



ICPALD



## REGIONAL INTEGRATION SUPPORT PROGRAMME (RISP II) CONTINUATION

IDENTIFICATION AND MAPPING OF KEY CROSS-BORDER  
LIVESTOCK ROUTES AND MARKETS, SERVICES AND PRIORITY  
TRANSBOUNDARY ANIMAL DISEASES INCLUDING  
ZONOTICS FOR REGIONAL AND INTERNATIONAL TRADE



INTERGOVERNMENTAL AUTHORITY  
ON DEVELOPMENT (IGAD)



EUROPEAN UNION

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## PREFACE

The major development challenges in ASALs is the inability of MS to invest adequately in key productive sectors including livestock and dry land agriculture. Local, regional and international trade in livestock and livestock products has historically been an important source of local and foreign exchange for IGAD member states. It has been observed overtime that the degree of stimulus provided by regional and international export markets significantly affects the rate and degree of livestock development in the member states. The expected long-term trend in total world demand for livestock and livestock products is for increased demand except for products from countries where livestock is subject to sanitary restrictions because of trans-boundary animal diseases (TADs) including zoonosis. It is therefore important that IGAD member states are informed of the key cross-border livestock routes and markets and priority animal diseases in the IGAD region and the facility and service gaps that need to be addressed to ensure that the animals traded locally, regionally and internationally and do not threaten host populations and meet the required regional and international zoo-sanitary standards.

This report was made possible with the hard work and support of the consultant; Dr. Dickens Malanga Chibeu and technical support and follow up of Dr. Ameha Sebsibe and ICPALD team. Moreover, we appreciate the inputs from representatives of IGAD member states and regional partners during data collection and regional validation workshop.

We are grateful to European Union (EU) for the financial support through Regional Integration Support Program (RISP II). ICPALD believes this report will help to inform MS and development partners on the current and future cross border development programs

**Dr. S.J. Muchina Munyua**  
**Ag. Director, ICPALD**

## LIST OF ACRONYMS

ALOP	Appropriate Levels of protection
AU	African Union
AU-IBAR	African union – InterAfrican bureau for Animal Resources
ASF	African swine fever
BIP	Border Inspection Point
CAADP	Comprehensive Africa Agriculture Development Programme
CAHWs	Community animal health workers
CBPP	Contagious bovine pleuropneumonia
CCPP	contagious caprine pleuropneumonia
CBT	Cross-border trader
COMESA	Common Market for Eastern and Central Africa
EAC	East African community
EDF	European Development Fund
ELISA	Enzyme-linked immunosorbent assay
ESA	Eastern and Southern Africa
FAO	Food and Agriculture Organisation
FAMIS	Food security for action marketing information system
FAOSTAT	FAO Statistics
FMD	Foot and mouth disease
GPS	Geographic Positioning System
HACCP	Hazard Analysis Critical Control Point
ICPALD	IGAD Center for Pastoral Areas and Livestock Development
IGAD	Inter-Governmental Authority for Development
IOC	Indian Ocean Commission
IRC	Inter-Regional Committee
KLMC	Kenya Livestock Marketing Council
KSA	Kingdom of Saudi Arabia
LINKS	Livestock Information Network and Knowledge
LMIS	Livestock Marketing Information System
LMSD	Livestock Marketing Services Division
LSD	Lumpy skin disease
MS	Member States
ND	Newcastle disease
OIE	World Organization for Animal Health
PCP	Progressive Control Pathway
PPR	Peste des petits ruminants
PVS	Performance Evaluation of Veterinary Services
RISP	Regional Integration Support Programme
RO	Regional Organisation
RVF	Rift valley fever
SAP	Structural Adjustment Programme

SGP	Sheep and goat pox
SPS	Sanitary and Phyto-Sanitary
SIFSIS	Sudan Institutional Food Security Information system
TADs	Trans-boundary Animal Diseases
ToR	Terms of Reference
UAE	United Arab Emirates
WAHID	World Animal Health Information Database
WTO	World Trade Organisation

Disclaimer

This is a report prepared for IGAD, but the views contained herein are the sole responsibility of the author and do not constitute in any way the position of IGAD or IGAD Member States.



## EXECUTIVE SUMMARY

This report presents the results of a study commissioned by the Inter-Governmental Authority for Development (IGAD) in October 2012. The study was funded through the Regional Integration Support Programme (RISP) II within the framework of the 10th European Development Fund (EDF). The IGAD Centre for Pastoral Areas and Livestock Development (ICPALD), established at the time as an activity of result 3 of RISP II to promote and facilitate sustainable and equitable dry lands and livestock development in the IGAD region coordinated the study.

The objective of the study was to identify and map key cross-border livestock routes, markets, services and priority trans-boundary animal diseases including zoonotics for regional and international trade in order to inform resource allocation (human, physical and financial) for animal disease control and trade by IGAD and Member States, leading to more effective surveillance and control of trans-boundary diseases. Thus, the results are to be used in determining the adequacy of the existing policies, laws, services and facilities supporting / facilitating cross border livestock trade and identifying obstacles and appropriate responses to the threat of spread of priority animal diseases in IGAD MS.

All the IGAD member countries were covered except Eritrea. Both formal and informal methods for data collection were used. Interactive mapping was used to map cross border livestock markets and trading routes and the associated services and facilities.

The study identified 75 cross-border markets most of which are located in dry regions, far from major urban centers, dominated by mobile pastoral production systems, and with poor road networks. As a result, animals are trekked from these markets to secondary markets and/or tertiary markets through bush or not so well established and serviced stock routes. Even in situations where stock-routes exist, they are not legally established.

Interactive maps showing the key cross-border livestock trade routes, markets and the associated services and facilities are presented separately but are an integral part of this report.

The study observed that intra-regional livestock trade is on the rise, a majority of which is informal. Formal and informal trade are linked; what starts off as informal in one country ends up being formal in the importing country. The downside is that even though both forms of trade are beneficial to the producers and the national economies, informal trade is more associated with the spread of animal diseases. There is therefore need to ensure safe trade (protection of host animal and human populations) by improving cross-border routes and markets infrastructure and services (veterinary services and facilities, holding/ feeding grounds and water point, and market information services), security, communication and creating awareness among value chain actors among other measures.

Overall, despite the shortcomings in infrastructure development and availability of services, the available data clearly demonstrates significant upward trends in both intra-regional trade and international trade with the Middle East/ Gulf States; possibly due to the increased demand for livestock products in response to increases in human populations, particularly urban dwellers, and in their incomes.

Animal diseases pose the highest risk to cross-border trade, followed by insecurity (due to political instability, cattle rustling, theft, inter-tribal wars, sharing of resources, traditional camel trade between Sudan and Egypt and Libya), poor stock-routes infrastructure/ high transportation costs, government bureaucracy and corruption, and inadequate market information. The ten most important diseases in this regard within the IGAD region are: FMD, CBPP, LSD, RVF, PPR, CCPP, SGP, Camel pox, Brucellosis and ECF. These diseases were identified and mapped on the basis of the perceived economic impact on trade, transmissibility, zoonotic potential, and disease prevalence. Transhumance, nomadism, movement in search of markets within and between states and civil strife exacerbate disease spread. The absence of or inadequacy in national disease control strategies made worse by poor or limited harmonisation and coordination at the regional level, sub-optimal enforcement of zoo-sanitary measures, out-dated legislative frameworks and inadequate financial resources are the main constraints to disease prevention, surveillance and control.

The commonality in diseases, disease status, challenges faced in controlling the diseases and livestock production systems implies that the acceptable level of risk among the seven countries is about the same and therefore regional trade based on agreed health certification systems that are in line with international standards is quite feasible. Accordingly, IGAD in collaboration with COMESA and EAC should seize the opportunity and take the leadership in harmonizing health certification systems for the various diseases in order to promote intra-regional trade. However, this requires concurrent concerted efforts in controlling the priority diseases.

Thus, investment in cross-border livestock marketing infrastructure and services including the control of priority animal diseases with concurrent regional harmonization of SPS policies, legislation, and standards would enhance the effectiveness of the control of TADs and zoonoses and thus protect host animal and human populations, reduce producer losses, and in turn increase their incomes as well as government revenues.

A five year draft project proposal worth 55M EUR to improve domestic, intra-regional and extra-regional trade in livestock and livestock products in IGAD member States has been drafted around the key areas of market and route infrastructure, harmonisation and compliance with standards, TADs and zoonoses control, macro-environment and coordination is presented separately to this report. Training needs assessment for health certification and animal identification as an integral component of the draft project proposal is also presented separately to this report.

