The problem

- Current international standards govern trade in livestock products from the perspective of preventing the spread of major animal diseases such as foot-and-mouth disease (FMD).
- The principle followed by the OIE Code is that safe trade in livestock products can only be ensured if livestock are reared in areas which are free of important diseases. These areas can be countries or zones within countries, or certain large farms which are free of infections, called ‘compartments’.
- Disease freedom requires disease eradication – but Africa has numerous livestock diseases and due to economic and environmental factors, there is little chance of eradicating many of these diseases. Control of diseases by conventional methods e.g. by fencing, is also problematic in many countries, expensive and difficult to sustain.

What is ‘commodity-based trade’?

- The key issue affecting safe trade in livestock products is not the area of origin of the product, but the characteristics of the product itself.
- If livestock products are derived from healthy animals and processed, the risk of spreading any disease can be reduced to an acceptable level for international trade. At the same time, the processing creates benefits such as local employment.
- The commodity-based approach is science-based and risk-based, and it applies globally – to both developing and industrialised regions of the world.
- Commodity-based trade accords with the strictest principles of human food safety – any and all diseases animals are excluded as potential sources of human food.

Example: The commodity-based approach to standards and trade

Imagine that you wish to export a mango to Brazil. Assume that the Brazilian authorities will not allow importation of mangoes due to a serious disease which affects the mango stone. So instead of exporting the whole mango, you remove the stone from a healthy mango and export only the mango flesh. The processed mango flesh is certified as presenting an acceptable level of risk. This is a commodity-based approach. It does not require your country to eradicate the mango disease from its territory in order to trade safely in mango flesh.

Now apply this thinking to beef. Although your cattle might be reared in an area affected by FMD, most cattle do not carry the infection. In any carcass the FMD virus, if present, is not found in muscle tissue (i.e. beef) that is properly matured. By removing the bones and lymph nodes from the beef, the risk of that beef containing FMD virus is decisively reduced. From a scientific perspective you should be able to export this meat. However, the OIE Code specifies that not only should meat be processed as outlined above, but the cattle should be also reared in an area which can be confirmed free of FMD. In other words, the OIE and important trading countries do not recognize the commodity-based principle. As a result, African livestock producers have limited access to regional or international high-value markets.

Commodity-based trade – some common myths

As thinking on commodity-based trade has evolved, some common misunderstandings among stakeholders are:

Myth 1: ‘Commodity-based trade includes products from sick livestock’

This is not true. The commodity-based approach omits sick animals from the marketing chain. It specifies that only products from healthy animals should be used. The usual forms of quarantining
and screening can be used to ensure that only healthy animals are slaughtered or milked.

Myth 2: ‘If we don’t eradicate diseases, there is no role for veterinary services?’
Government veterinary services are crucial to support commodity-based trade. Such trade requires risk analysis on livestock products, the identification of critical control points to enhance product safety, certification of products and various other activities. Most importantly, disease control is still needed to reduce the impacts of diseases at household level and improve production.

Myth 3: ‘The OIE Code already covers trade in animal commodities’
The fundamental approach of the OIE, and the way the Code is structured, assumes that diseases not commodities should be the focus of standard setting. Standards for trade in livestock commodities are not user-friendly – in the case of most processed products there are not standards at all.

Myth 4: ‘The commodity-based approach is not scientific’
There is a mass of published scientific information which explains how different types of processing of livestock products reduces or eliminates pathogens. This information has been in the public domain for decades.

Myth 5: ‘The commodity-based approach is the only approach’
The commodity-based approach should be viewed as an option for COMESA member states to use. It does exclude the use of compartments or fenced areas. However, it does provide a means to add value to products at source, and a route for smaller or poorer farmers to access more lucrative markets.

Do African institutions support the commodity-based approach?
The commodity-based approach to trade in livestock products evolved within the African Union in 2004. The concept is supported in various continent-wide and regional policy documents such as:
- The recommendations of the AU Experts of Agriculture Meeting, February 2008
- The recommendations of the COMESA Fifth Meeting of the Ministers of Agriculture, March 2008
- The recommendations of the East African Community Secretariat Meeting on Experts of Livestock Trade and Marketing in East Africa, April 2008

In addition, in late April 2008 the AU Department for Rural Economy Agriculture convened an Expert Panel on Commodity-based Livestock Trade.

The AU Expert Panel on Livestock Commodity-based Livestock Trade
April-May 2008

Expert participants:
- SADC representative and former President of the OIE FMD and Other Epizootics Commission
- Director of Veterinary Services, Zimbabwe and Member of the OIE Code Commission
- Director of the Botswana Meat Commission and former Director of Veterinary Services, Botswana
- Director of Public Health, Mali and Member of the Codex Alimentarius Secretariat
- Director of Veterinary Services Northern Cape Province, South Africa and President of the South African Veterinary Council
- Former Research and Marketing Director for Tesco UK
- Director of Veterinary Services, Nigeria
- PACAPS Project, Tufts University

This panel re-affirmed the need for the AU to support changes to the OIE Code, and for accelerated, concerted action by African governments and regional organizations. The results of their deliberations are to be published by the AU-DREA in May 2008.

What needs to be done?
- Ministries of Agriculture and Livestock in the COMESA region need to raise awareness of the commodity-based approach to livestock trade both internally within their own departments, and externally with key private sector
investors and civil society actors in each country.

- Improved understanding of the approach and dialogue with stakeholders at national level should lead to a stated official position on commodity-based trade. These positions will be harmonized by COMESA, and articulated to the OIE by Chief Veterinary Officers.

- The commodity-based approach can be applied in the COMESA region, if countries agree to test the approach through pilot trials. Such testing would generate further evidence and lessons learned, and would show that commodity-based trade was appropriate and safe.

- COMESA will work with member states to analyze the implication of commodity-based livestock trade on the current food crisis and rising food prices.

It is hoped that the thoughts expressed in this brief will be considered by the various teams of experts and consultants now assisting countries in Eastern and Southern Africa to identify income sources and growth drivers under the CAADP agenda.

References

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This Policy Brief was produced by the Pastoral Areas Coordination, Analysis and Policy Support (PACAPS) project of the Feinstein International Center, Tufts University, implemented in partnership with COMESA. The project is funded primarily by the United States Agency for International Development as part of the wider program Regional Enhanced Livelihoods in Pastoral Areas.

Further information
A video on livestock commodity-based trade is available online as follows:
- English version http://r4d.blip.tv/file/989242
- French version http://r4d.blip.tv/file/989544

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Cross-border livestock trade represents one of the most significant growth areas of regional trade in eastern Africa. Since 1990 it has grown from a relatively minor informal activity to a dynamic enterprise that contributes to local and regional food security, meat consumption in large urban centers, and poverty alleviation among vulnerable populations, such as pastoralists. Indeed, in terms of volume it represents one of the few success stories in the region’s livestock sector and in contrast to common perceptions it is not strictly an unofficial, clandestine activity.

Despite its importance, however, the trade remains poorly understood and is plagued by ambiguous policies and administrative actions, occasional border closures, and a range of informal (illegal) taxes that can amount to a major percentage of marketing transaction costs. In an effort to clarify misunderstandings about cross-border livestock trade and to identify potential policy discussion points, this research brief discusses the current narratives, realities, and points of contention about cross border animal trade.

**Annual value of trade exceeds US$60 million**

Most intra-regional trade in livestock in the region is unrecorded, but estimates are that its value exceeds $60 million per annum. As the graph below shows, there have been very large increases in trade volumes within a relatively short period of time. In just five border areas, including eastern Ethiopia/Somaliland, southern Somalia/northeastern Kenya, western Ethiopia/eastern Sudan, southern Ethiopia/northern Kenya, northern Tanzania/southern Kenya, the commerce accounts for an estimated $61 million per annum\(^1\). About 10 percent of this commerce passes through official trade channels and most of this is along the western Ethiopia/eastern Sudan border. The aggregate figures do not include cross-border trade in camels or trade through the Ethiopia/Djibouti (for re-export), southern Sudan/northwestern Kenya/northern Uganda, and eastern Uganda/western Kenya borders trades, which collectively accounts for at least another $5 million in value per year (Little 2005). In short, intra-regional cross-border trade is a major and growing commerce that exceeds live animal exports from the region by a factor of at least 10 times.

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\(^{1}\) Estimates are based on average price of $150/cattle and annual cross-border exports to Kenya of approximately US $34.5 million, of which $9 million (60,000 cattle) are from southern Ethiopia (see Mahmoud 2003), $13.5 million (90,000 cattle) are from southern Somalia (Elmi et al 2008), and $15 million (100,000 cattle) are from northern Tanzania, (Zaal et al. 2006); to the Sudan of $10.5 million (70,000 cattle) from western Ethiopia (Mulugeta et al. 2007); and to Somaliland (for re-export to the Middle East) of $16 million (800,000 small stock) from eastern Ethiopia (Little 2005).
Few services and border posts for official exports

Eastern Africa has vast international boundaries that span large and often poorly administered areas. These locations usually are inhabited by pastoral and agro-pastoral populations, while infrastructure and social and economic services are largely absent. Consequently, much cross-border trade in these extensive territories remains unofficial for the simple fact that customs posts, export banking services, and official border crossings are very few. Along some international borders customs posts and services are separated from each other by distances of 200 km or more. In order to sell at remote official border post herders and/or traders need to trek animals over massive distances at considerable cost. Along the eastern Sudan and northwestern Ethiopia border, for example, there is only one official outlet where animals can be exported to the Sudan, so more than 50 percent of the estimated 70,000 cattle sold annually use unofficial transit points (Mulugeta et al. 2007). It is unlikely in the near future that states and/or the private sector in eastern Africa will make the necessary investments in customs facilities, economic services and animal health infrastructure to officially capture much of the region’s cross-border trade. In short, unofficial trade in livestock will be important in the region for the next several years.

Cross-border trade contributes to government revenues

But does the lack of official exports mean that cross-border trade contributes little to public revenues, either for the exporting or importing country? The answer is “no” since for the exporting country local market taxes and other transaction fees usually are paid at least once and often twice before the animal is exported, while a series of fees and taxes from the border to the terminal market in the importing country are paid by traders and wholesalers in the importing country. In 2001 Mahmoud estimated that local authorities in Ethiopia and Kenya, respectively, earned US$ 78,296.1 and US$ 226,884.6 from taxes and fees from the cross-border trade. Along with the numerous jobs, such as trekkers, fodder traders, market brokers, and middlemen, that are associated with cross-border trade the activity contributes significantly to employment and public revenues in the region.

