

Retrospective Assessment of Pastoral Policies in Ethiopia, 1991-2008

Report Number 1 Pastoral Economic Growth and Development Policy Assessment, Ethiopia

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Introduction

Ethiopia has the largest number of domestic livestock in Africa and much of it originates in the country's pastoral zones. These areas contain approximately 30 percent of the national population or 9.3 million cattle, 52 percent or 12.4 million sheep, 45 percent or 8.1 million goats and close to 100 % or 1.8 million camels (Catley 2009:2). Since 1991 when the current government took power from the Derg regime, the country has pursued a number of program and policy initiatives in the country's pastoral areas, especially during the past 10 years. This paper reviews the evolution of these policies, but with special attention to the period since 2000 when government efforts toward pastoral areas and economies took on increased significance. It is mainly based on (1) available documents and literature; (2) interviews with government, non-government organization (NGO), and donor officials and key researchers and private sector actors during visits by the authors in August-September and November 2009; (3) the findings of 12 background notes or papers that were commissioned by the project; and (4) the authors' prior field and policy-relevant experiences in pastoral areas of Ethiopia and other African countries. This paper is meant to complement two other papers--one on pastoral policy options and another on future scenarios for the pastoral economy--that also were written as part of this study.

Information and Data for Pastoral Policy Making

The unavailability of reliable statistical data as well as the lack of an institutional mechanism to systematically collect information on key aspects of the pastoral economy limits the precision of the present discussion of pastoral policy. This section of the paper outlines difficulties of which we are aware, and which we intend to explore further in the course of our investigation and reporting in the two subsequent reports. The country's major data collection agencies, including the Central Statistical Authority (CSA), the National Bank of Ethiopia (NBE), and different units of the Ministry of Agriculture and Rural Development (MoRD), gather and analyze the quality and quantity of critical information on pastoral economies, as they do for domestic crop production. As we will discuss below, there are large gaps in information on pastoral household incomes, poverty rates, trade, and land use in pastoral areas.

Currently, we can identify at least three aspects of information gaps in pastoral areas. ***First, we lack information on production practices and marketing decisions by pastoral producers which can be used to analyze current practices, identify key constraints, and predict how producers will respond to policy initiatives. The consequences are: (a) difficult to estimate the economic performance of a sector if you do not know its size (rather like estimating crop yields with no knowledge of planted area) (b) unreliable statistics obscure the factors which drive changes in livestock population numbers, such as climatic fluctuations.*** If this sector is to improve both due to the direct benefits to producers and to support the role they play in the larger economy, we need better information on production practices, marketing decisions, and linkages of the pastoral sector to the larger economy. According to Aklilu (2002), Ethiopia had used 'a constant figure [for its livestock population] for nearly 30 years before allowing for annual marginal adjustments in the mid-1990s. This recent adjustment showed that the cattle population

officially increased by 5 million head' (Aklilu 2002, Volume I: 2) during the 1990s. If we look only at the period from 1996-2005, cattle numbers for the country as a whole grew from 31.2 to 38.5 million head, an aggregate increase of about 23 percent. In this period the national herd of cattle is estimated to have been highest in 2002 with a figure of 40.6 million head, which reflected the buildup after the 1999-2000 drought (WISP 2006:7). Aggregate increases during 1996-2005 for other domestic livestock species ranged from 16 to 42 percent. Even if we ignore the issue of the accuracy of these estimates, the fact that official estimates before the mid-1990s and even now do not change much on an inter-annual basis is in itself misleading. In a particularly severe two-year drought, such as occurred in the early 1970s, livestock populations in northeast Ethiopia fell by as much as three quarters, based on aerial animal counts conducted after the disaster. Although not as severe, drop-offs of 40-50 percent in cattle numbers occurred in some parts of the country during the 1999-2000 and 2002-2003 droughts. Climatically-induced instability is characteristic of lowland livestock keeping, where droughts are 'normal' and animals build up and decline according to cyclical patterns of rainfall.

Part of the failure to properly understand the population dynamics of livestock herds reflects outdated scientific understandings of what drives herd dynamics in arid and semi-arid rangelands. Recent studies, including some in Ethiopia's rangelands, show how climate—rather than stocking rates—is the driving force behind swings in livestock populations. Yet, Ethiopian policy still is premised on the notion of stable ecosystems and that the key is to compel pastoralists to maintain herd sizes that are consistent with some notion of a "carrying capacity," and that to exceed this level leads to environmental degradation. The private and government ranching schemes in southern and eastern Ethiopia are based on this assumption, which do not reflect current scientific understandings of rangeland ecosystems and herd population dynamics. This issue is explored later in the paper in the section on range management.

A second gap in data relates to trade information. Consequences are: underestimation of the importance of the informal livestock and livestock product trade (both domestic and cross-border) for the national economy, and overestimation of the importance of official livestock exports. In the late 1990s, the percentage contribution of hides and skins to foreign exchange earnings was second in importance only to coffee exports and averaged around 90% of the livestock's total contribution to national GDP. In contrast, the contribution of live animals to foreign exchange earnings was between 2 and 4 %, while the export earnings from meat varied from 4% to 11% of the total from livestock. In sum, the value of the export of a by-product of domestic meat consumption – hides and skins – was apparently about nine times more significant than live animal or meat exports, yet we have little reliable data on the amount of hides and skins coming from pastoral areas (see discussion below). A rough estimate is that about 20 percent of these exports originated either directly or indirectly (i.e., through lowland-highland trade in live animals) from the pastoral areas (see Aklilu 2009).

The following table based on FAO statistics on live animal and meat exports during 1993-2005 provides some indication of how official animal and meat export figures were derived.

Table 1. Live animal and meat exports, 1993-2005

	Cattle(1)	Goats(1)	Sheep(1)	Beef(2)	Goat(2)	Mutton(2)
1993	5,600	0	8,800	0	0	33
1994	2,250	5,293	17,975	15	69	124
1995	25	0	22,800	73	243	259
1996	0	0	4,000	73	243	259
1997	800	0	4,000	15	1,490	312
1998	1,218	1,896	15,515	47	2,302	155
1999	549	1,300	30,704	1	1,818	87
2000	326	160	39,960	0	1,149	13
2001	44	0	15,000	0	222	20
2002	544	0	1,140	8	879	184
2003	2,217	3,080	11,706	0	2,094	1,501
2004	56,658	4,080	53,348	177	2,094	8
2005	267,596	13,636	38,104	-	-	-

Notes: (1) live head, (2) metric tons of meat. Source: FAOSTATS

The extremely low numbers of live animals exported in some years confirm that the FAO figures (provided by the Ethiopian government) take no account of the regional International (cross-border) trade with neighboring countries, which in most years is considerably larger than the volume of official trade reflected in Table 1. It is therefore likely that we have little idea of the actual total contribution of livestock production and livestock exports to the Ethiopian national economy and, if anything, have greatly underestimated their contributions. As noted above, for much of this period, hides and skins – an easily recorded but relatively modest component of the total value of livestock production – are second in importance only to coffee exports. As Aklilu (2009:1) recently points out, not only are there no systematic domestic records for hides and skins from pastoral areas (as well as highland areas), but no accurate data on domestic meat and live animal sales as well. How important would livestock exports, especially regional exports across borders, be if we accurately recorded their true economic contribution? Given current data gaps we cannot answer this question, and more importantly, the government of Ethiopia has not been generating data which would allow it to answer this question.

A third aspect of the gap related to domestic consumption and production.

We identify two particular issues for consideration. One is the use of animals to **meet domestic consumption needs** that is not captured in national statistics.

Consequences are: underestimation of the contribution of pastoralists to Ethiopian food security, both their direct contribution of animal protein and their indirect contribution to the production of calories from grain by the arable sector.

The domestic consumption/production question can be thought as having two components. First, livestock are used to generate consumption for livestock producers in pastoral areas. In five southern Ethiopia sites from 2000-2002 we recorded information on household income generation. Assigning cash values to home-consumed products indicates that on average 49% of total household income is in the form of home produced and consumed milk with another one percent coming from

livestock slaughters.¹ This stands in contrast to 16% from livestock sales. Official figures only recognize the contribution of livestock sales thus missing half of what the pastoral sector produces. Similar findings (for example, Jonathan Davies' work in Afar Region) lead us to stress that the government should recognize the major contributions livestock make in producing food for pastoral producers. Thus, while own-consumption of milk contributes the largest percentage of household income, the activity is not calculated by CSA or statistical departments within the MoRD.

