



Common Market for Eastern and Southern Africa  
Comprehensive African Agriculture Development Programme (CAADP)  
Pillar III

## **Policy Framework for Food Security in Pastoralist Areas**

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**Abbreviations**

ABE	Alternative Basic Education
AU	African Union
AU/IBAR	African Union/Interafrican Bureau for Animal Resources
CAADP	Comprehensive Africa Agriculture Development Programme
CAHW	Community-based animal health worker
CCM	Community case management
CHW	Community health worker
COMESA	Common Market for eastern and Southern Africa
FAO	Food and Agriculture Organisation
GAM	Global Acute Malnutrition
LEGS	Livestock Emergency Guidelines and Standards
PFFSPA	Policy Framework for Food Security in Pastoralist Areas
RNI	Recommended Nutrient Intake
SPS	Sanitary and Phytosanitary
TAD	Transboundary animal disease
TEV	Total Economic Value
TLU	Tropical Livestock Unit
OIE	Office international des epizooties
WHO	World Health Organization

## Introduction

### **Background to the COMESA Policy Framework for Food Security in Pastoralist Areas**

The Comprehensive Africa Agriculture Development Programme (CAADP) has been endorsed by African Heads of State and Governments as a vision for the restoration of agricultural growth, food security, and rural development in Africa. CAADP aims to stimulate *agriculture-led development that eliminates hunger and reduces poverty and food insecurity*. It is a strategic framework to guide country development efforts and partnerships in the agricultural sector, and directs investment to four mutually reinforcing and interlinked pillars:

- *Pillar I*: Extending the area under sustainable land management and reliable water control systems;
- *Pillar II*: Improving rural infrastructure and trade-related capacities for market access;
- *Pillar III*: Increasing food supply, reducing hunger and improving responses to food emergency crises; and
- *Pillar IV*: Improving agriculture research, technology dissemination and adoption.

CAADP Pillar III focuses on chronically food insecure areas and populations vulnerable to and affected by various crises and emergencies. It draws together the central elements of the CAADP vision to ensure that growing agricultural productivity, well-integrated markets and expanded purchasing power of vulnerable groups combine to eradicate hunger, malnutrition and poverty. The pillar's focus necessarily intersects with the other three CAADP Pillars.

In the COMESA region pastoralist communities are among the most food insecure and vulnerable groups, who are repeatedly affected by natural and man-made disasters. Many of these areas are subject to frequent large-scale humanitarian programmes and the challenge of harmonizing emergency assistance with development policies and related investments. In some areas, protracted political instability and conflict has created 'complex emergencies' in which long-term humanitarian assistance undermines development and economic growth.

To illustrate the urgent needs in pastoralist areas of the COMESA region, three chronic food security crises in pastoralist areas can be used.

- In Northeastern Uganda (commonly known as Karamoja), 80 per cent of the population are highly food insecure (UNICEF, 2009). Assessment of Human Development Indicators places this region below the bottom-ranked country globally<sup>1</sup> in the United Nations Human Development Index. Health and nutrition assessments conducted in 2008 showed that under-5 mortality was reaching alert status in three districts and the nutritional status of children 6 to 59 months of age required immediate humanitarian action.
- In the Somali region of Ethiopia, emergency nutritional and mortality surveys conducted in seven districts in 2009 showed a critical/serious nutrition situation with two districts showing critical rates of global acute malnutrition (GAM >20 per cent), and four districts showing serious rates of global acute malnutrition (GAM 15-19 per cent) (EHNRI/UNICEF, SCUS, 2009). The WHO cut-off for GAM in emergencies is 10 per cent.
- In Turkana District, northwest Kenya, GAM ranged from 20.5 to 26.9 per cent in four divisions which were assessed in April 2009. In Lokituang sub-district GAM has been measured 12 times since March 2000 and has exceeded 10 per cent (the WHO cut-off for emergencies) 11 times, with an average GAM over the past nine years of 22.4 per cent - more than twice the WHO standard.

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<sup>1</sup> Sierra Leone is ranked bottom of the Human Development Index, at position 177.

Although some of these human nutrition statistics are very recent, they reflect levels of food insecurity in pastoralist areas over decades. Levels of malnutrition which would be considered unacceptable in other parts of a country are regarded as ‘normal’ in pastoralist areas. A regional overview of the predicted food security situation for the third quarter of 2009 is shown in Figure 1.

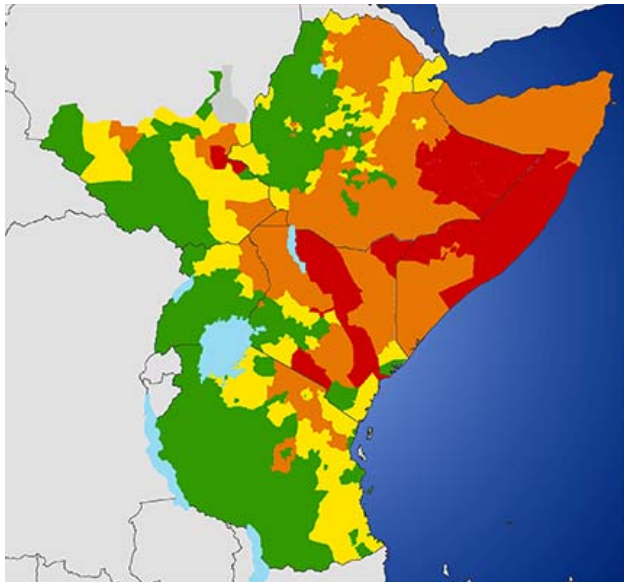


Figure 1. Estimated food security conditions, July-September 2009

*Notes*

Source: FEWSNET

Extremely food insecure (dark red) and highly food insecure areas (red) include:

- pastoralist areas of the Somali Region, southern Oromiya Region, and Afar zones of Ethiopia
- most of the pastoralist districts of Kenya, including the entire north and much of the east and south
- Northeastern Uganda or Karamoja, occupied by agropastoralists and pastoralists
- Eastern Equatoria in South Sudan, and parts of Bahr el Ghazal and Upper Nile, occupied by agropastoralists and pastoralists.

Food insecurity in pastoralist areas can also be viewed in terms of chronic food insecurity, and transitory or acute food insecurity. Those vulnerable to chronic hunger are households that are either subjected to frequent or severe and regular food insecurity, or households that have low resilience, or both. In contrast, households that suffer acute or transitory food insecurity or hunger do so over a shorter but intense periods, such as the life-threatening periods of drought. For example, in Kenya even in normal years when there is no drought, nearly three million people rely on relief aid to meet their food needs. These people are chronically food insecure and unable to produce or access enough food to meet their needs at any time. They face permanent hunger because, for example, they lack sufficient financial assets, adult labour, land or income earning opportunities. Over the last decade, the number of those facing chronic hunger in most COMESA arid districts has increased. During drought years or at times of other crises, the acute food insecure households join the chronically food insecure. At present, the main instrument for dealing with both categories of food insecurity in pastoralist areas is food aid.

The **COMESA Policy Framework for Food Security in Pastoralist Areas (PFFSPA)** has been developed under CAADP Pillar III and provides a policy framework which is specific to vulnerable and food insecure pastoralist populations in the COMESA region, while also being closely aligned with the CAADP principles. The PFFSPA also complements the generic *Framework for African Food Security* which has been developed by the African Union/New Economic Partnership for Africa Development. The PFFSPA examines the special and complex challenges facing pastoralist communities within the context of the COMESA regional mandate of promoting the free movement of goods, services and people. Therefore, the framework emphasizes the cross-border and regional aspects of pastoralist livelihoods and the policy options for strengthening these livelihoods through better integration of pastoralists into national and regional economies. The PFFSPA is structured into two main sections:

- Section 1 – is a contemporary analysis of pastoralist livelihoods in the COMESA region which explains the economic and ecological rationale behind mobile pastoralism, describes the vulnerability context and reasons for repeated food security crises, and discusses current policy and institutional arrangements and constraints; the analysis also covers recent trends and debates such as population growth and climate change;

- Section 2 – draws on the analysis in Section 1 to present and prioritize policy needs, with an emphasis on regional policies and the need to view pastoralist areas in terms of cross-border economies and ecosystems.

### ***Definitions of pastoralism and scope of the PFFSPA***

Although there is no standard definition of pastoralism, it is often defined as a livelihood in which at least 50 per cent of a household's food and income is derived from livestock. Furthermore, pastoralism is characterized by mobility and in particular, the seasonal movement of livestock to access grazing resources and water. In Africa and the COMESA region, pastoralist communities occupy arid and semi-arid zones with very high spatial and temporal variability of rainfall. The COMESA Member States with substantial pastoralist populations are Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Sudan and Uganda<sup>2</sup>. In total, these populations exceed 25 million people. As part of CAADP Pillar III the focus of the PFFSPA is food insecurity and vulnerability, and in this regard food security and human development indicators show that specific pastoralist areas of Djibouti, Eritrea, Ethiopia, Kenya, Uganda and Sudan are a particular concern.

Typical pastoralist areas have no permanent water sources, water availability is seasonal, and options for crop production are extremely limited. Where permanent rivers are found in pastoral areas (e.g. the Awash valley in Ethiopia) it is usual to find only a single river running through a vast dryland area of tens or hundreds of thousands of square kilometres. In many cases, land adjacent to these rivers has already been appropriated for commercial agricultural schemes and is no longer available to pastoralists.

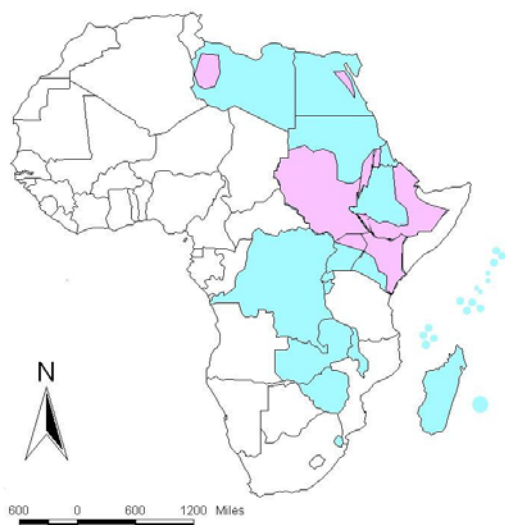


Figure 2. The COMESA region and pastoralist areas

*Note*  
Pastoralist areas are shaded in pink and are illustrative.

A second major livelihood system of relevance to the PFFSPA is agropastoralism. Again there is no standard definition of agropastoralism but it involves less reliance on livestock and more reliance on crop production. Agropastoralism occurs in areas with relatively higher rainfall, but also involves some form of seasonal movement of livestock to grazing areas. The distinction between pastoralism and agropastoralism is often blurred because depending on rainfall and other trends, households may adopt either of these two livelihood strategies in different years. In terms of high levels of food insecurity, high dependence on livestock and mobility, some agropastoral areas are very relevant to the PFFSPA e.g. parts of South Sudan.

<sup>2</sup> Somalia has observer status in COMESA, and has a large pastoralist population.

## **COMESA process for developing the PFFSPA**

As a way of life and economic activity, pastoralism in Africa is one of the oldest, most resilient and most adaptive livelihoods strategies which is well suited to arid and semi-arid environments. Pastoralists have developed a diverse range of strategies, institutions and networks to exploit the unpredictability of arid environments to their economic advantage. Livestock mobility and the carefully controlled breeding of animals to feed selectively on the best quality pastures highly dispersed in time and space are two of the more critical strategies that allow them to create economic value rather than mere survival in difficult environments. However, policy dialogue around pastoralism has often been characterized by controversy, and diverse or opposing opinions. Although the limited availability of official data and statistics from many pastoralist areas may have hindered policy formulation, a considerable body of research and development literature has often been overlooked when setting policy. Essentially, pastoralist production systems are fundamentally different from the sedentized crop or mixed farming systems found in areas with relatively higher rainfall. Part of the difference stems from the multiple roles of livestock in pastoral economies, including as a means of food, cash, savings and insurance. Therefore, policy responses to food insecurity in pastoralist areas need to be adapted to the unique characteristics of these areas.

With these issues in mind, the process for developing the PFFSPA by COMESA included:

- The sourcing and review of a substantial body of published and grey literature on pastoralism in COMESA Member States, including:
  - Academic studies on: socio-economics; social organization and gender; ecology and natural resources; livestock production and marketing; human nutrition, food security and health; traditional institutions and governance;
  - Development and humanitarian literature dealing primarily with issues such as pastoral development policies and programmes and their impact; humanitarian assistance including food aid and non-food interventions, and their impact; the causes and responses to conflict; the theory and practice of drought cycle management;
  - Policy and legal documents including national development and disaster management policies related to pastoralist areas, poverty reduction strategy papers, policies on livestock development and marketing, and legal codes for legitimizing cross-border pastoral movements.

This literature dated back to the 1940s, but included articles in scientific journals published as recently 2009.

- The establishment by COMESA of a regional multi-stakeholder consultative forum, the Regional Livestock and Pastoralism Forum, as a means for COMESA to discuss pastoralism and livestock issues with a range of governmental, non governmental and private sector actors.
- The use of three workshops involving COMESA CAADP and agriculture technical experts, national CAADP experts from Djibouti, Ethiopia and Kenya, and professional staff from the African Union Interafrican Bureau for Animal Resources (AU/IBAR) and the Intergovernmental Authority for Development (IGAD)<sup>3</sup>. The workshops included visits to pastoralist areas in Ethiopia and Kenya, and consultations with pastoralist elders and local non governmental organizations.

The process outlined above began in October 2007 and led to the first drafting of the PFFSPA in August 2009. This consultative draft was completed in December 2009.

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<sup>3</sup> See <https://wikis.uit.tufts.edu/confluence/display/FIC/Regional+Policy+Support+to+COMESA++Project+Outputs>



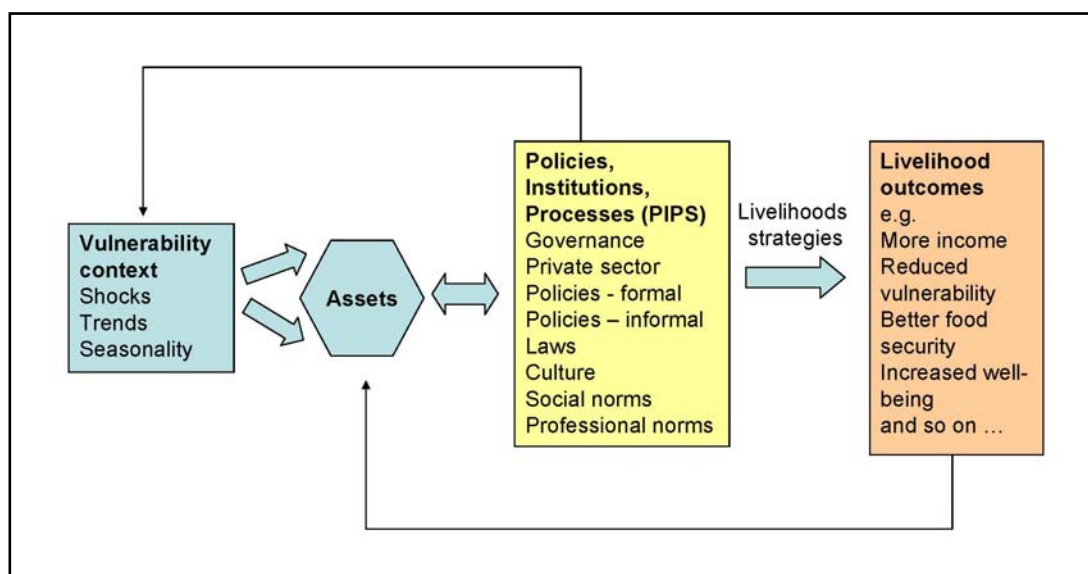
## Section 1. Pastoralist Livelihoods and Food Security in the COMESA Region

### 1.1 Analytical Framework

Household food security is often assessed using measures such as productivity, availability, assets and entitlements. However, for the purpose of examining a wider range of factors which affect food security, and to ensure a full review of policy and institutional issues, the sustainable livelihoods framework was used. Also, as the analysis shows and as CAADP Pillar III already recognizes, pastoralist communities are *chronically vulnerable* and, therefore, an analytical framework was needed which enabled a full analysis of vulnerability and risk.

In summary, the livelihoods framework enables a description of local individual, household or community ‘assets’ to be positioned and analyzed against factors which contribute to vulnerability, such as seasonality, shocks and trends. The framework also allows examination of formal and informal policies, institutions and processes which affect the ways in which people are able to protect or develop their assets. This part of the framework includes sub-national, national, regional and international policies and institutions and, therefore, is highly relevant to a regional body such as COMESA. From the perspective of defining and responding to poverty, the diverse pastoralist communities in the region commonly explain poverty by reference to both their livestock holdings (financial assets) and access to indigenous social networks and support systems (social assets). The sustainable livelihoods framework allows both financial and social assets to be examined.

*The sustainable livelihoods framework*



*A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base (Scoones, 1998).*

By following the sustainable livelihoods framework, this section is organized into three main areas:

- Assets – the financial, social, human, natural, physical, and political assets of pastoralist communities, and their relative strengths and importance;
- Vulnerability context – the factors which hinder asset accumulation, the risks faced by pastoralists and their differential exposure to them, and trends in these risks over time;
- Policies and institutions – the formal and informal institutional and policy arrangements at local, national, regional and international levels which support or hinder pastoralist livelihoods.

## **1.2 Assets**

### **1.2.1 Financial assets**

*Financial assets comprise the inflows of cash from income, gifts or other sources, as well as stocks and savings held by a family or household.*

#### **a. Regional overview**

In economic terms, pastoralism contributes a significant amount to the COMESA region's agricultural Gross Domestic Product (GDP), including more than 35 per cent of agricultural GDP in Kenya, Ethiopia, and Sudan, and to the region's foreign exchange earnings, including 10 and 8 per cent in Ethiopia and Uganda, respectively. It also contributes significantly to national and regional food markets and to food security in the area. Estimates are that meat supplied from pastoral rangelands to national markets account for about 99 per cent of consumption in Djibouti, 52 per cent in Eritrea, 14 per cent in Ethiopia, 36 per cent in Kenya, and 46 per cent in Sudan. When the large economic and food value of own or subsistence consumption of pastoral products, especially milk, also are considered, the pastoral sector's contribution both to GDP and food security are substantially exceeding 30 per cent of agricultural GDPs in some COMESA countries. Generally, 75 per cent or more of total pastoral milk production does not enter the market but is consumed locally and in the case of Ethiopia is estimated to be US\$215 million per annum (Davies, 2007). Moreover, taxation on marketed livestock and livestock products account for a significant percentage of local and national revenues, with the pastoral sector accounting for almost all revenues generated in key dryland zones and market towns throughout the region. In short, pastoralism is a significant economic activity in the region that contributes considerably more to government revenues than it receives in public allocations, in most countries a ratio as high as 10:1.

#### **b. Livestock herds and household income**

For pastoralist communities the main financial asset is livestock. Livestock holdings represent wealth in pastoral areas, and animals are used both as a form of savings and as assets to be exchanged for cash or grain as needed. The emphasis on livestock ownership and production in pastoralist areas is largely determined by environmental factors and especially the arid or semi-arid conditions with marked variability in rainfall. In these areas, livestock are able to digest dryland vegetation and convert this resource into human foodstuffs such as milk and meat. Furthermore, livestock can be moved from one area to another, thereby enabling access to scattered and unpredictable grazing resources over large areas.

In general, pastoralists keep mixed herds of livestock comprising combinations of large and small ruminants. The composition of herds in different areas is influenced by environment and particularly, the drought tolerance of different livestock species. Market demands also influence the types of livestock reared. As a general rule, camels and goats are prioritized in the most arid areas, with cattle and sheep also reared but in areas with relatively higher rainfall. It follows that mixed herding is a logical strategy which allows risk management and flexible financial management. In terms of risk, different livestock species have different water and grazing needs, and to some extent, are affected by different diseases. Therefore, it is likely that some animals will survive an adverse event such as a disease epidemic or drought. In terms of financial management, small stock such as sheep and goats are a convenient asset to be sold to meet basic needs such as food, medicines or school fees, whereas larger stock represent more long-term savings.

From the perspective of relatively intensive or purely commercial livestock production systems, the types of livestock kept by pastoralists are sometimes viewed as 'low-producers' in terms of indicators such as milk production or reproductive performance. However, production should be viewed relative to the required outputs of the system and the cost of inputs. These issues are discussed in section 1.2.2 but it can be noted that livestock breeds in pastoralist areas have evolved over many hundreds of years

and are generally well-adapted to the local environment and disease-risks. In part, this adaptation has been influenced by selective breeding by pastoralists to emphasize specific production characteristics such as milk production. Furthermore, seasonal variations in rainfall and grazing, and recurrent drought, mean that pastoralist livestock such as camels are able to produce milk in very dry conditions when other species have ceased production.

Table 1. Estimated livestock populations in pastoralist areas of the COMESA region

Livestock species	Population estimate, COMESA region	Population estimate, pastoralist areas	Pastoralist livestock population as a proportion of COMESA region
Camels	7,433,900	7,285,222	98%
Cattle	25,930,332	4,926,761	19%
Sheep	27,885,499	7,807,939	28%
Goats	25,392,381	6,348,095	25%

Notes

Source: compiled by COMESA 2008.

Pastoralists in some areas also keep donkeys, mules and horses. These animals have substantial livelihoods value in terms of transportation of water, goods and people.

Table 2. Contribution of sales of livestock and livestock products to annual household income in selected pastoralist communities of the COMESA region

Pastoralist area (main ethnic group)	Income as a proportion of total annual income		Total annual income from livestock and livestock products
	Livestock sales	Milk, milk products	
Northeastern Kenya (Somali) <sup>1</sup>	10-70%	5-30%	15-100%
Northwestern Kenya (Turkana) <sup>2</sup>	36-97%	3-11%	47-100%
Northern Kenya (Rendille, Gabra) <sup>3</sup>	11%	64%	75%
North-central Kenya (Samburu, Il Chamus) <sup>3</sup>	16%	35%	51%
Northern Kenya/southern Ethiopia (Borana) <sup>3</sup>	28%	52%	80%
Southern Ethiopia (Guji, Gabra) <sup>3</sup>	25%	63%	88%

Notes

<sup>1</sup> From Save the Children (2007); data is for the Wajir pastoral livelihoods zone and varies by wealth group from 'very poor' to 'better off' households.

<sup>2</sup> From Oxfam GB (2005a); ranges relate to differences between 'poor' and 'better off' households.

<sup>3</sup> From McPeak et al. (forthcoming); income from milk and milk products also includes minor income from meat.

### c. Livestock herds and human foods

An important characteristic of pastoralist systems is the direct, household-level consumption of livestock products and especially milk, which tends to be the highest proportion of total household income. Animal milk is a valuable food containing high quality protein plus fat, vitamins and minerals. Therefore, milk is a good source of Type II nutrients that are needed for growth and development of children, including all eight essential amino acids. Milk is also a good source of Type I nutrients, which prevent specific micronutrient deficiency diseases (e.g. vitamin A and iodine), and protect against other illnesses. A basic nutritional analysis of animal milk shows that two cups of milk per day (around 500ml) can meet at least 50 per cent of the recommended intake for many essential nutrients (Table 3). Therefore, the ability of livestock to convert dryland vegetation into milk is one of the fundamental economic justifications for pastoralism. Milk is not only consumed fresh, but preserved in the form of ghee, butter, yogurt and cheese. These foods are also highly nutritious and a particularly good source of energy and fat-soluble vitamins.

A second important characteristic of pastoralist nutrition is the consumption of grain, and the use of livestock to sell or exchange for grain. All pastoralists groups consume grain and therefore, require markets to exchange livestock for grain. In terms of child nutrition and food security, it is important to

note that grain alone is not easily digested by young children. However, when mixed with milk cereal protein is more fully utilized for growth.