A mechanism for poverty alleviation

There is considerable enthusiasm in the region for targeting livestock trade to overseas export markets, especially those in the Middle East and Asia. However, numerous studies have shown that those actors who benefit from this commerce mainly are large-scale traders with considerable capital (Mulugeta et al. 2007; Little 2003). They are able to procure animals from larger producers who have the resources to produce export-quality animals and transport them to those large markets that exporters often visit. Even those traders and producers who officially export animals in the cross-border trade tend to be considerably wealthier than other livestock traders, in part because of the large capital requirements required to attain letters of credit from banks, export licenses, and animal health certifications for export. Mulugeta et al. (2007) found that no medium or small-scale traders participated in the official export trade between western Ethiopia and eastern Sudan, but that they were dominant in the unofficial cross-border trade. Furthermore, the official export trade is considerably more selective than the unofficial trade about what types and quality of animals are sourced, a practice that further disadvantages medium and low-income producers. Thus, as a mechanism for poverty alleviation cross-border livestock trade generally fares better than large-scale export trade.

Improved food security means reduced food aid expenditures

Many border zones in eastern Africa are grain deficient and heavily rely on revenues earned from cross-border livestock trade to finance foodstuff imports, grain trade, and local consumption. The trucks that ferry livestock from the border markets to
terminal markets, such as Nairobi or Mombasa, often load up with foodstuffs on their return to sell back in the borderlands, and livestock traders also use profits to purchase grains and other foodstuffs for sale as well. Shopkeepers and foodstuff sellers in the deficit areas are dependent on these flows of commodities that are largely cross-financed via cross-border livestock trade. Thus, when there is a disruption in cross-border animal trade many food traders are forced to close their businesses for lack of supply. In some cases during the late 1990s and 2000s more than 50 percent of retail businesses in some border regions were shuttered during bans on cross-border trade. Those few merchants who might have been able to procure foodstuffs sell them at exorbitant prices, which add to the food security problems of low-income consumers in the borderlands.

When there have been bans on cross-border cattle trade resulting in reduced incomes and food availability, governments and relief agencies have been forced to feed local populations with food aid. For governments that attempt to constrain or even halt cross-border livestock trade through strong-handed interventions, they must be prepared to bring in food aid and other relief for the affected populations. This assistance will come at considerable cost to the public and international community.

A ‘do no harm’ policy
There is little doubt that there are market inefficiencies and challenges in cross-border trade. These include high marketing transaction costs, especially caused by high transport fees; loss of weight by animals on long treks; lack of price transparency among certain market brokers; minimal physical market infrastructure; uneven market information, especially to producers in remote areas; and excessive rent-seeking (illegal fees and taxes) by government officials. If one talks with traders and herders about their constraints, problems usually cluster around security, high transport costs, and unfair market practices, such as defaulting on payment for consignments, at large terminal markets. Many of these issues also are associated with other types of livestock trade, but they have not effectively slowed cross-border trade in recent years. One popular market investment by governments and donors is to improve market infrastructures, including installing weigh machines, fencing off large areas of the market, and establishing holding grounds, which are all interventions that rarely are mentioned by traders and herders as high priorities. They often are not maintained and are constructed at considerable capital cost with very little actual positive impacts on cross-border trade and its actors.

So, what should governments and other parties do, if anything, to improve cross-border trade and enhance its contributions to local and national government? In general, actions should be driven by the humanitarian principle of ‘do no harm’ or, in other words, do not make matters worse by unnecessary interventions (Anderson 1999). This tenet is a challenge to interventionist governments and donors because cross-border trade effectively has succeeded because of the lack of strong external interventions. It has been a free market activity driven by the availability of better markets for local herders and traders across borders rather than within them. In short, governments and donors need to be wary of excessive intervention in cross-border trade, since previous actions have led to precipitous drops in the trade; pushed it further underground and away from town markets where some public revenues can be collected; and/or greatly aggravated food security problems in the area.

Areas that could assist cross-border livestock trade include:
- Improved public security and rule of law, since insecurity and illegal collections of fees strongly impact the efficiencies and costs of cross-border trade for key actors, such as traders and producers;
- Improved dissemination of market information, especially to small-scale traders and herders who often are vulnerable to large brokers and buyers with better price information. The use of cell phone technologies has reduced information constraints but more can be done in remote border areas;
- Better coordination (harmonization) of animal health requirements and vaccination programs between border countries;
- Where possible, decentralize border trade decisions to local officials and civil organizations, such as trader associations, that have better information about local trade conditions and

Market infrastructure development in pastoral areas is popular among donors and governments, but like this disused market in Ethiopia, is rarely maintained or used in the long-term.
constraints than central and regional government officials. Local border committees with representatives from neighboring countries have been formed in some border markets, but they need the flexibility to respond to local conditions and constituents without strong interventions by central government bodies.

With public resources so scarce and incomes low in eastern Africa, governments and development agencies should avoid wasting valued resources trying to control a commerce that works reasonably well, as well as invest in expensive market infrastructures and technologies that market actors rarely seek. Instead, they should create better conditions for public security, market information, and local participation in trade-related policies. Based on historical experiences of informal trade elsewhere, cross-border trade is likely to eventually merge into official trade channels as trading enterprises grow, governments streamline regulations, and transport costs decline (for example, through investments in rail systems). There already are several cases worldwide where this has taken place, including in West Africa where much of the $150 million cross-border trade in cattle now is conducted through official channels (see Williams et al. 2006). For at least the foreseeable future, however, unofficial trans-border trade in eastern Africa will continue to play a major role in meeting consumption demands in the region and providing livelihoods for tens of thousands of people.

Given the connection between cross border cereal trade and livestock trade, COMESA’s Alliance for Commodity Trade in Eastern and Southern Africa (ACTESA) which is presently focusing on expanding staple cereal crop trade, may consider developing a long term initiative to facilitate expanded growth in livestock trade as well.

It is hoped that thoughts expressed in this brief will be considered by the various teams of experts and consultants now assisting countries in Eastern and Southern Africa to identify income sources and growth drivers under the CAADP agenda.

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Further information
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Income Diversification Among Pastoralists: Lessons for Policy Makers

How Important is Diversification?
Income diversification is an increasingly important means for herders to manage risk. Currently the proportion of income from non-pastoral sources exceeds 20 percent for many pastoral locations in the region, a figure that is considerably larger than most policy makers assume. However, despite its rising significance, diversification is not the panacea for overcoming pastoral poverty and food insecurity that many assume it to be. In fact, research shows that while some forms of diversification enhance welfare, others can increase risk and eventually undermine pastoral livelihoods. Importantly, herd mobility and accumulation remain the major means for managing risk in dryland areas and, therefore, efforts to encourage diversification should complement not compete with these goals.

This policy brief discusses some of the common misunderstandings regarding economic diversification among pastoralists that have plagued development policies and programs. It offers guidelines for different policy options which allow herders to better manage the risks that they currently face while better positioning themselves for the future. As presented here, economic diversification among pastoralists is the pursuit of any non-pastoral income-earning activity, whether in rural or urban areas. This definition includes:

- any form of trading occupation e.g. selling milk, firewood, animals, or other products
- wage employment, both local and outside the area, including working as a hired herder, farm worker, and migrant laborer
- retail shop activities
- rental property ownership and sales
- gathering and selling wild products e.g. gum arabica, firewood, or medicinal plants
- farming, both for subsistence and cash incomes.

In presenting different examples of pastoral diversification, the paper distinguishes between strategies of ex-pastoralists or poor who are clearly exiting pastoralism - often painfully - and those better-off herders who remain in the sector but are diversifying to complement and sustain their livelihood. One set of tactics is pursued for survival, the other for investment. As will be argued, rather than treat diversification always as an alternative to pastoralism, it suggests that it should be seen as a mechanism for adding economic value in pastoral communities and regions and for helping to maintain pastoral livelihoods.

Multiple Strategies
Income diversification is merely one of a range of different strategies that are employed by pastoralists to manage risks and improve welfare. Rarely is it the most important and usually ranks well behind the normal means of coping with risk, which include mobility, herd accumulation and animal diversification, the use of social networks and exchanges, and the marketing of animals. Practitioners may view income diversification as an abandonment of pastoralism, but only the poorest, least viable pastoral households are using it to opt out of pastoralism. Instead, better-off pastoral households pursue non-pastoral activities to recover from drought or shock-induced herd loses and to supplement rather than replace livestock-based incomes. The need to earn supplemental revenues has resulted in some households maintaining family members year-round in settlements, while others remain in the range areas with the herds. By doing so, they still are able to move animals in search of seasonal pastures and water, as well as pursue non-pastoral activities, including formal education.

Pastoral areas are littered with failed development projects, especially expensive irrigation schemes and market infrastructure projects, which were based on the faulty premise that drought-stricken pastoralists would permanently exit pastoralism following a major disaster, such as a drought. Costly investments in permanent irrigation structures and town-based facilities were constructed in many pastoral areas but were abandoned once the pastoral sector recovered and herders returned to pastoralism. The expensive lesson here is that flexibility should be a driving factor in programs and policies that allow herders different options to supplement livestock-based incomes.

Adding Value to Pastoral Production
Different forms of pastoral diversification support, even strengthen, the pastoral sector, while other activities 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. They allow herd access to new sources of income and value that complement pastoralism, and can stem movements of herdsmen to towns and settlements where they require food and other public assistance at high costs to government and donor agencies alike.

However, many of the diversification strategies that herdsmen practice earn very minimal incomes, rarely strengthen the sector, and are destructive of the environment. These include activities, such as cultivating in key grazing zones and charcoal making, the latter which results in the deforestation of large expanses of rangelands, soil erosion, and loss of water supplies. Cultivation of key dry season grazing and water points is a particular problem, especially in highland and river valleys where agriculture often is feasible. This process is increasingly prominent in parts of the Borana plateau, southern Ethiopia and in large parts of the Maasai areas of southern Kenya and northern Tanzania, where local administration and institutions have been unable to control the loss of key grazing and water resources for use by pastoralists. Because these activities negatively affect the ability of herdsmen to access key resources during periods of need, they make local pastoralism less sustainable over time, as well as generate local disputes and destructive conflicts over these key resources.