Second, livestock also reproduce, increasing capital stocks over time in a way that also is not captured in official statistics. The value of annual livestock births are nowhere captured in official data. These shortcomings in economic data lead to misleading estimations of poverty and an overemphasis on humanitarian assistance for pastoralists, rather than on positive policies to promote economic growth and capital formation. ***By failing to acknowledge the contribution of breeding, milk and other animal products, it is conservatively estimated that pastoralism's official contribution to Ethiopia's GDP is undervalued by more than 50 percent. A conservative estimation is that pastoralism's contribution to GDP is more in the order of 16 percent rather than the commonly stated figure of 9 percent (see WISP 2006: 18).*** For comparative purposes, one can imagine how undervalued the contribution of smallholder agriculture to Ethiopia's GDP would be if crop sales were the only measure of economic value rather than total income, including the value of crops grown and consumed locally. Similar to pastoral households, most smallholders who grow crops consume the bulk of their production on farm rather than sell it. The comparison is made even more stark when we consider that Aklilu (2009:1) recently pointed out not only are there no systematic domestic records for hides and skins sales from pastoral areas (as well as highland areas), but no accurate data on domestic meat and live animal sales exist as well. Even the marketed contributions of the pastoral sector are not being recorded reliably.

One other way of contrasting the value of pastoral production that may be somewhat surprising to policy makers is to contrast the value of milk production to the value of food aid. As there often is a perception that pastoralists are food aid dependent and in "crisis," we report the following per capita figures for total income for the five southern Ethiopia sites for which income components were reported above. Note that the first half of this period was a drought that gave way to a recovery by the end of the study. Figures are income per person per day expressed in US dollars. Non-marketed commodities and food aid are valued using local market prices.

	Jun-00	Sep-00	Dec-00	Mar-01	Jun-01	Sep-01	Dec-01	Mar-02	Jun-02
Non Food Aid Income	\$0.14	\$0.07	\$0.07	\$0.07	\$0.10	\$0.12	\$0.16	\$0.12	\$0.17
Food Aid Income Equivalent	\$0.03	\$0.03	\$0.02	\$0.01	\$0.00	\$0.01	\$0.00	\$0.00	\$0.00

This indicates that undervaluing home produced and consumed products undervalues the contribution of livestock to the well being of pastoral producers, the

¹ Even in the highlands where urban centers and dairy markets are considerably more developed than in the lowlands, available studies indicate that more than 75% of milk produced there is consumed within the household rather than sold (Francesconi et al. 2010; Stahl et 2006).

value of the pastoral sector to the national economy, and makes pastoral areas appear more food aid dependent than they are. This also leads to a lack of information on what pastoralists do (produce and consume milk) thus making it difficult if not impossible to design programs to improve their well being (such as improving the productivity of milk animals).

The **linkages between highland economic activity and lowland livestock raising** has also been identified as an area where the pastoral sector contributes to the national economy in ways that are under researched and undervalued. Coppock (2004) estimated that 20% of draft animals in the highlands were obtained in the pastoral lowlands. Aklilu's background note draws attention to the value of camels produced in pastoral areas for the salt trade in northwestern Ethiopia. Negatu's background note (2009) also highlights these linkages, and also notes the mutually beneficial exchanges that are possible when livestock graze stubble in harvested fields during dry seasons, maintaining body condition and depositing manure, as well as when highland livestock are entrusted to lowland herders during rainy seasons, avoiding crop damage in the highlands during farming seasons and providing a wage or promise of payment in kind for the lowland herders at the end of the farming season. Perhaps most critically, a variety of studies have indicated that formal live animal and meat exports are critically if not almost exclusively reliant on livestock obtained in pastoral areas. There is also information that indicates that pastoral animals should also be viewed as the major source of livestock for informal cross border trade. As stressed above, the magnitude of this trade can only be estimated as it does not conform to government rules, but estimates reported later in this document indicate that it may be generating almost ten times the revenue of official trade. It also has led to discouragement or neglect of an economic activity that rather than being seized upon as an economic opportunity has been treated as illicit. Taken together, ***we find that there is evidence that a set of gaps in official data leads to a major systematic undervaluation of the economic contribution of pastoralists to the national economy.***

Marketing and Trade

As noted above, livestock raised in pastoral areas are critical to the national livestock economy of Ethiopia both in terms of GDP and export earnings, and have been during 1991-2008. In terms of marketing and trade, there are three main components to the market in Ethiopia that can be identified. Within each of these main components, we identify the subcomponent that is of interest for our analysis of how policy has influenced these markets, with a particular focus on pastoral areas.

- Livestock produced in Ethiopia that will cross a border into a non-neighboring country
 - As chilled meat
 - As live animals.
- Livestock produced in Ethiopia that will cross a border into a neighboring country as live animals
- Livestock produced in Ethiopia for consumption within Ethiopia
 - Born in the lowlands and consumed in the lowlands

- Born in the lowlands before being taken to the highlands for some time before slaughter.

Livestock produced in Ethiopia that will cross a border into a non-neighboring country

Aklilu (2009) in his background note argues that animals in the export sector originate almost exclusively in the pastoral lowlands. He cites data from the SPS-LMM programme in September 2007 that indicates on 180 feedlot centers in the Oromia region, all 20,500 cattle present were sourced in southern or southeastern rangelands. Legese et al state that '[i]n Ethiopia, the pastoralist and agro-pastoralist areas such as Borena, Afar and Somali are considered the traditional source of livestock, supplying 95% of livestock destined for export market' (2008: viii). Therefore, policies that influence international livestock and meat trade have a direct impact on livestock producers in pastoral areas. As a corollary, Ethiopia's participation in international livestock and meat trade relies on pastoral production, and any policies that impact the viability of the pastoral production system will have implications for Ethiopia's participation in international trade. Table 2 gives a broad overview of what Ethiopia currently is exporting; see Table 2)

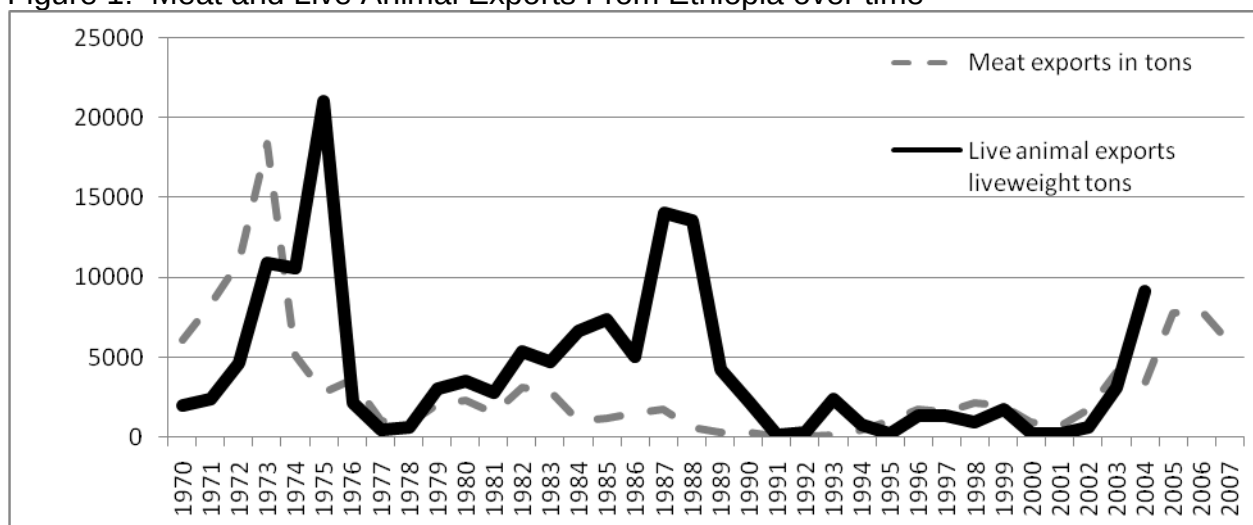
Table 2: Meat and Live Animal Export Destinations from Ethiopia

Destination Country	Meat Exports	Live Animal Exports
Yemen	Mutton, veal, beef, goat	Cattle, sheep, goats
United Arab Emirates	Mutton, veal, goat	Sheep and goats
Saudi Arabia	Mutton, goat, camel	
Congo	Beef	
Sudan		Cattle

Source: (Legese et al. 2008: 41)

Figure 1 below draws on figures from Legese et al (2008) to put the current trade volumes in historical context. Data are reported by the National Bank of Ethiopia. We