# 1. INTRODUCTION, BACKGROUND AND OBJECTIVES

## 1.1 Overview

This report presents the results of a study commissioned by the Inter-Governmental Authority for Development (IGAD) in October 2012. The study was funded through the Regional Integration Support Programme (RISP) II within the framework of the 10th European Development Fund (EDF). The IGAD Centre for Pastoral Areas and Livestock Development (ICPALD), established at the time as an activity of result 3 of RISP II to promote and facilitate sustainable and equitable dry lands and livestock development in the IGAD region coordinated the study. The results of the study are to be used to determine the adequacy of the existing policies, laws, services and facilities supporting / facilitating cross border livestock trade and to identify obstacles and appropriate responses to the threat of spread of priority animal diseases in IGAD MS. The study covered all the IGAD member countries except Eritrea and was conducted by one key consultant, but with support from experts in certain key areas such as GIS mapping among others. The study was conducted in 65 working days split over several months from late 2012 to early 2013.

## 1.2 Introduction

Since 2002, the Common Market for Eastern and Southern Africa (COMESA), the East African Community (EAC), the Inter-Governmental Authority for Development (IGAD) and the Indian Ocean Commission (IOC) have made joint efforts through the Inter-Regional Committee (IRC) in the programming and implementation of regional programmes and projects under the European Development Fund (EDF), with a view to improving coordination in the implementation of regional integration programmes, especially in order to avoid the duplication of activities. RISP is one of the key regional economic integration programmes implemented under the 9th EDF following that principle with the purpose of developing the capacity of the ROs and their Member/Partner States in policy formulation, implementation and monitoring of regional integration as well as multilateral and regional trade. The programme was implemented jointly by COMESA and EAC and contributed significantly in furthering the integration road maps of the two organisations, namely by facilitating the launching of the COMESA Customs Union and the EAC Common Market in 2009. The aim of RISP II is to consolidate the achievements of the 9th EDF RISP while expanding support to all four Regional Organisations in contributing to the economic integration in the ESA-IO region. RISP II has six results for obtaining the specific objective, namely:

**RESULT 1:** Regional policies and regulations for the implementation of the regional integration mandates and agenda are designed and/or adjusted;

**RESULT 2:** Trade development, trade facilitation instruments and strategic, regulatory and technical preparatory works of trade related infrastructure designed and/or adjusted;

**RESULT 3:** Regional institutions established and strengthened to implement and monitor regional policies and regulations, including institutions that service private sector at regional level;

**RESULT 4:** Management capacities of the ROs improved to meet international recognised standards of governance;

**RESULT 5:** Member/Partner States capacity to address trade related issues and to

implement their trade liberalisation and regional integration commitments is enhanced;

**RESULT 6:** Capacity of the region to negotiate and implement multilateral trade agreements is enhanced.

Accordingly, this study was undertaken as one of the sub-activities under result 3 of RISP II to contribute to the promotion and facilitation of sustainable and equitable dry lands and livestock development in the IGAD member countries.

The report has been organised into eight chapters. Chapter one provides the introduction and gives the specific terms of references, objectives and the methodology used in the study. Chapters two and three identify and describe the key cross-border markets, routes and services and priority TADs and zoonoses respectively. Chapter four highlights the key risks to cross-border regional trade in livestock and livestock products and priority data requirements for monitoring and evaluating security of the trade. Chapter five explores the regional policy, regulatory, institutional and normative frameworks under which the sector is operating. Chapter six is an assessment of the capacity of key formal and informal structures (ministries, agencies, partners, communities, among others) to develop, administer and implement effectively, monitor and evaluate regional livestock trade protection responsibilities, while the key constraints and opportunities are covered in Chapter seven. Presented separately are: interactive maps on cross-border routes and markets and the services available and a draft proposal to address the prioritized opportunities together with the related training needs for animal health certification and identification.

### **1.3 Background**

The major development challenges in IGAD arid and semi arid areas is the inability of MS to invest adequately in key productive sectors including livestock and dry land agriculture while promoting to sustainable management of natural resources, and poor policy and institutional environment leading to under-performance of the livestock sector and poverty and hunger among the livestock keepers. In addition the IGAD region is faced with twin challenges of demonstrating good performance in managing and improving the contribution of livestock sector to the national economy in one hand and the welfare and livelihood of herders in other hand. The existing structure of the livestock marketing is based upon an interwoven matrix of primary markets at the village level, secondary markets at the local town/district level, and terminal markets (in major towns/cities) for final domestic sales or exports. Marketing margins are extremely high because of the inadequate infrastructure and poor organization and under development. Poor transportation infrastructure impedes the movement of livestock and livestock products from producer centres to urban markets. The long chain of middlemen together with informal and formal levies and taxes imposed on by the local authorities and other entities erode most of the producers' market share of profit. In addition, there is often inadequate provision of cold storage facilities at urban markets, poor markets distribution and organization.

Local, regional and international trade in livestock and livestock products has historically been an important source of local and foreign exchange for IGAD member states. It has been observed overtime that the degree of stimulus provided by regional and international export markets significantly affects the rate and degree of livestock development in the member states. The expected long-term trend in total world demand for livestock and livestock products is for increased demand except for products from countries where livestock is subject to sanitary restrictions because of trans-boundary animal diseases (TADs) including zoonosis. In addition,

the cyclical swings in livestock demand and supply, which are likely to be exacerbated by climate-related diseases (e.g. outbreak of recent rift valley fever) and unsound regional (and MS) policies may increase risk, discourage output and reduce competitiveness of livestock and products from IGAD MS.

In a world where traditional marketing channels with ad hoc sales are being gradually replaced by coordinated links among pastoralists, processors, retailers and others require well coordinated policies it is important that IGAD member states are informed of the key cross-border livestock routes and markets and priority animal diseases in the IGAD region and the facility and service gaps that need to be addressed to ensure that the animals traded locally, regionally and internationally do not threaten host populations and meet the required regional and international zoo-sanitary standards. The Sanitary and Phytosanitary (SPS) Agreement, finalized with the establishment of the World Trade Organization (WTO), seeks to ensure that quarantine regulations are not used to unfairly to protect domestic producers. It is thus important that the key cross-border livestock routes and markets and priority animal diseases in the IGAD region are mapped to show the available animal health services and facilities to inform resource (human, physical and financial) allocation for animal disease control and trade by IGAD and Member States.

Given the great economic potential of livestock in the IGAD region, member states will find effective surveillance and control of trans-border diseases attractive in the future. Such collective action would benefit all the producers of all MS through access to regional and international markets.

Given the great economic potential of livestock in the IGAD region, member states will find effective surveillance and control of trans-border diseases attractive in the future. Such collective action would benefit all the producers of all MS through access to regional and international markets.

## ***1.4 Objectives of the Study***

The overall objective was to identify and map key cross-border livestock routes, markets, services and priority trans-boundary animal diseases including zoonotics for regional and international trade in order to inform resource allocation (human, physical and financial) for animal disease control and trade by IGAD and Member States, leading to more effective surveillance and control of trans-boundary diseases. The specific objectives are to:

1. Provide key stakeholders with a clear picture of the key cross-border livestock routes and markets and priority trans-boundary animal diseases including zoonotics for regional and international trade to inform debate and decision making and resource allocation at regional and national levels,
2. Highlight the key risks to cross-border regional trade in livestock and livestock products, and prioritize data requirements for monitoring and evaluating security of the trade,
3. Describe the current institutional, policy, legal and normative framework supporting regional trade in livestock and livestock products, noting strengths as well as weaknesses,
4. Drawing on global best practices, assess the capacity of key formal and informal structures (ministries, agencies, partners, communities, among others) to develop, administer and implement effectively, monitor and evaluate regional livestock trade protection responsibilities,
5. Identify and prioritize opportunities to improve service delivery
6. Develop a draft proposal to address the prioritized opportunities

## 1.5 Deliverables

The expected outputs were

- Inception, draft and final reports
- An interactive map(s) showing the key cross-border livestock trade routes, markets and the associated services and facilities and priority animal diseases,
- Staffing and training needs to support an effective animal identification and health and certification system at key cross-border markets clearly indicating MS institutions that can be tasked to meet this need
- A draft proposal addressing the priority areas identified including an indication of the cost of not investing additional resources (maintaining the status quo).

The full Terms of Reference (ToR) are in the annex.

## 1.6 Guiding Principles

As per the TOR, the approach and methodology took into account the principles of conflict, environment and gender sensitivity and responsiveness; partnership; subsidiarity and complementarity; and alignment of the recommendations to IGAD's global strategy.

## 1.7 Approach

- a) Both formal and informal methods for data collection were used.
- b) Use of interactive mapping to map cross border livestock markets and trading routes, the associated services and facilities, and priority animal diseases in IGAD member Countries.
- c) Appraisal of risks to cross-border trade in livestock and livestock products.
- d) A description to enable the understanding of the strengths and weaknesses of the current policy, legal, institutional and normative framework supporting regional trade in livestock and livestock products.
- e) A stakeholder analysis of the key players in cross-border livestock and livestock products trade.
- f) Stakeholder validation of findings and key recommendations.