Table 1. Source of income by research site, Northern Kenya, 2000-2002

<table>
<thead>
<tr>
<th>Site</th>
<th>Livestock Sales</th>
<th>Trade and business</th>
<th>Wage &amp; Salary</th>
<th>Pastoral Income (milk/meat)</th>
<th>Net Remittances</th>
<th>Crops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logologo</td>
<td>9%</td>
<td>13%</td>
<td>43%</td>
<td>21%</td>
<td>13%</td>
<td>0%</td>
</tr>
<tr>
<td>N’gambo</td>
<td>6%</td>
<td>7%</td>
<td>30%</td>
<td>37%</td>
<td>8%</td>
<td>13%</td>
</tr>
<tr>
<td>Dirib Gumbo</td>
<td>14%</td>
<td>1%</td>
<td>16%</td>
<td>47%</td>
<td>11%</td>
<td>10%</td>
</tr>
<tr>
<td>Suguta Marmar</td>
<td>28%</td>
<td>18%</td>
<td>10%</td>
<td>36%</td>
<td>7%</td>
<td>0%</td>
</tr>
<tr>
<td>North Horr</td>
<td>10%</td>
<td>3%</td>
<td>13%</td>
<td>63%</td>
<td>11%</td>
<td>0%</td>
</tr>
<tr>
<td>Kargi</td>
<td>9%</td>
<td>3%</td>
<td>9%</td>
<td>72%</td>
<td>7%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: PARIMA household study, 2000-2002
Can formal education help?
As noted earlier, access to formal education often is a condition for attaining salaried, higher income employment. Indeed, considerable evidence shows that secondary and post-secondary education can help pastoralists to attain waged, higher paid employment (see Little et al., forthcoming). While pastoral regions have relatively low levels of education compared to other areas, herders recognize its importance for attaining relatively secure, salaried employment and “accessing resources outside the pastoral circuit” (Kratlii 2001: ii). In many parts of eastern Africa pastoral households with higher levels of education generally are better off in terms of income and food security, in part because family members who are employed can remit incomes (see McPeak and Little 2004). The case of Letamara of Baringo District, Kenya is illustrative of the positive role that education can play in pastoral diversification. Letamara had graduated from secondary school and his brother from university in the early 2000s and both had relatively high-paying positions in government. Despite the fact that Letamara had lost almost 80 percent of his livestock during the 1999-2000 drought, his family had adequate cash income, including remittances from his brother, to purchase food during the drought and animals in the recovery period. Data from a larger, nearby sample of households confirm that individuals with secondary and/or post-secondary schooling are about ten times more likely to have salaried employment, twice as likely to remit income, and own 20 percent more livestock than others in the area (Little et al., forthcoming).

To encourage herders to pursue education-based diversification, school locations and calendars should reflect the seasonal nature of pastoralism and population movements. Mobile schools are one avenue for accomplishing this and have been successfully implemented in West Africa and elsewhere in the world. They should be given more serious consideration in eastern Africa, so herders are better prepared for skilled positions in the future while minimizing costs to their pastoral livelihoods (Dwyer 2000). Pastoralists should not have to make a choice between the pursuit of pastoralism and sending children to school because of conflicting demands between the two.

Conclusions
Several misconceptions surround the issue of economic diversification among pastoralists. This short paper has tried to clarify many of these and to point to their policy implications. There is little question that income diversification as a risk coping and management strategy will continue to increase among pastoralists, especially in light of future uncertainties about climate change and food prices. Many poor in pastoral areas who have exited or are in the process of doing so because of drought and other factors, may not re-enter the pastoral sector, and thus, need to have access to skills training, job creation, and other support, in order to pursue alternative livelihoods. Better-off households, in turn, will continue to supplement their incomes by a range of different

Differential Impacts
Diverse categories of herders—rich/poor and female/male—respond differently to opportunities for diversification. For instance, poor herders often are limited to poorly remunerative petty trade, charcoal production, and casual (unskilled) labor activities, but better-off households have the required labor and capital to diversify into more lucrative activities. The latter often pursue investments in education, which can be used to acquire salaried employment, long-distance livestock trade, shop ownership, and retail and wholesale businesses. In northern Kenya, for example, non-pastoral activities comprise more than 70 percent of household income for the lowest income quintile, but only about 25 percent for the highest income group. Most of the former group is involved in casual labor and other low income-earning activities, but those in the highest income quintile engage in retail businesses and salaried employment (Little et al. 2008).

What are sometimes disguised are gender-based differences. Indeed, pastoral women and men often pursue very different income-earning strategies. For example, women often control important segments of the trading sector, including dairy trade and small stock trade, and engage in beer brewing and handicrafts, which are used to supplement livestock-based incomes. Males, on the other hand, usually are more active in cattle and camel trade, especially long distance commerce, and are more likely to be involved in labor migration for employment. With these kinds of differences, policies that encourage pastoral income diversification should acknowledge their effects on varied social groups, so as to insure that benefits are not especially skewed toward one group (for example, wealthy male pastoralists).
activities, but pastoralism will remain their activity and mobility and flexibility their chief means for achieving it.

The paper has distinguished between good and less good forms of diversification and has highlighted expensive activities, such as irrigated agriculture, and other expensive infrastructure projects that are costly and unsustainable. Too often these are concentrated in or near towns and settlements that encourage herders to sedentarize and result in large pockets of poverty, food aid dependence, and environmental destruction. As the paper has argued, those activities that facilitate small enterprises and other activities (for example, collection and processing of natural products and livestock-based products) can provide employment/livelihoods for poor, ex-pastoralists while supporting pastoral production. They will benefit multiple groups of beneficiaries and, importantly, will generate added value in the local economy while sustaining livestock production.

It is hoped that thoughts expressed in this brief will be considered by the various teams of experts and consultants now assisting countries in Eastern and Southern Africa to identify income sources and growth drivers under the CAADP agenda.

References


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Further information

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Strengthening of trade among COMESA member countries, establishing a Free Trade Area that will include all eastern and southern African member countries of COMESA, EAC and SADC, and an increased global demand for meat create new and exciting opportunities for trade in livestock commodities, particularly beef. The presence of certain greatly feared trade-sensitive diseases in the region poses a challenge to the beef industry. Policy options to overcome the challenge by providing science-based evidence that COMESA beef is safe and healthy are explored.

COMESA potential for beef trade
According to FAO statistics for 2005, the 19 COMESA Member States collectively own close to 128 million head of cattle. Sudan and Ethiopia have the largest national herds, at some 38 million each, followed by Kenya and Madagascar, with 12 and 10.5 million respectively. However, only a little more than 2 tonnes of commercially-produced beef was recorded for the same period. The great potential for producing beef to generate wealth in the region is therefore far from being realised.

Why so little beef?
While the statistics certainly do not reflect the total amount of beef derived from cattle in COMESA countries, they do reflect the amount that is sold through formal channels. Pastoral husbandry, long-established markets for live animals, and traditional value systems in which the animals themselves are wealth and not a source of income contribute to the apparent low yield, but also lack of infrastructure, low productivity and, most importantly, lack of access to high value markets owing to the presence of diseases that are greatly feared by potential trading partners. This barrier to trade is largely responsible for lack of progress and change – why change if there is no perceived benefit? African livestock producers are told that the ‘global livestock revolution’ offers a way out of poverty, yet the door remains closed owing to sanitary requirements that are, according to the international standards widely applied, extremely difficult for their countries to achieve.

What are these feared diseases?
Foot and mouth disease (FMD) is without doubt the most important disease that keeps cattle from ‘infected’ countries out of the high value markets. These markets are located in countries that have eradicated FMD, and its occasional reappearance, as occurred in the UK in 2001, only reinforces their determination to keep it out. How they may do so is set out in the Terrestrial Animal Health Code of the World Organisation for Animal Health (OIE), and this relies upon not sourcing animals or meat from
countries or zones that cannot be proven free of FMD either with or without vaccination. Since the SAT viruses that are endemic in African buffalo and in cattle in much of the region are different from those in other parts of the world and cannot be controlled with the same vaccines, and types O and A are also prevalent in cattle populations in several countries, there is a perception that African cattle are dangerous indeed! The other significant disease is Rift Valley fever (RVF). Although it does not have the same potential for rapid spread as FMD, it can cause serious and even fatal disease in humans, and therefore arouses fear that is out of proportion to the real risk. However, in terms of market access for beef it is of far less significance than FMD, as trade is generally only affected during outbreaks, which are sporadic, climate-linked and for that reason increasingly predictable, although weather-based false alarms can cause serious interruptions to export.

Achieving freedom from FMD
FMD is one of four diseases for which the OIE recognises free status. Countries achieve this by providing proof that either the whole country or certain parts of the country are free from FMD by offering scientific proof of its absence. While freedom without vaccination is preferred, OIE recognises freedom with vaccination provided that the means exist to distinguish between vaccinated and naturally infected animals. Countries wishing to have one or more free zones recognised must ensure physical separation between them and endemically infected areas, as well as vaccination in the zone of possible contact and continuous surveillance for the presence of the disease. In the event of an outbreak in the free zone, free status is lost and to regain it all the cattle in and around the outbreak area have to be destroyed. These measures are expensive, and while they benefit cattle producers in the free zone, cattle producers in infected and buffer zones are placed at a terrible disadvantage, since it is usually difficult, if not impossible, for them to market their cattle even in the free zone in their own country, let alone for export.

Is there another way?
Contrary to the perception that African cattle are largely infected with FMD, the great majority of course are not, and their meat would pose no risk to human and animal health. However, additional assurances are usually required by importers. According to Article 4 of the WTO SPS Agreement (Sanitary and Phytosanitary Agreement), which provides guidelines for safe trade in agricultural commodities, assurance of commodity safety must be based on sound technical evidence, but this evidence does not have to be identical in all cases. Thus, matured beef derived from healthy animals in a recognised FMD-free zone will automatically be regarded as safe in terms of FMD. However, since there is adequate scientific evidence that FMD virus is unable to survive in de-boned and de-glanded matured beef, there is no reason why this commodity, derived from healthy cattle that have been subjected to ante-mortem inspection and slaughtered under the prescribed conditions for export, should not be accepted as having an equivalent level of safety regardless of the status of the area of origin.

The way forward
COMESA states need to recognise the potential benefits that will accrue if this principle of equivalence is widely accepted and applied. To this end, every effort should be made to lobby both potential trading partners and international standard-setting bodies, in particular the OIE, using the available scientific evidence, to abandon the status quo based on geographical freedom alone and embrace the principle that if a product (such as de-boned beef) is inherently safe for a particular disease, this is equivalent to geographical freedom from that disease, so that a wider world can enjoy COMESA beef.