Figure 1: Meat and Live Animal Exports From Ethiopia over time

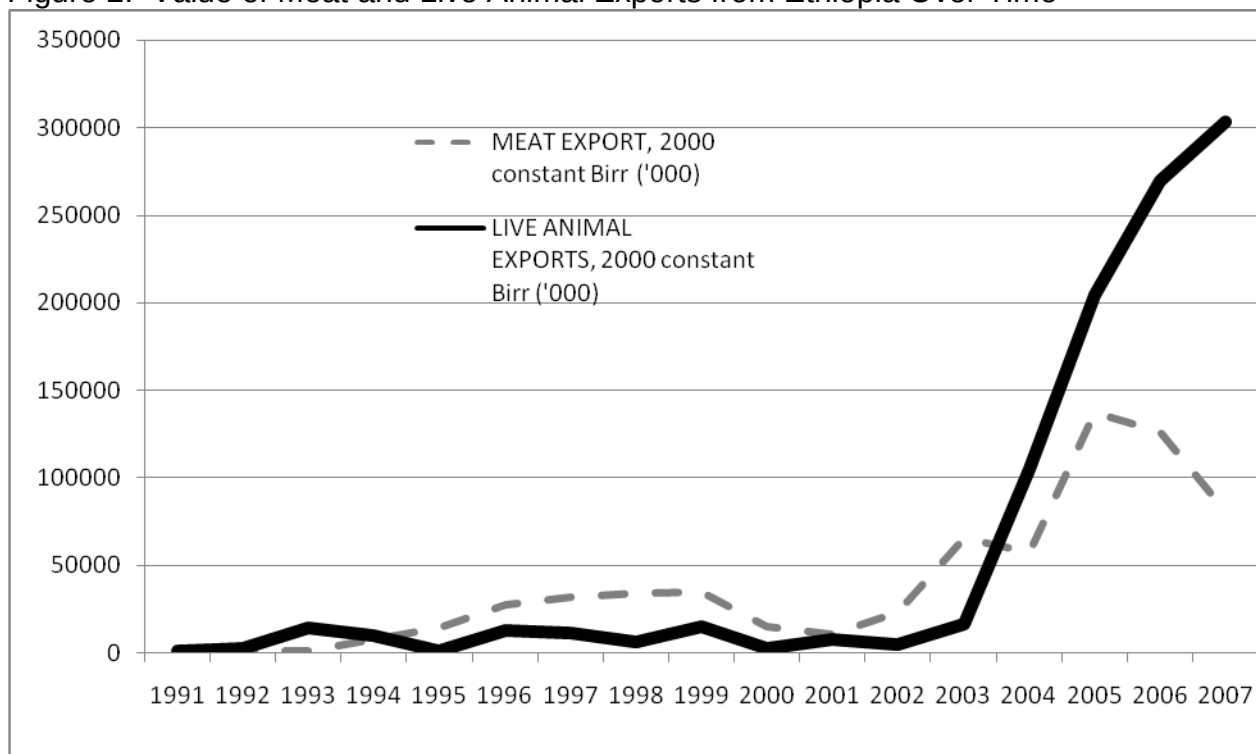


first consider information on trade volumes from 1970 to present. To get a sense of the value of meat and animal exports during the time period of particular relevance to this review, we can convert official statistics recording nominal values to real values using the CPI deflator. This expresses all Birr in 2000 constant values. When we do this, we arrive at the findings presented in Figure 2.

We begin by focusing on the meat export sector. As seen in Figures one and two, in the early 1990s there were almost no meat exports from Ethiopia. The second half of the decade saw slow growth that was disrupted by the Rift Valley Fever import ban in Middle Eastern countries in 1998 and then again in 2000, but this has given way to rapid growth in the current decade. Rich et al (2009) report that in 2003-4 Ethiopia exported 3317 tons of meat valued at US \$ 6.3 million. In the next year the amount of foreign exchange from meat exports had reached US \$ 17.5 million.

Aklilu's background note (2009) indicates that the current status of this market can be traced back eight or nine years to the establishment of private export abattoirs. Prominent examples are Mojo, Luna, and Elfora. He writes "[t]he main channels of collection are the Southern and Southeastern rangelands (Borana and Bale lowlands) and to some extent the Central (Mieso and Metehara), Eastern (Babile), Northeastern (Afar) and Central Northern regions (Senbete, Kemissie and Bati).'⁷ (p. 6) Legese

Figure 2: Value of Meat and Live Animal Exports from Ethiopia Over Time



(2008) reports that exporters prefer animals from these areas as meat from animals from the highlands is "not suitable for export due to discoloration of the meat / mutton

before reaching ... consumers.” (p. 11). However, the success of these export operators currently is facing a challenge due to inefficiencies in the market chain for animals from these areas. Legese et al. note that there is currently a complaint by the exporters of sheep and goat meat that there is an insufficient supply of animals coming from the lowlands to allow them to meet the demand they confront. They identify a series of steps that could be taken to improve efficiency in this market and allow its continued growth we will discuss in a later paper for this project.

As illustrated in Figure 1, there are two distinct peaks for meat exports. The first occurs during 1972-74, the second began in 2004 and continues to today.² Both are largely private sector driven. The chart also illustrates there are three peak periods for live animal exports from 1970 to present. The first is from 1973 to 1976 (largely through private sector operations to the Middle East), the second is 1987 to 1989 (largely through the government run Meat Development Enterprise (MDE) exporting sheep to the Middle East), and the third began in 2004 and continues to today and is largely a private sector phenomenon. This contrast is important to note, as it indicates the policy approach since 1991 of encouraging to operate in the livestock trade sector has begun to bear fruit over the past decade.

However, this figure also illustrates the outcomes of policy inconsistencies in the livestock sector that are related to the regime changes that have taken place over the past thirty years.³ Aklilu (2006) notes that “[i]nconsistent policies have hampered Ethiopia’s potential for maximizing livestock export revenues, despite having the largest livestock resource base in Africa. The underperformance of the livestock sector in contribution to national wealth is attributable to several key direct factors, such as poor veterinary services, infrastructure, financial services, and technical and physical barriers but these factors themselves are a result of policy choices regarding the allocation of resources.” (p. 187) He goes on to trace how policy shifts associated with regime changes has led to lost access to external markets which is not easily regained and missed opportunities.

The privatization efforts by the current government led to some disruptions of the export sector when first introduced in the early 1990s. Aklilu traces the decline in live animal exports illustrated in chart one from the late 80s to the early 90s as due to the closing of the MDE before the private sector was ready to replace it. He argues that the growth in informal cross border trade in this period was a direct result of diversion of animals from the marketing channel that was formerly supported by the MDE, shifting the flow of sheep to the Middle East to neighboring countries.

He further notes that in 1998, under the ministry of trade, the Government set up the Livestock Marketing Authority (LMA). While the LMA had a clear mandate, it was structurally hampered in its effectiveness by being designed to operate at the federal level and had limited representation at the regional level, where the supply chains originate. In addition, there was a lack of clarity as to where the LMA lay in relation to

² The decline in meat exports in 2005 was due to temporary restrictions of this trade with Saudi Arabia and the U.A.E. which were lifted in 2006. Preliminary evidence suggests exports increased following the end of these restrictions.

³ This section draws from Yacob Aklilu’s chapter “A Review of Policies and the Impact on Livestock Trade” in **Pastoral Livestock Marketing in Eastern Africa**, John McPeak and Peter Little (eds.) Intermediate Technology Publications Ltd.

the Ministry of Agriculture (MoA), the Agricultural Bureaus in the regions, and the Department of Veterinary Services (DVS). As the LMA was in the Ministry of Trade, there was an administrative separation between livestock trade and livestock production which led to ambiguity and difficulties in coordination.

A related set of problems are identified as confronting the DVS, where the national referral laboratory was run by the Ethiopian Agricultural Research Organization (EARO), leaving the DVS with insufficient staff to meet the multiple mandates the department was meant to meet. In particular, the DVS did not have sufficient staff to supervise livestock marketing in a way that met the requirements of trading partners. This reached the point where a drive to restructure the DVS was initiated by a Saudi livestock and meat trading company in 2004, which although it did not ultimately lead to a business agreement with that company, did lead the MoA to request a study by AU-IBAR (Moorhouse, 2004) detailing suggestions for reform in the DVS to allow trade deals to be possible. The DVS has recently been reformed into an American style APHIS (Animal and Plant Health Inspection Service). This change took place with the support of the Texas SPS-LMM programme. The former DVS and the Plant health regulatory department were amalgamated under the name of Animal and Plant Health Regulatory Directorate (APHRD). APHRD has become active in terms of supporting the export business, in overseeing the labs, but its mandate when it comes to regional governments is still limited to trans-boundary diseases (Yacoub Aklilu, personal communication).

Livestock produced in Ethiopia that will cross a border into a neighboring country as live animals

Key international (cross border) livestock flows occur to Somalia, Kenya, and Djibouti. For example, sources cited in Aklilu's background note have reported that 50% to 60% of cattle exported from Somaliland (excluding Bosaso) originate from the Somali area of Ethiopia. The cross border trade from Ethiopia to Kenya has been estimated to meet 20% of the Kenyan domestic demand for meat. Recent figures from the SPS-LMM program put the value of unofficial cross border exports between US \$250 million and \$300 million per year (Legese et al. 2008). If this is anywhere near accurate, it would suggest that unofficial cross border exports are generating somewhere around ten times the revenue of official live animal and meat exports.

