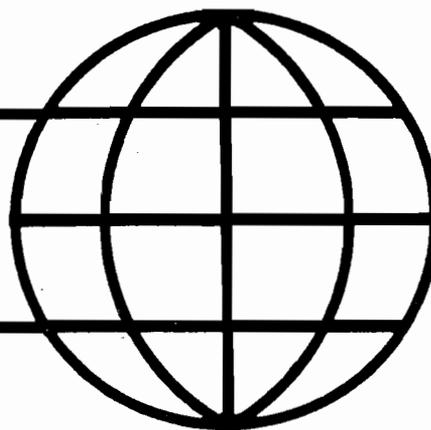


**COOPERATIVE AGREEMENT ON HUMAN SETTLEMENTS  
AND NATURAL RESOURCE SYSTEMS ANALYSIS**

**CROSS-BORDER CATTLE TRADE AND  
FOOD SECURITY IN THE  
KENYA/SOMALIA BORDERLANDS**

Peter D. Little



**Clark University**  
International Development Program  
950 Main Street  
Worcester, MA 01610

**Institute for Development Anthropology**  
Suite 302, P.O. Box 818  
99 Collier Street  
Binghamton, NY 13902

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## SUMMARY

This report is based on field studies carried out in northeastern Kenya during the summer of 1996, and in the neighboring region of southern Somalia during 1986 to 1988. The findings of the follow-up research of 1996 emphasize two important points. The first is that with the collapse of the Somali state and its domestic and export market infrastructure, cross-border trade with neighboring Kenya has grown considerably during the past five years. As a commodity, livestock has features that make it amenable to cross-border trade even in situations of widespread insecurity. It is a mobile and high-value commodity that can be transported overland rather than on roads, and can easily be moved across borders. The livestock market functions relatively well in terms of providing effective price signals and associated supply responses, and in comprising a series of transaction costs and fees that mainly can be explained in market terms. Neither transport (trekking) costs and other marketing costs have increased exorbitantly as a result of the prolonged conflict, and prices in the cross-border trade vary vis-a-vis distances to the main markets in Kenya.

The second set of findings point to the overwhelming importance of the livestock sector to the regional economy and to food security. The report argues that a critical indicator to examine for food security in the region is the terms-of-trade between what herders receive for their products (livestock) and what they must pay to purchase needed grains (mainly maize flour and sorghum). Marketing patterns and incomes from cattle trade provide good indications of the conditions of the pastoral sector and of local food security. Livestock marketing is critical for understanding food security in the region because it is the main source of income to subsidize grain consumption; combined purchases of maize grain and flour account for the largest consumption expenditure for herders in the region.

The report also examines the question of how to treat policy and development in the absence of a state, or in an activity (cross-border commerce) that benefits mainly because of the absence of government controls. It points to four general areas where NGO and/or donor support are warranted: (1) mobile veterinary services; (2) cereal banks and emergency livestock buying programs; (3) support for Kenyan market infrastructure; and (4) the use of livestock market and trader information in early warning systems. Regarding point (4), it is suggested that in the cross-border context livestock markets and networks of traders provide a tremendous opportunity to monitor conditions in pastoral areas like northeastern Kenya/southern Somalia. Because traders are greatly concerned with the condition and prices of livestock and operate in market chains that can span several hundred kilometers, they can relay important information about famine-prone areas that may be difficult and risky to visit.

## Table of Contents

I. Introduction	1
II. Methodology	2
III. The Seasonality and Ecology of Livestock Trade	3
IV. Marketing Structure and Channels	7
V. The Cross-Border Trade	12
VI. Relationships between Livestock Sales, Grain Marketing, and Food Security	26
VII. Social and Economic Characteristics of Livestock Traders and Their Activities	28
VIII. Conclusions and Policy Implications	40

## I. Introduction

This report is based on field studies carried out in northeastern Kenya during the summer of 1996, and in the neighboring region of southern Somalia during 1986 to 1988. The goals of the most recent period of fieldwork were to update the earlier study--which focused on pastoralism, food security, and cross-border trade in the region--by examining the ways in which the region's conflict has affected marketing activities and pastoral food security. The follow-up research of 1996 was motivated by two very basic premises. The first is that with the collapse of the Somali state and its domestic and export market infrastructure cross-border trade with neighboring Kenya is likely to be greater now than in the past. The second set of assumptions are that because of the overwhelming importance of the livestock sector to the regional economy, marketing patterns and incomes from cattle trade should provide good indications of the conditions of the pastoral sector and of local food security. As the report will hopefully demonstrate, both sets of assumptions proved to be surprisingly on target--especially the premise about increased cross-border trade.

The work presented here is inherently comparative in two respects. The first is that it frequently makes temporal comparisons between pre-conflict (pre-1991) and conflict eras (1991-present). The second is that it draws on my other work on livestock trade and pastoralism elsewhere in East Africa. Because of some of the difficulties faced in obtaining either primary or secondary data and because of an overall concern with issues of food security, I include some materials that deal with milk marketing in the Kismayo area, southern Somalia--an excellent economic indicator for food security--and other relevant activities in which I was able to find information comparable to the data set of 1986 to 1988.

The report is divided into eight parts (including the introduction). The second section describes the study's methodology, while the third part (III) discusses the regional ecology and production system of the Kenya/Somalia borderlands. In section four (IV) of the paper, I examine the market structure and channels of livestock trade, indicating some of the changes that have taken place since the late 1980s. The bulk of the survey materials from the recent study (1996) are presented in section (V), and where possible I have presented the data in tabular form, in order to make the information relatively accessible to the reader. Section (VI), in turn, looks at the relationship between marketing and pastoral food security, while in part (VII) I examine the social and economic characteristics of traders themselves and their perceptions about market and other constraints. In the final section (VIII) I address the policy implications of the research and point to areas of marketing and food security that could be enhanced through institutional and/or financial support.

It should be noted that the data presented here have been subjected to "first round" analysis and additional data analysis are expected to be carried out during the next several months. However, based on findings from these analyses I feel confident in saying that despite the devastation brought on by the prolonged conflict in Somalia--especially in the large urban centers and in parts of the two major river basins (the Jubba and Shebelle)--the livestock sector of the Lower Jubba region remains in relatively good shape and at stocking rates probably no less than 80 percent of pre-1991 levels.

## II. Methodology

As noted earlier, the information for this report was collected under two different research projects: (1) a study of herder households and marketing in 1986 to 1988 (prior to the recent civil war) and a study of regional and cross-border trade in the summers of 1996 (and supplemented with some information from the summer of 1995). Much of the earlier data on herder grazing patterns had not been analyzed nor written up prior to this year, in part because the focus of the previous projects had been on livestock marketing and household expenditure patterns (see Little 1992a, 1994, and 1996). Therefore, during the Spring and Summer of 1996 more than two months were spent mapping grazing points; measuring the distances and timing of herd movements; and analyzing the different grazing patterns of cattle, camels, and goats and sheep.<sup>1</sup> Based mainly on prior research with herding groups (Chamus and Pokot of Baringo District, Kenya and the Samburu of Samburu District) of the Rift Valley, Kenya, I found that Somali herders of the Lower Jubba region generally have fared better during recent droughts than have Kenyan herders. Even the civil strife of the past five years has not had a irreversible impact on the region's livestock sector (see Lohr 1995 and EC/FAO 1995), an outcome that many organizations and practitioners would challenge.<sup>2</sup> The reasons for the resiliency of Somali pastoralism--especially in comparison to similar systems of Kenya--are the flexibility/mobility of the system and the relatively favorable access to key grazing and water resources that herders maintain. By contrast, on the Kenyan side access to vital resources is eroding because of the encroachment of alternative land uses (irrigated agriculture, game parks and reserves, and hydropower projects) into dry season water and grazing reserves.

The bulk of the data from the 1996 study derive from a survey of livestock traders operating in the Somalia/Kenya borderlands, especially around the major market town of Garissa, Kenya (about 145 kilometers [km] from the border) (see Appendix A for copy of survey instrument). As was common in 1988, most of the Somali cattle that are currently moved across the border are sold at this market town. In addition to Garissa, traders also were interviewed at the two major urban markets in Nairobi (Dagoretti and Njiru/Dandora) and at three markets around Mombasa, Kenya. Most of the cattle sold in northeastern Kenya are transported and eventually sold in these large urban markets. Unlike the earlier study, interviews were only conducted with traders from southern Somalia and Kenya, and not with herders who also participated in the trade.

Overall I interviewed 69 traders, of whom about two-thirds were involved with cross-border trade and the others with domestic trade in Kenya alone. A relatively large number of traders made frequent buying visits to southern Somalia, even if they claimed Garissa, Kenya as their main resident, and some of these had been engaged in the business for several years. Of the 45 traders that I worked with in Somalia during 1986-1988 I found some information on about 80 percent of them, and even re-interviewed a few who had migrated to Garissa. Only two of the traders had explicitly stopped their business activities because of the regional conflict.

In addition to the formal survey data from traders, additional information was obtained through open-ended interviews with key merchants, representatives of non-governmental organizations and donor agencies, government officials, producers, veterinarians, and other important actors in the border region. Virtually all of the main non-governmental organizations working in southern Somalia/northeastern Kenya were visited during stays in Nairobi.

Considerable use was made of the remarkable amount of secondary data available in Nairobi, especially from the United Nations Development Office for Somalia (UNDOS) and the Famine Early Warning Systems (FEWS) project based in Nairobi, and in Garissa at district and provincial offices.

### III. The Seasonality and Ecology of Livestock Trade

It is important to highlight some of the ecological features of the border region and its livestock resources that figure so prominently in trade. The Lower Jubba Region of southern Somalia straddles the Kenya border and contains the largest number of cattle of any region in the former Somalia, as well as a sizeable number of the country's camels and goats. Available data on regional and national livestock numbers (as of 1987) showed that approximately 25 percent of the national cattle herd or an estimated 860,000 animals were in the region (Janzen 1988; Hubl 1986); 214,000 camels or 3.53 percent of the national herd; 229,000 goats or 1.22 percent of the national herd; and 57,000 sheep or 0.51 percent of national herd. In the late 1980s the region contained one of the largest concentrations of cattle found anywhere in East Africa.

The proportion of sheep, Somalia's leading export commodity in the 1980s, and goats in the Lower Jubba region are relatively insignificant. On the other side of the porous border with Kenya, the prevalence of small stock is higher. For example, livestock numbers in Garissa District, Kenya are an estimated 280,000 cattle, 240,000 goats and sheep, and 60,000 camels (Kenya 1994:35).<sup>3</sup> Relative to the small percentage of the country's total land area (approximately 7 percent of total), the proportion of the national cattle herd in the Lower Jubba and in neighboring Garissa, Kenya is considerable. Recent reports and surveys of the area--as well as my own interviews with livestock traders--indicate that the livestock herds of southern Somalia have not suffered nearly as much from current problems as elsewhere in the country (Lohr 1995). An informed estimate is that livestock herds now are at levels that are only 10 percent below those prior to 1991. An International Committee for the Red Cross (ICRC) report seems to confirm that cattle numbers in the Lower Jubba area remain high. In a 1992/1993 field report their veterinarians reported that they vaccinated and/or treated 197,640 cattle in the Jubba region (ICRC 1992/1993:1).

To comprehend the dynamics of grazing patterns in the Kenya/Somalia borderlands, it is necessary to understand the area's unique geography and ecology. The Lower Jubba Region, at one time an administrative unit of southern Somalia bounded on the east by the Jubba River and the Indian Ocean and on the west by Kenya (see Maps 1 and 2), comprises 35,114 square kilometers of remarkably flat land, more than 90 percent of it classified as rangeland (Resource Management and Research 1984:40). The border district of Garissa, Kenya (contiguous with the Lower Jubba region) has a similar ecology of arid and semi-arid pasture lands that is partially bounded on the west by the Tana River Basin. At the extremes of the border region, therefore, are two important rivers, the Jubba and Tana, representing the only perennial rivers in the region.

