OCTOBER 2009

Feinstein International Center

Strengthening the humanity and dignity of people in crisis through knowledge and practice

Livestock Exports from the Horn of Africa: An Analysis of Benefits by Pastoralist Wealth Group and Policy Implications

Yacob Aklilu and Andy Catley
Feinstein International Center, Tufts University

Tufts University | Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy

Feinstein International Center
Tufts University
200 Boston Ave., Suite 4800
Medford, MA 02155
USA
tel: +1 617.627.3423
fax: +1 617.627.3428
fic.tufts.edu

Acknowledgements

This report was commissioned by the Food and Agriculture Organization (FAO) under the Livestock Policy Initiative of the Intergovernmental Authority on Development (IGAD).

The authors would like to thank the various people who were interviewed in Ethiopia, Kenya, and Sudan; and FAO for the logistical support provided in Sudan.

We are also grateful to the following people who reviewed earlier drafts of the reports and who made very useful recommendations on structure and content: Roy Behnke, Peter Little, Otieno Mtula, Dil Peeling, and Ian Scoones.

Contents

Contents *(continued)*

Acronyms

AFD	Action for Development
AU/IBAR	African Union/Interafrican Bureau for Animal Resources
CAHW	Community-based Animal Health Workers
CAPE	Community-based Animal health and Participatory Epidemiology project
COMESA	Common Market for Eastern and Southern Africa
CSA	Central Statistics Authority
DPPC	Disaster Preparedness and Prevention Commission
FAO	Food and Agriculture Organization
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GL-CRSP	Global Livestock – Collaborative Research and Support Program
IGAD LPI	Intergovernmental Authority on Development Livestock Policy Initiative
KLMC	Kenya Livestock Marketing Council
KMC	Kenya Meat Commission
Ksh	Kenyan Shillings
LIME	Livestock Marketing Enterprise
LIP	Livestock Programme
LIU	Livelihood Integration Unit
NGO	Non-Governmental Organization
PARIMA	Pastoral Risk Management project
PLMG	Pastoral Livestock Marketing Groups
PPG	Pastoral Producer's Group
RVF	Rift Valley fever
SP	Sudanese Pound
TLU	Tropical Livestock Unit
UAE	United Arab Emirates
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
USAID	United States Agency for International Development
USD	United States Dollars

SUMMARY

There have been substantial investments from aid donors in livestock marketing in pastoralist areas of the Horn of Africa for more than thirty years. Most recently, this support has included attention to the export of live animals from the region and related certification, quarantine, and other inputs. Such programs have often been justified by broader economic development narratives, which have placed commercialization and export trade as, apparently, a driving force for poverty reduction. Therefore, it has often been assumed that in pastoralist areas a linear and simple relationship exists between "better access to export markets" and "poverty alleviation." This report was commissioned by FAO under the IGAD Livestock Policy Initiative and examines the benefits derived from the livestock export trade from pastoral areas by wealth group. Simply put, do some groups benefit more than others and if so, who? If the benefits are skewed towards, for example, wealthier pastoralists and other actors, to what extent can livestock export systems be justified in terms of reducing pastoral poverty or vulnerability? The backdrop to the report includes increasing evidence that more people are leaving pastoralism in the region, and many of these people are becoming destitute, with few non-livestock economic opportunities available in these areas.

Drawing on both extensive existing research in the region and from elsewhere, and new field research conducted in pastoral areas of Ethiopia, Kenya, and Sudan in 2009, the main findings of the report are as follows:

- At the level of national poverty assessments, pastoralist areas in some countries are characterized as universally poor. This characterization is incorrect and arises due to a reliance on poverty indicators from non-pastoral settings, such as household income. For pastoralists, livestock are the main form of financial and social asset, and an important, direct source of food. Therefore, livestock holdings are a more useful measure of poverty than household income. A simplistic description of pastoral areas as "poor" can lead to broad-brush development strategies and misguided assumptions that any benefits from such strategies will be equally distributed.
- Concepts of vulnerability and risk in pastoral areas are not well captured or understood by policy makers, nor is the basic economic logic that poorer pastoral households need to build herds before more commercially-orientated market engagement becomes feasible. Until a certain level of livestock assets are acquired, livestock sales do not increase. This behavior does not reflect a fixation with acquiring livestock for reasons of social status, but is a rational economic strategy given the vulnerability context and the high economic returns from livestock relative to other economic opportunities in these areas. It follows that for poorer households, investments in livestock market infrastructure or livestock exports systems have limited impact on sales. Although donors and government continue to invest in market infrastructure and export systems, there seems to be very limited evidence available—after decades of activity—that these programs benefit poorer pastoralists.
- Vibrant export markets are perceived to benefit all actors involved in the marketing of livestock and livestock products in one or another way. This is a dominant policy narrative within some donors and governments. Multiplier effects, arising from such business activities, are also viewed as benefiting those providing services and amenities to facilitate livestock trade, although not directly involved in the sale and purchase of livestock. Such perceptions could be correct in the general sense. The generalization, however, fails to account for the diversity of the actors involved in the export market. Diversities in power and influence, wealth or stock ownership, level of vulnerability, access to market and information, business acumen, and risk tolerances all determine the proportion of benefits for each group of actors. Among these actors, poorer pastoral households benefit the least and are relatively passive responders to export market opportunities.
- While the livestock export trade from the region continues to grow, so do levels of pastoralist destitution. This can be explained by policy and institutional arrangements, including

donor support for livestock export systems, which contribute to a gradual redistribution of livestock assets from poorer to richer herders. While further research is needed to prove or disprove these trends, in other parts of the world the process of commercialization in pastoral areas has led to situations where poorer pastoral households are no longer viable, and a form of commercialized pastoralism evolves with only relatively large herds. As poorer households lose their animals, some people become contract herders or find work related to livestock rearing or marketing, others engage in non-livestock activities, and others leave pastoral areas or rely on food distributions or safety net programs.

- A more poverty-focused approach in pastoralist areas would explicitly recognize and support a strategy of herd growth for poorer households. This is the strategy which these households already try to pursue, and which economic research and analysis—conducted over more than thirty years—explains as logical given the livelihoods context. The elements of such as strategy would include:
- developing the infrastructure (secondary roads) and communications (mobile phone networks) in pastoral areas to levels which are found in other, non-pastoral areas of the region and more basic livestock market centers. This assists poorer households to access local traders more easily and negotiate more effectively over prices; for traders, transaction costs are reduced; trader monopolies become less likely; access to remote dry season grazing areas for traders, especially during drought, becomes easier and less costly;
- recognition that poorer herders are bankable, and that credit and financial services can be tailored to the specific aspirations and needs of poor pastoralists; livestock credit systems can encourage herd growth;
- preventing avoidable livestock losses during "normal years" through clear policy support to appropriate primary veterinary services. These are often forms of privatized clinical services involving veterinary degree, diploma, or certificate holders, often linked to community-based animal health workers; this encourages herd growth for poorer pastoral households;
- institutionalizing livelihoods-based programming and the drought-cycle management model, with policy recognition that drought is a manageable risk; supporting the process with economic analysis i.e., the costs and benefits of commercial destocking and local market support versus the costs and benefits of food aid.

When making these recommendations, it is evident that they are not new ideas. While there is much evidence available to support these approaches, dating back many years, this evidence is often outweighed by government needs for hard currency and the related prioritization of livestock exports. More pluralistic policies and strategies are one option, providing benefits to a wider range of producers. Here, the regional economic communities such as IGAD and COMESA have a role to play in raising awareness among Member States and creating regional policy frameworks which support diverse livestock marketing options. At present, options which specifically seek to understand the livelihoods of poorer pastoral households are still very much a hard sell.

1.1 About the report

Over many years, there have been substantial investments in livestock marketing in pastoralist areas of East Africa and the Horn of Africa. During the last ten years or so, these programs have included increasing efforts to improve the export of livestock or livestock products, with funding from major international aid donors. As such, poverty alleviation was the ultimate goal of these programs, with the assumption that more exports equated to fewer poor pastoralists. Running parallel to these programs has been attention to "pro-poor" development and the notion that poverty reduction depends on understanding the livelihoods of the poorest people within a particular context and area and designing development programs which are specific to protecting or building the assets of the poor relative to wealthier groups. Livelihood analysis often reveals important policy and institutional constraints which affect the ways in which poorer households are able to manage their assets, indicating that policy reform is often central to poverty reduction.

This report examines livestock marketing in pastoralist areas and the extent to which poorer households benefit from the export trade. The report focuses on the export of live animals from pastoralist areas of the Horn to the Gulf States. It discusses if and how support to this trade by donors, governments, or regional organizations should be prioritized over, for example, domestic or regional markets, if the ultimate objective is to reduce poverty. The main content of the report is structured as follows:

- Section 2 is an overview of definitions of poverty in pastoral areas, on the assumption that a poverty-focused strategy should be based on an understanding of livelihoods, wealth differentiation, and spatial variability in wealth.
- Section 3 reviews research on marketing behavior in pastoral areas, describes how different wealth groups behave in different ways, and discusses the two contrasting policy positions, viz. "better export market access for poverty reduction" versus "herd growth for poverty reduction." This section draws heavily on research conducted by the Global Livestock Collaborative Research and Support Program (GL-CRSP) and is complemented by additional field research in Ethiopia, Kenya, and Sudan conducted in early 2009 by one of the authors (YA).
- Section 4 focuses on reported trends in some pastoral areas, such as changes in herd ownership, increasing reliance of the poor on non-livestock activities, contract herding, and changes in the species composition of herds in response to drought or market demands.
- Section 5 assesses the impact of livestock exports on poorer pastoralists by reviewing the impact of export or domestic bans on pastoral livelihoods in different areas.
- Section 6 assesses the impact of past and recent pastoral livestock marketing initiatives, focusing on impact on poorer pastoralists; it includes an account of some private sector behaviors which, if not understood, will undermine marketing programs.
- Section 7 looks at the livelihoods-based programming during drought and the linkages between "emergency" approaches such as commercial destocking and "development" approaches such as support to livestock export markets.
- Section 8 is a discussion of the analysis presented in the preceding sections.
- Section 9 offers some conclusions.

1.2 Notes on methodology

Both secondary and primary data sources were used for this study. Selected secondary sources were reviewed on the following topics: wealth group ranking of pastoralists in Ethiopia, Kenya, and, to some extent, Sudan; household sources of food; sources of cash income and expenditures; household behaviors in livestock marketing; diversification and alternative sources of income; herd dynamics; the impact of trade bans; and vulnerability, food aid requirements, and poverty.

Primary data was collected from key informants and focus groups through field visits to Nairobi and Garissa in Kenya; Khartoum, El Gezira, and El Gedarif in Sudan; and Borana in Ethiopia,

lasting on average ten days in each country. Key informants were selected from government and NGO staff, livestock traders and their agents, middlemen and exporters, market vendors, and relevant civic associations. Focus groups consisted of pastoralists, pastoral associations and unions, livestock marketing groups and cooperatives, and pastoral producer groups. Many of the case studies in the report were compiled from key informants and focus groups during the field study (see Annex 1).

To provide a broader representation of the region, the report also covers other pastoral areas not visited during the study, viz. northern Kenya, the Somali Region of Ethiopia, and Darfur and Kordofan in Sudan. Secondary data sources were used for northern Kenya and the Somali Region of Ethiopia. Primary data sources were used for Darfur and Kordofan, drawing on one of the author's (YA) previous missions to these regions.

Although the report draws on literature and field research in Ethiopia, Kenya, and Sudan conducted in early 2009, there are well-known limitations in the available data, not least due to the substantial informal movements and marketing of livestock. When trying to examine export markets it was notable that during the field research we were unable to gain unimpeded physical access to important pastoral livestock rearing areas such as Darfur, southern Somalia, or the Somali Region of Ethiopia, due to conflict.

2. POVERTY QUESTIONS: WHAT AND WHERE IS "POVERTY" IN PASTORAL AREAS?

If pastoral livestock marketing is to be viewed from the perspective of poverty reduction, we first need to define "poverty" in pastoral areas, decide who is poor, and where they live. Although this initial step may seem obvious, at a national policy level, pastoralists in the Horn are described in very different ways when it comes to poverty. Some countries view pastoralist districts as universally poor, while other countries rank pastoral regions as the most wealthy. In the case of Somali communities which straddle the border of southern Ethiopia and northeast Kenya, the same pastoralist could be called "wealthy" by one government and "poor" by the other. At the same time, the livestock marketing strategies of the two countries are so similar that it seems difficult to explain these strategies by reference to poverty levels. This section of the report assumes that a poverty-focused development strategy cannot be formulated unless poverty is understood and measured with reasonable confidence in terms of absolute figures by population and area, and in terms of trends over time. The section covers two main issues: the problem of applying standard poverty indicators to pastoral areas and the need to understand the vulnerability of pastoral livelihoods.

2.1 National poverty indicators and pastoral livelihoods

At the level of national policy, strategies for poverty reduction in pastoral areas will partly depend on the ways in which poverty in these areas is perceived and defined by policy makers, including central government ministers and technical experts in ministries of finance and planning, agriculture, and livestock. Increasingly, under processes such as the development of national poverty reduction strategy papers, a set of standard indicators are used throughout a country to measure poverty. However, these indicators are mostly drawn from an understanding of rural livelihoods in non-pastoral settings and so include cash income and expenditure, levels of education, and market access.

2.1.1 Income and assets

Research from pastoral areas of northern Kenya (Little et al., 2008) shows that when poverty assessments in pastoral areas use indicators which are transferred from non-pastoral areas, the result can be a misrepresentation of poverty and a simplistic labeling of all—or at least a very high proportion—of pastoralists as "poor." In the case of livestock marketing policy, it follows that, if most pastoralists are poor, then a poverty-focused strategy need not worry too much about wealth differentiation in these areas. In other words, if everyone is poor, then most people will likely benefit from a poverty reduction program. The authors of the Kenya research argue convincingly for poverty assessments in pastoral areas which prioritize alternative measures of poverty and, specifically, livestock assets.

An alternative, asset-based approach to measuring poverty in pastoral areas fits well with livelihoods analysis and related frameworks and the ways in which pastoralists themselves define wealth and poverty. Notably, throughout the Horn of Africa, pastoralists use livestock holdings as the basis for their descriptions of wealth. Furthermore, they explain the relationship between livestock and wealth by reference to livestock as both financial capital *and social capital*. Integral to pastoral livelihoods are the use of livestock as a form of savings and to exchange for cash or food (financial capital) and the use of livestock as the basis for complex social support systems, based on loans and gifts of livestock and livestock products (social capital). While the language of livelihoods analysis and assets is used here, the social role of livestock in pastoralist communities has been documented extensively since the 1940s and so is not particularly new (e.g., Evans-Pritchard, 1940). In summary, while some countries measure poverty in pastoral areas using income, market access, education, and other indicators, livelihoods analysis and pastoralists themselves tend to use livestock ownership and various aspects of social capital as the main determinants of wealth.

At a practical level, even if livestock holdings were viewed as important in poverty assessments, such measurement is extremely problematic.[1] In one sense, the use of inappropriate indicators for poverty assessments in pastoral areas might relate to the methodological challenge of "counting livestock" and quantifying their social value in economic terms, and then still being able to place pastoralists within a wider national poverty assessment framework or index. As far as we know, there have been few, if any, attempts to apply an economic value to the livestock-based social transactions in pastoral communities.[2]

At a policy level, one of the challenges of pro-poor livestock marketing thinking is to identify potential target groups (i.e., poorer groups) and decide if and how marketing interventions might strengthen their livelihoods. Even if more asset-based approaches to defining pastoral poverty are used, at some point a poverty-focused approach to livestock marketing will also need to consider destitute pastoralists as the "poorest of the poor" in pastoral areas. Often living in or around urban centers, these people may have insufficient (or no) livestock assets to live as pastoralists, or may have made a conscious decision to leave pastoralism. As the lowest wealth group within an area, should a livestock marketing strategy target this group, and if so, how? Or is the focus on "poorer pastoralists," those people who are still pastoralists and wish to remain so, who own relatively few livestock but are still able to follow a pastoral way of life?

2.1.2 Market access

Adequate access to markets is a widely-accepted indicator in poverty assessments and assumes that people need to be able to produce and sell and, therefore, reach markets when they need them. Although this logic applies very well to many non-pastoral rural settings, at least two additional issues need to be considered in pastoral areas:

- First, pastoralism relies on mobility and a large area in which to move. If accessibility is measured using physical distance to a market, what might be acceptable to a pastoralist might be viewed as inaccessible by a settled farmer. Perceptions of "reasonable accessibility" are likely to differ markedly between these two broad groups. If national surveys define market access indicators according to settled rural communities, many pastoral areas will be categorized as having poor market access even though pastoralists themselves (at least in some areas) may not view distance to markets as a problem.[3]
- Second, pastoralists—including poorer pastoralists—are already selling some livestock and have been doing so for decades. This shows that pastoralists and traders have already found ways to trade in remote areas which might be poorly served in terms of formal markets.

In terms of poverty assessment, these issues show that in pastoral areas the indicator of "market access" requires a careful and specific interpretation which differs from non-pastoral livelihoods.

As mentioned in section 1, a common justification for governments and donors to invest in "improved livestock markets" has been a belief that pastoral areas have insufficient market access. However, livelihoods analysis shows that pastoralists have to sell animals in order to survive.

[1] From the 1940s, administrators and researchers have described the difficulty of estimating livestock ownership in pastoral households in Africa. More modern survey methods still face similar problems; see Holt and Lawrence (1991) in the Ogaden region of Ethiopia and Devereux (2006) in the same region fifteen years later. As a general rule, pastoralists (and other livestock keepers) avoid providing accurate information on livestock ownership for cultural, political, or economic reasons, rather like an MP might avoid a question about his or her expense reports or bank balance. Furthermore, the concept of "ownership" is not straightforward, as some animals may be co-owned, on loan from relatives, or loaned out to others. Direct counting of livestock in or around a homestead, even if tolerated, not only has to take account of these factors, but also of the division of herds to more distant areas. While direct observational and longitudinal studies have recorded livestock holdings, almost inevitably these studies are small-scale. More general food security surveys, based on methods such as the household economy approach, include data on livestock ownership, but the validity depends on researcher experience. While these reports may show reliable (repeatable) patterns of increasing pastoral livestock holdings by wealth group, the absolute measures of livestock assets, especially when disaggregated by species, are difficult to validate.

[2] The IGAD-FAO Livestock Policy Initiative and Tufts University were beginning to support work in this area in Ethiopia in late 2009.

[3] There is wide variation in market access. In some cases, pastoralists who are situated far from markets at a particular point in time delegate someone from the community to take animals to market on their behalf.

This aspect of pastoralism applies not only to some households, but to *all* households. It follows that in one way or another, and by definition, 100% of pastoral households have some access to markets. If this level of accessibility is compared to say, human health, education, or veterinary services, where accessibility falls way below 100%, the extent of the pre-existing livestock marketing activity becomes more evident.