The position of the Ethiopian government is that unofficial cross border trade is illegal. While clearly this is true, there has been little to no government effort to regularize this trade. A few notable exceptions are the EXCELLEX project, where arrangements were made to facilitate the flow of animals between Ethiopia, Djibouti, Somaliland, and Puntland through the border town of Togochale. The Livestock Trade Commission was another effort towards regularizing this trade, though it was ultimately not successful due to disagreements among the partner countries. Traders report that they would be interested in bringing this trade into line with rules, but as reported by Aklilu (2006) they "...are required to visit at least 12 different offices and institutions to process their export documents and fees must be paid at each office. This is a lengthy procedure sometimes resulting in missed shipments." (p. 202). During our visit we also encountered with some frequency the complaint that even if there was a desire to go through the official steps needed, the staffing and capacity of formal government

channels at the borders is nowhere near the level required to process the volume of animals. In addition, as new areas open up for cross border trade (for example, the Sudan), government is not seen as responsive in shifting investment and personnel to meet the changing demands of the export markets.

While we understand there are security issues related to borderlands that are of concern to any government, we find it puzzling that the focus of government efforts has been and appears to be a continued focus on exports that do not involve cross border trade despite the latter activity's importance to several regions of Ethiopia. We will discuss this issue further in the team's next report on 'future scenarios for pastoral development', but leave the issue by noting that policies to date have not been effective at stopping this trade or at bringing it into line with government rules and regulations. As such it has been and continues to perform less than optimally from the perspective of producers and the government of Ethiopia.

Livestock produced in Ethiopia for consumption and / or use within Ethiopia

The first element that escapes national statistics is home consumption of animals. From household studies in the Borana plateau, we can estimate that approximately 1% of the household herd is consumed directly per year. Given estimates of the Zonal Rural and Agricultural Development office reported in Legese et al (2008), for the six project woreda of Yabello, Dire, Telltale, Arero, Moyale, and Liben that would correspond to a value of roughly US \$0.25 million per year per woreda in direct consumption.

A second element that may have been overlooked by policy makers is that animals born in the lowlands that are held in the highlands for some time before eventually being sold and slaughtered. One type of animal in this group are livestock that are obtained from pastoral areas to be used as traction animals in highland agriculture before being fattened to be sold for consumption. Aklilu, for example, reports that 29% of the cattle for sale in the main Addis market were reported as coming from Hararghe. However, as many farmers source their animals in the pastoral lowlands of Bale, some or perhaps even most of these animals originated from the lowlands though end up classified as highland animals in the market for domestically consumed meat.

Final areas where livestock produced and traded in pastoral areas are unreported but nonetheless important to the national economy, are in the provision of traction and transport animals. Coppock (1994) estimates that 20% of highland traction animals originate in pastoral area. Aklilu (2009), on the other hand, investigated a camel trade in the Northwest of Ethiopia that involves 3-4,000 camels per week. The salt mines in Berahle use 50,000 to 75,000 camels per year to make trips up into the Tigray highlands. In addition to this use, he also found camels are increasingly being adopted as a substitute for donkeys as pack animals by mid-altitude farmers. Altogether he estimates this camel trade route alone has a sales volume between US \$18.5 million and \$24.5 million per year, rivaling or surpassing the sales volume of the formal meat exports reported above.

Drought Cycle Management

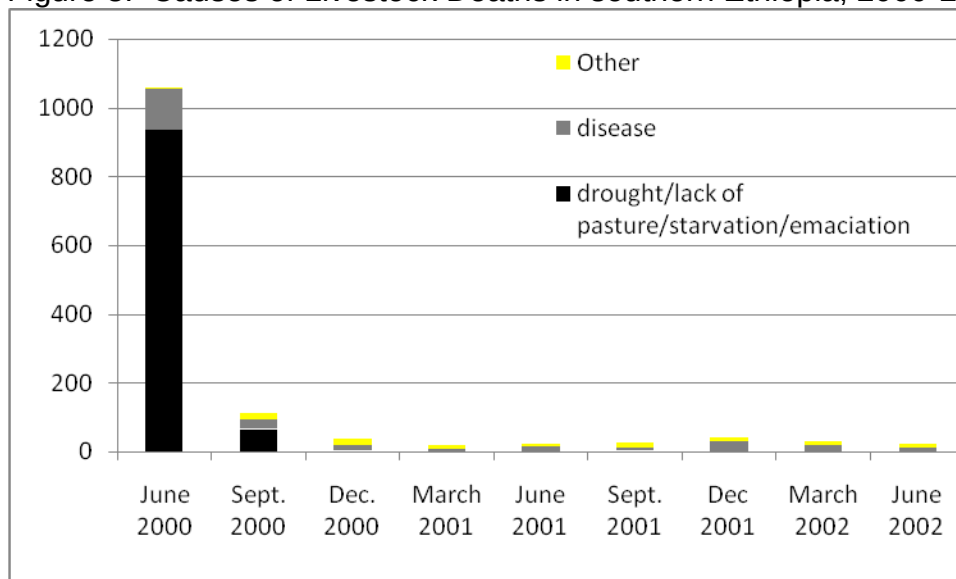
In the 1990s, the field of rangeland ecology in arid and semi arid areas saw a spirited debate contrasting 'equilibrium' and 'non-equilibrium' views of pastoral

ecosystems. The traditional **equilibrium view** saw periodic crashes in livestock populations in the familiar ‘boom and bust’ pattern as reflecting herd sizes growing beyond carrying capacity and placed blame for this population build up on either traditional values (pastoralists hold on to animals for prestige) or tragedy of the commons incentives (individuals make stocking decisions based on private cost and benefits and ignore the costs imposed on others). This view of the world led to policies to try to limit stocking levels, restrict and control grazing pressure, and privatize rangelands in a variety of countries. Food aid and emergency relief are here conceived of as short term humanitarian interventions to save lives that long term structural interventions will eliminate the need for.

The **non-equilibrium view** proposes a different explanation of population crashes. Here it is proposed that these crashes are inevitable, and a fact of life in these kinds of ecosystems. It is not that they are triggered by herd build ups or avoidable by the policy interventions outlined in the previous paragraph. They are a consequence of the production environment being driven by high spatial and temporal variation in rainfall. Two kinds of studies resulted from the premise that ‘busts’ are best viewed as exogenous shocks driven by climate events. First, there was a burst of interest in what herders did both ex ante to prepare for the inevitable shock to come and ex post to cope with the shock once it occurred. A variety of studies outlined how herd management, marketing patterns, mobility decisions, forecasting, and formation of social networks could be used to help minimize the impact of herd loss on pastoral households. A second set of studies began to look at what could be done during drought events to provide herders the means to better manage the risks they faced. The combination of these studies leads us to the growing field of drought cycle management, where the challenge is to identify innovative means to help pastoralists prepare for and cope with shocks in ways that do not inhibit the effectiveness of existing strategies to deal with such events.

Figure 3 below illustrates the nature of these busts in pastoral areas of Ethiopia.

Figure 3. Causes of Livestock Deaths in southern Ethiopia, 2000-2002



Here we report the cause of livestock deaths in the Pastoral Risk Management (PARIMA) study area of southern Ethiopia and the reason cited by the owner for the cause of death. Clearly the driving factor here is the drought losses that occurred in the first half of 2000, with negligible losses coming in other periods and from other reasons. Abebe's background note (2009) provides a summary of drought cycle management (DCM) and livestock based emergency interventions in pastoral areas of Ethiopia that can be used to help pastoral households cope with events such as the one illustrated above for the year 2000. He notes that there has been growing interest in this approach, but that it has really only been since 2005/2006 that it has been attempted in Ethiopia. The set of components that are needed for a drought cycle management plan are: 1) drought early warning; 2) drought preparedness and contingency planning; and 3) policies to support drought resilience.

With **drought early warning** a surveillance, analysis, and reporting system is put in place to attempt to monitor and forecast drought events. Sandford identified around 33 early warning systems that had been developed for Ethiopia (2002). Many were found to be limited in their impact as they were not clearly linked to response measures, were remotely sensed and technology driven, were not linked to community monitoring and response, and had no clear triggers that led to specific actions.

Drought preparedness and contingency planning addresses many of these problems. It sets up a set of steps to be taken in response to a drought prediction, with a clear link between policies and triggers. It also has developed a funding strategy for these policies in advance of the event, rather than having to appeal for funds when the drought has already taken hold. Ethiopia still is working toward having this in place. Dawit (2009) argues that the National Disaster Prevention and Preparedness Fund is not easily accessible at the local level, leading to it being accessed only twice since its creation in 2000. As it is managed centrally and funds are largely based in Addis Ababa, this limits the effectiveness of the program.

The planning should build in **policies to support drought resilience**. Barton et al (2001) identify policies that support pastoral land tenure, strengthening pastoral institutions, and improving market infrastructure and access as long term policies that will also improve drought resilience. Mobility, a key to pastoral risk management in drought, has been particularly controversial in Ethiopia.