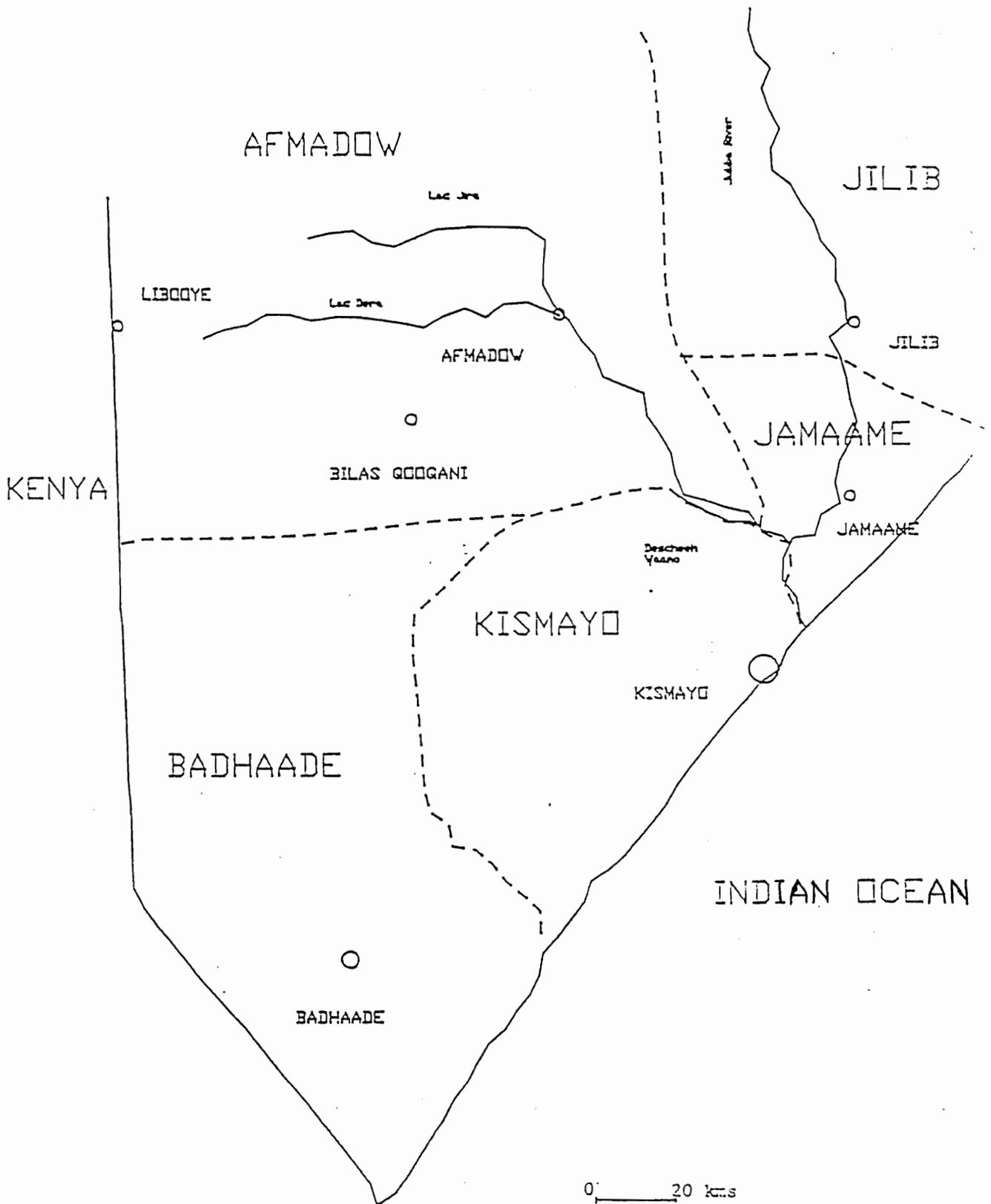
Like other rangelands of Africa, the border region experiences considerable seasonal variation in the availability of fodder, a serious constraint to production and trade during the long dry season (the *jilaal* season). In the river basin areas and along the coast annual average

rainfall can exceed 700 mm/year, but the majority of the region receives between 300 to 450 mm. On the Somalia side an important ecological feature is the Lag Dera basin, composed of a series of meandering seasonal rivers and associated grasslands in central Afmadow District.<sup>4</sup> This basin defines an excellent grazing resource for cattle and covers several hundred square kilometers and is fed by seasonal rivers and streams that at times originate in Kenya. On the Kenyan side the famed Lorian swamp of northeastern Kenya is part of the same water catchment system and during especially heavy rainfall years seasonally flooded runoff from the Lorian can reach the Lag Dera complex. The annual flood of the Lag Dera streams often empties into the Descheeg Waamo, located along its southwest border, which then eventually flows into the Jubba River. According to one report on land use, "The Lac Dera is reputed to flow for 2-3 months [of the year] mostly in the gu' [wet season] collecting local runoff, principally from lands downstream of Afmadow where the annual rainfall exceeds 500 mm" (Hendy 1985:37). The ecology of the Lag Dera complex may also depend on the annual flooding of the Jubba River, whose floodplain is utilized by herders during the wet seasons and in the short dry season. Common vegetation in the Lag Dera and Lag Jira basins include a range of acacia subspecies and such grasses as Cenchrus ciliaris, Chrysopogon plumulosus, and Eragrostis spp (Hendy 1985:42). The Lag Jira basin, located about 30 kilometers north of Lag Dera, also defines excellent wet season grazing and serves as a drainage system for seasonal streams flowing from Kenya.

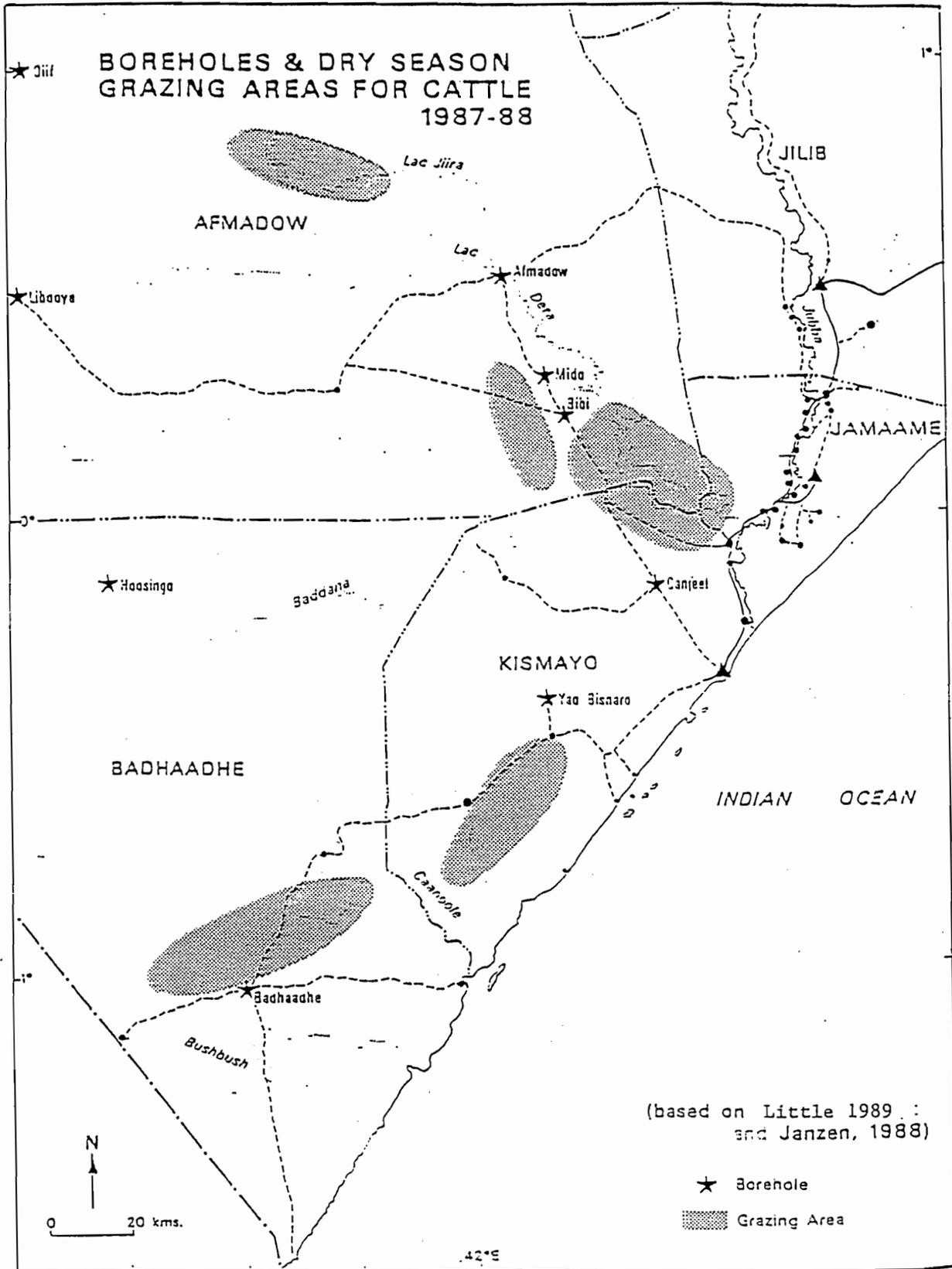
The rangelands of the Lower Jubba are considered among Somalia's finest grazing areas for cattle because of their relatively high annual rainfall—in excess of 500 mm in many locations—and the availability of such seasonally flooded areas as Lag Dera and Lag Jira. The wetlands of the Jubba river zone, however, are more likely than other types of pastures to have good stands of perennial grasses during the dry seasons. The concentration of cattle in the floodplain of the lower Jubba is the highest of any region of Somalia and among the highest in eastern Africa.

Water scarcity and aridity are greatest in the immediate border zone between the two countries and on the Kenyan side between Liboy and Garissa (a distance of about 145 kms). Since Garissa is the main market for cross-border commerce, the cattle trade is (and always has been) highly seasonal. Animals are trekked to Kenyan markets from the Lower Jubba, passing through arid areas where water and pastures are available only seasonally. During annual dry periods—December to March and July to August—the trade stops (or slows down considerably) because of the high probability that cattle will perish en route to Kenyan markets. In the dry months of the pre-war period, the cattle trade was reoriented toward regional (Kismayo town) and national (Mogadishu) markets of Somalia during dry seasons. However, currently the options for selling livestock at reasonable prices in Somalia are so limited, that herders have begun to keep herds near the Kenya border during the dry season to take advantage of market opportunities in Kenya.

MAP 1. THE STUDY REGION, LOWER JUBBA, SOMALIA



MAP 2



The mobility of herders of the Lower Jubba and their capacity to utilize distant pastures outside of their home regions are key reasons why they are more successful than Kenyan herders during droughts. In Baringo, Kenya, for example, Chamus Maasai herders do not normally migrate more than 70 kilometers even during the most severe droughts; while for the Samburu people seasonal herd movements are almost always less than 100 kilometers (Ministry of Agriculture and Livestock Development 1991; Little 1992a). In both cases, accessibility to drought reserve grazing areas is difficult because of the presence of large-scale commercial farms, ranches, and national parks in key dry-season grazing zones. It is not unusual for those groups to lose more than 30 percent of their cattle during a localized drought of short duration. Even among the more nomadic Turkana herders of northern Kenya, who inhabit a considerably harsher environment--where average annual rainfall is below 350 mm in most locations--than the Samburu or Chamus, seasonal migrations are usually less than 75 kilometers (McCabe 1983).

Since the outbreak of armed conflict in southern Somalia, the grazing patterns of 1991 and 1992 seemed to have been the only years that were seriously affected. During these two years, when clashes were widespread in the region and clan alliances were very unstable, some Somali herders moved their animals either to Kenya or to Ethiopia. Since 1993 regional grazing patterns have not been severely impacted, and normal dry and wet season grazing resources are being utilized. This means that there remains considerable seasonal movements of livestock across borders depending on water and grazing conditions. More than 90 percent of traders who work in the border region keep at least some of their herds part of the time in each of the two countries. During 1995 and 1996 herders migrated with their cattle to their normal seasonal grazing resources around Lag Dera, Lag Jira, and Descheeg Waamo (Somalia), although the construction of several permanent water points in central Garissa District, Kenya at the large refugee camps at Dadaab and Hagadera has attracted a large number of cattle and camels to that area (Kenya 1995).