Reference
Thomson, G.R., Leyland, T.J., Donaldson, A.I. 2009. De-boned beef, an example of a commodity for which specific standards could be developed to ensure an appropriate level of protection for international trade. Transboundary and Emerging Diseases 56: 9-17.

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Further information
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The COMESA Green Pass is a system of certification to support trade in agricultural commodities. It is believed that the Green Pass will open the way to high value markets by guaranteeing the safety and quality of the commodity. Trade in livestock commodities faces particular challenges posed by the relatively higher threat to human health of animal-derived food and the fact that international standards for their trade are based on geographical freedom from diseases endemic to the region. Commodity-based trade supported by the Green Pass holds the key to unlock the door to high value markets.

Commodity-based trade – how does it work?
Commodity-based trade (CBT) is based on the principle that livestock commodities and products (meat, milk and their derivatives) can be rendered safe in terms of human and animal health regardless of the disease status of the area of origin. The concept is in line with the food safety standards set by the Codex Alimentarius of FAO/WHO, which focus only on the safety to human health of the actual traded product. However, in order to protect animal health, another set of standards is applied to livestock commodities, drawn up by the World Organisation for Animal Health (OIE). These recommend that the area of origin of animals from which products not exposed to high temperatures for long periods during processing are derived should be free of trade-sensitive diseases, although bilateral trade based on risk analysis is possible. Recognising that the establishment and maintenance of, for example, foot and mouth disease (FMD) free zones is not achievable for many developing countries, in particular in sub-Saharan Africa, CBT has been proposed as a viable alternative.

Commodities for which scientific data exist to support certification of safety in terms of relevant diseases should be accepted as safe regardless of their area of origin. For example, ample evidence can be presented to show that de-boned, matured beef from which the glands have been removed presents no more than an acceptable level of risk, because because any FMD virus that may accidentally be present at slaughter would be destroyed by the low pH reached during maturation.

Does CBT imply that meat from animals with FMD can be traded?
While matured, de-boned and de-glanded beef from animals infected with FMD would not be able to transmit the virus, it must comply with the general food safety requirement that meat should be derived from healthy animals. Consumers therefore need have no fear that acceptance of CBT would result in their eating meat from sick animals! CBT simply offers the necessary assurance that, in the unlikely event of an apparently healthy animal with no clinical signs or lesions of FMD nevertheless harbouring the virus, e.g. in the early incubation phase of the disease, that virus would nevertheless not be present in the traded meat.

Is CBT widely accepted as an alternative to geographical freedom with or without vaccination?
Although comparatively new, the concept has gained wide acceptance among countries and international organisations wanting to use trade in livestock commodities in the war against poverty. CBT has been embraced in principle by the OIE, but the current recommendation is that the commodity should originate in a free zone, thus effectively
maintaining the status quo. The COMESA Council of Ministers has accepted the principle of CBT and, by applying it to trade in livestock commodities within COMESA, can set an example that will encourage wider acceptance. Member countries can play an important role within the Africa Commission and General Session of the OIE to press for the requirement for geographical freedom of area of origin to be dropped when CBT is applied. It will also be important to identify other suitable commodities/products for which data regarding safety from trade-sensitive animal diseases exist or should be generated.

**Will CBT reduce the status of the veterinary services?**

The application of CBT is likely to enhance the status of the veterinary services. They have a vital role to play in maintaining a healthy livestock industry by monitoring animal health, preventing disease, intervening in the event of an animal health crisis, carrying out pre-slaughter inspection and maintaining a database of disease information to support certification for trade. If as expected CBT opens the way for more and higher value trade, this will not change, but the need for sufficient animals of good quality will provide new opportunities in terms of improving nutrition and reproduction, and will ultimately create opportunities for greater privatisation of veterinary services.

**How can the COMESA Green Pass support CBT?**

One of the most important requirements for CBT to work is credible certification, which is the main purpose of the COMESA Green Pass. Currently, certification for livestock commodities is provided by the state veterinary authorities, based on the disease status of the area of origin, and is unfortunately not always accepted as credible by trading partners, who prefer to carry out their own inspections. Certification for commodities that have been subjected to some process to render them safe may require additional expertise not available in official veterinary services. The proposed National Green Pass Authority will have the opportunity to make use of such expertise to enhance the credibility of the certificates that it provides, which will naturally also include the assurance by an examining veterinarian that the animals from which the commodity was derived were healthy. Most importantly, the fact that the national authorities will be monitored and evaluated by a Regional Green Pass Authority will greatly increase credibility of the Green Pass in the eyes of importers, as the regional authority will be serving regional interests, which must not be jeopardized by an oversight at national level.

**Further reading**


Thomson, G.R., Leyland, T.J., Donaldson, A.I. 2009. De-boned beef, an example of a commodity for which specific standards could be developed to ensure an appropriate level of protection for international trade. *Transboundary and Emerging Diseases* 56: 9-17.

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**Further information**

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High value markets for livestock commodities require that the commodity should be traceable back to the farm of origin. This translates into a system for the identification at farm level of animals from which commodities are derived. Various animal identification systems have been in place for centuries, mainly with the purpose of indicating ownership. For purposes of international trade, identification must be permanent, unable to be tampered with, unique, and linked to a registration system that permits traceability. Highly sophisticated systems exist, but these come at a high cost.

How can COMESA meet the challenge?

Why must animals be traceable?
The reasoning behind the requirement for traceability reaching back to the farm where the animals from which a food product was derived were raised is simple: if the commodity causes or may have caused any unwanted situation, it will be possible to rapidly trace it backwards on its journey from the farm to the retailer to pinpoint the source of the problem and intervene to eliminate it. It also enables any resulting prohibition on trade in the commodity to be limited to a narrower field, thus limiting the damage done. For example, if hamburger patties are found to have contained a serious human pathogen and the source of contamination can be traced, only patties emanating from that source need to be withdrawn from sale. Animal identification has many other advantages that include demonstration of ownership and the ability to maintain better records pertaining to health, production and reproduction.

What are the minimum requirements for animal identification and traceability?
The minimum requirements for identification of animals are determined by the purpose, animal species and of course the cost. The BSE (mad cow disease) scare prompted the EU to insist upon individual identification for cattle to ensure precise traceability of beef. At the other end of the scale, identification to show ownership is usually at herd level; some countries have developed a national brand to stop cross-border theft. In developed countries, the trend is towards individual identification of larger species (cattle, sheep, goats, pigs) but this is not applied to poultry or fish. If the issue is traceability, the identification must be linked to some form of register, preferably electronic, that will enable the movement of the animal to be tracked rapidly all the way to the abattoir. As the
commodities derived from that animal must also be traceable to source, the identification usually incorporates a bar code that can then be used to identify the product.

**What are the recommended identification systems?**

Hot iron branding and ear notches are old traditional methods of identification that have served their purpose over a long time. Unfortunately, because they can be altered and because if not well done brands may be difficult to read, these methods are not acceptable for international trade. Acceptable methods of individually identifying cattle range from simple numbered ear tags to bar-coded ear tags to various types of identification and tracking devices that make use of imaging and radio frequency technology. These may be incorporated into ear tags, inserted under the skin or placed in ruminal boluses. They are expensive and in countries with limited resources and limited export questions might be raised about whether applying them widely would be justified.

**What is the way forward for COMESA?**

We have to accept that for trade in livestock commodities, requirements for identification and traceability are not going to go away, and in fact are likely to get more exigent as time goes by. On the other hand, before investing heavily in a system, most producers or governments would like to be sure that the profit will be worth it. Not only are the devices expensive, but maintaining the necessary traceability capacity is resource intensive. The best approach may be to decide on a minimum requirement for trade among member states that is largely based on a simple form of herd level identification, since extensively kept herds on pasture can be considered as a unit in terms of their health status. Where individual identification is desirable, for example in dairy cattle, simple numbered ear tags may be used. A ‘traceability and identification’ fund can be established in which some of the profit from livestock commodity trade within COMESA can be accumulated in order to upgrade the system as more profitable but also more demanding markets become available. At the same time, for particular circumstances such as cattle of pastoralists who want to participate but may not favour embellishment of their cattle with ear tags, some innovation may be necessary. Since the cattle are named by their owners, a system of identification using names, digital photographs and banking of a hair sample for genetic analysis if required could be considered. Another possible approach would be to identify only animals associated with dedicated production chains, e.g. those participating in the COMESA Green Pass system. This would reduce the complexity as well as the cost to livestock owners not participating in the marketing chain.

**Should we consider identifying animals other than cattle?**

This will depend on the extent to which they are traded, and the requirements of the markets in which they are traded. Relatively simple systems like simple numbered ear tags can be used for sheep and goats, although these do sometimes get lost as a result of contact with the thorny plants that prevail in Africa. Because pigs tend to fight and ear tag losses are common, an ear tattoo is the usual recommendation for identifying pigs. At present some form of batch identification is considered sufficient for poultry, fish and other aquatic animals, even by the EU.

**Further reading**

Terrestrial Animal Health Code, OIE: Chapter 4.1 General principles on identification and traceability of live animals ([www.oie.int](http://www.oie.int)).


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The COMESA Green Pass is a system of certification of agricultural commodities proposed to facilitate trade. Traders in high value markets are sometimes sceptical of certification provided by developing countries in terms of health and safety of commodities, creating yet another barrier to accessing those markets. There are strategies and tools to support credibility of certification for trade in livestock products. Making sure that they are in place and functional is fundamental to acceptance of the Green Pass as an assurance of safety and quality.

What makes certification credible?
Certification is credible when it is carried out by competent persons and supported by technical evidence that will testify to its veracity. For livestock commodities, this means that certification relating to animal health before slaughter should be provided by a qualified veterinarian; meat inspection should be carried out by a qualified meat inspector or veterinarian; and process and product certification should be carried out by a person knowledgeable in those fields. Where necessary, the certification should be supported by diagnostic data from a laboratory that is capable of carrying out the tests. Certification that an area is free of one or more diseases should be supported by surveillance data indicating that the declaration is based on monitoring and investigation that would reveal the presence of the disease. Finally, the process of certification should be transparent and clearly free of any influence from interested parties.

What are the pillars on which credible certification of livestock commodities and products rests?
The following structures and practices should be in place to support certification of livestock commodities and products:

- A national veterinary service that is able to function according to the norms provided by the World Organisation for Animal Health (OIE);
- Adequate legislation in terms of animal disease control, food safety and management of veterinary drugs;
- Access to veterinary diagnostic laboratory services;
Epidemiological data derived from surveillance for diseases of international importance;
- Regular, timely and transparent reporting of the occurrence of listed diseases to the OIE;
- Credible and auditable implementation of HACCP in livestock commodity and product processing to guarantee food safety.