## 1.8 Methodology

The study was conducted through desk review, country visits, data and information synthesis, and validation workshop. A questionnaire covering all the pertinent parts of the study was sent in advance to the Chief veterinary officers (CVOs) of all the 7 participating countries. This was followed by visits for exposition, focused group discussions and one-on-one interviews with national management staff.

In the specific case of geographical mapping, the study used a combination of Participatory GIS (P-GIS), onscreen digitising and existing secondary data to establish the Geo-database of Livestock Routes and Market services. P-GIS entails group discussions with key informants well versed in the thematic area of livestock movement and marketing. The information gathered is geo-referenced and mapped, reviewed and validated to give an expert P-GIS map of key livestock routes and markets. Livestock routes were established via on screen digitizing to produce vector data of linear routes depicting to and from attributes of livestock routes in the region focusing on trans-boundary routes.

Key markets were obtained through secondary spatial databases. The UNOCHA common

operational database (CODS) and fundamental operational databases (FOD) provided the key reference for geo-referenced markets. Each market was identified using the spatial query tool and exported as a GIS feature. Markets were then amalgamated using the standard merge analysis tool. Each market identified was assigned its relative attribute information consisting of livestock market (LM), Border Inspection point (BIP), staffing levels, market information, market structures and financial services available. However due to variations in spellings, Google earth was used to extract markets not available on the COD/FOD database. This entailed spatial query on Google earth, converting KML files to shape files for integration into the GIS environment.

Livestock routes and markets geo-database is distributed using the open source arc GIS explorer, a robust GIS software with key spatial analysis functionalities for use by non GIS users. This enables query, zoom/pan, print functions, buffer analysis and integration of map layers with Google earth that provides unique interactive and dynamic experience to users.

Data on priority trans-boundary animal diseases (TADs) and Zoonoses was obtained from member countries at a workshop for Epidemiologists and laboratory Experts, Kampala, Uganda, 22-25 October 2012 under the auspices of SMP-AH project which the consultant attended and participated in. Disease data for geographical mapping was obtained from ARIS of AU-IBAR and OIE/ WAHID.

A SWOT matrix was constructed to provide a structure and focus for discussion on internal strengths and weaknesses, and opportunities and threats of key stakeholders.

A stakeholder workshop was used to validate the draft findings, conclusions and recommendations.



## 2. KEY CROSS-BORDER STOCK ROUTES, MARKETS AND SERVICES FOR REGIONAL AND INTERNATIONAL TRADE

### 2.1 Introduction

International boundaries throughout the Horn of Africa have important economic and ecological characteristics that generally distinguish the region from other parts of Africa. Most of these borders are characterized by arid and semi-arid environments; are generally isolated, insecure and have very poor transport, communications, and other infrastructure; and livestock-based economies and cross-border trade in livestock and livestock products, most of the trade informal, assume considerable importance because most border markets are located far from national urban centres and markets.



Source: Peter D. Little

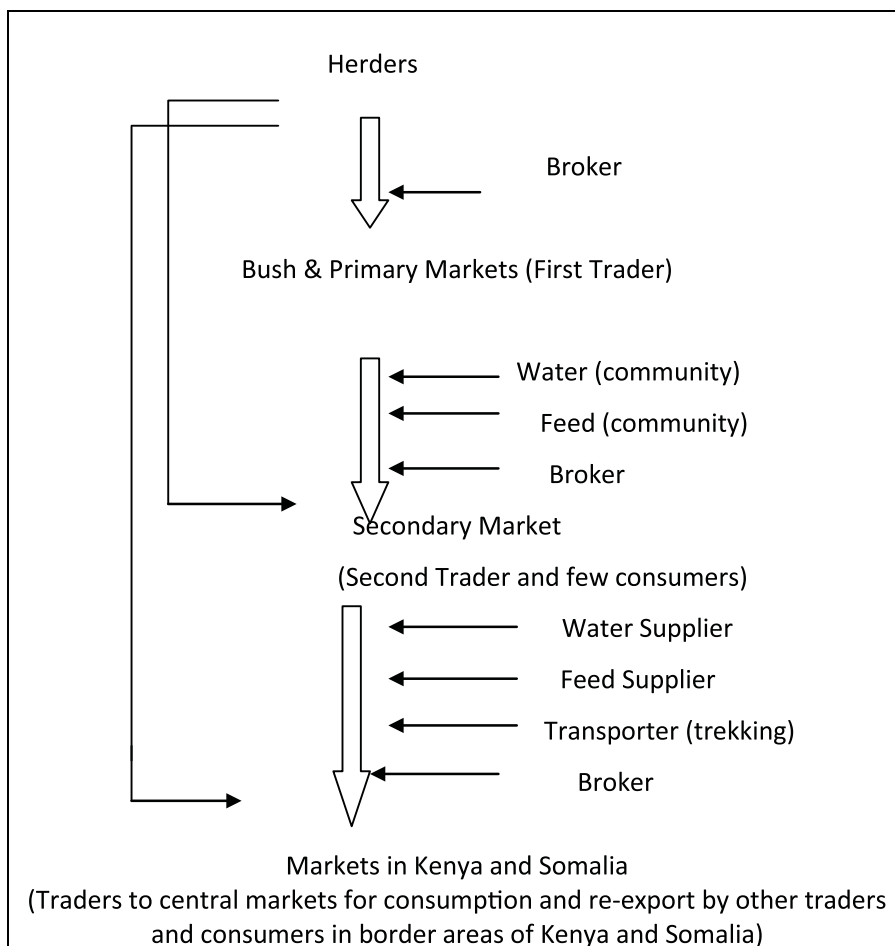
Informal cross-border livestock trade (ICBLT) dates to the pre-colonial period and the era of long-distance caravan trade (Dalleo 1975) and is favoured by the fact that it is a living and mobile commodity that can be transported overland rather than on roads, and can easily be moved across borders. For some observers it represents a normal market response to cumbersome, time-consuming export regulations and regional price distortions, and should be encouraged as a means to increase intra-regional trade, meet local demand that is not being met by national production and markets, and insure regional food security. For others, ICBLT reflects a potential loss of foreign exchange, an illegal activity, and a source of unfair competition for official traders and food producers. The contra position argues for increased regulations and taxes, policing, and/or forcing ICBLT into formal market channels (Little 2007). The pros and cons of formal and informal cross-border trade notwithstanding, cross-border livestock trade has remained to be the lifeline for many pastoralists in the region; unfortunately, infrastructure needs specific to formal cross-border livestock trade (CBLT) including veterinary services and facilities, feed, holding grounds, and water points are so poorly developed in the border areas that even if governments wanted to officially export livestock to neighbouring countries, they are hampered in most



border markets (Little, 2001). Therefore, knowledge of trade routes, points of embarkation and disembarkation, and dry season grazing areas as a means to deploying the necessary services to enhance the security and sanitary measures for cross border livestock trade is important. In tandem, good animal welfare should provide freedom from hunger and thirst; discomfort; pain, injury and disease; and fear and distress, as well freedom to express normal behaviour.

The key players in cross-border livestock trade include the producers (pastoralists), brokers, feed and water suppliers, traders, transporters/ trekkers, processors, exporters and consumers. A typical livestock marketing channel involving Ethiopia, Somalia and Kenya is presented in Figure 1 below.

**Figure 1 Cross-border Livestock Marketing Channel from Southern Rangelands of Ethiopia to the Neighbouring Countries (Kenya and Somalia)** Source: Teka et al 1999



Previous work on stock-route mapping has mainly been country-specific with a focus on internal markets and stock-routes, except the work done by Aklilu (2002) that covered the whole IGAD region. Even then, cognizant is taken of the fact that livestock movement pathways are shaped by supply and demand differences between countries in a region, which in turn determine the price, or value of livestock in specific locations among other reasons (Cocks et al 2009). Thus, the drivers of animal movement, and the subsequent movement pathways, are highly dynamic with major changes occurring over short time periods, hence the need to update the stock-routes. Furthermore, none of the previous studies has included the infrastructure and services available,

particularly at the cross-border markets.

Safe trade requires a combination of ingredients, among them, veterinary services support that emphasizes the eradication of OIE listed diseases, complying with SPS requirements, particularly disease freedom status, reliable surveillance and reporting systems, and market infrastructure development including market information systems. These in turn require significant investments in everything from satellite–assisted GIS systems for surveillance, to measures for strict movement restrictions and fencing for disease free zoning, to laboratory testing facilities and a revamped field –level veterinary service. Given the state of veterinary services in Inter-Governmental Authority on Development (IGAD) member states which do not meet the standards of quality; upgrading facilities, imposing regulations and providing services to such a level would certainly require significant investment. Accordingly, local and regional trade are considered less costly options in comparison with export to high value markets in Europe or Middle East (Scoones and Wolmer 2006).