#### **IV. Marketing Structure and Channels**

The war in southern Somalia has had some major impacts on livestock marketing in the region. Prior to the onset of the conflict in 1991 there were four major marketing options for livestock in the Lower Jubba Region: the overseas export market (for camels, cattle, and sheep); the Kenya market (for cattle and camels only); the regional market based mainly on such towns as Kismayo, Jilib, and Jamaame (for all livestock species); and the national market at Mogadishu, the former capital of Somalia (mainly for cattle and camels) (see Table 1). The regional domestic market, concentrated in regional towns like Kismayo, Jamaame, and Jilib. This trade was for local consumption or for the rebuilding of local herds, and involves both low-quality, low-priced cattle and young heifers or bulls (less than 3-4 years). On the consumption side, it was centered around local butcheries and accounted for an estimated 40 percent of cattle sales in the area.<sup>5</sup> The second market was the national domestic market located in Mogadishu, Somalia's largest city; it required the trekking of cattle from the Lower Jubba over a distance of more than 300 kilometers. In the late 1980s the Mogadishu market was growing rapidly, along with the city's population, and cattle prices there tended to be about 20 to 25 percent

higher than in the lower Jubba. The Mogadishu market was the final destination for approximately 16 percent of cattle sold in the region.

The third and fourth market channels in the lower Jubba involved international export trade. In the case of the Kenya market, animals were sold and moved "unofficially" across the border to Kenyan markets, particularly to Garissa. This trade accounted for about 25 percent of cattle sales in the late 1980s, but up to 45 percent in centers of the western Lower Jubba Region (e.g., Liboy, Bilas Qooqani, and Afmadow), and very few sales in such eastern towns as Gelib and Jamaame. Because the trade was not officially sanctioned in the 1980s, its importance was probably understated by traders. It was estimated to include about 20,000 cattle annually from the Lower Jubba region alone (Little 1995; Cassam 1987). Middlemen and traders based in Afmadow, Somalia and Garissa, Kenya were heavily involved in this trade. As noted earlier, this trade is highly seasonal: during the long dry season (January to March) virtually no cattle move from the lower Jubba to northeastern Kenya. The Kenyan trade involved medium-to-high-quality male and female animals, which were used for immediate slaughter; fattening and eventual slaughter in urban centers; and for restocking and breeding purposes on commercial ranches in the Eastern and Rift Valley Provinces of Kenya. At least part of the reason for the growth in cross-border trade in the 1980s was the 1984 drought, which devastated approximately 50 percent of Kenya's national cattle herd. The result was a surge in demand for cattle in Kenya, and the country's herders largely rebuilt their herds through unofficial imports from Tanzania, Ethiopia, and Somalia (Cassam 1987).

The fourth market, the overseas export trade, was very different from the other three channels, and it was the only livestock business in which the largest merchants and companies were involved. In 1988, it accounted for fewer than 8 percent of the cattle sold, but because it involved high-quality animals, this trade was responsible for about 15 percent of the aggregate value of marketed cattle. The overseas export trade entailed the grafting of a modern contractual system of marketing onto a customary pattern of trade. The export traders, who were typically registered members of a company, had contracts with a private importer, usually from a Middle Eastern country, to supply a specified number of animals at an agreed price. They usually did not purchase animals at local market centers but relied instead on their own chain of middlemen and agents for supplies. Export traders often employed some full- or nearly full-time people whose function it was to procure animals. Finally, in contrast to other markets, the overseas commerce was restricted to young male cattle aged four to seven years. Female cattle were not exported, and only the largest males, those that exceeded 275-300 kilograms live weight were purchased. Finally, because of the sheer size of their orders, exporters were forced to procure animals throughout the year and to keep a force of hired herders to manage the animals.

In most years the Lower Jubba Region, via the Kismayo port, accounted for 35 to 40 percent of the country's total overseas exports of cattle and about 20 percent of its camel exports. During 1987 and 1988 unofficial cross-border sales to Kenya exceeded official exports from Kismayo port by a factor of six. With the recent civil war in the country, the advantage has greatly increased, since official exports of livestock virtually have stopped.

**Table 1: Cattle Markets and Prices in 1988, Lower Jubba Region**

(US \$ at 1988 Exchange Rates)

	Overseas <sup>a</sup> Trade	Kenya Trade	Mogadishu Trade	Regional Trade	Other
% of Total Regional Trade	8%	25%	16%	40%	11%
Average Market Price <sup>b</sup>	\$146	\$123	\$112	\$74	\$69

NOTES:

<sup>a</sup> Based on author's data and on information in Stockton (1987).

<sup>b</sup> Average exchange rate during 1987 to 1988 (until February, 1988) is calculated at 130 Somali Shilling=US \$1.00.

Trade in other animal species--such as camels, goats, and sheep--reveals neither the complexity nor the volume that cattle marketing does. It is estimated that the marketed volume of cattle exceeds regional sales of small stock and camels by factors of three and fifteen, respectively (Little 1989). An examination of herd ownership shows why this might be so: average cattle herds in the region are considerably higher, especially in Afmadow District, than those of other livestock types. Average herd sizes per pastoral household of 9 members are 58 cattle, 13 camels, and 7 sheep and goats in the region as a whole; and 75 cattle, 2 camels, and 8 sheep and goats in the Afmadow area alone (Little 1992b). Despite this discrepancy, prior to 1991 some camels and small stock were exported from Kismayo to the Middle East--though it is likely that many of the camels for export originate from the middle and upper Jubba, not the lower Jubba. However, neither animal type were exported from the region to Kenya, and the overseas trade has virtually ceased because of the prolonged conflict. Camel markets are poorly developed in Kenya and therefore relative demand for the animal there is low; while exports of sheep and goats to Kenya are inhibited by high transport costs relative to the market value of the animals and by abundant supply in Kenya. Regional trade in small stock is almost strictly oriented to local markets, especially those in the larger towns. With the collapse of the overseas cattle trade, merchants who were involved at least partially in the trade--local or export--of either small stock or camels were better prepared to confront the market crisis of the 1980s.

Of these four markets only the cross-border Kenyan trade seems to have escaped large - scale devastation. In fact, it seems to have grown considerably as a result of the conflict in neighboring Somalia. The regional domestic market in the Lower Jubba still exists, but herders are increasingly likely to avoid Kismayo market because of conflict. Kismayo is virtually cut off from its livestock-producing hinterland, and traders from the main cattle-producing areas around Afmadow currently avoid the city's market. Much of the reason for this is embedded in clan relations in the area, especially a long-standing tension between the Harti of Kismayo and the surrounding Ogadeen. Relative to prices at the Kenyan and other markets, those at the regional market in Kismayo have declined by more than 30 percent in real terms during the past five years.

With the exception of a few isolated cases, overseas exports from the region have virtually stopped. While in 1988 approximately 25 percent of traders interviewed indicated at least some involvement in overseas export trade, currently less than 4 percent of traders have engaged in any export activities during the past five years. Those merchants who did indicate some involvement export animals from Mombasa, Kenya rather than Kismayo.

In terms of the national market, cattle movements from the Lower Jubba to Mogadishu are at very low levels. This contrasts sharply with the pre-war context when approximately 16 percent of regional cattle sales were destined for the Mogadishu market. At present cattle from Mogadishu are being trekked in the opposite direction. Traders are moving them the 600+ kilometers through the Lower Jubba region to Garissa, where they are then sold. The prices for cattle in the Mogadishu region are low enough that it attracts traders from as far away as Nairobi. Table 2 shows how the actual prices of cattle in Mogadishu (In US \$) have declined relative to 1987-1988 and how its prices now are lower than those of Afmadow and elsewhere in the Lower Jubba (see Table 2).<sup>6</sup> This is drastically different from the pre-war situation when Mogadishu prices were the highest in southern Somalia. The collapse of the domestic cattle

**Table 2: Average Prices of Cattle in Selected Markets: 1987-1988 and 1996**  
(In US \$)

	Mogadishu	Afmadow	B/Qooqani	Liboy
1987-1998 <sup>a</sup>	\$112	\$87	\$72	\$77
1996 <sup>b</sup>	\$97	\$131	\$154	\$155

NOTES:

<sup>a</sup> Based on analysis of monthly market data collected under the USAID/Livestock Marketing and Health Project. The period covered was January 1987 to February 1988, although data were not available for each market every month.

<sup>b</sup> Based on data from interviews with 69 traders. Period covered was March 1996 to July 1996.

trade to Mogadishu again largely reflects internal political problems that have isolated one region from the other, and cities from their regional hinterlands.

Prior to the conflict there were about 4,000 camels exported to the Middle East from Kismayo and there also was a relatively large domestic market for camel consumption in Somalia itself. The Somali market was important enough that it attracted relatively large numbers of camels from Kenya, and they fetched considerably higher prices in Somalia than in Kenya where the domestic market for camels is minimal.<sup>7</sup> However, as a result of the decline in the export trade and regional and national markets in Somalia, the cross-border trade in camels has virtually ceased. What minimal cross-border movement there tends to be are movements of camels from Somalia to Kenyan markets. An important impact of this precipitous decline in camel trade have been deep drops in camel prices relative to prices for cattle. While prior to the war camel prices in Afmadow were about 40 percent higher than cattle prices--and even considerably more than that during the dry season--they are currently about 5 percent less than cattle prices (see data in next section).

## V. The Cross-Border Trade

The increase in cross-border trade with Kenya is reflected in the marketing statistics of the main border district of Garissa, Kenya. From 1991 to 1995 sales of cattle--the main animal marketed--in Garissa have more than doubled, and increased by three-fold since 1989 (Table 3). In 1989 sales of cattle in Garissa were 24,395, while they had increased to 80,795 by 1995. Herders and traders acknowledge that this dramatic increase is a result of the growth in cross-border trade. Recent reports from the area also confirm this trend (United Nations Development Office for Somalia [UNDOS] 1995). The dependence on Somali animals at the market is especially high because Garissa District experienced an approximate 50 percent die-off or sell-off in aggregate herds during the 1992 drought (Kenya 1994).

Garissa is currently the largest cattle market in Kenya outside of the main urban centers (e.g., Nairobi and Mombasa). **In 1995, the last year where there were complete statistics, it generated more than 565,565,000 Kenya Shillings or \$11,311,300 in cattle sales alone.** This figure compares favorably with some of the major tea and coffee-producing districts in the country, although this is not acknowledged in official economic reports--perhaps because cattle represent a minor component of overseas exports. It should be noted that these data include only official sales at the market. Yet, it is known that some unofficial sales occur outside of Garissa town market and that cattle are trekked overland to avoid market taxes and inspection by government veterinarians. Because of restrictions on cattle movements from northeastern Kenya, all animals at the Garissa market need to be inspected at the time of transport and cleared by a veterinarian. They then must be trucked in lorries to final markets at Nairobi or elsewhere rather than trekked on foot, an important point of contention among Kenyan traders.

**Table 3: Cattle Sales in Garissa, Kenya: 1989-1996<sup>a</sup>**

<u>Year</u>	<u>Number</u>	<u>Value (Ksh)</u>
1989	24,395	51,717,400
1990	32,664	84,273,120
1991 (Civil War)	33,449	99,510,775
1992	65,127	162,229,648
1993	67,076	387,162,670
1994	62,351	436,457,000
1995	80,795	565,565,000
1996 (Until 5/96)	24,590	184,425,000

NOTES:

<sup>a</sup> Based on annual reports from Ministry of Agriculture and Livestock Development, Garissa.

Cattle production and trade in the border region spurs commerce (including cross-border commerce) and non-farm business activities in the region. It is estimated that the number of business licenses issued in Garissa town has grown by about 30 percent since 1991, when the volume of cross-border trade doubled approximately. Some traders left the Kismayo area in 1991 at the time of the conflict and later established businesses in Garissa town.

Most of the cattle at the Garissa market are destined for resale to butchers and abattoirs in the Nairobi area. Table 4 shows the destination of animals sold in Garissa during 1995, and reveals the overwhelming significance of the Nairobi market; more than 71 percent of cattle are destined for the Nairobi market. Prior to its closure in 1994, about 35 percent of Garissa cattle were destined for slaughter at the government-owned Kenya Meat Commission (KMC) on the outskirts of Nairobi. Private slaughter houses in the Nairobi region have assumed some of the slack left by its closure, but traders complain that the KMC's absence is especially felt during droughts when volumes of low-quality cattle increase. The KMC was the main facility for handling very large volumes of cattle for processing, an occurrence during droughts. Based on observations and interviews with traders at the Nairobi markets, it is estimated that Garissa cattle **account for about 15 percent of cattle sold at the major markets in Nairobi (as high as 35 percent at Dandora and as low as 5 percent of cattle sold at Dagoretti)**. Estimates from market records show that the Nairobi population consumes about 300,000 cattle per year.

