

Policy Options for Pastoral Development in Ethiopia and Reaction from the Regions

Report Number 4 Pastoral Economic Growth and Development Policy Assessment, Ethiopia

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Introduction

This report addresses policy options for improving pastoral economies and development in Ethiopia. We draw on the findings of our three previous reports (Report 1, a retrospective assessment of policies completed in January 2002; Report 2, outlining future scenarios for pastoral development completed in March 2010; Report 3, identifying policy options for pastoral development also completed in March 2010). We incorporate in this final report reactions to the findings of the Reports 2 and 3 that were elicited in a series of regional meetings conducted in Afar, Somali, Oromiya, and SNNP Regions in August-September 2010. These meetings included regional government and a few federal officials, NGO workers, herders, and traders. In the report we have used quotation marks (“”) to indicate direct responses from participants. The size of the meetings averaged about 16-20 participants and at all meetings participants were broken up into discussion groups of 5-6 members to encourage more conversation.

We highlight five key policy areas: (1) land use, especially in the highly productive river valleys; (2) land tenure; (3) settlement, sedentarization, and education; (4) livestock trade; and (5) data needs to enable evidence-based policy making. We feel these five areas are consistent with the government’s goals of agriculture-led industrialization, job creation, and private-sector led growth. There is considerable overlap among the policy topics, but the general message is that policies are needed to: (1) sustain the efficient use of rangelands by protecting the importance of pastoral mobility and avoiding sedentarization as a general solution to pastoral development problems; (2) recognizing existing tenure systems that insure pastoralists access to land and water resources, so they can produce their tradable products;(3) pursue both regional and domestic trade rather than mainly overseas international and high risk markets; and (4) use the growth of towns and growing interest in education to allow a more diversified future with improved well being without undermining livestock production systems. Limits of space and available time did not allow us to include all policy-relevant topics important to pastoral development in Ethiopia in this final report, so we will focus on what emerged around these five most important issues.

In the previous report (Report No. 2 on ‘scenarios for pastoralism’), we laid out a contrasting narrative for the future of pastoralism. One was that of a vibrant and growing pastoral economy that contributes to local and national welfare and economies, supports a range of different market options, builds on conflict resolution mechanisms between government and local communities, secures pastoral land rights and mobility, and provides economic options for those exiting pastoralism. The second was that of a depressed and unviable pastoral sector that depends on food aid, aggravates existing conflicts, results in higher national consumer prices for animal products, and leads to steep declines in foreign trade earnings. The first scenario recognizes the importance of pastoral production and trade to the national economy, the significance of livestock mobility and flexible tenure systems, and the contribution of regional export (cross-border) and domestic markets to the economy. The alternative scenario was premised on replacing pastoralism with alternative land use systems and investments at high economic and environmental costs, misunderstandings about pastoral tenure systems and the importance of mobility, and an over-emphasis on international animal and meat exports regardless of the costs and benefits to local economies and producers. The evidence used to define these two scenarios is contained in report No. 2.

Report No. 3 laid out the policy options that could lead to either of these two scenarios or some point intermediate to the extremes. We will present in this final report first the key points made in report No. 3 for each of the five policy areas identified above. We will follow this with a description of the questions we posed participants in the regional meetings and a presentation of their responses. We close each section with a brief summary of the key points made by participants in the regional meetings. The document then closes with a few closing points we drew from the regional meetings that merit some attention.

Policy Area 1: Land Use

In report 3, we wrote that the Ethiopian government has two main options with respect to land use development and the exploitation of pastoral key resources, and the choice of these options will largely determine the future of Ethiopian pastoralism. The first option recognizes that mobile pastoralism contributes to local, regional, and national economies and its alternatives in drylands are minimal at least for the foreseeable future. The example of West Africa shows that it is legally possible to frame laws that protect pastoral land rights. 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.

The second option is to pursue non-pastoral land use activities, especially large-scale irrigation, in critical pastoral resource zones. The obvious site for these options is the important river valleys that traverse pastoral rangelands.

Our benefit-cost analysis suggests that unlike pastoralism significant public subsidies favor irrigation. Many private irrigated sugar schemes in the Awash, for example, pay little or nothing for the maintenance of irrigation infrastructure, for water, or for the initial costs of land development. Even then our best effort at comparing the profitability of livestock, cotton and sugar in the Awash valley suggests that computational uncertainties abound, but rough productive parity is probably a fair characterization of the relative competitiveness of these alternative agricultural systems, with one key caveat: most of the riverine irrigation often is highly subsidized by government and/or donors, while competing pastoral systems are not. Real world uncertainties also complicate these comparisons and need to be considered in land use policies in drought-prone areas. In particular, global climate variability and change are likely to impact both rainfall and river flow levels in the Ethiopian lowlands. Any decline or increased variability in rainfall from year to year – both of which are possible – also would tip the balance towards mobile livestock production and against dryland farming or water-demanding forms of irrigated agriculture.

Between these two extremes—policy support for mobile pastoralism and large-scale irrigation policy—lie other policy options. For example, irrigated or flood recession agriculture mixed with livestock keeping is a customary farming system in some areas of lowland Ethiopia, and a new system of market-oriented production in others. As practiced by smallholders, it can make efficient and intensive use of small irrigated areas combined with seasonal grazing on rainfed pastures. Government policy has encouraged this kind of agricultural system, which probably holds more long-term commercial promise than mono-cropped large-scale irrigated estates. Small holder irrigation is a useful component of lowland agriculture and merits continued support in many cases, but it is at risk from the expansion of large scale irrigation projects and will never be able to accommodate more than a minority of pastoralists.

Another land use option is dryland farming, an occupation that poorer ex-pastoralists frequently adopt out of necessity rather than choice. In the lowland areas the risk of harvest failure is high (3 out of 5 years in many areas) and likely to increase in the future if global climate change brings more erratic or lower rainfall levels. The expansion of dryland farming into zones of lower rainfall should not be encouraged as a settlement policy because of its excessive risks and rates of failure.

In the regional meetings we asked about issues of pastoral land use and sustainability: Do you think it is true that in order to take advantage of Ethiopia's vast rangelands and environmental variability, livestock herds will need to remain mobile and mobility will continue to be important for pastoralists? What are the advantages and/or disadvantages of maintaining mobile pastoralism?

In Oromia Region there was considerable discussion about how much mobile pastoralism really exists today—in Somali Region this was not much of an issue since mobility

is widespread there. The participants from Oromia indicated that mobility still is important but mainly occurs during long dry seasons and droughts. It was noted that mobility increasingly is restricted to moves within the wereda, but in bad years there are even movements of 200 km or more, even between Kenya and Ethiopia. The Oromia group agreed on the need for livestock herds to remain mobile to maximize utilization of spatial and seasonal variability in availability of forage and water. Mobility should not be limited to movements within one region or even one country. It could involve cross border movements. “Pastoralism in dry areas with environmental uncertainties can only remain productive if it involves some level of mobility.” Other advantages of mobility were said to be: assist the integrity of the eco-system; improves productivity; and helps to cope with droughts. The disadvantages were noted to include: the potential for igniting conflict and makes access to services difficult and more expensive. It was agreed that policy makers should be informed about the ecological and economic implications of mobility, in order to make the right decisions. In Oromia they indicated that with “global climate change becoming real,” mobility will become more important.

Some other benefits of mobility were noted to be:

- It helps the ecology of the area by not keeping animals too long in one location;
- It makes good use of available rangeland resources;
- It allows herds to adapt to different rainfall patterns across territories;

Some concerns about other aspects of mobility were noted to be:

- It can increase conflicts (there was much debate about this point and local herder participants said it was not a problem because communities reciprocate with others for grazing rights—mobility is not a reason for conflict);
- It can facilitate transmission of livestock diseases;
- It limits access to economic opportunities.

In Somali region it was agreed that mobility is the best strategy to utilize resources efficiently and improve livestock health and productivity. One Somali herder from Fiq noted that “without mobility there can be no livestock, and without livestock there can be no pastoralism.” In Afar another participant noted: “We don’t hate to settle. It is the variability in resource availability for our livestock that forces us to move. It is the only way we can make a living out of the harsh environment.” When participants were discussing the effects of livestock mobility and pastoralism on the environment, a Somali herder in the group noted that: “There is no overgrazing by livestock—it is the lack of rainfall that makes areas look bad. I know areas that were said to be overgrazed but when the rains returned to normal, they were full of grasses and good for livestock.”

For the Afar regional participants, we asked additional questions about mobility:

Team: Is there an area of Afar where there is more mobility?