Veterinary Services and other inputs

Since the mid 1990s, key policy achievements in veterinary service delivery relate to the privatization of clinical veterinary services in pastoralist areas and legislative reforms to facilitate the delivery of veterinary services, including the establishment of Community Animal Health Workers (CAHWs) (this section draws heavily on the background note by Catley [2009]). Specifically these include the:

- recognition of the role of Community Animal Health Workers (CAHW) and the publication *Minimum Standards and Guidelines for CAHW System in Ethiopia*, that legitimizes CAHWs;
- Proclamation No.267/2002 on the need for a veterinary statutory body in Ethiopia for certifying veterinary professionals and para-professionals, including CAHWs;
- development of private veterinary pharmacies and CAHW networks in pastoral regions;

- creation of the Animal and Plant Health Regulatory Directorate in the federal MoARD;
- Increasing recognition within the MoARD of the damaging impact on the private sector of free veterinary inputs during emergency/droughts;
- wider use of veterinary voucher schemes during emergencies.

For the pastoral areas perhaps the most significant policy change by the government during the past decade has been the legalization of CAHWs. Catley (2009), for example, documents how important CAHWs have been in delivering cost-effective veterinary services to remote pastoral areas, including the elimination of such devastating animal diseases as rinderpest. In the rinderpest campaign, he notes how “the innovative use of CAHWs in Afar. . . achieved international recognition (ibid:3)” and that many neighboring countries, including Kenya, have failed to promote CAHWs. While this and other Ethiopian policy changes indicated above are very positive, slow progress has occurred in other areas since 1991 (see Catley 2009). For example, there are inconsistencies between what policy states and what actually takes place in practice, which often leads to both government and private sector delivering clinical services in the same areas. As Catley points, the private sector tends to withdraw in these situations which leaves pastoralists dependent on the less efficient public system. In fact, one study shows that the government was three times less efficient than the private sector in delivering veterinary services to rural areas (ibid). The effect can result in massive economic losses of livestock due to preventable animal disease. Catley estimates that more than 10 times worth of economic value is lost due to preventable deaths than are earned from official livestock exports (ibid). By the time vaccination takes place during an outbreak, mortality rates usually already have peaked.

In addition to mortality losses due to disease, production losses such as reduced milk production and reduced fertility, are attributed partly to feed availability. The provision of 'feed aid' for productive livestock groups (calves and lactating animals), encouraging preservation of hay, and dry season range reserves, focusing on timely restocking and de-stocking activities, possible arrangements of the use of by-products from local investment for livestock feed (State Farms-cottonseed cake, Sugar Factory-molasses and sugarcane stalk etc),controlling the diversion of natural river courses (especially Awash River) are some approaches to address feed security (see Catley 2009).

Pastoral Land Tenure

On the surface, the present legal status of pastoral land is similar to that of farm land, and the rights of pastoralists are little different from those of farmers. For all kinds of agricultural land, the state retains ultimate control:

The right to ownership of rural land and urban land, as well as of all natural resources is exclusively vested in the state and the peoples of Ethiopia. Land is a common property of the nations, nationalities and peoples of Ethiopia (Constitution of the Federal Democratic Republic of Ethiopia, 1995, Article 40)

The Constitution further distinguishes between rights to farm land and pastoral land:

- Ethiopian peasants have a right to obtain land without payment and the protection against eviction from their possessions. The implementation of this provision shall be specified by law.
- Ethiopian pastoralists have a right to free land for grazing and cultivation as well as the right not to be displaced from their own land. The implementation shall be specified by law.

The wording of the constitutional clauses pertaining to farmers and pastoralists is remarkably similar, but the reality has been quite different. Despite the ultimate control of land by the state, the gradual codification of land rights has improved the tenure security for farmers who pay land tax and now can often register their use rights. In contrast, the land rights of Ethiopian pastoralists have become less secure over time. Specific laws to implement pastoral land rights have not been developed. Moreover, as Beruk Yemane (2009) noted in his background paper, there is a potential contradiction between the 1994 constitution (quoted above) and the Civil Code under article 1194: 'immovable situate in Ethiopia which are vacant and without master shall be the property of the state.' Much depends on the interpretation of 'vacant and without master.' Recent appropriation of communal pastoral grazing land for large-scale irrigation schemes, private ranches, and commercial enterprises seems to lack participation, and is at odds with promoting livestock production and trade, which as we have shown contribute significantly to Ethiopia's GDP and export earnings. Examples include the appropriation of riverine areas in the Omo River Valley for irrigated farming, seasonal grazing areas for private ranches in Borena Zone, Oromiya Region, and about 10,000 hectares for irrigated agriculture near Gambela in Western Ethiopia. Reports indicate that the government has set aside 2.7 million hectares of land for agricultural investment by private investors (McLure 2009) and it is most likely that the bulk of these lands will come from pastoral regions.

Related to land tenure is land use, government policies (where they exist) contradict efforts by pastoralists to protect their livelihoods and environment. For example, the loss of key dry season grazing areas, especially to irrigation schemes in riverine areas, crowds herders onto less productive rangelands which undermines their economic welfare, puts them into competition and conflict with other groups (see Elias 2006), and aggravates environmental degradation. The net economic result is reduced quality of tradable products and animals for local sale and export and higher costs for additional food aid for displaced pastoralists.

That Ethiopian pastoralists have developed customary common property land tenure systems is well documented. In the scientific and research literature, there can be no question that the pastoral lands of Ethiopia are neither vacant nor without masters. However, historically and in demographic terms, the Ethiopian state is founded on farming, and Ethiopian tenure traditions and agricultural practices both have a strong farming bias, and farming takes precedence over pastoralism if there is a conflict over land use. A veteran observer of pastoral tenure in Ethiopia summarized the situation as follows:

At present, formal land rights in the pastoral area of Ethiopia seem to be a matter of loosely defined group rights that are granted to named ethnic groups without

taking locally evolved tenure rights, if and where these exist, much into consideration. Security of tenure remains poor, particularly in relationships affecting the interests of the state. These interests are often expressed in policies favouring other economic activities, including alternative uses of pastoral lands (Helland 2006: 4).

Without legal guarantees, pastoralists have no security of tenure if individuals or outside interests wish to use their land. Previously pastoralists may have been protected from losing land by their remoteness, but this is no longer the case. Commercial development, extensions to the road network, improved security, and population pressure that has forced farmers to leave the highlands have steadily eroded the isolation of pastoral areas and increased the ability of outside interests to appropriate pastoral property. Without legal protection, the increased accessibility, commercial and conservation value of pastoral land has accelerated pastoral land loss in recent decades.

Losses have occurred on three major fronts: to irrigated agriculture (see the section on this topic), wildlife and conservation interests, and agricultural encroachment both by former pastoralists themselves and by neighboring non-pastoralists. As in the rest of East Africa, most wildlife refuges and parks in Ethiopia are situated on pastoral land. Pastoralists have preserved and – through their husbandry practices – created these valued environments, but Euro-American notions of Africa as a pristine wilderness full of wild animals have difficulty accommodating this reality. International conservation interests are among the most vocal advocates for the expulsion of pastoralists from ancestral lands that have been designated for conservation or touristic purposes. Large parts of valuable dry-season pastures in the Awash and Omo River valleys have been removed for wildlife conservation purposes with the same consequences for pastoral economies and livelihoods that were described above for large-scale irrigation.

Ex-pastoralists and poor pastoralists themselves have also sought to farm both along river banks in valued dry season zones and in wet season, upland grazing areas. In large parts of Borena, the Awash valley, and in arable areas of Somali Region cultivation by herders and ex-herders is occurring as responses to increased poverty, loss of mobility through land appropriation, and declining per capita livestock holdings. This diversification into farming has occurred, even though local councils of pastoral elders and other customary institutions have ruled against it in many places. As noted above, what makes it especially difficult to halt is the fact that cultivating herders can pay land taxes to *kebele* or Pastoral Association (PA) officials and receive formal recognition of their right to farm. Local institutions and communities have virtually no official status in administrative terms and, thus, have been unable to limit the expansion of cultivation, even in dry season areas that are critical for the pastoral economy. Part of the problem is that official administrative structures, such as the PA unit, overlap and often conflict with rulings and responsibilities of customary tenure institutions. Research by the PARIMA project showed that there is considerable ambiguity over who is responsible for enforcing local land and water rights, with the result that local herders and farmers can seek rulings from either the state administrative or customary institutions. Under these conditions of uncertainty conflict often results as neighboring groups compete for land and water and can encroach on communal lands without local

sanctions. The imposition of administrative boundaries by federal and regional officials also can aggravate conditions of tenure uncertainty by enforcing decisions which can unduly favor one group over the other and contradict customary ownership of key resources, such as deep wells and ponds.