Table 3. Nutritional composition and contribution to recommended nutrient intakes of animal milk

Nutrient	In	In	In	RNI** by age			Two cups milk provide 50% RNI or more
	250ml* cow milk	250ml* goat milk	250ml* camel milk	6-11 months	12-23 months	24-59 months	
Energy (Kcal)	165	173	163	700	900	1500	No
Protein (g) <sup>β</sup>	8	8.9	7.9	13	14	16	Yes
Thiamine (mg)	0.1	0.1	0.1	0.3	0.5	0.6	Yes (younger children)
Riboflavin (mg)	0.4	0.4	0.2	0.4	0.5	0.6	Yes
Niacin (mg)	0.2	0.7	1.1	4	6	8	No
Vitamin B6 (mg)	0.1	0.1	0.1	0.3	0.5	0.6	Yes (younger children)
Vitamin B12 (µg)	0.9	0.15	0.5	0.7	0.9	1.2	Yes (not goat)
Folate (µg)	12.5	2.5	1	80	150	200	No
Vitamin C(mg)	3	3	9	30	30	30	Yes (camel only)
Vitamin A (µg)	95	139	125	190 <sup>α</sup>	200 <sup>α</sup>	200 <sup>α</sup>	Yes
Calcium (mg)	288	335	317	400	500	600	Yes
Phosphorous (mg)	300	302	214	275	460	500	Yes
Magnesium (mg)	30	40	30	54	60	76	Yes
Potassium (mg)	380	453	354	700	2000	2100	Yes (younger children)
Iodine (mg)	0.05	0.06	no data	0.09	0.09	0.09	Yes
Iron (mg)	0.2	0.1	0.5	7.7	4.8	5.3	No
Zinc (mg)	1.3	1.4	1.1	0.7	1.7	2	Yes

*Notes*

Source: Sadler et al. (2009).

\*250ml is equivalent to 1 cup milk. Levels of nutrients in milk taken jointly from Park and Haenlein (2006) and WFP 'NutVal' 2006 v1.4 (Seal 2006)

\*\* RNI = Recommended Nutrient Intake - all taken from WHO FAO Vitamin and Mineral Requirements in Human Nutrition, 2004. RNI = the Estimated Average Requirements + 2SDs, and is therefore sufficient for 95 of the population  
<sup>α</sup> The RNI for vitamin A gives the EAR only - i.e. estimated average requirement. This is due to the potential toxicity of this vitamin when consumed in amounts in excess of individual daily requirements.

<sup>β</sup> based on high quality protein

Examples of the contribution of milk to pastoralist's diets are provided in Annex 1, and indicate that milk can account for up to 66 per cent of foods consumed. The high reliance of pastoralist groups on milk explains the good nutritional status of these groups during periods of high milk production, such as the main wet seasons. However, pastoralists – and especially their children – are very susceptible to periods of milk deficit, as occurs during drought. This aspect of pastoralist nutrition explains high levels of child malnutrition in many pastoralist areas towards the end of the dry season, and especially high malnutrition during drought. These issues are discussed more fully in section 1.3, along with seasonal and drought-related trends in the terms of trade of livestock and grains.

#### **d. Pastoralism, livestock and wealth**

The high reliance of pastoralists on their livestock is illustrated by the wealth categories which pastoralist themselves use to describe rich and poor households. Commonly, these definitions are based on a combination of livestock holdings and elements of social capital, such as access to family members for loans, gifts or other types of support (see section 1.2.2). In any given pastoralist area there are households which own relatively large numbers of livestock, measured in absolute terms in hundreds or even thousands of animals. Even households which are characterized locally as poor, may own up to 30 or 40 small ruminants, and a few cattle or camels. These minimum numbers of livestock are needed to enable a pastoralist to pursue a pastoral way of life, and are sometimes measured under the concept of 'minimum herd size'<sup>4</sup>. When livestock assets in both rich and poor households are

<sup>4</sup> Livestock in pastoralist areas are sometimes measured using Tropical Livestock Unit (TLU) per person. However, there is no standard TLU/person in these highly variable areas because factors such as rainfall distribution, and production of pasture and its nutritious quality vary widely from year to year. Whereas in one

compared with non pastoral households in other ecological zones of a given country, pastoralists might be described as rich in financial assets because their financial capital often exceeds that of for example, settled farmers. However, in many national poverty assessments pastoralist areas are categorized as ‘poor’, mainly because the income values of own-consumption of animal products (especially milk) and herd breeding/reproduction are not estimated. This apparent contradiction arises when poverty surveys use indicators drawn from non-pastoral settings, such as annual cash income and access to basic services (Little et al., 2008).

In terms of food security policy, livelihoods analysis shows that pastoralist areas are not universally poor but that financial assets vary between households. Therefore, annual income and food consumption from livestock vary by wealth group, as shown in Tables 4 and 5. The high-risk nature of pastoralism is also important, as discussed in section 1.2.2.

Table 4. Annual pastoral household income from livestock sales in selected areas of Kenya, Ethiopia and Sudan

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

*Notes*

Income data compiled from Save the Children (2007) and LIU (2008).

The annual household income from livestock sales is expressed in US\$ by using the exchange rate when the study was undertaken for the three countries. Livestock equivalents that needed to be sold to raise the level of income for each wealth group are expressed only in shoats for the purpose of comparison (for conversion purposes 10-11 shoats = 1TLU). Price information was obtained from SCF data for Darfur and N.E Kenya and from exporters and local traders for Borana. The exchange rate at the time was US\$1 = 74 Ksh = 11 ETB. The low exchange rate of the Kenyan currency at the time could to a little extent misrepresent the actual number of animals sold when expressed in US\$ terms.

Table 5. The contribution of milk and meat to household food requirements

Area, country	Pastoral wealth group			
	Very poor	Poor	Middle	Better-off
North Darfur, Sudan	-	0-5%	10-15%	-
West Mandera, Kenya	0-5%	5-10%	7-10%	10-15%
Wajir, Kenya	0-5%	1-10%	10-15%	15-25%
Teletele, Dillo and Dier, Ethiopia	0-5%	0-10%	40-50%	70-80%
Borana-Guji, Ethiopia	1%	2%	25-35%	40-50%

*Notes*

Source: SCUK (2004; 2007); LIU (2008).

The Table shows from around 2004, in some areas the very poor and the poor have had little access to own food sources, which implies that most of their food requirements had to be sourced from outside.

## e. Markets

Data on sources of food and income in pastoralist households demonstrates that pastoralists are very dependant on markets, and especially as a means to sell animals and acquire cereals. A vast body of research shows that certain livestock marketing behaviours are observed amongst all pastoral wealth groups, but this depends on seasonal conditions at the time of sale. In the wet seasons there is herd growth and prices generally are good, and these conditions motivate sellers. However, pastoralists

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year a certain number and type of livestock may sustain a household, in another year a different number and type of livestock are needed. Whereas TLU/person is a useful indicator in stable farming environments, this kind of standard indicators is a far less useful in disequilibrium environments where averages can hide a wide variation in normality.

must attain sufficiently large herd sizes to allow them a comfortable margin to liquidate their animals through the market (e.g. Barrett et al., 2006). During dry seasons (or drought) prices are lower, herders often are pressed by immediate cash needs and thus, do not have the luxury of timing sales according to periods when prices are most favourable. Here, the fundamental principle is to market what is considered surplus at a time when cash need arises, and price is not such a key factor in determining sales compared with wet season sales. Conversely, sales could be dictated by desperate situations when the decimation of livestock becomes imminent, as in times of prolonged drought (Aklilu and Wekessa, 2002).

While certain behaviours hold true for all wealth groups, important differences exist in marketing behaviours by wealth status. Research shows that wealthier households use livestock markets more frequently to sell animals because these households have greater cash expenditures. For the poorer households the key livelihoods strategy is herd growth because in these environments, livestock provide the best economic returns relative to other available options (McPeak, 2005).

From a regional and cross-border perspective, many pastoralist ecosystems are cross-border systems and this includes marketing arrangements.

#### **f. Remittances**

Remittances sent from relatives located overseas or in urban centers are an increasingly important source of financial capital for pastoralists in some areas. For example, in 2006 the Somali diaspora was estimated at over 1 million people and their remittances were valued at US\$825 million per year (Economist Intelligence Unit, 2006); other reports value remittances at up to US\$1 billion (Lindley, 2005). The importance of remittances was also shown by household surveys indicating that remittances accounted for up to 20% of the income of poor households in some pastoral livelihoods zones (FSAU Somalia, 2006). Other examples include the Darfur region in Sudan where prior to the onset of the current conflict in 2003, the migration of workers to Libya and transfer of remittances back home was an important livelihoods strategy (Young et al., 2005).

#### **g. Other activities**

Although livestock rearing is the main and most logical economic activity in pastoralist areas, various other economic activities take place. The harvesting of wild products on pastoral rangelands is common and includes aloes, gum Arabica, honey, and a range of different incenses and medicinal plants. Their sale comprises both an important supplemental source of income for herder households, as well as valuable inputs for other sectors of the economy and other industries. Tourism is also important in relatively secure areas with the required infrastructure and facilities, and is particularly linked to wildlife parks and nature conservancies. The extent to which pastoralists benefit from tourism varies considerably. In some countries or areas within countries, wildlife conservation has led to the exclusion of pastoralists from their traditional grazing lands. In contrast, community-based approaches and local management of facilities occurs in other areas, albeit on a small scale.

These other types of economic activities in pastoralist areas are attracting increasing attention due to concerns over reports that destitution in pastoralist areas is increasing. In this regard it is useful to categorize two broad types of diversification as follows (Little, 2009):

- ‘Good diversification’ is closely linked to the pastoral sector and keeps value added in the region; it includes milk and meat processing, tanning, trading, retail input suppliers, and local natural product gathering/processing.
- ‘Weak or harmful diversification’ may hurt the physical environment and social fabric of society and in the long run can undermine the main economic activity of pastoralism; it includes charcoal production, firewood sales export of charcoal, illicit liquors, the sex trade and banditry.

Related to economic diversification in pastoral areas is education, and a deliberate strategy of educating family members with a view to either future income via remittances, or, greater capacity to engage in novel income generating activities. Education is discussed further in section 1.2.3.

## 1.2.2 Natural assets

*Natural assets are defined as the natural resource stocks from which resources flow and services useful for livelihoods are derived.*

### a. Environment and mobility

The parts of the COMESA region where pastoralists live are characterized by extreme climatic variability, especially with respect to rainfall. This variability may be seasonal – as in the annual alteration between wet and dry seasons – or unpredictable and erratic, as in multi-year droughts. Livestock mobility is one of the most effective techniques African pastoralists have developed for both exploiting and coping with both regular seasonal variability and droughts in these semi-arid and arid areas. As pastoralism is largely determined by rainfall, those member states with substantial pastoralist populations - Djibouti, Eritrea, Ethiopia, Kenya, Sudan and Uganda – also have large areas of land classified as arid or semi-arid.

Table 6. Examples of land classification in COMESA Member States with substantial food insecure pastoralist populations

Country	Total land area	Proportion of land			Total proportion of land classified as desert and drylands
		Desert Hyperarid	Arid	Drylands Semi-arid	
Djibouti	22,000km <sup>2</sup>	99%	1%	0%	100%
Eritrea	122,000km <sup>2</sup>	32.8%	6.6%	37.7%	77.1%
Ethiopia	1,133,000km <sup>2</sup>	9.4%	18.5%	15%	42.9%
Kenya	591,000km <sup>2</sup>	-	-	-	84.0%
Sudan	2,498,000km <sup>2</sup>	37.4%	10.2%	16.3%	63.9%

*Notes*

Data compiled from FAO TerraStat database, and for Kenya from Republic of Kenya (2007).

Somali has observer status in COMESA and has a large pastoralist population. The total land areas is 642,000km<sup>2</sup> and 98 of this land is desert or dryland.

Although pastoralist mobility is often seen as a non-progressive and unproductive way of life, economic analysis shows that herd movement is effective in preserving both pastoral livelihoods and high levels of livestock production in these unstable climates. Research in this area dates back to the mid 1970s and produces consistent results using different methodologies in different areas (Dahl and Hjort, 1976; Scott, 1984; Galaty and Johnson, 1990; Scoones, 1995; Muhereza and Otim, 2002). Table 7 presents an example of research conducted in pastoralist areas which examined livestock performance in mobile pastoral herds versus sedentary herds; nomadic cattle consistently out-perform sedentary cattle across the indicators measured.

Table 7. The performance of settled and migratory cattle in Darfur, Sudan

Performance indicator	Migratory herds	Sedentary herds
Calving rate	65%	40%
Females first calving under four years old	65%	29%
Total herd mortality	15%	35%
Calf mortality	11%	40%
Meat production per breeding female	0.057kg	0.023kg

Source: Wilson and Clarke (1976).

How does herd mobility contribute to the maintenance of these relatively high levels of performance? If a herd is confined to one place, livestock numbers, viability and productivity are limited by the

scarcest resource in the scarcest season in that particular place. If rainfall and vegetation are constant or predictable, sedentary systems can function. However, movement becomes necessary when – as in semi-arid areas – conditions fluctuate widely such that a place that is rich in resources at one time becomes virtually uninhabitable in another. Mobile herds can then move from one favourable area to another, avoiding resource-scarce periods in each zone that they visit. In this way mobile livestock producers can maintain over a wide geographic region a larger and more productive livestock population than could be sustained by separate herds each confined to its own small area.

Table 8 examines the implications of these realities for domestic livestock production in Africa. It compares output from settled commercial ranching versus open-range pastoralism in the Sahel, Eastern and Southern Africa. The studies cited here captured in one unit of measure – protein, calories, or cash – the combined value of the diverse array of dairy, traction, meat and fertilizer products generated by indigenous African herds. All these studies expressed this output on a per hectare basis, which makes possible a direct comparison of land productivity under different production and land tenure systems. According to these studies pastoral systems consistently outperform sedentary ranching systems not by a narrow margin but by orders of magnitude.

Table 8. Comparison of outputs from pastoralism versus settled commercial ranching

Country	Productivity of pastoralism and ranching (ranching = 100%)	Units of measure
Mali <sup>1</sup>	80-1066% relative to US ranches; 100-800% relative to Australian ranches	Kg protein production/ha/year
Ethiopia <sup>2</sup> (Borana)	157% relative to Kenyan ranches	MJGE/ha/year
Kenya <sup>3</sup> (Maasai)	185% relative to East African ranches	Kg protein production/ha/year
Botswana <sup>4</sup>	188% relative to Botswana ranches	Kg protein production/ha/year
Zimbabwe <sup>5</sup>	150% relative to Zimbabwe ranches	Zimbabwe \$/ha/year

Notes

<sup>1</sup>Penning de Vries and Djiteye (1982); <sup>2</sup>Cossins (1985); <sup>3</sup>Wesern (1982); <sup>4</sup>de Ridder and Wagenaar (1984);

<sup>5</sup>Barrett (1992).

Although the scientific evidence shows the efficiency of herd mobility in pastoral areas and the need for relatively large system boundaries to optimize land use, diminishing access to grazing areas is one of the most important long-term trends affecting pastoral livelihoods. Pastoralists face competition from farmers, have their lands allocated to commercial rice, sugar or cotton schemes (often of questionable profitability or sustainability), are displaced by large-scale dams or other development projects, are excluded from wildlife conservation areas, and in some areas, are affected by bush encroachment which prevents grazing by livestock. These pressures on grazing land increase tensions and conflicts between pastoral groups, which in turn, can limit access to buffer areas between disputing communities. These issues are described in more detail in section bb but disabling land tenure arrangement are a major factor affecting food security in pastoralist areas.

## **b. Cross-border mobility and livelihoods**

If pastoral livestock mobility is viewed from a regional perspective, it is evident that the large ecosystems within which pastoralists need to move are often cross-border ecosystems. This fact is a remnant of the national borders which were created during the colonial period and which often divided well-established and rational pastoral economic and social units. The modern consequences of these borders is that the cross-border movement of herds to access seasonal grazing resources is a sound economic and environmental activity, but, is usually perceived as illegal by states. As discussed in section 2, this aspect of pastoralist livelihoods in the COMESA region is a key justification for rationalizing and enabling transboundary pastoral movements, livestock marketing and epizootic disease control on a regional basis.

Table 9 summarizes some of the main pastoralist ecosystems in the COMESA region. Some of these systems include up to four countries, and most are characterized by high levels of food insecurity.



Table 9. Examples of important cross-border pastoralist ecosystems in the COMESA region

Pastoralist ecosystem/cluster	Description
Somali NE Kenya-Somalia <sup>a</sup> -eastern Ethiopia-Djibouti	An extensive pastoralist ecosystem stretching from Kenya to Djibouti, including the whole of Somalia, and covering more than 1 million km <sup>2</sup> . Many of the traditional Somali clan areas transect national borders in this system. It contributes substantially to the COMESA region's livestock exports to Gulf States, and also includes a major cross-border trade from southern Somalia into Kenya. The ecosystem is characterized by high levels of food insecurity.
Afar Ethiopia-Eritrea-Djibouti	Encompassing parts of north-east and east Ethiopia, south-east Eritrea and Djibouti. A very remote ecosystem with relatively limited livestock marketing activity in terms of regional or export trade. The ecosystem is characterized by high levels of food insecurity.
Borana Ethiopia-Kenya	Covering areas of northern Kenya and southern Ethiopia, with important cross-border movements and livestock trade. The ecosystem is characterized by high levels of food insecurity.
Maasai Kenya-Tanzania <sup>b</sup>	The Maasai ethnic group covers extensive areas of southern Kenya, and northern and central Tanzania. There is substantial cross-border movement and livestock trade. The ecosystem is characterized by moderate levels of food insecurity.
Karamojong Cluster	Comprises the large Turkana district of north-west Kenya, Pokot district in Kenya, the Karamoja region in north-east Uganda, and related ethno-linguistic pastoral groups in South Sudan and south-west Ethiopia. The ecosystem is characterized by high levels of food insecurity, especially in Turkana and Karamoja.
North-eastern Sudan-north, and western Eritrea	Includes seasonal the movements of Beja and Beni Amer pastoralists between Sudan and Eritrea, and related economic activities.

*Notes*

<sup>a</sup> Somalia has observer status in COMESA.

<sup>b</sup> Tanzania is not a member of COMESA.

### 1.2.3 Human assets

*Human assets represent the skills, knowledge, ability to labour and good health that together, enable people to pursue different livelihood strategies and achieve their livelihood objectives.*

#### a. Indigenous skills and knowledge in pastoralist areas

Pastoralists live in some of the harshest and risk-prone environments in the world, with severe limitations in terms of the availability of water and vegetation. Their ability to adapt and survive in these areas is in part, due to a very detailed understanding of their environment and knowledge of water sources, plants, wildlife and livestock. Pastoralists are skilled livestock herders and have developed extensive knowledge of livestock husbandry and health, including selective breeding strategies (e.g. Dinucci and Fre, 2003), prevention and treatment of diseases and parasites (e.g. Bizimana, 1994), and grazing practices (e.g. Oba and Kutile, 2001) based on the quality of vegetation and mineral sources in different areas. This knowledge is documented extensively in the anthropological, rangeland and livestock husbandry literature on pastoralist areas, and represents a vast intellectual resource in the region.

In terms of food security crises in pastoral areas due to drought, it is increasingly recognized that drought-response programmes should build on the strategies which pastoralists try to use during drought (e.g. Morton, 2006; LEGS, 2009). These strategies are based on the protection of a core

breeding herd of mainly selected adult females, to maximize herd growth and recovery after drought. Therefore, pastoralists do not necessarily aim to maintain their entire herds and will sell off or even slaughter certain types of animals to focus resources on the core breeding stock. Drought strategies include splitting herds and moving to distant grazing areas (including the use of private trucks), purchase of livestock feed and water, and veterinary care. These expenses will be covered through sale of selected animals, assuming that traders are accessible and prices are reasonable.

## **b. Formal education in pastoralist areas**

In contrast to indigenous knowledge and skills, formal education services in pastoralist areas are very poorly developed. Within a given country, pastoralist areas often rank lowest in terms of the physical presence of schools, school enrolment, literacy levels and other indicators. For example, in non pastoral areas of Kenya the proportion of 6 to 17 year-olds who have never attended school generally falls below 5 per cent (Government of Kenya, 2009a). However, in pastoralist districts this indicator varies from 15 to 50 per cent. Furthermore, these figures hides gender disparities with far fewer pastoral girls attending school than boys. In the pastoral North Eastern Province of Kenya 93 per cent of women reported having no education at all (SID, 2004). In Uganda, pastoral children in Karamoja were three times less likely to attend school than children in other parts of the country and illiteracy among females was 7.5 times higher in Karamoja than in other areas (Barton and Wamai, 1994). In the largely pastoralist Somali region of Ethiopia the national statistics agency was unable to report any education indicators or facilities in 2006, whereas statistics were reported for all other regions of the country (CSA/EDRI/IFPRI, 2006). Livelihoods studies in selected areas of the region indicated that the literacy rate among pastoralists was only 13.7 per cent, and 75 per cent of pastoralists described education services as ‘poor’ or ‘very poor’ (Devereux, 2006). Like the North Eastern Province of Kenya, the figures obscured a large gender difference; whereas 22.4 per cent of men were literate only 4.8 per cent of women could read or write.

Table 10. Educational attainment in pastoralist areas

Country, pastoralist region	Proportion of males with no educational attainment	Proportion of females with no educational attainment
Ethiopia national	52.4%	66.8%
- Somali Region	82.4%	88.8%
Kenya national	15.8%	22.9%
- North Eastern province	65.8%	86.8%
Uganda national	12.3%	23.0%
- Karamoja	52.7%	66.5%

Source: Kipuri and Ridgewell (2008).

Two years after the signing of the Comprehensive Peace Agreement in Sudan, household surveys confirmed that South Sudan had some of the lowest education indicators of any region in the world. In the main agropastoral and pastoral areas such as Bahr el Ghazal, Upper Nile, Jonglei, Lakes and Eastern Equatoria, primary school entry rates varied from 1.0 to 8.1 per cent, compared with rates of up to 20 per cent in settled farming areas of Central and Eastern Equatoria (SGNU/GSS, 2006). The secondary school net attendance rate varied from 0 to 3 per cent in agropastoral and pastoral areas, compared with 2.9 to 6.6 per cent in more settled farming areas.

Education is generally viewed as fundamental to human development, with an educated population contributing to economic growth and diversity, as well as leading to broader societal and cultural benefits. In pastoralist areas the limited education facilities relate directly to the opportunities for ‘good’ economic diversification in these areas and wealth creation (see section 1.2.1g). The potential contribution of education to household wealth in pastoral areas is shown by a study in Baringo District in Kenya which tracked pastoral households over 20 years. During this period the average period of education per household member increased from 1.8 years to 3.7 years, the proportion of households with at least one secondary school graduate increased from less than 8% to 23%, and the

proportion of households receiving remittances increased from less than 10% to 28%. The impact of these trends is shown in Table 11.

Table 11. Impact of secondary education on pastoralist households in Baringo District, Kenya, 1980-2002

Livelihoods indicators	Homesteads 'with secondary education'	Homesteads 'without secondary education'
Households with member in salaried employment	57%	2%
Households receiving remittances	78%	30%
Annual expenditures assisting relatives (Ksh)	4,441	1,670
Annual food expenditures (Ksh)	16,9953	10,2303
Households claiming 'good' food availability	70%	49%
Households using food aid	23%	66%
Average number of animals owned	9.8 cattle, 41 sheep/goats	6.4 cattle, 30 sheep/goats
Number of animals lost in drought	19.5	12
Losses as proportion of total cattle owned	67%	65%
Annual cash savings (Ksh)	56,343	9,993

Source: Little et al. (2009).