Yes, less restrictions on mobility in the north where it is dryer. We have migration routes for animals from our regional capital to the Terra depression, bordering Tigray. During dry periods, herders from the central part migrate to Amhara, Tigray, or the south-- the swamp area near Gawane about 150 km from here (Awash town). Cattle migrate from the central to the south. Three categories of years determine the extent of mobility: normal year, drought year, and severe drought year. In the normal year routes of migration are short. In Awash area however, mobility is more restricted because of conflict and the irrigation activities.

Team: Are there areas that the irrigation schemes keep open so the animals can water?

The problem is not the water. It is that when they go for the water they go for the crops and conflict occurs. And they do have plans that after harvest the animals come to the crop production areas so they can graze. Around here (upper Awash) they are not nomadic anymore.

The Afar also noted that because federal security forces have to secure the key transport route to Djibouti and because others areas are insecure, the Afar must trek their animals very long distances (>150 km) in order to get access to alternative grazing areas. In this way they may even be more mobile in some areas, than they were in past. One Afar woman participant argued that pastoralists should be settled and provided with alternatives to support their livelihood. She argued that mobility slows down development, service delivery, etc. and she cited the suffering of pastoral women when the family must move. She said it is the women who dismantle the house and carry it by camel to take it to the new destination and it is women who build the house again. At times they even give birth on the route and this sometimes causes maternal and child death. Other Afar participants countered this position and were in favor of ensuring herd mobility in the future to efficiently use the dry rangelands.

In the Southern Nations, Nationalities, and People's Region (SNNPR) meeting, mobility was identified as a key strategy to use water and pasture in an efficient manner. It was noted that the benefits of mobility have to be weighed against the danger of livestock theft and the potential transmission of livestock diseases. However, mobility is still practiced by herders in SNNPR. At the September dialogue meeting the group said that the need for resource sharing and mobility often leads to peaceful co-existence, not to conflict. The pastoralist in the group said that mobility never causes conflict. He said it is immobility or factors that impede efficient mobility that cause conflict in pastoral areas. From his perspective mobility facilitates resource sharing, reciprocity, and peaceful co-existence.

We also asked: There are several key perennial rivers that cross pastoral areas in Ethiopia and these are important for sustaining pastoralism but also hold potential for irrigation. In your area, what kinds of tradeoffs are there between irrigated agriculture and pastoral production and can both of these activities be supported without hurting pastoralism?

Some Oromia participants felt that there should be more careful consideration of the effects of rainfed farming and the private enclosures that often are associated with it. The irrigation issue is not very relevant to the Boran situation in this region, but dryland farming is increasing and is constricting grazing available to pastoralists. One participant felt that more rangelands have been lost to dryland farming and enclosures than to bush encroachment, which is a special problem in Borena Zone, Oromia. What makes the topic of dryland farming very complex is that "many Boran pastoralists themselves are farming and enclosing lands in the rangelands." In terms of irrigated farming, this also was seen as a complicating factor in Somali and Afar regions as many elite (wealthy) community members have pursued irrigation and been allocated irrigation plots. As noted earlier, there also are outside commercial investors who have been given rights by the government to farm large tracts of land, and some of these are in key pastoral production zones in Oromia and Afar regions and South Omo, SNNPR.

In Oromia Region irrigation so far is not a major threat to pastoralism. However, there are a lot of pastoral lands that have been lost to the Fantale Irrigation scheme (in excess of 20,000 has) and regional government officials at the Adama meetings were in favor of this scheme. According to those who favored the Fantale Scheme, they noted that "it was a small holder scheme owned and run by pastoralists themselves." They noted that it is based on a land use system that is supposed to take into consideration both livestock and crops to make their production complementary. The irrigated land is supposed to be divided for both forage and crop production, and livestock have access to crop residues. "There also is an open area for livestock to graze." They contended that the mobility of livestock has not been constrained by the scheme--at the Afar meeting, however, participants strongly disputed this claim. In a similar dialogue in Afar, Afar participants pointed out that irrigation schemes in some areas, have restricted mobility. Pastoralists in the Fantale area are supposed to have equitable access to

irrigable land, with each family allocated 0.75 ha. Regional participants in Afar indicated that no pastoralists with animals would want to settle on an irrigation scheme. One Afar participant noted that “settlement is not the solution in the pastoral areas. Everyone, especially in Afar, will not support this settlement policy.”

In Somali Region it was noted that lands currently cultivated along the rivers have been under cultivation for decades and they are cultivated by small holders (some are non-Somali resident farmers). The main issue is only lack of access by herders to the river to water their livestock. This at times causes conflict between the farmers and the herders, especially pastoralists cannot access river water. Legislation to enable herders to have access to the river bank to water their animals might resolve the issue.

Finally, on this topic we asked: Can the economics and benefits of pastoral production compete with irrigated farming?

There is a general recognition that irrigation investments are going to happen in the riverine areas, so the issue often discussed was how to make it complementary with livestock production. In all regions there was a concern that a land use plan needs to be put in place so that herder access to water and dry season grazing can be assured, and that communities know where irrigation is planned. In Somali Region the effects of the expansion of irrigated cultivation in pastoral areas remains to be determined. Some participants argued that intensive dairy production of camels and/or cows on irrigated plots would be even better than maize and other food crops, because there is a good local market for milk. At least a few participants noted that it is inappropriate to compare irrigation and pastoralism because the former receives government support and uses considerable inputs while pastoralism does not.

Additional points came out of the discussions of this topic that merit mention.

- The economic viability of the irrigation schemes was viewed as uncertain. There was a great deal of scepticism that these would turn out to be viable commercial enterprises. Generally the sense was that the impetus behind this effort was not economic but motivated by the government’s concern with encouraging pastoralists to sedentarize and abandon mobile pastoralism. One participant noted that in the riverine areas “if a comparison is made between pastoral and irrigated farming production, the pastoral production will do better; the sectors are unmatched . . . irrigation farming needs huge investment such as modern equipment and available water resources throughout the year.”
- The food security motivation behind the government’s irrigation drive was noted, but there was debate about whether pastoral areas were fundamentally food insecure, and whether the harvests from irrigated areas would be sufficient to ensure food security. Some Somali regional government officials were convinced that pastoralists are dependent on food aid, although it is unclear what data they are basing this on, except aggregate delivery figures from WFP.
- It was often noted that the production side of irrigated cultivation was getting more attention than the marketing side, and the marketing issue was fundamental, especially in many pastoral areas that are distant from major markets.
- When livestock production was compared to irrigated cultivation given current government investment patterns, there was a sense that irrigated cultivation of certain high-value crops, such as vegetables, might be competitive with livestock production if markets were nearby. When the question was posed, if you had to invest the amount of funds that is being invested in irrigation in either livestock or irrigated cultivation, which has a higher promise of economic return, livestock was the answer.
- There is a major disconnect in world view between the planners of the irrigation projects and the people who ostensibly are to benefit from these projects. Planners view

pastoralism as stagnant or backward, livestock marketing and contraband as two sides of the same coin, and mobility as the major cause of conflict. The regional population articulates an adaptive pastoralism that changes marketing strategies and species marketed in response to changing market conditions, livestock trade as the foundation of the economy and cross border trade as fundamental to the livelihood strategy, and mobility as critical to the viability of the livestock production system.

- In the regional meetings, there was general consensus that specific efforts have to be made to ensure the expansion of irrigated cultivation and livestock production complement rather than compete with each other. There was a sense that this will require more direction from government than is evident currently – the design of the irrigation infrastructure should have built in elements to minimize disruption to livestock production, such as watering points and corridors for livestock to transit.
 - If private farms come in, they should build troughs for the animals around their property to ensure livestock don't lose access to water.
 - Corridors to rivers need to be maintained among the cultivated plots so that access to river water is maintained in clearly defined areas.
 - Linkages between what is cultivated and livestock production can be explored (fodder crops, residues, rotational cultivation leaving some pasture in each season)

Some regional participants felt that the discussion of irrigation's impacts needs to be broadened beyond just economic benefit/cost analyses to look at wider social, environmental, and health impacts. One interviewee noted that there are serious health and sanitation issues associated with the Fantale irrigation scheme in Oromia, and there are Malaria problems associated with other government-financed irrigation schemes in the pastoral regions. The schemes themselves may only benefit the wealthier pastoralists who can have a plot and then rent or share-crop to a farmer, and then remain in the pastoral sector. A benefit/cost analysis should include more than economics, which some felt the 'Future scenarios' reports overemphasized.