2.2 Vulnerability

2.2.1 The paradox of wealth and vulnerability

Not all national surveys conclude that pastoralists are poor. In Ethiopia in 2002, the largely pastoralist Somali Region was ranked as the least poor region, with a poverty level of 38% compared with a 44% national average (FDRE, 2002). In part, this result reflects a perception among some government and donor experts who express views such as *"Pastoralists aren't poor because they have so many animals."* However, when examining additional data from Ethiopia, Devereux (2006) noted the paradox of wealth and vulnerability in Somali Region by reference to food security indicators. Although apparently wealthy, the region still had a child stunting level of 48% and child wasting of 11.7% in 2002.[4]

Livelihoods analysis explains the disparity between wealth and food insecurity in pastoral areas by reference to shocks, trends, and policy context (e.g., see Bishop et al., 2008; Catley et al., 2008). A combination of marked seasonality in normal years, drought, conflict, and livestock disease epidemics mean that pastoralism works well when times are good, but is subject to rapid depletion of assets when times are bad. Superimposed on this system are various policy and institutional factors through which pastoralists can be politically marginalized and under-served in terms of basic social services and infrastructure.

It is for these reasons that pastoral areas of the Horn display two contradictory features. They are subject to repeated and large-scale humanitarian assistance due to recurring droughts, occasional floods, disease outbreaks, and localized or cross-border conflicts. In some areas, human population growth and increasing competition for land exacerbate the impact of drought—what once may have been called a "prolonged dry season" is now called a "drought" and prompts attention from the humanitarian sector. At the same time, pastoralists are noted for their enduring resilience, animal husbandry and resource management skills, and for producing surplus livestock during non-drought periods, despite the harsh environment in which they live. At the policy and institutional level, the symptoms of vulnerability tend to prompt action from humanitarian aid actors rather than development actors, albeit usually late. In general, these responses are two-fold and in relative terms comprise a very large investment in food aid and a very small investment in non-food assistance.

2.2.2 Vulnerability and gender

A further element of vulnerability in pastoralist areas relates to gender, and, in many areas, a cultural discrimination against women and girls. In the Somali Region of Ethiopia, this behavior was associated with higher mortality in girls and women relative to boys and men (Devereux, 2006). A male infant had a 22% higher chance of surviving to the age of five than a female infant; crude life expectancy for men in pastoralist areas was 41 years compared with 33 years in women. These findings on female mortality agreed with much earlier studies, conducted in the late 1980s, in pastoralist areas of Somalia (Aden et al., 1997). This kind of data indicates that a "pro-poor" approach to pastoral livestock marketing should include strategies which target women, and the roles of women in pastoral production systems are well-documented. However, across the region, the ways in which pastoral women own or have access to livestock assets are diverse and vary according to the business experience and acumen of women and societal norms around marriage, the status of female-headed households, the role of male relatives in supporting widows,

[4] Stunting in children is a measure of persistent, long-term food insecurity, and uses a height-for-age measurement; wasting is a measure of acute food insecurity and uses a weight-for-height measurement. Both are standard nutritional anthropometric methods and, when correctly applied, are objective and representative in poverty assessments.

and so on. In general, pastoral women tend to have responsibilities such as the management of sheep and goats, the milking of livestock, and the management of milk in terms of domestic consumption, milk processing, and milk sales. Women can also play very substantial roles in the marketing of livestock and livestock products (Sikana et al., 1993; Ridgewell and Flintan, 2007)

Looking specifically at livestock exports in Somalia in the mid-1980s, the increasing commercialization and export of sheep was linked to men taking over this marketing activity from women, and therefore, also taking greater control of the income derived from sheep sales (Talle and Abdullahi, 1993). In contrast, the control by Somali and Boran women over domestic milk marketing seems to be robust with well-organized marketing systems (Herren, 1990). In part, the vulnerability of pastoral women has been recognized and prompted NGO programs such as women's savings and credit groups, some of which have become involved in livestock marketing and developed links with exporters (Aklilu, 2004; Desta et al., 2006). While there are positive lessons from these programs, they tend to be small-scale.

3.1 Access to livestock markets

The length and duration of mobility in a given year and the type and numbers of animals owned determine which livestock markets are accessed by pastoralists. For example, the Baggaras and the Abbalas of Darfur cover between 600 km and over 1,000 km when migrating from wet season to dry season grazing reserves, including cross-border movements into Chad and Central African Republic. On average, Darfur pastoralists stay for about nine months in dry season grazing reserves far away from secondary markets. They only access bush or primary markets during this period. The Baggaras access secondary markets during the wet season migration for about three months, when they stay closer to Jeneina, Nyala, and El Fasher markets. Unlike the Baggaras, however, camel-rearing Abbala pastoralists' access to such markets is limited to a brief wet season period, since they move further north to the fringes of the Sahara desert, where they are closer to primary markets.

In the eastern part of Sudan (El Gedarif and El Gezira), mobility is limited to a maximum of 75 km due to the presence of large farms. On the surface, it appears as if these pastoralists have better access to secondary markets compared to those in Darfur. However, these groups tend to be poorer than Darfur pastoralists because of mobility restrictions and therefore, the need to buy livestock feed and crop residues in the long dry season. Whereas these pastoralists are better positioned to access secondary markets, the small number of animals they sell in a given year discourages them from making the extra effort to access such markets, and they often sell their animals in primary markets. On the other hand, large-scale investors and absentee non-herders in both eastern and western Sudan keep their animals close to secondary markets. They sell their animals mainly in secondary and, in a few cases, in terminal markets (particularly those in Darfur).

There are no secondary markets in the Borana region of Ethiopia, with the possible exceptions of Negele and Moyale across the border. The latter is dominated by middlemen who buy cattle in Ethiopia from primary markets, either in cash or on loan, and sell them in Moyale. Negele is equally accessed by Guji pastoralists and small-scale traders who sell for profit. In summary, most Boran pastoralists' access is limited to primary markets. A rather recent phenomenon in Borana indicates that some "pastoral marketing cooperatives" have begun selling cattle in distant secondary markets such as Adama by trucking animals from Borana. Although of pastoral background, members of such groups are either small-scale traders or middlemen residing in major settlements. They may have some livestock looked after by contract herders. In any case, like all other traders, they buy from pastoralists and sell for profit in secondary markets. Similarly, there are no secondary markets of any significance in the Somali Region of Ethiopia. Livestock are purchased from numerous bush and primary markets by traders, then bulked, trekked, and sold, either in Hargeisa or in the terminal markets of Bosaso and Berbera.

In northeastern Kenya, Garissa is a major secondary market. Poor herders, in some cases, delegate two or three individuals from their village to sell their animals on their behalf in Garissa. The poor also sell their animals to a better-off herder in the village or bush market, who would then re-sell the livestock in Garissa along with his own. Regardless, the Garissa market is dominated by traders who buy animals from southern Somalia and sell for profit.

In summary, most poor pastoralists have access to bush or primary markets, but they don't have regular access to high-value secondary or terminal markets. Better-off pastoralists have access to secondary markets, while absentee non-herders and investors also access terminal markets in a few cases.

3.2 Marketing behavior and wealth

For decades, government policy makers, technical advisers to donors, and livestock experts in UN agencies have struggled with the notion that, despite the construction of new and "better"

markets in pastoral areas, pastoralists don't sell more animals. Commonly, this behavior has been explained by reference to pastoralists' apparent obsession with livestock and their irrational desire to keep large numbers of animals for the sake of status, regardless of the environmental consequences.

Evidence to contest these fairly entrenched views dates back to at least the mid-1980s (more than twenty years ago), when it was shown that commercial herding depends on the attainment of a large herd. For example, both subsistence herd owners (small herds) and commercial herd owners (large herds) in the Botswana rangelands sold cattle, but small herds also met a range of domestic and non- commercial needs (Behnke, 1987). The small herd owners aimed to both maintain a reliable income and maximize long-term herd growth, such that *"Once domestic needs have been met, the successful herd operator is free to engage in a spiralling process of sales, reinvestment and herd expansion"* and that *"… herd growth is directly related to the prudent economic calculations of individual* (small herd) *owners, and may have little to do with the supposed inclination of Africans to hoard cattle as an inert store of wealth"* (Behnke, 27).

The behavior of small herd owners in Botswana is similar to pastoralists in East Africa. In general, pastoralists must be pressed by immediate cash needs and, if possible, must attain sufficiently large herd sizes to allow them a comfortable margin to liquidate their animals through the market. For example, Barrett et al. (2006) state that *"Pastoralists appear generally unwilling to liquidate animals to the point that their herd size may prove insufficient to ensure household food security in the face of unknown conditions in the future"*(Barrett et al., 21). The basic principle is to market what is considered surplus at a time when cash need arises rather than for short-term profit, for example, when there is an increase in livestock prices. Conversely, this could be dictated by desperate situations when the decimation of livestock becomes imminent, as in times of prolonged drought (Aklilu and Wekessa, 2002). Even in the face of rising livestock prices in southern Ethiopia and northern Kenya, Barrett et al. (2006), quoting McPeak (2005), argue that *"The simple answer is that livestock offer the best rate of return of assets available to pastoralists in this region and that livestock prices increase with improvement in underlying forage and water availability, reflecting greater animal productivity … If herd accumulation is rational, then livestock marketing will respond mainly to demands for cash needs rather than to short-term profit-taking opportunities"* (Barrett et al., 25).

However, there are also exceptions in terms of short-term profit seeking. For example, large producers, such as individual Maasai ranchers, will respond to profit opportunities by, for example, buying from poorer pastoralists when conditions are difficult and they are compelled to sell. Female breeding stock may be added to the larger herds, while males can be held and then sold when markets improve (Behnke, personal communication).

While certain behaviors are generally observed, differences also exist in marketing behaviors between wealth groups. Research shows that wealthier households use livestock markets more frequently to sell animals because these households have greater cash expenditures. Tracking pastoral households in the central rangelands of Somalia in the 1980s, Abdullahi (1993)[5] concluded that *"Economic parameters, calculated for differently sized pastoral herds, support the evidence that herders with undersized herds are subjected to a displacement process: a household's income increases with the number of animals owned … It is shown that households organize and utilize their resources to achieve not only subsistence but also a surplus for commercial use; the latter however is only possible for pastoral households with large herds"* (Abdullahi, 146).

These findings are directly relevant to this paper, because Somalia has had an active livestock export trade for decades. The implication is that while both poor and wealthier households might benefit from the trade, wealthier households

[5] Based on longitudinal research on 104 pastoral households.

would capture a relatively greater benefit. More recent data on income from livestock sales by pastoral wealth group is shown in Table 1.

When livestock prices are rising (e.g., in a post-drought period), wealthier households are able to sell surplus animals and take advantage of favorable prices, while poorer households tend to hold their few animals remaining after the drought, unless forced to sell by consumption needs. Both spatially and temporally, household livestock sales volumes fall as prices increase, as cash-limited (poor) households sell animals to meet immediate expenditure needs, rather than to capture capital gains on an appreciated asset.

Poorer households also tend to sell younger animals (mainly small ruminants), because of pressing cash needs, for which they may not get a good price, whereas the middle and better-off can afford to wait until their animals mature (SC UK, 2007). In some non-urgent cases, the poor pool animals together and send one or two people to a secondary market in the hope of fetching better prices (pastoral focus group 2, Garissa). Middle and better-off groups also buy animals from the poor at the village level to sell them in larger markets.

Table 1. Annual pastoral household income from livestock sales in selected areas of Kenya, Ethiopia, and Sudan

Area	Pastoral wealth group income (US$)			
	Very poor	Poor	Middle	Better–off
Mandera, Kenya Equivalent sheep or goats	105 3.5	229 7.5	702 24	1,787 60
Wajir, Kenya Equivalent sheep or goats	42 1.5	169 5.5	677 22	1,105 37
Teltele, Dillo, and Dier, Ethiopia Equivalent sheep or goats	114 5	202 8.5	714 31	2,100 92
Borana-Guji, Ethiopia Equivalent sheep or goats	132 5.5	231 10	768 34	1,500 66
North Darfur, Sudan Equivalent sheep or goats	-	115 4	615 21	-

Notes:
Income data compiled from SC UK (2004) and LIU (2008).
The annual household income from livestock sales is expressed in US$ by using the exchange rate when the study was undertaken for the three countries. Livestock equivalents that needed to be sold to raise the level of income for each wealth group are expressed only as sheep or goats for the purpose of comparison (for conversion purposes, 10-11 sheep or goats = 1TLU). Price information was obtained from SC data for Darfur and North East Kenya, and from exporters and local traders for Borana. The exchange rate at the time was US$1 = 74 Ksh (Kenya) = 11 Birr (Ethiopia). The low exchange rate of the Kenyan currency at the time could to a little extent misrepresent the actual number of animals sold when expressed in US$ terms.

Similarly, Nin Pratt et al (2004)[6] referred to SC UK surveys in the Somali Region of Ethiopia prior to the 2003 export ban and reported that, on average:

- a poor pastoralist owned 42 sheep and goats, five cattle, and three camels, and sold six sheep and goats, one cattle every two years, and one camel every ten years;
- a mid-level pastoralist owned 148 sheep and goats, 29 cattle, and 28 camels, and sold more than 20 sheep and goats and 0.8 camels every year, and one head of cattle every two years;
- rich pastoralists sold a greater proportion of quality animals than poor pastoralists (exact figures not mentioned).

In any case, the above data shows the extent of income gaps between the middle and the better-off on one hand, and the very poor and the poor on the other. For example, the number of sheep/goat equivalent sold by middle and better-off groups was respectively seven and nineteen times higher than the very poor in Mandera (Kenya) and respectively fourteen and twenty-four times more in Wajir[7] (Kenya). In Teltele, Dillo, and Dier (Ethiopia), the middle and better-off income groups sold respectively six and eighteen times more small ruminants than the very poor. The better-off in these market-isolated areas of Ethiopia also sold more animals than any of the regions in Table 1, supporting the argument that people living in remote areas rely more on livestock sales than other groups as there are fewer opportunities for diversification (Little, 2009). In Borana-Guji (Ethiopia), the middle and better-off income groups also sold respectively six and twelve times more sheep and goats than the very poor. The data for Darfur is incomplete, but the price of sheep and goats was higher than any of the regions in the Table 1. Even then, the middle income group sold five times more small ruminants than the poor.

[6] The survey used only three wealth groups—poor, middle and rich—rather than the four wealth groups used in Table 1.

[7] The distribution of relief food at the time of the survey may account for the very poor holding on to their animals in Wajir.

4.1 Changing herd composition and export markets

One response of pastoralists to the impact of successive droughts, conflict, or new market demands is to change the species composition of herds. In terms of rebuilding herds after drought, these changes can be temporary, as pastoralists tend to first rebuild sheep and goat herds before acquiring cattle or camels. Small ruminants reproduce faster than larger species, and are then converted into cattle and camels if and when the opportunity arises. In early 2009, this trend was apparent in the North East province of Kenya (pastoral focus group 1, Garissa).

4.1.1 Somalia

Somalia provides a good example of changing herd composition in response to export markets. Working in the Bay region of Somalia in the mid-1980s, Al-Najim (1991) associated a demand for cattle in the export market as a reason for herders switching to cattle rearing, with less attention to camels. The sustainability of this shift was questioned from the environmental perspective and the relatively high water needs of cattle relative to other livestock species. However, the trend was likely affected by a ban on cattle exports imposed by Saudi Arabia in 1983 due to concerns over rinderpest in Somalia.

4.1.2 Ethiopia

In Borana pastoral areas, livestock holdings were measured over a seventeen-year period between 1980 and 1997. Drought-associated reductions in mean herd size were from 128 cattle per household in 1980/81 to ninety-one cattle per household in 1996/7 (Desta and Coppock, 2002) and dipped as low as seventy-two head in the drought year of 1992/93 (Lybbert et al, 2001). Researchers in these areas suggest that these figures may understate the overall decline in mean herd size because the 1997 survey omitted those households which exited the system prior to 1997. Desta and Coppock (2002) proposed that the worsening impacts of drought persuaded the Borans to adapt their cattle-based production system to include more camels and small ruminants in the herd structure. As a result, the Borans have become the major supplier of sheep and goats to the export abattoirs in Ethiopia, although this could partly be attributed to accessibility compared to other pastoral regions (key informant 1, exporter). In addition, they supply most of the camels destined for formal live exports (key informant 2, exporter).[8] This could not have been the case thirty years ago, as camels were not part of the herd composition in the Boran production system and as there were far fewer small ruminants than is the case today (pastoral focus group 1, Did Hara).

4.1.3 Sudan

In Darfur, numerous studies suggest that the conflict itself was, to a considerable extent, the result of competition over diminishing natural resources and that the conflict has exacerbated the precarious situation even further. For example, sedentary and agro-pastoral families in Darfur were the main suppliers of sheep for Sudan's substantial export market, but lost nearly all their animals after they became internally displaced. The livelihood of the Baggara (cattle keeping) and the Abbala (camel keeping) pastoralists has also been greatly compromised by the closure of traditional migration routes, confinement of cattle, camels, and small ruminants in the same area both in the dry and wet season grazing reserves, and limited access to veterinary care and markets. These extraordinary circumstances have seriously undermined average household herd ownership since the conflict began in 2004 (Young et al., 2005, 2008; Aklilu, 2006).

The northern Rizaygat camel herders are increasingly including sheep in their herd composition because of their readily marketable potential in the confined environment they live in at the moment and the lack of wage herders for

[8] Whereas the Somali Region could have supplied more sheep, goats, and camels for meat and live animal exports for Ethiopia, the trade flow is from the region towards Somalia, rather than inwards to Addis Ababa.

camels, since such groups are now employed as militias following the Darfur conflict (Young et al., 2009). The southern Rizaygats, on the other hand, are shifting away from sheep to cattle production because of increasing demand for beef in the domestic market following the discovery of oil (key informant 1, Khartoum).

4.2 Diversification and herding for others

According to Little (2009, 1), livelihoods diversification in pastoral areas is:

> *The pursuit of any non-pastoral income-earning activity, whether in rural or urban areas. This definition includes (1) any form of trading occupation (e.g., selling milk, firewood, animals, or other products); (2) wage employment, both local and outside the area, including working as a hired herder, farm worker, and migrant laborer; (3) retail shop activities; (4) rental property ownership and sales; (5) gathering and selling wild products (e.g., gum arabica, firewood, or medicinal plants); and (6) farming (both for subsistence and cash incomes).*

For poorer households, diversified economic activities are particularly important in terms of the proportion of income derived from these activities (Box 1).