Ensuring that the competent authorities (National and Regional Green Pass Authorities) are compliant with international management standards (ISO 9000) is helpful in assuring independence and transparency.

National veterinary services
The challenge of strengthening of veterinary services, often weak or perceived as weak in developing countries, has been taken up by the OIE, and their PVS tool is used for internal and external reviews of veterinary services to enable weaknesses to be identified and addressed. A number of COMESA countries have already benefited from this peer review process. Strengthening of veterinary services is an ongoing process that includes peer review, capacity building and continuing professional development. This is enhanced when opportunities are identified or created at regional level in order to harmonise veterinary service provision in COMESA.

Legislation
Harmonisation of legislation is one of the stated aims of COMESA, and this is important for trade in livestock commodities. The legislation for disease control tends to be reasonably similar in aim if not in wording in most countries. This may not, however, be the case for legislation for the management of veterinary drugs. International trade in livestock commodities increasingly depends on ability to demonstrate that they are safe in terms of drug residues, as well as in respect of animal and human pathogens. Testing procedures for drug residues are expensive and can best be provided at regional rather than national level. However, adequate legislation in terms of veterinary drug registration and dispensation goes a long way toward reassuring importers that commodities are unlikely to contain harmful residues.

Veterinary diagnostic laboratory services
The ability to rapidly diagnose and therefore manage animal diseases is vital for the prevention of widespread disease outbreaks that can lead to lengthy trade bans. By its strategy to ensure a regional laboratory network that includes reference laboratories with links to international reference laboratories, COMESA has taken an important step forward. The test will be to ensure the capacity and sustainability of the laboratories by overcoming the major challenge to veterinary laboratories in sub-Saharan Africa – lack of samples to maintain skills! It will also be important, particularly for the reference laboratories, to prioritise tests that are important for trade and work towards obtaining ISO accreditation for them within the region.

Surveillance for livestock diseases
Adequate surveillance for livestock diseases requires the active participation of livestock producers and traders in terms of reporting unusual disease events and liaison with the animal health authorities, as well as active seeking of disease/infection on their part. This requires awareness creation and training, which form part of the COMESA Green Pass strategy, and must be a dynamic and ongoing process. It is important to record negative data, i.e. the absence of disease, as well as disease incidence, as this demonstrates that surveillance is taking place! Epidemiological databases must be constantly updated to ensure current reporting and transparency.

Disease reporting
Member countries of OIE are obliged to report unusual disease events by means of immediate notifications and to provide six-monthly and annual reports on their disease situation to the OIE. These reports are available on the OIE website WAHID interface. Completing and submitting these reports promptly is important for demonstrating transparency. Efforts should be made at the regional level to ensure that all COMESA member countries are assiduous in fulfilling their obligations in terms of disease reporting, even when listed diseases are absent, as in some of the oceanic islands, to meet their obligations of transparency.

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The availability of sufficient livestock commodities of the required quality is crucial for the success of the COMESA Green Pass in promoting trade within the region and beyond. This means convincing a wide range of stakeholders along the livestock value chain of the benefits of participation in the system, and convincing potential trading partners of the desirability of the commodities. Competitiveness in global and even regional and local markets is not a given – it must be achieved through awareness, commitment and innovation.

Who are the targets for the campaign?
The prime targets for a campaign to promote participation in the COMESA Green Pass system are value chains extending from the livestock producers, livestock processors, animal feed manufacturers, livestock commodity processors, and wholesale or retailer traders. All of these need to be aware of the SPS measures required and the benefits of participation.

Livestock producers
Commercial livestock producers are likely to be willing participants in any initiative to increase their profits, but may need to be convinced that their participation will reap financial reward. Since they probably already have animals of sufficient quality and productivity, the focus will be on (1) confirming that the animals are free of trade-influencing unwanted diseases such as foot and mouth disease, brucellosis and tuberculosis, (2) ensuring that any commercial feed used is of good quality and free of contamination with toxins and infectious agents and (3) managing veterinary drugs responsibly. Although not an SPS requirement, animal welfare is increasingly a consumer requirement in the higher value markets, and producers should be aware of this.
One of COMESA’s aims is to improve rural income by enabling pastoralists and small-scale livestock producers to earn more from their animals through better market access by participation in the Green Pass system. Their production is often, although not inevitably, characterised by low productivity. Particularly in smallholder and peri-urban enterprises the animals may not be of the necessary quality to supply meat to the formal market, let alone the export market.

The problem is compounded by lack of infrastructure and lack of access to resources such as production and market know-how, credit and even affordable veterinary services. One option is evidently to have a scheme whereby weaners are purchased from poor farmers and raised in feedlots where the necessary resources are available. Unfortunately such schemes can cause great dissatisfaction on the part of the people who sell weaners because the price that they receive seems very low in comparison to the price received by the feedlot owners. This will need a sensitive approach and possibly initiatives like weaner producers becoming shareholders in the feedlot, rather than simply being paid for the calves. Like commercial herds, testing will be needed to confirm freedom from particular diseases, and training in health management and responsible use of veterinary drugs may be required. Genetic improvement may also be needed through provision of AI or bulls in order to attain the necessary quality of meat.

Livestock commodity processors
The processors of livestock commodities range from providers of abattoir services to those who undertake further processing to add value to the final product that is offered for sale. They have a strong influence on the safety and quality of food derived from animals. Ante- and post mortral inspection by qualified personnel at the abattoir will ensure that the meat has been derived from a healthy animal. However, since meat is highly perishable, particular care must be taken in the value-adding process to ensure that contamination with unwanted substances and agents does not render the product unsafe or unfit for human consumption. This is generally assured by implementation of HACCP (Hazard Analysis and Critical Control Point) throughout the processing, packaging and storage of the commodity. Certification for the Green Pass can only be issued when auditing has confirmed that the system has been adequately applied and the product has tested safe.

Animal feed manufacturers
The emergence of mad cow disease (BSE) dramatically focused attention on animal feed, believed to be the source of the problem. However, other health concerns have been raised about animal feed. Bacteria that cause salmonellosis, listeriosis and clostridial diseases in humans and animals have been traced to animal feed, and there have also in recent years been cases of very large amounts of meat having to be destroyed because it contained toxins like the carcinogen dioxin as a result of the animal feed being contaminated. SPS measures therefore have to be applied by animal feed manufacturers to ensure a safe product free of contaminants to safeguard human and animal health.

Wholesale/retail traders
COMESA wholesale/retail traders are the final link in the value chain before the commodity or product reaches the importer. It is in their own interest to handle the commodity or product bearing the Green Pass mark in such a way that there is no deterioration. When the Green Pass system is working as intended, selling the commodities or products bearing the proud symbol should confer a competitive advantage that will be jealously guarded and not jeopardised by allowing any deterioration of quality prior to export.

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One of Africa’s greatest resources is its rich wildlife, which underpins the growing tourist industry in most of sub-Saharan Africa. While this industry is a lucrative source of revenue, the benefits are not necessarily enjoyed by the wider community, and the demand for more land for conservation conflicts with the demand for more land for agricultural purposes. While conserving biodiversity is a global responsibility, infinite amounts of land are not available for the purpose, and this means that wildlife resources must be managed in a sustainable way. This includes trophy hunting and harvesting of wildlife as food. Commodity-based trade may facilitate the sustainable exploitation of wildlife.

Background
The teeming herds of wildlife that roamed sub-Saharan Africa and provided a source of food for our hunter-gatherer ancestors and their descendants were a cause of amazement, admiration and temptation to the early European explorers that rapidly led to over-exploitation. Before the arrival of guns, off-take of wildlife for food by indigenous people made a sustainable contribution to population control, as did other predators. This changed with the availability of modern weapons and the demand for greater quantities of animals to supply not only meat but trophies, ivory, and other products popular in the global market. At the same time, increasing settlement and agricultural activity placed pressure on wildlife, restricting them to less and less land. When it was recognised that there was a real danger of wildlife disappearing altogether, tracts of land were set apart as nature reserves, where wildlife could be conserved. In addition, private game ranches and sometimes government-owned hunting concessions permitted wildlife to be hunted under conditions that prevented the activity from leading to their extinction.

In recent decades, conservationists have called for more extensive tracts of land to be set aside for conservation, to address the problems of nutritional stress and limited gene pools that arise as a result of limiting ability to migrate and seek new pastures. The projected increase in tourism has proven
attractive to governments. The result is the creation of transfrontier conservation areas (TFCAs) that allow fences to come down between reserves situated in different countries. Some conservationists want fences to be abandoned wherever possible. Conversely, veterinarians are convinced removal of fences will result in more frequent disease outbreaks & loss of trade opportunities for livestock producers. This inevitably raises questions as to the effects of increased wildlife/livestock/human interaction in terms of the health and safety, as well as the socio-economic effects.

Wildlife conservation and livestock production – are they compatible?
Apart from predation, the major concern at the wildlife/livestock interface is disease. Various wildlife species are reservoir hosts for diseases that do not affect them at all but can be serious for livestock. The classical example is African buffalo, which can harbour foot and mouth disease viruses, but other well known examples are gnu (wildebeest) and malignant catarrhal fever and warthogs and African swine fever.

Transmission also occurs in the opposite direction, with bovine tuberculosis causing heavy losses to wildlife and bovine brucellosis having been diagnosed in African buffalo. However, mixed livestock/wildlife ranching has proven successful with careful species selection and management. It is probable that biodiversity conservation will have the best hope for sustainability if it is integrated with livestock production and other income-generating opportunities so that the socio-economic effects are positive.

There are also concerns relating to human health that have to be addressed, because 75% of zoonotic diseases are reported to have originated in wildlife. The perception that the wildlife/livestock interface is an area of potentially extra high disease transmission is certain to have a negative effect on trade in livestock or wildlife commodities unless it can be shown that the risks can be effectively managed.