Another land issue that recently has emerged in Ethiopia concerns the current practice of leasing or granting land to international commercial interests. There appears to be a great deal of uncertainty as to how this policy was being designed or implemented. We have heard reports of agricultural concessions being granted in pastoral areas to firms from Turkey, South Korea, India, Brazil, China and Saudi Arabia, though much seemed speculative. To the best of our knowledge, land is being rented for 140 Birr per hectare, for 4-5 years no taxes will be paid on profits from this land, and concessions are being granted for 25-40 years. As indicated earlier, it is reported that 2.7 million hectares have been demarcated to attract agricultural investors, and that most of these firms are interested in either agro processing and export or biofuels, particularly jathropa (see McClure 2009). The benefit to Ethiopia of this effort was described as increased foreign direct investment, increased foreign exchange, and potentially with the biofuels as a poverty reducing means to help mitigate climate change. The concerns expressed were that key grazing areas would be lost for pastoral production, there was little local knowledge over how such concessions were being granted, and that they could spark a great deal of conflict if not managed well. This program was too new to have much evidence to evaluate it, but it did seem to be an area where there was interest and uncertainty as to what was the nature and goal of the government policy.

Range Management

In a background note for this report, Gufu Oba (2009) remarks upon the weak impact of current range management science on Ethiopian rangelands policy. This was not for lack of large rangeland projects in the 1970s and 1980s (see Table 3). For example, the Third Livestock Development Project (TLDP), jointly funded by the Ethiopian government and World Bank, employed at its height in the early 1980s over 1,000 permanent staff and reported directly to a vice minister in the Ethiopian government. Through the JEPSS, Joint Ethiopian Pastoral Systems Study Project, the TLDP was affiliated with ILCA, the largest and most prestigious livestock research organization in Africa at that time. In short, in Ethiopia in the 1980s there existed an institutional focal point for range research and development, plentiful employment and career prospects for Ethiopian rangeland professionals, a direct link to high-level policy makers, and a long term affiliation with a premier international research organization. Unfortunately, the range science practiced in the 1980s was not equal to the challenge. Large-scale water developments on the Borana Plateau under TLDP were an environmental and institutional disaster, and ‘the outcome of the ranch experiment has been the same as elsewhere in pastoral Africa, i.e. the Western ranching concept has failed to transform traditional pastoralism’ (Coppock 1994:35). As discussed earlier,

Table 3: Livestock/Pastoralism Projects, Ethiopia

Project	Operational period	Operational area	Donors govt agencies	Activities
Pilot Rangeland Development Project	1965-1970		USAID and Range Development Unit, MOA	Pond construction to relieve grazing pressure, range management
TLDP – Third livestock Development Project	1975-87, extended into early 1990s	Somali Region, Afar, Borana Plateau	World Bank and MoA	Water development, roads, animal fattening, ranch development, range management
JEPSS – Joint Ethiopian Pastoral Systems Study	1982-85	Afar and Borana pastoral systems	TLDP and ILCA	Research on lowland development strategies and range management
SSRP – Southern Sidamo Rangelands Project	1985-88	Southern rangelands	CARE-Ethiopia, MoA, Relief and Rehabilitation Commission, ILCA	Extension and research on pastoral development interventions
FLDP – Forth Livestock Development Project, Pilot Project	1988-	Southern rangelands		Institution building and extension
SERP – South-east Rangelands Project	1990-	Southern rangelands	ADF	Infrastructure and institutional development, service co-ops
STI – Southern Tier Initiative	2001-07	Borana Zone, Liben zones, Somali Reg.	USAID - MoARD	Health, education, improve pastoral incomes and dispute resolution
FOCUS – Focus on Newly Emerging Regions		Somali Region	USAID-MoARD	Animal health, education, conflict mitigation and food security
PLI – Pastoralist Livelihood Initiative	2005-2008	Somali, Afar and Oromiya Regions	USAID-MoARD	Animal health, livestock marketing, drought cycle management, rangeland management, water rehabilitation
RELPA – Regional Enhanced Livelihoods for Pastoral Regions	2007-09	Ethiopia and Kenya	USAID-MoARD	Conflict mitigation, regional cross-border cooperation, pastoral livelihoods
PCDP	2003-08	Selected woredas Afar, Somali , Oromiya	MoFA – World Bank	Decentralization, early warning, capacity building
PCDP II	2008-13	Selected woredas Afar, Somali and Oromiya Regions	MoFA – World Bank	Community education, risk management and livelihood enhancement
Pastoralists Communication Initiative	2006-09	Horn of Africa	DFID, UN OCHA, MoFA	Advocacy and research

most of the development interventions were based on ill-conceived notions of carrying capacity that attempted to limit stocking rates based on the premise that overstocking—rather than rainfall—was responsible for periodic herd crashes. The government's ban on fire burning also continued throughout the 1980s (and even until the 2000s) under the premise that local pastoral practices were inconsistent with modern range science and, thus, harmful to the environment.

In response to these and other practical failures, the early 1990s saw the international science of range ecology discard much traditional range management theory and replace it with the disequilibrium theories discussed earlier. Work conducted in Ethiopia, especially on the Borana Plateau, contributed to the creation of the new theoretical consensus (see Oba 2009). It is therefore strange that this new rangeland thinking has had so little impact on Ethiopian pastoral policy. Several factors contributed to this outcome. For example, in the late 1980s donor-funding for pastoral projects in Ethiopia began to shift away from natural resource management and livestock production and re-focused on community development and service provision. The biologists and economists who had dominated the old-style projects were replaced by experts in pro-poor advocacy, livelihood enhancement, community mobilization, and public advocacy. Around this time, ILCA amalgamated with an international animal disease research organization to become the International Livestock Research Institute (ILRI) and began gradually to shift its headquarters and the bulk of its work in eastern Africa from Addis Ababa to Nairobi, Kenya. First class academic and scientific research on range management and livestock production continued in Ethiopia, but the biological sciences lost the institutional affiliations with national agricultural research institutes and other government departments that brought their work to bear on national policy. The newly formed ILRI also moved much of its research in Ethiopia from the rangelands to agro-pastoral systems in the highlands. Aside from fostering practical work on drought cycle management and commercial de-stocking in droughts, the new thinking in rangeland ecology therefore had little effect. Donor-funded projects on pastoral development in Ethiopia reinforced this trend by emphasizing pastoral rights, voice, advocacy and political mobilization. Because the scientific basis for these projects was often unclear or unstated, senior Ethiopian administrators could dismiss this work for a lack of rigorous data and documentation.

What has been lost is the connection between Ethiopian policy and international scientific best practices in rangeland ecology and pastoral systems generally. In particular, the environmental and economic implications of livestock mobility in pastoral systems have not been sufficiently discussed with Ethiopian policy makers, although there are numerous in-country studies and publications that demonstrate its critical importance. ***Ethiopian policies on livestock mobility reflect the limited scientific understandings of the 1970s and 1980s, and it is past time for an update based on scientific research from the 1990s and 2000s.***

Irrigated Agriculture in Lowland Pastoral Areas

There is an important potential difference between developing pastoralism and developing pastoral areas. Developing pastoralism implies support for and exploitation of the productive potential of extensive livestock systems. In this scenario, pastoralism

persists and evolves in response to modern market and other conditions. Pastoral area development, on the other hand, often involves the expropriation of pastoral resources and the replacing of livestock production with alternative, and supposedly more productive, land use systems. Radical changes in land use – in favour of irrigated agriculture, wildlife conservation, tourism or hydroelectric power generation – are justified, it is argued, because they serve wider national goals. The only real question that planners then need to consider is how to compensate pastoral communities for the loss of their resources and livelihoods. In cases, where the land is inaccurately treated as 'vacant' and unused by pastoralists, then even the issue of compensation can be avoided.

The Awash valley provides a suitable location for examining the benefits and costs for Ethiopia of this kind of pastoral area development. The valley contains a small part of all the land area that is suitable for irrigation in Ethiopia – around 4 to 5 percent of the national total. But over a one-third of all valley land that can be irrigated is already irrigated, which amounts to just under 50 percent of all the land that is presently under irrigation in Ethiopia (48,311 irrigated hectares out of a national total of 107, 265 hectares, Awulachew et al. nd: 123). Because it is so intensively used, the Awash valley gives us an idea of what lies in store for the lowlands if the Ethiopian government continues to pursue a policy of modernizing agriculture through irrigation.