Box 1. Sources of cash in pastoralist households

West Mandera, Kenya
Reference year: October 2006 to September 2007
Average annual cash income for the very poor was US$340, US$488 for the poor, US$856 for the middle, and US$1,787 for the better-off. Annual cash income for the very poor was derived from sale of livestock and milk (31%), labor and remittances (46%), and sale of firewood (23%). For the poor, 47% of the cash income was generated from the sale of livestock and milk, 32% through labor plus some remittances, and 21% from selling firewood and other sources. For the middle group, livestock and milk sales constituted 82% of cash income with the balance coming from labor and some remittances. The better-off generated 100% of their annual cash income from livestock and milk.

Wajir, Kenya
Reference year: October 2006 to September 2007
Average annual cash income was US$325 for the very poor, US$392 for the poor, US$677 for the middle, and US$1,105 for the better-off. Livestock and milk generated only 13% of the annual income for the very poor, 46% came mainly from labor plus some remittances, and 41% from firewood and charcoal. For the poor, livestock and milk generated 43% of annual cash income, labor, 23%, firewood and other sources, 34%. The middle and the better-off groups derived all their annual cash income from livestock and milk.

Teltele, Dillo, and Dier, Borana, Ethiopia
Reference year: 2006 to 2007
Average annual cash income was US$286 for the very poor, US$336 for the poor, US$714 for the middle, and US$2,100 for the better-off. The very poor generated their cash income through livestock sales (40%), labor (20%) and safety net (40%). The poor, through livestock sales (60%), labor (5%), and safety net (35%). The middle and better-off groups generated all their cash income from livestock sales.

(continued)

Borana – Guji, Ethiopia
Reference year: 2006 to 2007
Annual cash income was US$227 for the very poor, US$272 for the poor, US$768 for the middle, and US$1,500 for the better-off groups. The very poor earned their income from livestock (58%), labor (12%), firewood (8%), and safety net (22%). The poor, from livestock (85%), safety net (10%), and labor (5%). All cash income was generated from the sale of livestock for the middle and better-off groups.

North Darfur
Reference year: 2004
Annual cash income for the poor was US$230 and US$615 for the middle group (data is not available for the very poor and the better-off). The poor earned their income from livestock (50%), firewood (30%), and remittances (20%). All cash income was from livestock for the middle group.

The data in Box 1 indicates that the very poor and the poor generate much of their annual cash income from diversified sources, out of necessity. In general, diversification away from livestock correlates with decreased wealth and proximity to market centers. For example, eleven types of diversified activities were mentioned by people living within a 39 km radius compared to seven types by those who lived more than 40 km away. Livestock sales, on the other hand, positively correlates with distance from towns because people who live far from towns have fewer options to diversify and have access to better quality pastures and livestock (Little et al., 2001). For example, the proportion of cash income from livestock sales was higher for market-isolated areas of Teltele, Dillo, and Dier compared to other areas.

According to Little (2009), two broad types of diversification can be considered:

"Good:" diversification that is closely linked to the pastoral sector and keeps value added in the region; includes milk and meat processing, tanning, trading, retail input suppliers, and local natural product gathering/processing. For example, the Afar in Awash are currently engaged in the collection and sale of *Prosopis* seeds for feedlot owners (Yacob Aklilu, personal observation).

"Less good:" may hurt the physical environment and social fabric of society and, in the long run, can undermine the main economic activity of pastoralism; includes charcoal production, firewood sales, export of charcoal, illicit liquors, sex trade, banditry.

In general, as marketing of livestock and livestock products increases, there are more opportunities for poorer or destitute pastoralists to earn income from relatively "good" types of diversified activity. Poorer pastoralists may benefit indirectly from existing or expanded trade by providing labor to wealthier pastoralists, investors, and livestock traders.

Working as drovers for trade herds is also common amongst the Somali, Kordofan, and Darfur pastoralists. The latter also specialize in migrant labor work within Sudan and across the border in Libya (Young et al., 2008). However, it also seems that, in some areas, herding for others is becoming a growing occupation, but one in which poorer herders become dependent on the benefactor.

> **El Gedarif, Sudan:**
> *Poor pastoralists, in general, work as contract herders for rich pastoralists (particularly those with their own boreholes or water reservoirs), rain fed or irrigation farmers and other investors, in addition to raising small numbers of their own stock. A pair of contract herders looking after 250 sheep for six months would each receive six lambs in payment plus 150 to 200 SP per month, food, a pair of shoes and clothes. If the contracted herder has less*

than ten sheep of his own, he will be allowed to feed his stock from the owner's provision (usually required in the dry seasons of May to July). If he owns more than ten sheep, then he has to purchase his own feed and water for his stock. Feed costs (example: sorghum stalks) are about 1.1 SP per sheep every two days, and water about 5 to 6 SP for 20 to 30 sheep every five or six days. This restriction persuades the contract herders to balance their flock to a maximum of ten per person by selling the surplus to local butcheries in the primary market (pastoral focus group 2, El Gedarif livestock market).

It may be tempting to assume that poor contract herders would make a swift transition back to independent herders with their own livestock, by building their herd size through payments in kind. In reality, only around 10% of contract herders were reported to regain independence of labor after four to five years. This was mainly due to the psychological insecurity inherent in the relative numbers of stocks owned by the employer compared to the contracted herders, plus fear of loss of secured income and family pressure and additional fees to be incurred for feed and water. Most contract herders remained as such for the rest of their lives and it was considered to be a long-term livelihood. This risk aversion was also reflected in the migration patterns of poor pastoralists (for example, owning an average of fifty sheep each) who preferred not to migrate long distances because of fears that their animals could perish (pastoral focus group 2, El Gezira). In addition, the costs of movement were relatively greater for smaller herds.

Northern Kordofan:
Young pastoralists, in addition to their own flock, also keep additional trading stock owned by investors on mutual arrangement. Investors provide money for the purchase of young ewes and lambs which will be looked after by contract herders for six months to one year. Profits from this arrangement are divided as follows: one-third to the herder, one-third to the investor, and the remaining one-third is theoretically added to the capital (which in effect goes to the investor). A young pastoralist may keep up to two hundred sheep belonging to an investor. This arrangement helps young poor pastoralists to build their own herds while the proceeds from contract herding help them meet immediate cash needs. Older pastoralists, with enough herd size, are too busy to be involved in such arrangements (key informant 2, Khartoum).

Darfur:
Before the conflict, Northern Rizaygat pastoralists would employ herders to look after their camels and sheep, for payments of approximately thirteen sheep annually and one to two young camels, depending on the quality of the labour. In addition herders are given all their food supplies. Since the war started, most of the labour (young herders) joined the military, thus creating shortage of herders for hire (Young et al., 2009).

Until the war started, herding for others was a full time occupation for young men from poor families. In Melit (North Darfur), each of the fifty local based livestock traders used to raise more than one thousand sheep and 100 camels through contracted herders. In addition, other investors (Government employees, Khartoum-based financiers) also employ contract herders to look after their herds. The herders are paid either in cash and food or in food and newborn lambs (usually eight lambs for herding 200 sheep). Cash payments go to the herder's family while payments in lambs are used to build up the family stock, from which the young herder will have a share when he starts a family. The success of this commercial production system depends on the expertise of the herder in animal husbandry, for example, during the mating season to ensure that the entire flock lambs within a two week period (Young et al., 2005).

Pastoral dropouts:
Dropouts also work as contract herders for rich pastoralists and investors in the field and as night guards and stock attendants in livestock markets. Few may graduate as brokers in small transactions and gradually as small traders and big brokers. One of the largest livestock exporters in Sudan was a pastoral dropout and stock attendant in a livestock market. Most dropouts, however, are employed as contract herders (Pastoral Union, El Gedarif).

Although all the above cases are from Sudan, similar arrangements also existed in Borana and the North East province of Kenya. The difference between Sudan and the other two countries was one of scale because of the relative large volume

of livestock transactions in Sudan. SC UK (2007), Bekele (2006), and Nin Pratt (2004) noted that the poor in Somali Region, Borana, and North East province of Kenya complement their income through contract herding for wealthier groups.

Venturing into new activities is increasing as poverty deepens or as new opportunities arise. In summary, diversification is tipping the balance of income in favor of non-livestock sources for the poor groups, leading to a smaller number of annual livestock sales, mainly as a result of having fewer animals to sell and, in a few cases, in an attempt to maximize the herd size.

5. LIVESTOCK BANS: IMPACTS BY WEALTH GROUP

In a livelihoods analytical framework, bans imposed on livestock markets are usually categorized as a "shock." This is a sudden, unpredictable and relatively large-scale event, the duration of which is unknown at the onset. In the Horn of Africa, livestock market bans are usually imposed by importing countries due to concerns about livestock diseases and, specifically, are a response to the presence (real or suspected) of epizootic or transboundary animal diseases in exporting countries. The extent to which different pastoral wealth groups are affected by domestic and market bans depends on a host of factors, which include: the volume of transactions; the purpose and mode of production; export tradition; types of animals exported; the availability of alternative domestic and/or cross-border markets and capacity to adapt to these markets; and the duration of the bans.

Sudan, Ethiopia, Somalia, and Kenya are in different leagues in terms of the volume of exports, export traditions, the conduct of the export business, and in the mode of production related to exports. These variations, in turn, are reflected within the different pastoral regions of each country:

- Kenya is the smallest exporter and a net importer of livestock through cross-border trade from Somalia, Ethiopia, and Tanzania. Kenya exports only a few thousand live bulls to Mauritius (see Annex 2).
- Ethiopia is a significant informal exporter to Somalia, Kenya, Sudan, and Djibouti, although the formal export sector has gained ground in the last few years. Formally, Ethiopia exports mainly goat meat and close to 200,000 live animals of all species.
- Somalia is a significant and longstanding exporter of live animals to the Gulf. The trade remains robust despite large-scale civil unrest in the south of Somalia—in the last four months of 2008, the port of Berbera alone exported 640,000 sheep and goats, 34,000 cattle, and 700 camels (Somaliland Chamber of Commerce, 2009). Southern Somalia exports substantial numbers of livestock, especially cattle, to Kenya via the Garissa market.
- Sudan has been a major livestock exporter to the Gulf for decades, including semi-formal and informal cross-border exports to Egypt and Libya. Sudan exports mainly live sheep, followed by camels and goats, and few numbers of live cattle. It also exports mutton, goat meat, and some beef.

In the next section we examine the impacts of livestock market bans in the four countries.

5.1 Case study: Garissa market, Kenya

5.1.1 Background

Among the pastoral regions of Kenya, the North East and the northern provinces supply most of the livestock for domestic consumption or for the various ranches located in the Central and Coast provinces. Livestock exports from Kenya are limited and intermittent. In 2008, only 4,000 bulls were exported to Mauritius and these were mainly sourced from the Garissa market and kept on a ranch for six to nine months before export. Another three consignments since then could not be honored because of drought. Despite the intention to re-enter export markets, the Kenya Meat Commission (KMC) is not meaningfully engaged in the export business for various reasons at the time of writing this report. It follows that, in its current status, Kenya is only a very minor exporter of livestock and livestock products. The number of live animals exported in 2008 was insignificant when viewed from the average weekly supply of 5,000 head in the Garissa market alone. But it could be a beginning. Under the current circumstances, domestic trade bans are likely to have a far greater effect on both poor and wealthy pastoralists than export bans.

5.1.2 Domestic market ban, 2007-2008

Garissa provides an interesting case study on the effects of a domestic trade ban. The famous Garissa market was totally closed for a period of seven weeks from December 2007 to February 2008 due to an outbreak of Rift Valley fever (RVF) in Kenya:

The livestock market was totally closed for seven weeks including slaughterhouses for the first time. Weekly losses in transaction costs were estimated between 30 and 40 million shillings (US$375,000 – US$500,000) based on an average weekly supply of some 5,000 cattle and up to 500 camels. The supply of milk from rural areas was reduced from 4,000 litres to zero as the ban was extended to milk as well, which affected pastoral women severely. While herders, traders, middlemen, and transporters were affected for the duration of the ban, the repercussion was felt in every economic activity. If it was not for relief food, I doubt if the population could have survived in those seven weeks. Garissa was what they call a ghost town in those seven weeks, but there was no war at the time. We, in the town, were forced to fast like Christians in the Lent Season (key informant 2, Garissa).

Such a blanket domestic trade ban, perhaps unprecedented in the region, affected all groups (different wealth groups of pastoralists, traders, transporters, and those who make a living from the market) in terms of proportional income losses regardless of wealth status, as the ban was imposed on all types of livestock and livestock products for the period. However, pastoral women were the most affected group, as their daily camel milk supply to Garissa town was totally disrupted for the duration of the ban. As a perishable commodity, the total milk production that was destined to be sold in Garissa was wasted and this was a complete loss for pastoral women. Then again, according to SC UK (2007) it was the wealthier households that supplied most of the camel milk to the town and the impact of the ban must have been greater to them in absolute terms. Next in line were livestock traders, transporters, middlemen, and other vendors in the market who suffered from lost business for the period. The city council also lost revenues. For pastoralists of all wealth groups, the effect was mainly time-bound (for those with pressing cash needs at the time), since they only had to defer the sale of animals by seven weeks, despite variations in the proportion of animals that were to be sold by different wealth groups for the duration of the ban. Obviously, their livestock were not wasted because of this temporary ban, unlike the milk. Those who were temporarily affected include Somali pastoralists across the border who supply close to 60% of the trade volume in Garissa (according to the Kenya Livestock and Meat Commission). Interestingly, other non-herding groups were equally or even more affected by the closure of the market. The following case was provided by an ex-pastoralist who is working as a vender in the Garissa market:

After I lost the few animals I had to the 1997 El Nino, I moved to the outskirts of Garissa. I started a new life by selling firewood and charcoal, the income was good, but I had to go further and further as the firewood close by became depleted. Since I didn't have a donkey, I had to hire one to carry the firewood or charcoal from long distance. I couldn't continue with this activity for long due to the physical hardship. A friend advised me to sell cold water and ice in the Garissa market. Later on, I added soda drinks and ice cream in the merchandise. On average, I earn between 7,000 and 9,000 shillings (about US$100) on a market day which gets my family by and by until the next market day. I prefer this life than the former one. Because even if El Nino happens again, I do not have much to lose (also I do not wish this for others since the market will be closed). More importantly, I have been able to send my children to school and soon they will be able to support me when they get jobs. The only problem with my current occupation is when the market gets closed—as happened last time. This was a disaster more than the El Nino. I had to sell the few goats I kept to pay for my children school fees to a wealthy guy in town in order to survive as I have no one to turn to. I pray to Allah to let the market stay open to keep me going from one week to the other (Ahmed Worseno, a former pastoralist).

Since Kenya is not actively involved in live animal and meat exports (excepting intermittent cattle exports to Mauritius), the imposition of bans by Middle East states bears no effect on pastoralists or traders.

5.2 Case study: El Gedarif and El Gezira markets, Sudan

5.2.1 Background

For both the domestic and export livestock markets in Sudan, close to 70% of the animals are sourced from the western states of Darfur and

Kordofan. Seasonal migration of pastoralists in these states involves covering long distances stretching from 600 to over 1,000 km within Sudan and across the borders into Chad and Central African Republic (Young et al., 2005, 2008; Aklilu, 2006). In the long dry spells that extend for up to ten months of the year, pastoralists (especially camel and sheep herders) stay far away from important secondary markets of Nyala, El Fasher, Jeneina, and Al Huwey (Aklilu, 2006). If at all, they only access less important primary markets during this period. They come in contact with secondary markets only during the winter season migration (lasting about three months, at most) when pastoralists move to the northern parts of Darfur and Kordofan.

For a country that has been exporting an average 1.5 million sheep/year (except in 2007 and 2008), over 200,000 camels (including informal exports to Libya and Egypt), about 100,000 goats, and some 3,000 tons of mutton, it is difficult to imagine that most of these livestock are collected and assembled from pastoralists within the short winter gap. This becomes apparent if we consider that the peak export seasons of Haj and Ramadan do not necessary fall within the winter migration calendar of Darfur and Kordofan pastoralists every year. Therefore, a good proportion of the trade stock comes from other non-pastoral sources. For example, Darfur's livestock population is estimated at 8.2 million head of cattle, 10.4 million sheep, 8.65 million goats, and 0.77 million camels (Ministry of Livestock Resources, 2002). However, a considerable number of the livestock population is also raised by farmers-cum-agro-pastoralists and investors (also referred to as "absentee non-herders"). Up to 25% of the sheep and goats, 20% of the camels, and 15% the cattle were estimated to be owned by these groups, including female-headed households that depend on raising sheep and goats for their livelihoods. In fact, the growth in livestock population, estimated at 3.2% per annum before the conflict, was attributed to an increasing number of farmers adapting to agro-pastoralism, investments by a growing number of businessmen, the move by wealthy pastoral groups to commercial production, and the growth in domestic and export livestock markets. Unlike pastoralists, however, these groups raised livestock for the sole purpose of profit. In fact, one of the big livestock exporters from Nyala (West Darfur) stated that they sourced 60% of the sheep and cattle and 40% of the camels from the settled population, i.e., from agro-pastoralists and investors (Aklilu, 2006).

Commercialization has enabled these groups to raise the annual off-take rate of small ruminants to about 40% (Abdul Fadal, undated), a figure that cannot be remotely imagined in Ethiopian and Kenyan pastoral production systems. Although similar data was not available for Kordofan, the situation would not be much different, since they share similar agro-climatic conditions and livelihood systems. Many attribute the growth in livestock production and exports beyond the capacity of the resource base as a major cause of the conflict in Darfur (Young et al., 2005; UNDP, 2006; Buchanan-Smith and Jaspers, 2007), which displaced close to 90% of the agro-pastoral population into camps (UNEP, 2004). The resulting reduction in annual export volumes of sheep and goats by more than half in 2007 and 2008[9] from Sudan showed that the displaced agro-pastoralists played a major role in livestock exports relative to the pastoral population.

Although El Gedarif and El Gezira are not major livestock exporting states, the investment pattern is similar, if not more marked, relative to Darfur and Kordofan. For example, the large-scale irrigated and rain-fed farms of Gezira and El Gedarif respectively have not only displaced the pastoral population but have provided the farm owners with the opportunity to raise large numbers of livestock on fodder and crop residues. They also sell crop stalks or fodder to poor pastoralists. Other livestock investors in non-farmed areas include wealthy pastoralists and businessmen who own boreholes or *haffirs* and who employ herders to manage their livestock. Such investors own up to 7,000 sheep and

[9] Nearly all livestock belonging to the agro-pastoral population was looted following the start of the Darfur conflict in 2004, and sold to exporters by the perpetrators. This activity helped to maintain Sudan's export figures for sheep and goats for 2005 and 2006 relative to previous years. The long-term implication of the loss of livestock among the agro-pastoral population began to take effect in 2007, once the looted animals were disposed of.

explained that at least 1,000 sheep per year were sold simply to cover the running costs of the operation (El Gedarif Pastoral Union). This is overwhelming evidence that the wealthy require the markets to operate without interruption. The fact that 80% of the land in these states is designated for agriculture and only 20% for pasture (according to the Om Algorah locality Pastoral Union) means that pastoral mobility and access to riverine areas is confined. It also means that despite their small livestock holdings, pastoralists are dependent on purchased feed and water, and, increasingly, need to work as paid herders for the rich or abandon pastoralism altogether.