What is the role of commodity-based trade?
Commodity-based trade (CBT) offers a means to trade in animal products from potentially high-risk areas and opens up new possibilities for trade in commodities derived from game species. In spite of the fact that wildlife species may be a source of pathogens, venison is popular and often fetches good prices in export niche markets. Currently venison is usually sourced from areas free of diseases like foot and mouth disease, but there is no scientific reason why de-boned, de-glanded venison from healthy animals (as is the case for beef) should not be sourced from any area regardless of its disease status. Because CBT is based on the premise that the safety of a commodity depends on its ability to transmit disease and not the disease status of its area of origin, it has the potential to facilitate trade in livestock and wildlife commodities emanating from even the interface areas. Provided that sound scientific evidence exists that the commodity would be unable to maintain and transmit disease-causing agents because the agent could not survive in it, the commodity should be accepted as posing only an acceptable (appropriate) level of risk. The ability to obtain good prices for wildlife as well as livestock commodities would make game ranching more attractive to producers and allow more people to benefit.

Commodity-based trade therefore offers scope for better and more sustainable integration of livestock production and biodiversity conservation.

What are the key elements for trade in wildlife commodities?
- Potential markets for venison exist within and outside the region;
- International acceptance, particular by OIE, for CBT without requirements relating to the area of origin of the commodity has been achieved;
- Producers who are interested in sustainable wildlife utilisation or mixed livestock and game production are identified and trained.

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Farming livestock for export, particularly to higher value markets, means making sure that the way in which the animals are farmed will enable the final commodity to comply with international standards for trade in livestock commodities. Concepts like “farm to fork” or “stable to table” imply that the quality of the commodity will be determined by events occurring from the birth of the animal from which it is derived to the moment when it is served as part of a meal. No single person or body is responsible for the entire value chain, and only the cook can be blamed if a fine piece of meat arrives at the table as a sorry burnt offering! The farmer is responsible for the first part of the value chain, which happens on the farm, and ends when the animal leaves the farm for the feedlot or the abattoir.

What makes a good quality beef animal?

The main on-farm factors that influence the quality of beef produced by cattle are as follows:

- Breed
- Nutrition
- Health
- Husbandry system
- Age at slaughter

These add up to the kind of animal chosen and how it is managed.

What is good quality beef?

The perceived quality of meat depends on various factors like appearance, flavour, consistency and juiciness – in fact it depends on what the consumer wants. Since all consumers want to be sure that the meat they eat will be good for them and not make them ill, the safety of meat is a non-negotiable element of quality. This depends not only on the health of the animal from which it is derived but also from the way it is handled all the way along the value chain, with HACCP systems in place to ensure the best practice at all stages until it reaches the consumer. The other attributes cannot be cast in stone. In the highest value markets consumers are generally looking for juicy, tender steaks that require little effort to cut or to chew, but there are markets where consumers are prepared to put more energy into eating their meat and flavour rather tenderness is the determining factor.
Selecting a breed

Various cattle breeds are famous for the beef they produce, but good beef can be obtained from any meat or dual purpose breed. There is nothing wrong with the meat of dairy cattle, either, but it is not considered profitable to raise dairy breeds for meat, as their conformation generally results in lower yields for the same amount of feed. Factors such as nutrition, health and age at slaughter are more important than breed in determining whether the meat will be of the necessary quality sought by the markets.

Nutrition, health and husbandry

The best quality meat for high value markets comes from animals that are in good condition and have not had to work too hard for their food and become tough in the process. For this reason ‘grain-fed’ beef from animals raised on concentrates in feedlots is widely considered the most desirable product. Especially in areas where grazing is not optimal, for example where pasture quantity or quality is insufficient and supplements are needed, producing beef in feedlots is probably the best option. This system also offers the advantage of being able to control parasites and diseases comparatively easily. However, where good pasture is available, there are consumers who prefer beef from animals raised on grass rather than grain because it is believed to have more flavour. A growing number of consumers in the highest value markets will only eat animals raised organically, i.e. under the most natural conditions possible. This is generally considered to be an expensive way to produce beef, as few or no artificial aids to pasture improvement or animal health care are permitted. Do some of the COMESA countries have an advantage in terms of good natural pasture and indigenous cattle breeds with natural resistance to disease? If so, every effort should be made to exploit this advantage. The charm of eating beef from interesting and attractive cattle breeds that have been raised under completely natural conditions in far-away Africa could be quite irresistible!

Age at slaughter

The global trend is to slaughter young beef animals, no older than two-tooth, to obtain the highest grades of meat. In contrast, many of the cattle slaughtered in Africa are at least three years old. There are various reasons for this, but many are raised on marginal grazing that may be stocked beyond its carrying capacity as well, resulting in slow growth. The fact that meat from such animals is tougher is often worsened by the fact that the animals are in poor condition because they have never eaten really well. In many cases the only way to have young, well-grown cattle to slaughter is the feedlot route.

Is there no hope for marketing beef of poorer quality?

Provided the meat is from healthy animals, there are plenty of marketing possibilities for beef other than toothsome and tender steaks. The meat from somewhat older animals in good condition will appeal to consumers who like some bite to their steaks - Argentina produces famous steaks that are sought-after for being less tender but more tasty. For cuts or grades that are not suitable for steaks, there are many ways in which value can be added along the chain by turning the meat into suitable processed products.

Conclusion

Knowing the markets and their preferences will help COMESA to determine what if anything will need to change on the farms where beef is produced for export within the region and beyond. A major focus on ensuring the health of the animals from which the meat is to be derived is essential, as this is not negotiable. After that, ways can be explored to satisfy different market tastes and in that way to allow as many producers as possible to benefit from the system.

Acknowledgements

This tenth COMESA Policy Brief was prepared by Dr. Mary-Louise Penrith and Dr. Gavin Thomson under support provided by TADScientific to the Pastoral Areas Coordination, Analysis and Policy Support (PACAPS) project. PACAPS is a project of the Feinstein International Center, Tufts University, implemented in partnership with COMESA. It is funded by the United States Agency for International Development as part of the wider program “Regional Enhanced Livelihoods in Pastoral Areas (RELPA)”.

Further information

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Commodity-based trade is accepted in principle by COMESA as a way to expand trade in the region through free movement of commodities and products across borders between member countries. The establishment of a Free Trade Area that will include all member countries of COMESA, EAC and SADC will necessitate similar free movement. Certain countries currently rely on country or zonal freedom from foot and mouth disease to export beef within region and to high value markets outside it including the EU. This provides an opportunity to investigate whether the principle of equivalence can be used as a basis for beef trade throughout the Free Trade Area. If this can be agreed, collective action by the countries in the three blocs could be taken to advance the matter in the international arena through a direct approach to the SPS Committee of the WTO.

Commodity-based trade and the free movement of beef
Large numbers of cattle producers throughout sub-Saharan Africa are denied access to high value beef markets because they farm in countries or areas where foot and mouth disease (FMD) is endemic. The standards for trade in livestock commodities, including beef, set out by the World Organisation for Animal Health (OIE) in its Terrestrial Animal Health Code recommend that the commodities should be sourced from areas or zones that are free of FMD. This principle is incorporated in the standards of the EU, which are adopted by many countries because they are readily accessed and perceived to represent the highest level of protection. The OIE provides a mechanism for declaration of freedom from FMD for countries or defined geographical zones within countries, but some markets, including the EU, do not accept the declaration without carrying out their own inspections. While the system works very well for cattle producers in free zones, it places the producers in other areas at a tremendous disadvantage. Not only are they unable to access high value export markets, often they are not able to access the better-priced markets in their own country owing to movement restrictions to protect the free zones. Freedom with
vaccination has been accepted as a principle by the OIE and the EU, allowing access to beef from markets in South America, but this course is not open to African countries on account of the presence of several serotypes and the lack of appropriate vaccine technology to distinguish naturally infected from vaccinated cattle.

Commodity-based trade (CBT) offers an alternative way out of the impasse, because it is based on the principle that certain commodities and products are inherently unable to transmit disease agents such as FMD virus, and therefore pose only an appropriate level of risk. This means that they are equivalent to commodities sourced from free areas and should be accepted for trade provided that they satisfy all the normal international requirements for food safety, such as having been derived from healthy animals. Although CBT has been accepted in principle by the OIE, the requirement for sourcing from a free area remains, negating the purpose for which it was developed. It is therefore necessary to lobby for its acceptance in the international arena as an alternative to geographical freedom of the area of origin.

Using the principle of equivalence to promote commodity-based trade
The WTO Sanitary and Phytosanitary Agreement (SPS Agreement) was drawn up by member states to promote safe trade in agricultural commodities and products while ensuring that the SPS requirements are not used unfairly as non-tariff barriers to trade. It recognises that countries that are free of trade-sensitive diseases like FMD will insist on preventing their entry through livestock commodity trade. On the other hand, since the eradication of FMD and other diseases in poorer countries where they are endemic is unlikely to be achievable in the short term, and the high level of resources needed to establish and maintain free zones may also not be available, Article 4 of the SPS Agreement concerns Equivalence. Provided that there is scientific evidence that a particular commodity or product poses no more than an acceptable level of risk, under Article it should be considered acceptable for trade regardless of the status of the area of origin. One commodity for which there is evidence that it poses only an acceptable level of risk for transmission of FMD is matured beef that has been de-glanded and de-boned. This commodity could therefore be sourced from healthy cattle anywhere in the region.

The way forward
Since the CBT has been accepted in principle by COMESA, member countries should be encouraged to apply it to intra-regional trade of de-boned, de-glanded and matured beef. The initiative to promote CBT by applying the principle of equivalence in a wider arena will require interaction between appropriate representatives of COMESA, EAC and SADC to reach consensus on the following matters:

- CBT could greatly benefit many hundreds of thousands of cattle raisers and potentially other livestock producers in the FTA as well as the rural economies of the countries in which they live;
- CBT potentially enables the conflict between biodiversity conservation initiatives and livestock development to be ameliorated.

Once consensus has been reached within the FTA, a consortium should be formed of countries willing and able to take the issue to the SPS Committee in the form of a concrete proposal.

Further reading

Thomson GR, Leyland TJ and Donaldson AI, 2009. De-boned beef an example of a commodity for which specific standards could be developed to ensure an appropriate level of protection for international trade. Transboundary and Emerging Diseases, 56, 9-17.

Acknowledgements
This eleventh COMESA Policy Brief was prepared by Dr. Mary-Louise Penrith and Dr. Gavin Thomson under support provided by TADScientific to the Pastoral Areas Coordination, Analysis and Policy Support (PACAPS) project. PACAPS is a project of the Feinstein International Center, Tufts University, implemented in partnership with COMESA. It is funded by the United States Agency for International Development as part of the wider program “Regional Enhanced Livelihoods in Pastoral Areas (RELP A)”.