The Afar region includes considerably more irrigation than other regions. Here is the Afar group's response to the irrigation question, and to additional probing queries from the team (this group included a disproportionately large number of government officials).

The government officials noted that by now it is the case that irrigated agriculture is more profitable than pastoralism in the riverine areas. When you go to the rangelands, it is pastoralism. The land in the rangelands is dry and barren, so there it is more profitable. In the Awash valley cotton or sugar is more profitable per land use area than pastoralism.

The SNNPR meeting participants felt it was too early to assess how livestock performed in comparison to irrigated cultivation as they have not had a long experience with irrigated cultivation. They also felt it was not possible to compare them to each other due to the lack of investment in livestock production in the area to date. Rather than an 'either – or' approach, they suggested ways should be found to allow the integration of the two production systems to the benefit of both. They have also emphasized the need for the consultation of the local people in every irrigation project planning and implementation. A 'participatory irrigation scheme' has been suggested by the FGD participants to reconcile irrigation with that of pastoralism in the region.

Team: How much use is there of the Awash river by pastoralists now? How much do livestock come down to the river?

We quote here: "Pastoralists use it frequently during the drought time when there is scarcity in the pasture, the barren, area. These pasture areas are all used for other purposes. They come when they have no other alternative than these river areas. When the flood subsides, they will come. When you see the region, there are broad categories. High potential,

riverine areas, suitable for all activities. The other area has moisture stress. With climate change there is less of this first kind than before. In between high potential and low potential there is a third class of land which lies in between. We need to see which system goes with each area. If the riverine area generates more income than traditional pastoral production, we should practice this there. But there is no broad answer: different areas have different potential and use. We need to look into which production system fits into each of the three areas. Pockets of high potential areas exist where we can practice agriculture, either in integration with livestock or alone. Mixed kinds of uses are in between. In the marginal areas I have reservations because of the current situation. When you talk to pastoralists they say they used to raise livestock, they had tall grasses, there was no barren land, and drought was every 15 years, but now when you see the region 70% is bare land. They are coming to town to look for jobs . . . I know pastoralism is the use of the low potential land that makes the most sense, but in the current scenario I don't see how it can continue. Pastoralism is full of uncertainty. . . . If you go to an irrigated area, you are secure. You can grow and get food, grow and sell the product for cash, or grow fodder. . . . Even the rangeland if we use groundwater, pastoralism can compete, but otherwise, pastoralism at this time is under a question mark. The main problem is that it cannot feed the people. You have skeletons, unproductive animals. They are using milk powder from shops because animals don't produce what is required to secure food. Increase irrigation and modernize it."

Somali participants also had many suggestions about the irrigation versus pastoralism question. We quote here:

Speaker A: "I would suggest to divide the issue into two: (a) the current situation (b) and the future potential. In the current situation, the livestock production could not compete with farming unless veterinary health centers, water wells and enough pasture are provided. And this is besides the diseases and the famine that hit this sector. However, irrigated farming needs huge investment such as modern equipment and available water resources throughout the year."

Speaker B: "Let us suppose that both sectors have equal shares of total investment."

Speaker C: "Definitely, the pastoral production will outperform irrigated cultivation (this person then provided a detailed numerical example of how much camels earn from milk sales in Gode area and contrasted the degree to which the value of these sales exceeds potential revenues from the same plot of irrigated farm producing maize)."

Team: In Afar are the people on the irrigation schemes the same as those in pastoralism?

We quote: "No, they are from the highland on the schemes. There are some Afar on the gardens. Lower Awash most of the farmers are Afars. The middle Awash it is a mix. . . . Most of the irrigated land is owned by the government (state farms). In Middle Awash 9000 ha of land developed for sugar cane production that state owned. The highland people often are laborers, they don't own the land. Sharecropping is common."

Team: Government or Afar owned?

We quote: "State farms are government owned. If the government builds dams, the Awash has potential of 60,000 ha. Here (upper Awash) it is 30,000. The government has allocated 20,000 ha to the Afar to grow sugar or to grow fodder. The regional government gives some support like seed, water pumps, and so on."

When you compare state-owned farms in Fantale, the Karayu are growing the sugar for Metahara sugar factory. When you compare the two, can you talk about the long term environmental sustainability? Sugar is grown to get short term returns. There is a quota from the EU that allows Ethiopia to export to EU, and we will get short term foreign exchange benefits. The agricultural experts at Metahara said that the sugar content of this cane is low quality and does not really merit the cost of transport. Therefore, can we really compare these two systems? We need to go back and ask if this is a fair comparison. Because the motivating factor is different. The sugar is generating a lot of money for the country. We need money for

generating welfare for the economy through development. Pastoralism is not geared to this. There are different objectives.”

Another participant stressed the uncertainty about the future he felt. “We can see the scenario of pastoralism in Afar. If you continue like this, can we have pastoralism in ten years? When they tell me what has been in the past in terms of vegetation, it is completely different now. If this is the situation, in the north and east of Afar it is hard to see that pastoralism has a future. With irrigation, we see questions like how long can we maintain the production of sugar. Middle Awash has a lot of issues. Land is abandoned due to salinization. If we flood it, salinity is a problem. When we see about these things, it is complicated, and it is hard to say what is possible or not. We need information. We don’t know about sustainability.”

Summary for Policy Area 1, Land Use:

- a) There was generally an acceptance that this expansion was going to happen, so the attitude in the regions was how to manage this change. This already was the case in Somali and Afar Regions and the question was what type of irrigation and how it could complement rather than compete with pastoral production
- b) The economic viability of many of the proposed irrigation schemes was viewed in the regions as uncertain. There was a great deal of scepticism that these would turn out to be viable commercial enterprises, especially because of high infrastructure and maintenance costs and marketing problems. Generally, the sense was that the impetus behind this effort was not economic, but largely focused around the government’s sedentarization campaign. This was a point that we heard in many of the meetings, although government officials defended irrigation as a means to promote food security (see note below) and to raise local incomes in the pastoralist regions.
- c) The food security motivation behind the irrigation drive was noted, but there was debate about whether pastoral areas were fundamentally food insecure, and whether the harvests from irrigated areas would be sufficient to ensure food security. There also was concern that the water would be insufficient in dry or drought years to irrigate as much land as the government has proposed. Notably, the food security argument was usually made by government participants rather than others present at the meetings.
- d) It was often noted that the production side of irrigated cultivation was getting more attention than the marketing side, and the marketing issue was fundamental. This was one of the main issues pointed out in the proposed Somali irrigation schemes in Gode and other areas.
- e) There is a disconnect between the government’s view of irrigation projects and the people who are to benefit from these projects in the regions. There is a generally accepted view of pastoralism as a stagnant or backward sector and mobility based on resource scarcity as a cause of conflict in the regions. The regional population and communities articulate a different view of an adaptive pastoralism that changes marketing strategies and species marketed in response to changing market and ecological conditions, livestock trade as the foundation of the economy and cross border trade as fundamental to the livelihood strategy, and mobility as critical to the viability of the livestock production system. There is a wide gap between these different world views. Once again, the economic contributions of pastoralism to local and national economies is one way to mediate this difference but if the motivations to transform pastoralists are not based on economics, then that argument will not hold.
- f) The regional view from participants is that of irrigated agriculture as a complement to pastoral production. The government view is irrigated agriculture as a substitute to or replacement for pastoral production. Once again, the type of benefit/cost analysis of pastoralism versus irrigation that was conducted by the study team is one means of

empirically addressing this debate, but again only if economics and profitability are major reasons for the government's investment in irrigation.

- g) In the regional meetings, there was a general consensus that specific efforts have to be made to ensure the expansion of irrigated cultivation and livestock production complement rather than compete with each other. There was a sense that this will require more direction from government than is evident currently – the design of the irrigation infrastructure should have built in elements to minimize disruption to livestock production, including points for watering and animal transit points. The difference between viewing irrigation as a replacement rather than a complement to pastoralism is currently hindering this discussion.

Policy Area 2: Land Tenure

In report 3 on policy we wrote that the wording of the constitutional clauses pertaining to the land rights of farmers and pastoralists is remarkably similar, but the reality has been quite different. With 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.

Ethiopia does not need a wholly new or 'modernized' system of pastoral tenure. Instead, it needs to build upon existing customary systems and clarify their relationship to government – a process of legal and administrative evolution, not radical change. To do this, Ethiopia needs specific laws that put into practice the pastoral land rights that are enshrined in the country's constitution.