In this situation, a trade ban would, therefore, mostly affect wealthy businessmen and pastoralists with investments in large-scale livestock production, and, agro-pastoralists[10] who raise livestock for the sole purpose of profit. Poor livestock herders sell few numbers of animals in the first place, often in primary markets at low prices (usually, half in cash, half on credit) to the first intermediary in a line of up to six middlemen before the sold animals reach the terminal market (Aklilu, 2002). Given the low prices they receive in the chain, the few numbers of animals they sell in a year, their total absence from important secondary markets for most of the year, and the rise in the domestic consumption of meat after the discovery of oil,[11] the direct effect of export trade bans on poor herders is far less significant compared to wealthier groups. However, poor herders will suffer more from indirect effects—loss of domestic markets to wealthier groups, price reductions for medium and low quality sheep, and loss of jobs (such as contract herding), as the wealthy groups will not hesitate to dispose of their flocks to reduce production costs as needed.

5.2.2 Impacts in El Gedarif and El Gezira

Although Saudi Arabia lifted the livestock export ban for the most of Sudan in 2009, the ban was still in effect in the eastern states of El Gedarif and El Gezira during field research in early 2009. Compared to the western states of Darfur and Kordofan, the volume of exports from the eastern states is small. El Gedarif exported close to 60,000 sheep and 20,000 camels in the previous year, while El Gezira exports some 30-40,000 sheep on a yearly basis (key informant 1, Khartoum). However, poor pastoralists admitted that they were not aware of the ban in the first place, and were not facing major difficulties except a small drop in the price of medium and low quality sheep from 120 SP to 105 SP for a period of about two weeks during the Id season (pastoral focus groups 1 and 2, El Gedarif, and pastoral focus group 2, El Gezira). The price of good quality sheep did not change.

Local traders stated that they were not affected by the ban as they were still supplying sheep to buyers in Khartoum. They suspected that some of these sheep may be processed and exported as carcasses from Khartoum. Unfortunately, it was not possible to meet camel herders in Kassala due to travel restrictions, where the effect of the ban may be felt more by wealthy camel herders, since the export market is a major destination for their camels (Pastoral Union, El Gedarif). In any case, the ban seems to have had no or little effect on any pastoral groups because of the low volume of exports from the two states and the capacity of the domestic market to absorb what could have been exported from this region. Exporters, who could have been impacted to some extent, were not available for comment.

5.3 Case study: Somali Region markets, Ethiopia

In the Horn of Africa, the Somali Region of Ethiopia is one of the most active livestock trading areas, and various sources estimate that 60-80% of Somalia's livestock exports originate from this region of Ethiopia through a largely informal cross-border trade (Teka et al., 1999, Nin Pratt et al., 2004). Although it is very difficult to verify these estimates, the kinship ties and trading networks between Somalis in Ethiopia and Somalia have been known for decades and have proven to be very resilient. The fact that so many Somali clans straddle the border is an indication of the relative ease in which

[10] Not in Darfur at the time of the study, but in Kordofan, El Gedarif, and El Gezira.

[11] Evidence apparently supporting this trend was the emergence of a new cross-border livestock trade from Ethiopia to Sudan in around 2005.

cross-border trade can take place (Hunt, 1941 and, more recently, Devereux, 2006). While the absolute numbers of livestock traded out of the Somali Region are unknown, an indirect measure of the impact of export bans on the region can be derived from livestock export figures from the two main ports of Berbera and Bossaso on the northern Somali coast.

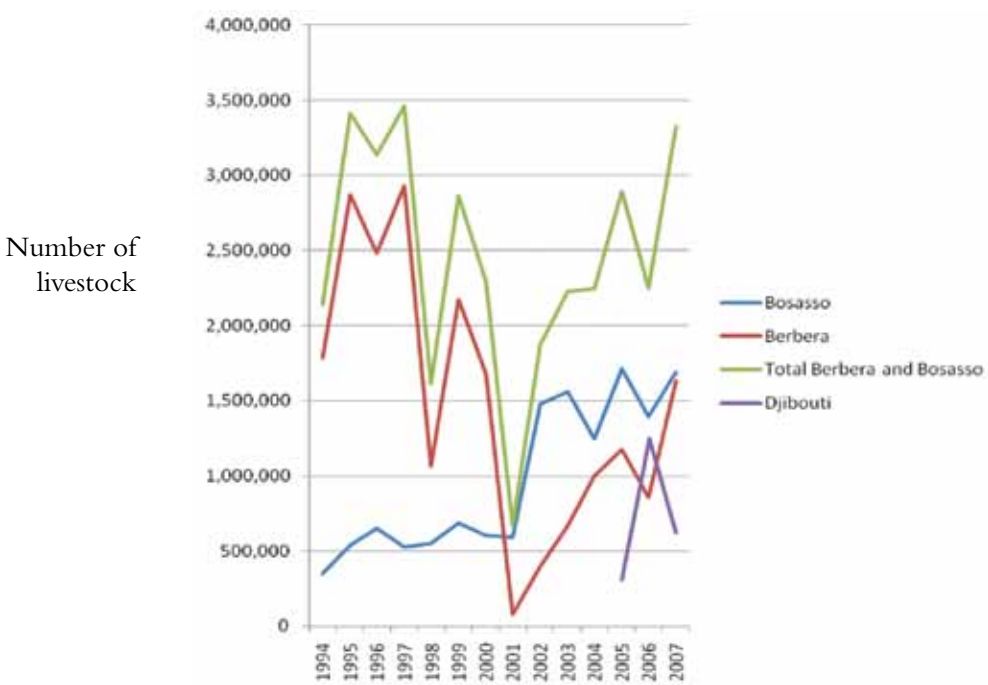
Livestock import bans were imposed on the Horn of Africa in 1998 and 2000. The 1998 ban was imposed by Saudi Arabia, but relaxed in 1999, whereas the ban in late 2000 involved Bahrain, Oman, Qatar, Saudi Arabia, UAE, and Yemen and was far longer-lasting. The export data in Figure 1:

- shows a dramatic decline in livestock exports in both 1998 and 2001 as a result of bans, confirming a severe shock to the markets in those years;
- shows that, as early as 2002, Bosasso port was exporting around 1.5 million livestock, and, despite the ban, exports have increased between 2002 and 2007; trade also increased out of Berbera port during this period despite the ban; to some extent, traders were able to circumvent official restrictions from Gulf States by redirecting exports to Yemen.

In terms of impact at household level, baseline surveys for the early warning system in Somali Region indicate that poorer pastoral households derive between 50% and 74% of their annual income from the sale of livestock or livestock products (depending on area). Assuming a worst-case scenario in which livestock sales stopped completely, the outcome would be catastrophic for poorer pastoralists. Even in a situation where markets still remained open but livestock prices fell, it is possible that poorer herders get displaced by medium wealth and wealthy sellers. This is because, during an export ban, the large volumes of relative high-quality livestock which were destined for the export market are re-directed to domestic markets, and these animals usually belong to wealthier households. During the 1998 ban, it was estimated that the price of sheep and cattle fell by 55% and 65% respectively in the Somali Region.

A number of interesting issues emerge from this analysis. In terms of absolute loss of income, the poor are less affected since they sell fewer numbers of animals. But they probably endured greater hardship than the rich because the ban prevented them from selling the few animals they need to sell to survive. The underlying

Figure 1. Livestock exports from northern Somali and Djibouti ports, 1994 to 2007 (source: COMESA, unpublished data).



assumption is that better-off households, and to some extent the middle income group, could withstand the shock better because of access to their own food sources, whereas the poor relied principally on livestock sales and other income-generating activities to access food. Therefore, the impact of export bans on poor livestock herders stems first from plummeting livestock prices in the domestic market (as was the case in Somali Region) and second, from increased competition in the domestic market, both in terms of quality and supply levels from owners that would otherwise have preferred to sell for the export market. A ban deprives poor livestock herders from accessing domestic markets they rely on, even at reduced prices and in the loss of income from other sources—such as guarding and trekking trade herds. As livestock sellers, the poor are indirectly impacted by livestock export bans, whereas the middle and better-off wealth groups are affected directly in a progressive manner.

An important but missing set of data from all the documents we reviewed was the proportion of livestock sold by different wealth groups which are destined for export versus domestic markets. In part, this deficit may relate to the difficulty of collecting the data. For example, when selling to traders, pastoralists may not know or ask about the final destination of their animals. Similarly, traders who are pooling animals for export, sometimes sourced from herders directly, may not know the wealth status of the seller. However, what is commonly observed is that most of the livestock destined for export come from the better-off and the middle income groups. The poor, in most cases, supply mainly to the domestic market and, even in the case of exports, they sell to the village-level middleman at a lower price, who then passes on the animals to subsequent buyers. Although relatively simple, this kind of analysis avoids many of the pitfalls of far more elaborate modelling of the costs and benefits of veterinary systems to deal with RVF in the region. For example, a desktop modelling study relied on livestock and human population estimates for the Somali Region, which are very difficult to validate, even in a broad sense (Nin Pratt et al., 2004).[12]

Further analysis of the impact of livestock bans in Somali Region is provided by Devereux (2006, 59), who suggested that *"Somali pastoralists and traders received no support from the Government of Ethiopia, in negotiating with governments in the Gulf to lift the ban"* and links this inaction to a government strategy to undermine the trade in live animals into Somalia/Somaliland. This analysis seems to overlook the fact that federal government sent high-level delegations to the Middle East soon after the ban was imposed, and regular repeat visits have taken place during the last five years. Furthermore, Saudi Arabia and other countries were using the international standards on animal diseases and safe trade (the OIE Code)[13] as the basis for imposing the ban. In terms of RVF, the OIE Code designates countries, not groups of countries or regions within countries, as either RVF-free or not free. It follows that the primary response of a country to the ban is to follow the OIE guidelines and convince the OIE and trading partners that RVF is either not present, or not a significant risk. It has to be a national-level response, not a sub-national response. In 2001, the Ethiopian government launched a national RVF surveillance program, and the strategy specifically recognized the importance of pastoralist areas in terms of contribution to export markets.

[12] Problems with the validity of livestock population estimates at household level and regional level need to be taken into account here. For example, livestock population figures for the Somali region used by the Ministry of Agriculture and South East Rangelands Project during the mid-1990s were 11 million shoats, six million cattle, and 1.5 million camels. The Ethiopian Central Statistics Agency figures used by Nin Pratt et al. in 2004 were 17.1 million sheep and goats (a 55% increase relative to earlier figures), 4.3 million cattle (a 28% decrease relative to earlier figures), and 20 million camels (a 1233% increase relative to earlier figures). In 2003, aerial surveys of seven out of nine zones in the region counted 11.9 million sheep and goats, but only 670,000 cattle and 1 million camels. In 2006, the Ethiopia statistics agency did not report average household ownership of camels, cattle, sheep, or goats for livestock-owning households in Somali region due to "no data" (CSA/EDRI/IFPRI, 2006).

[13] Under the World Trade Organization, the Office international des epizooties (OIE) is delegated to develop international animal health standards for trade in livestock and livestock products. The standards are detailed in the OIE Terrestrial Animal Health Code, known commonly as the "OIE Code."

5.4 Case study: Borana markets, Ethiopia

5.4.1 Background

The depletion of livestock assets in the Borana production system due to recurrent droughts and other factors has been described in section 4. However, the Borans have a comparative advantage over other pastoralists in Ethiopia because, in response to export bans imposed by Gulf States or Egypt, they can easily switch to the Kenya market, where the imposition of a ban is unlikely. The Kenya market is a reliable alternative market for wealthy Boran pastoralists, particularly for those selling cattle and camels. In the unlikely event of a dual imposition of bans by Gulf countries and Kenya, wealthy pastoral groups will be the first to suffer.

Theoretically, a specific ban on small ruminants and a shift to the Kenya market would affect wealthy groups more in terms of absolute loss of income, but its effect could also be significant to the poor because most of the livestock-based cash earnings for this group come from the sale of shoats. Furthermore, the Kenya market could not absorb the entire volume of shoats arising from a complete shift to markets there, unless Kenya started to export shoat carcasses. Exporters estimated that close to 1,250 metric tons of sheep and goat carcasses exported from Ethiopia were sourced from Borana-Guji areas (key informants 1 and 2, exporters). This translates roughly to between one million and 1.25 million animals, which Kenya could not import in addition to current imports from Borana and from other sources such as the North East province, the Maasai, Somalia, and the Somali Region of Ethiopia. A prolonged export ban on sheep and goats would unduly affect the food security status of poor pastoralists compared to wealthy groups and vice versa for cattle and camels.

5.4.2 Impact of bans

Following an outbreak of RVF in Kenya, the United Arab Emirates (UAE) imposed an export ban on Ethiopia for about six months in 2007. The main trade to UAE involved small ruminants (mainly goats) of 20 kg live weight or less, exported as chilled carcasses. Borana was one of the areas affected by the ban.

Interviewees stated that their export volume was reduced by about 60% during the ban, even though they tried to compensate for the loss by increasing shipments to Saudi Arabia and Yemen (key informants 2 and 3, exporters). During normal periods, the UAE is a major destination for Ethiopian meat exporters because there are daily flights between the two countries, whereas there are only two to three weekly flights to the other destinations. They were not keen, though, to disclose the loss in absolute cash terms.

An Isuzu truck owner disclosed that he made a net profit of 650 Birr per trip when transporting sheep and goats from Borana to the abattoirs and managed six trips in a month (or a net profit of some 3,900 Birr) in a normal time. For the first two months of the ban, his monthly trips were reduced to three, incurring a reduction in his monthly income.[14] During the third month of the ban, he moved to Arba Minch and began transporting bananas to Addis Ababa. Although the income was as good, he lost money on repair costs to his truck due to bad roads. He came back to Borana in August 2007 on hearing that the ban was lifted.

A livestock trader who sold sheep and goats to an abattoir in Mojo was interviewed to estimate his losses during the ban. In a normal period, he sold around 300 animals of 20 kg live weight or less, and 150 to 200 animals of over 20 kg live weight per month. He explained that his trade of the larger animals was not affected by the ban because they were exported to Saudi Arabia and Yemen, not UAE. His losses were seen in the 300 smaller animals which he'd previously supplied monthly to the abattoirs, and he estimated that the ban resulted in a loss of US$5,478 over six months.

When asked about the impact of the ban, pastoralists in Teltele stated that:

> *The traders suddenly started to screen sheep and goats, only weighing over 20 kg live weight for*

[14] The truck owner was still transporting commodities within the local areas at this time. So, his overall loss must be less than the figures mentioned. He was not able to remember his earnings by transporting other commodities in the local area during this time.

reasons unknown to us. We welcomed this since they (the traders) were finishing off young breeding males, anyway. The very poor and the poor with pressing cash needs at the time sold the animals at a reduced price to local traders. The middle and better-off usually sell bigger shoats, but some of them have bought smaller shoats from the poor to sell to the traders. Once they knew that shoats of 20 kg live weight or less were not wanted, they let them on the pasture and sold them later at a better price when the shoats gained weight. Then after a short time, the traders started buying smaller one (20 kg or less). It was all puzzling. (pastoral focus group 2, Teltele)

Closer to Yabello town, pastoralists in Did Hara noted that:

We know that these traders take our animals to Mojo and Nazareth, but we don't know where they take them from there. We have seen some improvements in the price of goats over time since the traders began operating in our areas. But, we cannot rely on them because they are not consistent. Sometimes, they come and buy our cattle and camels or only small shoats or bigger ones. And there are times when they do not come for months at all. When they don't come we take our cattle, camels, and shoats and sell them in Kenya. Although livestock prices are a little lower in Kenya, we still make some gains through the unofficial exchange rate between the birr and the shilling. In fact, when they stopped buying smaller shoats, poor pastoralists wanting to sell one or two goats suffered a bit and had to borrow money from relatives. But, after a while they were able to sell them to better-off pastoralist groups. The better-off made a deal with Borana traders who sold the shoats for them in Nazareth. So, they were not affected as such. Since then we (the wealthier groups) have made a pact with Borana traders. We buy calves or young bulls and graze them for seven to nine months and sell them to Borana traders who take them to Nazareth. If not, we sell them in Kenya, for a lesser price. We make more profit this way than with the shoats. This arrangement does not mean much for the poor, however, since they rely mainly on shoats. Bans on shoats affect the poor and the better-off are affected when there is no market for cattle and camels. (pastoral focus group 1, Did Hara)

6.1 A fixation with market infrastructure?

As suggested in the Introduction to this report, livestock marketing initiatives in pastoral areas have been driven by a perception among policy makers and donors that poverty reduction requires more livestock sales, which in turn requires more markets. Furthermore, these markets should be "modern." Since the 1970s, donors such as the World Bank, African Development Bank, USAID, and others have repeatedly supported market construction in pastoral areas, with support from African governments. Despite the investments, evaluations which show positive impact on the livelihoods of poorer pastoralists are hard, if not impossible, to find. In contrast—and as recently as 2008—impact assessments of new livestock markets in pastoral areas have once again shown the flawed logic of new markets and the litany of problems associated with the long-term financing and management of these facilities (Bekele and Aklilu, 2008). When describing livestock marketing in Somalia in the early 1980s, it was noted that for pastoral areas, *"The basic requirements, so far as market facilities are concerned, appear to be ample space for transactions and the provision of drinking water for market users. Little justification for investment in fencing, pens, scales or auction rings can be established since the system seems to work well in its present simple, highly flexible form"* (Reusse, 1982, 7).

6.2 Marketing groups versus individual loans: case studies

The perception that enhanced livestock markets or exports support poverty alleviation in pastoral areas is persistent. Concerned agencies and advocacy groups continue to argue that the welfare of pastoral groups in general is hampered by marketing constraints and that alleviating this problem is the key to improving the food security of all pastoralists, including poor producers. Over time, this notion has led to various initiatives which target more of the "software" or organizational aspects of livestock marketing. These programs include financial support (loans or grants) and technical assistance to "pastoral producer's groups" or "pastoral livestock marketing groups" in a bid to involve producers more directly in livestock marketing. The following case studies examine these initiatives in Kenya and Ethiopia, and compare the "group approach" with a project in Sudan which provided direct loans to poorer herders.