Local and domestic markets comprise primary markets in the rural areas and secondary or domestic urban markets. Primary markets comprise livestock sales by producers in the rural areas either through local slaughter or networks of local butcheries based in rural service centres and small towns. The main policy concern at this level is public health. Domestic urban markets are vibrant and fast growing. As urbanisation continues, the spending power of the growing middle class increases and the demand for red meat expands. Pastoralists and small-scale farmers can benefit from this growing demand because it is a low-cost option, focused on maintaining basic food safety and public health. Increasing food safety/ SPS requirements at the margins to assure consumers and allow supply to more integrated and longer, supermarket dominated supply chains may reap significant benefits for a large number of producers. However, the emphasis on export, particularly to high value markets detracts a focus on improving domestic markets and meeting local demand (Scoones and Wolmer 2006).

Regional trade (cross-border market) is favoured by the growth in demand for meat, which suggests more positive market opportunities across the IGAD region, and a shift to higher value products as income increase. But just like in internal markets, the emphasis on export to high value markets (international trade with Middle East States) tends to detract a focus on this market. Regional trade coordination can be enhanced by a focus on among others: removal of trade/ tariff barriers (e.g levies and duties) and non-tariff barriers, regional SPS agreements based on agreed certification processes, and investment in infrastructure including cross-border transport networks

## **2.2 Results**

A mapping of the key cross-border routes and markets highlighting the services and facilities available is presented. This study defined cross-border markets as overland or terrestrial places along or very close to international boundaries where livestock and livestock products are traded (LM) and /or veterinary services such as import & export inspection, certification etc are offered. In the latter case, they require official government gazettelement as Border Inspection Posts (BIP). Interactive maps for the same are presented as separate outputs of this study.

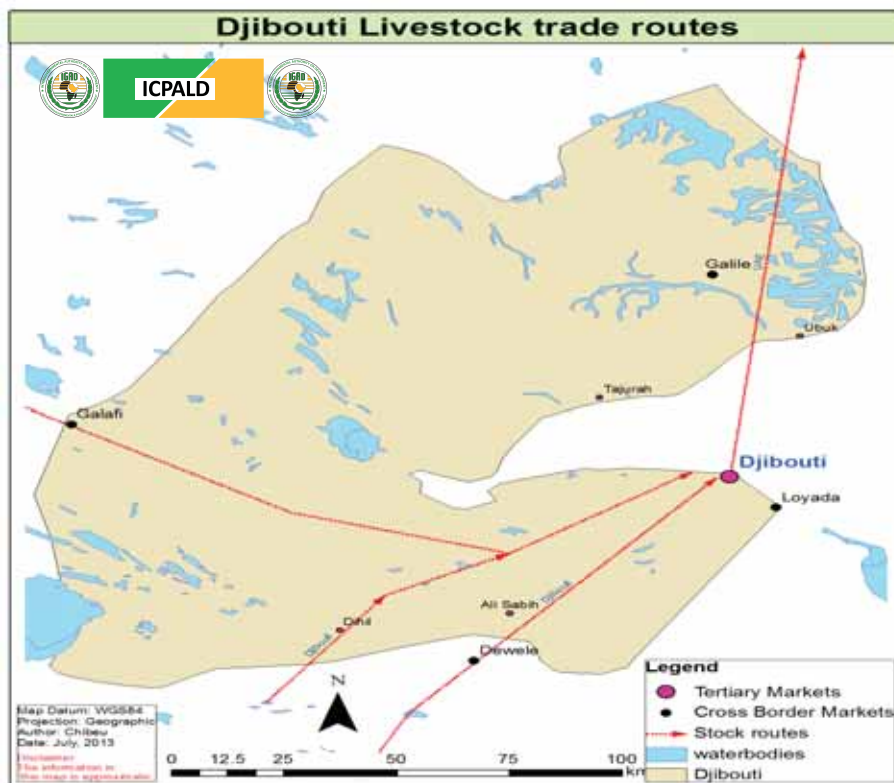
## 2.2.1 Djibouti

### a) Cross-border stock routes and markets

The livestock population of Djibouti is 40,000 cattle, 1M sheep and goats, 50,000 camels and 6,000 poultry (Ministry of Agriculture, Djibouti 2012). The country has three main cross-border markets, two of them; Galafi and Galile are on the Ethiopian frontier, while Loyada is on the Somali frontier (Figure 3). Galafi is connected to Djibouti's main tertiary market of Balbala in the capital city of Djibouti by road and rail; with Yoboki and Dikhil markets lining this transport corridor. Galile is linked with Balbala via Ali Sabieh. Animals from Ethiopia are mainly trucked, but those from Somaliland are trekked (Loyada is only 3 Km from Djibouti's main quarantine station at Damerjog). Figure 2 is a map of Djibouti showing cross-border markets and routes.

The direction of flow of animals is 100% from the neighbouring countries into Djibouti. The main catchment areas in Ethiopia have traditionally been the Afar and Somali regions that supply cattle and shoats, but in recent years, camels destined for Egypt via the Djibouti port have extended the catchment area to include Oromya region of South Eastern Ethiopia and parts of Northern and north-eastern Kenya via Moyale. Trucking of camels although advisable on the basis of the long distance from the catchment areas (eastern Ethiopia and north-eastern Kenya) has come with its own challenges: the animals are too tall to fit in the standard trucks, leading to unethical practice of transporting the animals with their legs folded and tied for a journey of up to 3 days. Attempts to use trains have not been successful, hence there is need to explore other means such as designer trucks. Yoboki and Dikhil are the main secondary markets, while Balbala in the capital city Djibouti is the only tertiary market.

**Figure 2: Djibouti Cross-border Livestock Markets and Routes**



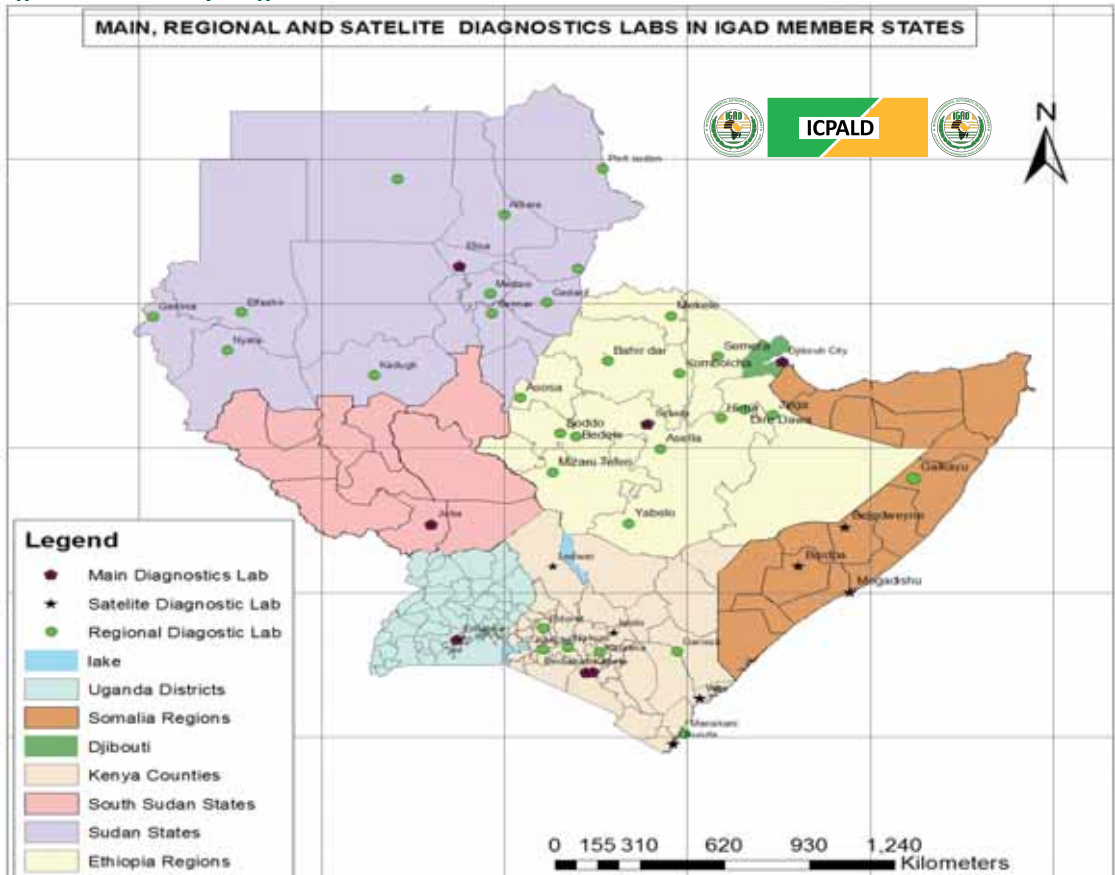
## b) Market and stock-route facilities and services

All the three cross-border markets are government approved Border Inspection Posts (BIP). However, Galafi is not under the authority of an official veterinarian; instead, customs officials are relied upon to relay information to veterinary authorities stationed at the nearby Yoboki check-point. Each of the three cross-border markets in Djibouti has a fenced-off market yard that is supplied with water; but the fencing needs major facelift while watering troughs are needed for the water supply. Hay and feed concentrates are usually supplied by the owners themselves or by private entrepreneurs. The loading ramps at all the three markets need improvement. No market information system exists in Djibouti. Table 1 summarises the facilities and services available in Djibouti.