Since its inception, large-scale irrigation in Awash has gone through three phases determined by changes in national political regimes:

- Imperial period, 1944 to 1974: Plantation development was initiated on large commercial concessions by international corporations in partnership with the state or members of the royal family. Early projects included the Wonji sugar factory in the 1950s and the Koka high dam, constructed in 1960 to supply hydroelectric power to Addis Ababa.
- Military rule, 1974-91: In conformity with their socialist ideology, the Derg nationalized commercial cotton and sugar concessions and turned them into state farms. The regime also continued the attempt, begun during the Imperial period, to settle pastoralists on state sponsored, managed and constructed irrigation schemes.
- Federalism, 1991-present: About one-fifth of all irrigated land in the 1990s was returned to the Afar clans as part of decentralization and compensation, and is now managed by large-scale investors with share croppers working at least nominally for Afar clans. State-owned cotton and sugar enterprises, nonetheless, remain important and two state-owned sugar estates are currently being expanded.

None of the irrigation schemes in the Awash have opened up new or unutilized resources. The sections of the river valley that were ideal for agricultural development were also seasonally inundated natural pastures, the resource heartland of the Afar and other pastoral groups. For stock keepers, these valley pastures were important because they produced per hectare about ten times the usable forage of adjacent rainfed areas, and this forage was available in the dry seasons or in droughts when other sources of feed were scarce. The importance of these pastures as drought

refuges became evident between 1971 and 1973 when massive numbers of livestock died and large-scale famine ensued.

By 1973 more than 52,000 hectares were irrigated in the Awash valley as a whole (more than are probably under irrigation today), but only 1500 hectares had been set aside for the pilot resettlement of pastoralists as compensation for the land taken from them, and by 1974 there were just 300 Afar settlers. Droughts are a recurrent threat in the Afar lowlands, but the drought of 1972-3 came in the wake of land dispossession and was different. The exact number of people who died is unknown, possibly as many as 100,000 to 200,000 or 25-30 percent of the Afar. Observers agree that this was in some measure a man-made famine that signaled a turning point. Future rainfall deficits appeared to produce droughts at shorter intervals; interethnic violence increased as pastoral groups competed for the shrinking resource base; the average size of household herds declined and the species composition of the herds changed; and some households became permanently dependent on food aid. These developments had multiple causes, but there can be little doubt that the dispossession of pastoral land for irrigation was a contributing factor. Such losses are hard to justify unless they can be offset against benefits to the national economy produced by irrigated sugar and cotton cultivation, the Afar Region's main cash crops, which also result in benefits for the local communities themselves. Despite the continued enthusiasm for irrigation in the Awash and elsewhere in pastoral lowlands, the benefit and cost analyses (economic, environmental and social) that might support these investments are lacking.

In sum, across three different political systems, the Ethiopian government has adhered to a policy of developing pastoral areas with large irrigated estates operated either by the commercial sector or the state, combined with pastoral settlement schemes for small holders. No efforts of comparable duration or ambitiousness have sought to explore the productive potential of the extensive livestock production systems indigenous to the lowlands and that produce both live animals and products for a range of different markets, including export.

The value added to raw agricultural output by processing is visible to outside observers of vertically integrated enterprises, such as sugar plantations/factories or cotton plantations/ginneries. This value is also susceptible to control by the owners of these enterprises and to taxation by government. Significant value can also be added to animal products. In the late 1990s, for instance, hides and skins were Ethiopia's second most valuable export commodity, after coffee. But in Ethiopia live animals and their products tend to be produced by many geographically dispersed small holders and then sold in complex marketing chains that display scant regard for international borders. At least in the pastoral sector, government currently has difficulty collecting the data that is needed to govern this kind of economic activity. Lacking this capacity, it is tempting to take what may appear to be the safer option – the promotion of vertically integrated enterprises that can be more easily monitored, controlled, taxed and, if need be, insulated from problems.

In the 1960s when irrigation development began along the Awash, migratory pastoralism was widely viewed as a primitive and unproductive way of life – certainly no competition for modern irrigated agriculture. No one thought at that time to ask how much the Ethiopian economy would lose if the Afar kept fewer livestock or were forced

to produce less animal products. In other words, no one calculated the opportunity costs to the national economy of replacing pastoralism with irrigated agriculture. It is remarkable – roughly half a century later – that so little has changed. In fact, no benefit-cost analyses to date that we know of includes a full examination of the costs to the national and regional economies by displacing the pastoral economy (for example, in terms of reduced exports, food [milk and meat] production, and increased needs for food aid) and the full costs of public subsidies for irrigation.

Pastoral Participation in Policy and Program Planning

Effective development policy is facilitated by participatory institutions and mechanisms to insure that local institutions and populations, including women, have a role in policy formulation and implementation. Since women often are responsible for managing dairy production and trade, which is a substantial percentage of pastoral household incomes, their input to policy and programme planning is critical (Watson 2009). In general, the participatory process is especially important for politically underrepresented and marginalized groups, such as pastoralists, to insure that federal and regional policies contribute to their livelihoods and welfare, and that they have a committed stake in them. In several policy and current government documents, including the Constitution, there is a clear departure from the past in terms of recognizing pastoralist economic rights, cultures, and their mode of livelihood. For example, pastoralists' rights are enshrined in Ethiopia's Constitution. These collective rights as stated in various articles of the constitution (Articles 39, 43, 45-48 and 92(3)), include rights to communal land, to economic development, and self-government. However, the implementation of these rights lack legal and practical instruments for their enforcement, especially in terms of land rights for pastoralists. The major policy changes so far made by the Federal Government that deal with governance and pastoral participation in development planning includes securing the constitutional right of pastoralists not to be displaced from their own land, the decentralization of some authority to the Regional states, and formation and reformulation of pastoral institutions both at federal and regional levels.

Different on-going national government/donor programs for pastoralists and pastoral areas are supposed to elicit local participation in policy and planning (some of the discussion here is drawn from the background note prepared by Brocklesby and Hobley 2009). These interventions include the Government of Ethiopia/World Bank Pastoral Community Development Project (PCDP), the Productive Safety Nets Programme (PSNP), and different activities of the Environmental Protection Authority (EPA). However, in reality it seems that little really has changed on the ground since the 1990s and, in some cases, the capacity of pastoral communities to maintain their rights to communal grazing lands and water points actually has declined, especially since 2000. The federal government and MoFA, in particular, have assumed greater roles in pastoral areas despite the official language of decentralization and pastoral participation. In fact, the major development activity in the pastoral regions, the PCDP, is implemented by the MoFA and funds key pastoral-related NGOs in its programs.

The mandate of the Ministry of Federal Affairs (MoFA) includes federal-level support to those regional governments which are perceived to be emerging and administratively weak, including the pastoral and agro-pastoral areas of Afar, Somali,

Borana, South Omo, and Gambella. Although the MoFA's role covers the promotion of good governance and pastoral development policies, its policies reflect limited understanding of pastoralism or dryland ecosystems as was indicated earlier in the paper. Long-term objectives such as sedentarization of pastoral communities dominate MoFA policy documents but with little input from those who will be most impacted (pastoralists) by such policies. Although there is only minimal evidence that attributes improved livelihoods and reduced vulnerability to increased settlement by pastoralists, there is much counter evidence that shows deteriorating nutritional status, increased food insecurity and dependence on food aid, and excessive state subsidies to maintain water (i.e., irrigation) and other infrastructure associated with sedentarization (see Fratkin and Roth 2004). The underlying theme that settlement and reduced mobility is preferred runs counter to much scientific research on pastoral ecosystems, especially the critical role of mobility in sustaining livelihoods and environments (Homewood 2008) and the high costs and risks of large-scale irrigation in drylands (see Little et al. 2001).

There has clearly been an increasing national and official recognition of pastoralism in Ethiopia. This is an important accomplishment by the government that mainly has taken place since the late 1990s. It is reflected in the establishment of the Pastoral Affairs Standing Committee in parliament, the incorporation of pastoral issues across ministries (for example, health and education) and the now institutionalized annual Pastoralist Days⁴. In the regions there has been a clear institutional response with, for example, the establishment in Oromia of a separate Oromia Pastoral Areas Development Commission and the recent provision of observer status to the Oromia Pastoral Association in the regional parliament. Other institutions include the Pastoral Development Commission in SNNP region, while other regions have Pastoral Coordination Office under the Regional Bureau of Rural Development. The Federal and regional governments, and NGOs are increasingly providing attention to pastoral development. These new structures represent opportunities for pastoralists to engage with government in dialogue and negotiation from these new institutional positions. From the perspective of pastoralists, this opening by government of a formal space has been responded to with the formation of membership-based pastoral associations (Oromia, Afar and Somali). These associations are appreciated by the federal and regional governments and effectively are owned by the pastoralists themselves. They are seen as distinctly different from NGOs, where pastoral communities participated little in critical planning and decisions.

Progress in pastoral representation has been most significant in Oromia which has provided a template for representative structures in Afar and Somali. To date, there has not been the same development in SNNPR, although there is a pastoralist elders committee made up of representatives from 17 different ethnic groups that has met on several occasions. It remains to be seen, however, whether the formation of these associations, as well as other pastoral organizations including pastoral NGOs, will have any sustained impact on pastoral economies and livelihoods.