6.2.1 Case study: Pastoral Producer Groups, Kenya

CARE Kenya initiated a program to support pastoralists in the marketing of their animals in 2005 to 2006 by forming pastoral producer's groups (PPGs). Initially known as the "Livestock Marketing Enterprise" (LIME) project, it provided support to the groups through capacity building, business plan development, and in subsidizing livestock transport costs from production areas to Garissa market and, later, to Mombasa. Group members had to contribute their own livestock (mainly cattle) as a startup capital and began buying animals from villages and rural markets which were sold either in Garissa or Mombasa. Later on, CARE started buying cattle directly from the groups and moving them to rented ranches for fattening. The profit from weight gains was supposed to go to the group after deducting overheads. However, this scheme did not work for various reasons, but particularly because of drought and a reduction in livestock prices.

The LIME project then became the Livestock Programme (LIP), and CARE told the groups that they would be given loans at a low interest rate. However, CARE then entered into a contract with the Equity Bank in Kenya to administer the loans on behalf of CARE. The following interviews with PPG, CARE, and Equity Bank illustrate the issues.

The PPG perspective:

> *Our PPG was established in 2006 with 30 members (17 women and 13 men) through the CARE LIME initiative. Members were mixed (non-pastoralists and pastoralists). Each of us contributed two head of cattle at the start and these*

were sold in Garissa. CARE provided training in capacity building, business development and subsidizing transport costs from Huluga (purchase site) to Garissa, and from Garissa to Mombasa. During the LIME project, we started by selling 200 head of cattle (140 through loans). Later, LIME started buying directly from us for fattening in the ranches—with the profit to go to the group after deducting the overheads. Unfortunately, because of the drought, the price went down for the first two batches of cattle. During the transition from LIME to LIP, we were told that they will provide us loans at 0.8% interest rate from LIP.

This did not materialize after CARE entered a partnership agreement with Equity. We found out that Equity was charging 19.75% interest rate (15% interest, 2% application fee and 2.75% insurance fee). We applied for a loan of five million shillings but didn't qualify for the loan because of having no collaterals even at this rate of interest. Currently, we operate on our own; we have 300 head in a ranch at Voi plus some cash in the bank.

We have two agents—one in Garissa market and another one in Somalia who monitor the markets and advise us when to purchase— i.e., when livestock prices are low. In effect, we are playing the role of middlemen or small-scale traders.

Currently, we are contracted to supply Alpha foods with 60-80 head of cattle a week, but we have been able to supply only 40-60 head a month, because collection is difficult. We conduct business as a group and not as individual members because of shortage of capital.

High staff turnover at CARE has not only deprived us of supporters who could argue our case with Equity Bank, but also deflected the objectives with which LIME was established. We see no benefit from the current LIP fund and feel abandoned by a program that brought us into being in the first place. We now know that what is sustainable in an NGO is only its name.

Worabe PPG focus group, 2009

The NGO worker perspective:

The original idea was that CARE was supposed to facilitate linkages between groups at the village level and buyers, and provide support such as transport, healthcare, etc. The implementation was, however, different. CARE became a buyer and took the animals to a ranch, where 3.8 million shillings was allocated for the ranch owner to put up water and feed facilities. The animals died and the loan is not yet fully recovered. LIME was supposed to be transformed into a share company, where PPGs, traders, and CARE were supposed to have shares. This idea was abandoned and replaced with the LIP concept. LIP was designed by CARE Kenya without the involvement of "people in the know" in Garissa or the PPGs.

When CARE team went to Garissa to explain the concept to pastoralists, the latter replied: "We don't have any market problems in Garissa in normal times. We need your intervention only in times of crisis—please devise a system for the period when we don't have any market for our animals because of drought etc. In order to do so, the animals in the ranches have to be sold first to accommodate our cattle—so give the money to ranchers and KMC who will buy our cattle in times of crises. Bring the government also on board. Do not give the money to traders." This is because in the 2006 drought, the government suggested that Lord Delamere's ranch should accommodate pastoralist animals until the crisis was over. But the ranch owners didn't agree to the idea and instead, opted to buy the weak animals of pastoralists.

PPGs play the role of middlemen at the grass root level—buy animals from households or pull their own animals together to sell them in the market. A person who sells only one animal will not go to the market because of overheads. Neighbors or the PPGs take his animal to the market on his behalf and give him the money minus the overhead expenses.

The issue of groups is not easy when it comes to managing business. The group dynamics is important for reducing overhead costs, bargaining power, and setting up common facilities that could serve individual members. However, the business focus should be on the individual, whether in terms of providing loans, training, etc. In Islam, money has no value on its own, except as a means to an end. So, interest is not allowed on loans. However, profit-making is allowed. Islamic banks operate on the basis of profit/loss sharing model on a business. The Gulf Africa and First Community Bank in

Garissa operates on this principle. During the transition, agreement was reached for the fund to be sharia compliant. Then the money was transferred to Equity bank which requests title deeds and log books, and if one has such assets, one can access loan from any of the banks. They charge higher interest rates for livestock loans than for agricultural loans. This is discriminatory. Besides, the LIP fund can be accessed by anyone in the country instead of limiting it to the region's pastoralists. The PPGs are not going to see any of the LIP fund.

CARE staff member (name withheld)

From the perspectives of a banker, giving loans to livestock traders, who could offer collateral, made better business sense than loans to the PPGs.

The banker's perspective:

The LIP outreach has not performed as expected. So far, only 2.3 million shillings is disbursed from the first phase (from a total of 30 million shillings). *These loans were given to individuals and not to the PPGs—the biggest being 500,000 Ksh. Loan performances is so far good, with outstanding loans being 1.4 million. These individuals were selected following recommendations from CARE, business evaluations, and business acumen. PPGs, so far, have not accessed the loan. Borrowers are individual traders who buy from the PPGs. Requests, so far, came from Shantabak and Worabe PPGs—each seeking a loan of five million. This was too risky for the bank, with no guideline to adhere to, and since then the PPGs have not come back again to the bank. On the other hand, a North Kenya Livestock Traders Association (in Moyale) is about to receive 3.7 million* (subject to changing their legal status from that of a civic association to a trading association). *This group has some experience in cattle trading. However, the main reason for securing the loan is an offer of collateral.*

Rapheal Ngera
Equity Bank, Garissa Branch

On the other hand, a parallel agricultural loan scheme run by Equity Bank in the same region was successful for a number of reasons.

Kilimo Biashara (agricultural business loan)—is conducted in partnership with Government, the Department for International Development (UK) and the Alliance for a Green Revolution in Africa (AGRA), with a guaranteed fund of some 300 million shillings, against defaults from any natural calamities. Some 1,500 families were given a loan of 20–50,000Ksh (depending on land size) in the district (the loan being used for seeds, fertilizer, chemicals, set up of irrigation canals, and water royalty) for irrigated maize farming of short maturing variety (70 days). The scheme was launched in October 2008, with a cultivation of 1,000 hectares of land. Expected cash flow, in a year's time is estimated around 60 million shillings, where there was none before from such activities. I attribute the success of this scheme to partners (government, Department for International Development, and AGRA) taking the risk in case of crop failures due to any natural factor and that the risk is spread to numerous borrowers (through smaller loans) rather than few individuals. I believe that CARE is a passive partner, does not share the risk of defaults, and is not prepared to monitor borrowers except introducing them to the bank. My recommendation is that small group loans impact so many individuals and that CARE should focus from macro to micro.

Rapheal Ngera
Equity Bank, Garissa Branch

In the final analysis, both LIME and LIP failed to benefit pastoral producer's groups—the former because of the project's direct involvement in livestock transactions without taking the risks involved into account and the latter, because of trying to bank un-bankable producer's groups (who cannot afford collaterals) on strict commercial loan principles. Through flaws in design and implementation modalities and an apparent lack of understanding of the local trade dynamics, the fund that was meant to benefit poor livestock producers is ultimately serving livestock traders, as evidenced by the loan to be approved for Moyale livestock traders association.

6.2.2 Case study: Borana Pastoral Livestock Marketing Groups, Ethiopia

In an attempt to establish more direct transaction linkages between pastoral producer groups and Ethiopian meat exporters, the CAPE unit of AU/IBAR initiated, designed, and funded some ten Pastoral Livestock Marketing Groups (PLMGs) and one cooperative in southern Ethiopia in

collaboration with the government Livestock Marketing Authority.[15] The pre-existing Savings and Credit Groups of GL-CRSP/PARIMA and the NGO Action for Development (AFD) were selected to benefit from this scheme due to the perceived business experience these groups have acquired. PARIMA and AFD were the implementers of the project, with AU/IBAR providing a grant of US$36,000 for the groups.

According to an assessment conducted in 2006:

> *All of the ten pastoral groups and the cooperative appear to have been capable of managing their small-ruminant trading activities. Over 25,000 sheep and goats were sold by the 11 entities over a period of 12-18 months. Three of the savings and credit groups managed largely by women were among the top performers overall. The cooperative, however, has been the outstanding performer to date in terms of sales volume and profit … due to the fact that the cooperative has had the longest period of marketing activity.*
>
> *… the total supply of marketed stock to date equated to an average of 2,450 head sold per group and 82 per household. The average number of small ruminants owned prior to initiation of marketing was only two (with high variability) … this average reflects that members of savings and credit groups tend to be poorer than average pastoral households in terms of livestock assets* (Desta et al., 2006, 117).

Competition among exporters, initially resulting in price increases from Birr 3.50 to Birr 5.50 per kilogram live weight, declined to Birr 4.50 after the exporters colluded. The PLMGs did not have a strong bargaining position to reverse the situation at the time, although the price later went up to Birr 8 per kilogram due to increasing demands. In addition, the formation of new livestock marketing groups and cooperatives by other agencies, which jumped on the bandwagon, coupled with established brokers who saw the pastoral marketing groups as their rivals, intensified the competition to supply the exporters (Aklilu, 2004). Agents of the exporters also preferred to buy from brokers and cooperatives close to market centers as they were easily accessible compared to the savings groups. The fierce competition between the various groups squeezed the profit margin in the transactions and expanded the overall catchment area to 56,000 km^2. In addition, unforeseen expenses were incurred by the groups from mortality and feed costs arising from delays or no shows by exporters when collecting animals for various reasons, including export dynamics (Desta et al., 2006). Regardless, according to Desta et al. (2006) the pastoral marketing groups considered the experience to be an "eye opener" and intended to work hard to catch up. It was reported that the groups invested some of their profits into their businesses or savings, and planned to diversify their livelihoods.

Although some positive experiences emerged from the pastoral livestock marketing groups, the assessment did not look in detail at impact on poorer pastoralists, or compare changes in livestock marketing in areas with PLMGs and those without. To overcome these deficits, a participatory impact assessment was conducted using "before-and-after" methodology in pastoral areas with and without PLMGs. Some results are shown in Figure 2. In areas with PLMGs (Figure 2a), data disaggregated by wealth group showed that:

- Over a three-year period there was no change in livestock off-take among poor herders, but a marked increase in sales among the middle wealth group and a slight increase in sales among richer herders.
- The limited impact of PLMGs on poorer herders on an area basis was confirmed by results from areas without PLMGs (Figure 2b), where sales were similar to areas with PLMGs.
- Livestock losses due to "death" were extremely high during the three-year period; these losses were mainly due to disease, drought (in 2005 to 2006), and predation, and affected all wealth groups.

[15] Now incorporated under a different setting under the State Minister for Agricultural Inputs and Marketing.

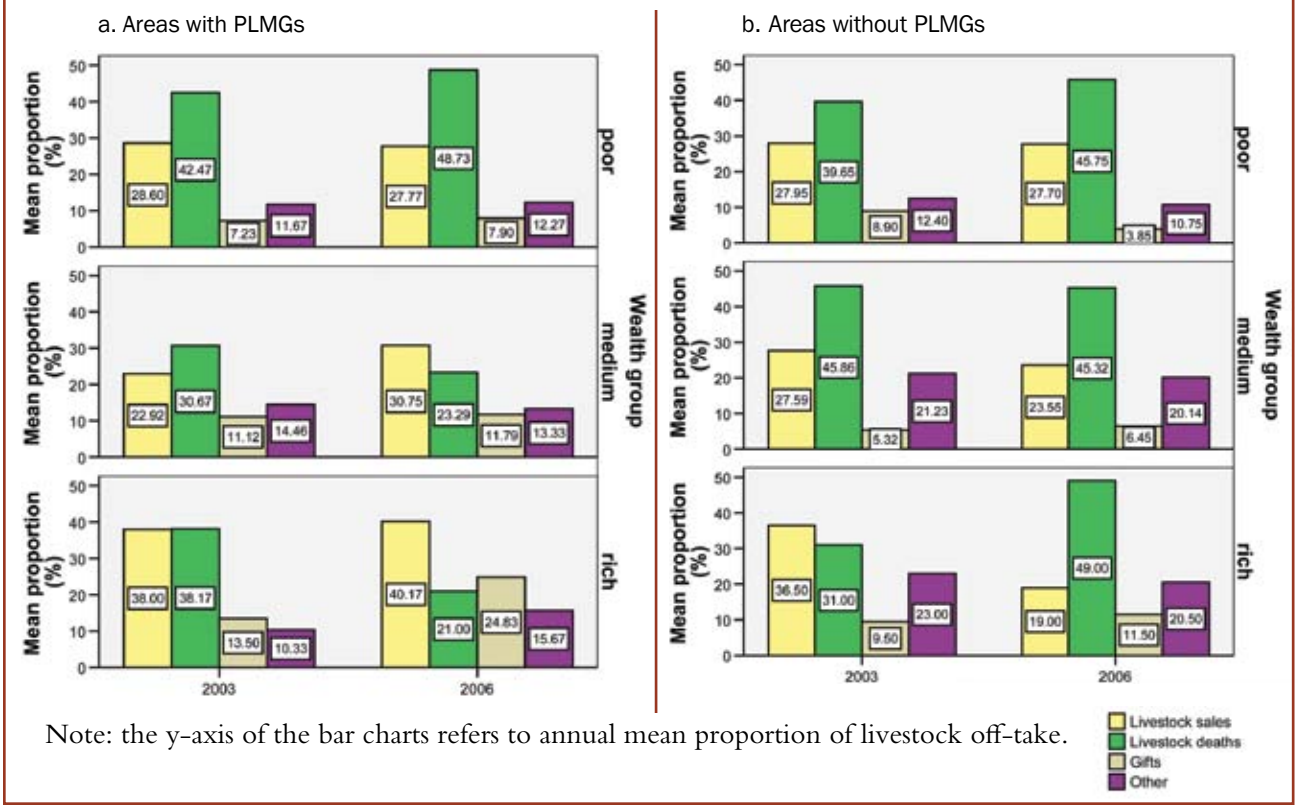
When visiting Borana in earlier 2009 during this study, two of the marketing groups and the cooperative stated that they were no longer trading in sheep and goats due to fierce competition from livestock traders, declining profit margins, and the closure of purchasing sites in the localities by export abattoir owners. The abattoirs were now relying on livestock traders who transported animals directly to the abattoir gates. Individual members in the groups were instead engaged in buying and feeding immature cattle for six to nine months and selling the finished animals to Borana traders (who take them to Nazareth), or Moyale in Kenya. Individual members were also engaged in other income-generating activities (petty trade, etc.). The cooperative had moved away from livestock trading and was diversifying its business activities into quarrying.

Although the groups and the cooperative benefited from trading sheep and goats initially, they were squeezed out of this business. This was partly because of the formation of similar marketing groups by other agencies in the same catchment areas, but mainly because of the fierce competition by livestock traders—whose power and influence resulted in the closure of purchasing offices of the abattoirs in the localities, thus depriving the marketing groups from accessing the exporters within the vicinity.

6.2.3 Case study: bank loans to poor pastoralists in Sudan

Until it was scrapped in 2007, there was a directive from the Bank of Sudan that 20% of the loans issued by commercial banks had to be directed to the export sector. By and large, most of the loans issued for the livestock export sector, including those from the Animal Resources Bank, went to livestock exporters and large-scale domestic livestock traders, either on a profit/loss sharing basis or based on loan administrative charges (a euphemism for interest rates). Even now, nearly all the loans issued by commercial banks for the livestock sector go to livestock traders and exporters.

Figure 2. Reasons for livestock off-take in areas with and without pastoral livestock marketing groups, southern Ethiopia, between 2003 to 2006 (source: Bekele, 2006).



Note: the y-axis of the bar charts refers to annual mean proportion of livestock off-take.

Quite recently, however, the Savings Bank has become an exception in giving loans to poor pastoralists in Sudan for production purposes. For example, in El Gedarif state, 50 poor pastoralists from each of the 23 pastoral villages were selected by the village chief and the state's Pastoral Union to benefit from a livestock credit scheme set up by the Savings Bank. The amount of loan allocated for each beneficiary was 1,500 SP, with a repayment period of 18 months (with possible extension up to 24 months) at an interest rate of 0.5% per month or 6% per annum. The loan scheme was guaranteed by the village chief and the state's Pastoral Union, including insurance premium coverage at 5% of the value of the loan. The loan was not disbursed in cash to the beneficiaries, but they were allowed to buy the animals they chose in the market up to the loan ceiling. Most beneficiaries bought, on average, 15 young ewes, although a few in the dairy sector bought cows. Interviewed pastoral focus groups were confident to repay back the loan in 24 months time, if not in 18, based on the following calculation:

- Annual double lambing enables the loan stock to produce 30 offspring in the first year (15 females and 15 males) and 45 offspring (23 females and 22 males) at the end of the second year.
- Net gains were calculated at 69 offspring after accounting for 8% mortality (according to pastoralists), which would include 14 mature male sheep (aged one year and above) and 20 lambs (six to nine months old) commanding a price range of between 200 to 220 SP and 100 to 120 SP respectively.
- Pastoralists explained that the net income would enable them to pay back the loans after accounting for veterinary, feed, and water costs, which were incurred during the two-month summer season.

Beneficiaries, including the village chiefs and Pastoral Union officials, considered this initiative as the first-ever attempt at poverty alleviation for pastoralists. They stated that, to their chagrin, they had been mere watchers for so long when banks disbursed loans for small and large-scale farmers (for seeds, fertilizers, machinery, dairy farms, boreholes, and so on), livestock traders, and various types of investors. Encouraged by the Savings Bank loan scheme, they suggested that the loan ceiling should be raised to enable them buy 20 ewes instead of 15. They also proposed additional short-term loans which could be used as follows:

- to buy light-weight sheep in May to July for 110 SP, which they can sell at 220 SP after feeding them for four months;
- to purchase pregnant females in June at 130 to 140 SP, which then deliver in September; the lambs to be sold six months later at 100 to 120 SP, and the females kept for further breeding.

6.3 Questions of design: avoid competing with traders

A general lesson from development projects is that in situations where pre-existing service providers or economic actors are adversely affected, they respond by undermining project activities or organize themselves to out-compete a new system.