**Table 1: Summary on Market facilities and Services, Djibouti**

FACILITY/MARKET	Galafi	Galile	Loyada
LM, BIP or both	Both	Both	Both
Under veterinary authority (Y/N)	No	Yes	Yes
Staffing (nil, poor adequate)	Poor	Poor	Poor
Market information (Y/N)	No	No	No
Connection to the rest of country (tarmac, rail, all weather marrum road, rural primary road)	Tarmac and rail	Tarmac	All weather marrum road
Main connecting secondary and tertiary markets	Yoboki, Dikhil, Balbala (Djibouti city)	Ali Sabieh , Balbala (Djibouti city)	Balbala (Djibouti city) and Cheik Farah
Telephone coverage (Y/N)	No	No	Yes
Market structures & services available (fencing, water, feed/hay, sheds, disposal sites, vaccination crash, loading ramp, emergency slaughter slabs, weighing scale, power-house)	Market yard fenced off but needs facelift Water supplied but water troughs not enough Feed supplied by owners and private businessmen Sheds in place but insufficient Loading ramps in place but need improvement	Market yard fenced off but needs facelift Water supplied but water troughs not enough Feed supplied by owners and private businessmen Sheds in place but insufficient Loading ramps in place but need improvement	Market yard fenced off but needs facelift Water supplied but water troughs not enough Feed supplied by owners and private businessmen Sheds in place but insufficient Loading ramps in place but need improvement
Financial services available (banking, mobile money transfer, loan, livestock as collateral, forex services, livestock insurance schemes)	None	None	Banking and money transfer

Djibouti has a central laboratory in the capital city but there are no regional laboratories (see Figure 3 and Annex 4). Laboratory testing for export animals is done within the quarantine station's own laboratory.

**Figure 3: Veterinary Diagnostic Laboratories in IGAD Member States**

Djibouti has only one quarantine station at Damerjog, located 15 Km from the capital city, and only 3 Km from Loyada, the border-market on the Somalia frontier (see Figure 5 and Annex 5). The emergence of Djibouti as a major livestock export hub is the result of the RVF outbreak in Yemen and Saudi Arabia in 2000 that resulted in the imposition of a ban on all livestock imports from the region by Saudi Arabia, Bahrain, Oman, Qatar, Yemen and the UAE. The quarantine station was therefore established as regional quarantine facility to provide quarantine and certification of animals for Djibouti, Ethiopia and Somalia. The catchment area has recently extended beyond the traditional areas to include more parts of Ethiopia and more recently northern Kenya. However, following the lifting of the quarantine on the Horn of Africa countries by the Kingdom of Saudi Arabia in 2009 and the subsequent opening of Berbera and Bosaso ports in Somaliland and Puntland respectively, the number of animals, especially the small ruminants going through the port of Djibouti has reduced significantly. Djibouti's first ever export slaughter house is under construction.

Banking and money transfer are available at Loyada. The other two markets do not offer any form of financial services.

### c) Trade performance

Djibouti imports livestock from neighbouring Ethiopia and Somalia to meet its domestic demand and is a transit country for the two countries as well. The main destinations for formal trade

via the port of Djibouti are Egypt, Emirates, Kuwait, Oman, Saudi Arabia, Yemen, Qatar, Jordan, Lebanon and Bahrain. Djibouti's formal trade exports for the years 2006-2010 are shown in Table 2 below. Sanitary requirements include vaccination and/or testing, and quarantine period for RVF, FMD, CBPP, Brucellosis and pox.

**Table 2: Djibouti's 5 Year Livestock and Livestock products Exports<sup>1</sup>**

Year	Export Value (1000 US\$)					5-year Total
	2006	2007	2008	2009	2010	
Live Cattle	10,111	26,784	14,021	9,280	542	<b>60,738</b>
Live Goats	0	0	0	0	0	<b>0</b>
Live Sheep	0	0	0	0	0	<b>0</b>
Live Camels	3,181	18,643	20,678	24,765	42,176	<b>109,443</b>
Cattle meat	0	0	0	0	0	<b>0</b>
Cattle offal	0	0	0	0	0	<b>0</b>
Sheep offal	0	0	0	0	0	<b>0</b>
Sheep meat	0	0	0	0	0	<b>0</b>
Cattle hide (wet salted)	0	0	0	0	0	<b>0</b>
Skins (wet salted)	0	0	0	0	0	<b>0</b>
<b>Sub-Total</b>	<b>13,292</b>	<b>45,427</b>	<b>34,699</b>	<b>34,045</b>	<b>42,718</b>	<b>170,181</b>

Source: FAOSTAT 2012

## 2.2.2 Ethiopia

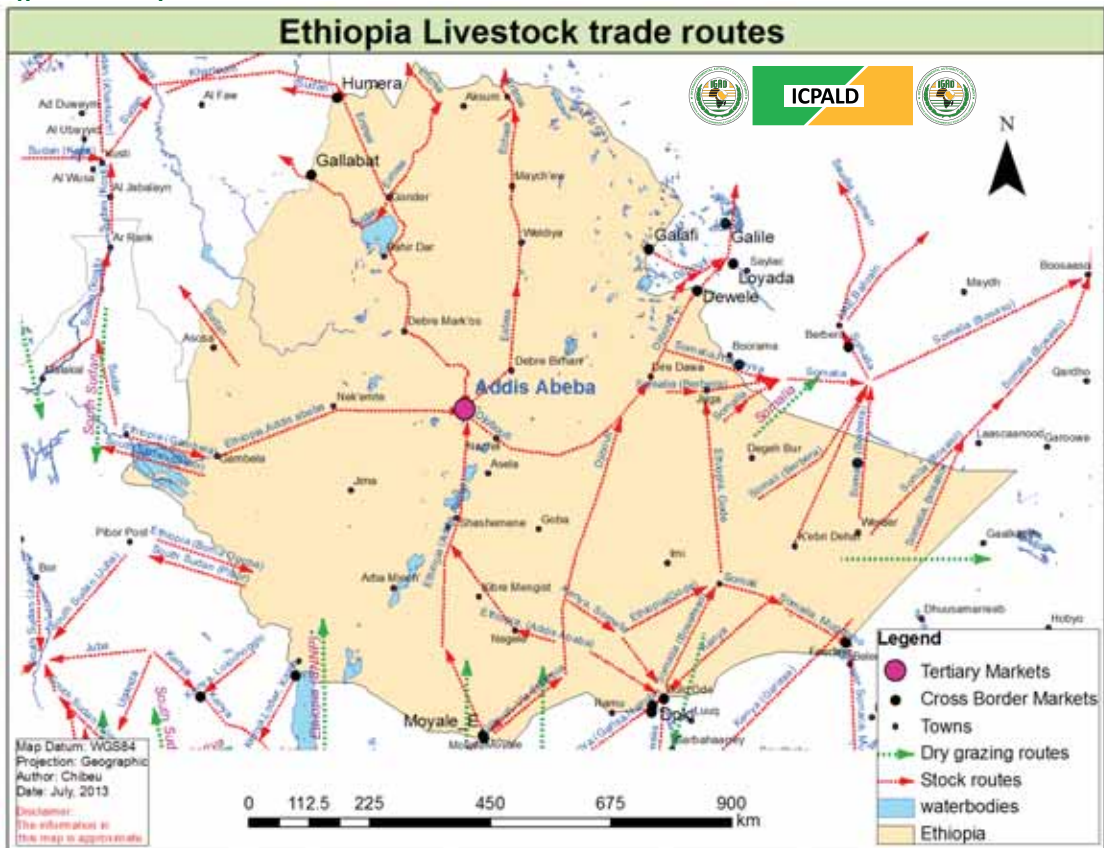
### a) Cross-border stock routes and markets

Ethiopia has the largest livestock population in Africa with about 52 million cattle, 33 million sheep, 30 million goats and 2.5 million camels (CSA, 2009). The main cross-border markets are Wuchale, Dewele, Gashamo, Goladi and Ferfer in the east and Dolo Odo and Moyale in the south. In the west are Okobo, Bambudeo, Kumruk, Humera and Almahal. Livestock trading networks penetrate deep into Ethiopia's Somali Region where many of the animals are raised. Throughout this catchment area, animals are both trekked and trucked to their final destinations. Through the cross-border markets, Ethiopia is linked with markets in the Arabian Peninsula and the Gulf through Djibouti, Somaliland and Puntland via the Ports of Djibouti, Berbera, Bosasso (Majid, 2010) and with Tertiary markets in Kenya (Nairobi, Mombasa) and Sudan (Khartoum). Sheep and goats have historically comprised by far the most significant proportion of this trade in terms of both numbers and value, although cattle have become increasingly important in recent years. The main secondary markets are located in the main towns and cities across the country, while Addis Ababa, the capital city is a tertiary market. Figure 4 is a map of cross-border markets and routes including dry season grazing in Ethiopia.