The provision of services in pastoralist areas is constrained by those factors which are typical of relatively large, remote areas with small human populations (Swift et al., 1990). These situations increase the transaction costs of service provision due to the large physical distances involved, leading to a high cost per person serviced. Professional workers such as teachers are also less willing to work in these areas due to their physical remoteness, limited facilities or infrastructure, and language and cultural issues. These constraints are exacerbated when conventional fixed-point delivery systems are used which do not take account of pastoral mobility, and therefore, these systems often have limited accessibility for pastoralists.

### c. Health in pastoralist areas

In common with formal education facilities, health services in pastoralist areas are extremely weak. Even the most basic, preventive primary health care programmes are poorly delivered in these areas relative to other parts of a given country.

- Sudan – the proportion of fully immunized children varied by state but was noticeably lower in some northern states with high pastoralist populations e.g. North Kordofan 39.4 per cent, South Kordofan 37.3 per cent, North Darfur 39.9 per cent and South Darfur 23.7 per cent (SGNU/GSS, 2006). In South Sudan, with substantial agropastoral populations, these figures were as low as 5.5 per cent in Bahr el Ghazal.
- Kenya - child immunization coverage was only 6 per cent in the pastoral North Eastern Province of Kenya (an area covering 20% of the country in terms of land mass) compared to a national average of 57 per cent . The province has only nine doctors and a doctor-patient ratio of 1:120,823; in other provinces the ratio varies from 1:21,000 to 1: 51,000 (SID, 2004). Looking specifically at women and child health, only 15.5 per cent of deliveries in North Eastern Province involved trained health workers, compared with a national average of 50.7 per cent (Government of Kenya, 2009a), and 86 per cent of pastoralists were more than 5km from a health clinic compared to a national average of 48 per cent.
- Eritrea – infant mortality in the pastoralist Northern Red Sea and Southern Red Seas zobas was 77 per 1000 live births and 122 per 100 live births respectively, compared to a national average of 48 per 1000 live births (WHO, 2007) – death rates were between 1.6 and 2.5 times higher in pastoralist areas.

- Ethiopia - in the Somali region of Ethiopia information from a livelihoods survey which included selected pastoral areas showed major disparities between access to health care between urban centres and pastoral communities (Devereux, 2006). For example, while 96 per cent of urban respondents reported a health clinic in their community, and within 1km distance, only 12 per cent of pastoralists reported a health clinic in their community and at a nearest average distance of 36km. Similarly, in pastoral areas only 24.4 per cent of children were immunized compared with 49.4 per cent of children in urban areas. In other districts of the region child immunization coverage varied from 17.8 to 34 per cent (EHNRI/UNICEF/ SCUS, 2009).
- Uganda - in the Karamoja region of Uganda, the under-5 mortality was 174/1000 live births compared to a national average of 137/1000 live births (UNICEF, 2009). Only 18 per cent of births were assisted by skilled workers compared to a national average of 42 per cent (Uganda Demographic and Health Survey, 2006 – cited by UNICEF, 2009)

In common with education, there are also major gender differences in health care and health outcomes. For example, in the Somali region of Ethiopia a male infant had a 22 per cent higher chance of surviving to the age of five than a female infant, and, crude life expectancy for men was 41 years compared with 33 years in women (Devereux, 2006). These findings on female mortality agree with much earlier studies conducted in pastoralist areas of Somalia (Aden et al., 1997).

#### **d. Health, food security and famine in pastoralist areas**

According to Bonfiglioli (1992), the main causes of morbidity and mortality among pastoralists are similar to those affecting other poor communities in tropical areas viz. malaria, diarrhoea, pneumonia, measles and neonatal tetanus. These diseases were also included as priorities in recent health surveys in Sudan (SGNU/GSS, 2006), Karamoja, Uganda (UNICEF, 2009), and the Somali Region of Ethiopia (EHNRI/UNICEF/ SCUS, 2009). While health service provision is a priority development issue, in humanitarian crises in pastoralist areas the limitations of health care become even more apparent. Not least, high human mortality during natural disasters such as drought is often associated with disease and congregations of people around diminishing, and contaminated, water sources. During famine in Darfur in 1985, severe malnutrition was actually relatively rare (de Waal, 1989). Instead, disease was a major cause of death even in those suffering only moderate malnutrition – around 100,000 people died without starvation contributing to these deaths. Outbreaks of measles, pneumonia and diarrhoea also explained the high mortality in children aged 1 to 4 years relative to other groups, with the later two diseases exacerbating the effects of measles. Darfur in the mid 1980s is not an isolated example of the importance of disease during drought. In the Somali Region of Ethiopia, measles outbreaks were also an important cause of death in children during drought and famine in 2000; 77 per cent of deaths occurred before any major relief operations began (Salama et al., 2001).

If these experiences are considered against recent figures for child vaccination coverage in pastoralist areas of the COMESA region, a substantial proportion of pastoralist children remain at risk of death due to preventable diseases and this risk is heightened during drought or large-scale displacement due to conflict. This fact helps to explain the very high vulnerability of pastoralist communities in the region, and severe problems with health risk management.

#### **1.2.4 Social assets**

*The social resources - networks, membership of groups, relationships of trust, access to wider institutions of society- upon which people draw in pursuit of livelihoods; the exchanges that facilitate cooperation, reduce transaction costs and may provide the basis for informal safety nets amongst the poor.*

The livestock and natural resource management practices used by pastoralists require well-organized collective action, especially in the harsh environments in which they live. Pastoralists organize themselves to split herds and move animals to distant grazing areas, to control access to communal grazing areas, to manage the watering of livestock, and to provide security. Partly for these reasons, pastoralists have very strong social organizations and leadership, and in the COMESA region examples include the Borana in Ethiopia (Hogg, 1990), the Dinka in South Sudan (Deng, 1987) and the Karamojong in Uganda (Stites et al., 2007).

The social assets of pastoralist groups also include the indigenous social support systems which to varying degrees, are intended to assist poorer members of the community. These systems may target households with relative few animals or those which have suddenly lost animals due to disease, flooding or other causes. Female-headed households may also be targeted. These local systems are based on loans or gifts of livestock or livestock products, and in Muslim pastoralist areas, the giving of alms includes richer households donating livestock to poorer households. These systems are often elaborate and complex. Examples include the *Buusaa gonofa* social safety net of the Borana community in Ethiopia (Hassen, 2009), systems of restocking in Somali areas (Catley, 1999), and the loans and gifts of the Gabra in northern Kenya (Linguist et al., 1995).

Although often described as traditional, the social organization and social support systems of pastoralist groups are not static. In some areas traditional leadership faces pressures from government administrations or disaffected youths, while local safety nets can be weakened when overall livestock holdings are reduced due to major disease outbreaks, drought or conflict. Another important societal weakness, common to many pastoralist groups, is the low status of women (Kipuri and Ridgewell, 2008). Social-cultural discrimination against women and girls is dramatic and evident through statistics such as their relatively high mortality and poor access to health care (e.g. Devereux, 2006), limited education, and less control or ownership of financial assets relative to men.

### **1.2.5 Physical assets**

*The basic infrastructure and producer goods needed to support livelihoods, including changes to the physical environment that help people to meet their basic needs and to be more productive, and the tools and equipment that people use to function more productively.*

Generally, pastoral communities have very limited access to, or ownership of, physical capital. This situation is partly an outcome of the pastoral way of life, where mobility can require the transportation of all possessions and this is eased if possessions are minimal. However, weak facilities and infrastructure such as schools (section 1.2.3b), health clinic (section 1.2.3c), roads and communications reflect the high transaction costs of service delivery per person, including public safety, and the political isolation of many pastoralist areas. Political capital is discussed further in section 1.2.6, but limits the capacity of these communities to make claims on government for the kinds of infrastructure and services which are present in relatively highly populated non-pastoral areas.

#### **a. Roads and transport**

Roads and transport communications are of critical importance for the presence of many other services and infrastructure since a good road network makes it easier and less costly for both public and private sector actors. Many pastoral areas are without any road access and the roads that exist are not sealed and are poorly maintained. Poor roads means that transport of, for example, market goods is difficult from off-road locations; in these areas people resort to pack animals. The poor road access to pastoralist areas also makes these areas less attractive to professional workers from other areas.

Data on roads in pastoralist areas of the COMESA region is difficult to acquire, but Table 12 provides national overviews. Relative to countries as a whole, road networks in pastoralist areas are generally far less developed. In northern Kenya, until recently the main asphalt road heading north to Ethiopia

ended in Isiolo. The road now extends to Merille but is still 500km short of the Kenya-Ethiopia border at Moyale. Further east, the asphalt road leading into the huge Somali districts of eastern and northeast Kenya stops at Garissa, approximately 480km away from the Kenya-Ethiopia-Somalia border near Mandera.

Very weak road networks in pastoralist areas are not only a development problem, but also hinder options in terms of drought management and response. Relief programmes incur high transaction costs when attempting to deliver drought assistance to these areas, meaning that for a given budget, fewer people or fewer areas can be reached. For programmes which aim to work with the private sector, traders or input suppliers find pastoralist areas unattractive even if aid programmes subsidize transport costs.

Table 12. Roads, telephones and internet access in COMESA Member States with food insecure pastoralist populations

Country	Roads		Telephones (proportion of population)		Internet	
	Paved (km/km <sup>2</sup> )	Unpaved (km/km <sup>2</sup> )	Main lines in use	Mobile	Users (proportion of population)	Hosts
<b>COMESA:</b>						
Djibouti	0.053	0.079	2.1%	8.7%	2.1%	161
Eritrea	0.007	0.027	0.7%	1.2%	2.1%	1,074
Ethiopia	0.006	0.027	1.0%	1.4%	0.3%	128
Kenya	0.019	0.287	0.7%	29.3%	7.7%	27,376
Sudan	0.002	0.003	0.8%	18.2%	3.7%	33
Uganda	0.067	0.226	0.5%	12.0%	6.2%	1,090
<b>Comparative:</b>						
South Africa	0.06	0.237	9.5%	86.2%	10.4%	1,300,000
USA	0.43	0.230	53.1%	83.1%	72.6%	316,000,000

*Notes*

Source: World Factbook (2008).

The COMESA Member States listed are those with notable food insecure pastoralist populations. In general, pastoralist areas have far lower physical infrastructure relative to national-level data. South Africa and USA are included for comparative purposes. Ethiopia has recently embarked on an extensive programme to construct paved roads throughout the country.

## **b. Communications**

In general, modern communication options are very limited in pastoralist areas. The cost of constructing and maintaining telephone landlines is relatively high, meaning that pastoralist communities tend to have poorer access to landlines than other communities. Table 12 shows the relatively low access of landlines and mobile phones in some COMESA Member States, and in general, these figures are far lower for pastoralist areas. For example, in Kenya the mainly pastoralist North Eastern and eastern provinces have the lowest number of telephones per head of population (SID, 2004). Limited landlines also means limited internet connections. Shortwave radios are available in some pastoralist areas, and these can be a useful way of communicating information, such as market prices.

Mobile phone use is thought to be growing in pastoralist areas but like landlines, most ownership of mobile phones is probably in the small urban centres with signal access being poor in more distant rangelands. The use of mobile phones in Kenya to deliver safety net payments is an indication of the growth of mobile phones in some pastoralist areas.

## **c. Public safety and security**

Government provision of physical security and public safety is minimal in pastoral areas, especially when compared to settled, more densely populated areas. Part of the problem relates to the general

isolation of these areas with significant constraints on responding quickly over long distances, while another key factor is the political marginalization of pastoralists (see section 1.2.6). As a result of the later, governments do not have the kind of public pressure to respond to conflict and insecurity nor does it have the political will to do so.

#### **d. Adequate water supply and sanitation**

Most pastoralist communities probably obtain water from hand-dug wells, bore-holes, seasonal rivers and ponds, and in some areas, small-scale water storage facilities such as concrete-lined berkads in Somali areas (e.g. see EHNRI/UNICEF/SCUS, 2009). It is generally assumed that pastoralist households have the worst water supply in terms of clean, piped water and the statistics tend to support this view. For example, in Sudan the mainly agropastoralist and pastoralist Jonglei state has the lowest use of improved drinking water sources nationally, with only 22 of households using such water (SGNU/GSS, 2006). In Kenya the pastoralist Northern Eastern province and Nyanza province in the south west have the lowest levels of piped water in households nationally, with only 0.6 of households having this facility (SID, 2004). Few statistics are available on sanitation in pastoralist areas, though some correlation with clean water supply would be expected e.g. for hand washing.

Indirect measures of the quality of water supply and sanitation are available from health and nutrition surveys. For example, in the pastoralist areas of the Somali region of Ethiopia as recently as 2009, between 25 and 53 of child deaths were attributed to diarrhoea in the previous 90-day recall period (EHNRI/UNICEF/SCUS, 2009). As discussed in section 1.3., seasonality and drought are key aspects of pastoral livelihoods. During drought, child mortality due to diarrhoeal diseases is a special concern as population congregate around diminishing and contaminated water sources.

#### **e. Clean, affordable energy**

In common with most other basic services and facilities, electricity access is lower in pastoralist areas compared to other rural areas. For example, in Kenya although only 4.6 of rural households nationally have electricity, this figure falls to 3.2 in the pastoralist North Eastern province. Wood is the most common source of fuel for cooking, lighting and heating.

### **1.2.6 Political assets**

Pastoralists' networks and other social relations have been developed to encourage survival in dryland environments where people are highly dependent on finite resources and highly vulnerable to climatic changes. For this reason, social relationships tend to be strongest in terms of how groups organise themselves internally and in the arrangements that they make with neighbouring groups. They tend to be weakest in terms of pastoralists' ability to deal with government and those other institutions outside pastoral society that have a more distant but crucial bearing on their welfare. This can be described as limited political capital, which is reflected in pastoralists' general marginalisation within COMESA Member States. The political representation of pastoralists partly reflects the history of governance in the country concerned, and here there is considerable variation in past and current political structures, ideologies and types of democracy in those countries with substantial pastoralist populations. Similarly, the status of civil society organisations, media and academic institutions varies by country with different degrees of freedom permitted either formally or informally.

In terms of pastoralist representation at the parliamentary level, Ethiopia has a Pastoral Affairs Standing Committee, and Kenya and Uganda have Pastoralist Parliamentary Groups. To varying degrees these groups comprise MPs from pastoralist areas and aim to ensure that pastoralist issues are fully integrated into national development policies. The extent to which these groups are effective relates very much to wider systems of governance and the capacities of the MPs involved (Morton et al., 2007). A recent development in Kenya is the creation of the new Ministry of State for the

Development of Northern Kenya and other Arid Lands, created in 2008. This ministry is tasked with coordinating line ministries and raising awareness of pastoralism more generally within government. In Sudan the Pastoralist Union is a federal-level body for pastoralist affairs with varying levels of representation from pastoralists themselves.

Collective models such as pastoral associations or ‘livestock user associations’ have been widely promoted in West Africa but with mixed results. Reviews are particularly critical of the use of these associations by government to as means to implement policy at a local level, rather than developing strong civil society groups that represent the interests of, and act as advocates for, pastoralists (Sylla, 1989; Bruggeman, 1993; Hesse, 2000).

Indirectly, pastoralist issues can be represented in technical line ministries and in this regard, the positioning of livestock development and marketing policies and programmes is relevant. Sudan has had a federal-level Ministry for Animal Resources for many years, and Kenya has a Ministry of Livestock Development, whereas in Djibouti, Eritrea, Ethiopia and Uganda livestock issues are dealt with by agriculture ministries. There is considerable variation in the ways in which technical line ministries for health or education deal with service provision in pastoral areas. Many still rely heavily on fixed-point service delivery models (with limited impact) rather than alternative or hybrid approaches which support pastoral mobility.

### 1.3 Vulnerability Context

Vulnerability is central to understanding chronic food security in pastoralist areas. As explained in section 1.2.1 on financial capital, livestock are the main economic asset of pastoralists and within a given area, wealth status depends mainly on livestock holdings. However, although pastoralists may be asset rich, in general pastoralists are highly vulnerable to herd (asset) losses and food insecurity. This vulnerability<sup>5</sup> relates to the risk environment of rainfall variability, conflict and governance issues, weak services and infrastructure, limited economic options other than livestock production, trends in population growth, environmental changes; displacement of pastoralists and reduced access to grazing lands. These factors are summarized in Table 13.

Table 13. Summary of the vulnerability context in pastoralist areas of the COMESA region

Seasonality	Shocks	Trends
Marked seasonality of livelihoods in a normal year due to rainfall patterns and seasonal variation in food production, food access and market conditions.	Sudden onset and unpredictable events such as: <ul style="list-style-type: none"> <li>• livestock disease outbreaks</li> <li>• floods</li> <li>• market bans</li> <li>• conflict and raiding</li> <li>• border closures</li> <li>• food price increases</li> </ul>	Long-term changes including: <ul style="list-style-type: none"> <li>• protracted conflicts and governance problems - complex emergencies</li> <li>• increasing negative impact of drought</li> <li>• declining per capita livestock holdings among poorer households</li> <li>• ‘development displacement’</li> <li>• bush encroachment</li> <li>• inappropriate water development</li> </ul>

The specific combination of risk and vulnerability factors and their relative importance varies by area. From a regional food security perspective, seasonality is common to all areas and but many of the most severe and protracted food security situations are found in those areas categorized as complex emergencies. By definition, complex emergencies are due to a combination of factors but all complex

<sup>5</sup> Vulnerability is normally defined as the likelihood that group or individual welfare will decline (i.e. fall below a certain benchmark of welfare) due to exposure to a certain condition or event, such as a shock.



emergencies in pastoralist areas are associated with long term political instability, conflict, and human nutrition and mortality indicators which remain elevated over time. By reference to Figure 1, complex emergencies in COMESA Member States include the Somali Region of Ethiopia, the Karamojong Cluster, and areas of South Sudan. Nutritional and mortality surveys in these areas consistently demonstrate the severity of the food security problems (e.g. EHNRI/UNICEF/SCUS, 2009; UNICEF 2009). Although not shown in Figure 1, Darfur in Sudan is also characterized by many analysts as a complex emergency (Young et al., 2005) and the protracted conflict in Somalia has spill over effects in northeast Kenya and Ethiopia.

### **1.3.1 Seasonality**

#### **a. Seasonality of production and market patterns**

Dryland areas in the Horn of Africa have distinct wet and dry seasons with very low or no rainfall during the latter. Typically, pastoralists manage their herds so that offspring are produced during the rainy season. This strategy aims to ensure that peak milk yield coincides with peak demand for milk from young stock and consequently, the precise breeding management for different species varies according to their gestation period. Lactation period also varies according to species; while small ruminants produce milk for a few months, camels can continue to lactate for over a year. In pastoral production systems, livestock are used not only to produce foodstuffs such as milk and meat but they are also exchanged for cereals. In normal periods, the latter activity can be extremely favourable for pastoralists in terms of food energy conversions because the livestock-cereal exchange rate is usually in the order of 1:2 to 1:15 (Swift, 1979). In this situation, a pastoralist can consume up to 15 times the energy derived from a single animal by exchanging that animal for cereals.

Related to these seasonal variations are market conditions. For poorer pastoralists herd growth is the optimal economic strategy (section 1.2.1) and animals are only sold when food (cereals) or cash is needed. However, as a dry season advances livestock lose body condition and their market value falls. At the same time, cereal prices increase due to rising demand and sometimes, stock-piling by traders. Therefore the terms of trade for pastoralists worsens during the dry season. These trends are amplified during drought because the supply of livestock to markets increases even further as their body condition falls, and therefore livestock prices reach their lowest level. In contrast, cereal prices peak because of reduced availability (because there is a drought) and heightened demand. Food security very much depends on these trends and the terms of trade for livestock and cereals.

#### **b. Seasonal variations in diet and the impact of drought**

Regarding seasonal variations in the diet of pastoralists, the seasonal pattern of milk production outlined above implies that consumption of milk peaks during the wet season and falls off during the dry season. Research studies and nutritional surveys confirm this pattern, with access to milk linked to seasonal variations in nutritional status, especially children (Sadler et al., 2009). As dry seasons progress, more of the diet is comprised of purchased cereals. When milk is available it is mixed with cereals and improves the palatability and digestion of these foods. As milk supplies fall, cereals are prepared using water and the nutritional value, especially for young children, is reduced. For poorer households with fewer milking animals and less capacity to purchase grain, cereal stores may become depleted before the onset of the next rains. Even in a normal year, such households experience a 'hunger gap' in which limited food is expected. Superimposed on these trends are disease risks during periods of nutritional stress, related to limited health care, and limited access to clean water.

A common finding in the literature on famine and emergency relief in pastoral areas is high mortality in children compared with other age groups. For example, an infant mortality rate of 615/1000 was recorded among Issa herders during the 1974 Ethiopian famine (Seaman, 1974). During the 1980 famine in Karamoja, Uganda, crude and infant mortality rates increased by factors of 5 and 10 with respect to the normal rate and approximately 21 per cent of the human population died (Bienik and Henderson, 1981). In Sudan in 1983, famine in Red Sea Province resulted in severe malnutrition

among 0 to 5 year old children of Beja herders; 31.4 per cent were stunted and 26.6 per cent wasted (Eltholm and Bushra, 1984 - cited by Swift et al., 1990). In Kordofan during the 1984 to 1986 famine, malnutrition in children was measured at 17 per cent for pastoralists who were able to retain some animals, 25 per cent in settled farmers and 40 per cent in pastoralists who had lost all their animals (Walker, 1988). During the famine in Darfur in 1984 to 1985 most of the excess mortality occurred in children aged between 1 and 4 years (de Waal, 1989). Among the various reasons cited for this differential mortality pattern are:

- children consume relatively more milk than adults (who consume more cereals) and infants (who are breast-fed). In the dry season the diet of children often comprises porridge made from cereals and milk. During drought, milk is less available and cereals are less digestible for children when not mixed with milk.
- water shortage during drought is linked to increased incidence of enteric disease. Diarrhoea is an important factor in the development of acute malnutrition among children.
- during drought, the labour demands and hence the food energy needs of children may increase as livestock are trekked to remote areas in search of grazing and water.

In 2009 the vulnerability of pastoralists and ex-pastoralists to drought and conflict, and especially their children, is evident from nutrition and health surveys in the Somali Region of Ethiopia (EHNRI/UNICEF/SCUS, 2009) and Karamoja in Uganda (UNICEF, 2009). In Turkana, Kenya GAM was measured at up to 26.9 per cent in some districts in April 2009. Nor are these figures unusual. Levels of malnutrition in various pastoral areas of the COMESA region have – for decades - greatly exceeded the WHO 10 per cent GAM emergency cut-off. Indeed, GAM levels which would be unacceptable elsewhere are regarded as normal for pastoral areas, and this fact alone demonstrates the need for regional food security policy and programmes.

### 1.3.2 Shocks

Important shocks to pastoral livelihoods are those which cause sudden loss of livestock assets, especially if large numbers of animals are lost. Such events are not only important due to the immediate effects such as reduced availability of milk or animals to sell, but also because the rebuilding of livestock assets takes years to achieve. Common shocks are described below.

#### a. Livestock diseases

Historically, rinderpest was the most important livestock disease in Africa in terms of causing high mortality and asset depletion. The disease had a devastating impact on pastoralist communities and in some countries, dramatically reduced the political power and geographical coverage of pastoral groups as their herds were lost and land was appropriated by colonial administrations. The eradication of rinderpest from Africa is widely regarded as a development and food security success story, as there is now far less risk of large numbers of livestock – especially cattle – being killed by the disease. Unfortunately other livestock diseases continue to have major impacts on pastoral livelihoods, either through direct loss of livestock or through livestock market bans imposed by importing countries. Some important diseases are listed in Table 15.

Table 14. Preventable annual livestock mortality due to diseases in pastoral areas of Ethiopia, non-drought years

Livestock species	Area		
	Afar	Borana	Somali
Camels	8.8%	5.5%	11.4%
Cattle	10.6%	11.1%	12.7%
Sheep and goats	11.0%	17.7%	13.5%

Note

Source: Animal Health Working Group/Tufts University (2008).