#### **A. Markets and Price Relations**

As would be expected, prices for cattle in Somalia generally increase as one moves toward the border of Kenya, where the most lucrative markets are found. On the Kenyan side, regional prices generally vary vis-a-vis distances to Garissa and, more importantly, to Nairobi and Mombasa. For example, on average cattle prices at Afmadow are about 25 percent below those of Liboy, a settlement on the Kenya/Somalia border (see Table 5). This difference is despite the fact that the latter is a very small town of approximately 2,500 residents, or about 40 percent smaller than Afmadow (see Table 5). As one moves across the border into Kenya, the prices for livestock tend to increase as one approaches the two most important final markets, Nairobi and Mombasa. Even at Garissa, Kenya, which is relatively close to the border, prices for all species of livestock are about 45 percent higher than they are in Afmadow, Somalia, located about 280 kms to the east. These price differences are about 25 percent higher than they were in 1988 prior to the war. At that time average cattle prices in Garissa were only 31 percent higher than they were in Afmadow. The greater price differentials partially reflect the higher risks now involved in moving livestock from Somalia to markets in Kenya. What is surprising is that with the extent of conflict in Somalia price differences between these markets are not higher. Is this indication that the conflict has not affected the cross-border trade as much as might have been assumed?

**Table 4. Destination of Cattle Sold in Garissa, 1995<sup>a</sup>**

<u>Market</u>	<u>Number of Head</u>
Nairobi	29,765
Dagoretti (Nairobi area)	11,695
Dandora (Nairobi area)	15,905
Tana River District (Coast)	2,981
Kilifi (Mombasa area)	9,350
Kitui	1,074
Machakos	<u>195</u>
<b>TOTAL</b>	<b>80,795</b>

NOTES:

<sup>a</sup> Based on annual reports from Ministry of Agriculture and Livestock Development, Garissa.

**Table 5. Cattle Prices at a Sample of Markets, 1996**

Market <sup>b</sup>	Prices (US \$)		
	Quality 1	Quality 2	Quality 3
Mogadishu (Somalia)	\$163	\$99	\$60
Afmadow (Somalia)	\$198	\$128	\$71
Doble (Somalia)	\$205	\$141	\$77
Liboy (Som/Kenya)	\$225	\$163	\$86
Garissa (Kenya)	\$270	\$190	\$115
Nairobi (Kenya)	\$333	\$231	\$156
Mombasa (Kenya)	\$328	\$244	\$168

NOTES:

- <sup>a</sup> Quality 1 = Highest quality animals (Bulls and Steers, 4-7 years)  
Quality 2 = Medium quality animals (Cows, older bulls)  
Quality 3 = Young or very old animals

- <sup>b</sup> Markets are listed in descending order by distance from main final markets of Nairobi and Mombasa. Thus, Mogadishu (Somalia) is furthest from these markets, while Garissa is closest.

Table 5 shows the average prices for different livestock species and quality levels during April to June 1996. The bulk of the cattle sold in Garissa, Nairobi, and Mombasa and were Quality-2 and Quality-3 animals. The cross-border trade, as indicated earlier, involves all types of cattle, but does not involve small ruminants nor large number of camels. Once again, it should be reiterated that the domestic price structure in Somalia has changed drastically with respect to one important market: Mogadishu. The prices of cattle in Mogadishu relative to other markets are considerably below 1988 prices (see Table 2).

Does this mean that traders involved with cross-border trade reap considerably more profits now than they did in the 1980s? Table 6 presents gross markups at different levels in the market chain between Afmadow (a supply area) and Nairobi (a consumption area) during 1987-1988 and 1996. As the data demonstrate, the price discrepancy for cattle between Somalia and Kenya has widened significantly. In 1988 the gross mark-up for medium-quality cattle between the purchase price in Afmadow and the resale price in Garissa was 31 percent, while in 1996 it had increased to 48 percent (see Table 6). The gross margin between Garissa and the final point of sale in Nairobi currently is 22 percent, while it was 36 percent in 1988. These data imply that the market has become more competitive between Garissa and Nairobi--perhaps because of the near completion of a major tarmac road and the associated increase in numbers of traders--and less competitive for Somali producers and traders, which have few viable market options other than the cross-border trade to Kenya. The risk factor associated with the Somali trade may partly explain the large increase in gross market margins between Somalia and Kenya; other explanations relate to the lack of competitiveness in the trade and the higher transaction costs involved with the current trade (including the high costs of security and risks associated with foreign exchange transactions). Thus, the large increase in gross markups do not necessarily equate to equivalent gains in net profits for traders, although profits have understandably increased for merchants in the cross-border trade.

An examination of gross margins in the market chain for high-quality (Quality #1) cattle reveals lower levels of markups between Afmadow (Somalia) and Garissa (Kenya) and about the same margin between Garissa and Nairobi (see Table 7). The lower levels probably reflect an increased demand for high-quality cattle, especially in Kenyan markets, and the greater bargaining power for Somalia-based herders and traders when supplying high-quality animals.

## **B. Transaction Costs**

Unlike the earlier study of cross-border cattle trade, I did not have sufficient time in 1996 to gather detailed net income data for traders. The latter are extremely difficult to collect with any degree of accuracy, and require more than the six weeks that I was able to be in the field during May and June, 1996. However, I did gather some transaction cost data which are indicative of changes in net revenues during the past 8 years.

### **a. Transport**

One of the most significant costs in the cross-border trade involves the transport or movement of cattle. All traders involved with cross-border commerce incur some transport costs, and more than 90 percent of all traders (including those who only work on the Kenya side)

**Table 6. Gross Marketing Margins for Medium-Quality Cattle at Important Points in the Market Chain, 1987-1988 and 1996**

	(In US \$)		
	<u>Afmadow</u>	<u>Garissa</u>	<u>Nairobi</u>
<u>1987-88</u>			
Price	\$128	\$190	\$231
Gross Markup	48%		22%
<u>1996</u>			
Price	\$198	\$270	\$333
Gross Markup	36%		23%

---

**Table 7. Gross Marketing Margins for High-Quality Cattle at Important Points in the Market Chain, 1996**

	(In US \$)		
	<u>Afmadow</u>	<u>Garissa</u>	<u>Nairobi</u>
<u>1996</u>			
Price	\$198	\$270	\$333
Gross Markup	36%		23%

pay for transport services. The mode of transport in the cross-border trade is by trekking on foot. Cattle are moved overland with normally three transporters/herders for every 100 cattle. In some cases it can take several weeks for the animals to be trekked from a distant range area in Somalia to Garissa or to another major marketplace (see Table 8). On the Kenyan side of the trade cattle are trekked to Garissa market and then trucked by motor vehicle (a government requirement) to markets down-country in Nairobi, or taken by foot to Garsen (distance of about 140 km from Garissa) and then trucked from there by vehicle to Mombasa.

Table 8 indicates transport costs on a per animal basis from different places in the market chain. Different marketplaces are listed in order of their distance from Garissa and Nairobi, and whether or not they are in Somalia or Kenya. With the exceptions of Mogadishu, where the transport costs are estimated from Mogadishu to Afmadow (a distance of about 600 kilometers), and of Garissa, where transport costs are estimated from Garissa to Nairobi (about 520 kilometers), costs and distances are calculated vis-a-vis movements to Garissa. Estimated length of time for travel also are provided for each market-to-market trek.

Table 8 shows that transport costs per animal approximately correspond to distance to market, although especially high-risk areas, such as Baidoa, have particularly high transport costs. What is interesting to note is that for the only market (Afmadow) where I have 1988 transport data, the transport costs per animal have increased by 78 percent between 1988 and 1996. This increase is above the corresponding growth in cattle prices--54 percent during 1988 to 1996--of the same period. Traders note that security risks are partly responsible for the increased transport cost, but these increases are not as high as might be expected under current conditions.

## **b. Middlemen Fees**

Many of the traders involved in the cross-border cattle trade utilize middlemen based in Somalia, especially from around the town of Afmadow, to procure cattle for them. All the middlemen and traders interviewed were males, although one female livestock trader involved in cross-border commerce was observed. This woman was involved with buying cattle in Mogadishu and reselling them in Garissa. More than 70 percent of traders involved in the cross-border trade utilize Somali-based middlemen. It is common for a Kenyan-based trader to receive price quotes by hand radio from the Somali-based middlemen. On average traders deal with about three different middlemen during the year, and some have been dealing with the same middlemen for more than 5 years.

On the Somali side the role of the middleman is to help the trader procure animals (the supply side) and he will usually charge a fee per animal purchased. By contrast, on the Kenyan side the middlemen help to match the trader with a buyer and often they will negotiate prices for the buyer. In these cases the middlemen always is compensated on a commission basis (on a per animal basis), and will receive a fee both from the buyer and seller. In the larger marketplaces (for example, Nairobi) Somali traders almost always deal with Somali middlemen, rather than rely on others to serve as brokers.

The relationship between trader and middlemen increasingly is based on cash terms only and unlike the 1980s very little credit or other services are provided to middlemen. The reliance on cash only seems to reflect a greater sense of risk associated with the trade and a breakdown

**Table 8. Transport Costs in the Cross-Border Cattle Trade (on a per animal basis), 1996**

<u>Market</u>	<u>Cost per Cattle</u>	<u>Est. Km to Market</u>	<u># Days for Trek</u>
SOMALIA			
Mogadishu <sup>a</sup>	\$3.27	520	20
Baidoa	\$4.59	690	28
Dinsoor	\$4.03	480	20
Afmadow	\$2.98	220	12
	(\$1.67) <sup>b</sup>		
Doble	\$2.03	160	8
KENYA			
Liboy	\$1.88	145	7
Modogashe	\$2.99	140	6
Hulugo	\$1.18	110	5
Garissa	\$14.05 <sup>c</sup>	520	1

NOTES:

<sup>a</sup> This measures transport costs between Mogadishu and Afmadow only. From Afmadow the cattle are then trekked to Garissa.

<sup>b</sup> This represents the transport cost per animal in 1988.

<sup>c</sup> This figure involves trucking to Nairobi in motor vehicles and, thus, it is much higher than the transport costs from all other markets which entail trekking cattle on foot.

in some of the trading relationships that previously were based on forms of trust. Analysis of the results in Table 9 show that about 21 percent of traders still advance credit to their middlemen--especially those based in small markets or in the rural areas ("bush")-- to assist in procuring cattle. By receiving credit the middleman is more closely tied to the trader's activities. Less than 10 percent of traders provide other services to the middlemen, such as food, bonus payments, or help with transport. Sixty-nine percent of traders and middlemen require full cash payment at the time of sale, rather than allowing for partial or scheduled payments. This form of transaction occurs even in cases where the trader may not pay the seller the full price until after the individual has sold the animal. In recent years Somali traders have complained about providing animals to Nairobi-based butchers on credit--that is, allow the butcher to sell the meat before having to pay full price--and not receiving payments (see discussion later in the report).

Prior to the fieldwork in 1996 I would have expected high middlemen fees in Somalia because of the added risks of doing business there. It is perceived that widespread theft would have made very problematic the middleman's responsibility of insuring an animal which is sold has not been stolen. What Table 10 shows, in contrast, is that middlemen fees are actually higher in Kenyan than in Somali markets. If these fees are then compared with those charged in the 1980s, it is apparent that there has not been widespread change with the exception of Bilas Qooqani. While in Afmadow fees grew by about 27 percent between 1988 and 1996, they increased about 100 percent in Bilas Qooqani.

### **c. Input Costs**

In 1988 virtually all traders incurred some expenses during the year for veterinary and other inputs. The prevalence of a tsetse-fly belt in the prime dry-season grazing areas of the Jubba Valley and in parts of Garissa District forced traders to purchase berenil, novidium, or another trypse-related drug. A current debate exists among donors and NGOs (non-governmental organizations) working in the region as to the effectiveness of some of the efforts since 1991 to bring veterinary services to southern Somalia (see EC/FAO 1995; Lohr 1995; UNDOS 1995). Several NGOs have operated small-scale veterinary programs and cross-border programs to increase the availability of veterinary drugs and services. Most traders, however, indicate that they rely on private traders and importers to purchase drugs and they do not see a lack of drugs as a major problem. Yet, income to purchase drugs and the high costs of veterinary inputs is perceived as a problem (discussed later in the report). While I did not collect cost data on veterinary and other input costs (for example, water and fodder), questions were asked to traders about whether or not they purchased a range of different inputs.