1 Given Djibouti's livestock population, the figures most likely include re-exports



**Figure 4: Ethiopia Cross-border Livestock Markets and Routes**



**b) Market and stock-route facilities and services**

Eight (Wuchale, Dewele, Gashamo, Geladi, Ferfer, Moyale, Humera and Almahal) out of the 12 cross-border markets are officially gazetted border inspection posts (BIPs) and are under the official veterinary authority, but with minimal staff. Table 3 below summarizes the market facilities and services available.

Ethiopia has a national livestock market information system (NLMIS) that collects data on volumes of animals supplied and average value in each age group, sex and grade of animal. In addition, the system is also meant to provide early warning information. However, market information services are only available at Moyale, Metema and Humera.

Banking services are available only at Moyale, Wuchale, Humera and Almahal. No other financial services are available anywhere else.

**Table 3: Summary on Market facilities and Services, Ethiopia**

FACILITY/MARKET	Dewele	Gashamo	Geladi	Ferfer	Dolo Odo	Tog Wachale	Moyale
LM, BIP or both	BIP	Both	Both	BIP	LM	Both	Both
Under veterinary authority (Y/N)	Yes	Yes	Yes	Yes	No	Yes	Yes
Staffing (Nil, poor, adequate)	Poor	Poor	Poor	Poor	Poor	Poor	Poor

FACILITY/MARKET	Dewele	Gashamo	Geladi	Ferfer	Dolo Odo	Tog Wachale	Moyale
Market information (Y/N)	No	No	No	No	No	No	Yes
Connection to the rest of country (tarmac, rail, all weather marrum road, rural primary road)	Rural	Rural	Rural	Rural	Rural	Tarmac	Tarmac
Main connecting secondary and tertiary markets	Bike & Diredawa	Jijiga	Jijiga	Kelafo	Negele	Babile & Jijiga	Dila, Awasa, Yabelo and Addis Ababa
Telephone coverage (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Market structures & services available (fencing, water, feed/hay, sheds, disposal sites, vaccination crash, loading ramp, emergency slaughter slabs, weighing scale, power-house)	None	None	None	Feeding and watering troughs	None	None	Fenced with water supply, sheds, disposal sites, emergency slaughter slab and crash for vaccination
Financial services available (banking, mobile money transfer, loan, livestock as collateral, forex services, livestock insurance schemes)	None	None	None	None	None	Banking services	Banking Services

FACILITY/MARKET	Okobo	Bambudeo	Kamruk	Metema	Humera	Almahal
LM, BIP or both	LM	LM	LM	Both	Both	Both-
Under veterinary authority (Y/N)	No	No	No	Yes	Yes	Yes
Staffing (nil, poor, adequate)	Nil	Nil	Nil	Poor	Poor	Poor
Market information (Y/N)	None	None	None	Yes	Yes	None
Connection to the rest of country (tarmac, rail, all weather marrum road, rural primary road)	Rural primary road	Rural primary road	Rural primary road	Tarmac	Tarmac	Rural primary road
Main connecting secondary and tertiary markets	Gambela	Metekel	Metekel	Gondar & Bhairdar	Tigrey	--

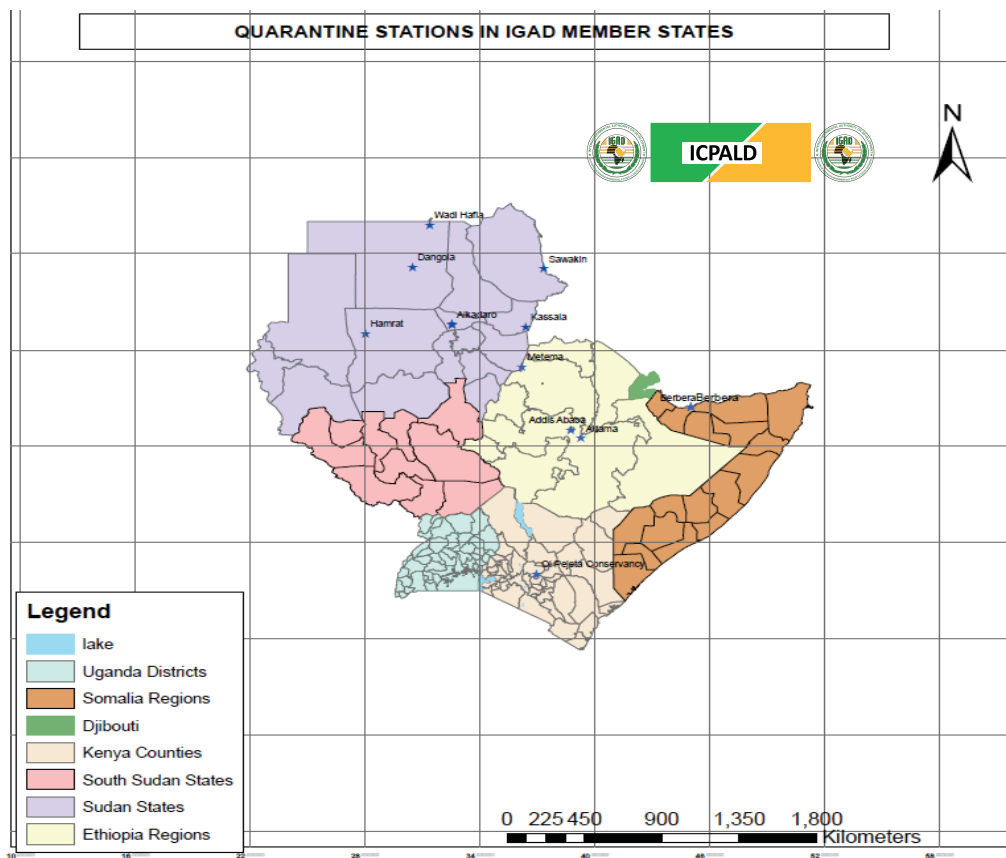


FACILITY/MARKET	Okobo	Bambudeo	Kamruk	Metema	Humera	Almahal
Telephone coverage (Y/N)	No	No	No	Yes	Yes	Yes
Market structures & services available (fencing, water, feed/hay, sheds, disposal sites, vaccination crash, loading ramp, emergency slaughter slabs, weighing scale, power-house)	None	None	None	None	None	None
Financial services available (banking, mobile money transfer, loan, livestock as collateral, forex services, livestock insurance schemes)	None	None	None	Banking	Banking	Banking

Ethiopia has a central diagnostic laboratory at Sebeta that is supported by 13 regional laboratories representing each region. According to the map, Jijiga Regional Laboratory serves the large and expansive Somali Region that is the main catchment area for Ethiopia's livestock export (see Figure 3 and Annex 4).

Ethiopia has 6 quarantine stations: Jijiga, Mile, Adama, Dire Dawa, Addis Ababa and Metema. Adama and Dire Dawa export their animals via Port of Djibouti, the main destinations being Yemen, KSA, UAE, Egypt, while Jijiga quarantine station is served by Port of Babera in Somaliland, Somalia. Metema in the west caters for animals destined for the Republic of Sudan (see Figure 5 and Annex 5). Two new public quarantine stations are under construction close to eastern borders, with the aim of expediting movement through Djibouti as a transit country. The services offered include vaccination against FMD and brucellosis, and quarantine period as specified by the importing countries.

**Figure 5: Quarantine Stations in IGAD Member States**



There are 9 main export slaughter houses, namely: Luna Export Slaughter House Private, Modjo Modern Export Kera Plc, Organic Meat Export Private Limited, Elfora Agro Industries Private Limi, Elfora Metehare, Hashim Nuru Jiru Private Limited Co, Abergelle International Livestock, Asheref Agricultural and Industrial PLC and Melgawondo (See Figure 7 and Annex 6).