Table 15. Examples of livestock diseases and shocks to pastoralist livelihoods

Disease	Nature of shock
Peste des petits ruminants (goat plague)	A rinderpest-like disease affecting goats and sheep, with mortality reaching 90% in some herds. The disease is widely reported in pastoralist areas of the COMESA region, but can be prevented by vaccination. Impact will be particularly evident in poorer pastoral households, which tend to rely more on small ruminants.
Contagious caprine pleuropneumonia	A contagious pneumonia of goats with mortality up to 100% in some herds; widely reported in pastoralist areas of the COMESA region, but can be prevented by vaccination or controlled with antibiotics. Impact will be particularly evident in poorer pastoral households, which tend to rely more on small ruminants.
Nairobi sheep disease	The most virulent viral disease of sheep globally with mortality exceeding 90%. A tick-borne disease, it is commonly reported in specific pastoralist areas; it can be prevented by vaccination or outbreaks controlled with acaricide use and to some extent, antibiotics. Impact will be particularly evident in poorer pastoral households, which tend to rely more on small ruminants.
Sheep and goat pox	A viral disease with mortality from 5 to 80%; preventable through vaccination. Impact will be particularly evident in poorer pastoral households, which tend to rely more on small ruminants.
Anthrax	High case fatality rate, especially cattle, approaching 100%. Common in pastoralist areas and preventable through vaccination.
Blackleg	High case fatality rate, especially cattle. Common in pastoralist areas and preventable through vaccination.
Contagious bovine pleuropneumonia	A contagious pneumonia of cattle, endemic in many pastoralist areas and therefore, causes low mortality. However, outbreak mortality can still reach 10-50%. Vaccination programmes are commonly attempted in pastoral areas but rarely successful; alternative control strategies required. Other impacts include domestic movement bans and market closure.
Camel pox	A viral disease with case fatality rate of 5 to 30%; preventable through vaccination.
Acute trypanosomosis	In cattle and camels; less common than chronic form of trypanosomosis but acute disease has a very high case fatality rate approaching 100% if untreated.
Rift Valley fever	Livelihoods shock due to: high rates of abortion in affected small ruminants, cattle and camels; zoonotic spread to humans and high case fatality in affected people; imposition of export trade bans especially by Middle East countries on the Horn of Africa.

*Notes*

Mortality and case fatality rates from Sewell and Brocklesby (1990); for some diseases there is a wide range in case fatality due to the biological variation in disease agent and host response.

Many of the diseases listed are 'trans-boundary animals diseases' (TADs) which by definition, require regional approaches to disease control.

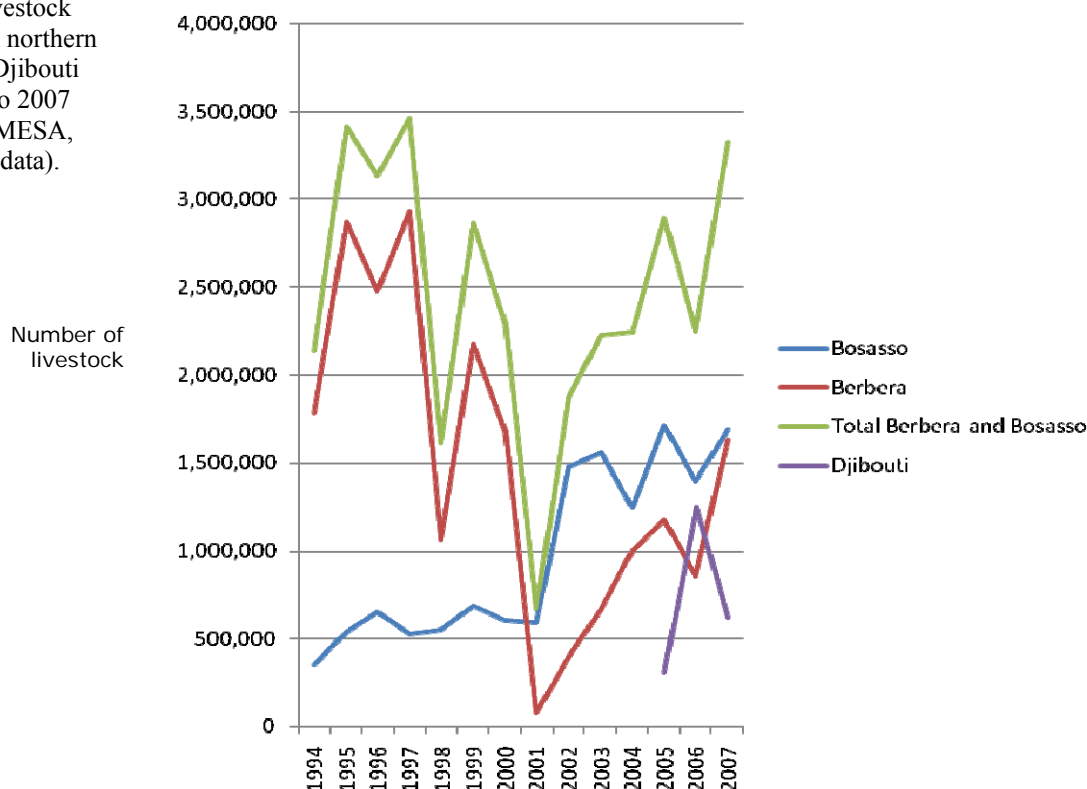
The total livestock losses in pastoralist areas caused by preventable diseases are substantial, with major direct impact on food security (e.g. direct consumption of milk by children; fewer animals to sell). These shocks also affect the integration of pastoralists into national economies. For example, the livestock in pastoral areas of Ethiopia is estimated at 9.3 million cattle (30 per cent of national population), 12.4 million sheep (51.7 per cent of national population), 8.1 million goats (45 per cent of national population) and 1.8 million camels (almost 100 per cent of national population)<sup>4</sup>. By averaging the annual mortality rates in Table 14 below to a figure 11.4 per cent, an order of magnitude estimation of the value of pastoral livestock lost each year due to disease can be made. This amounts to preventable losses of 3.6 million animals valued at \$798 million. In comparison, according to the National Bank of Ethiopia the value of total livestock and meat exports in 2005/6 was only \$40 million. Therefore, the value of disease-related livestock losses in pastoral areas alone is approximately 20 times the value of livestock and meat exports.

## b. Market bans

In the COMESA region livestock market bans are usually either domestic, or imposed by importing countries due to concerns (real or suspected) of epizootic or trans-boundary animal diseases (TADs) in Member States (or neighbouring countries) (Aklilu and Catley, 2009). Of particular relevance to COMESA as a regional economic community are export bans, and it is evident that different Member States vary in terms of the volume of exports, export traditions, the conduct of the export business and in the mode of production related to exports. These variations, in turn, are reflected within the different pastoral regions of each country. For example:

- Kenya is a relatively small exporter, but a net importer of livestock through cross-border trade from Somalia, Ethiopia and Tanzania. Kenya exports only a few thousand live bulls to Mauritius;
- Ethiopia is a significant informal exporter to Somalia, Kenya, Sudan and Djibouti, although the formal export sector has gained ground in the last few years. Formally, Ethiopia exports mainly goat meat and close to 200,000 live animals of all species.
- Sudan has been a major livestock exporter to the Gulf and of semi-formal and informal cross-border exports to Egypt and Libya for decades. Sudan exports mainly live sheep followed by camels and goats and few numbers of live cattle. It also exports mutton, goat meat and some beef.

Figure 3. Livestock exports from northern Somali and Djibouti ports, 1994 to 2007 (source: COMESA, unpublished data).



In addition, Somalia is a significant and longstanding exporter of live animals to the Gulf. The trade remains robust despite large-scale civil unrest in the south of Somalia - in the last four months of 2008 the port of Berbera alone exported 640,00 sheep and goats, 34,000 cattle and 700 camels (Somaliland Chamber of Commerce, 2009). Southern Somalia exports substantial numbers of livestock, especially cattle, to Kenya via the Garissa market. The impact of export bans imposed in 2000 are illustrated in Figure 3.

Table 15 indicates that outbreaks of certain livestock diseases have a particularly high impact on food insecure, poor households because these disease cause high mortality in the livestock species kept by the poor. The extent to which different pastoral wealth groups are affected by domestic and market

bans depends on a host of factors, which include: the volume of transactions; the purpose and mode of production; export tradition; types of animals exported; the availability of alternative domestic and/or cross-border markets, and capacity to adapt to these markets; the duration of the bans (Aklilu and Catley, 2009).

In high-livestock export areas of the COMESA region such as the Somali Region of Ethiopia, the imposition of export bans has a negative impact on poorer households. This is explained by better-off herders being forced to sell more for local markets and therefore, competing with poorer households and also driving prices down. As the volume of animals presented at local markets increases, prices may fall. The impact of bans will also depend on timing and duration. In general, poorer households require greater predictability of markets. They have less flexibility than better-off households in terms of being able to sell when prices are good, or waiting for traders to be available. Both traders and better off herders can exploit the need for poor herders to sell relatively soon after a decision to sell has been made. In general, poorer household only sell when there is an urgent need for cash. This condition is exaggerated during market bans because prices of imported consumer goods, including foods, rise due to shortages.

In low-livestock export areas of the COMESA region, such as Afar and Borana (Ethiopia), northeast province (Kenya), the existing domestic and cross-border markets are more than a match for the number of animals the poor and the very poor sell in a given year. For the very poor and the poor in these areas, their immediate concern is to dispose of animals once they have made a decision to sell. It is the middlemen, the better-off, some middle income groups and those residing close to market centres that can differentiate the demand and better time their sales for export and domestic markets. More importantly, the very poor and the poor sell animals from time to time on the basis of urgent cash needs rather than at an opportune time when livestock price increases, for example, in peak export seasons.

These findings indicate that livestock export markets benefit poorer pastoralists (more food insecure), but not as much as better-off pastoralists (less food insecure). Compared with domestic or cross-border trade, while export trade may lead to higher prices the extent to which poorer producers benefit from these price differences is highly variable by area and marketing system. Furthermore, any benefits due to the higher value of export trade in some areas are offset by the risk of trade bans imposed by Middle East countries and Egypt. This risk is high. Since 1998 at least 11 trade bans have been imposed either on individual countries in the Horn or on the region as a whole. Livelihoods analysis indicates that as a shock, livestock trade bans have a disproportionately high negative impact on poorer herders. As a general rule households with more assets are better able to withstand shocks. The unpredictability of trade bans is a particular problem for poorer households because once they've identified a need to acquire cash, they then need to sell livestock quickly. Compared to domestic market or cross-border markets where bans are relatively rare, export markets are high risk from poverty reduction and food security perspectives.

### **c. Floods**

Recent years have seen an increase in floods in pastoralist areas, particularly due to El Nino weather systems and heavy rains at the end of drought. Flooding causes direct loss of human life, destruction of property and infrastructure (which is already limited in pastoral areas, see section 1.2.5), and death of livestock by drowning. After the immediate shock of flooding, human and livestock health deteriorates, especially due to vector-borne diseases and contaminated water sources. For livestock, grazing areas may become flooded leading to poor nutrition or health problems arising from prolonged standing or lying in wet conditions. These impacts are particularly devastating after drought, when considerable loss livestock assets has already occurred and when people and surviving livestock are weak.

Flood conditions also relate to market bans because unusually heavy rains encourage the proliferation of the mosquito vector for Rift Valley fever. Although the type of rainfall which is associated with

this disease can be predicted with reasonable accuracy, and vaccination can prevent the disease, very few preventive measures are implemented in pastoralist areas.

#### d. Conflict and livestock raiding

Various types of conflict are common in pastoralist areas and these are discussed more fully in section 1.3.3. As conflict can occur suddenly, without warning and can be large-scale, it can be considered as a shock. Such events cause direct loss of human life and injury, destruction of property and physical infrastructure, loss or theft of assets, and disruptions to basic services such as health and education (See Box 1). Local conflicts can involve neighbouring pastoralist groups, or pastoralists and more sedentary communities, and may involve competition for resources and disputes over land or water. Therefore, such conflicts are more common during drought, when pastoral lands have been encroached by farmers, or when livestock trekking routes have been blocked. Local conflicts can also be triggered by development activities, such as the construction of new facilities near to disputed administrative borders.

##### Box 1. In and out of school in Samburu, Kenya

10 November 2009 - *"I just joined a new school a few weeks ago"* 14-year-old Kelly Lanyasunya said at Lesidai primary school in Samburu Central District (central-northwestern Kenya). *"I got a new uniform and I am making friends but if this area gets insecure, I will have to move to another school."* Like her classmate, Nabik Kekichorumongi, she is forced to change schools whenever bandits attack the surrounding villages. Stephen Leparachwo, head teacher at Lolkunono primary school in Samburu Central, said Lesidai primary school often receives parents bringing their children from Pura, a neighbouring area affected by banditry. *"When they come, some are even without food. The bandits follow the fleeing residents [and their cattle], not giving the children a chance to read,"* he said.

Much of the insecurity is due to cattle-rustling between the Samburu, Pokot, Turkana and Borana communities, according to local residents. In September, for example, Pokot cattle raiders killed 32 people in Samburu Central. Rustling has also affected food production, especially in fertile areas like Ngano on the Kirisia ranges, where bandits lurk in the beautiful landscape. In 2008, insecurity worsened in Ngano, according to the headmaster of a local school, Simon Lenolkulal. *"We could hear gunshots, so we were seeking cover on the ground with the children,"* he said, recalling a recent incident. *"There is a high rate of transition even of school teachers here... Teachers are reluctant to work here because of the insecurity. One week there is peace, the next week we are moving... Every week we enrol new children, then when there is tension they leave."*

Source: IRIN(2009)

In addition, livestock raiding is common in some pastoralist areas and can involve well-organized and well-armed groups comprising several hundred individuals. Attacks by such groups can result in hundreds of human fatalities and the theft of thousands of livestock. Such events are not uncommon in certain areas which are poorly policed and where the proliferation of small arms continues to increase. They often occur during post-drought periods when groups attempt to restock through raiding. Livestock raiding is not only a 'traditional' behaviour, but can be motivated by political actors, the military or others for personal gain. So-called 'commercial raiding' reflects the high value of livestock, with the raided animals often channelled rapidly into local markets. As a measure of the frequency of livestock rustling in Kenya, between 2005 and mid 2008 there were 7,348 reported incidents, with several fatalities often reported per incident (Government of Kenya, 2009b).

The theft of livestock and the violence associated with such activity is also a deliberate strategy of war, and is evident in civil and international conflicts in the region. At such times, livestock assets can be viewed as a liability as they are likely to be targeted by military or insurgency forces as a means of depleting the assets of opposing groups, or communities who are perceived to support such groups. In terms of food security impacts, the strategic theft of livestock was considered to be a key factor in the famine in Bahr el Ghazal in Sudan in 1998 (Deng, 1999).

#### **e. Border closures**

Typically, the closure of borders relates to conflict. For example, borders can be closed when governments fear the influx of large numbers of refugees from a neighbouring country and the related obligations of humanitarian assistance, under international law. Such concerns are exacerbated when conflicts are protracted, and refugee camps become long-term entities.

Border restrictions can also be imposed to prevent people leaving a conflict-affected area, especially if such movement is to access labour markets in other countries and where remittances are an important type of financial asset. For example, the closure of the Sudan-Libya border had important negative impacts on livelihoods in Darfur (Young et al., 2005).

#### **f. Food price increases**

According to the International Monetary Fund between March 2007 and March 2008, global food prices increased an average of 43 per cent. During that time, the U.S. Department of Agriculture reported that wheat, soybean, maize and rice prices increased by 146 per cent, 71 per cent, 41 per cent, and 29 per cent respectively. Undoubtedly, rising food prices contributed to a significant increase in food insecurity worldwide, particularly among poorer populations.

In the COMESA region approximately 56 per cent of pastoral households subsist on less than US\$ 1 per day, but pastoralists also need to buy a substantial proportion of their food needs in the form of cereals. For some poorer pastoralists, up to 85 per cent of food needs are acquired through direct purchase meaning that food price increases have a direct impact on food security. For example, in Kenya the impacts included increased numbers of people living below the poverty line, dietary changes and reduction in meal frequency, informal wage rates declining due to increased demand for casual jobs, rise in school drop outs, distress livestock sales amongst pastoralists and livelihood crises amongst pastoral, agro-pastoral and marginal agricultural farmers (KFSSG, 2009). The situation is exacerbated by drought because pastoralists rely heavily on cereals during drought periods, as milk supplies dwindle. As pastoralists sell animals to obtain cereals from local markets, the cereal/meat price ratio largely tilts against pastoralists during droughts because their livestock lose body condition and attract lower prices, while at the same time, cereals prices increase. Drought coupled with increased global food prices meant that from 2007 to 2009, pastoralists in the COMESA region suffered a double shock with regard to food price increases.

According to FAO, more than 17 million people confronted serious food insecurity in East Africa due to the combined effects of below-average harvests, high food prices, conflict, and insecurity. In Somalia, an estimated 3.2 million people required food assistance in May 2009, where food prices remained elevated with sorghum and imported rice prices 72 and 32 per cent higher, respectively, than March 2008. In Kenya, FAO reported that an estimated 3.5 million people (the government estimation was 10 million) required emergency food assistance and an additional 850,000 children enrolled in the School Feeding Programme. Above-average food prices and insecurity in Somali Region continued to contribute to food insecurity in Ethiopia, resulting in an estimated 4.9 million people projected to require emergency food assistance from January to June 2009. In Sudan and the Karamoja region of Uganda, an additional estimated 5.9 million and 970,000 people, respectively, were in need of food assistance.

Although food prices started to fall in May 2009 due to various interventions (particularly by the international community), food prices remained high in most developing countries. According to FAO, food emergencies resulting from the combined effects of chronic food insecurity and high food price levels, persisted in 31 countries, many of which were in the COMESA region.

A more frequent but less severe form of food price increase results from bans on cross-border trade in pastoralist areas. At these times, not only do herders lose cash from not being able to sell their animals, but, as indicated earlier, the prices of food also rise. Much of the revenue from cross-border

livestock trade is used to purchase foods and other goods for back-hauling to the border areas where they are sold to shops and/or directly to consumers. For example, periodic closures in cross-border livestock trade between Kenya and southern Somalia and between eastern Ethiopia and Somaliland has resulted in monthly price increases of 50 per cent or more for basic food staples. These changes have a particularly devastating effect on poor pastoralists who are especially dependent on food purchases (Little 2008).

### 1.3.3 Trends

#### a. Conflict and complex emergencies<sup>6</sup>

Although conflict has been mentioned as a shock to pastoralist livelihoods in section 1.3.2, many of the protracted conflicts in the Horn of Africa have deep historical roots which in turn, make these conflicts more difficult to resolve. From livelihoods and food security perspectives, intractable and violent conflict is probably the single most important factor for the continuation or worsening of conditions in pastoralist areas. Therefore, when describing the vulnerability context of food insecure pastoralist areas, conflict cuts across shock, trends and even seasonality. While conflict's effects cause distinct shocks to pastoral production systems, for example through the deliberate killing and confiscation of livestock, conflict cannot be regarded as an unusual event since different forms of conflict have been endemic in the region for at least the last four decades. Military activity also tends to be seasonal with large-scale offensives, in particular, occurring during the dry months of the year when pastoralists are at their most vulnerable. Three main categories of conflict exist in pastoralist areas of the COMESA region and these are described below.

***International or inter-state conflicts*** - pastoralism is found mainly in the peripheral areas of nation states, along and across international borders. Many of these borders are today the sites of conflicts between neighbouring states, where either there are overt hostilities or antagonistic relations. The borders most affected by inter-state conflicts or tensions are those between Sudan and Eritrea, Eritrea and Djibouti, Ethiopia and Eritrea, Ethiopia and Somalia, and Uganda and Sudan.

***Internal political conflicts*** - because pastoral areas are, typically, remote and difficult to reach, and have a limited government presence, they are ideal locations for regional and local resistance movements. Their proximity to international borders provides insurgents with relatively easy escape routes out and supply lines, and pastoralists are often accused of supporting them. Internal wars are often linked to inter-state conflicts because opposing governments arm and train their adversary's dissidents as a form of 'proxy war'. The flow of small arms into the region from internal conflicts and 'hot pursuit' of insurgents by government troops into neighbouring countries has created generalised and intensified insecurity well beyond the main arenas of war. The volume of small arms in pastoral areas, not surprisingly, are extremely difficult to estimate and most figures are highly unreliable. Recent research in one very volatile region of East Africa - northeastern Uganda and northwestern Kenya - gives an estimate of about one small arms weapon for every 12 people or about 80,000 weapons for a population of 950,000 pastoralists in the area (Mkutu, 2006).

***Local/clan/ethnic conflict (raiding)*** – livestock raiding is common in parts of the region and is particularly prevalent among cattle-owning groups in the Karamojong cluster (north-west Kenya, south-west Ethiopia, south-east Sudan, north-east Uganda). Previously, raiding and warfare were concerned primarily with restocking herds and establishing a group's political rights and access to territory, rather than with physically controlling territory. Consequently, raids were governed by implicit rules on acceptable behaviour that, for example, sanctioned against assaults on women and children. However, the land reallocation policies of colonial governments tended to provoke tensions between pastoral groups by restricting traditional patterns of movement and increasing pressure on water and pasture. The violent impact of raiding has worsened over time with increasing access to

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<sup>6</sup> The early part of this section draws directly on the conflict analysis by Trish Silkin conducted for DFID in 1998-99 under the 'Pastoral Livelihoods Appraisal Mission' (RWA/Vetnetwork UK, 1999).



modern firearms. Raiding has also assumed new forms with entrepreneurs, protected by governments, recruiting, training and arming young men to raid for commercial purposes. In this new raiding large numbers of livestock are stolen and large numbers of people killed and wounded, including women and children who were previously exempt. Heavy fatalities provoke a spiral of revenge and retaliatory attacks, which governments appear unable or unwilling to stop. This new raiding represents a shift in the balance of power towards the young men of pastoral society and away from elders. It derives partly from the power of the gun and partly from the political patronage that commercial raiding enjoys.

The affects of conflict are summarized in Table 16. The devastating impact of protracted conflict can be explained by the fact that conflicts causes depletion of, or reduced access to, all six types of livelihoods assets viz. human, financial, physical, natural, social and political.

