
- Di Gredorio, M., Hadedorn, K., Kirk, M., Korf, B., McCarthy, N., Meinzen-Dick, R. And Swallow, B. (2008) **Property Rights, Collective Action, and Poverty: The Role of Institutions for Poverty Reduction**, CGIAR CAPRI
- De Haan, C (2002) 'Livestock Development, and Poverty Reduction: Global Trends and Perspectives' in **Papers, Proceedings and Presentations of the International Workshop - Bhubaneswar, India, October 28-29, 2002**, FAO
- Halderman, M, (2004) **The Political Economy of Pro-Poor Livestock Policy-Making in Ethiopia**, FAO PPLPI Working Paper No. 19, Rome
- The IDL Group (2002) **Community Based Animal Health Workers -Threat or Opportunity**, The IDL Group, Crewkerne
- IFAD (2004) **Livestock Services and the Poor: A Global Initiative Collecting, Coordinatin and Sharing Experiences**, IFAD, Rome
- ILRI (International Livestock Research Institute). 1995. *Livestock Policy Analysis*. ILRI Training Manual 2, ILRI, Nairobi, Kenya
http://dlc.dlib.indiana.edu/archive/00002995/01/Livestock_policy_analysis.pdf
- Knips, V (2004) **Livestock Sector Report, Horn of Africa, Review of the Livestock Sector in the Horn of Africa (IGAD Countries)** FAO, Rome
- LDG (2003). **Livestock Services and the Poor**, Report produced for the Global Initiative on Livestock Services and the Poor. Livestock Development

Group, University of Reading, Reading, UK.
www.livestockdevelopment.org

- Leksmono, C., Young, J., Hooton, N., Muriuki, H. and Romney, D. (2006) **Informal Traders Lock Horns with the Formal Milk Industry: The role of research in pro-poor dairy policy shift in Kenya**, ODI/ILRI Working Paper 266
- Leonard, D. (2000) 'The New Institutional Economics and the Restructuring of Animal Health Services in Africa' in D. Leonard ed., **Africa's Changing Markets for Health and Veterinary Services: The New Institutional Issues** (pp. 1-39), Macmillan Press, London
- Leonard, D. (2007) **The Political Economy of Livestock Policy Among the Somalis**, IGAD LPI Working Paper No. 05-08
- LID (Livestock in Development) (1999) **Livestock in Poverty-Focused Development**, LID, Crewkerne. Available from www.theidgroup.com/downloads/livestock.pdf
- Little, P., McPeak, J. Barrett, C. and Kristjanson, P. (2008) **Challenging Orthodoxies: Understanding Poverty in Pastoral Areas of East Africa**, Paper for 'Pastoralism and Poverty Reduction in East Africa: A Policy Research Conference', Nairobi
- LIU (Livelihoods Integration Unit) (2007), **Livelihood Profile Tigray Region, Ethiopia: Raya Valley Sorghum and Teff Livelihood Zone**, LIU, Disaster Prevention Preparedness Agency, Addis Ababa
- Lybbert, T.J., Barrett, C.B., Solomon Desta and Coppock D.L. (2002) **Stochastic Wealth Dynamics and Risk management Among A Poor Population**, Cornell University WP 2002-44, New York
- Maltsoglou, I (2007) **Household Expenditure on Food of Animal Origin, A comparison of Uganda, Vietnam and Peru**, FAO PPLPI Working Paper No. 43, Rome
- McPeak, J. G. (2006) 'Livestock Marketing in Marsabit District, Kenya, Over the Past Fifty Years' in J.G. McPeak and P.D. Little ed. **Pastoral Livestock Marketing in Eastern Africa: Research and Policy Challenges**, (pp 39-56), ITDG, London
- McPeak, J. G., Little, P.D. and Demment, M.W. (2006) 'Conclusion: the Policy Implications and Future Research Needs' in J.G. McPeak and P.D. Little ed. **Pastoral Livestock Marketing in Eastern Africa: Research and Policy Challenges**, (pp 247-256), ITDG, London
- McSherry, B. and Brass, J.N. (2007) **The Political Economy of Pro-Poor Livestock Policy Reform in Kenya**, IGAD LPI Working Paper No. 04-08
- Morton, J., Livingstone, J.K. and Mohammed Musa (2007) **Legislators and Livestock: Pastoralist Parliamentary Groups in Ethiopia, Kenya and Uganda**, IIED Gatekeeper Series No. 131
- Moehler, D.C. (2007) **The Political Economy of Pro-Poor Livestock Policy in Eritrea**, IGAD LPI Working Paper No. 03-08
- Nelson, M.B. (2005) **International Rules, Food Safety and the Poor Development Country Livestock Producer**, FAO PPLPI Working Paper NO. 25, Rome
- North, D. C. (1993) **The New Institutional Economics and Development**, Economic History 9309002, EconWPA
- North, D.C. (1998) 'Understanding Economic Change' in J.M Nelson et al. ed. **Transforming Post-Communist Political Economies**, (pp 13-18), National Academy Press