**c) Trade performance**

Ethiopia is a net livestock and livestock products exporter. The main export destinations are the Middle East countries. Sanitary requirements by Middle East countries include vaccination and/or testing, and quarantine period for RVF, FMD, CBPP, Brucellosis and pox. Export earnings according to FAOSTAT 2012 show a steady rise over a 5 year period (2006-2010), peaking in 2010 at 89,804,000 US\$, with live cattle as the leading export earner for the period (Table 4). However, according to the Ethiopian Revenue and Customs Authority 2011, Ethiopia earned USD 211.1 million during Ethiopian financial year (July 2010-June 2011) by exporting 16,877 tonnes of meat and 472,041 head of live animals. The live animal export contributed 70% of the earnings while the balance (30%) was obtained from meat export.

**Table 4: Ethiopia's 5- Year Livestock and Livestock Products Exports**

Year	Export Value (1000 US\$)					Five Year Total (1000 US\$)
	2006	2007	2008	2009	2010	
Live Cattle	31,584	24,350	26,599	36,359	75,139	<b>194,031</b>
Live Goats	291	1,325	141	350	295	<b>2,402</b>
Live Sheep	924	5,988	3,735	5,988	5,185	<b>21,820</b>
Live Camel	0	-	-	-	-	<b>0</b>
Cattle meat	5	8	0	0	2,079	<b>2,092</b>
Cattle offal	12	5	9	189	163	<b>378</b>
Sheep offal	0	0	103	0	0	<b>103</b>
Sheep meat	1,758	4,961	7,709	4,849	6,943	<b>26,220</b>
Cattle hide (wet salted)	7,915	4,717	338	0	0	<b>12,970</b>
Skins (wet salted)	0	0	0	0	0	<b>0</b>
<b>sub-Total</b>	<b>42,489</b>	<b>41,354</b>	<b>38,634</b>	<b>47,735</b>	<b>89,804</b>	<b>260,016</b>

Source: FAOSTAT 2012

Intra-regional trade estimates are scanty and poor; for example, Ethiopia's formal live animal exports for the years 2010/11 and 2011/12 to Djibouti, Somalia and Sudan are only available as aggregate data (Table 5). A study by Desta et al, 2011 has demonstrated the increasing significance of informal cross-border livestock trade (ICBLT) between Ethiopia and Somalia (Table 6). Similar trends are highly likely with Djibouti. Livestock exports to Sudan have exploded since December 2004, when the trade opened, particularly in cattle and camels. Figures have gone from negligible to over 100,000 cattle worth over \$30 million dollars in estimated exports from the Gondar area alone (formal and informal) in 2007 (Mulugeta et al 2007). This figure does not include camels and other trade routes, which if included and extrapolated to the present as the trade has continued to grow; the amount from 2007 can easily be tripled or quadrupled to reflect the reality today. Khartoum is a tertiary market for these animals, but still others are re-exported north into Egypt.

**Table 5: Official intra-regional Exports, source: Ministry of Agriculture, Ethiopia 2012**

Country	All animals	
	2010/2011	2011/2012
Djibouti	21,755	116,689
Somalia	110,043	149,308
Sudan	103,133	153,175

**Table 6: Informal Export Value to Somalia (Source: Desta et al, 2011)**

Year	Cattle (USD)	Camels (USD)
2008	24,890	1800
2009	4,495,990	43,623
2010	13,670,700	2,972,400
2011	25,005,960	5,274,000

## 2.2.3 Kenya

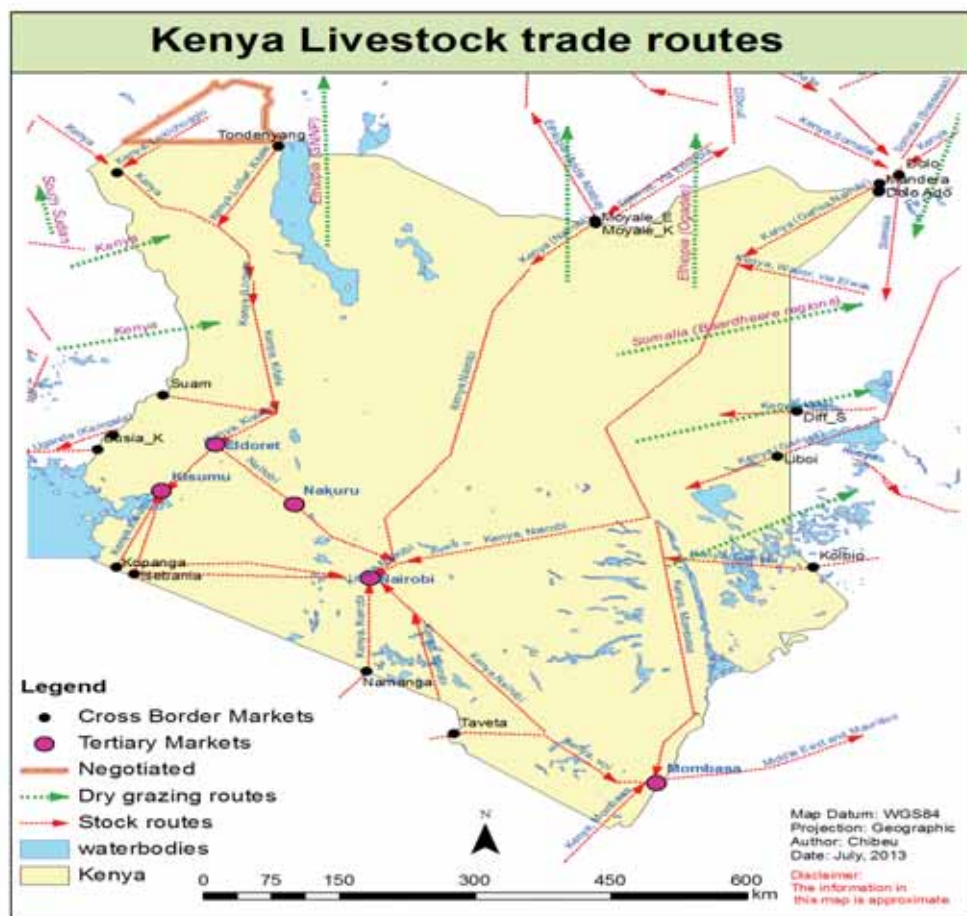
### a) Cross-border stock routes and markets

Kenya has a livestock population of 17.5 million cattle, 27.7 million goats, 17 million sheep, 3 million camels, and 31.8 million domestic birds (Ministry of Livestock Development). The main overland

(terrestrial) cross-border markets are: Lungalunga, Taveta, Oloitoktok, Namanga, Nyamutiru and Isebania (Tanzania frontier); Busia, Malaba, Luakhakha and Suam (Uganda frontier); Lokichoggio and Kibishi (South Sudan frontier); Todenyang, Moyale and Mandera (Ethiopia frontier); and Mandera, Elwak, Dif, Liboi, Hulgo (Somalia). The Mandera and Moyale markets are supplied by the Somali and Borana regions of Ethiopia respectively, while animals from Lower Juba in Somalia converge at Garissa (secondary market) after entering Kenya via Elwak, Dif, Liboi and Hulgo. The southern border markets receive animals from northern Tanzania. The main secondary markets are Garissa, Mackinon Road, Garsen, Suswa, Makutano, Rumuruti, Ishiara, Marsabit, Nakuru and Isiolo; while the main tertiary markets are Nairobi and Mombasa.

Most cross-border markets are connected to secondary and tertiary markets via main trunk roads, except some markets on the Somali frontier (Diff, Liboi, Hulgo) and in the North West, where the road network is poor. Animals entering Kenya from Somalia through these entry points are trekked to the nearby Garissa market from where they are trucked to tertiary markets (Nairobi and Mombasa). Busia and Malaba in the west and Taveta in the south are connected to the tertiary markets by both road and rail. Figure 5 shows cross-border markets and routes including dry season grazing in Kenya.

**Figure 6: Kenya Cross-border Livestock Markets and Routes**



## b) Market and stock-route facilities and services

Lungalunga, Taveta, Oloitoktok, Namanga, Isabania, Todenyang, Kopanga, Nyamatiru, Busia, Malaba, Luakhakha, Suam, Lokichoggio, Moyale, Mandera and Liboi are the officially gazetted BIPs and are functional under the official veterinary authority but with modest staff. According to an assessment report on entry ports conducted by the Kenya Department of Veterinary Services in 2012, most of the ports are grossly under-staffed and the skeleton personnel available require training/ refresher training on standard operating procedures (SOPs). Further, the report noted that the Ports lack the necessary infrastructure and services/ procedures including office space, waste disposal, vehicle disinfection, bio-security measures and physical security. Table 7 below summarizes the market facilities and services available.