Table 16. The impact of protracted conflict in pastoralist areas of the COMESA region

Type of livelihoods asset	Impacts
Human	<ul style="list-style-type: none"> <li>• The main victims of civil and international conflicts are civilians not armed combatants – physical injury, mental trauma, death</li> <li>• <b>Women and children</b> are particularly badly affected by all forms of conflict – rape, mutilation and forced marriage of women and girls is a tactic of war and counter-insurgency; spread of HIV</li> <li>• Use of child soldiers with related long term, mental trauma and wider societal impacts</li> <li>• ‘Scorched earth’ tactics with violent removal of communities from resource-rich areas e.g. oil, natural gas, minerals</li> <li>• Destruction of health facilities and disruption of basic preventive health campaigns e.g. child vaccination</li> <li>• Destruction of education facilities or disrupted access to education (see Box 1)</li> <li>• Destruction/damage to water supplies; water-borne disease outbreaks</li> <li>• Injury and death after conflict due to landmines and unexploded ordinance</li> </ul>
Financial	<ul style="list-style-type: none"> <li>• Direct and violent depletion of financial assets such as livestock is a tactic of war and counter-insurgency</li> <li>• Restrictions on movement – seasonal labour migration and remittances</li> <li>• Market closure or dysfunction, preventing sale or exchange of livestock for cash or grain</li> <li>• Breakdown of veterinary services – no preventive or curative services, shocks due to disease epidemics and loss of assets</li> <li>• Limited private sector investment – high risks of doing business and trade</li> <li>• ‘War economies’ with trade controlled by armed elites for personal gain and related incentives for maintaining conflict</li> </ul>
Physical	<ul style="list-style-type: none"> <li>• Destruction or damage to roads and physical infrastructure</li> <li>• Destruction of government offices and records</li> <li>• Breakdown of communication and transport</li> <li>• Destruction or contamination of water sources as a tactic of war and counter-insurgency</li> <li>• Breakdown of public security</li> </ul>
Natural	<ul style="list-style-type: none"> <li>• Restricted movement limits access to grazing areas; overgrazing of accessible areas; restricted cross-border movements</li> <li>• ‘Bad diversification’ e.g. excessive charcoal production</li> <li>• ‘No mans land’ areas between conflicting groups</li> <li>• Landmines and unexploded ordinance preventing access to grazing areas</li> <li>• Breakdown of traditional institutions for natural resource management</li> </ul>
Social	<ul style="list-style-type: none"> <li>• Forced migration – internal and international displacement; break-up of families and communities</li> </ul>

	<ul style="list-style-type: none"> <li>• Breakdown of traditional safety nets/social support</li> <li>• Breakdown of traditional leadership and institutions</li> <li>• New and violent ‘social norms’</li> </ul>
Political	<ul style="list-style-type: none"> <li>• Reduced political capital as pastoralists portrayed as inherently violent or supporting insurgents, opposition groups or religious extremists.</li> </ul>

By creating mistrust among different pastoral groups and curtailing contacts between them, clan or ethnic conflicts cut across the inter-group relations essential for survival in the pastoral environment. In particular, by reducing the incidence of exchanges and social relationships, including marriages contracted across ethnic and clan lines, limit inter-group reciprocal grazing and water arrangements that are so essential during times of drought.

In complex emergencies it is possible to find many, if not all, of the impacts listed in Table 16 occurring simultaneously and over many years or even decades. As such, it becomes difficult to imagine meaningful long-term development or sustainable food security initiatives without conflict management and resolution. Conflict also greatly exacerbates the impact of shocks such as drought and epidemics, which can occur within complex emergencies, rendering them more difficult to control and withstand.

In general, aid responses in complex emergencies are dominated by typical humanitarian programming which emphasizes ‘saving lives’. Over time, short-term emergency projects are repeated back-to-back and often fail to take a long-term perspective such as developing local capacities, services or markets (Alinovi et al., 2008).

**b. Increasing impact of normal dry seasons and drought**

Although many pastoralist areas cannot be categorized as complex emergencies and have relatively stable political and governance contexts, some of these areas are still subject to repeated humanitarian assistance due to drought. Furthermore, the need for such assistance appears to be increasing in the Horn of Africa region in areas such as northeast Kenya and southern Ethiopia. While some analysts attribute these humanitarian crises to climate change and increasing variability of rainfall, pastoralist areas have always been characterised by marked variation in rainfall between years. Analysis of rainfall data over the last 25 years or so shows declining rainfall in some pastoralist areas, increasing rainfall in other areas, and no change in rainfall in other areas. Declining rainfall has also been cited as a cause of conflict and complex emergencies, and Darfur is a recent well-publicised example where climate change was seen by some as a cause of major, long-term crisis (Gore, 2006; Sachs, 2006). However, detailed analysis of rainfall data in Darfur showed that rainfall patterns declined many years before the onset of conflict, and that much local adaptation to drier conditions had already taken place (Kevane and Gray, 2008). These experiences indicate a need to carefully examine objective rainfall measures before assuming that drought is becoming more frequent or more severe in pastoralist areas. Also, analysis is complicated because there no standard definition of ‘drought’ and that in terms of humanitarian food security programmes, drought is usually a reduction or failure of successive rains rather than failure of a single rainy season.

Rather than declining rainfall per se being the main cause of food insecurity in pastoralist areas, it seems that periods which might previously have been viewed as a normal dry season are now having a far greater negative impact on pastoral livelihoods. This trend is explained by a combination of factors including human population growth, decreasing livestock holdings among poorer households, increasing competition for land or displacement from traditional dry season grazing areas, and movement restrictions. The mix of factors differs in different areas, but nevertheless combine to exacerbate the impact of dry seasons. It follows that while rainfall in these areas may not be changing very dramatically, poorer pastoral households are finding it more difficult to maintain their

livelihoods during long dry seasons. When drought does occur, its impact is felt by larger numbers of poorer households with consequent increases in levels of pastoralist destitution.

Some of the important trends are as follows:

***Human population growth*** – accurate census data is not available from most pastoralist areas, but it might be assumed that with increased settlement by poor and ex-pastoralists and their higher birth rates, human population growth would be in the order of 3% per annum for settled populations and about 2 per cent for mobile pastoralists (Fratkin and Roth, 2004). As indicated below, the livestock holding of poorer households are declining so that an increasing number of people are required to live off diminishing assets.

***Shifting livestock ownership patterns*** - the decreasing livestock assets of poorer pastoral households in some areas indicates that the strategy of using herd growth as a means to escape poverty is no longer failsafe. The decline in household herd size seems to be more pronounced in the very poor and poor households in the areas where these trends are reported (not least, because these households own fewer animals to begin with) and a considerable number of poorer pastoralists are forced to leave the system each year. Precise numbers are unknown, but reports from different sources and different areas are consistent in terms of increasing numbers of destitute pastoralists. At the same time, the ‘asset gap’ between poorer and middle or better-off groups may be widening - in some areas the better-off are more than ten times richer than the very poor (see Table 4). Indirect evidence for an increasing asset gap comes from livestock marketing figures. Even in areas where pastoralism is reported to be in decline, the annual volume of animals traded is either constant or increasing. For example, the Garissa livestock market sources animals from within northeast Kenya but also the Lower Juba region of southern Somalia. Although reports of increasing pastoralist destitution are available for both areas, the livestock sales at Garissa show an overall trend of marked increase e.g. 24,395 cattle sold in 1989 to 105,667 cattle sold in 2007. One explanation is a redistribution of livestock assets towards wealthier groups, with proportional increases in livestock sales in line with the known marketing behaviour of these groups (Aklilu and Catley, 2009).

***‘Development displacement’*** – over many years pastoralist areas have been subject to development projects such as dams, large-scale irrigation schemes for rice or sugar, wildlife conservation reserves and other public or private initiatives which displace pastoralists from their traditional areas or prevent access to important dry season grazing or water. For example, the Awash Valley in Ethiopia was part of the ancestral land of Karrayu and Afar pastoralists. Since the 1960s this area has experienced the creation of a national park, various concessions to commercial farms, and investments in irrigated sugar plantations. Whereas the original grazing land of the Karrayu was approximately 150,000 hectares, the land currently accessible to them is now only around 60,000 hectares (a 60 per cent reduction) and continues to decline (Gebre and Kassa, 2009). Such losses are important not only in terms of land area, but also because of the seasonality of pastoral systems and the crucial role of dry season grazing areas in supporting herds. Similar trends are evident in many other pastoralist areas. In Blue Nile State, the process of government appropriation of land dates back to the 1940s and through the 1970s included the traditional watering points of pastoralists in new rain-fed, semi-mechanized farming schemes supported by legislation (Ahmed, 2008). In Kenya, rice and cotton estates in the Tana River basin negatively affected pastoral populations in the middle and lower parts of the basin, as well as instigated conflict between local farmers and Orma pastoralists who customarily used the riverine area as a drought reserve zone. More recently, there are plans for the government to lease most of the delta area to a Middle Eastern agribusiness company to grow sugar cane, some of which will be processed into ethanol. The loss of the critical delta zone to commercial agriculture will jeopardize pastoral production in much of the Tana River basin. Elsewhere in eastern and southern Africa plans to displace pastoralists for bio-fuel projects, especially for the production of jatropha and sugar cane, have been planned for other countries. Although examples of opposite trends are rare, the Oromia Regional government in Ethiopia recently took the reverse step of making some 30,000 hectare of irrigated land available for Karrayu pastoralists to grow fodder around a commercial enterprise.

Other forms of displacement have been justified in terms of livestock development and replacing mobile pastoralist systems with commercial ranches. Although research shows that pastoralism usually outperforms ranching, government support to ranching was common in the immediate post-colonial era and for many years afterwards. For example, the failures of the Ankole ranching projects in southwest Uganda are well-documented (Muhereza and Otim, 2002), as are the collapse of commercial and cooperative ranches near the coast of Kenya (Mahmoud, 2006). According to the Range Management Division of the Ministry of Agriculture in Kenya, there were 454 ranches in Kenya in December 2000. Of these, 321 were group ranches, 84 were private company ranches, 27 were District Agricultural Company ranches, 17 were cooperative ranches, while three and two were Agricultural Development Corporation (ADC) and Public Company ranches respectively (Aklilu, 2001).

***Private enclosure of land*** – in some areas wealthier and more influential pastoralists or farmers claim private use of communal land. For example, since the colonial period in eastern Sudan the seizure of prime pasture reserves and water was a factor in the progressive weakening of the Beja pastoral system, leading to food insecurity and urban migration (Morton, 1993). This practice enables the keepers of private enclosures to benefit from wider communal land access during wet seasons, but restrict access to the enclosures to their own animals during the dry season. Not only is this trend associated with a myriad of quasi-legal arrangements (e.g. Behnke, 1985), but it now occurs in some areas where the asset gap between rich and poor pastoralists is widening. The trend also reflects a weakening of traditional pastoral institutions which hitherto would have prevented individuals from appropriating land for their private use.

***Bush encroachment*** – the invasion of woody plant species into pastoral rangelands is an important cause of reduced accessibility and availability of useful graze and browse species for livestock in some areas. For example, in the Borana rangelands of southern Ethiopia woody plant cover increased from around 40 per cent in the early 1990s to 52 per cent in 2001, equivalent to a 12 per cent reduction in grazing resources (Dalle et al., 2006). Similarly in the Afar region *Prosopis juliflora* was wrongly introduced in the 1970s and spread rapidly through high quality pasturelands (Admassu, 2008). By 2006 over 700,000 hectares of grazing and cultivable land was either invaded or at risk of invasion, representing 15 per cent of the region's productive land (USFS, 2006). On a smaller scale pastoralists of Baringo, Garissa, and Turkana districts, Kenya have lost tens of thousands of hectares of prime grazing to *Prosopis juliflora*.

***Inappropriate water development*** – although water is clearly a crucial resource for livestock production in pastoralist areas, the introduction of new water points requires very careful planning and analysis of rangeland management, pastoral mobility and local management arrangements. Often provided by government or development programmes, inappropriate water development disrupts more sustainable indigenous range managements systems with localized year-round grazing, promotes the creation of permanent encampments and localized land degradation, and instigates conflict between competing groups. Examples include the construction of water ponds in wet season grazing areas in Borana, Ethiopia (Homann et al., 2008) and borehole construction in northeast Kenya (Gomes, 2006).

## **1.4 Policies, Institutions and Processes**

### **1.4.1 Policy issues and challenges: national and regional**

The COMESA Member States with substantial, food insecure pastoralist populations vary substantially in terms of the politics and nature of their ruling bodies, governance structures and levels of decentralization. Some of these differences have deep historical roots and due to the cross-border nature of livelihoods in many pastoralist areas, result in different or even contradictory policies on each side of a given national border. Therefore, regional harmonization of policies and legislation is likely to be of particular benefit both to pastoralist communities and national economies. In terms of

setting appropriate policy in pastoral areas to reduce food insecurity and promote economic growth, at least five broad challenges are evident at national level:

- Perceptions of pastoralism and economic value - approaches to estimating the economic value of pastoralism to national economies which overlook key economic activities and, therefore, undervalue pastoral areas in economic terms;
- Policy incoherence between line ministries, and between development and humanitarian policies and strategies; the frequent absence of policy or limited implementation of existing policies;
- Specific policy issues around land use and land tenure; livestock marketing policies; and service delivery
- Drought management and the institutionalization and prioritization of food aid in national humanitarian programmes
- Conflicts within countries.

To some extent, these policy areas are reflected in the emerging or endorsed national CAADP compacts.

#### **a. Perceptions of pastoralism and economic value**

One of the main policy challenges is that in many countries, policy narratives around pastoralism are almost entirely negative. Typically, pastoralist areas are regarded as ‘low potential’ areas and mobile livestock production systems are seen by policy makers as irrational and inefficient. Therefore, in broad terms pastoral areas are regarded as a policy problem rather than as areas which make important contributions to national economic growth. A large body of scientific research on pastoral livestock rearing, rangeland resources and more recently, climate change, demonstrates the economic and ecological logic of mobility in these dryland environments and the strong adaptive capacity of pastoral systems. However, this evidence has only rarely been incorporated into national pastoral or livestock development policies. Instead, a dominant policy objective has been sedenterization of pastoralists, supported by interventions such as irrigation schemes for commercial production of agricultural commodities. Implemented in many countries for more than 50 years and sometimes with support from international donors, these approaches and projects often have negative impacts on pastoralists and their environments (see section 1.3.3.b). Therefore, inappropriate policy is contributing to the decline in food security in pastoral areas rather than helping to reverse this trend.

More positively, recent analyses of pastoralist livestock production systems has shown how pastoral areas already contribute substantially to national economies (Hesse and MacGregor, 2006). These analyses explain how the widespread use of GDP to measure economic activity leads to a drastic undervaluing of pastoral areas, whereas tools such as Total Economic Value (TEV) produce a more accurate inventory and value of livestock and non-livestock economic goods and services. Furthermore, estimates of contribution to GDP are often based on very weak data sets from pastoral areas and do not take account of informal cross-border livestock trade, which is perceived as difficult to measure. An outline of the TEV approach to estimating the economic value of pastoralism is shown in Table 17, and includes the substantial household or community-level production and consumption of livestock products which is currently hidden from GDP-type estimations.

A further and as yet largely unexplored economic issue is the use of African pastoral rangelands in carbon trading (Tennigkeit and Wilkes, 2008). Should carbon trading become possible it would add a further economic value to the rangeland resources in pastoral areas and provide additional incentives to maintain these resources.

Table 17. Total Economic Value: conceptualizing the direct and indirect economic values of pastoralism in COMESA Member States

Direct values	Indirect values
<p><b>Household and community consumption; livelihoods factors</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Service provision: insurance, savings and risk management.</li> <li>• Other factors: socio-cultural values and maintain important social relations and social capital, including for peace.</li> </ul> <p><b>Economic activity</b></p> <ul style="list-style-type: none"> <li>• Marketed: domestic, regional and export sales of milk and milk products, meat and live animals, hides and leather, and non-timber forest products.</li> <li>• Raw material production: inputs to supply chains involving informal or quasi-formal economic activity – butchers, traders, transporters.</li> </ul> <p><b>Human capital</b></p> <ul style="list-style-type: none"> <li>• ‘Employment’.</li> <li>• Skill development and indigenous knowledge.</li> </ul>	<p><b>Economic activity</b></p> <ul style="list-style-type: none"> <li>• Inputs to agricultural production.</li> <li>• Inputs to tourism.</li> </ul> <p><b>Environmental benefits</b></p> <ul style="list-style-type: none"> <li>• Ecological and rangeland services.</li> <li>• Maintaining the balance and stability of pastures.</li> <li>• Tree regeneration.</li> <li>• Maintenance of natural ponds.</li> </ul>

*Notes*

Adapted from Hesse and MacGregor (2006).

Of the various activities listed, only formally-recorded exports of meat, live animals and hides and leather are commonly recorded in terms of assessing the national economic value of pastoral systems.

Whether due to internal national priorities or because of pressure from donors concerned to encourage good governance and mitigate the impact of structural adjustment programmes, governments are increasingly directing their attention towards poverty reduction policies and programmes. Most COMESA Member States with substantial pastoral populations have developed poverty reduction strategy papers or equivalent plans, and in part, these strategies draw on national poverty assessments. Examples include Djibouti, Kenya, Uganda, Ethiopia, Eritrea and Sudan. However, the inclusion of pastoral areas has often been problematic due to the methodological and logistical challenges of collecting household or community survey data in sparsely populated areas with limited infrastructure and insecurity. Also, national surveys tend to use a standard set of indicators which are derived from sedentary farming and urban communities, and which prioritize cash income and expenditure, levels of education, and market access. Research from pastoral areas of northern Kenya (Little et al 2008) shows that when poverty assessments in pastoral areas use these types of indicators the result can be a misrepresentation of poverty, and an incorrect categorization of all – or at least a very high proportion – of pastoralists as “poor”.

The descriptions of household and community assets in pastoral areas presented in Section 1.2 include the important role of livestock holdings as a measure of wealth, plus access to social transactions and support from family and clan members. Indeed, pastoralists themselves often use a mix of financial (livestock) and social assets to describe wealth and poverty, and categorize households by wealth group. Integral to pastoral livelihoods are the use of livestock as a form of savings and to exchange for cash or food (financial capital), and the use of livestock as the basis for complex social support systems, based on loans and gifts of livestock and livestock products (social capital). In summary, while some countries measure poverty in pastoral areas using income, market access, education and other indicators, livelihoods analysis and pastoralists themselves tend to use livestock ownership and various aspects of social capital as the main determinants of wealth.

The use of a limited range of indicators to measure poverty in pastoral areas and the categorization of whole administrative units (e.g. districts, zones) as poor tends to reinforce negative perceptions about these areas at the level of national policy. It can lead to broad-brush poverty alleviation strategies which fail to take account of wealth differentiation, the fact that some households have considerable livestock assets, the specific locations of poorer households, or the possibility that the poorest households are not pastoralists but destitute town dwellers. Destitute households may have lost all of their livestock, own insufficient numbers of animals to pursue a pastoral livelihoods, or, have opted not to return to pastoralism. Alternative and more accurate approaches to understanding poverty in pastoral areas need to be asset-based and in particular, include livestock holdings. In addition, measures of vulnerability and risk need to be included in poverty assessments (Little et al., 2008). Such approaches should lead to more valid analysis, and assist the development of policies which specifically target more vulnerable households as required.

## **b. Policy coherence**

The strengthening or protection of assets in pastoralist areas, and strategies to reduce vulnerability and risk, require coordination and harmonization of policies between line ministries. For example, livestock marketing policy involves linkages between ministries dealing with infrastructure such as secondary roads or water provision, and other dealing with issues such as taxation and duties, management of markets by local government or others, plus veterinary inspection, certification and disease control. Similarly, if humanitarian programmes are to 'do no harm' and avoid undermining long-term development efforts, emergency actors within government need to coordinate with technical line ministries. These levels of policy coherence have been slow to emerge for pastoral areas, with different ministries using different analyses and data to develop their policies, and doing so independently of other ministries. Within a country, it is possible for one ministry to have progressive policies to support mobile livestock production and related marketing activities, while another ministry promotes settled agriculture and sedentization. The allocation of pastoral land to large-scale commercial agriculture can contradict natural resource management policies. In terms of service provision, one ministry might focus on fixed-point delivery systems implemented solely by government whereas another ministry could support privatized, community-based delivery systems. A further complication in the policy environment is the absence of policy, or weak implementation or monitoring of policy. A prominent example is the widely-accepted importance of livestock in pastoral areas (and nationally) but in some countries, the existence of livestock marketing policy in draft form for many years without official endorsement.

More positive policy experiences are also beginning to emerge, with related efforts to improve coordination and understanding of pastoralism across central government. For example, in Kenya the Ministry of State for the Development of Northern Kenya and other Arid Lands was created in 2008, and has a multi-sectoral coordination role. In Ethiopia the Ministry of Agriculture and Rural Development has published *National Guidelines for Livestock Relief Interventions in Pastoralist Areas of Ethiopia* (MoARD, 2008), which focus on drought cycle management, and related livelihoods-based interventions with private sector actors.

## **c. Specific sectoral policies**

### Land tenure

Historically, governments in Africa have used legislation to legalise the alienation of pastoralists from their land. The current situation is still very mixed, particularly in the COMESA region. Contrary to West Africa where governments have passed a series of pastoral laws to protect pastoral land and enhance livestock mobility (see Box 2), there are no specific pastoral policies or laws in eastern and southern Africa that explicitly address pastoral land tenure issues. Rather, pastoral land tenure, if it is addressed, falls under other policy instruments and laws such as the country's Constitution or Poverty Reduction Strategies or as a sub-component of national sector-based laws on land, forests or the environment.

#### Box 2. Pastoral legislation: lessons from West Africa

- Legal recognition and protection of livestock mobility with provisions for the development and maintenance of livestock corridors at national and regional levels, and the establishment of byelaws for their management.
- Legal protection of pastoral resources from encroachment and alienation even, in the Niger, within farming areas. Provisions for compensation in the event of land lost to public interest.
- Legal recognition of customary land management based on the principle of nested rights of access to and control over resources rather exclusive ownership rights to land.
- Marrying of formal and informal institutions to devolve responsibility for resource management to the most appropriate level.
- Conflict resolution based on negotiation and consensus seeking using existing local institutions at different levels.

In Ethiopia, for example, the Constitution of 1992 guarantees pastoralists' rights to unclaimed land for grazing and cultivation, and the right not to be driven from their lands<sup>7</sup>. Similarly, the Constitution of Kenya recognises customary land rights (but not customary institutions) specifying these are to be held in trust by county councils for the benefit of communities in accordance with their customary practices and rules.

Ensuring that such broad provisions are applied are also highly dependent on governments recognising the full value of pastoralism as a land use system. In most countries, this is not the case (see section 1.4.1). National development priorities focused on the modernisation of the agricultural sector as a major driver of growth and economic development, are thus justifying the alienation of pastoral land. In Sudan, for example, while land legislation at the national level has always favoured agricultural land use over pastoralism, local land rights have been further weakened by the 1990 Investment Act that facilitates the acquisition of land by investors, including foreign companies and more recently, foreign governments. This has greatly contributed to local land disputes and, in some cases, unsustainable land use and management practices.

Even when land laws explicitly seek to protect pastoral land rights they may not be appropriate. For example, while the Ethiopian Federal Land Act 1997 (Federal Proclamation No. 89/1997 on Rural Land Administration) assigns rights to pastoralists, the legal framework only allows for individual or state rights to be granted and not communal rights. Since the majority of pastoralists' land claims are via the community, this law may in fact support the privatisation of the ranges (Alden Wily, 2003).

Legal dualism, the existence of two incompatible legal codes operating side-by-side, is widespread across the region. The situation is further complicated in some countries (for example Sudan) with the added influence of religious law, leading to legal pluralism. In practice the distinctions between these legal codes is blurred as local people gain access to land through a blend of "customary" and "statutory", "formal" and "informal" institutions. A lack of clear hierarchy or coordination between these institutions leads to confusion and fosters tenure insecurity, particularly for pastoralists whose tenure systems are poorly understood by local and national government authorities (Cotula et. al, 2004). Furthermore, most of the governments in the COMESA region lack adequate administrative or financial capital to implement or enforce legislation. This constraint is even more acute for local governments. At the national level, Livestock Ministries are often politically marginalised and under-funded.

Many lessons can be learnt from West Africa where significant land and resource tenure reform has occurred, particularly with respect to pastoralism. A major innovation has been the passing of specific pastoral laws at national level that explicitly address pastoral land use, livestock mobility, conflict

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<sup>7</sup> Article 40 (4): "Ethiopian pastoralists have the right to free land for grazing and cultivation as well as the right not to be displaced from their own lands. The implementation shall be specified by law."



resolution, and crop-livestock integration: Guinea (1995), Mauritania (2000), Mali (2001), Burkina Faso (2003), Niger (2009)<sup>8</sup>. The pastoral laws of Niger, Mauritania and, to a lesser extent, Mali, are of greatest interest since their provisions better accommodate the specificities of dryland environments. They also recognize and legalize traditional practice, protect mobility and common property, and further the integration of customary and modern institutions and laws seeking to create a more effective governance framework capable of mediating the interests of all livelihood groups within the broader context of decentralisation.