Different wealth groups of pastoralists are impacted by livestock market transaction modalities applied by traders, middlemen, wealthy pastoralists, or investors (absentee non-herders). In many cases, the manner in which livestock transactions are conducted has been developed and dictated by those who call the shots and, over time, the modalities have become the standard *modus operandi*. Generally, the benefits that accrue from the transaction modalities positively correlate with wealth and status. Traders, investors, middlemen, and wealthy pastoralists employ various strategies to maximize their income from livestock transactions, whereas the role of the poor is far more passive.

There are many similarities in the transaction modalities applied in the pastoral areas of Sudan, Kenya, and Ethiopia, although Sudanese traders, investors, and wealthy pastoralists are more adept than their counterparts in Kenya or Ethiopia, due to the large volume of domestic and export trade. There are also a few exceptional differences in the transaction modalities across the three countries. The following cases reflect the extent to which livestock markets are controlled and manipulated by middlemen and local traders:

> *It is nearly impossible for any producer to sell his animal outside of the broker and this could impact*

the income of pastoralists, especially the poor ones, whose immediate needs persuade them to dispose of the animals soon. Brokers in Garissa operate in three different ways. Buy and sell in the market, making an average margin of 1,500 to 2,000 Ksh/head, or get a commission of 200 Ksh per cattle/camel and 100 shilling per goat, or pocket the difference above what the producer has instructed the broker to sell the animal for (Abbas Mohammed, chairman of KLMC, Nairobi).

Brokers (dilal) *make something like 15,000 to 20,000 Kenyan shillings in a given market day in Garissa, equivalent to the annual income of a poor pastoralist* (Ibrahim Mohammed, KMC agent, Garissa).

We rely totally on dilals *on the price our animals can fetch in the market* (pastoral focus group, Garissa market).

Most pastoralists sell their animals in primary markets and rarely in secondary markets (only if they come across one during migrations). Sellers are often surrounded by brokers offering to purchase on credit or installments (through promises of higher prices than the market rate). Often, four to six middlemen wedge themselves in the chain between the producer and the terminal markets. A bull sold for 800 SP at the producer level could eventually be sold at 1,500 SP at terminal markets, following some reconditioning (Pastoral Union, El Gedarif).

Despite the presence of buyers and sellers since the early morning in secondary markets, actual stock transactions take place only from mid-day onwards, owing to the psychological game played by brokers and buyers. Buyers and their agents pretend not to be interested in the type and quality of animals on offer, send their scouts to find out which of the pastoralists are hard-pressed to dispose of their animals, wait until the sellers are physically weakened by the harsh sun and risk the prospect of keeping their animals overnight in rented pens and pay for feed and water. Buyers and agents then make a move for a kill (key informant 2, El Gedarif).

Through the facilitation of brokers, it is common for livestock traders from Nairobi to buy cattle on credit from pastoralists. What is also common is that every two or three years, the trader/s disappears with the money and pastoralists don't get paid. The same trader/s will re-appear some years later when everything has been forgotten (Abdiduba, chairman of Tile Medo cooperative, Moyale).

Better–off pastoral groups also double as livestock traders by buying livestock from the poor and selling them in secondary markets (SC UK, 2007; Pastoral Union, El Gedarif).

Compared with most NGO program managers or field staff, livestock traders have many years of direct market experience and are adept at maximizing profit:

When I buy cattle or camels in Afmadow (Somalia), I know the likely profit I am going to make in Garissa, because I have information on price and I can anticipate what the price is likely to be when my stock reaches the market. I base my price estimate on the behavior of the market through close contacts. I check about the supply level in Garissa market, whether my competitors have disposed of their stocks or if there is a specific demand for certain type of animals. If I buy 200 bulls in Afmadow to sell in Garissa, I will buy 180 of them at a price that enables me to make profit in Garissa. But, I will choose some 20 "eye-catching" bulls and if the seller demands higher price, then I don't hesitate to pay his quote even if I know that I am not going to make profit from these specific 20 bulls. Because the particular good looks of the 20 bulls would raise the average margin of the other 180 bulls in a wholesale negotiation. But, I do not think such bulls come from poor pastoralists, because the poor do not bargain that much to persuade me the price I had to pay for these specific bulls. I may also pay a similar price for a three-year-old castrated bull of slightly lesser weight and for un-castrated bull of the same age. I sell the castrated one to butchers and the other one to ranchers or farmers. The channels are different (Hussein Elmi, livestock trader, Garissa).

Sudanese sheep exporters employ a strategy, which they refer to as the "Amber effect." This involves a proportional mix of top quality, medium, and lesser quality flocks in the export trade flock. A typical flock composition will consist of 30% Hameri (top quality or "Amber" sheep) and 30%

Shurani (difficult to differentiate from Hameri, but of less quality) with the balance coming from other sub-groups of the Saharawi types. The top 30% Amber quality, for which a premier price is paid by the exporter, is supposedly to strike the eyes of the importers when negotiating the wholesale price. The importers, in turn, would classify the sheep into different grades when selling the lot in the local market in Saudi Arabia. But, a Sudanese exporter may not get a good deal unless his herd contains a good mix of the "Amber" quality in the herd (key informant 1, Khartoum).

Middlemen and exporters also try to outwit each other in Sudan (perhaps, elsewhere for that matter). The middlemen/local traders' primary concern is to dispose of inferior animals first and they would bring such animals to new traders/exporters. Experienced exporters/traders would take time (four to five days) to gauge the quality of animals available for sale before they start negotiations. Once the middlemen/ local traders know the relative experience of the trader, then they decide on which animals to offer for sale (key informant 2, El Gedarif).

Producing for the market:

To capture the Saudi market, wealthy pastoralists in Sudan cross-bred the Hamari and Nilotic sheep. The offspring, Shawrani, while having similar features to that of the popular Hamari, is known to be 20% more reproductive than either of its parents because of its shorter tail (hence convenient for mating). Shawrani fetches lesser price in the market than its Hamari counterpart, but this shortcoming is more than compensated by its ability to produce more offspring (in terms of cash returns). In addition, because of its physical resemblance to the Hamari, inexperienced buyers end up paying the same price as for Hamari (pastoral focus group 2, El Gedarif).

7.1 Drought and markets

For poorer pastoralists, this report has emphasized the importance of herd growth as the key strategy for reducing poverty. We've seen how herd growth is a logical economic approach in which poorer herders aim to acquire increasing numbers of animals as a means to increase financial and social capital (section 3). Herd growth also relates to vulnerability and risk in pastoral areas and, in particular, helps to protect against drought. In general, the larger and more diversified a household's herd, the better able they are to withstand drought.

The drought-related interventions of governments and aid agencies in pastoral areas fall mainly under the humanitarian or relief wings of these actors. Over many years, early warning systems have evolved which, to a large degree, can describe the early stages of drought and related impacts at the local level. As drought is a slow-onset problem, in theory, the early warnings provide ample time for response. In practice, drought response in pastoral areas is consistently late and is most likely to be triggered only after nutritional assessments show high rates of child malnutrition or excessive mortality of people or livestock. By and large, drought response by aid actors is a political and emotive event, prompted by images of livestock carcasses and malnourished children. In addition, drought response is still dominated by food aid and a set of institutional arrangements which are not entirely altruistic (Barrett and Maxwell, 2005).

Markets are a crucial element of livelihoods analysis in pastoral areas during drought. For many years, it has been known that when drought happens, the value of livestock usually falls because they lose body condition. At the same time, the market supply of animals rises as herders need to sell some animals to buy grain for household consumption and again, this contributes to a decrease in livestock prices. As the demand for grain increases, so does its value. In summary, during drought livestock prices fall and grain prices rise (e.g., De Waal, 1989; Toulmin, 1995).

Despite this pattern, pastoralists do sell livestock during drought, and, independently of aid actors or government, use the income to try to meet immediate household food needs and protect remaining livestock. They may buy supplementary feed for livestock, transport livestock to distant grazing areas by truck, and buy veterinary care, all using private sector suppliers (e.g., Morton 2006; Abebe et al., 2008). Also, pastoralists do not usually aim to keep all of their livestock alive,[16] but often target adult breeding females as a means to rebuild herds after drought. Again, the long-term view is herd growth and managing risk.

As drought progresses, livestock prices fall to such a level that some pastoralists will decide not to sell. They try to weigh up the likelihood of rain and these animals surviving against the very limited income they'll receive from sales and the options for using this income. Eventually, the opportunities for selling disappear because livestock become so emaciated that traders stop buying; the market dries up. It is around this point that a severe livelihoods crisis becomes evident. For poorer households, their main financial asset is worthless other than as a source of meat.

7.2 Drought cycle management and livelihoods

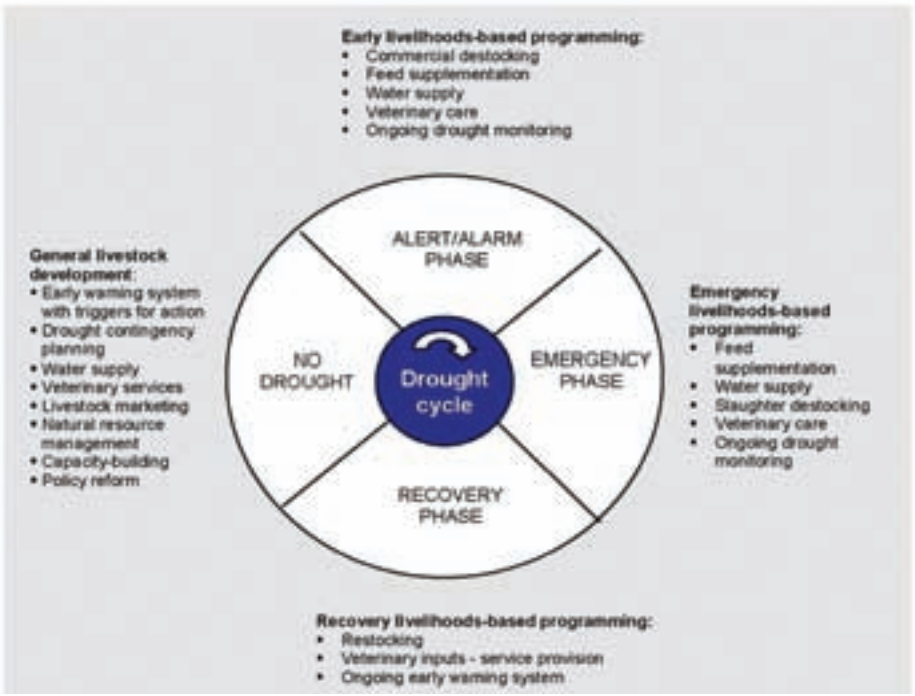
Drought cycle management is a risk-based approach to herd management, which recognizes the inherent unpredictability of rainfall, and therefore livestock numbers, in pastoral areas. It encourages strategic and timely destocking of herds at the onset of drought combined with appropriate restock after drought and therefore, mirrors the strategies of pastoralists themselves (e.g., Toulmin, 1995). The drought cycle model was based on an understanding of the different stages of a drought and the most appropriate types of intervention at each stage.

[16] For example, in Borana areas of southern Ethiopia, herders will slaughter calves at the onset of drought as a way of reducing stress on lactating cows and improving their chances of survival.

The drought cycle management model and livelihoods-based programming are closely linked. Livelihoods thinking in emergencies is based on the assumption that relief aid should not only save human lives, but also protect people's livelihoods. This means trying to safeguard the assets, local services, markets, and systems which people need to recover from emergencies. Here the thinking is that keeping people alive with food aid isn't enough. Furthermore, if adequate support to livelihoods is enabled or provided during the early stages of a drought, it's likely that far less food aid will be needed.

One of the most useful livelihoods-based responses during the early stage of drought is a market-based response called "commercial destocking." It involves working with private traders to organize livestock purchases from drought-affected areas. Although weak or thin, these animals can then be fattened in other areas before being sold on. In terms of the export focus of this paper, experience from Ethiopia shows that an active export trade can be a major incentive for traders to do business in unfamiliar areas (Abebe et al., 2008). In early 2006, drought was affecting southern Ethiopia at a time when Ethiopia had agreements with Egypt to export beef. A joint initiative of the Livestock Marketing Authority, Save the Children US, and Tufts University[17] led to two traders purchasing approximately 20,000 cattle from Moyale district, valued at US$1.01 million. Around 5,405 pastoral households benefited from cattle sales and on average each household received Birr1,620 (US$186) from cattle which otherwise would have died. In terms of aid investment, the benefit-cost was 41:1. These dramatic figures indicate the potential for livestock export systems to be integrated into long-term drought management policies and programs. It can also be noted that these purchases did not take place at the formal livestock markets located in urban centers, but at informal purchasing sites along the main Moyale-to-Addis Ababa road. For the traders, a key issue was access to communities with their trucks and therefore, the condition of secondary roads. This was a far more important constraint than the presence of formal livestock marketing structures such as walled yards and offices.

Figure 3. Livelihoods-based livestock interventions in the drought cycle (adapted from Aklilu et al., 2006).



[17] The commercial destocking took place under the Pastoralist Livelihoods Initiative in Ethiopia, funded by USAID.

8.1 Development options: phones, roads, or markets?

In part, the ways in which different actors benefit from livestock export trade depends on their access to information about the trade. In a dynamic trading environment where prices and demands are constantly changing, those actors who are best informed are those who can most easily pass on costs and maximize profits. Clearly, these groups include exporters and their agents, local livestock traders, middle men, and wealthier pastoralists. The very poor and the poor are the least informed. Although market information systems remain popular among donors and governments, simply strengthening mobile phone networks in pastoral areas will enable better information flow. This isn't a livestock marketing policy issue, but has more to do with policy on liberalized telecommunication systems and, in some cases, internal security.

The benefits of the export trade also depend on levels of disposable livestock assets. The answer to this question is also simple. The very poor and the poor own the least number of livestock and, as explained in section 3, try to maximize herd growth as a logical economic strategy. Therefore, despite a situation where market opportunities expand, poorer households will limit sales to a level which is sufficient to meet household needs. It is only when herds grow beyond a certain point that these households sell more, and move into middle wealth groups.

In terms of the frequency and timing of disposals, middle and better-off groups sell more frequently than very poor and poor groups, but also choose when to sell in response to price rises, particularly when pasture and water conditions are good (Barrett et al., 2006). Very poor and poor groups, on the other hand, sell animals as the need arises, with less attention to price variations (SC UK, 2007). From these observations it's evident that the benefits deriving from an expanded export trade are most easily linked to wealthier groups.

To some extent, this finding is not surprising. Analysis in other parts of Africa indicates that benefits tend to become restricted to a smaller group as market values increase, whereas regional, domestic, and local trade benefits more producers (Figure 4). Here the implication is that poorer producers have limited access to export markets relative to wealthier producers.

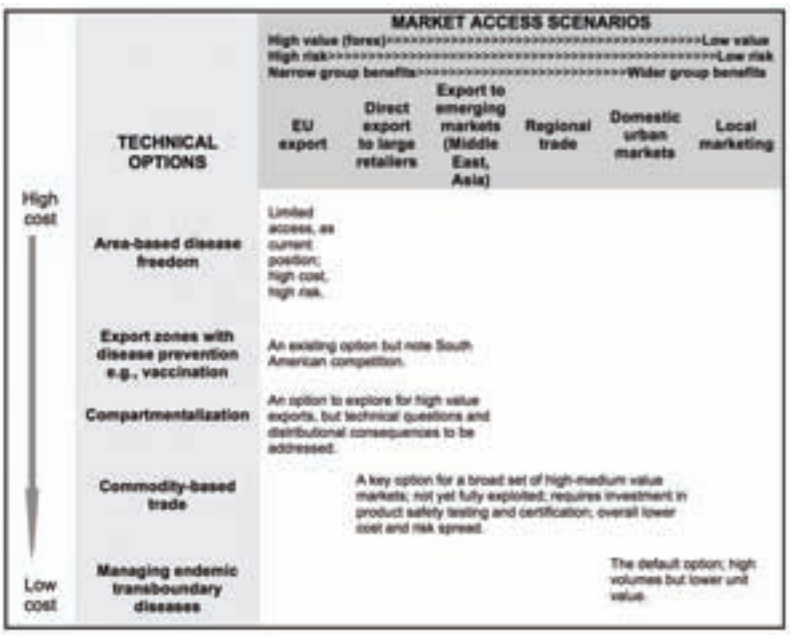


Figure 4. Market access and disease management options for livestock commodities.

Notes: Adapted from the framework of Scoones and Wolmer (2008), which was based on market access options for countries with foot-and-mouth disease in southern Africa, against disease control or other technical options.

8.2 Implications of "area-based" poverty reduction strategies

This report has shown that, in some countries, pastoral areas are crudely equated with poverty. The broad labelling of pastoral areas as "poor" relates to poverty assessment methods which use indicators drawn from non-pastoral settings, and which overlook livestock assets as a key indicator of pastoral wealth. In terms of livestock marketing policy, an area-based approach which focuses on marketing infrastructure and access mostly benefits middle and better-off wealth groups, as these groups have more animals to sell. Similarly, export-driven approaches benefit poorer pastoralists least of all and are particularly risky due to frequent and unpredictable trade bans. When bans are imposed, poorer groups are less able to adapt their selling behavior relative to wealthier herders. Again, these scenarios are reflected in the framework in Figure 4, with export markets generally positioned as high risk relative to regional or domestic markets.

Also within an area-based policy framework, it's evident that pastoral areas not only meet most of the domestic meat demand through internal and cross-border markets, they remain the main (and in some cases, the sole) suppliers of livestock for the export market, generating up to US$200 million for Somalia and Sudan, some US$50 million for Ethiopia, and around US$20 million for Kenya per annum (Aklilu, 2008). This level of economic activity has prompted governments, development planners, and donors to promote livestock marketing from pastoral areas in general. Such initiatives focus on promoting live animal and meat exports on the assumption that such measures will alleviate poverty through increased off-take rate and changes in livestock prices in favor of the producer. The basis of this assumption is the perception that pastoralists are not able to sell their animals as and when they want due to marketing constraints. Here the conclusions of Scoones and Wolmer (2006, 37) seem to apply:

> *There is an enormous amount of policy talk about what constitutes a "pro-poor" policy. But much of this descends into confusion and circularity as everything is brought into the fold. Nearly everything can be justified as "pro-poor," as long as you include some (often wildly heroic) assumptions about how the benefits trickle down, link and multiply. What is needed, instead of these vacuous and generic statements is a more rigorous framework for asking what intervention is likely to have a wide, sustained impact on poverty reduction and livelihood improvement.*

Vibrant export markets are perceived to benefit all actors involved in the marketing of livestock and livestock products in one or another way. Multiplier effects, arising from such business activities, are also viewed as benefiting those providing services and amenities to facilitate livestock trade, although not directly involved in the sale and purchase of livestock. Such perceptions could be correct in the general sense. The generalization, however, fails to account for the diversity of the actors involved in the export market. Diversities in power and influence, wealth or stock ownership, level of vulnerability, access to market and information, business acumen, and risk tolerance capacities all determine the proportion of benefits for each group of actors.