⁴ The Ethiopian Pastoralist Day (EPD) has been held on the 25 January every year since 1999. Partly as a cultural celebration, partly as an advocacy opportunity, the EPD gives pastoralists a common platform for sharing their experience and voicing their concerns to those in power. The PFE takes a lead role in organizing the EPD, in partnership with government.

The development of an effective pastoral voice in policy dialogue and implementation is a basis for building livelihood security, a key theme of a recent DfID report (Brocklesby et al 2009). Results so far suggest that opening up space for pastoralist-state engagement is both possible and essential if marginalised voices are to be heard and acted upon.

Sedentarization and Ex-Pastoralists

As was implied in the earlier section on irrigated agriculture, government, and even donor agency, policies and programmes have been more oriented to non-pastoral activities and ex-pastoralists/non-pastoralists than to pastoral production and trade and pastoralists themselves. Extension, credit and other programs in pastoral areas have been geared toward encouraging non-pastoral activities and, thus, have reached only a small minority of livestock herders themselves. In addition, fixed-point, settlement-based services in pastoral areas, including food aid and the Productive Safety Nets Programme (PSNP), also have been oriented toward settled, ex-pastoralists, although government policy does encourage mobile health clinics and flexible education calendars to accommodate the seasonality of pastoralism (MoFA 2008).

The government's Rural Development Policy and Strategy (RDPS) (Ethiopia 2002) and its recent Plan for Accelerated and Sustained Development to End Poverty (PASDEP, 2005) advocate for the sedentarization of pastoralists over the long term (11-25 years), a policy that remains controversial--especially in Oromiya Region--and promotion of irrigation as discussed earlier in the paper. It generally is consistent with past policies toward sedentarization, although the current policy emphasizes that settlement will be "voluntary." The sedentarization policy also contradicts the constitutional rights of pastoralists to freely use their grazing lands. The text of the RDPS (138) points out that: "since the livelihood of the people is based on Pastoralism, our development endeavor and activities must be based on Pastoralism". On the other hand, it also has a statement that: "In these areas, accelerated and sustainable development can be achieved only when the people are made to settle (p. 143).....settling the whole pastoral people through process [long term] must be underlined (p. 146)." The government's most recent policy statement on pastoralism recognizes that mobile pastoralism contributes to the country's economic growth through trade and other activities and it will remain important in the short- and medium-terms for livelihoods in the lowlands. However, in the longer-term (10+ years from present) sedentarization, irrigated agriculture, and other non-pastoral livelihoods should be encouraged through voluntary settlement and the future of the lowlands will not be based on mobile pastoralism.

The policy of sedentarization should consider the outcomes of scientific research, which, as we suggested earlier, demonstrate unambiguously that mobile pastoralism generates environmental benefits and is the most efficient land use system for Ethiopia's extensive dry rangelands, which comprise more than 50 percent of the country's land mass. Moreover, past development efforts in Ethiopia and elsewhere in Africa and the Middle East show the high economic, environmental, and social costs of investments in rangelands that were based on sedentarization. It is often stated in the Ethiopian public media that sedentarization is a preferred way of life compared with pastoralism. Several projects funded by bilateral and multilateral donor organizations in

dry regions of the country tried to limit pastoral movements by establishing new water points (the construction of boreholes), fixed-point veterinary services, and managed grazing schemes. However, such interventions have often been environmentally and socio-economically damaging as a result of sedentarization.

Dropping out of pastoralism due to successive droughts, loss of key pastoral lands and resources, and/or conflict often push former pastoralists into low remunerative casual labor work, petty trading, or high risk, opportunist farming. These latter activities aggravate pastoral food insecurity, the need for food aid, and poverty and welfare. An expansion of humanitarian assistance, especially food aid, currently being provided for these settled, ex-pastoral populations has saved lives, although it does little to build sustainable livelihoods. There is an urgent need—a humanitarian imperative—to look beyond short-term relief efforts for these ex-pastoralists, such as those provided by the Productive Safety Nets Programme (PSNP). Fortunately, there has been renewed donor interest in support of mobile pastoralism in the past few years. In addition to substantial support from USAID to pastoralism and livestock marketing, the World Bank and African Development bank have continued to fund large-scale projects in pastoral areas of Ethiopia. DfID also has supported the regional Community-based Animal Health and Participatory epidemiology (CAPE) project. There is some convergence in the “new thinking” on pastoralism as a viable enterprise, and the need to facilitate enhanced livelihood options; improved livestock value-chains; natural resource management; integration of conflict prevention, mitigation and resolution; and better application of early warning information towards early response and development as well as policy engagement. However, to date there has not been much ‘buy-in’ from government to this ‘new thinking’ on pastoralism and pastoral development. Unfortunately, as we have shown in the paper, there are certain policies regarding mobility, communal lands, and livestock trade that conflict with these goals.

Safety Nets in Pastoral Areas

In 2004, the Government of Ethiopia initiated the previously mentioned PSNP. In 2005 it was funded by the World Bank and other donors working in a consortium for a first phase. It was designed to reduce household vulnerability to shocks, improve household and community resiliency in the face of shocks and replace the food aid approach to safety nets that had been the prevailing model to that point. The first beneficiaries were enrolled in the program in 2005. The model is that when people are able to participate in public works such as tree planting, work on school infrastructure, road rehabilitation among other kinds of efforts, they will receive a monthly transfer from the project. In some cases this transfer is in the form of food, in other cases it is in the form of cash, and in still others it is a mix of food and cash. The World Bank web site reports that the project enrolled 5 million chronically food-insecure people in 2005, more than 7 million in 2006 and reached 7.6 million people at the end of phase one. The second phase of the project began in 2007. It was designed to have three components:” (a) safety net grants which will provide grants (i) to households whose adults participate in labor-intensive public works subprojects, and (ii) for direct support to households who are labor poor and cannot undertake public works; (b) drought risk financing which aims to provide timely resources for transient food insecure households in response to shocks; and (c) institutional support which will strengthen all aspects of

program implementation, including capacity building at community level, monitoring and evaluation, strengthening transparency and accountability measure, and carry out of several studies, pilots, and assessments.” (World Bank Web site, accessed October 2009) We know of no particular studies as to how the project has fared in pastoral areas, although the project was active in such areas beginning in 2008. The overall evaluations of the project that are available indicate that it was effective in helping to avert a food security crisis in 2008, but there is mixed evidence on the role it has played in long term poverty reduction. An interesting aspect of the project that has come out is the difference between transferring food and cash. The difference became particularly acute during the commodity price spike, as recipients getting cash transfers found the buying power of their transfer significantly diminished.

Conclusion

Ethiopia has made progress since 1991 in policy support for pastoral areas, especially in the delivery of veterinary services, drought cycle management, private sector support, and export trade. These all have been major improvements over previous political regimes since the 1970s. However, in other sub-sectors policy and legislative gains often have been compromised by weak implementation and contradictory strategies. ***The complex interplay of written policies and what actually occurs in the pastoral lowlands often is contradictory, and results in increased livelihood insecurity and ecological problems as we have shown in the case of irrigation development. Thus, the overall policy environment for pastoralism in Ethiopia still exemplifies many misunderstandings about pastoralism and its importance to regional and national economic growth. The current progress in understanding pastoral economies and their contributions to welfare and economic growth also is still at odds with official views of pastoralism as an economically arcane form of production and mobility as a cause of conflict and environmental abuse.***

The paper suggests that the lack of basic data on key livestock-based activities, such as domestic and regional trade, contributes to misunderstandings of pastoralism, as well undervalues its contributions to the Ethiopian economy and GDP. By failing to acknowledge the contribution of breeding, milk and other animal products, it is conservatively estimated that pastoralism’s official contribution to Ethiopia’s GDP is undervalued by more than 50 percent. ***A conservative estimation is that pastoralism’s contribution to GDP is more in the order of 16 percent rather than the commonly stated figure of 9 percent (see WISP 2006: 18).***

Despite the impressive amount of empirical work on pastoral ecology and economy that has been carried out in the country over the past 30 years, there is a strong disconnect between current understanding of pastoralism and official premises about pastoralism that informed key policy decisions. By distinguishing between ‘written’ policies and guidelines and those that have actually been consistently implemented in practice, the paper shows that there are certain policies ‘on paper’ toward pastoralists (including women) and pastoralism—many of which are sound in principle—that remain un-implemented to date. In some cases, official policies formulated since 1991 are contradicted by what actually has or has not happened in practice. This distinction is extremely important since many area-based policies often

strongly support non-pastoral activities, such as large-scale irrigation and dryland farming, and non-pastoral populations activities that can actually undermine pastoralism, the key economic activity in all of the country's pastoral regions. In the project's next two reports on (2) 'future scenarios for pastoralism in Ethiopia' and (3) 'policy options' we build on some of the historical lessons learned here in discussing positive future scenarios and the policy options that are needed to achieve them.

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