At regional level, the ECOWAS decision agreed in Abuja in October 1998 provides a regional framework for cross-border transhumance between fifteen member states.<sup>9</sup> The decision authorises 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 transhumant herds with their herders; assure the protection of animal health of local herds; inform in good time the populations of ‘welcoming areas’ of the arrival of transhumant herders.

In line with other bilateral and regional agreements, the rights of transhumant 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.

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.

The manner in which the pastoral laws, in particular, were designed also offer key lessons for eastern and southern Africa. Although further improvements are needed, Niger and Mauritania offer probably the best examples of a participatory and iterative learning process involving representatives of the majority of stakeholders from local pastoral communities to line ministries. In Niger, the process broadly consisted of a series of in-depth studies of local pastoral practice, differentiated by region, which produced an initial draft report. The report was widely disseminated and discussed over one year producing two further versions of the report, which was then used by a small committee of experts including lawyers to draft a bill. There is broad consensus in Niger that the provisions within the new pastoral law are largely positive. This in large measure is a result of the quality of the consultation process driven by the Permanent Secretariat of the Rural Code, the body responsible for the design of the law, in strong partnership with civil society, international NGOs and the donor community.

In addition, the legal protection of pastoralists’ land rights needs to be followed by a set of complementary activities as follows:

- information, communication outreach and training - are critical to ensure all local actors are aware of and understand the laws and their provisions;
- 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;

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<sup>8</sup> The laws of Burkina Faso, Guinea, 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. Additional laws of relevance would include: forestry, water and local government.

<sup>9</sup> Réglementation de la transhumance entre les états membres de la CEDEAO Décision A/DEC.5/10/98 of 1998 and C/REG.3/01/03 of 2003. Member states : Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo

- 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.

### Livestock marketing policies

Governments often regard pastoral areas as a means of acquiring export and local tax revenues, and as a source of supplies for domestic meat consumption, breeding or draft animal needs. In fact, in terms of economic contributions pastoral areas meet or exceed all that might be expected. On average, Sudan and Somalia raise about US\$200 million per annum from the export of livestock and livestock products. In 2009 Ethiopia's live animal and meat exports reached US\$80 million, while Kenya's direct and indirect exports of live animals and livestock products may amount to about US\$20 million. In Ethiopia, pastoral areas supply 20 per cent of the oxen requirements of highland farmers (Coppock, 2004) and nearly 100,000 camels for the salt mines in the north; increasing numbers of farmers in mid-altitude areas are switching to camels as a replacement for donkeys. The numerous ranches in Kenya and Sudan depend entirely on pastoral stock. Pastoral livestock resources meet nearly 100 per cent of the domestic meat demand in Somalia, over 50 per cent in Sudan and Kenya, and between 20 and 25 per cent in Ethiopia. Exports in hides and skins also bring in significant foreign exchange revenues for Ethiopia, Sudan, Kenya and Somalia.

Despite these encouraging figure, there is often a profound disconnect between what governments expect from pastoral production systems in terms of contributing to national economies, and state support to these systems. In theory, appropriate interventions and policy support could have helped the livestock marketing system to be more effective, ease the burden on transactions, enhance market integration and above all, ensure that producers receive due benefit. In practice, such support is rarely evident. For example, in Sudan 21 different types of taxes were applied along livestock trade routes between Darfur and Omdurman (Aklilu, 2002). Although traders complain about the myriad of taxes, they eventually pass on these to the producer at the time of purchase. While not as pronounced as Sudan, Ethiopian and Kenyan livestock traders pay various types of taxes between purchasing points and final destinations. In Kenya, this problem is compounded by the need for pastoral livestock to have movement permits (a means for charging unofficial taxation) en route to terminal markets. According to Aklilu (2002) livestock are probably the most taxed agricultural commodity in the region. Each layer of tax translates into reduced income for pastoral producers.

Livestock export trade bans have become recurrent in the Horn of Africa (see section 1.3.2b). At times, importing countries have applied bans on sound precautionary measures such as to prevent the introduction of rinderpest. At other times, the imposition of bans had weak technical justification and seemed to be more related to economic or political factors. Whatever the cause, the impact of bans was enormous on pastoral populations. Governments have usually tried to address the problem by lobbying importing countries and this approach may be helpful when bans are imposed for reasons other than sanitary concerns, but not when there are genuine sanitary issues. The latter case requires addressing the root causes of the ban, otherwise, impromptu lobbying only ensures the likelihood of bans being imposed once again for one or another reason. Of note, it is the setting up appropriate SPS standards and the delivery of veterinary services on consistent basis that could potentially minimize the imposition of bans and preventable mortality levels in pastoral areas.

Within countries, market access can be a serious problem for pastoralists. For example, there are only three secondary and ten primary markets in Greater Darfur, which is similar in size to France. In north eastern Kenya there are three secondary markets which are located, on average, 300 km apart. Two of these markets (in Wajir and Mandera) may not even be considered as secondary markets. In southern Ethiopia, the distance between livestock market in Negelle and the next market in Dubluk is 290 km and apparently, there is no market centre of any importance between Negelle and Dolo, a 300km stretch in the other direction. This is simply the result of either having roads that are not suitable for

transporting livestock or having no roads at all. Lack of access to livestock markets equates to lack of accessing basic consumer goods. Pastoralists have to trek for days or weeks not only to sell their animals but also to buy consumables. In many cases, pastoralists are forced to sell livestock to the nearest available markets, which could be across a border. This is particularly the case in Ethiopia, where an estimated 350,000 head of cattle, 1,100,000 sheep and goats and 125,000 camels (valued at between US\$250 to US\$300 million) are sold across the border to Somalia, Djibouti and Kenya (SPS-LMM, 2009). However, this trade is officially considered as illegal, since the cross-border trade does not involve the exchange of foreign currencies unlike other commodities. Both pastoralists and livestock traders face occasional harassments and confiscations in the cross-border trade. The solution to this problem is simple: either provide them with new alternative internal markets or let them continue to trade across the border. The latter would be eased by better understanding of the benefits of free trade areas, specifically in relation to trade in live animals, with related options for forex transactions.

While there is a need for better economic analysis of free trade area options with related policy support, there is also a persistent notion amongst government officials that marketing efficiency in pastoralist improves if market infrastructure is developed (e.g. market yards, trekking routes, collection centres etc). Although there has been huge investment in pastoral livestock marketing infrastructure by international aid donors for more than 40 years, there has also been limited attention to the long-term management and maintenance of these facilities. The result is that most of these structures are in a dilapidated state or totally collapsed. It is also not uncommon to see yet more new market facilities constructed, but without analysis of past failures. What is widely accepted is that such facilities generated taxes for local councils or central governments, but very little of this revenue was used for maintenance or upgrading purposes, or to address other market-related constraints. As recently as 2008, the construction of new market yards in Ethiopia resulted in additional taxes being charged from producers and traders and therefore, disincentives to use the new facilities (Bekele, 2008). Similarly, Kenya has embarked on establishing a disease free zone but this concept has not only been disproved due to economic and technical reasons in southern and eastern Africa, but can also be socially disruptive since these zones exclude small producers. Given Kenya's reliance on neighbouring countries to meet even its domestic meat requirements, investment in a disease free zone seems difficult to justify. To date, policy makers have tended to overlook the basic needs of pastoralists, which are access to simple markets for selling livestock and purchasing consumables. This requires investment in roads in pastoralist areas, and new market centres close to where they dwell with appropriate local management systems.

A framework for understanding a range of market access scenarios against different livestock disease control or management options is provided in Figure 5, section 2.1.5.

### Policies on basic services

The analysis of livelihoods assets in pastoral areas presented in Section 1.2.6 shows that food security can be enhanced by adequate provision of at least three types of basic services. These are human health services to improve human capital; education to improve human capital and ultimately, financial capital; veterinary services to protect livestock assets and financial capital. Of these services, human health and education are especially weak for pastoral women and girls.

In general, service delivery policies and strategies for pastoral areas have often followed models which were designed for settled and relatively highly populated areas. These are fixed-point approaches, with services provided by a facility such as a school or clinic. When these models are transferred to pastoral areas the result is low accessibility and availability (see Section 1.2.3c), because budgets tend to limit the number of facilities which can be operated in large areas. Alternative approaches to human and animal health include mobile teams of professionals or para-professionals using 4WD vehicles, but these systems are very expensive to operate and in part, are restricted to areas with road access; such access is problematic during wet seasons.

In education, human health and veterinary services, a range of alternative systems of service provision have been tested in pastoral areas. These include alternative basic education (ABE), community-based health workers (CHWs) and community case management (CCM)(e.g. Degefie et al., 2009), and community-based animal health workers (CAHWs). To varying degrees these systems recognize the importance of pastoral mobility, and therefore, many are not entirely dependent on fixed-point facilities. Some systems, especially for veterinary care, also rely increasingly on private sector linkages for input supply. Often piloted by NGOs, some of these approaches have been subject to intense scrutiny and evaluation by governments and others, leading to official endorsement, and supportive policy and legislative change (Catley et al., 2004). For basic veterinary care, CAHWs working with relevant government oversight are now recognized by Ethiopia, Sudan and Uganda for pastoral areas. In human health, CHW-type approaches were tested many years ago in pastoral areas and proved to be effective (e.g. Bentley, 1989), but policy support to these systems remains weak across the region. Systems of alternative basic education have been tested in pastoralist areas over many years (Oxfam GB, 2005b). Before the onset of civil war in Somalia (in the late 1980s) the Ministry of Education recognized that conventional education services based on modern, fixed point schools were largely unworkable for pastoralist communities, and so they sought to integrate mobile Koranic schooling into the official national education programme (Gorham, 1978). Similar approaches have been used in other countries, with varying degrees of policy support from government. Most recently, the Ethiopian government has supported alternative education services in pastoralist areas following piloting by NGOs.

#### **d. Livelihoods, drought management and food aid**

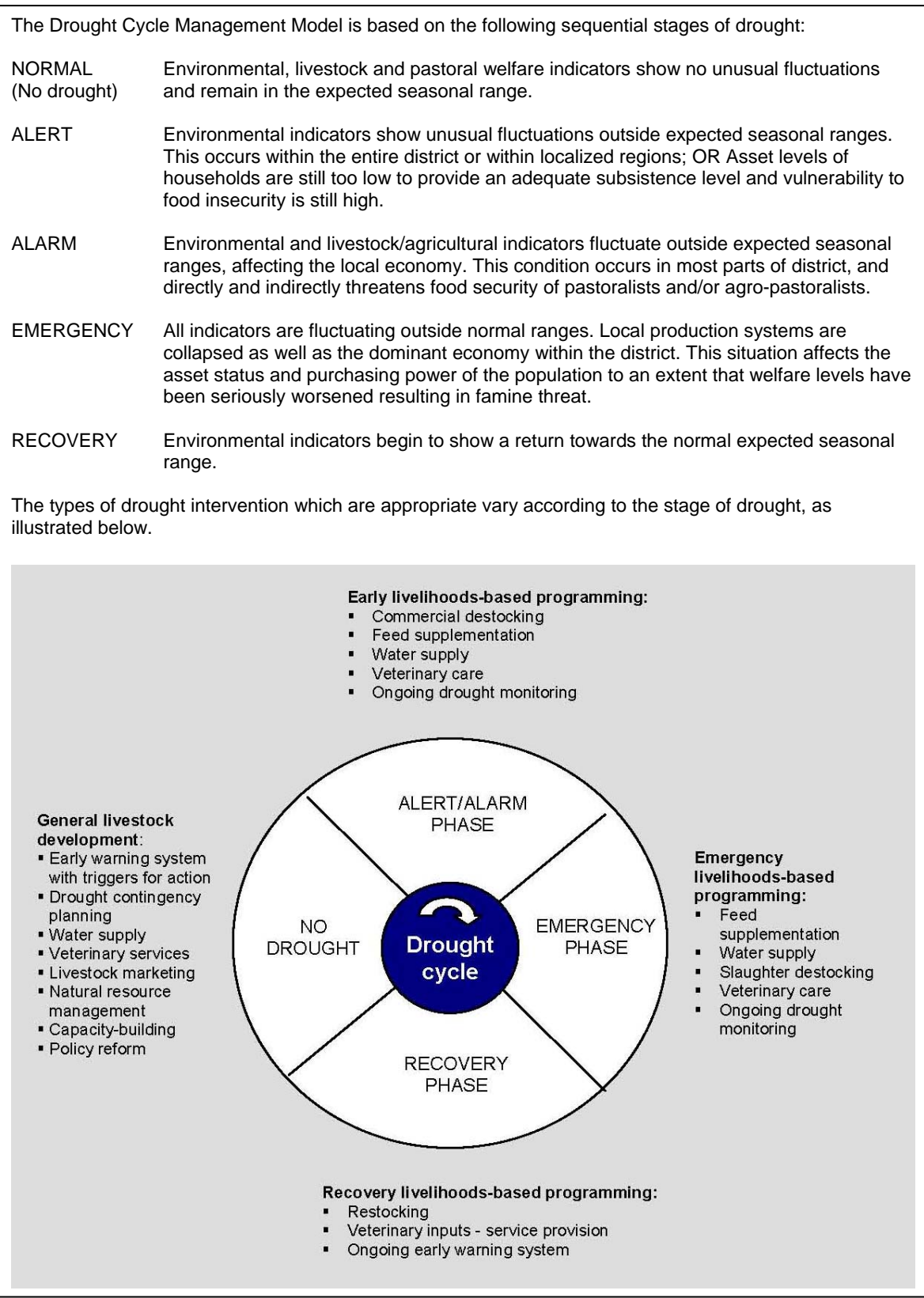
In recent years humanitarian agencies have increasingly recognized that emergency programmes should not only aim to save human lives but also protect livelihoods. This thinking is based on the notion that it makes little sense to keep people alive through humanitarian programmes if at the same time, people's assets are lost and local services and markets disappear. The concept of livelihoods-based programming assumes that emergency programmes need to both protect human lives, and the assets, markets and services which people need to recover from disasters.

Drought in pastoral areas is a slow onset natural disaster, typically involving successive rain failures or inadequate rain over two or more seasons. Together with conflict, it is the most important cause of food insecurity in pastoral areas and historically, has contributed to famine and massive loss of human life (see Section 1.3.1b). Although drought is often categorized as a 'shock', any long-term development planning process for pastoral areas could reliably predict that drought will occur at some point in any three to five year period, even if the precise timing of drought is unknown. Similarly, the slow onset nature of drought provides ample time for response, before substantial loss of human life or loss of important livelihood assets such as livestock.

One of the most successful models for dealing with drought is the Drought Cycle Management (DCM) model. The concept was developed following the realisation that conventional responses to drought in the region dealt with development and disaster responses as separate issues. Drought was seen in most cases as a major disaster event in need of ad hoc responses which would inevitably affect development activities and be implemented with costly delays (CORDAID et al, 2004). The DCM model (Figure 4) implicitly recognises that development and relief are linked because drought is recurrent in nature and is a slow onset hazard. The DCM model identifies four stages of drought cycle management – normal, alert/alarm, emergency and recovery – and that these stages may occur simultaneously. Interventions are identified for each stage, and activities are implemented depending on the different drought warning stages.

Similarly, detailed reviews and evaluations are available which show the value of livelihoods-based drought programming in pastoral areas. These include analysis of various drought interventions in Kenya from 1999 to 2001(Aklilu and Wekessa, 2001), and in Ethiopia, specific assessments of commercial destocking (Abebe et al., 2008) and livestock feed supplementation (Bekele and Tsehay, 2008).

Figure 4. The drought cycle management model



Economic analyses show that early response to drought using livelihoods-based programmes is far more cost-effective than food aid, even when the costs of early warning are considered. Based on figures from the 1999-2001 drought response in ten districts of Kenya, the cost of a late response has been calculated to be twice that of an early response (Table 18).

Table 18. Cost of the 1999-2001 drought in ten districts of Kenya

Item	Cost (US\$ million)
<i>Actual costs of drought:</i>	
Cost of emergency relief interventions	300.0
Value of livestock lost	38.6
Cost of current early warning system	5.0
<i>Total drought costs</i>	<i>343.6</i>
<i>Potential cost given appropriate early response:</i>	
Cost of early warning system with rapid response capacity	51.9
Cost of subsequent essential relief	120.0
<i>Total necessary cost</i>	<i>171.9</i>
<i>Potential savings</i>	<i>171.6</i>

Source: Bushell and Wekesa (2001).

Other analyses compare the cost of early livelihoods-based responses to food aid. Using data from a commercial drought destocking operation in southern Ethiopia, it was calculated that through the early sale of one adult cow a pastoralist could acquire sufficient income to buy grain to feed a family of six people for two months. More commonly however, the animals perished and food aid was used to support the family. In this situation, the procurement, distribution and monitoring of local food aid cost approximately 97 more than destocking, whereas imported food aid cost 165 times more than destocking (COMESA, 2009). In contrast to the economic logic of early response and livelihoods-based programming during drought, is the reality that food aid has dominated humanitarian intervention in pastoral areas for decades and is still the preferred response of government and international aid donors. For example, in Kenya between 2004 and 2006 food aid comprised 91.3 per cent of the budget of US\$ 433 million assigned to drought response, and 94.4 per cent of the actual expenditure. Livelihoods support to pastoralists amounted to around only 2.3 per cent of budget and 1.6 per cent of expenditure.

Table 19. Food aid and livelihoods interventions in pastoralist areas during drought

Food aid	Livelihoods interventions
The overwhelming and dominant response to drought by governments and humanitarian agencies Perceived to:	Relatively limited application during drought compared with food aid.
<ul style="list-style-type: none"> <li>• mitigate immediate food shortages and save lives</li> <li>• prevent migration</li> <li>• prevent sale of assets to buy food</li> </ul>	Aims to provide immediate assistance while also protecting or enhancing livelihoods assets – especially financial and social assets – and maintain the local markets, services and systems needed for post-drought recovery.
But limited effectiveness due to problems such as:	
<ul style="list-style-type: none"> <li>• Weak targeting</li> <li>• Limitations in volume of food aid distributed and its nutritional composition</li> <li>• Late delivery, after people have either already died or migrated</li> <li>• Various political and institutional factors e.g. targeting areas where political support is high; sale of food aid and profiteering.</li> </ul>	Recognizes underlying causes of vulnerability; aims to build resilience.
	Includes specific interventions such as commercial destocking, livestock feed supplementation, veterinary care, slaughter destocking and restocking.
	More cost effective than food aid.

Source: COMESA (2009).

In 2009 representatives from COMESA and ministries of agriculture in Ethiopia and Kenya reviewed experiences with the use of food aid and livelihoods interventions in pastoral areas (Table 19), and their findings agree with wider and more comprehensive analyses of food aid programming and impact (Barrett and Maxwell, 2005).

In part, the continued reliance on food aid in drought response is because over many years food aid has become institutionalized in government and donor systems. There are standard procedures for estimating food aid requirements, and for procuring and distributing food aid. In contrast, livelihoods-based programming requires support such as national drought contingency policies and related funds, with pre-agreed triggers for early response. The establishment and administration of contingency funds has been problematic, and although early warning systems may provide adequate prior notice of a drought crisis, the information provided is of limited use in terms of triggering livelihoods-based support against the DCM model (Figure 4). Although early response is of critical importance during drought, at present most humanitarian response only starts after the official declaration by government of an emergency, at which point it is usually too late to implement some of the most beneficial livelihoods support programmes.

The concepts of DCM and livelihoods-based programming during drought fit well with disaster risk reduction approaches, and risk management is attracting increasing interest within some governments in the region. In Ethiopia the Ministry of Agriculture and Rural Development has published national guidelines on livelihoods-based drought programming (MoARD, 2008) and internationally, the *Livestock Emergency Guidelines and Standards* (LEGS, 2009) promote similar approaches to deal with drought in pastoral areas. However, there is still a considerable need to further institutionalize and enact DCM and livelihoods-based programming during drought in pastoral areas, and better understand the options for food aid to complement these approaches, rather than using food aid as the primary response.

### Box 3. Livelihoods-based interventions in pastoralist areas during drought

Livelihoods interventions aim to protect or enhance livelihoods assets, strategies and outcomes, or the context, structures and processes that influence these three elements. Livelihoods interventions can contribute both to saving lives and to building resilience and addressing vulnerability.

Livelihoods support is often considered to be distinct from relief aid, in that it is more ‘developmental’ and usually implemented over a longer period. Such an either–or distinction between ‘development’ and ‘relief’ modes of assistance is particularly misleading in the Horn of Africa: the form of urgent, large-scale livelihoods support required fits neither paradigm well, and requires new ways of thinking about the problems that people are actually facing.

In the water sector, livelihoods approaches should focus on maintaining existing water sources and building local capacity to monitor and respond to changing patterns of demand for water. Examples might include:

- Emergency water supplies to prevent distress migration and loss of life/livestock.
- Establishing strategic water sources. This requires a detailed understanding of livelihoods and population movements.
- Providing storage or transport facilities to reduce time spent collecting or queuing for water.
- The subsidized provision of fuel and pumps.

Livestock interventions could include:

- Destocking: early off-take when terms of trade for livestock are still favourable.
- Supplementary livestock feeding, which is more cost-effective than restocking or buying new animals after a drought; supplementary feeding targets core breeding stock rather than entire herds.
- Emergency veterinary programmes, which can prolong the life of vulnerable animals for several months, even where pasture and other conditions remain unchanged.
- Restocking, with a focus on those who have not dropped out of the pastoral system.

Source: Pantuliano and Wekesa (2008).

## **e. Conflict**

A dominant, overriding factor which determines vulnerability and food insecurity in pastoral areas is conflict (see Table 16). Within countries, conflict takes the form of livestock raiding, conflicts over natural resources between pastoral groups or between pastoralists and farmers, conflicts over rights to the commercial use of resources such as oil or natural gas, inter-clan conflicts, violent counter-insurgency activity and civil war. During the last 20 years or so considerable effort has been expended in resolving and managing conflict, through diplomatic means, government interventions such as forced disarmament, and through a myriad of conflict early warning systems and local conflict resolution programmes supported by NGOs and other actors. Analysis of these interventions points to at least four important challenges:

- the persistence of internal conflict is essentially a governance issue and relates very much to systems and capacities for law enforcement both centrally and in pastoral areas;
- inappropriate development policies and strategies can fuel conflicts e.g. through the construction of new facilities such as water points in conflict-sensitive locations, or the unlawful allocation of pastoral land for agriculture;
- simply ignoring pastoral areas can lead to weak or harmful livelihoods diversification, including activities which may hurt the physical environment and social fabric of society (Section 1.2.1g); when people respond to limited livelihoods options by resorting to illegal activities, this can cause or perpetuate local conflicts;
- the political economy of certain forms of conflict indicates that conflict can be initiated and maintained by individuals for personal gain, and that the same individuals may undermine attempts to resolve conflict in the long-term. If a core function of government is to ensure the safety and protection of its citizens, in most pastoral areas this function is not achieved.

## **f. Regional harmonization**

The analysis in Section 1.2.2b shows that pastoral ecosystems were distinct and rational social, economic and ecological units which in many cases, were divided by the creation of national borders during the colonial period. The cross-border nature of pastoralist communities means that many are subject to at least two broad, national policy environments depending on which country they find themselves in at a particular point in time. Some groups move within three countries and therefore, face three sets of national policies. At present, although movement across borders has a sound environmental and economic basis it is often regarded by governments as troublesome or illegal. Such perceptions add to the negative views of pastoralism which arise due to the undervaluing of pastoral economies (Section 1.4.1a) and through categorizing pastoral areas as universally poor (Section 1.4.1b). In addition, in some countries there are specific, remote pastoral areas which governments associate with insurgency groups and conflict. For these reasons, pastoralist communities in the COMESA region are among the most in need of regional policy harmonization.