**Table 9: Relationships between Traders and Middlemen**

<u>Category</u>	<u>%Yes</u>	<u>%No</u>
Deal with Middlemen in So. Somalia	44	56
Provide Credit to Middlemen	21	79
Full Cash payment after sale	69	31
Trader provides services	9	91

n=69 traders

**Table 10. Middlemen Charges in Different Kenyan and Somali Markets, 1996**

(in US \$)

<u>Market</u>	<u>Per Animal (1996)</u>	<u>Per Animal (1988)</u>
SOMALIA		
Afmadow	1.91	1.50 (est.)
Bilas Qooqani	2.85	1.40 (est.)
Diff	1.79	
Doble	1.27	
SOMALIA AVG.	1.96	
KENYA		
Liboy	1.52	
Hulugo	1.79	
Garsen	2.41	
Garissa	2.07	
Wajir	2.61	
Mombasa	2.68	
Nairobi	2.38	
KENYAN AVG.	2.21	

Table 11 shows the percentage of traders who indicated purchasing different inputs during the past year. The data also indicate whether or not any traders owned their own trucks for transporting animals (only one did). As the table depicts, more than 50 percent of traders indicated that they purchased their own veterinary drugs during a period of 12 months, a percentage that is likely to have been greater in 1988. Yet, it is unclear if the relatively low percentage is due to the unavailability of drugs or to their increased prices. In the late 1980s subsidized veterinary drugs were available in Kenya (although under government control) and in Somalia, and traders bitterly complain about the current cost of these medicines.

Traders purchase water for their herds from motorized boreholes during dry seasons, and when they are trekking cattle long distances to the market. Water points have been rehabilitated in many parts of the Lower Jubba rangelands, and traders frequently pay the cost of fuel to operate the pump, as well as a fee for the borehole operator. However, less than one-third of traders indicated that they had purchased water during the past year, a figure that is well below what it was in 1988 (50 percent or more of traders). As noted earlier, most traders attempt to move cattle across the border during the short or long rainy seasons, when surface water is available at no cost. Nonetheless, some do purchase water at established watering points along the route from Afmadow to Garissa. By contrast, almost no traders purchase fodder, although when the market is slow at Garissa cattle merchants frequently buy fodder to maintain the weight of their animals. Most traders perceive the lack of readily available fodder and holding grounds at markets as important constraints to marketing (discussed in more detail later in the report).

Herders are frequently hired by traders during the year to look after their animals, although many of the smaller merchants rely on their own family labor. Most hired herders are provided with food and a wage of about US \$0.60/day. Those who are involved with the long-distance transport of cattle to market are paid better at a rate of about \$1.75/day; and these trips can take up to several days (see Table 8). As noted earlier, more than 90 percent of traders hire trekkers to transport their cattle to market.

### **A. Supply Areas**

Table 12 shows the main producing areas that supply cattle to important Kenyan markets. Like during the pre-war economy, Somalia remains an important supply area for these markets, with Afmadow assuming an especially prominent role (about 13.3 percent of cattle sold in our sample originated from the Afmadow area). What is noteworthy, however, is the relative lack of cattle from the Kismayo area associated with the cross-border commerce. As indicated earlier, for political and factional reasons Kismayo is poorly integrated with the rest of the Lower Jubba economy and, therefore, cattle rarely move from there to Kenyan markets because they have to transverse large parts of the Jubba hinterlands.

Most traders in the survey sample act as independent merchants and do not work for companies or with other traders. Only 22 percent of traders noted that they collaborated with other traders in their cross-border business operations, while about 3 percent said they worked directly for a livestock marketing company. As was noted earlier, most traders involved with the cross-border trade utilize Somalia-based middlemen.

**Table 11. Use of Livestock-Related Inputs by Traders, 1996**

<u>Item</u>	<u>% Yes</u>	<u>% No</u>
Cattle Dip\Dip Medicine	27.5	72.5
Veterinary Drugs	55.1	44.9
Hiring Herders	57.6	42.4
Fodder	6.7	93.3
Water	31.9	68.1
Own Lorry	1.4	98.6

n=69

**Table 12. Origins of Regional Cattle Sold by Traders at Kenyan Markets (Nairobi, Mombasa, and Garissa), 1996<sup>a</sup>**

(n= 505 cattle sales)

<u>Market</u>	<u>% of Total</u>
<b>SOMALIA</b>	
Afmadow	13.3
Bilas Qooqani	3.8
Baidoa	2.6
Buale	1.8
Berhani	0.6
Diif	2.0
Dinsoor	3.2
Doble	4.2
Kismayo	1.8
Mogadishu	4.0
Other Somali Markets	2.4
<b>KENYA</b>	
Garissa	29.1
Garsen	1.8
Huluqo	2.4
Liboy	7.1
Mandera	1.2
Modagashe	1.2
Shantawa	1.8
Tana River	1.2
Wajir	2.4
Other Kenyan Markets	<u>12.1</u>
<b>TOTAL</b>	100

NOTES:

<sup>a</sup> The results are not reflective of cattle marketing in Kenya generally, since the selection of the trader sample was oriented toward individuals who either worked in northeastern Kenya/Somalia, or who purchased livestock from these areas.

## **VI. Relationships between Livestock Sales, Grain Marketing, and Food Security**

In terms of marketing strategies, herders and traders confront several options at the onset of a drought. It is important to recognize that localized droughts are very common in the border region, forcing herders and traders to adjust their normal grazing patterns every 3 to 4 years. During the past 20 years full-blown regional and/or national droughts have occurred about every eight years, while localized droughts take place about every 3 to 4 years. A localized drought means that at least some parts of the region or nearby accessible locations have experienced at least some rainfall while other sites have not. A regional drought, in turn, means that the long rains (gu season) have completely failed in the entire region; while a national drought means that the long rains have failed throughout the country. During April to July 1996 the long rains of central and northern Garissa District almost completely failed, with most areas receiving than 30 percent of normal rainfall. Fortunately, the early rains of April were quite favorable across the border in Somalia (especially around Lag Jira and Lag Dera) and were above average in the southern portion of Garissa District during the later part of the season, May to June, 1996. Thus, herders and traders in the locally affected zones were able either to move their animals across the border into Somalia or southward toward the coast, although the latter area is in the tsetse fly zone.

During most years if the long rains do not come by early April, herders can either sell some cattle immediately--probably fetching a relatively low price because of the poor condition of stock after the long dry season; dispose of small stock initially to maintain their cattle and camel assets; continue to graze their animals or move them to another grazing area and hope that the rains arrive; and/or make plans to migrate animals to markets in Kenya where livestock prices are higher. Since herders are mainly relying on grain in their diet by the end of the dry season, the price of grain has an important effect on a herder's decision to sell. From observations of droughts in the region during the past 17 years, stress sales of cattle--particularly of productive breeding [cows] animals--usually do not begin to take place in large numbers until about the fourth month after the long rains have failed (and up to 9 months after there has been any effective rain at all).

Why is livestock marketing so critical for understanding food security in the region. The most important reason is that it is the main source of income, which is then used to subsidize grain consumption. In pastoral households of the region combined purchases of maize grain and flour account for the largest consumption expenditure for herders in the region. Similar to prices for grain, livestock prices experience considerable seasonal fluctuations, at times varying as much as 50 to 60 percent in successive months. Animals lose weight during the dry months, and herders, often desperately in need of cash to buy food, flood the market with cattle in poor condition. At such times they sell their animals at the nearest available market center. These factors, coupled with the dry-season slowdown in the border trade to Kenya, result in severe price fluctuations during the year. In 1988 cattle prices in one market center, Afmadow, dropped by as much as 50 percent from the wet to dry season. The same general pattern was displayed in other major market centers. For example, in Garissa town prices for three different qualities of cattle and goats (high quality males, medium quality males and females, and young

small males and females) dropped on average 40 percent between May and July 1996. These monthly and seasonal price fluctuations increase the economic vulnerability of herders, especially the poorer ones, but they also allow for considerable profit-making by those traders who are able to make speculative purchases in the dry season (see Little 1992b).

A critical indicator to examine for food security is the terms-of-trade between what herders receive for their products (livestock) and what they must pay to purchase needed grains (mainly maize flour and sorghum). The terms-of-trade indicator does show strong seasonal changes as well as longer term structural trends. In terms of livestock prices, aggregate real increases from 1988 to 1996 were no more than 35 percent for most livestock species and quality levels. On average in 1988 medium-quality bulls (cattle) were \$104 in Afmadow, while in 1996 they were on average about \$128. Higher increases of about 40 percent were found for "Quality 1" animals during these years, but there is little doubt that with the on-going conflict the loss of alternative markets has greatly affected livestock prices and the terms-of-trade for herders.

What happened to grain prices during this period? Once again, an analysis of market patterns at Afmadow indicate that average prices of maize grain rose more than 100 percent from 1988 to 1994. Average retail prices were \$0.58 per kilogram in 1996, while they were only 0.22 in 1988 (Famine Early Warning System [FEWS] 1996). Despite the periodic presence of large-scale imports of food aid, the terms-of-trade for livestock herders of the Lower Jubba has deteriorated since 1988. The reasons for this are related to the prolonged conflict, which has made herders increasingly dependent on one market outlet, cross-border commerce. The main grain-producing areas of the Lower Jubba also have been badly damaged in the past 5 years and current yields still remain 30 to 40 percent below pre-1991 yields (see FEWS 1995). What this means is that herders of the region now sell a slightly higher proportion of their herds every year to buy comparable amounts of grain. In the Somali case 100 percent increases in grain prices in a single month of widespread conflict have been observed. In 1995-1996 such fluctuations in food prices occurred in Baidoa and Kismayo, two towns that are prone to price "shocks" because of periodic fighting.

A very important indicator of food security in livestock-producing regions, such as southern Somalia, is the price of milk in market towns. The study of 1986 to 1988 collected considerable amounts of information on milk marketing in the Kismayo area (see Little 1994). It showed that rapid increases in milk prices usually corresponded to stress conditions in the pastoral sector (for example, decreased milk yields) and, in some cases, nutritional problems among pastoralists who were heavily dependent on milk for their diet (see Little 1994). Current increases in milk prices in the Kismayo area, however, reflect severe interruptions in the milk marketing chain as a result of conflict, rather than declining pastoral productivity or herd stress. In the past traders procured milk for the Kismayo market from distances of up to 150s kms from town, but the current market catchment covers no more than a 30 km radius around Kismayo. Thus, from October 1995 to April 1996 the price of fresh camel milk in Kismayo has varied between US \$0.33 to 0.67/liter and has averaged about 0.60/liter, which is well above price levels and variability in nearby market towns (FEWS 1996). By contrast, prices for camel milk in Kismayo during 1987 to 1988 averaged about \$0.31/liter and varied no more than 25 percent during those years. These relatively stable prices of 1987 to 1988 occurred at a time when the region experienced a drought and low pastoral productivity and some shortages of milk. In short, unlike past trends in the region, the current high and unstable prices for fresh milk

(camel) in Kismayo are indicative of food security problems in the town (and problems in the rural-urban supply system) rather than stress in the surrounding pastoral areas.

Analyses of price data in Garissa, Kenya during 1993 to 1995 show a more favorable marketing outlook for herders, although large monthly swings are still prevalent. While there are few grain producing areas in northeastern Kenya, important grain-producing zones are located in neighboring regions. Price relations between grain and livestock products in Kenya are more stable than in southern Somalia.

The data in Figures 1 and 2 depict monthly prices in Garissa for livestock (on a per kilogram basis) and a range of food products. The information is presented in Kenya shillings, which fluctuated widely in value during 1993 to 1995. Thus, some of the long-term increases may be more reflective of fluctuations in the value of the Kenya shilling, rather than in seasonal changes in product prices--although the general relationship between grain and livestock prices should not be impacted. The data show the relatively stable prices for grain, in part because of the massive amounts of imported food aid in the area during those years. On the livestock marketing side market quarantines on livestock sales, a common occurrence in Kenya because of fears of Foot and Mouth Disease, can rapidly alter livestock prices which has been the case for northern Kenya (Little 1992a).