There are significant differences between the governance systems of the pastoral Oromo, Somali, Afar and South Omo peoples. No single formula can specify in detail how these diverse customary systems of resource control should interact with government. However, under Ethiopia's decentralized federal structure, regional authorities have the ability to adapt national legislation and guidelines to regional circumstances. Outlined below is a framework of national-level laws that could guide these local policy adaptations. They should be phased into practice over a 5-year period.

Recognition of livestock mobility:

Mobility, a key to pastoral risk management in drought, has been particularly controversial in Ethiopia. The government has moved from an explicit goal of sedentarization to one that encourages 'necessary measures to be put in place to encourage pastoralists to settle voluntarily' (Ethiopia 2005), but this remains a long way from viewing mobility as a positive response that should be supported by policy. Mali provides an example of a comprehensive set of laws to preserve livestock movement that can have relevance for Ethiopia's pastoral lowlands. Pastoral routes are classified as part of the public domain and under government protection (Article 52 in Malian law), and movement is sanctioned for purposes of nomadism or transhumance 'across the whole national territory' subject to restrictions on protected areas and animal sanitation requirements (Articles 4, 5 and 14). This policy measure would be worth considering for pastoral areas of Ethiopia, especially in Somali and Afar Regions where seasonal movements often entail long distances.

Protection of pastoral resources:

Losses of pastoral lands have occurred on three major fronts: to irrigated agriculture, wildlife and conservation interests, and agricultural encroachment both by former pastoralists themselves and by neighboring non-pastoralists. That Ethiopian pastoralists have developed customary common property land tenure systems is well documented. Without legal guarantees, pastoralists have no security of tenure if individuals or outside interests wish to use

their land. Commercial development, extensions to the road network, improved security, and population pressure that has forced farmers to leave the highlands have increased the ability of outside interests to appropriate pastoral property.

Another land issue that recently has emerged in Ethiopia concerns the current practice of leasing or granting land to national and international commercial interests. 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.

The feasibility of some form of land certification in the pastoral areas, probably on a community or group basis, that would secure local land rights should be considered. The Ethiopian government already is successfully involved with rural land certification in cultivation areas of the highlands. Registration or certification also would provide some protection against the current expropriation of pastoral lands that presently is occurring. The key will be to seek a land registration format that secures pastoral land and water rights, but does not compromise mobile pastoralism in the lowlands (Ian Scoones, personal communication). Research on different land registration/tenure models that would work in Ethiopia's pastoral areas is sorely needed at present.

Arbitration and enforcement procedures:

Administrators and customary authorities can usefully mediate between the interests of competing pastoral groups and individuals. One solution to this problem is for the authorities to promulgate procedural as well as substantive land law. This approach would specify the institutional framework within which interested parties could legitimately put forward their claims to resources, the administrative/ jural institutions that should process these claims, and the criteria for choosing between competing claims.

We asked in the regional meetings: Do current land tenure systems help to facilitate livestock mobility and pastoral production generally? Do you feel that pastoralist access to land is secure for the future or do you believe official legislation by the government is needed to protect pastoralists' land rights? What are the main threats to rangelands in this region?

Most participants knew little about what the official land tenure policy was in their region, but many indicated that communal and other lands needed some legal recognition in the future. However, local participants indicated that rangelands were not open to anybody and herders from different clans and areas had to seek permission from local communities and elders before they grazed certain locations. There are local tenure rules in place for controlling grazing and land rights but many felt government policies often did not acknowledge them. There was considerable debate in Afar region about whether or not there was an official regional land tenure policy in the area, with some government officials saying that a land policy has been approved and discussed by local elders--and what remains is the development of the implementation guidelines of the policy--and other community members and officials from the region arguing that there is no land policy that locally has been approved. Both Afar and Oromia regional officials said there was a land policy being developed, but it has not been finalized or approved. Again, local non-government participants highlighted the importance of the government providing legal rights and protection to communal pastoral lands. Most participants indicated that there needed to be regional legislation to insure that pastoralists do not continue to lose valued rangelands.

As noted earlier, a key threat to pastoralism highlighted by regional discussions was commercial investment by outside investors who receive land leases from federal and regional governments often without involvement of pastoralist communities. This can be a problem as there are usually existing claims on all lands in pastoral areas. As one Somali participant noted, “all land is claimed by some group, clan, or individual pastoralist. There are no vacant lands in our region.” That means when land is given to an investor it is a clan’s or individual’s land that is involved. One interviewee noted that the problem was very severe in South Omo area, SNNP where 250,000 ha of ‘vacant land’ has been identified for agricultural investment, and 160,000 ha already have been awarded to commercial investors, including some international investors. In this case, conflict has ensued with incidents of violence against workers on one commercial farm, while it is said that pastoral communities in the area no longer will cooperate with the local and regional government authorities. The threat of outside investors was highlighted in Afar region but did not seem as large a problem in Somali and in Oromia. One participant noted that these outside investments are heavily subsidized by the government, similar to the way that irrigation is. “Why does pastoralism not benefit from subsidies?”

In another discussion the issue of certification, which is given for individually-owned plots in the highlands, needs to be available for communally owned pastoral lands. “Pastoralist access to land is not secured for the future unless protected by law.” Extensive dryland farming in some areas and cultivation in valley bottoms and other key resource areas, private enclosures, settlements, and political decentralization (which enforces boundaries) all compromise mobility and limit access to natural resources for pastoral use. The major threats to the rangelands in Oromia are identified as: dryland farming, private enclosures, and bush encroachment. Both in Oromia and Somali regions the loss of grazing land due to internal factors, such as private enclosures by herders themselves, was emphasized. These enclosures could be for grazing or for cultivation (or they could be for making claims to land under conditions of uncertain land rights). There are certain locations in Borana and Somali region especially along key market routes, where private enclosures were said to be a serious cause of pastoral land loss. Where rainfed cropping is attempted, failures of 3 out of 5 years are not unusual. In Afar it was concluded that the current land tenure and land use practice do not facilitate pastoralism based on livestock mobility, but rather impede or even destroy it.

In the SNNP meeting, the group argued that the existing tenure system facilitates rather than constrains mobility. The clan based system where elders determine who can access what resources when is still functional and viable. It is, however, under threat by the expansion and encroachment of irrigated farming in the area and will require official legislation to deal with the situation.

Summary for policy area 2, Land Tenure:

- a) The process by which land is being granted to outside investors in the riverine basins is not well understood by people in the regions. This policy should be better articulated so local communities are aware and to avoid potential conflicts between local communities and outside investors and their farm workers.
- b) The land tenure policy process generated much debate, especially in the Afar region. There is a looming problem in that the government view of land rights is that by identifying lands that can be irrigated, the land falls under government domain to dispose of but this does not match the local reality of pastoral tenure systems where all land—even what outsiders consider to be “vacant”—has local claims to it. For example, in Somali Region clans and sub-clans claim ownership to all lands in the region, even those that only are used very intermittently. The lands in question are frequently characterised by a dense network of clan management structures by which land access and rights are recognized and managed. The potential for this to

- lead to misunderstandings on the part of outsiders and government is prevalent and likely to lead to disputes and conflict.
- c) We found people in the regions willing to adapt customary land use systems to incorporate the new irrigation schemes, but we did not get a sense that they were being consulted to develop a locally acceptable management scheme. We think it would be a good idea to place more emphasis on local compromise and consultation with impacted communities (including more than a select group of elders but also youth, women, and local pastoralists and agro-pastoralists).

Policy Area 3: Settlement, Sedentarization, and Education

In report 3 we wrote that to be effective, increased investment in pastoral areas would need to be matched by fundamental changes in some long-standing aspects of Ethiopian pastoral policy. Settlement policy is one of these. The problem is not that Ethiopia has a pastoral settlement policy, but that it has a settlement policy that does not acknowledge the critical importance of mobility. By rural Ethiopian standards, pastoralists tend to be reasonably well off (Davies and Bennett 2007). Reasonably well off pastoralists have no reason to want to become poor peasants, and since Ethiopia already has a surplus of poor peasants, the national economy has little to gain from creating more of them. Simply settling people is no solution.