Further information
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Residues in livestock commodities refer to unwanted substances like poisons, drugs and hormones that can be detected in meat, milk or eggs from animals that were exposed to them during their lifetime. Since these products are derived from apparently healthy animals, any poisons that might be detected would be in small enough quantities not to have caused death or even illness in the animal. All the same, there are standards set for the levels of such substances that can be tolerated in human food, and usually they are very low or even zero. Standards are also set for the levels of veterinary drug residues that can be tolerated in human food, because there is concern that by eating food containing drug residues people might develop resistance to medicines (antibiotics and other antimicrobials). Side effects from hormones are also feared. For the COMESA Green Pass, a strategy will have to be developed to ensure that the certified products do not contain unwanted residues.

Background
Concern about unwanted residues in food is a comparatively recent development. It has been known for a long time that food may contain residues of poisonous substances such as heavy metals and pesticides that can be harmful to human health. A nervous syndrome that people suffered in Japan known as “Minamata disease” resulted from eating fish that contained mercury as a result of water pollution. Some poisons, like heavy metals, tend to accumulate in the body and therefore even small quantities if taken in over a long period can cause serious disease. Concern about drug residues is more recent. It developed mainly as a result of the widespread use of antibiotics in animal feed to prevent disease and promote growth in industrialised farming systems. Since veterinary and human drugs are similar, it is feared that if humans are exposed to even small quantities of antimicrobials over a period of time they may develop resistance, and the human drugs of the same groups
will no longer work for them. Additionally, some drugs have side effects that it is feared may affect people exposed to residues. Hormones are used as growth promoters or to regulate reproduction in farm animals. It was demonstrated that the daughters of women who had been exposed to stilboestrol, a synthetic hormone that was widely used in cattle, frequently developed early cervical cancer, and the use of stilboestrol was banned. Cases of men developing female characteristics after eating meat containing hormones were highly publicised although not scientifically confirmed. The EU bans completely the use of any hormones as growth promoters in food animals.

How are residue levels in livestock commodities determined?
Determining whether residues are present at the very low permitted levels, and identifying trace amounts of substances whose presence is altogether prohibited, requires sophisticated and expensive laboratory equipment and highly skilled technicians to operate it. Because the EU and other importers of livestock products exercise zero tolerance for certain substances, more sensitive equipment is constantly being developed to detect ever more minute quantities, meaning that very expensive equipment may need to be replaced rather frequently. Building laboratory capacity for residue detection is a challenge for developing countries. The cost of up-to-date equipment is not the only constraint. Infrastructural problems related especially to electricity and water supplies are the norm rather than the exception, and will adversely affect not only the quality of testing but also equipment itself. Under less than ideal conditions, retention of highly qualified and skilled personnel cannot be guaranteed.

Is there any way other than laboratory testing to control residues?
Controlling drug residues requires a holistic approach based on a strategy that will as far as possible prevent the presence of unwanted substances in food. Countries should have a policy and legislation relating to pharmaceuticals that imposes all the necessary controls for the responsible use of veterinary as well as human drugs. Even more importantly, producers and veterinarians should be made aware of the dangers of misusing drugs, such as not observing withdrawal periods or using products not registered for use in their or their client’s animals. Even if the animals are produced for local consumption only, there is a responsibility to protect consumers from harmful substances. If the necessary measures to prevent drug misuse leading to residues are in place, periodic checks with testing at a reference laboratory should suffice to confirm that they are working.

What should be done at regional level in terms of residues?
Most importers are mainly concerned to know that the necessary controls in terms of drugs and residues are in place in the exporting country, and will not demand that capacity to perform testing should be available. The most important thing therefore is to ensure that any member country from which livestock commodities are sourced has the necessary legislation in place to control veterinary drug use. Harmonising the veterinary drug legislation in the region as far as possible by raising it to the highest level of control would be a positive action in support of certification of product safety.

Although testing is not always a requirement for export, it is probable that the importer will carry out tests from time to time, and if unacceptable levels of unwanted substances are detected this will create a problem. It is therefore prudent to identify a laboratory within the region or elsewhere with the necessary capacity and carry out ‘own’ tests to confirm that the system is working and veterinarians and producers are complying with the regulations.

Residues are rarely a problem in livestock raised extensively on natural pasture, so it is important to target feedlots and other types of intensive production when testing for residues in livestock commodities.

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In the new book *Modern and Mobile: The Future of Livestock Production in Africa’s Drylands*, COMESA explains that pastoralists contribute significantly to domestic and export livestock markets. Cross-border trade in pastoralist areas is critical to regional economies as well as the national economies of different countries. However, pastoralism in the region is still very much misunderstood in terms of the economic benefits which it currently generates, and the potential for growth. In marked contrast to the available evidence on the economics of pastoralism are widely-held beliefs that pastoralism is an archaic, economically inefficient, chaotic and environmentally destructive form of land use. Although such views are not evidence-based, they continue to drive national livestock and land policy in many countries in the COMESA region.

Where there is no data?
Existing national statistics are inadequate and inaccurate, and fail to record the full economic contribution of pastoralism in the COMESA region. Direct values of pastoralism include the production of milk, meat and hides for family consumption and domestic and export markets, but these are poorly captured in the national accounts, even when as inputs to the formal sector. Indirect values of pastoralism include contributions to other formal economic sectors (e.g. tourism, agriculture) and sustainable land use and risk management in disequilibrium environments and a range of other environmental services (e.g. biodiversity conservation, carbon sequestration). But these too are rarely portrayed in national statistics or recognized by policy makers. Consequently, governments undervalue pastoralism and promote policies that in seeking to change or replace it create a vicious circle of impoverishment, conflict and environmental degradation.

Undervaluing pastoralism
Governments collect data on livestock numbers and certain indicators of productivity (milk and meat production) and export values of live animals, hides and skins and to a lesser extent milk. These contributions are subsequently expressed in terms of their contribution to agricultural GDP. And while existing national statistics indicate livestock contributing a significant amount to the COMESA region’s agricultural GDP – 80% in Sudan, 50% in Kenya,
35% in Ethiopia – these figures undervalue the true contribution of pastoralism to the economy.

National databases are limited in a number of ways.

- A significant but unknown proportion of the pastoral economy does not pass through official markets but occurs within the community and through unofficial trade, including cross-border commerce. Only 10% of interregional trade from five border areas in East Africa, valued at US$ 61 million per year, actually passes through official trade channels and is recorded. Furthermore, the total national value of milk and meat consumed within the pastoral family and the labour supplied for managing livestock are unknown.

- In practice, statistical compilations tend to be based on assumptions, estimates and best guesses by a range of people. Data collection also fails to distinguish gender or capture the economic contribution of women pastoralists through dairying, provision of labour and collection of non-timber forest products. Data that is collected tends to focus on the livestock sector, ignoring the economic contribution of other key resources within pastoralism (e.g. non-timber forest products). Furthermore, not only does the data fail to distinguish between the relative contributions of different livestock production systems (e.g. ranching, dairying, pastoralism), statistics are largely collected on cattle with little information available to demonstrate the economic outputs of sheep, goats and camels, key resources in many pastoral economies and a major source of trade both within and outwith the region. Information on the contribution of donkeys is virtually non-existent.

A new conceptual framework

A new conceptual framework is required to capture properly the true national value of the goods and services from an informal sector like pastoralism. To do this, the concept of pastoralism’s economic benefits has to be extended beyond the value of livestock products (milk, meat, hides) to include all “values” associated with it. These values also need to be disaggregated within pastoral systems and households and between them and the broader national economy.

The Total Economic Value (TEV) framework is such a tool, providing a more complete picture of the impact and value of pastoralism. Table 2 uses the TEV approach to identify the range of direct and indirect values that can be attributed to pastoralism, as a first step in exploring its total value.

**Direct values** include the consumption of livestock products (milk, meat, blood) and forest goods essential for the well-being of the family. Livestock provide financial services – investment and insurance – to rural communities without easy access to formal banking facilities, and currency to build social capital so essential in high-risk environments where access to key resources is highly dependent on social relations.

Other direct values include the value of the goods sold on informal and formal markets and the inputs pastoralism makes to the supply chains of other formal and informal sectors, including the *nyama choma* or roast meat trade in East Africa. A 2005 study in Arusha, Tanzania, identified over 600 *nyama choma* businesses employing 5,600 people with an estimated 25,000 dependents. When ancillary businesses such as butchers’ outlets are included, the annual turnover of the

### Table 1: Total Economic Value (TEV) framework

<table>
<thead>
<tr>
<th>Direct values</th>
<th>Indirect values</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subsistence and livelihood values:</strong></td>
<td><strong>Economic input values:</strong></td>
</tr>
<tr>
<td>• Production for household and community consumption; includes flows of livestock products such as milk, meat and blood, and forest products such as firewood, honey, fruits, medicine; also include breeding and stock accumulation.</td>
<td>• Added value to agricultural production</td>
</tr>
<tr>
<td>• Service provision: insurance, savings and risk management.</td>
<td>• Benefits to tourists and the tourism industry</td>
</tr>
<tr>
<td>• Other factors: socio-cultural values and maintain important social relations and social capital, including for peace.</td>
<td><strong>Environmental values:</strong></td>
</tr>
<tr>
<td><strong>Economic values:</strong></td>
<td>• Nutrient recycling</td>
</tr>
<tr>
<td>• Marketed: domestic, regional and export sales of milk and milk products, meat and live animals, hides and leather, and non-timber forest products.</td>
<td>• Maintenance of pasture productivity and biodiversity</td>
</tr>
<tr>
<td>• Raw material production: inputs to supply chains involving informal or quasi-formal economic activity – butchers, traders, and transporters.</td>
<td>• Tree regeneration</td>
</tr>
<tr>
<td><strong>Human capital values:</strong></td>
<td>• Maintenance of natural ponds and water cycling</td>
</tr>
<tr>
<td>• Employment of 9 to 20 million East Africans</td>
<td>• Building environmental resilience to climate change</td>
</tr>
<tr>
<td>• Skill development and indigenous knowledge</td>
<td>• Carbon storage</td>
</tr>
</tbody>
</table>
industry in Arusha is now estimated at US$ 22 million. The direct value of pastoralism as an ‘employer’ is often overlooked. In the drylands areas of the COMESA region, pastoralism is often the only form of employment. Estimates of the pastoralist population vary from 9 to 20 million, and with potential part-time involvement could be considerably higher. And is not just the numbers that are important. Pastoralists are highly specialised livestock herders and breeders and have skills and indigenous knowledge of direct national value. Pastoralists also possess a sophisticated understanding of livestock genetic selection processes. As climate change brings greater environmental, social and economic uncertainty, harnessing pastoral knowledge and experience on livestock management in an environmentally sustainable manner will prove invaluable in the overall management of Africa’s drylands.