The data in Figures 1 and 2 demonstrate that livestock and grain prices tend to be inversely related. When livestock prices drop during the dry season because of weight loss and other factors, grain prices tend to rise because of shortages and increased demand. In the context of a drought the situation for herders is exacerbated even more, as livestock prices fall further vis-a-vis grain prices.

## **VII. Social and Economic Characteristics of Livestock Traders and Their Activities**

As noted in an earlier section, virtually all traders and middlemen involved in long-distance and/or cross-border trade of cattle are male. The vast majority of these are Somali (more than 90 percent), although there are a small number of Wardei and Kamba engaged in the trade, but they usually work with Somali middlemen or other Somali traders.

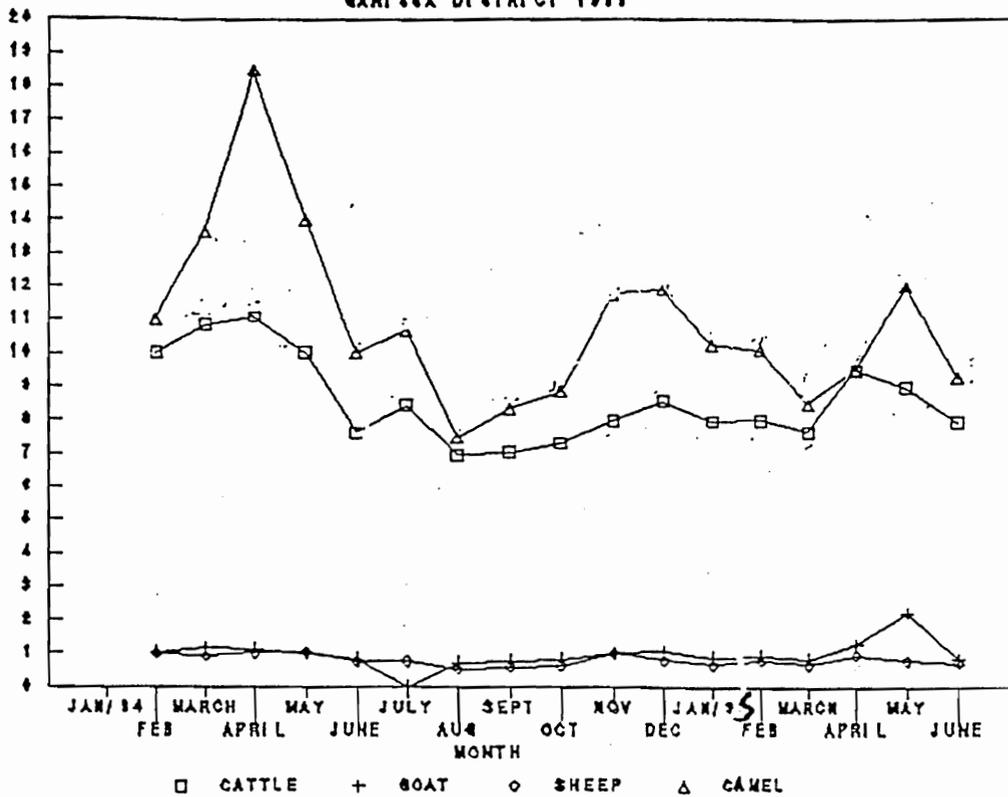
More than 50 percent of the traders in the 1996 survey were based in Garissa, while about 18 percent stayed on the Somali side for much of the year. About 15 percent of the sample based themselves in the main markets around Nairobi or Mombasa. Other traders were based in small market centers in Kenya, including Hola, Liboy, Wajir, Mwingi, and Modogashe.

The boom in cross-border trade since 1991 has resulted in a relatively large number of traders beginning operations within the past five years. While the average number of years that traders in the sample have been involved in livestock trade was 9.47 years (range of 1 to 45 years), a large proportion had started their operations during the past five years. Table 13 shows the breakdown of trading experience of traders in the sample, and reveals that 43.5 percent started since 1991 (and about 40 percent of these started since 1994). The information in the table is not differentiated by those who engage in cross-border trade and those who do not, but the percentage of new traders is higher for those who mainly engage in cross-border trade rather than domestic trade in Kenya. Overall only 31 percent of traders have been engaged in livestock trade for more than 10 years. These figures are different than the data from 1988,

FIGURE 1. Livestock Prices, January 1993 to June 1995, Garissa District, Kenya

LIVESTOCK PRICES (CARCASS ON HOOF)

GARISSA DISTRICT 1995

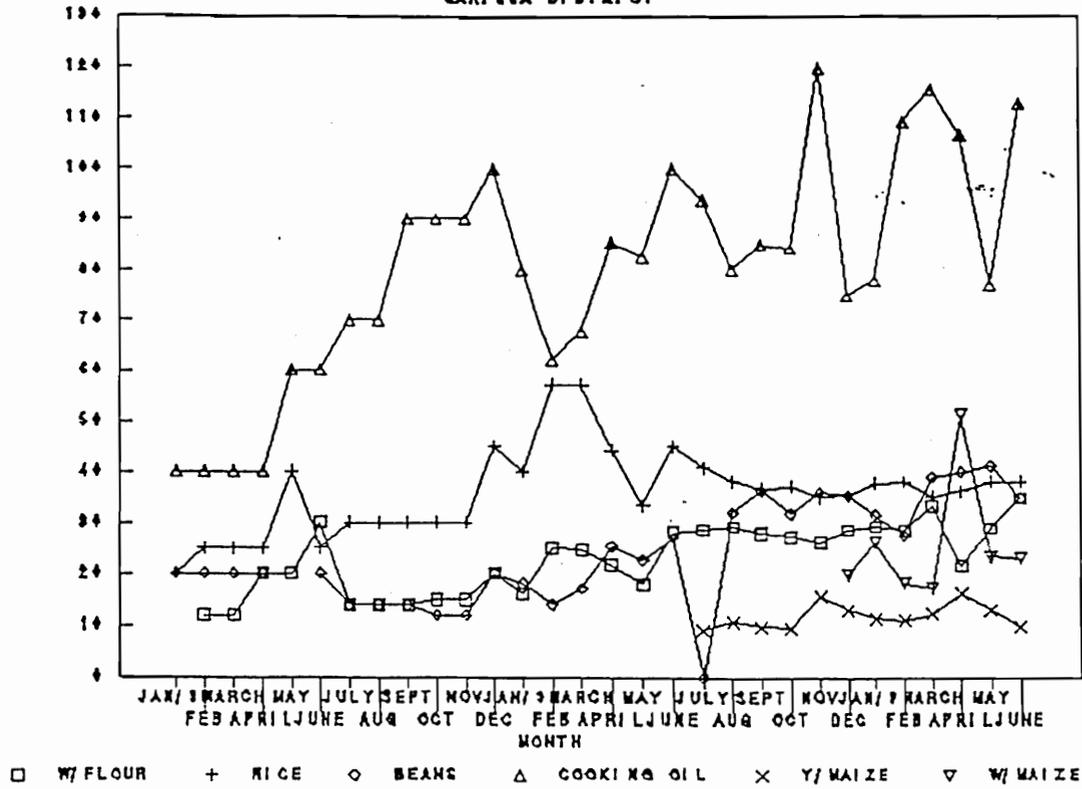


\*From: CARE International 1995:10

FIGURE 2. Food Prices, January 1993 to June 1995, Garissa District

FOOD PRICE JAN' 93 TO JUNE 95

GARISSA DISTRICT



\*From: CARE International 1995:11

**Table 13. Years of Trader Involvement in Livestock Commerce<sup>a</sup>**

<u>Years of Involvement</u>	<u>% of Total</u>
1 to 5	43.5
6 to 10	26.1
11 to 15	10.1
16+	21.3

MEAN: 9.47 YEARS

NOTES:

<sup>a</sup> The data are not differentiated between those traders who engage in cross-border and those who do not. It is likely, however, that the vast majority of traders who have traded for more than 15 years do not engage much in cross-border commerce.

where a large number of traders had been involved with commerce for more than 10 years. Once again, the growth in the cross-border livestock trade--as well as the lack of viable alternative sources of employment--accounts for recent increases in the number of cattle traders.<sup>8</sup>

## **1. Scale and Differentiation in Trading Operations**

There are great differences among livestock traders in the scale of their trading activities, although most of the traders interviewed had larger operations than the general population of traders in the region. This is because traders were only interviewed at the large markets around Nairobi, Mombasa, and Garissa, rather than at smaller centers. This emphasis differs from my earlier study where I was able to interview traders from a range of different market sizes, including very small centers without regular auctions. The present situation in Somalia did not permit me to travel to small market centers in southern Somalia. Nonetheless, there are considerable differences in scale among those traders interviewed and among those who work at different markets. Those merchants who mainly focus on the largest market, Nairobi, and do not engage in much cross-border trade, have considerably larger operations than others. While all traders report annual sales of 943 cattle, traders who sold to Nairobi claimed sales of 1,133 cattle. Once again, both these levels of average sales reflect a sample of relatively large-scale traders, although the variability is considerable.

Table 14 shows the differentiation in scale among all traders, while Table 15 indicates the average annual sales for each percentile group. The latter reveals that the wealthiest percentile group--as measured by reported annual sales--has average sales that are more than seven times higher than the lowest percentile group. For the richest percentile group average annual sales are 1,663 cattle, while it is only 233 for the percentile group with the smallest annual sales. For comparative purposes Table 16 shows sales patterns for those traders who mainly sell directly to Nairobi. A comparison of the data in Table 14 with those in Table 16 show that about 35 percent of the general sample had sales from 1 to 600, while only 20 percent of Nairobi traders were in this category. At the upper scale of trading operations 60 percent of Nairobi traders had annual sales above 901, while in the general population only 45.5 percent of traders achieved this level.

## **2. Diversification and Non-Trading Activities**

The scale of cattle trading reflected in the sample requires a relatively full-time commitment to the business. Nonetheless, traders do engage in non-cattle trading activities. In addition to buying and selling cattle, 33 percent of the sample engaged in some camel trading, while 29 percent of the sample also bought and sold goats. In terms of non-livestock trading activities, Table 17 shows that traders engaged in a range of different investments, with the most common being the (1) ownership of a butchery, (2) a small retail store, and (3) hides and skins trade. Certain of the wealthier individuals are involved in several of these activities. For example, one trader in the sample owns a butchery, a retail store, and a wholesale store.

**Table 14. Annual Sales of Cattle by All Traders, 1996**

<u>Range of Annual Sales</u>	<u>Percentage of Total</u>
1 to 300	16.7
301 to 600	18.1
601 to 900	19.7
901 to 1200	28.8
1200+	<u>16.7</u>
TOTAL	100

Average (Mean): 943  
Standard Deviation: 760

n=69 traders

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**Table 15. Annual Sales of Cattle by Percentile Group, 1996**

<u>Percentile</u>	<u>Average Annual Sales</u>
10	233
20	362
30	481
40	710
50	816
60	1040
70	1184
80	1200
90	1663

Average (mean): 943  
Standard Deviation: 760  
Range (70-4800)

n=69 traders

**Table 16. Annual Sales of Cattle by Traders Who Sell to Nairobi, 1996**

<u>Range of Annual Sales</u>	<u>Percentage of Total</u>
1 to 300	12.0
301 to 600	8.0
601 to 900	16.0
901 to 1200	40.0
1200+	<u>24.0</u>
TOTAL	100

Average (Mean): 1133  
Standard Deviation: 900  
Range: 70-4800

n=25 traders

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**Table 17. Other Activities of Livestock Traders**

<u>Type</u>	<u>% of Total Traders</u>
Butchery	18.8
Retail Store	17.8
Grain Trade	11.6
Hides and Skins Trade	15.9
Wholesale	2.8
Wholesale/ retail store	1.4
Taxi and Retail Store	1.4

n= 69 Traders

What is apparent from interviews with traders is that livestock trade generates the initial capital for investment in these other activities. Some of these ventures, such as the hides and skins trade and the butchery business, closely complement the livestock trade, while others have little to do with livestock. Since a certain number of cattle perish en route on long treks from Somalia, the sale of hides and skins is a way to recoup at least some revenue from herd losses. Grain trade is an activity, where livestock traders often move in and out of depending on market conditions in southern Somalia. Some indicated that they await word as to whether a World Food Programme (WFP) shipment has come to southern Somalia before deciding whether or not to buy grain from Kenya and transport it back to Somalia. It should be noted that small bush "taxis" do operate intermittently between Liboy (the border) and Afmadow and buses and matatus (taxis) between Liboy, Kenya and Garissa, so traders can move small shipments of goods within the border region.