However, the reality is that many poor, ex-pastoralists reside in pastoral areas and require alternative livelihoods to pastoralism. Settlement policies, therefore, must take into account the importance of maintaining mobility but also dealing with growing human populations who have been forced out of pastoralism through drought or other shocks or, less frequently, by choice. This reality suggests the need for a new approach to pastoral settlement that is based more on employment prospects than on dwelling types, as follows:

- Education is essential if pastoralists or their children are to exit from pastoralism into formal sector employment, to which many aspire. However, educational services and literacy rates in pastoral areas are amongst the lowest in Ethiopia. A commitment to improved pastoral education should be the center piece of the government's 'settlement' policy (see discussion below).
- Enterprise and skills training and micro-credit facilities in pastoral towns is needed for ex-pastoralists or those who have opted out of the system. Some of these services currently are provided by NGOs in selected pastoral areas but would need to be scaled up. Different forms of non-pastoral occupations can support, even strengthen, the pastoral sector, while other activities, such as charcoal making, can undermine and constrain it. For instance, activities that keep value added in the pastoral sector and promote region-based development, such as sustainable rangeland use (e.g., acacia sap and wild aloe harvesting and animal feed collection), veterinary and input retail supply, post-slaughter livestock processing and distribution (e.g., hides and skins, meat processing), animal fattening combined with marketing, nature-based tourism, and dairy sales and processing. Because they are strongly linked to pastoral production and generate economic multipliers in pastoral areas, they can be called *good forms of diversification* (see Little 2009).

A point that needs to be made about settlement is the ecological problems and localized overgrazing associated with restricting mobility and encouraging pastoral sedentarization. The number of animals is not large enough to lead to ecological problems in Ethiopia's rangelands, but the spatial distribution of them does lead to ecological problems. McPeak (2003) has written about this for northern Kenya, and there are a variety of studies on the 'borehole effect' in various African rangelands. In a comparative setting central Asian states are currently experiencing a major problem with this issue to the point that there is fear of a sectoral collapse.

People are not migrating with their animals, and this is leading to major concerns about the environmental sustainability of livestock production and declining profitability and herd sizes. This is generally seen as originating in the lack of state support for migration to remote pasture areas that ended when the Soviet era ended. Ethiopia might wish to look at experiences in other countries to think through some of the larger impacts that may result from policies that support settlement growth in rangeland areas. We suggest that the goal of settling people be pursued with some caution, and with an awareness of the tradeoffs.

Education will be important for pastoralist welfare and economies in Ethiopia over the next 15-20 years. It can offer a window of access to opportunity for self development and employable skills training among youth. Because well-paying job opportunities in local areas are few, many of the educated are likely to migrate out and remit income back to their home areas. This process already is underway and is likely to increase in the future. Pastoralists in Somali and Afar regions are relatively better positioned and already are benefiting from the flow of remittances. These economic benefits are likely to grow in importance in the future, especially as education improves.

Mobile schools of semi-permanent structures mean that when the community must move because of drought or conflict they can shift with minimal losses. The non-formal schools, including mobile schools, should be scaled-up urgently to improve access to education. However, the scaling up of non-formal education creates an increased demand for both human and financial resources and these needs to be addressed by the government. At the same time there is a need to sensitize and mobilize communities to ensure that children regularly attend schools.

Successful and innovative approaches to education provision around the world can inform and inspire new approaches for pastoralists in Ethiopia, including open and distance learning; primary-level distance education; formal education and revised curriculum to increase local relevance; blended learning¹; the role of community radio and 'edutainment'², and entertainment education³ (Krätli and Dayer, 2009). There also is a future concern about the need to improve the quality of learning. This calls for strengthening the performance of school facilitators and supervisors. Other challenges include curriculum, equivalence and certification, linkages between non-formal, the formal school system and community. If alternative basic education is to be mainstreamed by the government, it needs to receive adequate resources, management and programmatic inputs.

Education expands pastoralists (both men and women) access to non-agricultural livelihood activities and also opens opportunities for improved business practice. For those leaving the pastoral system, education provides them with a risk management tool to pursue a livelihood option that is able to generate income and benefits to the pastoral economy.

In the regional meetings, we asked: Do you agree that small and medium-sized towns are growing rapidly in pastoral regions and that they often outpace the growth in rural populations? If you agree, what factors do you think are responsible for the growth of towns in pastoral areas?

The growth and development of towns is a reality according to most participants and is a trend that is document in Report 2 on 'future scenarios.' However, it was important to

¹ Refers to combining instructional modalities (or delivery media) and combining instructional methods.

² Refers to educational entertainment. It is a blend of Education and entertainment.

³ This is a way of using media for entertainment and education. "Media messages can be designed and produced with the specific purposes of both entertainment and education. Using media messages in this way can increase knowledge of and interest in an issue of educational relevance, or influence the audience's attitude towards a subject, either by introducing alternative points of view, or working at a more subconscious level by introducing new models of social norms and behavioral patterns; in other words, 'informal learning' through the vehicle of entertainment." Krätli and Dayer, 2009: 24).

understand if the growth was a result of in-migration from other regions, and whether or not the local pastoralists own the business and other services in towns. “You also must know what kinds of services are available since all towns are different.” There was debate about the importance of medium-sized and small towns for the pastoralist economy, especially if most of the businesses are owned by non-pastoralists or outsiders which seem to be the case in Afar Region. It was agreed that towns are especially important for ex-pastoralists who have lost their animals but remain in the regions. In Oromia there also was a sense that many small and medium-sized towns had little infrastructure that could be used for supporting value-added industries and other sources of employment. Nonetheless, most participants agreed that their growth were a significant recent phenomenon and that government should install appropriate infrastructure and encourage private investment that strengthens the positive links between towns and rural pastoral sector.

In terms of the factors that mainly are responsible for town growth, lots of discussion was generated. It was noted that “some towns have come and gone due to conflict and war, re-emerging after the conflict is resolved. Other towns came up because of the decentralization policy and the creation of new woredas and woreda capitals.” Some towns were established around permanent water points and others emerged because of increased population or the existence of vibrant livestock markets (especially markets that serve the cross border trade).

Other factors that were noted to be responsible for the rapid growth in pastoral towns include:

- Concentration of social services, including food aid, in towns;
- their role in facilitating income diversification (especially employment) and investment strategies that increase rural-urban migration;
- Expansion of government infrastructure and facilities (including availability of mobile phone connections), especially in new woreda centers;
- Government-sponsored settlement programmes, especially centered around irrigation projects;
- Conflict that forces people to seek security in towns (Internally Displaced Persons[IDPs] in some areas);
- Drought and poverty that push pastoralist ‘drop outs’ to town.

In the regional meetings we asked: Education lags in pastoralist regions compared to other parts of the country. What role do you see formal education playing in the future of this region, in terms of:

--jobs?

--migration and remittances?

--increased opportunities for women?

--support of pastoralism?

This question did not invoke as much debate as others, and discussion focused on how to deliver education services to pastoralists as well as the advantages/disadvantages of formal education. It was generally agreed that formal education will be critical for pastoralism and pastoralists in the future. As one participant noted: “There are still major issues about how to provide social services, such as education, to mobile pastoralists who are not in settlements.” It was also noted that the formal schools are to a great degree dependent on the non-formal education (NFE) schools or on the alternative basic education (ABE) programs. Many pastoral children pass through the NFE before moving to formal schooling. Education has become a concern for those pastoralists that own large herds, and there are good chances that all the children from these families may not go to school-some have to remain behind to herd cattle. In some areas there are signs of increased numbers of girls going to school compared to boys.

On the positive side education was seen to facilitate:

- attainment of jobs;
- gaining key positions in government and NGOs where they can influence/lobby for policies and development programmes for pastoral areas'
- migration and remittances for those educated who are employed and can send money back to pastoral areas—the remittances were seen as very important and some pastoral communities have educated members who work abroad and send home considerable funds (especially Somali Region);
- increased opportunities for women and their participation in development;
- improve pastoralism in cases when educated individuals return to assist with trading and other pastoral-related activities, or serve as extension/development agents for pastoral communities;
- can help to fight poverty;

One Somali participant said, "Education is not only an opportunity for job creation but it is also a sustained process that will continue to produce local professionals that have a blend of pastoral values and the advantages that education could bring in terms of diverse thinking".

On the negative side it was felt that formal education:

- can lead to labor shortages at the household level;
- educated youth may not want to assist with pastoralist activities.

The respondents felt that more government efforts should be made to increase secondary and post-secondary education opportunities; target pastoralists for assistance to attend universities; and deliver mobile education services to herders in remote areas.

In the SNNP meeting, a participant noted '...there are those who feel that they have missed something by not being educated...so they are sending one child, others have gone from one child to two...' while another noted '...when people saw the educated children from our community, especially the girls, providing financial support and building a house for the parents...they got motivated to send their girls to school.' Clearly there are major changes in attitudes toward education and the role of education in pastoral areas.