- Okidegbe, N. (2001) **Rural Poverty Trends and Measurement**, Rural Strategy Background Paper #3, World Bank
- Onweng-Angura, T. and Okello-Atikoro, J. (2004) **Factors Influencing Household Food Security in Adwari Sub-County in Lira District**
- Ossiya, S., Isyagi, N., Aliguma, L. and Aisu, C. (2003) 'Urban and Peri-Urban Livestock Keeping Among the Poor in Kampala City' in Richards, J.I. and Godfrey, S.H. (Eds.) **Urban Livestock Keeping in Sub-Saharan Africa: Report of a workshop held on 3-5 March 2003 in Nairobi, Kenya** (pp 21-38), Natural Resources International Ltd, Aylesford
- Ouma, E.A, Obare, G. A. and Stall, S.J. (2004) **The Socio-economic dimensions of Smallholder Livestock Management in Kenya and its Effects on Competitiveness of Crop-livestock Systems**, paper contributed to the NARO Conference on "Integrated Agricultural research for Development-Achievements, Lessons Learnt and Best Practice", Uganda
- Perry, B.D., Randolph, T.F., McDermott, J.J., Sones, K.R. and Thornton, P.K. (2002) **Investing in Animal Health Research to Alleviate Poverty**, ILRI, Nairobi
- Pozzi, F. and Robinson, T. (2007) **Poverty and Welfare Measures in the Horn of Africa**, IGAD LPI Working Paper No. 08-08
- Rass, N (2006) **Policies and Strategies to Address the Vulnerability of Pastoralists in Sub-Saharan Africa**, FAO PPLPI Working Paper No. 37, Rome
- Reist, S., Hinterman, F. and Sommer, R. (2007) **The Livestock Revolution: An Opportunity for Poor Farmers?** Focus No. 1/07, InfoResources , Zollikofen
- Roba, A.W. and Witsenburg K.M. (2004) **Surviving Pastoral Decline: Pastoral sedentarisation, natural resource management and livelihood diversification in Marsabit District, Northern Kenya (Volume I)**
- Santos, P. and Barrett, C.B. (2006) **Heterogeneous wealth dynamics: On the roles of risk and ability**, <http://ssrn.com/abstract=998549>
- Save the Children UK (2002) **Abay Tekazzie Watershed Baseline**, Save the Children UK
- Save the Children (2007), **Vulnerability and Dependency in 4 Livelihood Zones of North Eastern Province, Kenya**, Save the Children UK
- Scoones, I. (1994) **Living with Uncertainty**, Practical Action
- SDP (Smallholder Dairy Project) (accessed August 2008) <http://www.smallholderdairy.org/>
- Sharp, K., Devereux, S. and Yared Amare (2003) **Destitution in Ethiopia's Northeast Highlands (Amhara)**, IDS and Save the Children UK
- SSCSE (South Sudan Centre of Statistics) (2007) **Southern Sudan Livelihood Profiles: A guide for Humanitarian and Development Planning**, SSCSE, Save the Children UK and FEWSNET
- Staal, S.J., Owango, M., Muriuki, H., Kenyanjui, M., Lukuyu, B., Njoroge, L., Njubi, D., Baltenweck, I., Musembi, F., Bwana, O., Muriuki, K., Gichungu, G., Omore A. and Thorpe W. (2001) **Dairy Systems Characterisation Of The Greater Nairobi Milk Shed** SDP, Kenya
- Tangka, F. K., Jabbar, M. A., & Shapiro, B. I. (2000). **Gender roles and child nutrition in livestock production systems in developing countries: a critical review**, Nairobi: ILRI

- Thornton, P.K., Kruska, R.L., Krisjanson, P.M., Reid, R.S., Atiena, F., Odera A.N. and Ndegwa, T. (2002), **Mapping Poverty and Livestock in the Developing World**, ILRI Nairobi
- UNDP (2007) **Human Development Report 2007/2008 Fighting climate change: Human solidarity in a divided world**, UNDP
- Wikipedia (accessed August 2008), <http://en.wikipedia.org/wiki/Institution>
- The World Bank (2000) **The World Development Report 2000/2001: Attacking Poverty**, Oxford University Press
- The World Bank (2007) **Project Appraisal Document for a Proposed ACGF Grant in the Amount of USD 15 Million to the Inter-Governmental Authority on Development for a IGAD Regional HIV/AIDS Partnership Program (IRAPP) Support Project**
- The World Bank (2008) **The World Development Report 2008: Agriculture for Development**, The World Bank, Washington