**It should be stressed, however, that levels of cross-border trade in commodities other than livestock has decreased considerably since 1991 because of insecurity.** In particular, since non-livestock items must be transported by vehicles on roads they are very prone to banditry and, therefore, traders and transporters are reluctant to risk large shipments of goods in the cross-border trade. As a result, the "boom" in cross-border cattle trade has not resulted in similar increases in cross-border commerce for other goods, despite the generation of considerable amounts of livestock revenue.

It is not uncommon for Somali traders to use Kenyan shillings earned from cattle sales to purchase trade goods (clothing, tea, and other small consumer goods) for their retail stores in southern Somalia. This form of arbitrage also was very common in the 1980s, when livestock traders used Kenyan shillings to import goods into Somalia or to sell to importers who did the same. With the current liberalization of foreign exchange markets, Somali traders often take their Kenyan shillings to Nairobi to exchange for US dollars. They can then use the dollars to take back to Somalia, where the currency is widely used. Many traders complain about the problems of utilizing the old Somalia currency, which is still a medium of exchange in the region and has a value of SoShilling 6,800 = US \$1 (June 1996, Afmadow). Surprisingly, most traders still transact livestock sales in Somali Shillings, rather than in dollars, and those from Kenya usually buy local currency once they have reached Somalia.

### **3. Perceptions of Constraints and Changes**

Three open-ended questions were asked each trader during the research. These were designed to measure their perceptions of problems and changes that have occurred during the past five years. In the interview process traders were asked to provide any answers that they felt were important, and these were then coded and analyzed. The three questions were:

--List the major problems with current livestock trade in northeastern Kenya;

--List the major differences between current trade and Kenya/Somalia border trade during past 5 years; and

--How has the war in Somalia affected livestock trade in your area?

The summary of the traders' responses to these queries are in Tables 18 to 20, and reveal some interesting patterns. While insecurity definitely is perceived as a major problem, many of the responses also point to general problems with market prices, transport, and competition. In fact, the concerns with insecurity are less than what I would have anticipated, although 1995 to 1996 have been relatively good years in terms of low levels of conflict in the border region. If the survey had been done in 1993 or earlier, the responses in Table 18 likely would have been very different. In terms of the cross-border trade, the traders felt that security had improved considerably since 1993--especially between Afmadow and the border.

The results in Table 18 highlight 4 main categories of constraints. These are in order of importance: (1) Price and marketing problems; (2) Security; (3) Water and grazing shortages; and (4) transportation. Constraints (1) and (4) are issues that are likely to be important for any type of trader survey, and address general trading constraints. The security problem (2), on the other hand, is unique to the current cross-border situation in the region, although this also is a problem in several other border areas of Africa. The lack of transport and infrastructure in southern Somalia are acknowledged as critical problems, as is the Kenyan government requirement that cattle must be trucked from the northeast to Nairobi markets. The latter is noted by merchants to increase transport costs over trekking by a factor of about 3 (see Table 8). The importance devoted to water and grazing shortages in Table 18 probably was influenced by the presence of a localized drought during the research period. Since the Garissa area was very dry during April to June, 1996, the months when most interviews were conducted, respondents likely overemphasized the significance of drought as a marketing constraint. Nonetheless, as stated earlier, water and grazing shortages affect the seasonal nature of the cross-border trade, with very little trade occurring during dry seasons.

Other issues that show up as constraints are the lack of veterinary services (6.5 percent of total responses), of market holding grounds (5.2 percent), and of effective credit (6.5 percent). In terms of the veterinary question herders of southern Somalia, to a large extent, used to rely on Kismayo town for the purchase of veterinary inputs and services. However, with the heightened tension between Kismayo town and its surrounding settlements, few herders currently buy veterinary supplies in Kismayo, or sell livestock there. Instead, they buy their inputs from itinerant traders who reside outside of Kismayo and who move with the nomads to different seasonal water and grazing sites.

For herders who trek their animals 100+ kms to Garissa, they often are forced to sell almost immediately upon arrival since there is no holding ground to utilize while they await a buyer. The rangelands around Garissa, a town of approximately 30,000, are heavily exploited by the local population and, therefore, are unable to provide much relief to pasture-starved herds. In a drought year this becomes an even larger problem and herders are forced to purchase riverain fodder from vendors at relatively high prices. The lack of a holding ground at the Garissa market aids large-scale traders to negotiate favorable prices, since herders and traders who trek animals long distances are unable to negotiate prices for several days when pastures are so scarce.

**Table 18. Problems with Current Livestock Trade**

<u>Category</u>	<u>Percentage of Responses</u>
1. No problem	4.5
2. Price problems/low demand/ marketing system is a problem	17.4
3. Security--cattle rustling/ banditry	15.5
4. Transportation/no trucks/ high transport cost/long trek from Somalia	12.3
5. Animal disease--lack of veterinary drugs	6.5
6. Water shortage/drought/ lack of forage/lack of grass between Liboy and Garissa'	15.5
7. No holding ground/have to buy grass at market/lack of pasture at market	5.2
8. Shortage of animals	3.2
9. High tax/license fee (Kenya)	3.2
10. Pay "tip" to government/ police	1.9
11. No credit/Not paid by Nairobi traders and butchers	6.5
12. Lions on trekking routes	1.3
13. Clanism/tribal hostilities	1.3
14. Need movement permit to transport cattle	1.9
15. Other	<u>3.9</u>
TOTAL	100

n=69 traders

**Table 19. Major Differences during Past 5 Years between Current and Past Cross-Border Trade**

<u>Category</u>	<u>Percentage of Responses</u>
1. No difference/no problem	6.5
2. Increased security problems	9.7
3. No information/Do not know	7.5
4. Livestock trade is good/ increased cattle from somalia/ cattle prices are cheaper now	8.6
5. Big differences	1.1
6. Trade is better now	15.1
7. Trade better before/ cheaper animal prices before	20.4
8. Clan conflict worse now/ clan affects trade more now	1.1
9. Market prices now are not good in Garissa/prices have gone up but profits are down	10.8
10. Less animals now	3.2
11. Somalia traders charge us more now	2.2
12. No government now	1.1
13. Drought has worsened/low prices because of drought/less animals from Somalia because of drought	8.6
14. Other	<u>6.2</u>
TOTAL	100

n=69 traders

**Table 20. Major Effects of Conflict on Livestock Trade**

<u>Category</u>	<u>Percentage of Responses</u>
1. More animals coming from Somalia/high population of livestock at Garissa market	12.6
2. Better prices now/better profits/prices have gone down in Somalia	3.6
3. No transportation system in Somalia/animals die because of long trek/increased transport problems	6.3
4. Security risk/cattle theft	36.0
5. Not much trade with Kismayo now	1.8
6. No effects/no major differences/trade has not been affected by war	11.7
7. Hurt trade for Kenyan traders/increased competition with Somali traders	8.1
8. War has decreased trade/not as many cattle traders/negative effects	3.6
9. Somali animals are in good condition now	2.7
10. Lost best grazing lands because of war--cannot move freely to grazing lands	1.8
11. Clanism has spread/have to trade with own clan	3.6
12. Reduced number of cattle/decreased number of camels coming to Kenya	2.7
13. Market contacts now are not reliable/we lose our animals to middlemen	1.8
14. Other	<u>3.6</u>
TOTAL	100

n=69 traders

Finally, the credit problems indicated in Table 8 relate to the recent difficulties that traders have had in collecting debts from Nairobi butchers. Traders may provide animals to a Nairobi butchery with the expectation that they will be paid in a few days when the meat is sold. A small number of traders indicated that Nairobi butchers have refused to meet their debt obligations and, in some cases, have refused to pay them at all. Traders have learned from this unfavorable experience and now require full payment by butchers at the time of sale.

Table 19 shows that security problems also are indicated as a problem but not the most important issue (9.7 percent of total responses). Most traders are relatively evenly split between those who say trade is better now (15.1 percent) and those who state that it was better in 1991 (20.4 percent). Yet, analysis of the different responses in Table 19 demonstrate that a large number of traders point to positive changes in cross-border trade, such as increased supply and better prices, while some feel that profits have dropped because of increased competition with Somalia-based traders. Once again, traders also point to drought as an important marketing issue, and one that has become more significant in the past five years.

In Table 20 the answers of traders show that increased security problems is the most significant impact of the war (36 percent), followed by the increased numbers of cattle moving from Somalia to Kenyan markets (12.6 percent), and the increased competition and lower profits for Kenyan traders (8.1 percent of total). All of these answers show that conflict has had an impact on commerce, but that its effects on cross-border trade have been less than for other types of trade. About 8 percent of total responses indicate that the conflict has not affected trade, while 6.3 percent emphasize the decline in transport and transport infrastructure as an outcome.

### **VIII. Conclusions and Policy Implications**

Is the cross-border trade in livestock still functioning five years after the start of the conflict in southern Somalia? The report has shown unequivocally that it remains a vibrant commercial activity and that levels of livestock trade actually have increased since 1991. As I have tried to show, much of this increase has resulted from the loss of other markets, both in Somalia and overseas. The livestock market functions relatively well in terms of providing effective price signals and associated supply responses, and in comprising a series of transaction costs and fees that mainly can be explained in market terms. Neither transport (trekking) costs and market fees have increased exorbitantly as a result of the prolonged conflict, and prices vary vis-a-vis distances to the main markets in Kenya. Traders mention insecurity as an important marketing constraints but not to the extent that it discourages them from participating in cross-border commerce. As the report has demonstrated, gross markups in the cattle marketing chain--especially between Somali and Kenyan markets--have grown in the past 8 years, and this may explain why traders are willing to accept moderate to high levels of risk.

As a commodity, livestock have features that make it amenable to cross-border trade even in situations of widespread insecurity. It is a mobile and high-value commodity that can be transported overland rather than on roads, and can easily be moved across borders, a practice that local pastoralists have engaged in since the borders were demarcated during the colonial era. These characteristics are not found in most other commodities in the region, which usually require road transport to be viable.

In terms of food security, the Lower Jubba region (especially the Kismayo area) remains highly vulnerable because of its dependence on food imports and aid. Although conditions in the main cattle-producing areas around Afmadow and elsewhere have not shown significant food problems in the past year or so, that does not mean the situation could not change in a relatively short period of time (2-3 months). Stress sales of productive cows at Kenyan markets were recorded during the past year, but they were mainly from Kenyan herds as a result of the localized drought in the northeast. There is little question that my research covered a period where herd and pastoral conditions were relatively good on the Somalia side. On the Kenyan side grain prices were already climbing and livestock prices plummeting by July 1996, and herders were migrating long distances in search of water and pasture.

The report has only briefly touched on non-pastoral populations of the Lower Jubba region and, of course, those agropastoralists and sedentary farmers (especially the Bantu populations) of the river valley areas have and continue to incur massive suffering and famine. By July 1996 several families from the Jubba Valley and Dinsoor area had migrated to the Kenya border to avoid conflict and hunger. If the focus of this report were on non-pastoral populations of the Lower and Middle Jubba region the conclusions about food security and drought response would have been very different.

How do you treat policy and development in the absence of a state, or in an activity (cross-border) that benefits mainly because of the absence of government controls? These are difficult questions to address under current conditions in the region. The normal response in such cases is to construct a policy scenario that predominantly focuses on the activities of non-governmental organizations (NGOs) and, in some cases, bilateral and multilateral donors. This has predominantly been the case for southern Somalia, where a large interagency coordinating body of NGOs and donor agencies for Somalia relief and development is based in Nairobi. However, government policies in Kenya clearly affect cross-border cattle trade with Somalia, including those related to veterinary services, market infrastructure, and pricing policy. The liberalization of meat prices in Kenya in 1987 may have been responsible for some of the increases in cross-border commerce that occurred during 1987 to 1988 (see Little 1992a).