These issues were discussed during three workshops in 2008 and 2009, involving COMESA CAADP and agriculture technical experts, national CAADP experts from Djibouti, Ethiopia and Kenya, and professional staff from the African Union Interafrican Bureau for Animal Resources (AU/IBAR) and the Intergovernmental Authority for Development (IGAD). The specific regional food security policy opportunities identified during these workshops included:

- recognition of the cross-border nature of pastoral ecosystems and the economic logic behind pastoral mobility, leading to harmonized land use and land tenure arrangements, and formal support to seasonal cross-border movements of people and livestock;
- recognition of the economic contribution of pastoral livestock marketing to national and regional economies, and the opportunities to support regional livestock trade through appropriate policies and legislation, and the ongoing work of COMESA to develop certification systems for transnational movements of livestock and livestock commodities;



- recognition of the impacts of persistent insecurity and armed conflict on pastoralist vulnerability, and the need to position food security policies and programmes within regional conflict resolution and conflict management;
- recognition that by definition, important transboundary animal diseases have a regional distribution and many are endemic in the region; coordinated regional approaches to control are needed and should be based on trade and livelihoods objectives.

#### 1.4.2 International institutions, policies and regulations

Outside of the COMESA region are various institutions, organizations, networks and non-African governments and policies which affect pastoralist livelihoods in the region. Historically a set of foreign policy objectives of non-African states have had major impacts in pastoral areas and for many years, the Horn of Africa has been of particular strategic importance due to its proximity to the Middle East. At times, major conflict has been influenced by non-African interests, such as the Cold War drivers of the heavily militarised Ethiopia-Somalia Ogaden war in 1977-8. More recently, attempts to combat international terrorism have shifted the agendas of some international donors from development to security, with cross-border, remote pastoralist areas are often regarded as environments which harbour Islamic extremists. Directly or indirectly, pastoralist communities can become a focus of counter-terrorism measures and politically, these activities are prioritized above food security policies and programmes. In some areas, the situation is further complicated by foreign interests in natural resources in pastoralist areas such as oil, natural gas or minerals. Although a comprehensive analysis of all of these actors and processes is beyond the scope of this policy framework, it is evident that any attempts to improve agriculture-led development under CAADP need to take account of higher-level policies and processes around conflict and security, and the regional nature of conflict.

A second important area of international policy has been around environmental issues in African drylands and more widely. Following severe droughts in the 1970s and 1980s African governments called for concerted international effort on desertification, and in October 1994, the Convention to Combat Desertification was signed by 86 countries. At times policy debate around desertification has been confused by perceptions that livestock are the main cause of land degradation, and particularly the relatively large herds kept by pastoralists. Although the empirical evidence shows that rainfall is the main determinant of rangeland condition in dryland areas (see section 1.2.2), the view that livestock are a problem rather than an asset has been persistent. More recently, climate change debates have included measures of the contribution of livestock to greenhouse gas emissions (e.g. Steinfeld et al., 2006). The analyses have focused on relatively intensive livestock production systems in industrialised and middle-income countries, and offer few practical solutions for highly food insecure or conflict-affected pastoralist areas in Africa. More positive however, is growing recognition that uncertainty over future climate patterns points to the need for flexibility and adaptability of production systems, and here pastoralism is highly adaptive if mobility is supported (IIED/SOS, 2009). Furthermore, pastoral rangelands are now being recognized as substantial natural resources which might be used for carbon trading (Tennigkeit and Wilkes, 2008).

In terms of agriculture-related international policies and actors, at least two sets of issues are particularly relevant to the PFFSPA:

- the international standards which aim to ensure safe trade in livestock and livestock products, in terms of both disease transmission between animals, and disease transmission from animals or animal products to people; the impact of these standards on livestock export trade from countries and pastoral areas within countries;
- increasing awareness of disaster risk reduction and livelihoods-based planning and responses to drought in pastoralist areas, with international standards now documented in the *Livestock Emergency Guidelines and Standards (LEGS)*.

## a. International institutions and standards governing trade in livestock and livestock commodities


In the World Trade Organization's Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) the *Office international des epizooties* (OIE) is recognised as the agency responsible for promoting trade by setting appropriate global standards on animal health. These standards are documented in the OIE Terrestrial Animal Health Code (commonly known as the 'OIE Code'). In the OIE Code, certain animal diseases of international economic importance, or with impacts on human food security or health, are subject to a set of trade-related principles and standards. These 'transboundary animal diseases' (TADs) can spread rapidly and require cooperation between countries for effective control. They include diseases such as foot and mouth disease (FMD) and Rift Valley fever (RVF). The OIE Code is based on the precept that countries need to eradicate TADs within their territories and prevent their reintroduction. Once this is achieved, trade between such countries is considered to present a low risk. The attention to disease eradication in the OIE Code is illustrated by the structure of the document, with a series of chapters dealing with specific animal diseases.

While in theory the OIE Code's focus on disease eradication has some technical basis, in practice the theory is difficult to apply (Thomson et al., 2004). For example, in Africa there are around 12 diseases which are classified as TADs and therefore, should be subject to eradication before African countries are to engage in international trade. In practice only one of these diseases, called rinderpest, has been eradicated and the eradication effort took more than 50 years. Furthermore, rinderpest was a relatively simple disease in terms of its biology and transmission, and a good vaccine was available. Other TADs in Africa have far more complex epidemiology and tools for control are of varying effectiveness. For example, reservoirs of FMD virus can exist in wildlife populations, whereas the RVF virus is maintained in certain species of mosquitoes. In summary, apart from rinderpest, there is no immediate prospect of any TAD being eradicated in Africa or globally and therefore, the relevance of the OIE Code and disease eradication becomes a concern.

At the international level, the situation is further complicated by a second set of international standards called the *Codex Alimentarius*. These standards cover human food safety and are jointly administered by two agencies of the United Nations viz. the World Health Organization (WHO) and the Food and Agriculture Organization (FAO). In contrast to the OIE Code, the *Codex* focuses on risk-based approaches and ways to ensure food safety through the processing of commodities e.g. by canning of meat. Tools such as Hazard Analysis and Critical Control Point (HACCP) are used to identify specific points in commodity production or processing where intervention results in an acceptable level of risk with respect to food safety. Crucially, the scientific logic which guides the *Codex* is the notion that food safety can often be achieved by attention to the clinical status of livestock entering the food chain, processing procedures and the hygiene of abattoirs and other food manufacturing facilities. The disease status of the area from the animals were produced is of secondary importance.

Given the limitations of the OIE Code in terms of its practical application in Africa (and elsewhere), the question arises as to whether the principles of the *Codex* might usefully be applied to animal health and the risks associated with animal-to-animal disease transmission. Using the example of FMD, if an animal is clinically normal when entering an abattoir and the bones and certain glands of the carcass are removed, and the meat is properly chilled, then the meat poses minimum risk in terms of disease spread. Here, safe trade in beef is possible even though the animal in question may have been reared in an area or country with FMD (Thomson et al., 2009). This kind of risk-based analysis has led to the concept of 'commodity-based trade' (CBT) as means to rationalize standards for trade in livestock commodities while also adhering to the need for science-based standards. Commodity-based trade also overcomes the limitations of 'disease free zones' which are constrained by numerous technical and economic factors in southern and eastern Africa.

Box 4. Events in the development of commodity-based trade for livestock products



October 2004, publication of a scientific paper on commodity-based trade by workers at the African Union/Interafrican Bureau for Animal Resources (Thomson et al., 2004)

Late 2004, publication of AU/IBAR Policy Brief on commodity-based livestock trade

2007, release of the film *Commodity-based Trade Approach for Livestock Products*, endorsed by the African Union Commission

March 2008, presentation on CBT to the COMESA Ministers of Agriculture Experts Meeting, followed by endorsement by the Ministers

*April 2008, Workshop Transboundary animal disease and market access: future options for the beef industry in southern Africa, run by IDS in Pretoria, South Africa; production of a COMESA Policy Brief on livestock commodity-based trade; April 2008, presentations by COMESA on CBT to the East Africa Community and IGAD*

May 2008, AU/DREA Expert Consultation of commodity-based trade

May 2008, AU/IBAR convened African Chief Veterinary Officers meeting at the OIE, Paris

April 2008 to September 2009, inclusion of CBT principles in the emerging COMESA Green Pass certification system

Support to CBT is particularly relevant to the PFFSPA because both the African Union and COMESA has already recognised the potential of the approach to enable regional trade in livestock commodities, including for example, beef, mutton or goat meat from pastoralist areas. For example, one of the most important requirements for CBT to work is credible certification and such certification is the main purpose of the COMESA Green Pass (COMESA/CAADP, 2009). 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 in each country 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.

**b. International standards and guidelines for livestock emergency programmes: protecting pastoralist livelihoods**

Livestock interventions have formed a substantial component of humanitarian programmes in pastoralist areas, over more than three decades. Although falling within a humanitarian sector which is often associated with short-term actions, some of these programmes have been very prolonged, especially in complex emergencies in South Sudan (Catley et al., 2008), Somalia (Bishop et al., 2008) and Darfur. Elsewhere, livestock programmes have been a common feature of drought response in areas such as north east and north west Kenya, and southern and eastern Ethiopia. In terms of protecting core assets and enabling post-crisis recovery, the logic of well-designed and targeted livestock programmes fits well with livelihoods thinking in pastoralist areas and models such as drought cycle management. However, this area has also suffered from diverse responses by donors, government and NGOs, and limited documentation of best practice. It was noted that the sector was

characterized by repeated cycles of inappropriate and badly implemented livestock relief projects, weak problem analysis, and programme design implementation which often overlooked local capacities and services. Although international agencies often claimed a mandate for controlling these programmes, the actual delivery of assistance to communities on the ground was often late, even in slow-onset droughts, due to limitations in contingency plans and budgets, and bureaucratic systems within large agencies. These problems were exacerbated by weak coordination. In contrast, since 1998 interventions such as human nutrition, food security, sanitation, shelter and health have been guided by the *Humanitarian Charter and Minimums Standards in Disaster Response* (The Sphere Project, 2004)<sup>10</sup>.

In 2002 AU/IBAR convened a meeting of livestock experts in complex emergencies, and the meeting recommended to the AU the development of guidelines and standards for emergency livestock interventions to cover both rapid onset disasters such as floods, slow onset disasters such as drought, and complex emergencies. This initiative developed into the global *Livestock Emergency Guidelines and Standards*, with technical oversight by a Steering Committee comprising the AU, FAO, International Committee for the Red Cross, Tufts University and the NGO consortium, Vétérinaires sans frontières Europa.

In terms of food security in pastoralist areas, LEGS is relevant because it follows a livelihoods-based approach to assisting pastoralist communities who are affected by drought, and the DCM framework (Figure 4) for sequencing of responses according to the stage of drought. Although focusing on livestock interventions, the ultimate aim of livestock programmes is seen as meeting one or more livelihoods objectives viz.,

- providing immediate assistance to crisis-affected communities;
- protecting the livestock-related assets of crisis-affected communities;
- assisting the re-building of key assets among crisis-affected communities.

The LEGS livelihoods perspective in emergency response highlights the need to develop closer linkages between relief and development, through for example, disaster preparedness and post-disaster rehabilitation.

In common with the Sphere handbook, LEGS also uses a rights-based approach to development and emergency work and includes the achievement of human rights as part of its objectives. In this context human rights generally refers not only to the 1948 Universal Declaration on Human Rights, but also to the various covenants and declarations that have been agreed since, in particular the civil and political rights and economic, social and cultural rights, both agreed in 1966, as well as additional covenants covering racial discrimination, discrimination against women, torture, the rights of the child and so on. For each set of rights there are ‘duty-bearers’ who have the responsibility to ensure that rights are protected and maintained. With regard to some rights (such as the right to food) nation states are required to work progressively towards the achievement of the right for all people rather than expected to achieve it immediately. A rights-based approach to development and emergency work may be interpreted in a number of different ways, but most approaches draw on the range of human rights instruments and declarations to emphasize the responsibilities and duties of key stakeholders as well as to add weight to their desired goals. A rights-based approach therefore emphasizes participation, empowerment, accountability and non-discrimination in the delivery of development or emergency programmes. In terms of livestock and pastoralism, at least three rights are clear – the right to pursue a livelihood of choice, the right to protection, and the right to food.

The LEGS handbook was published in early 2009 (LEGS, 2009)<sup>11</sup> and the content is summarized in Box 5. A series of regional training courses for governments, UN agencies, NGOs and others will take place during 2010 to 2012, and the document is being translated into Arabic and French.

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<sup>10</sup> These standards are commonly known as the ‘Sphere Handbook’ <http://www.sphereproject.org>

<sup>11</sup> The LEGS handbook is available free-of charge at <http://www.livestock-emergency.net>

Box 5. Overview of the *Livestock Emergency Guidelines and Standards*

***The Standards and Guidelines***

How to conduct rapid assessments of livestock and livelihoods, and identify appropriate interventions

The LEGS Common Standards:

- Participation
- Planning and early response
- Initial assessment
- Targeting and vulnerability
- Response and coordination
- M&E and impact assessment
- Technical support and competencies
- Advocacy and policy

The LEGS Technical Standards:

- Destocking
- Provision of feed and water
- Veterinary Services
- Livestock Shelter
- Provision of Livestock

***Cross-cutting issues***

Gender  
Protection  
People living with HIV  
Environment

## **Section 2. Policy Framework for Food Security in Pastoralist Areas**

The PFFSPA under CAADP Pillar III focuses on the three main objectives of the pillar viz. increasing food supply, reducing hunger and improving responses to emergencies. When developing the framework livelihoods analysis was used to organize and analyze information and evidence (Section 1). The analysis enabled the acquisition and management of pastoral household and community assets to be viewed in the context of chronic vulnerability, and a complex policy environment at national, regional and international levels. Through the analysis, a set of key policy objectives were identified which align well with CAADP Pillar III objectives, or which fall into other CAADP Pillars. The PFFSPA objectives can also be justified in terms of evidence, and a body of research and programme evaluations which support the framework.

In addition, the PFFSPA includes the need for further evidence-gathering and analyses, with emphasis on economic assessments which capture the full value of pastoralism and thereby will assist policy making at national and regional levels. Therefore, this section is organized as outlined below.

- Section 2.1 is a description of the PFFSPA priority policy and strategy areas, with justification. Important criteria for identifying and prioritizing strategies included the principle of building on existing processes at COMESA or elsewhere, and, further application of *proven* programming approaches in pastoral areas in terms of impact on pastoral livelihoods.
- Section 2.2 presents some limitations of the PFFSPA from the perspective of the multi-dimensional nature of human food security and vulnerability, and the focus of CAADP on agriculture. It proposes a need to develop strategic linkages with non-CAADP actors dealing with conflict, health and social services in pastoral areas.

### **2.1 Priority regional policies and strategies for enhancing food security in pastoral areas**

Although a considerable body of sound academic research is available from pastoralist areas, a key findings from the livelihoods analysis in Section 1 was that evidence was not sufficiently influencing policy. This problem was compounded by the isolation of pastoralist communities and pastoralist civil society from the policy making process, which was often highly centralised. Commonly, policy was often based on perceptions that development objectives and strategies designed for non-pastoral areas should be applied to pastoralist communities. These policies existed in governments and donor agencies, and in some cases, were applied consistently over many years in the face of growing evidence that these approaches were ineffective. The key research findings from pastoral areas which need to be far more central to pastoral policy making are described below, together with relevant PFFSPA policy and strategy needs.

While the PFFSPA has been developed primarily under CAADP Pillar III, the livelihoods analysis shows that chronic vulnerability in pastoralist areas requires policy and programming support under other CAADP Pillars, especially Pillars I and II. The positioning of the different policy and strategic priorities against each CAADP Pillar in shown in Table 19, together with the generic area of improved capacity for economic and livelihoods analyses. This set of generic analytical activities has not been positioned under CAADP Pillar IV *Improving agriculture research, technology dissemination and adoption* because as the livelihoods analysis shows (Section 1), improvements in pastoralist livelihoods require attention to both ‘livestock’ (which falls under agriculture research) and ‘non-livestock’ sectors (e.g. safety nets; credit and financial services).

The need for ongoing learning and analysis also includes emerging policy and programming areas, such as safety net and social protection programmes in pastoral areas; livestock and drought insurance schemes; carbon trading and pastoral rangelands; and the need to evaluate various livelihoods diversification programmes. At present, these approaches are currently being applied and tested, or still being debated but there is insufficient evidence to include these approaches in the PFFSPA in

terms of wider application on the ground, until evidence of impact, cost efficiency and experiences with implementing modalities becomes available.

Table 19. Food security in pastoralist areas: Relationships between the four CAADP pillars

CAADP Pillar	Regional policy and strategy priorities
<p><i>All Pillars</i> Improved capacity for evidence-based livelihoods and economic analyses, national and regional.</p>	<ul style="list-style-type: none"> <li>• Need for Total Economic Value assessments of cross-border pastoralist communities to overcome limitations of assessments based on GDP contributions.</li> <li>• Comprehensive economic analysis of cross-border livestock trade and regional economic valuation.</li> <li>• Follow-on analysis of regional and national economic benefits of free movement and free livestock trade</li> <li>• Support to national poverty assessments to include asset-based and vulnerability indicators for pastoral areas.</li> <li>• Evaluation of emerging safety net and social protection programmes; livestock and drought insurance schemes; livelihoods diversification programmes.</li> <li>• Tracking trends and their impact on pastoral economies and livelihoods – conflict, climate.</li> <li>• Regional harmonization of pastoral early warning systems to ensure cross-border analysis</li> <li>• Capacity to review previous, failed pastoral development policies and programmes</li> </ul>
<p><i>Pillar I</i> Extending the area under sustainable land management and reliable water control systems</p>	<ul style="list-style-type: none"> <li>• Recognition that the economic, ecological and social viability of key pastoral areas depends on the cross-border nature of these systems.</li> <li>• The need for enabling pastoral land tenure policy and legislation at national level, with regional harmonization.</li> <li>• Enabling regional and/or bi-lateral legislation and procedures for seasonal cross-border movements of pastoral people and livestock.</li> <li>• Formal recognition of the role of traditional pastoral institutions in natural resource planning and management, and water provision.</li> </ul>
<p><i>Pillar II</i> Improving rural infrastructure and trade-related capacities for market access</p>	<ul style="list-style-type: none"> <li>• Recognition that pastoral marketing behaviours and needs are differentiated by wealth and livestock holdings.</li> <li>• Poorer, more vulnerable households require predictable access to livestock traders e.g. secondary road networks and mobile phone networks are important. conventional market infrastructure and primary road networks benefit wealthier pastoral households, traders and transporters;</li> <li>• Rationalization of livestock marketing and movement taxes nationally and trans-nationally.</li> <li>• Risk-based regional certification systems for intra-regional movement of traded livestock and livestock commodities.</li> <li>• Support to national veterinary services to rationalize policies for transboundary animal diseases based on trade objectives and opportunities afforded by ‘commodity-based trade’.</li> </ul>
<p><i>Pillar III</i> Increasing food supply, reducing hunger and improving responses to food emergency crises</p>	<p><u>Increasing food supply and reducing hunger</u></p> <ul style="list-style-type: none"> <li>• Primary focus on livestock-derived food and income to increase food supply, especially milk for children; secondary focus on testing ‘good diversification’ options, many of which relate to livestock rearing and marketing (see All Pillars above).</li> <li>• Protection of livestock assets, and maximizing productivity and herd growth for poorer households – key strategy of strengthening privatized, community-based veterinary services.</li> <li>• Support to poorer herders to enable herd growth – credit and financial services, with scaling-up and adaptation of modalities as appropriate.</li> </ul>

- Piloting and evaluation of livelihoods diversification options – especially for women and destitute pastoral households, with scaling-up and adaptation of modalities as appropriate (see All Pillars above).
- Support to evaluation of safety net (Ethiopia) and social protection (Kenya) programmes in pastoral areas, with scaling-up and adaptation of modalities as appropriate (links to All Pillars above).

#### Emergencies - drought

- Recognition that national early warning systems for drought are adequate, early response is limited.
- Promotion of drought-cycle management and livelihoods-based programming, with emphasis on early market-based interventions such as commercial destocking (relates to Pillar II).
- National drought contingency funds with pre-agreed triggers and implementation plans with multi-donor support.
- Use of livestock-derived foods in national food reserves.
- Awareness-raising, training and application of international guidelines – the *Livestock Emergency Guidelines and Standards (LEGS)*.

*Pillar IV*  
Improving  
agriculture research,  
technology  
dissemination and  
adoption

Strategic research related to regional and international trade opportunities in pastoral livestock and livestock products

- Research on safety (acceptable level of risk) of processed livestock commodities e.g. chilled meat, derived from pastoral areas.
- Cross-border epidemiological and economic assessments of TADs, including benefit-cost analysis of control options; development/harmonization of regional TAD policies.
- Research on processing and storage methods for livestock products, suited to constraints in pastoral areas.

### **2.1.1 Poverty, vulnerability and economic value of pastoralism**

At the level of national policy making, pastoral poverty, vulnerability and the economic worth and potential of pastoralism are poorly understood. National poverty assessments can overlook the importance of livestock assets as the most useful measure of financial capital in pastoral areas, and that wealth relates directly to livestock holdings. Livestock assets in pastoral areas are substantial and already make huge contributions to the meat and milk industries in COMESA Member States, but this resource is not sufficiently recognized or prioritized in policy. National economic planning processes focus on measuring the contribution of pastoral areas to exports and GDP, and overlook substantial informal domestic and cross-border livestock trade, the household level production and consumption of livestock products, and other economic activities and potentials.

*For these reasons, the PFFSPA includes a set of generic economic and livelihoods analytical capacity needs which cut across all four CAADP Pillars, and which aim to improve understanding of the economic value and potential of pastoralism nationally and regionally. Also, there is a need to evaluate emerging approaches in pastoral areas such as safety nets and livestock insurance.*

Poverty reduction and food security policies need to take account of wealth differentiation and vulnerability in pastoral areas, and re-align analysis and strategies around at least four main vulnerable groups. To some extent, these groups overlap.

- Pastoral households with relatively few livestock, which pastoralists themselves would categorise as ‘poor’. These households engage primarily in pastoral livestock production but are most at risk of dropping out of the pastoral system when shocks occur or when long-term negative trends reach a critical point. The most logical economic option for these households is herd growth, and this is the strategy these household try to pursue.
- Destitute pastoral households, being households which have usually lost most or all of their livestock and who reside in or around urban centres. Some of these households may aim to



return to pastoralism and their strategy is to acquire livestock and build herds. Other households will opt not to return to pastoralism and instead, engage in other livelihood options; many of the ‘good diversification’ options relate to livestock production and marketing.

- Women and girls in pastoral areas, who are marginalized and vulnerable due to the types of livestock they are allowed to own, poor access to health and education, and limited alternative livelihood options. They may opt to engage in ‘good diversification’ options related to livestock production and marketing, should these options become available.
- Pastoral children who are vulnerable due to normal seasonal variations in milk supply, with associated seasonal patterns in malnutrition. Milk deficits are exacerbated during drought, when malnutrition peaks and food insecurity is worsened further due to weak health services.
- The chronically sick, or physically and mentally disabled, and elderly people who are unable to work; these people are unable to engage in food for work or cash for work programs, require direct, long-term food or cash-based assistance, and often have specialist health service needs.

Based on this analysis of vulnerability and the existence of specify vulnerable groups, the PFFSPA includes strategies which are specific for each group (Table 20).