There is a common perception that those at the sharp end of the business (exporters, ranchers, feedlot operators, and butcheries) make the most out of both domestic and export livestock markets. This has been corroborated through field research. Some actors, like transporters and middlemen, although their services are obviously required, also take advantage of the captive pastoral livestock markets. Insecurity, bad roads, and poor communications in these areas increase risks and costs for traders, so that, at certain times, traders face limited competition. Again, providing pastoral areas with the security and infrastructure being developed in non-pastoral areas of a given country will provide pastoralists with more options in terms of when to sell and whom to sell to. At the same time, herd size is a key factor in determining the level of sales. In the absence of alternative economic activities which outperform livestock rearing, poorer households will prioritize herd growth, even if export markets are easily accessed.

It is possible that the existing policy and institutional arrangements for livestock marketing in some pastoral area are contributing to the

redistribution of livestock assets for poorer to richer herders, which, in turn, is reflected in a widening asset gap between wealth groups and increasing levels of destitute pastoralists. While further research is needed to prove or disprove these trends, in other parts of the world, the process of commercialization in pastoral areas has led to situations where poorer pastoral households are no longer viable, and a form of commercialized pastoralism continues with only relative large herds (Barth, 1961; Evans-Pritchard, 1949). If asset redistribution is indeed taking place in the Horn of Africa, the current policy arrangements may lead to a set of scenarios such as:

- Sudan's export volume may stabilize or decrease in the coming years because of the displacement of the agro-pastoral population in the critically important region of Darfur and the growing trend of domestic meat consumption. Ethiopia and Kenya, on the other hand, can potentially increase their export volume if they make certain essential adjustments.
- Substantial increases in the volume of exports from Kenya or Ethiopia, as in Sudan, will continue to benefit the better off-groups disproportionately more than the poor. More importantly, expanded export trade from these two countries, if and when it happens, will follow similar patterns as in Sudan, in terms of production and contract herding arrangements, the proliferation of absentee non-herders, and rich pastoralists moving into commercial production.

It follows that, although the support of some donors to pastoral livestock export systems is justified on the grounds on poverty reduction, such support may accelerate trends such as livestock redistribution from poorer to richer households. In Kenya, the emergence of Somali livestock traders-cum-ranchers serves as a good indicator of the future. Though ranching was uncommon among Somali herders and traders, there is an emerging trend amongst the latter to lease ranches in Taita Taveta district in order to supply quality cattle to the Mombasa market.[18] With one exception,[19] these initiatives are currently directed at the domestic market. This trend is likely to be followed by wealthier pastoral groups once they realize the potential benefits to be derived from leasing ranches. Such groups will make a move to lease available ranches in the Coast province and will split their herds in two groups. They will keep breeding and young stocks in pastoral production areas and those to be marketed in the ranches for value adding. Through time, this wealth group will move into livestock marketing activities, in addition to production. With expanded export trade, this trend is likely to accelerate until ranches become unavailable for lease, prompting the wealthy group to expand this concept into pastoral production areas, with their own boreholes or water dams. As herd accumulation by the wealthy group, traders, and investors intensifies, poor pastoral groups and ex-pastoralists are most likely to work as hired herders and errand boys for these groups, rather than keeping their own stocks. They may as well derive most of their income from such activities than from their stocks.

New trends are also emerging following the sourcing of live cattle and small ruminants for exports from Borana in the last eight years or so. Pastoral dropouts and poorer pastoral groups living close to market centers (and in particular to the new market yards) are engaged in financially rewarding activities as middlemen, loaders, and guards (Bekele, 2006). According to one observer, *"… the level of beer consumption has gone up in Borana since the advent of the livestock export business."* Wealthy pastoralists, on the other hand, are increasingly engaged in livestock trade. Those who were supplying cattle to feedlot operators in Nazareth have now set up their own feedlots in these areas, in addition to supplying their clients. Some pastoral groups organized into associations or cooperatives have set up feedlot centers in Finchowa, Negele, and Yabello. New enclosures (*kalos*) are expanding in Borana to accommodate

[18] According to Mahmoud (2006), 14 such ranches were leased by Somali traders in the Coast province, with lease durations varying between one to 30 years. The location of the ranches provides traders with improved veterinary services, good security, access to good pasture and water, and proximity to Mombasa market. The trend in producing quality cattle from the ranches prompted Somali entrepreneurs to set up a new abattoir with a processing capacity of 400 head in an eight-hour shift, in addition to the five abattoirs that serve the population in Mombasa. Ranchers are profiting from value adding in the ranches.

[19] The one exception is a Somali rancher exporting live bulls to Mauritius at the moment.

trade herds for the wealthier groups that have moved into trading, although the enclosures were made possible on the pretext of farming (Bekele, 2006). Exporters who have been unable to acquire land for livestock holding purposes on their own have succeeded through third parties by using local influential men. The largely unused ranches of Did Tiyora and Did Hara, belonging to cooperative societies in Yabello and Negele zones, are likely to be leased to exporters or other wealthy producers on the pretext of making the ranches more productive. This would trigger the expansion of ranches or *kalos* into pastoral main production areas.

As livestock trade activities flourish and wealthy pastoral groups and investors move more into commercial production, both push and pull factors will persuade poor pastoralists to work for the wealthier groups—push factors because of increasing poverty and pull factors due to emerging job opportunities as trade expands. Both in Kenya and Ethiopia, increasing numbers of poor pastoralists will be pulled into the positions of hired herders, trekkers, watchmen, middlemen, and loaders on terms and conditions set by their patrons. Poor groups may still sell small numbers of sheep or goats for the export market, but a high proportion of their cash income will be derived from diversified activities. In an expanded export trade, the poor essentially tag onto the activities of wealthier groups, middlemen, livestock traders, and exporters. Under the prevailing circumstances, the poor are too poor to make any meaningful gains from their own stocks within the current or expanded level of export trade in the Sudan, Ethiopia, and Kenya.

8.3 Alternative approaches: herd growth with a pro-poor focus

Pastoral poverty is not well understood or appreciated by governments, policy makers, donors, development planners, or practitioners. In terms of livestock marketing, the priority for poorer households is to maximize herd growth and only sell livestock to meet basic household needs. Everywhere, these sales are already happening and use existing networks and systems of trading, which don't really benefit much from investments in modern market infrastructure.

Overall, policy support to these poorer pastoralists needs to recognize that a certain level of livestock acquisition has to be reached before these groups start to sell more animals. Furthermore, investments in physical capital are probably better directed at non-livestock investments such as mobile phone networks and secondary roads.

When considering the poor, there is a need to distinguish between those who are still struggling in the system with no viable herd and who complement their income from diverse activities, and those who have exited the system already. Poverty alleviation initiatives for the former group should focus on building their herd size to allow them stay in the system, grow their assets, and benefit from domestic or export trade. The following approaches apply.

8.3.1 Herd growth through loans targeting the poor

As demonstrated in Sudan, poor pastoralists can be bankable in livestock (not in cash) and conventional collaterals can be substituted with flexible systems involving peer group pressure and guarantees by village chiefs, pastoral associations, or cooperatives. The beauty of such an undertaking is that pastoralists need no training on livestock husbandry, unlike small-scale business or livestock marketing loans that often fail short of achieving their objectives because of capacity constraints and business dynamics, among other things. The other advantage of such an initiative is in restoring the dignity of poor pastoralists who are repeatedly humiliated in times of food aid distribution, as loan repayments build self-confidence. Of note, poor pastoralists should be entitled to access loans for livestock as other citizens, such as farmers do for seeds, fertilizer, farm implements, or other inputs.

Indirect evidence of the impact of herd growth strategies on pastoral livelihoods is provided by restocking programs, implemented either post-drought or to assist rehabilitation of returnees or internally displaced people in pastoral areas. When designed and implemented well, these programs show good results in terms of herd growth and households returning to a pastoral way of life. Key elements of program design included discussion with pastoralists to identify

minimum herd size and composition and selection of households who wished to return to pastoralism as their main livelihood.[20] For example, SC UK used restocking to assist the return of 500 households to pastoralism in Fik zone in the Somali Region of Ethiopia. An evaluation showed that 75% of restocked households resumed a pastoral lifestyle 18 months after the end of the project (Wekesa, 2005).

However, livestock gifts or loans should not be extended to those who have exited the system already. People in this group, through no fault of their own, have sometimes moved away psychologically from pastoral livelihood systems. They have settled close to food distribution centers and major settlements along main roads and are now used to other types of wage employment. A few of these individuals may have succeeded in life by chance, through courage or desperate measures or business acumen, compared to their previous status, but most are trapped in a poverty cycle. This group requires diversified income sources along the lines of the "good" diversification proposed by Little (2009) through skills building (carpentry, masonry, and artisanship), value adding (fattening, local level milk processing, preservation of hides and skins), gum arabic collection, trading (consumer commodities, livestock feed, grain), serving as community-based livestock health workers, and construction of pens, shades, holding grounds, and watering points for use by trader herds for a fee. Interventions of this nature should be preceded by a thorough assessment of opportunities and potential resources that are available in a given geographical area to let such people earn a living from diversified livelihoods and minimize competition amongst each other. For example, honey is one of the most available, but often neglected, products in the pastoral areas of Sudan, Ethiopia, and Kenya. Refining and packing honey is a simple process that could bring added value if sold in major towns through marketing support to such groups. Low-cost interventions such as this one could make a big difference in the lives of people entrapped in perpetual poverty.

8.3.2 Preventing avoidable losses

During normal or "non-drought" periods, an important type of avoidable loss in pastoral herds is livestock disease (e.g., see Figure 2). In general, veterinary services in pastoral areas are still extremely weak, although approaches such as privatized clinical services are gradually expanding. To varying degrees, these involve urban-based private veterinary pharmacies or clinics, owned or managed by degree or diploma holders, who supply more community-based workers (AU/IBAR, 2003). In terms of clear policy support, different countries currently take very different positions on community-based animal health workers (CAHWs), with Ethiopia having supportive legislation and minimum guidelines published by the federal government and Sudan also being supportive through state legislation. In contrast, the most research on these systems has probably been conducted in Kenya, but despite the positive results, national policy does not support CAHW systems. Recent research in Kenya shows marked reductions in mortality in pastoral herds treated by CAHWs, supplied through private pharmacies (Bekele and Akumu, 2009). In general, disease prevention through vaccination is still weak in pastoralist areas in all countries in the region.

8.3.3 Integrating drought cycle management into development strategies

There is a tendency to expect pastoral households to rebound to their former asset levels through food aid responses in spite of recurrent droughts resulting in massive livestock mortalities.[21] As section 7 shows, market-based approaches to drought, such as commercial destocking, far

[20] Making good use of pastoral indigenous knowledge on minimum herd size is crucial to the success of these programs; more details are provided in the Government of Ethiopia guidelines (MoARD, 2008) and LEGS (2009). One main disadvantage of restocking is the high cost per household. It seems likely that cash distributions would reach a larger number of households for a given budget, and allow households to choose how the cash should be used.

[21] In a study undertaken to understand poverty between 2000 to 2002 in Dirib Gumbo (Borana, Kenya), Sagata Marmar (Samburu), Logologo (Ariaal and Rendille), Kargi (Rendille), and North Horr (Gabra) in Kenya, Little et al. (2008) established that the average daily cash income per person was $0.17, average daily consumption $0.20, average daily value of herd reproduction per person $0.29, which adds to a total daily income of $0.66 per person. The average proportion of poor people in these areas earning less than a casual laborer wage rate ($0.64/day) was 50%. These findings are in tandem with the wealth rankings of LIU and SC US for poor pastoral groups.

outweigh food aid in terms of impact, but are not yet widely applied. Commercial destocking can benefit from export markets, but need not depend on such markets. Furthermore, commercial destocking is enabled by facilitating linkages between traders and drought-affected pastoralists, in terms of communication (e.g., mobile phones, site visits facilitated by government and NGOs), and physical access (e.g., roads). Fixed point and "modern" livestock markets in towns have a very limited role to play in drought response.

8.4 Stabilizing the export trade: is it desirable and feasible?

The benefits poor pastoral groups can accrue from direct sales of livestock to the export trade are minimal. In vibrant export markets as in Sudan or the Somali Region of Ethiopia, it is the indirect benefits of the export trade that are more important to poor groups compared with what they earn from own livestock. Similarly, it is the loss of the indirect benefits that significantly affects poor people rather than losses incurred in livestock price reductions in domestic markets whenever bans are imposed. Since the imposition of livestock bans on the Horn of Africa some years ago, various donor-funded programs have aimed to formalize and stabilize the livestock export trade, with emphasis on Somalia and Djibouti. Although we did not review these programs in detail during the study, in general, they were aimed to stabilize trade and used an area-based and technical approach. The programs have been area-based in the sense that there has been limited differential analysis of pastoralism by wealth and, therefore, limited understanding of potential benefits by wealth group. As we discuss in section 2, the potential impacts partly depend on how poverty is defined; section 5 concludes that while the poor may benefit indirectly, the direct benefits are captured by wealthier actors.

The stabilization approach has been largely technical, with much of the effort focused on improving certification systems for exported livestock and related surveillance and laboratory diagnostic support. There has also been a group of programs around managing RVF, including preparedness, detection, and response. The emphasis on technical solutions fits well with a perception of export trade as an activity which is controlled by international standards and technical criteria. However, the technical issues are far from straightforward. For example, what is a technically rational quarantine period for export livestock, and why? Why are diagnostic tests designed for interpretation on a herd basis applied to individual animals, with limited understanding of the validity of the test results? What are the desired quality control procedures for laboratory diagnosis, and who regulates these facilities? Why, from a technical viewpoint, do some countries refuse to accept livestock which have been vaccinated against RVF? And why are the international standards governing the safe trade in livestock and livestock products subject to such varied interpretation by different actors? In addition to these and various other veterinary questions, is the need to take a regional approach to handling outbreaks of transboundary animal diseases such as RVF or foot-and-mouth disease, but no clear regional leadership or coordination on the technical side exists.[22] For example, national RVF preparedness plans remain incoherent from a regional perspective. If these technical, leadership, and coordination issues are as difficult to deal with as indicated here, it seems that any strategy to stabilize trade through a largely technical approach is flawed and, at best, wishful thinking.

An alternative way of looking at the livestock export trade from the Horn is to accept the inherent political and economic drivers of the trade, which will always trump the science (even if the science is good science). The livestock export business is big business and the private sector is able to lobby, negotiate, and influence way beyond the power of the international standards governing livestock trade to do so. Nor should this finding be particularly surprising. Compare these experiences with, for example, the capacity of the beef industry in the USA to influence the United States Department of Agriculture. So what might be done? Although the livestock export trade cannot be completely stabilized, some of the risks can be reduced. If so,

[22] Regional actors include AU/IBAR, the FAO sub-regional office in Ethiopia, the FAO regional emergency office in Nairobi, the FAO Emergency Centre for Transboundary Animal Diseases in Nairobi, and the OIE sub-regional office in Nairobi.

the shocks to pastoral livelihoods caused by livestock bans might become less frequent. Currently missing, or at least not sufficiently emphasized in donor-funded programs, are the issues of trust, relationships, and regional representation of countries in the Horn. Here the two relevant regional economic communities are COMESA and IGAD. At the time of writing this report in mid-2009, COMESA was developing commodity-based certification systems to enable regional and cross-border trade within the COMESA region. For livestock, these systems are progressive and science-based relative to the OIE Code, as they are risk-based and recognize the limitations of approaches based on disease freedom. COMESA is also beginning dialogue with the Gulf Cooperation Council (GCC) on livestock trade issues, and under the Comprehensive Africa Agriculture Development Programme, developing a regional food security policy framework for pastoral areas which emphasizes regional livestock trade. One opportunity may be for IGAD and COMESA to harmonize their policies and strategies on livestock and pastoralism or even develop joint approaches and certainly a common position in terms of engagement with the GCC or other relevant bodies.

9. CONCLUSIONS

If pastoralist areas are considered to be universally poor, then support to livestock export marketing could be justified in terms of benefits being distributed among a homogenous population of poor households. Such benefits might include reliable access to markets and price-related benefits. In theory, a high proportion of households would do well in such a situation, and poverty might decrease. However, the reality is very different in pastoralist areas, with clear diversity in wealth according to livestock assets and different marketing behavior and capacities by wealth group.

In different parts of the Horn of Africa region, certain common trends are evident in pastoralist areas. These trends include commercialization and dynamic responses to market opportunities domestically, regionally, and internationally. There seems to be little doubt that those groups who can respond most actively to changing markets are richer herders (with more animals to sell), various types of traders, and service providers such as financial service providers and transporters. Those who benefit least are poorer herders. Furthermore, if trends in the Horn of Africa follow similar trends to other pastoralist areas of the world, commercialization does not result in more and more households/herds engaging in a growing and lucrative trade, but instead, in the acquisition of even larger herds by wealthier herd owners and the sale of more animals from these herds. This asset redistribution—from small herd owners to large herd owners—results in poorer herders relying more heavily on non-livestock economic activities, working as contract herders, or leaving pastoralist areas altogether. Therefore, rather than reducing poverty in pastoralist areas, a long-term impact of donor support to livestock export markets could be an acceleration of asset shifts from poorer to richer pastoralists. While donors may contest this analysis, there seems to be little evidence that investments in livestock export systems have specifically benefited poorer pastoralists in the Horn of Africa. In contrast, there is evidence that increasing numbers of people in pastoralist areas are becoming destitute.

In the foreseeable future, national policy responses will probably be dominated by the drive to acquire hard currency and therefore, livestock exports will be prioritized over regional or domestic markets. These policies may increase GDP, but the benefits for poorer pastoralists are likely to remain minimal.

REFERENCES

Abdullahi, A.M. (1993). Economic Evaluation of Pastoral production Systems in Africa: An Analysis of Pastoral farming Households in Central Somalia. In: M.P.O. Baumann, J. Janzen, and H.J. Schwartz (eds.), *Pastoral Production in Central Somalia*. Deutsche Gesellschaft fur Technische Zusammenarbeit (GTZ) GmbH, Eschborn, 129-148.

Abebe, D., Cullis, A., Catley, A., Aklilu, Y., Mekonnen, G., and Ghebrechirstos, Y. (2008). Livelihoods impact and benefit-cost estimation of a commercial de-stocking relief intervention in Moyale district, southern Ethiopia. *Disasters, The Journal of Disaster Studies, Policy and Management* 32/2, 167-189.

Aden, A.S., Omar, M.M., Omar, H.M., Högberg, U., Persson, L.A., and Walls, S. (1997). Excess female mortality in rural Somalia – is inequality in the household a risk factor? *Social Science and Medicine* 44(5), 709-715.

Ahrens, J. (1998). Cessation of livestock exports severely affects the pastoralist economy of Somali Region. UNDP Emergency Unit for Ethiopia, Addis Ababa.