## **1. Mobile Veterinary Services**

Paraveterinary services and sales of medicines by private traders remain heavily constrained on the Kenyan side. In fact, traders and herders are said to purchase large amounts of veterinary drugs on the unofficial market at considerably lower prices than the government-controlled rates. In Somalia the limited availability of veterinary drugs is at least part of the reason why the livestock sector did not suffer from the war as much as might have been expected. Rinderpest vaccinations and trypanosomiasis-related treatments by NGOs (especially ICRC) in 1992 and 1993 played an important role in insuring that livestock losses were not massive. Currently veterinary drugs are generally available from private traders and occasionally from the few NGOs which still work in the region. While interviews with Somali-based livestock traders indicate that access to veterinary supplies is not a major problem in the Lower Jubba, this is not strictly reflected in the data. As the report has shown, use of veterinary drugs to treat cattle is below levels of 1988. Traders' responses about veterinary

supplies may only reflect relative importance vis-a-vis more pressing concerns about transport and security.

The efforts of several NGOs in support of paraveterinarians and veterinary supplies during the past four years has been beneficial and has allowed herders to graze tsetse-infested areas more easily. At present private traders also are an important source of veterinary supplies, which are imported from neighboring countries. Efforts should be made to continue to support paraveterinary efforts and, in emergency droughts, donors should think of subsidizing prices and supplies. As research elsewhere has shown, during a drought disease often takes a heavier toll on herds, than does the drought itself.

## **2. Cereal Banks and Emergency Livestock Buying Programs**

The sharp rise in grain prices during a prolonged dry season or drought often is a reason why herders are forced to market productive animals at "throw-away" prices. It also is a reason why the terms-of-trade for herders are often so volatile. Community-based cereal banks have been implemented in the Sahel with mixed results, but they still warrant attention, especially if organization and management issues can be effectively addressed. The latter often are the reasons why they have had difficulties in the past. Herders could use cereal banks as another asset to utilize during harsh periods, while at the same time avoiding exorbitant prices during a drought.

Closely related to the above discussion of marketing is the common pattern of selling off large numbers of livestock during a drought, usually at very low prices. Some efforts by NGOs in the region to initiate emergency buying programs, so that herders reap some economic benefits before their animals perish or before they are sold at very low prices. In parts of northern Kenya emergency buying campaigns have been used both to improve conditions of herders as well as to supply a source of protein to refugee and famine victims. Private traders often are used and the purchased livestock is slaughtered, dried, and then sold/distributed to refugee camps. It should be noted that there are about 250,000 refugees living in camps in northern Kenya, as well as several refugee communities in Kismayo town and other parts of southern Somalia. On the Somalia side the security situation is still probably too difficult for such a program to be implemented except in isolated areas.

## **3. Kenyan Market Policy and Marketing Infrastructure**

As the report has shown, the livestock trade of the Lower Jubba region is much better integrated with Kenyan markets, than it is with other regions of Somalia. For this reason it is virtually impossible to discuss cross-border trade without attention to Kenyan policy and market infrastructure. The lack of infrastructure throughout northeastern Kenya discourages trade, as well investment in livestock-related industries, such as abattoirs. The latter type of investment is increasingly feasible for the border area, because of the near completion of the tarmac road between Garissa and Nairobi, and would also draw considerable numbers of cattle from southern Somalia. Such a facility could also serve as a buyer of livestock during emergency periods, a similar function to what the now-defunct Kenya Meat Commission used to assume. Outside of the main cities of Nairobi and Mombasa, Garissa is the largest cattle market in the country, but

it is hampered by the lack of any market infrastructure--including holding grounds and watering points. For herders who trek their animals 100+ kms to Garissa, they often are forced to sell immediately since there is no holding ground there to utilize while they await a buyer. During a drought this becomes an even larger problem and herders are forced to purchase fodder from vendors at relatively high prices.

#### **4. Livestock Market and Trader Information in Early Warning Systems**

Considerable effort and resources have been expended in Africa on early warning systems for food insecurity and famine, and they often combine aerial (for example, LANDSAT) and ground-level methodologies (producer surveys and market prices) for detecting trends (see Buchanan-Smith and Davies 1995; Save the Children 1994). In the cross-border context livestock markets--and in particular networks of traders--provide a tremendous opportunity to monitor conditions in pastoral areas like northeastern Kenya/southern Somalia and, unlike other methodologies that work at the producer or household level, they do not require costly data collection. While market prices are usually gathered in early warning systems, including the FEWS approach, little systematic use is made of the networks of livestock traders and middlemen that operate out of these markets. Nor is systematic recording of what types of animals (especially of productive cows) are being sold is carried out. Because they are greatly concerned with the condition and prices of livestock and operate in market chains that can span several hundred kilometers, livestock traders can relay important information about famine-prone areas that may be difficult and risky to visit.

In the Kenya/Somalia borderlands monthly visits to the Nairobi and Garissa markets would yield considerable information about food security in the Lower Jubba region and in other important supply areas of southern Somalia. Markets are held regularly in these locations and unless there was a drought there would be no need to visit them more frequently than once per month. An advantage of these livestock markets is that cattle are grouped by where they originated and so it is easy to identify traders and herders involved in the cross-border commerce. A 1-2 page sheet could be filled out for a small sample of about 15 traders during each visit. It would focus on prices; types and conditions of animals being bought and sold; locations where animals are currently coming from (and their prices); perceptions of current constraints and trends; and prices for other commodities (especially grain) in particular locations. In addition to interviews with traders, a trained enumerator could observe market activity, estimate numbers and types of animals being sold, and the general condition of animals and talk with market officials and, possibly veterinarians, and then record these observations and comments. A scale for the condition of cattle (from 1: very poor to 4: very good) based on a combination of weight and appearance could be used and, again, traders are excellent informants here. They often are able to estimate weights of cattle with amazing accuracy.

In sum, the cross-border commerce has clearly reaped profits for certain traders, but it also has provided the only reliable outlet for producers in southern Somalia. While specific to the ethnic Somali areas of northeastern Kenya and southern Somalia, the report has pointed to some methods and processes that are likely to be found in many other border regions of the Horn of Africa. If one accepts the premise that greater access to income and markets is the most effective to combat food insecurity and poverty, then cross-border cattle trade has a critical

role to play in the region. The report reiterates what is commonly accepted by pastoral practitioners; that is, external parties must be willing to rethink orthodox development strategies, in order to support the flexibility and mobility of pastoral economies in virtually every type of program, from veterinary to marketing to extension activities.

## NOTES:

1. This work was done with the assistance of Gregg Goldstein. His efforts on the project are gratefully appreciated.
2. For example, one local NGO, the United Somali Sahil Professional's Association (UNISOPA), estimated that the Lower Jubba area lost about 2/3 of its cattle since 1991 as a result of drought, war, and disease (UNISOPA 1993:2). I would strongly question these figures, as would others (see Lohr 1995).
3. These census numbers are probably considerably higher now, since they are from 1992, a year in which about 50 percent of the region's herds were lost as a result of drought.
4. As used in this paper, the important seasonal grazing area, the Jira plains, is included in the Lag Dera complex.
5. This figure includes purchases by local herders to replenish their own herds. Because many of these cattle are eventually sold at other markets, the data on regional markets frequently do not capture final sales. The percentages noted here and for other markets discussed in this section are derived from interviews with traders and from a sample of more than 800 cattle sales at four major markets--Afmadow, Kismayo, Bilas Qooqani, and Libooye--during February 1987 to February 1988. For each transaction, the buyer was asked to identify the market destination of the animal. While I carried out the analysis of these data, much of the information at the market centers was gathered by the Livestock Marketing and Health Project, Mogadishu.
6. I have tried to use the cattle prices recorded by NGOs working in the Mogadishu area, but have found them for the most part unreliable. Instead, I have relied on price data from traders who actually procure animals from the Mogadishu area. At the Garissa, Kenya market the Mogadishu cattle are evident and are referred to as the "red" cattle because of their hide color.
7. It should be noted that while the market for camels remains very small in Kenya, it has grown during the past five years and now about 2,500 camels annually are being exported from Mombasa. There now are market and slaughter facilities for camels in the Nairobi region.
8. It also is possible that there is significant turnover in traders involved with cross-border trade, but I was unable to gather this information since I focused only on currently active traders.

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APPENDIX A  
QUESTIONNAIRE

Kenya/Somalia Cross-Border Study  
May-June 1996

GUIDELINES FOR INTERVIEWS WITH LIVESTOCK TRADERS

DATE of Interview:

1. NAME OF TRADER AND HIS RESIDENCE:
  
2. NAME OF COMPANY AND ITS LOCATION:
  
3. AFFILIATION WITH OTHER TRADING COMPANIES OR TRADER ASSOCIATIONS:
  
4. HOW MANY YEARS HAVE YOU BEEN INVOLVED IN LIVESTOCK TRADE:
  
5. LIST LOCATIONS WHERE HE BOUGHT ANIMALS IN THE PAST TWELVE MONTHS (IN ORDER OF IMPORTANCE):

LOCATION

TYPE OF ANIMALS

PRICES

SEASONS/MONTHS OF THE YEAR THAT HE PURCHASES:

6. LIST MARKETS THAT HE SELLS ANIMALS AT:

7. LIST VOLUME OF LIVESTOCK PURCHASES/SALES OVER THE PAST 12 MONTHS (DISTINGUISH BY MARKET AND ANIMAL TYPE)

<u>Number</u>	<u>Animal Type</u>	<u>Price per:</u>	<u>Month</u>
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8. DOES HE BUY ANIMALS FOR EXPORT TRADE (IF SO, FROM WHICH AREAS) :

9. DID HE EXPORT LIVESTOCK FROM KENYA DURING THE PAST 12 MONTHS:

IF YES, SPECIFY:

TYPE OF LIVESTOCK:

COUNTRY EXPORTED:

10. NUMBER OF MIDDLEMEN/AGENTS THAT HE HAS DEALT WITH IN THE PAST 12 MONTHS (DISTINGUISH BY LOCATION AND TYPE OF RELATIONSHIP) :

<u>Number</u>	<u>Location</u>
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11. HOW LONG HAS HE BEEN DEALING WITH SPECIFIC MIDDLEMEN/AGENTS:

12. DO YOU DEAL WITH MIDDLEMEN BASED IN SOUTHERN SOMALIA:

IF YES, SPECIFY:

LOCATION OF MIDDLEMEN:

13. IN THE PAST, HAVE YOU DEALT WITH MIDDLEMEN IN SOUTHERN SOMALIA:

14. LIST METHOD OF PAYMENT/TRANSACTION TO MIDDLEMEN:

--WHEN ARE MIDDLEMEN PAID IN FULL( IE., AFTER EXPORT)

--DOES TRADER PROVIDE CREDIT/FUNDS FOR MIDDLEMEN TO PROCURE ANIMALS  
IF YES, EXPLAIN:

--DOES TRADER PROVIDE OTHER SERVICES/MATERIALS TO MIDDLEMEN  
IF YES, EXPLAIN:

15. LIST COSTS OF RECENT MARKET PURCHASES/TRANSACTIONS:

--PRICE PAID HERDER (DISTINGUISH BY LOCATION)

--PRICE PAID TO MIDDLEMEN

--FEES CHARGED BY MIDDLEMEN AND/OR BROKER

--COSTS OF VACCINATIONS

--COSTS OF DIPPING

--COSTS OF WATERING

--COSTS OF HIRING HERDERS (INDICATE NUMBER, MONTHLY WAGE AND WHETHER FOOD IS INCLUDED IN PAYMENT, TREKKING COSTS BY LOCATION AND NUMBER OF ANIMALS MOVED)

--TRANSPORT/TREKKING COSTS

FROM: TO:

COST PER ANIMAL:

--COSTS OF FODDER/FEED

16. WHAT OTHER KINDS OF PRODUCTS DO YOU TRADE:

--HIDES AND SKINS (Y/N):

--GRAIN (Y/N):

--OTHER FOODESTUFFS (Y/N):

--OTHER GOODS (Y/N): (SPECIFY)

17. DO YOU OWN LORRY FOR TRANSPORTING LIVESTOCK:

18. DO YOU KEEP HERDS IN NORTHEASTERN KENYA THROUGHOUT THE YEAR:

19. DO YOU OWN ANY BUTCHERIES:

IF YES, SPECIFY LOCATION:

20. LIST THE MAJOR PROBLEMS WITH CURRENT LIVESTOCK TRADE IN NORTHEASTERN KENYA:

21. LIST THE MAJOR DIFFERENCES BETWEEN CURRENT TRADE AND KENYA/SOMALIA BORDER TRADE DURING PAST 5 YEARS:

22. HOW HAS THE WAR IN SOMALIA AFFECTED LIVESTOCK TRADE IN YOUR AREA (EXPLAIN):

OTHER OBSERVATIONS (NOTES):