Table 20. Vulnerable groups in pastoral areas and priority PFFSPA food security strategies

Vulnerable group	Reasons for vulnerability and PFFSPA food security strategies	Key non- CAADP food security needs (Section 2.2)
Pastoral households – general	<p>Subject to transitory, acute food insecurity during drought, conflict or epidemics causing sudden reductions in livestock assets. Vulnerability also affected by reduced mobility.</p> <p>Strategies</p> <ul style="list-style-type: none"> <li>• Reduce risk of epidemic disease impacts through improved veterinary services, especially private sector delivery</li> <li>• Enable mobility and land tenure through policy and legislation reform; minimize development displacement</li> <li>• Reduce risk of livestock market bans; livestock health certification e.g. COMESA Green Pass</li> </ul>	<ul style="list-style-type: none"> <li>• Conflict management</li> <li>• Primary health care, especially women and girls</li> <li>• Education, especially women and girls</li> </ul>
Pastoral households with few livestock	<p>Vulnerable and chronically food insecure due to limited and largely unprotected financial capital (livestock), managed within diminishing natural resource access due to reduced mobility and conflict. Compounded by weak services – health and education – and limited access to credit or reliable markets. Also recurrent drought.</p> <p>Strategy - promote herd growth/reduce avoidable livestock losses through:</p> <ul style="list-style-type: none"> <li>• Livestock credit to pastoralists (Sudan model)<sup>1</sup></li> <li>• Improved primary veterinary services<sup>2</sup></li> <li>• Maximising livestock production by enabling mobility and efficient use of natural resources<sup>3</sup></li> <li>• Secure access to pastoral rangelands – land use and land tenure policies<sup>4</sup></li> <li>• Ensure predictable access to livestock traders and markets</li> <li>• Protect core livestock breeding stock during drought<sup>5</sup> – drought contingency planning and</li> </ul>	<ul style="list-style-type: none"> <li>• Conflict management</li> <li>• Primary health care, especially women and girls</li> <li>• Education, especially women and girls</li> </ul>

	<p>funding; pre-agreed action triggers; early response, especially commercial destocking<sup>6</sup>; application of LEGS; more strategic, targeted use of local food aid.</p>	
Destitute households, in and around urban centres		
Pastoralism – opt in	<p>Vulnerable and chronically food insecure due to no or insufficient financial capital to resume pastoralism, and limitations of traditional restocking mechanisms. Other constraints similar to above.</p> <p>Strategy - as above for pastoral households with few livestock, plus restocking programmes<sup>7</sup> or one-off cash distributions for livestock purchase.</p>	<ul style="list-style-type: none"> <li>• Conflict management</li> <li>• Primary health care, especially women and girls</li> <li>• Education, especially women and girls</li> </ul>
Pastoralism – opt out	<p>Vulnerable due to limited financial capital and few non-livestock economic activities; limited education and health, especially women and girls; poor infrastructure and communications; conflict.</p> <p>Strategies include:</p> <ul style="list-style-type: none"> <li>• Testing of ‘good diversification’ with emphasis on income activities related to livestock production and marketing of livestock and livestock products.</li> <li>• More strategic, targeted use of local food aid</li> </ul>	<ul style="list-style-type: none"> <li>• Primary health care, especially women and girls</li> <li>• Education, especially women and girls</li> <li>• Small business management support</li> </ul>
Women in pastoral areas	<p>Vulnerable due to limited financial capital and few non-livestock economic activities, compounded by cultural gender discrimination; very limited education and health, especially women and girls; poor infrastructure and communications; conflict, which may target women and girls.</p> <p>Strategies include:</p> <ul style="list-style-type: none"> <li>• Testing of ‘good diversification’ with emphasis on income activities related to livestock production and marketing of livestock and livestock products.</li> </ul>	<ul style="list-style-type: none"> <li>• Primary health care, especially women and girls</li> <li>• Education, especially women and girls</li> <li>• Small business management support</li> </ul>
Pastoral children – malnutrition	<p>Vulnerable due to high nutritional dependence on animal milk and seasonal variation in milk supply in normal years; marked decrease in milk supply in drought years and limitations of grain-only diets; weak health systems and failure of disease prevention especially cholera and measles.</p> <p>Strategies:</p> <ul style="list-style-type: none"> <li>• As above for pastoral households with few livestock, plus restocking programmes or one-off cash distributions for livestock purchase.</li> </ul>	<ul style="list-style-type: none"> <li>• Conflict management</li> <li>• Primary health care, especially girls</li> <li>• Education, especially girls</li> </ul>
Infirm or elderly	<p>Vulnerable due to limited financial capital and inability to work; limited ability to migrate; weak health services.</p> <p>Strategies:</p> <p>Agriculture (livestock)-based strategies very limited;</p>	<ul style="list-style-type: none"> <li>• Conflict management</li> <li>• Primary health care; specialist healthcare</li> <li>• Will require long-term provision of income through social protection programmes;</li> </ul>

likely to rely heavily on social protection.	unable to engage in paid employment or many income generating activities.
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#### Notes

<sup>1</sup> Aklilu and Catley (2009) for account of the Sudanese credit system for pastoralists and the concept of poorer pastoralists as bankable clients.

<sup>2</sup> See the AU/IBAR policy on community-based animal health workers, the OIE Code on veterinary para-professionals, and the national minimum standards for these workers e.g. Ethiopia (MoARD, 2009).

<sup>3</sup> Includes cross-border movements; adapt legislation and certification from West African countries, ECOWAS and Europe.

<sup>4</sup> Includes the need to harmonize land use and land tenure across borders.

<sup>6</sup> See Abebe et al. (2008); Barrett and Maxwell (2005).

<sup>5,7</sup> See LEGS (2009) and MoARD (2008).

## 2.1.2 Pastoralist production and mobility

Empirical research in different African countries has compared the productivity of pastoralist's mobile livestock production systems with livestock ranching, and explained the superiority of mobile production by reference to its adaptive capacity in areas with high rainfall variability. In summary, this research shows that as environments become drier and rainfall more uncertain, pastoralism increasingly outperforms ranching. It follows that a core aspect of pastoral development and food security policy should be to recognize and support mobile livestock production systems. This includes the land policies and legislation which protect pastoralist's access to rangelands. As climate variability becomes a more prominent policy area, pastoralism should be recognized as a highly adaptive livelihoods strategy – but only if mobility, including cross-border mobility- is enabled. At present, many policies support an opposite trend. These policies include disabling land tenure arrangements, appropriation of pastoral rangelands for 'commercial' (but often subsidized) agriculture projects, inappropriate water development, fixed-point delivery of education and health services; and weak policies to deal with bush encroachment. Similarly, evaluations of pastoral development programs which aim to 'modernize' pastoral areas through livestock ranching, rangeland improvement, irrigation schemes, introducing 'improved, exotic' livestock breeds and other approaches show widespread failure. It is important to acknowledge these past failures and focus future policy and programming on approaches that have been properly evaluated, shown to benefit pastoralist communities, and which are financially viable and sustainable.

*The PFFSPA emphasizes that livestock production will continue to be the most viable economic strategy in pastoral areas. Research shows that mobile livestock rearing provides the best economic returns in these areas, and that most livelihood diversification options relate to livestock production or the handling and marketing of livestock or livestock products. The PFFSPA aims to support pastoral mobility through:*

- *Recognition that mobile livestock production systems are economically and ecologically efficient in pastoral areas*
- *Land use and land tenure policies need to be developed which support pastoral mobility and which ensure access to pastoral rangelands, especially dry season grazing and water resources*
- *Land use and land tenure policies need to be harmonized in cross-border pastoral areas*
- *Seasonal cross-border movement of people and livestock needs to be enabled through regional and/or bilateral legislation and procedures*
- *Support to traditional pastoral institutions and their involvement in natural resource planning and management.*

*These policy areas fall primarily under CAADP Pillar I (Table 19) .*

*In terms of legislation to support pastoral mobility, including cross-border movements, and pastoral land tenure, positive experiences from West Africa might be adapted for the COMESA region.*

Land tenure which enables pastoral mobility is a priority and here there are numerous positive lessons to be adapted from West Africa (see section 1.4.1c, Land Tenure). Specifically, to secure and improve pastoralism in the COMESA region the following issues need to be addressed:

- Pastoral land tenure policy should focus on:
  - recognition and protection of the rangelands as communal areas under controlled access management systems;
  - protecting pastoral resources from alienation or encroachment, particularly strategic resources (dry season water, dry season grazing, livestock corridors, etc.);
  - ensuring flexible tenure arrangements that focuses on rights of access and control rather than ownership and which accommodate multiple use and over-lapping rights of access;
  - secure mobility within and between different ecological zones and cross-border if necessary;
  - Conflict management through mediation, negotiation and consensus.
- Pastoral planning must be flexible and accommodate variability of dryland rangeland environments as a key principle. Central to this is the need for a hierarchy of institutional arrangements at different levels to respond adequately to environmental variability and its impact on resources at different levels (e.g. shallow wells, wet season grazing). While it is critical that the State provides an enabling legal framework, the latter should focus on broad principles and provide guidelines for empowering local decision-making and problem solving by local institutions.
- Integrate formal and informal institutions. Though weakened and transformed, many customary institutions still have huge legitimacy among local communities and continue in practice to regulate access to and control over resources and for mediating conflict. Policy needs to recognise the role and importance of customary institutions and promote complementary links with local government institutions over the governance of natural resources.
- Ensure greater participation of pastoralists in policy and legislative design. Working through pastoral advocacy groups can facilitate this.
- Finally, pastoralism is a complex system that requires a multi-sectoral approach. Pastoral land tenure has to be addressed within a wider policy context of supporting pastoral livelihoods (education, health, markets, safety net provision, etc.). Such support needs to include both technical advice but equally support to institutional development that empowers pastoral communities to drive their development agenda in line with their priorities and vision.

### **2.1.3 Herd growth, vulnerability and pastoral livestock marketing**

Among various misperceptions about pastoralism is the view that pastoralists try to acquire large herds for mainly cultural reasons and social status, rather than economic logic. Similarly, pastoralists are often described as reluctant to sell livestock. The empirical research from pastoral areas, including recent research on pastoral livestock marketing (McPeak and Little, 2006), contests these long-held perceptions.

In pastoral areas, there are few banks, formal credit facilities or financial services, and limited economic opportunities other than livestock production. Furthermore, the economic returns from livestock exceed the returns from, for example, a conventional cash saving account which acquires interest. Therefore, pastoralists strategize to increase their financial assets not in the form of cash, but in the form of livestock. At the same time, livestock meet a high proportion of daily household food needs by providing milk and other foods. In terms of livestock sales, pastoralists cannot survive only on consumption of products derived from their livestock, and all pastoral groups need to exchange livestock for grain at certain times of year. It follows that all pastoral households, in one way or another, depend on markets to make these exchanges – all pastoralists already use markets.

In addition, from a vulnerability perspective it is important to note that pastoral households of different wealth status have different marketing behaviour which in part, relates to the concept of minimum herd size. For poorer, more vulnerable households with fewer animals the attainment of a minimum herd is prerequisite for existing as a pastoral household because a minimum size and composition of herd is needed to ensure survival on the rangelands. Therefore, these households follow a logical economic strategy of herd growth and until herds reach a certain size, will only sell animals to meet immediate needs. This behaviour is not culturally driven, but driven by very rational economics and basic food needs within the pastoral environment. It follows that when asked to prioritize their own development needs, poorer pastoralists will list interventions which prevent loss of livestock and therefore, promote herd growth. These interventions include veterinary care, conflict reduction and access to dry season grazing and water resources. For these households, the marketing of livestock takes place through small, informal markets at some distance from urban centres, or to traders who travel into pastoral areas. The existence of more formal market facilities in towns is of secondary importance to the accessibility and predictability of traders as and when needed. In contrast, wealthier and less vulnerable herding households sell animals more frequently because these households tend to have greater cash expenditures, including for education, and capacity to time sales to take advantage of good prices. However, these households often will not sell livestock simply for the sake of acquiring cash because the returns from cash investments are lower than from livestock. Instead they may enter the market at certain times as either sellers when prices are high, or buyers when prices are low. The very wealthiest herd owners also may begin to seek investments in shops, property, or trading enterprises to diversify some of their livestock holdings, but, again the limited options for profitable, non-livestock activities means that the rational choice is to pursue herd accumulation.

The economic logic of pastoral livestock marketing helps to explain the apparent anomaly that formalizing livestock marketing and constructing new markets and facilities, or increasing livestock or meat prices, does not necessarily lead to increased livestock trade from pastoral areas. In most pastoral areas, basic open markets with simple facilities such as water and fodder are sufficient to allow transactions to take place. Furthermore, if livestock prices increase at certain times of year – for example, in the wet season when herds are breeding - then households will only need to sell animals to meet their cash requirements during those periods.

*Under CAADP Pillar III the PFFSPA recognizes that for more vulnerable pastoral households, herd growth is a logical economic strategy and should be supported through proven policies and programmes such as:*

- *Livestock credit facilities designed specifically for poorer pastoral households; experiences from Sudan warrant attention and adapting to other countries;*
- *Reducing preventable livestock losses and supporting productivity (e.g. milk supply) through improved primary veterinary services, using approaches such as privatized CAHW networks linked to urban pharmacies; CAHW systems are already endorsed in Ethiopia, Sudan and parts of Uganda, and are supported by AU/IBAR and the OIE if properly regulated;*
- *Maintaining core breeding stock during drought by further institutionalizing drought cycle management and livelihoods-based programming, including strengthening capacities for contingency planning, and creation of contingency funds with triggers for action; implementation of proven livelihoods-based drought interventions following international standards and guidelines, with emphasis on commercial destocking.*

*Under CAADP Pillar II, the PFFSPA recognizes that the livestock sales by more vulnerable households are minimal. When a decision is made to sell an animal, these households need rapid access to local, small-scale markets or traders, and information on prices. At this level the main infrastructural needs are secondary roads and good telecommunications e.g. mobile phone networks, rather than market infrastructure. In times of drought, better secondary roads and communications e.g. mobile phones, will also enable approaches such as commercial destocking.*

#### **2.1.4 Livelihoods diversification**

Among the vulnerable groups listed in Table 20 are destitute households who have opted out of pastoralism, and women who currently have limited livelihood options. Various small-scale livelihoods diversification programmes have been implemented in pastoral areas or are ongoing. These include: milk processing and marketing; pastoral livestock marketing groups; harvesting and sale of natural pastoral products (gums, resins etc.); production and sale of livestock fodder; women's savings and credit groups; and community-based tourism. Although some evaluations of these approaches are available, most do not provide information on improvements in household financial capital, and overlook the relatively high level of initial aid investment needed to achieve impact. Therefore, it is unclear whether these approaches can be scaled up over wide areas, or how they might be adapted to reduce the level of investment required. In the case of tourism, this usually depends on a range of other factors such as security, access to wildlife populations (especially large mammals) and the relatively high-grade transport infrastructure which is needed if foreign tourists are targeted.

It is also evident that education is an important strategy for encouraging livelihoods diversification for both pastoral and non-pastoral households, and here there is clear evidence of benefits (e.g. see Table 11). This is discussed in Section 2.2 and within the context of access to education as a fundamental social service and right.

*The PFFSPA recognizes that livelihoods diversification programmes need to be further developed in pastoralist areas, but that the scaling-up of new approaches should depend on evidence-based evaluation of changes in household financial capital, assessment of programme cost efficiency and possible policy constraints.*

*Therefore the PFFSPA strategy is to promote comprehensive evaluation of recent or ongoing livelihoods diversification programmes in pastoral areas, with attention to the economic feasibility of scaling-up within specific national policy and institutional contexts.*

#### **2.1.5 Cross-border livestock trade and the export of livestock and livestock products**

Livelihoods analysis shows that many food insecure pastoralist areas are natural ecological and economic units which due national demarcations during the colonial period, are now cross-border areas (section 1.2.2b). Furthermore, the economic value of the cross-border trade in livestock and other commodities is substantial in terms of contributions to local and national economies. At present, national-level trade policies and thinking around this trade tend to be driven by apparent opportunities to control the trade and by so doing, acquire foreign exchange centrally. Governments see the trade as illegal whereas pastoralists themselves see it as normal, and a logical activity given the conditions and facilities where they live, and the limited functional public investments in infrastructure or basic services. Furthermore, the long borders in question mean that the physical infrastructure and human resources needed to fully control the border areas are beyond the capacity of most governments and may not make economic sense relative to the returns. In contrast, the COMESA policy of supporting the establishment of free trade areas offers an alternative and more practical approach to dealing with these issues. Similarly, IGAD now recognizes the importance of a free trade area for regional economic integration.

Another aspect of the cross-border livestock trade issue is the control of diseases, especially TADs. At times, attempts to restrict or control the trade are justified on the grounds of disease prevention and the disease status of the receiving country. However, in the Horn of Africa region the most important TADs are endemic in each country and therefore, the problem of importing the disease is of little relevance if the disease is already present. By definition, TAD control requires regional approaches



Notably, if particularly vulnerable pastoralist groups are to be assisted by policy, the analysis shows that more people are likely to benefit from regional, domestic and local marketing. Although the size of these benefits is relatively low (cf. high-value export markets), from a technical disease control perspective the regional-domestic-local options are relatively robust. In terms of vulnerable livelihoods, predictability of market access may outweigh price (e.g. see section 1.2.1e) and therefore market stability is important. The figure also shows that commodity-based trade as supported by the COMESA Green Pass, enables regional marketing, whereas in comparison, ‘disease free zones’ have high cost, high risk and benefit relatively few people. Furthermore, if well-designed and implemented the Green Pass system could be acceptable to non-African countries, particularly if bodies such as the Gulf Cooperation Council were involved in reviewing the system.

*The PFFSPA recognizes that regional livestock trade from pastoralist areas is an essential element of capturing the full economic potential of these areas. Priority areas for policy support are:*

- *Economic analyses of the potential for free regional trade in livestock and livestock products and other commodities in pastoral areas to generate relevant benefits to participating countries; cost-benefit analyses of conventional ‘border control and taxation’ approaches compared with forex arrangements and commodity imports in free trade areas;*
- *Continued policy support to develop the COMESA Green Pass system for regional trade in livestock commodities, and live animals, with associated awareness-raising and capacity support to national government and private sector stakeholders;*
- *Strategic research support to evaluate safety of specific livestock commodities using HACCP principles and risk analysis;*
- *Continued liaison between COMESA and regional bodies such as the Gulf Cooperation Council to ensure that the Green Pass system becomes acceptable to key importing countries in the Gulf;*
- *Development of a comprehensive regional TAD control programme for the Horn of Africa based on contemporary epidemiological and economic analysis in cross-border pastoral ecosystem, and cognizant of the opportunities afforded by commodity-based trade and the Green Pass system; coordination of a relevant technical agency such as AU/IBAR*
- *Organization of consolidated COMESA Member State representation at international standard setting bodies.*

## **2.1.6 Livelihoods-based responses to drought and risk management**

Table 20 describes six specific vulnerable groups in pastoralist areas, and five of these groups depend directly or indirectly on livestock. For those ‘opting in’ to pastoralism, livestock will be the main financial and social asset, and the source of food either by direct consumption or through grain purchases. For those opting out of pastoralism but remaining in pastoralist areas, ‘good diversification’ relies heavily on livestock through small businesses such as the processing of livestock products, or livestock marketing. For pastoralist children, access to livestock milk is a key determinant of nutritional status. Despite the dependency of these vulnerable groups on livestock, in both conflict-affected and relatively stable areas of the region, drought regularly decimates livestock assets in pastoralist areas. Furthermore, the pattern of drought occurrence is such that droughts should not be viewed as unexpected shocks, but predictable events within any three to five year timeframe.

Pastoralists employ various coping strategies to manage drought, with mobility, splitting of herds and disease control measures being uppermost strategies. On the other hand, regional governments, their development partners and civil society have established early warning systems and response measures to assist pastoralists to become more resilient to droughts. Kenya, Somalia, Uganda, Ethiopia and Sudan, among other countries all have drought early warning systems and response mechanisms. The



DCM model has been instrumental in assisting governments and humanitarian agencies to adopt more livelihoods-based programming with the objective of not just saving lives but also saving livelihoods by having a phased response mechanism based on the different stages of the drought cycle (Figure 4). However, the evidence shows that there is still a large gap between early warning and early response in many countries (Pantuliano and Wekesa, 2008). This problem is not due to any flawed technical logic in the DCM model, but because drought response and the whole system of disaster management in many countries is subject to disabling drivers such as institutional, political and business interests that undermine the effective implementation of the system (Longley and Wekesa, 2009). Technically and administratively, the establishment and management of national drought contingency plans, triggers and funds should not be beyond local capacities, especially if supported by mechanisms such as multi-donor trust funds. In practice, drought response is primarily a food aid issue within current institutional frameworks, despite its massive cost and impact. Therefore, governments in the COMESA region need to show real commitment to addressing drought risk among pastoralists in the region and in promoting the DCM approach.

Good examples of timely and effective livelihoods responses to drought in pastoralist areas are available in the region, including commercial destocking, slaughter destocking and livestock feed supplementation (e.g. Aklilu and Wekesa, 2002; Abebe et al., 2008; Bekele and Tsehay, 2008). Together with guidelines for needs assessments according to DCM and risk management principles, best-practice standards for these interventions are now available internationally (LEGS, 2009) and nationally (MoARD, 2009). What is now needed is a scaling-up and institutionalization of these approaches, with a focus on early response. COMESA can play a strategic role in promoting the DCM and livelihoods approach to improved household food security during crises, and by assisting countries and donors to reposition the role of food aid. Further needs and opportunities include the use of livestock products such as dried milk or canned meat in national food reserves, and far better regional coordination and movement of commodities in the face of drought. In general, when drought affects one part of the region, food commodities in neighbouring countries are adequate or surplus.

*The PFFSPA recognizes that drought in pastoralist areas is a major constraint to food security. At present, drought is managed as an unpredictable 'shock' to these areas although it is a slow-onset event which takes many months or even years to develop. The costs of late response to drought are huge in terms of asset depletion and recovery, and the high cost of food aid. Drought contingency plans and budgets may exist, but are subject to serious institutional weaknesses.*

- *COMESA should raise awareness of livelihoods-based, early response to drought in Member States, with relevant economic analysis and promotion of LEGS; Member States with food insecure pastoralist populations should adapt LEGS to their national contexts;*
- *Institutional arrangements and capacities for national drought contingency planning, budgeting, decision-making and accountability should be systematically reviewed, and harmonized on a regional basis; such coordination should assist cross-border responses to drought;*
- *Regional and national policies on the use of imported and local food aid should be critically reviewed given the high cost and limited sustained benefit of food aid relative to livelihoods programmes; while food aid will still be required, the policy objective should be a far more appropriate balance of non-food and food interventions;*
- *COMESA should assist Member States to include livestock products in national food reserves, and assess the extent to which such approaches can provide guaranteed markets for pastoralist livestock products.*

## **2.2 Sectoral limitations of the PFFSPA**

CAADP is an agriculture-led approach to hunger reduction, poverty reduction and improved food security. Under CAADP Pillar III the focus on food security for vulnerable communities requires analysis of these communities using either food security or livelihoods conceptual frameworks. In the

case of pastoralists, the livelihoods analysis presented in Section 1 shows how food security and vulnerability in pastoral areas are complex, multi-dimensional issues which require multiple, coordinated policy and programming at national and regional levels. Under the broad heading of agricultural development, pastoral livestock development and marketing programmes under CAADP will contribute much to food security, but at least three crucial areas of pastoral food security policy and programming fall outside of Pillar III and the other CAADP Pillars. These areas are conflict management, health and education, and the analysis clearly shows the impact of these factors on vulnerability. Food security in pastoralist areas will continue to be extremely fragile as long very basic programmes such as child immunization continue to be woefully inadequate.

Therefore, in the case of food security in pastoralist areas CAADP needs to support broader multi-sectoral policies and strategies beyond the four CAADP pillars. Given the structure of the AU and the relationship between the AU departments and RECs, it is important that Africa-wide policy on health and education in pastoralist areas is developed by the AU Department for Social Affairs and harmonized with both the PFFSPA and the emerging AU pastoral policy framework, led by the AU Department for Rural Economy and Agriculture. Similarly, the AU Department of Peace and Security has a key role to play in liaising with other AU departments and the PFFSPA to harmonize conflict prevention and management policies and strategies in pastoral areas.

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