Aklilu, Y. (2002). *An Audit of the Livestock Marketing Status in Kenya, Ethiopia and Sudan*. African Union/ Interafrican Bureau for Animal Resources, Nairobi.

Aklilu, Y. (2004). Pastoral livestock marketing groups in Southern Ethiopia: Some preliminary findings. Paper presented at the *Access to Markets Workshop*, CORDAID, 2-3 November 2004, Adama Makonnen Hotel, Nazareth.

Aklilu, Y. (2006). Livestock, Migration and Trade – War Affected Communities, Darfur Early Recovery. UNDP Sudan, Khartoum.

Aklilu, Y. (2008). *Livestock Marketing in Kenya and Ethiopia: A Review of Policies and Practice*. Pastoral Areas Coordination, Analysis and Policy Support Project, Feinstein International Center, Addis Ababa.

Aklilu, Y. and Wekesa, M. (2001). *Livestock and Livelihoods in Emergencies: Lessons Learnt from the 1999-2000 Emergency Response in the Pastoral Sector in Kenya*. Feinstein International Famine Center, Medford, MA.

Al-Najim, (1991). Changes in the species composition of pastoral herds in the Bay region of Somalia. Pastoral Development Network Paper 31b, Overseas Development Institute, London.

AU/IBAR (African Union/Interafrican Bureau for Animal Resources) (2003). Private Veterinary Practice in Pastoralist Areas of Eastern Africa. Report of a regional workshop held in Nakuru, Kenya, 6-9 August 2003. African Union/Interafrican Bureau for Animal Resources, Nairobi.

Barrett, C.B. and Maxwell, D.G. (2005). *Food Aid After Fifty Years: Recasting its role*. Routledge, London and New York.

Barrett, C., Bellemare, M., and Osterloh, S. (2006). Household-level livestock marketing behaviour among northern Kenyan and southern Ethiopian pastoralists. In: J. McPeak and P. Little (eds.), *Pastoral Livestock Marketing in Eastern Africa: Research and Policy Challenges*. Practical Action Publishing, Rugby, 15-38.

Barth, F. (1961). *Nomads of South Persia: The Basseri Tribe of the Khamseh Confederacy*. Little, Brown and Company, Boston.

Bekele, G. (2006). *Pastoralists Livestock Marketing Initiative and Livelihood Changes: A Participatory Impact Assessment in Southern Oromiya*. Feinstein International Center, Tufts University, Addis Ababa.

Bekele, G. and Aklilu, Y. (2008). *Impact Assessment of the New Livestock Markets in Somali, Afar and Oromia Regions*. Feinstein International Center, Tufts University, Addis Ababa.

Bekele, G. and Akumu, J. (2009). *Impact Assessment of the Community Animal Health System in Mandera West, Kenya*. Feinstein International Center, Tufts University, Addis Ababa; CARE International, Nairobi; Save the Children US and VSF Suisse, Nairobi.

Behnke, R.H. (1987). Cattle accumulation and the commercialization of the traditional livestock industry in Botswana. *Agricultural Systems* 24, 1-29.

Bishop, S., Catley, A., and Leyland, T. (2008). Livestock and Livelihoods in Protracted Crisis: The Case of Southern Somalia. In: L. Alinovi, G. Hemrich, and L. Russo (eds.), *Beyond Relief: Food Security in Protracted Crises*. Practical Action Publishing, Rugby.

Buchanan-Smith, M. and Fadul, A. (2008). *Adaptation and Devastation: The Impact of the Conflict on Trade and Markets in Darfur*. Feinstein International Center, Tufts University, Medford MA.

Buchanan-Smith, M. and Jaspers, S. (2007), Conflict, camps and coercion: the ongoing livelihoods crisis in Darfur. Disaster 31(S1), S57-S76.

Catley, A., Leyland, T., and Bishop, S. (2008). Policies, Practice and Participation in Protracted Crises: The Case of Livestock Interventions in South Sudan. In: L. Alinovi, G. Hemrich, and L. Russo (eds.), *Beyond Relief: Food Security in Protracted Crises*. Practical Action Publishing, Rugby.

Catley, A., Abebe, D., Admassu, A., Bekele, G., Bayou, A., Eshete, G., Rufael, T., and Haile, T. (2007). *Livestock off-take and losses in pastoralist herds: a comparison of normal years and drought years*. Feinstein International Center, Tufts University, Addis Ababa.

Coppock, D. (ed.) (1994). *The Borana Plateau of Southern Ethiopia: Synthesis of pastoral research, development and change, 1980-91*. International Livestock Centre for Africa, Addis Ababa.

CSA/EDRI/IFPRI (Central Statistical Agency/Ethiopian Development Research Institute/International Food Policy Research Institute). (2006). *Atlas of the Ethiopian Rural Economy*. CSA, EDRI, and IFPRI, Addis Ababa.

De Waal, A. (1989). *Famine that Kills. Darfur, Sudan 1984-1985*. Clarendon Press, Oxford.

Desta, S. and Coppock, L. (2002). Pastoral System and Small Ruminant Production in the Borana Plateau of Southern Ethiopia. Langston University.

Desta, S., Gebru, G., Tezera, S., and Coppock, L. (2006). Linking pastoralists and exporters in a livestock marketing chain: recent experiences in Ethiopia. In: J. McPeak and P. Little (eds.), *Pastoral Livestock Marketing in Eastern Africa: Research and Policy Challenges*. Practical Action Publishing, Rugby, 109-128.

Devereux, S. (2006). *Vulnerable Livelihoods in Somali Region, Ethiopia*. Research Report 57, Institute of Development Studies, University of Sussex, Brighton.

Evans-Pritchard, E.E. (1940). *The Nuer: A Description of the Modes of Livelihood and Political Institutions of a Nilotic People*. Oxford University Press, New York.

Evans-Pritchard, E.E. (1949). *The Sanusi of Cyrenaica*. Clarendon Press, Oxford.

FDRE (Federal Democratic Republic of Ethiopia) (2002). *Development and Poverty Profile of Ethiopia for 2002*, Ministry of Finance and Economic Development, Addis Ababa.

Herren, U. (1990). The commercial sale of camel milk from pastoral herds in the Mogadishu hinterland, Somalia. Pastoral Development Network Paper 30a, Overseas Development Institute, London.

Hesse, C. and MacGregor, J. (2006). Pastoralism: drylands' invisible asset? Issue Paper no. 142. Drylands Programme, International Institute for Environment and Development, London.

Holt, J. and Lawrence, M. (1991). An End to Isolation. The report of the Ogaden Needs Assessment Study 1991. Save the Children, London.

Hunt, J.A. (1941). *A General Survey of the Somaliland Protectorate 1944-1950*. Crown Agents, London.

Lautze, S., Aklilu, Y., Young, H., Raven-Roberts, A., Kebede, G., and Leanings, J. (2003). *Risk and vulnerability in Ethiopia: learning from the past, preparing for the future*. Feinstein International Famine Center, Medford MA.

LEGS (Livestock Emergency Guidelines and Standards) (2009). Livestock Emergency Guidelines and Standards. Practical Action Publishing, Rugby.

Lewis, I.M. (1961). *A Pastoral Democracy*. Oxford University Press, Oxford.

Little, P.D. (2009). *Income Diversification among Pastoralists: Lessons for Policy Makers*. Policy Brief Number 3, COMESA and Pastoral Areas Coordination, Analysis and Policy Support (PACAPS) Program, Tufts University, Medford, MA.

Little, P.D, Smith, K., Cellarius, B.A., Coppock, D. L., and Barrett, C.B. (2001). Avoiding Disaster: Diversification and Risk Management among East African Herders. *Development and Change* 32(3), 401-433.

Little, P.D., McPeak, J., Barrett, C.B., and Kristjanson, P. (2008). Challenging Orthodoxies: Understanding Poverty in Pastoral Areas of East Africa. *Development and Change* 39(4), 585-609.

LIU (Livelihoods Integration Unit) (2008). Livelihood Profile Oromia Region, Ethiopia, Southern Agro-pastoral Livelihood Zone. Livelihoods Integration Unit, Addis Ababa.

———. (2008). Moyale cattle, camel and shoat pastoral (MCP) livelihood zone.

———. (2008). Borana Guji pastoral (BGP) livelihood zone.

———. (2008). Market isolated cattle and shoats pastoral (MIP) livelihood zone.

———. (2008). Moyale agro-pastoral, labor and cross-border trade (MCB) livelihood zone interventions, Revised First Draft, Ministry of Agriculture, Addis Ababa.

Lotira, R. (2004). *Rebuilding Herds by Reinforcing Gargar/Irb Among the Somali Pastoralists of Kenya: Evaluation of Experimental Restocking Program in Wajir and Mandera Districts of Kenya*. AU/IBAR and Feinstein International Center, Nairobi.

Lybbert, T., Barrett, C., Desta, S., and Coppock, D. (2001). Pastoral Risk and Wealth-Differentiated Herd Accumulation in Southern Ethiopia. USAID, Utah State University, International Livestock Research Institute, and the Rockefeller Foundation.

Mahmoud, S. (2006). Innovations in pastoral livestock marketing: the emergence and the role of Somali cattle traders-cum-ranchers in Kenya. In: J. McPeak and P. Little (eds.), *Pastoral Livestock Marketing in Eastern Africa: Research and Policy Challenges*. Practical Action Publishing, Rugby, 129-144.

Ministry of Livestock Resources (2002). Livestock Statistics for Sudan, Khartoum.

MoARD (Ministry of Agriculture and Rural Development) (2002). National Contingency Plan for Livestock in Drought Affected Areas of Ethiopia. Ministry of Agriculture and Rural Development, Addis Ababa.

MoARD (Ministry of Agriculture and Rural Development) (2008). National Guidelines for Livestock Relief Interventions in Pastoralist Areas of Ethiopia. MoARD, Addis Ababa.

Morton, J. (2006). Pastoralist coping strategies and emergency livestock market intervention. In: J. McPeak and P. Little (eds.), *Pastoral Livestock Marketing in Eastern Africa: Research and Policy Challenges*. Practical Action Publishing, Rugby, 227-246.

Nin Pratt, A., Bonnet, P., Jabbar, M., Ehui, S., and de Haan, C. (2004). Benefits and Costs of Compliance in Sanitary Regulations in Livestock Markets: The Case of Rift Valley Fever in Ethiopia. Paper presented at the 7th Annual Conference on Global Economic Analysis, June 17-19, 2004, Washington D.C.

Reusse, E. (1982). Somalia's nomadic livestock economy: its response to profitable export opportunity. *World Animal Review* 43, 2-11.

Ridgewell, A. and Flintan, F. (2007). Gender and Pastoralism Volume II: Livelihoods and Income Development in Ethiopia. SOS Sahel, Addis Ababa.

Sandford, S. and Habtu, Y. (2000). Emergency Response Interventions in Pastoral Areas of Ethiopia. Department for International Development UK, Addis Ababa.

Scoones, I. and Wolmer, W. (2008). Foot-and-mouth disease and market access: challenges for the beef industry in southern Africa. Institute of Development Studies, University of Sussex, Brighton.

Scoones, I. and Wolmer, W. (2006). Livestock, Disease, Trade and Markets: Policy Choices for Livestock Sector in Africa. Working Paper 269, Institute of Development Studies, University of Sussex, Brighton.

Somaliland Chamber of Commerce (2009). Report on Livestock Exports, Somaliland Chamber of Commerce, Hargeisa.

SC UK (Save the Children UK) (2004), Pastoral Food Economy Profile, North Darfur – Sudan. SC UK, Khartoum.

SC UK (Save the Children UK) (2007). Vulnerability and dependency in four livelihood zones of North Eastern Province, Kenya. SC UK, Nairobi.

Sikana, P.M., Kerven, C. K., and Behnke, R.H. (1993). From subsistence to specialised commodity production: Commercialisation and pastoral dairying in Africa. Pastoral Development Network Paper 34d, Overseas Development Institute. London.

Talle, A. and Abdullahi, A.M. (1993). Labour Resources in Pastoral Production: Some Implications of Increased Trading. In: M.P.O. Baumann, J. Janzen, and H.J. Schwartz (eds.), *Pastoral Production in Central Somalia*. Deutsche Gesellschaft fur Technische Zusammenarbeit (GTZ) GmbH, Eschborn, 113-128.

Teka, T., Azeze, A., and Gebremariam, A. (1999). Cross-Border Livestock Trade and Food Security in the Southern and Southeastern Ethiopia Borderlands. OSSREA Development Research Report Series – no 1. Organization for Social Science Research in Eastern and Southern Africa (OSSREA), Addis Ababa.

Toulmin, C. (1995). Tracking Through Drought: Options for Destocking and Restocking. In: I. Scoones (ed.), *Living With Uncertainty: New Directions in Pastoral Development in Africa*. Intermediate Technology Publications, London.

UN Country Team Ethiopia (2003). 2003 Appeal, Contributions vs. Requirements by Sector. United Nations, Addis Ababa.

UNDP (2006). DJAM-Track 1, Darfur Early Recovery – Livestock, Migration and Trade in War Affected Communities. UNDP, Khartoum.

UNEP (2005). Rapid Environment Assessment at the Kaima, Otash and Bayoun camps. UNEP, Khartoum.

UNEP/OCHA (2004). Rapid Environment Assessment at the Kalma, Otash and Bajoun Camps. Joint UNEP/OCHA Environment Unit.

Wekesa, M. (2005). Terminal evaluation of the restocking/rehabiliation programme for the internally displaced persons in Fik zone of the Somali region of Ethiopia. Addis Ababa, SCUK Ethiopia.

Yemane, B. (2000). The Declining Pastoral Environment, Vulnerability Status and Adaptation Strategy. Ministry of Agriculture, Addis Ababa.

Young, H., Osman, A.M, Abusin, A.M., Asher, M. and Egemi, O. (2009). Livelihoods, Power and Choice: The Vulnerability of the Northern Rizaygat, Darfur, Sudan. Feinstein International Center, Medford, MA.

Young, H., Osman, A., Aklilu, Y., Dale, R., and Badri, B. (2005). Darfur – Livelihoods Under Siege. Feinstein International Center, Medford, MA.

ANNEX 1
Focal points and focus groups

Sudan, 12 to 23 March 2009

Babiker Abdal Shawna, President of El Gedarif Pastoral Union
Dr. Ahmat, Director, Ministry of Livestock Resources, Wad Medhane, El Gezira
Dr. Afaf Maki Ismael, Director General of Animal Health, Om Algorah, El Gezira
Dr. Salih Abden, Assistant Director, Animal Health
Dr. Umistar , Director of Animal Health, Gezira State
Key informant 1, El Gedarif - Dr. Jibril, Director of Animal Resources, El Gedarif state
Key informant 2, El Gedarif - Abdurahman Mohamed Ahmed, Chief of Um Goweid pastoral camp
Key informant 1, Khartoum - Dr. Amar, IGAD/LPI focal point, Sudan
Key informant 2, Khartoum - Dr. Omar Diliani, IGAD/LPI focal point, Sudan
Pastoral focus group 1, El Gedarif - Um Goweid locality,
Pastoral focus groups 2 and 3, El Gedarif - livestock market
Pastoral focus group 1, El Gezira - Om Algorah locality
Pastoral focus group 2, El Gezira
Pastoral Union, El Gedarif
Pastoral Union, El Gezira - Om Algorah locality
Staff of Animal Resources Bank, El Gedarif
Staff of Savings Bank, El Gedarif
Traders focus group 1, Wad Medhane livestock market, El Gezira
Traders/middle men focus group 1, El Gedarif

Kenya, 12 to 23 February 2009

Abbas Mohammed, Chairman of KLMC, Nairobi
Ahmed Worseno, vendor in Garissa market (ex-pastoralist)
CARE ELMT staff, Nairobi
CARE staff, Garissa
Dr. Julia Kinyua, IGAD/LPI focal point, Nairobi
Dr. Rashid, veterinarian, Garissa market
Hussen Elmi, livestock trader, Garissa
Middlemen/traders focus group, Garissa market
Mohammed Musal, livestock trader and live animal exporter (to Mauritius)
Pastoral focus group 1, Garissa market
Pastoral focus group 2, Garissa
Raphael W. Ngera, Business Growth and Development Manager, Equity Bank, Garissa
Shantabak PPG focus group, Shantabak
Worabe PPG focus group, Worabe

Ethiopia, April 2009

Finchowa livestock marketing cooperative
Key informant 1, exporter - Tesfalidet Berhe, meat exporter
Key informant 2, exporter - Ayele
Key informant 3, exporter - Shifere, live animal exporter
Pastoral focus group 1 - Meleb Chamo livestock marketing association
Pastoral focus group 1, Did Hara – Yabello, Borana
Pastoral focus group 2, Teltele, Borana
Tile Medo livestock marketing cooperative
Traders/middlemen focus group 1, Harobake

ANNEX 2

Livestock Export Summary

Sudan

Live animals

Year	Cattle	Goats	Sheep	Camels
2004	750	101,899	1,703,562	132,602
2005	501	109,654	1,271,787	131,156
2006	-	108,706	1,492,291	129,125
2007	3,658	30,290	615,843	85,862
2008	1,198	14,337	610,832	140,757
Destinations	Egypt, UAE, Saudi Arabia, Kuwait, Libya, Qatar, Yemen	Syria, Yemen, Kuwait, Saudi Arabia	Saudi Arabia, Egypt, UAE	Libya, Egypt, UAE, Saudi Arabia, Qatar

Meat (metric tons)

Year	Beef	Goat meat	Mutton	Camel meat
2004	765	217	5571	6
2005	656	27	4702	27
2006	-	7	2264	10
2007	-	12	2131	8
2008	3	1.5	207	0.7
Destinations	Qatar, Saudi Arabia	Qatar, Kuwait, Jordan, Bahrain, Egypt	Qatar, Saudi Arabia, Jordan, UAE, Bahrain	Qatar, Saudi Arabia, Jordan, Bahrain, Kuwait, Oman, UAE

Source: Ministry of Animal Resources

Ethiopia

Year	Live animals[23]		Meat	
	Quantity/heads	Value (thousand USD)	Volume (ton)	Value (million USD)
2004/05	103,905	13,081	3,317	6,335
2005/06	163,375	27,259	7,754	15,598
2006/07	233,925	36,507	7,917	18,448
2007/08	297,644	40,865	5,875	15,471

Source: Customs Authority

Kenya

4,000 bulls to Mauritius in 2008. Other intermittent exports of bulls to Mauritius, beef to South Sudan, and shoat carcasses to Dubai. In 2009, 6000 cattle and 2000 goats were exported to Mauritius.

[23] Aggregate of cattle, camels, and sheep.

Feinstein International Center

Feinstein International Center
Tufts University
200 Boston Ave., Suite 4800
Medford, MA 02155
USA
tel: +1 617.627.3423
fax: +1 617.627.3428
fic.tufts.edu