Summary for policy area 3, Settlement, Sedentarization, and Education:

- a) The growth of small towns was a fact noted in each of the regional consultations. The regional participants identify these towns as important components of local life and recognize the critical role they play in the economy and as a place that can support people who are no longer in the livestock economy.
- b) They would like to see more support of the human capacity (e.g., skills training for employment and business owners) and infrastructure in these towns to locate value added processing activities that build on both the livestock and agricultural economies.
- c) In general, there was a desire for a policy that supports settlement as it is occurring rather than a general policy of sedentarization. The economy is very dynamic in the different pastoralist regions and people often are settling of their own will, and the implications for water, electricity, human health, sanitation, security, land use and conflict, and impact on local economies require study and action to ensure the growth of these towns is beneficial.
- d) Education was highly desired and is seen as a pathway to the future. This presents a great challenge and opportunity for the future of pastoral areas.

Policy Area 4: Livestock Trade

In report 3 on 'policy' we wrote that a variety of studies have indicated that formal live animal and meat exports are almost exclusively reliant on livestock obtained in pastoral areas. Recognizing that the live animal and meat export markets are dependent on animals produced in the lowlands, there is a strong case for public investment in certain market-related

infrastructure, such as market feeder roads. Connecting producers and consumers / processors is a critical step. Legese et al. (2008) and Aklilu (2002) provide some specific suggestions. Besides standard and obvious steps (water, shade, fencing, ramps in markets and roads connecting markets) but noting that unless these are identified as real needs they may not have any impact. Other activities such as building up and regularizing feed markets, improving availability of consumer goods in markets next to livestock markets, ensuring regular and strategically defined market days, and moving market transactions from dyadic negotiation to auctions should be investigated.

Perhaps as important as infrastructure is organization. Most producers are relatively small scale producers. To make marketing more effective, producer organizations can be formed to capture economies of scale in marketing. Desta et al (2006) present an example of such an organization formed in southern Ethiopia in response to the meat export market expansion. Groups could also be helpful in information dissemination and input purchasing. Of course, groups confront collective action and management issues that are not applicable to household production. To the extent government can provide support and a legal framework conducive to fostering collective action among producers that could be an important step toward improved market functioning. The infrastructure and organization efforts should be seen as complements – either in isolation is not likely to have an impact, but the combination is.

Improving animal feed markets has emerged as an area related to marketing that needs more research and development. The government has a role in ensuring quality standards are met in this market, and it would probably be the case that a benefit-cost test of investment in research on least cost rations would come out positive. This will require the creation of national certification standards for the feed industry. The regional research stations in collaboration with ILRI could make immediate steps to identify feed production and conservation technologies that build on what is available in each region of the country. Using technologies such as Near Infra Red Spectrometry (NIRS), policies should be aimed at providing producers information on feed quality to develop this market on a more rational foundation. There is growing use of feedlots. It would be useful to investigate what is the proper balance between fattening in the lowlands for final finishing in the feedlots compared to having more of the fattening take place in the highlands. This could be seen as a research and development effort that will take place over the next five to ten years with a goal of developing technical extension information to deliver to groups starting three to five years from now.

With regard to the exports of meat, we begin with what we do not recommend. The 'creation of disease-free zones for export to the Middle East or OECD' does not appear to make sense. Given the economic problems this model has encountered in southern Africa and the fact that the trade agreements that fostered it have come to an end, it does not look to be a promising option. Second, the cost benefit analysis of Rich et al. (2008) indicate that unless complementary investments are made, notably in feed markets, chilled bovine meat export to the Middle East is not currently competitive with the prices of Brazilian and Indian meat. Either costs have to come down or Ethiopian meat will have to prove superior in qualitative terms to the products offered by competitors in other countries to merit the higher price charged to consumers.

We find investment in border posts, border markets, and support to ease the process of legally exporting live animals across regional borders (decreasing the bureaucratic steps required) to be promising. First, regional cross-border trade is very difficult and costly to try to control anyhow, so it is better to improve the efficiency and ensure at least some revenues from existing trade flows. Second, the government is missing out on the value of this trade. This has two significant impacts. First, it makes the government systematically undervalue the contribution of livestock production to the national economy. We have been struck in this research project by repeated assumptions that the economic value of pastoral and agro pastoral areas is essentially minimal. If one starts with that assumption, then we see how one could

think that it is economically beneficial to settle pastoralists down on irrigated farms. But if one recognizes that 95% of the export market is selling animals originating in the pastoral areas, considers the uncounted value of animal products such as milk, notes how the traction practiced in the highlands is not possible without the livestock produced in the lowlands, and calculates the loss of production that comes from taking key ecological resources out of the livestock production system by conversion to irrigated agriculture, the case becomes much less clear.

The second major problem is that the government ends up not taxing much of the cross border trade and thus does not have tax money to support public investments in veterinary service provision and expansion of this trade. We believe the EXCELLEX effort launched early in this decade merits another look and expansion to other areas. This is the kind of effort that could begin immediately, as the activity is ongoing. We would suggest that government go forward in discussion with participants in these markets to identify how this can be improved for all involved parties.

In sum, to bring the informal cross border trade into legal status would require improving prices and ease of marketing domestically through major investments in infrastructure, including additional customs and banking facilities on the borders, reduced administrative and paperwork requirements, and subsidies. These actions would be hugely expensive, of questionable sustainability, and might only re-direct the trade to other unofficial channels. Currently traders in Ethiopia's border areas need to traverse several hundred kilometers of territory to officially export their animals because of the glaring lack of banking facilities and customs posts. Further research on this topic, especially the benefits/costs to different actors in the system (e.g., herders and small-scale traders) and the modalities of financing and streamlining export requirements, is sorely needed.

A market information system such as the one developed by the USAID-funded LINKS project housed at ILRI could be expanded and improved. This would provide real time monitoring of the spatial evolution of prices in markets throughout Ethiopia. If market monitors are trained in using standardized assessment techniques, this provides a means for improving market efficiency by smoothing out spatial price differences for animals having similar characteristics in different markets in the country. We would note from early studies that developing a market information system is only one necessary step for information to lead to market efficiency. Producers have to be trained in how to use this information. This means either adjusting production techniques in terms of the kinds of animals marketed at a given age (as seen in the goat meat export market they are capable of change) or feed and veterinary techniques that improve the quality and thus price per head of animals in a cost effective way. But extension built around this information system is critical. This is already in place at ILRI, but could be revised to build on the technical capacity in place, such as SMS and mobile phone technologies.

In the regional meetings we asked: There are numerous livestock market channels in the country, including local domestic trade within the region, national domestic trade to key urban centers outside the region, regional cross-border trade between neighboring countries, and overseas exports to Middle East (which involves both live animals and meat). Economic analysis of these different markets show a strategy should emphasize regional (cross-border) and domestic trade rather than mainly pursue overseas international markets. Do you agree with this strategy and what are main advantages/disadvantages for pastoralists of these different markets?

There was general agreement with the above question about the importance of different markets. One person said "When you try to enter large international markets, we can't be competitive. But if you look at the region, we can benefit. It all boils down to policy and government interest." Participants wanted to know more about how to access the domestic

market. In Afar much of the discussion stemmed around why they are not able to tap live animal export markets the way that the Boran and others can (see discussion below).

The negative aspects of current cross-border marketing were noted. The disadvantages are the insecurity, the lost tax revenue, the complicated system of currency exchange and cross border diseases. If services are developed to confront these problems, this can strengthen the network. One participant especially stressed the negative aspects of this trade: "You know all these cattle bring what? Weapons, contraband, and illegal electronics." In response, another said "But these things have been happening from the time we were born. The next generation will still be talking about it. If we don't find a mechanism to recognize this trade, give them a good price, let them trade for hard currency, it will never go away. We have to find a way--these fears will always be there they will never go away. How can we make this formal so the pastoralists can benefit from the trade?" Most Somali participants emphasized the profitability of cross-border markets when compared to other markets available in the region and country.

Some participants, especially from the NGO sector, could not understand why the formal market in trade was not competitive with the informal trade. Why are the meat processing companies on the official market paying much lower prices (at least 50-55% lower in the Somali case), than what herders and traders receive from the informal trade? According to one participant, "this is very surprising since both markets often are selling to the same terminal market in the Middle East. Why can the meat companies and formal exporters not pay higher prices to the pastoralists?" There was a sense that the export companies should not blame the pastoralists for not selling to them when their prices are lower than the local and regional (cross-border) market prices. (The issue of whether the chilled meat export really was comparable to the live animal market was really comparable, since they are different products was briefly discussed but not adequately resolved).