Pastoralism contributes significant but unknown value indirectly to other sectors and industries – indirect values. Agriculture is a key beneficiary of pastoralism. It helps raise agricultural productivity by providing manure, animals for agriculture and transport, seasonal labour, and technical knowledge for the rising number of farmers now investing in livestock. Farmers also help pastoralists by providing crop residues as fodder – potentially crucial in drought years. These reciprocal exchanges help reduce conflict and promote peaceful relations.

Unlike agriculture, pastoralism is one of the few land uses able to coexist with wildlife, as domesticated and wild animals exploit different ecological niches. As such, pastoralism is a major contributor to tourism, particularly in eastern Africa. A vital input is the maintenance of grazing reserves, which provides critical dry season habitats for wildlife. Nelson (2009) estimates the protection of dry season grazing contributes US$ 8m million to Tanzania’s northern circuit tourism industry. The carbon storage potential of the rangelands is increasingly recognized. The rangelands are the largest land-use system in the world, covering about 40% of the earth’s land mass and 60% of Africa. It is estimated that these habitats store approximately 30% of the world’s carbon stocks. Pastoralism, while generating economic benefits from these areas through the temporary grazing of livestock, also plays a significant role in ensuring the stored carbon is not released, as would be the case with alternative land-use systems (e.g. farming, bio-fuel production).

The way forward
Globally, livestock is growing faster than any other agricultural sector; and in COMESA region, the demand for meat and related products is rising along with urban populations. To meet that demand, contribute to economic development and boost foreign exchange, the region’s governments are focusing on both regional and international trade. Pastoralism, properly valued using a TEV framework backed by a supportive policy environment will contribute significantly to meeting both domestic and regional demand.

Further reading
RECONCILE/IIED.

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Huge benefits foregone
Cross-border livestock mobility in the COMESA region is of tremendous importance to national and regional economies and food security, particularly in pastoral areas. In East Africa, for example, the inter-regional livestock trade is estimated to have an annual value in excess of US$ 65 million. Revenues earned from cross-border trade primarily finance the import of cereals and other essential items (tea, sugar, oil, medicine, clothing) into grain-deficit dry pastoral areas. The value and importance of this back trading is such that when cross-border livestock sales are banned, governments discover that they have to bring in food aid.

Cross-border mobility is also critical for the maintenance of high pastoral livestock productivity. National borders arbitrarily created by the European powers at the Berlin Conference in 1885 split pastoral communities apart, divided ecological zones and cut through trading routes. The border between Kenya and Uganda, for example, demarcated along the Turkana escarpment, severs the wet season lowland plains to the east from the wetter dry season highland grazing areas to the west. This has seriously undermined pastoral productivity and ability to manage drought and thereby contributes to conflict.

Unlike West Africa that has passed specific legislation to protect and enhance regional livestock mobility and trade, many governments in the COMESA region regard cross-border mobility, particularly of pastoralists, to be illegal. Much on-going livestock movement and trade thus remains hidden and unofficial. This contributes to conflict, undermines the profitability and productivity of the pastoral sector and represents huge benefits forgone to national and regional economies.

Linking regional and local livestock mobility
Lessons from West Africa indicate cross-border mobility needs to be addressed within a comprehensive policy, legal and institutional framework that harmonizes national and regional legislation to secure livestock mobility from the local to the regional level.

At regional level, the ECOWAS decision agreed in Abuja in October 1998 provides a regional framework for cross-border transhumance between fifteen member states. The decision authorizes cross-border transhumance in respect of certain conditions, the chief of which is the granting of an International Transhumance Certificate (ITC). The ITC aims to:

- Allow a control of departing livestock herds.
- Assure the protection of animal health of local herds in the host country.
- Inform in good time the populations of ‘welcoming areas’ of the arrival of herds from neighbouring countries.

The rights of non-resident mobile herders are protected by the host countries legislation, but they also have to abide by the laws of the host country in relation to forests, wildlife, water points and pastures. Conflict resolution is envisaged via a conciliation commission (commission de conciliation) made up of herders, farmers, local government representatives and other concerned parties.

Box 1
Legality of cross-border transhumance

The crossing of land borders for the transhumance of cattle, sheep, goats, camels and donkeys according to conditions defined by this Decision is authorized between all the countries of the Community.

Article 3, Decision A/DEC.5/10/98 regulating transhumance between the member states of ECOWAS.

There are certain restrictions for pastoralists. In order to gain the ITC, they must provide local administration services with information on their herd, vaccinations, the itinerary they intend to follow and the border posts they will use. In addition, there must be minimum two herders at any one time, and at least one herder per 50 head of livestock.

In practice pastoralists have complained of the administrative "red tape" in acquiring relevant documents, of harassment and illegal fines from border officials and of the fact that livestock corridors are often blocked in the host countries thereby contributing to farmer-herder conflicts. Furthermore the rigidity with which the transhumance dates are fixed without sufficient consultation with pastoral communities or regard to the particular environmental conditions of a particular year have also caused problems.

Bi-lateral agreements between countries on livestock mobility have also been passed. These are essential to tailor the ECOWAS decision to local realities, and they tend to be short documents that set out the modalities for cross-border mobility – see Box 2.

Box 2
Key specifications common to bi-lateral agreements for cross-border mobility

- Essential documents required to cross the borders are specified – e.g. passport, vaccination and animal health certificates.
- Time periods for mobility are specified – e.g. between November and April, and not exceeding a period of 30 days.
- Entry and exit points and livestock corridors along which animals must travel are specified.
- Conflict resolution conditions are specified.

Bi-lateral institutions to manage and monitor the provisions within the agreements and in accordance with the ECOWAS decision have also been created. For example, in 2003, Burkina Faso and Niger signed an agreement to hold an annual meeting between their livestock ministers and establish a Joint Technical Committee to support the ministers’ meetings, provide recommendations for consideration, contribute to conflict mediation and implement other activities as instructed. Though not perfect, this has contributed to facilitating peaceful livestock movements between their two countries.

Cross-border mobility as an extension of national livestock mobility needs to be addressed within the respective national legislation of contiguous countries if it is to be recognised and secured. Legal provisions need to be harmonised in national legislation in all countries in the following key areas:

- Recognition of livestock mobility within and between countries as a rational and productive form of land use.
- Protection of the rangelands as communal areas under controlled access management systems.
- Protection of pastoral resources from alienation or encroachment, particularly strategic resources (dry season water, dry season grazing, livestock corridors, etc.).
- Provision for flexible tenure arrangements that focus on rights of access and control rather than ownership and which accommodate multiple use and over-lapping rights of access.
- Establishment of conflict management mechanisms focused on mediation, negotiation and consensus
- Decentralization of management decisions to the level of communities with space for traditional institutions and systems to function effectively

Box 3 provides a few examples of key provisions within pastoral laws in Mali, Mauritania and Niger that explicitly address pastoral land use, livestock mobility, conflict resolution, and crop-livestock integration.

The way forward
To promote and secure cross-border livestock mobility in the COMESA region an over-arching policy and legal framework needs to be developed at both regional and national level. Such a framework must explicitly address pastoral land use, livestock mobility, conflict resolution, crop-livestock integration and the integration of customary and modern institutions to create a more effective governance framework capable of mediating the interests of all livelihood groups. It is essential that this be designed with the full and informed participation of pastoral communities and other actors including farmers, the private sector, local government authorities and national

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3 Loi 2000/044 portant code pastoral en Mauritanie ; Loi n° 004 du 27 février 2001 portant charte pastorale en République du Mali ; and Projet de loi relative au pastoralisme, 2009, Niger. The laws of Mali and Mauritania have been promulgated and have directives (decrees) for their implementation. In Niger, the law has been approved by the government but not passed by Parliament – the latter having been dissolved by the President in May 2009.
institutions (e.g. line ministries, MPs). Experience from Niger in particular has shown how a participatory and iterative "learning" process over more than three years and involving representatives of the majority of stakeholders from rural communities to line ministries has produced a pastoral law whose provisions are widely considered to support pastoral land rights and livestock mobility.

However, legal protection of cross-border mobility is not in itself adequate. It is a necessary and vital component, but it needs to be followed by a set of complementary activities including:

- **Information, communication outreach and training** are critical to ensure all actors are aware of and understand the laws and their provisions. Pastoralists need to build capacities in legal and political engagement, learn to assert their rights and ensure that government authorities are applying checks and balances as specified by law.

- **Investment in livestock corridors and basic services along their route (water points, resting areas, access to markets, clinics, etc.)** is essential. Developing such routes involves not just financial investments in physical structures (beacons, wells, etc.), but critically investment in consensus building among all actors to ensure the legitimacy and protection of the routes.

- **The development of operational guidelines** (decrees, byelaws, etc.), which set out the practical steps and modalities for the implementation of the substantive law including responsibilities of different actors, sanctions, etc. These guidelines need to be developed with the full collaboration of all actors to ensure their legitimacy, they need to reflect local realities and specificities and they need to be accessible to all actors.

Finally, it is essential to harmonise the wider institutional and development framework, largely focused on growth through the modernization of the agricultural sector, to ensure it complements and supports cross-border mobility in the COMESA region.

**Further reading**


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**Box 3**  
Innovative legal provisions from West Africa

- **Pastoral mobility is protected under all circumstances and can only be limited temporarily and for reasons of the safety of animals and crops, and this in accordance with the provisions of the law. Art 10, Pastoral Law, Mauritania**

- **In the context of the policy of regional integration, the movement of Malian livestock herds for international transhumance to neighbouring countries is authorised…[...]. Similarly, the entry and movement of herds from neighbouring countries on Mali’s territory for the purpose of transhumance is authorised subject to reciprocity and according to bi-lateral and regional agreements …[...]. Art 23, Pastoral Charter, Mali**

- **Subject to provisions within the current law, all forms of exclusive appropriation of pastoral areas under the public domain of the State and local government is prohibited. In particular, no land may be leased if it constrains the mobility of herders and livestock as well as access to pastoral resources. Art 5, Pastoral Law, Niger**

- **Pastoralists can, at their request, benefit from a priority right of pastoral use of natural resources situated in their home area. The priority right of pastoral use does not prevent the implementation of customary rules of management and use of pastoral areas, in particular the third party access to water and the right of grazing…[...]. Art 11, Pastoral Law, Niger**