In Afar the participants felt that their region was marginalized in terms of access to favorable markets. Here are their responses:

"I think the pastoral cooperative societies will increase to help with marketing and be more economically efficient. If they are efficient, they will have their own abattoir services and they will join the export market in the future. It requires a lot of work in the sector.

Team: What needs to happen?

"Capacity and skills, linkages between pastoralists and the export markets, and market infrastructure in these areas requires improvement and a lot of work. If we do this, I think the sector will be viable for the pastoral communities."

Team: Do you think the meat exports are better than live animal export?

"There are a lot of options with the byproducts. Hides and skins and other byproducts, they will encourage division of labor and specialization."

Another participant added: "One thing about the demand for local camel and cattle is confusing. The Afar versus the Boran and Somali, the others are getting more benefits from their animals. The market, the central market in Addis, you don't see Afar animals. The Afar may have the potential to be traded in Amhara and Tigray as a breeding animal only. It is not for fattening. The traders don't like our animals because of the horn and size."

Another issue was raised by participants. In Borana, the rangeland was noted to be in decent condition overall. In Afar one participant noted land: "... is degraded and even after rain you don't see any grasses due to degradation. *Prosopis* has invaded, there is no more rangeland here. Livestock production unless there is intervention in breeding and feed, it is hard to talk about livestock production in Afar. However, when you talk about sheep and goats, there is a high potential for the future. The goats eat the shrubs, so there is high potential. At the same time, this region is near the port, it is easy to export. We have constructed market holding ground (quarantine zones) in Afar region. In Mille there is a big quarantine being constructed by the federal ministry of agriculture."

“When you come to Sabure area, there is high sugar cane production. From this you get molasses and by products that are good for fattening. And there are marketing groups and cooperatives looking at fattening and exporting livestock. But it needs huge intervention from the government. When USAID helped us to import Boer goats and Dorper sheep from South Africa, breeding became possible and may help. The Afar animals are small. Live animals have a 30 kg export threshold. When we cross with the South African breed, maybe we can get there.”

“As we have said, grass species are disappearing, bushes are growing here. Goat and camel can survive on bushes and shrubs. In the future the camel and goat will be able to eat this. If you look at the cattle and the sheep, they are very weak; the camel and goat are better. For camels we can export them. [But] we need breeding help to make our meat better. (Even though it is not verified by current research, people who have started and stopped fattening tell us the Afar cattle are slow growing). Traders prefer the Borana even travelling greater distances to southern Ethiopia. We have to find out why Afar cattle are not wanted by traders. With the shoats we have started. The exporters want an animal to export, the owners can't find a buyer, the problem is the age. The buyers want below 1 year and 28-30kg liveweight to get a carcass weight of 16. We need a process of selection and we are working with ILRI now to help. . .For the future, we have the cash crop and the byproducts of the sugar, and we can feed these to the cattle and the sheep. The goats and camels can browse on the bush and shrubs and then we have opportunities for the future.”

In Somali region the following exchange was observed:

Speaker A: “I can say our livestock used to go to neighboring countries because local markets were not doing well, but recently, the domestic market strengthened. I mean that there is good demand locally here. One of the main disadvantages of cross-border trade was tax evasion. As a result, the government revenue is reduced and there is increased likelihood of government confiscation of your live animals in case of patrolling police or the border guards.”

Team : What could be done to make cross-border trade easier?

Speaker C: To facilitate cross-border movement much easier, the government must grant trade permits to Somali merchants, for the businesses must be given export licenses.

Speaker B: where should I go to get license?

(One participant noted that traders have to go to Dire Dawa to attain export license. One suggestion is that licenses be made available in Jijiga town, so that those who want to export on official channels do not have to travel to Dire Dawa.)

Speaker C: When I am in the process of exporting to Somaliland, where should I pay my tax?

Speaker A: Let me tell you that, the processing of papers must be shortened, and the amount of the tax must be reduced for cross-border trade.

Summary for policy area 4, Livestock Trade:

- a) There was a clear sense that cross border trade was an activity that was extremely difficult to stop by regulation since it was critical to the income generation for producers and the general food security of the regions.
- b) There was a sense that it does not make much sense to try to stop cross-border trade given the economic dynamism this sector fuels—in terms of business, food imports and consumption, and increased trader and herder incomes. It was noted in the Somali Region that food insecurity often occurs when the government halts cross-border trade.
- c) There was a sense that the government has a legitimate concern about security in the border areas, but also an argument that cross border trade is not the cause of insecurity. It also is a general fact that greater security would be beneficial to the trade.
- d) There was a willingness to market livestock through formal export markets if the distribution of border posts were expanded to make crossing officially feasible, and if policies such as the hard currency requirement were based on the realities of market

prices and market exchange rates—and if government regulations could be streamlined to reduce the very high transaction costs that traders incur in the formal market channels.

- e) The government of Ethiopia is truly overlooking an economic activity (cross-border trade) of critical importance to the livelihoods of people in pastoral areas. It also is of great economic benefit to the country, and could be of greater economic benefit to pastoralist livelihoods and the country if supported rather than hindered.

Policy Area 5: Data needs

In report 3 we wrote that good policy requires valid information and an institutional framework to systematically collect and analyze it. Unfortunately, there are large gaps in information on pastoral incomes, trade, and land use in pastoral areas that constrain policy formation. If the pastoral sector is to improve both due to the direct benefits to producers and to support the role they play in the larger economy, the government needs better information on production practices, pastoral household incomes, marketing decisions, and linkages of the pastoral sector to the larger economy. 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. 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.

Recommendation: the government could create a task force among CSA (Central Statistics Agency), Ministry of Agriculture and Rural Development, and other relevant bodies to address the information and statistical data needs for pastoral planning and policy. The goal would be the establishment of a set of pastoral economic benchmarks and an institutional framework, probably housed in CSA, to improve statistical data collection on livestock-related activities, including livestock trade pastoral income data. There is no reason why policy-relevant data on pastoral economies equivalent to what currently exists for cereals production and marketing cannot be regularly gathered and analyzed.

In the regional meetings we asked: We feel that there are large gaps in information on pastoral incomes, trade, and land use in pastoral areas that greatly underestimate the economic value of pastoralism. Discuss this point and what the policy implications might be.

There was a general consensus that data were available for many pastoral regions but that it was scattered among different sources and much of the NGO information was viewed as hard to obtain. What government had available for planning purposes was inadequate. The Afar and Somali participants especially felt that there needs be more data on the environmental impacts of irrigation and pastoralism on water availability, salinity, deforestation, and the general ecology. The sustainability of irrigation is a key issue and there is limited data on this. The Afar group suggested that:

- An institution should be put in place with a mandate to collect, analyze, document and disseminate information;
- National and international research organizations and academic institutions should conduct intensive research on Afar pastoralism to generate knowledge that could be available for use by the community and policy makers;
- There should be strong participation by pastoralists in the generation of information to ensure its usefulness and applicability.

In Somali region the group suggested that:

- The regional Bureau of Finance and Economic Development should be mandated to lead the collection, consolidation, analysis, dissemination and updating of information

- Pastoralists should be consulted and encouraged to participate in the data generation process

In Oromia the group discussion emphasized that:

- reliable figures on camel numbers and their economic contributions do not exist;
- accuracy and reliability of the existing information is questionable;
- available information is not well organized and useful for analyses;
- data rarely is updated, so it quickly becomes outdated;

In SNNPR the group discussion emphasized that:

- SNNPR is the least studied and least well known of the livestock producing areas
- No information on trade from the SNNPR rangelands is available
- No information is available on rangeland use and land rights

They also agreed with our report's (No. 2) conclusion that a lack of economic data on pastoralism and its importance has led to misunderstandings and an underestimation of its economic and environmental contributions. Again, in Afar there was a feeling that little information is available about the production and marketing practices of Afar pastoralism and its economic contribution to the national economy. They said that surprisingly there is more information available on irrigation than pastoralism in Afar, "although more than 95% of Afar are pastoralists." There also was some concern that the data which does exist on pastoralism, including those used in writing the 'Future Scenarios' report (No. 2), has a bias toward Afar, Somali, and Boran areas and do not include much on pastoral populations in the SNNP Region. The Oromia group also felt that there was a lack of data on the expansion of commercial farms in the region and how much land the government has allocated to them. "We hear rumors but we have little data on this." The same group also raised a question about why the study did not consider the impact of expanding dryland farming, which is encroaching on key grazing resources that are crucial to sustaining pastoralism in a dry environment. Another participant asked why we did not emphasize bio-fuel issues more in the report and asked how many of these commercial bio-fuel farms are being placed in the pastoral regions. Again, the consensus is that there is little information on these investments, but "we know that the government is putting a lot of infrastructure and investment to promote large-scale commercial farming." The widespread investment by outsiders in large commercial farms also was seen as a special problem in Afar Region, where some participants complained that many irrigable lands in the Awash valley already have been allocated to investors.

Another data-related area that was viewed as lacking (including in the reports we produced) is the entire issue of climate change and its effects on pastoralism. "We know that it is a big issue and that pastoralists will confront more drought (the team pointed out that there is still little agreement on what kinds of effects climate change will have on pastoral areas—many models actually show that the areas may have more flood than drought problems)." Participants brought up this issue, especially in Oromia, but it was not discussed much at the Somali and Afar meetings.

Summary for policy area 5:

- a) In all four regional dialogue meetings, there was a lack of data to answer empirical questions.
 - I. Are pastoral areas in fact food insecure? If so, by what measure; for example, are aggregated deliveries of food aid really an indication of food insecurity?
 - II. Are rangeland areas really degraded? What is the evidence for this?
 - III. Is pastoralism really declining?
 - IV. Do breed differences matter in marketing livestock to different markets?
 - V. What are the costs and benefits of livestock compared to irrigated agriculture?

- b) We again note that more empirical evidence would be critical to ensure that policies for the future are based on a foundation of empirical fact.
- c) While one would, of course, expect us to make this point as we are researchers, it was striking how many people in the regions also noted that they did not have the facts available to make informed decisions or assessments.

Overall Conclusions:

We begin the conclusion by turning to the response we heard about what our reports did not cover and what other issues need to be addressed

We asked of the participants at the plenary sessions “what was missing from the study and its reports.” Along these lines we also received some written comments from individuals in the region. The meetings provided an opportunity to raise topics and issues that regional participants felt were missing from the study, or were not emphasized sufficiently. Comments included:

--*Local Participation*: the need for strong participation from pastoral communities in policy and programme planning was emphasized in each of the regions, and most strongly in Afar and Somali regions. One Afar participant put it this way: “the community has to be strongly involved in any policies that affect their livelihoods and communities.” The general consensus among the non-government participants (and even some government officials) is that an economic study and its policy recommendations must include inputs from the pastoralist community and they must participate in the identification of policies. “It is up to the pastoralists to decide whether they want to settle and farm or continue to be pastoralists. The government or nobody else should determine this.” There also was a sentiment that even the findings of our study should be discussed with the different pastoralist communities to receive their inputs and recommendations. As one participant noted: “pastoralists and even ex-pastoralists need a ‘voice’ in policy planning.”

--*Good governance*: the issue of good governance was highlighted by one Afar participant who indicated that good policy is tied to good governance and strong participation by the pastoralist community. Others related good governance to insuring that the community is consulted before any programmes and policies are implemented. There was a general feeling by some participants that too many people from outside the pastoral regions (“highlanders”) are determining policies in pastoral areas.

--*Policy Contradictions*: Somali and Oromia participants both pointed out the contradictions in some of the policies discussed in the reports. They felt that if the government was supporting pastoralist economies and trade, then why was it also promoting a policy of pastoralist sedentarization that compromises mobility. “These are contradictory policies,” according to one participant. Others also reiterated this point, noting how the promotion of mobile pastoralists is inconsistent with a medium-term policy of sedentarization.

--*Environmental impacts*: environmental impacts of development interventions, especially irrigation, also were highlighted as an issue that should be discussed in the study. The Afar participants highlighted this issue and the effects that commercial agriculture and chemical inputs was having on water quality and the health of humans who rely on the Awash River. The problems of invasive species, like *prosopis juniflora*, *parthenium spp*, *Acacia drypanolobium*, and other non-palatable brush and weeds also was emphasized by several participants and the economic costs of these to the pastoralist economy should be highlighted.

--*Climate Change*: some participants noted that the effects of climate change are not sufficiently addressed in the report. This point was especially highlighted by international NGO participants working in the regions and it is unclear whether it was a major concern of local and regional participants. The effects of climate change on pastoralist economies and livelihoods

especially were highlighted in the Oromia meeting (little discussion was held on the evidence of climate change in the areas).

--*Broader Impacts and Analyses*: there should have been broader analysis of the social impacts of policies and pastoralist development programmes and not just the economic aspects of pastoralism. This point came out in many of the discussions, especially when discussing the social and public health impacts of irrigation which should be included along with economics in any benefit/cost analyses of irrigation.

We conclude by turning to the response we heard to the following ‘big picture’ question.

In the regional meetings, we asked: Do you think that pastoralism as a way of life will continue to exist in this region during the next 15-20 years? Explain why or why not?

The question of the viability of pastoralism in the next 15-20 years was heavily discussed and opinions generally were divided, but the majority agreed that it would be sustained during and beyond this period—albeit with considerable changes. Those officials from Somali and Afar who worked in irrigation treated mobile pastoralism as a temporary or transitional livelihood that eventually would evolve into settled agriculture or at least a form of agro-pastoralism. They viewed pastoralism as disappearing within 15-20 years especially mobile pastoralism, but others argued against this and noted “what other options do pastoralists have in these dry areas?” Most accepted that the percentage of the population practicing mobile pastoralism would decline but it would still be the main economic activity in the regions, especially in the drier parts. With the exception of the pro-irrigation officials, most participants did not see settled farming as a substitute for pastoralism. They felt that pastoralism’s sustainability also relied on constructive government policies to foster an environment where pastoralists could pursue effective production and marketing activities. And future policies must receive strong participatory input from pastoral communities themselves if they are to be sustainable. A participatory land use plan also was highlighted as important to insure that pastoral communities do not continue to lose key pastoral resources. In short “pastoralism will continue if the land tenure issue is addressed, market is facilitated, animal health care provided, and if right of access to water and pasture is not compromised in the riverine areas.”

Final comment and consideration for DfID programme planning

To conclude, this report has incorporated the comments and feedback from four regional dialogue meetings (Afar, Oromia, Somali, SNNP regions) with findings from our previous reports #2 and #3 from the “Future Scenarios” study. The main points are presented in reaction to five key policy areas. In terms of the key findings and most contested issues to consider in policy and programme planning in pastoral regions, we note the following:

- *Lack of local and regional participation in policy and programme planning*: There is still widespread discontent about the lack of local or regional participation in the planning of development interventions in pastoral regions, especially regarding irrigation and settlement schemes. There also are concerns about the lack of transparency in determining which areas in the pastoral regions are selected for commercial investment by outsiders. In short, many of the local participants still feel as if development policies and plans are being imposed on them by the government, and often by officials who do not know very well pastoral regions nor are from pastoral areas. A next step in terms of this study would be to take the reports and their findings to pastoralist communities themselves (probably via pastoralist associations in the regions or NGO projects) and seek their inputs (at woreda and kebele levels).
- *Sedentarization and irrigation*: While there are already tendencies toward voluntary settlement in the regions—especially by ex-pastoralists, the government’s position on mobility and sedentarization is still perceived as inconsistent with the realities of pastoral economies and ecologies. Irrigation-based settlements in key riverine areas and basins

are still highly contested in the areas and will continue to be so until it is acknowledged that irrigation should complement not replace pastoralism in the areas. Participants assumed that the government will just continue to subsidize irrigation schemes well into the future, including their operating costs, and they viewed this as driven by administrative and political rather than economic concerns.

- *Land tenure and rights:* This remains a very contested issue in the pastoral areas and the regional land proclamations currently being written are unlikely to ameliorate the local sentiment that the government can take over any lands (especially those deemed suitable for irrigation and commercial investment) and resources that it feels are in the national interest. What is going on with commercial investment by outsiders who are awarded land allocations in excess of 20,000 ha in many cases, is not helping the situation. The conflict and violence associated with one commercial farm in SNNP that was mentioned in the report may be a marker for what could happen in other regions in the future.
- *Markets and Trade:* It seems that the government at the moment is relaxing some of its enforcement practices against cross-border trade in the Somali Region, but this can change rapidly and the formal regulations still forbid the practice. It is poorly understood by local communities why the government would want to halt an economic activity that is so important to local and regional economies. Some participants indicated that the government needs to work with traders to make the license procedures and foreign exchange requirements (letter of credit) less burdensome, if they wish to channel the unofficial trade into formal markets.
- *Gender:* Women especially have little formal/public input into local and regional decision-making and incentives need to be implemented that increase their role in programme planning and opportunities, such as education.

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