**Table 7: Summary on Market Facilities and Services, Kenya**

FACILITY/MARKET	Lungalunga	Taveta	Oloitoktok	Namanga	Nyamutiru	Isebania
LM, BIP or both	BIP	BIP	BIP	BIP	BIP	BIP
Under veterinary authority (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
Staffing (nil, poor adequate)	Poor	Poor	Poor	Poor	Poor	Poor
Market information (Y/N)	No	No	No	No	No	No
Connection to the rest of country (tarmac, rail, all weather marrum road, rural primary road)	Tarmac	Tarmac and rail	Tarmac	Tarmac	Tarmac	Tarmac
Main connecting secondary and tertiary markets	Mombasa	Voi , Mombasa & Nairobi	Email – Nairobi	Kajiado-Nairobi	Migori-Nairobi	Mabera-Nairobi
Telephone coverage (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
Market structures & services available (fenced market yard, water, feed/ hay, sheds, disposal sites, crash for vaccination, emergency slaughter slabs, weighing scale, power-house)	Vaccination crushes and loading ramps	Vaccination crushes and loading ramps	Vaccination crushes and loading ramps	Vaccination crushes and loading ramps	Vaccination crushes and loading ramps	Vaccination crushes and loading ramps
Financial services available (banking, mobile money transfer, loan, livestock as collateral, forex services, livestock insurance schemes)	Banks, mobile money transfer, forex services	Banks, mobile money transfer, forex services	Banks, mobile money transfer, forex services	Banks, mobile money transfer, forex services	Banks, mobile money transfer, forex services	Banks, mobile money transfer, forex services

FACILITY/MARKET	Busia	Malaba	Luakhakha	Suam	Lokichoggio	Kopanga
LM, BIP or both	BIP	BIP	BIP	BIP	BIP	BIP
Under veterinary authority (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
Staffing (nil, poor adequate)	Poor	Poor	Poor	Poor	Poor	Poor
Market information (Y/N)	No	No	No	No	No	No
Connection to the rest of country (tarmac, rail, all weather marrum road, rural primary road)	Tarmac	Tarmac and rail	Marrum	Marrum	Tarmac	Rural primary road
Main connecting secondary and tertiary markets	Kisumu, Bungoma & Nairobi	Bungoma & Nairobi	Bungoma – Nairobi	Kitale – Nairobi	Lodwar – Nairobi	Lodwar-Nairobi
Telephone coverage (Y/N)						
Market structures & services available (fencing, water, feed/hay, sheds, disposal sites, vaccination crash, loading ramp, emergency slaughter slabs, weighing scale, power-house)	Vaccination crushes and loading ramps	Vaccination crushes and loading ramps	Vaccination crushes and loading ramps	Vaccination crushes and loading ramps	Vaccination crushes and loading ramps	Vaccination crushes and loading ramps
Financial services available (banking, mobile money transfer, loan, livestock as collateral, forex services, livestock insurance schemes)	Banks, mobile money transfer, forex services	Banks, mobile money transfer, forex services	Banks, mobile money transfer, forex services	Banks, mobile money transfer, forex services	Banks, mobile money transfer, forex services	Banks, mobile money transfer, forex services

FACILITY/MARKET	Todenyang	Moyale	Mandera	Elwak	Liboi
LM, BIP or both	BIP	BIP & LM	BIP	BIP	BIP
Under veterinary authority (Y/N)	No	Yes	No	No	No
Staffing ( Nil, poor, adequate)	Poor	Poor	Poor	Poor	Poor
Market information (Y/N)					
Connection to the rest of country (tarmac, rail, all weather marrum road, rural primary road)	All weather earth road	Tarmac	All weather earth road	All weather earth road	All weather earth road
Main connecting secondary and tertiary markets	Lodwar-Nairobi	Isiolo, Wajir Nairobi	Wajir, Garissa Nairobi	Wajir, Garissa and Nairobi	Garissa, Nairobi
Telephone coverage (Y/N)	No	Yes	Yes	Yes	Yes
Market structures & services available (fencing, water, feed/hay, sheds, disposal sites, vaccination crash, loading ramp, emergency slaughter slabs, weighing scale, power-house)	None	Fencing, Weighing scale, vaccination crushes, and loading ramps	Vaccination crushes and loading ramps	Vaccination crushes and loading ramps	None

FACILITY/MARKET	Todenyang	Moyale	Mandera	Elwak	Liboi
Financial services available (banking, mobile money transfer, loan, livestock as collateral, forex services, livestock insurance schemes)	Banks, mobile money transfer, forex services	Banks, mobile money transfer, forex services	Banks, mobile money transfer, forex services	Banks, mobile money transfer, forex services	Banks, mobile money transfer, forex services

The study noted that some of the stock-routes and holding grounds including the developments and associated facilities thereon that once existed as public entities have since been converted to private / individual use.

Kenya has two central veterinary laboratories (the Central Veterinary Laboratories at Kabete and Embakas (FMD)) which are supported by 6 regional investigation laboratories (Kericho, Nakuru, Eldoret, Mariani, Karatina and Garissa) and some satellite laboratories across the country (Lodwar, Isiolo, Witu and Ukunda) (see Figure 3 and Annex 4).

Sirma on Ol Pejeta Ranch in the central part of the country is the only quarantine station in Kenya, specialising in embryo transfer (see Figure 5 and Annex 5). Kenya has six export slaughter houses, namely: Farmers Choice Butchery, Choice Meat Butchery, Kenchic Ltd, Kenya Meat Commission, Mombasa Slaughter House and Quality Meat Packers (see Figure 7 and Annex 6).

**Figure 7: Export Slaughter Houses in IGAD Member States**



### c) Trade performance

Kenya's official exports for the years 2006 to 2010 are shown in Table 8. The main export



destination for Kenya's live animals has been Mauritius, while the meat products destinations include United Arab Emirates, Oman, Qatar, and Bahrain. Within the region, Kenya exports Ethiopia, Sudan, Somalia, Egypt and Tanzania. Overall, there has been a rise in export earnings over the 5 year period, save for the drop in 2008. The main export earners were wet salted hides, live cattle, beef and mutton.

**Table 8: Kenya's 5- Year Livestock and Livestock Products Exports**

Year	Export Value (1000 US\$)					Five Year Total (1000 US\$)
	2006	2007	2008	2009	2010	
Live Cattle	649	3	86	1,576	1,771	<b>4,085</b>
Live Goats	5	5	2	138	0	<b>150</b>
Live Sheep	22	0	0	1	4	<b>27</b>
Live Camel	0	-	-	-	-	<b>0</b>
Cattle meat	59	264	533	357	2,241	<b>3,454</b>
Cattle offal	3	1	28	44	95	<b>171</b>
Sheep offal	-	-	-	0	1	<b>1</b>
Sheep meat	309	367	402	720	1,786	<b>3,584</b>
Cattle hide (wet salted)	1,597	2,128	524	234	136	<b>4,619</b>
Skins (wet salted)	0	0	0	0	0	<b>0</b>
<b>Sub-Total</b>	<b>2644</b>	<b>2768</b>	<b>1575</b>	<b>3070</b>	<b>6034</b>	<b>16,091</b>

Source: FAOSTAT 2012

Overall, Kenya is a net receiver of cattle and small ruminants from its neighbours in the IGAD region as well as Tanzania (EAC), but supporting data can only be estimated. For example, Tables 9 and 10 show the number of animals originating at Moyale and Garissa markets as proxies of imports from Ethiopia and Somalia respectively. According to Markakis, (2004), more than a quarter of Kenya's meat consumption comes from cross-border trade while others (Little, 2003; Little and Mahmoud, 2005) estimate that cross-border trade with Somalia alone constitutes an estimated 16% of beef consumed in Nairobi. However, in the recent past, there has been a significant flow of camels and small ruminants out of Kenya into neighbouring Ethiopia. These animals finally end up in Djibouti where they are re-exported to Egypt and Middle East countries. The Garissa veterinary officer estimates that 150,000 to 200,000 camels are exported from Garissa, Wajir and Mandera Counties into Ethiopia as transit to Djibouti annually, while estimates from Moyale for the years 2010, 2011 and 2012 are 5,179, 11,067 and 6,290 respectively.

**Table 9: Animals Moved from Moyale Market to Nairobi (source DVO Moyale)**

Year/species	2008	2009	2010	2011	2012	TOTAL
<b>Cattle</b>	24,993	46,938	41,818	49,593	23,546	<b>186,888</b>
<b>Camels</b>	447	471	179	1,067	1,290	<b>3,454</b>
<b>Sheep and Goats</b>	0	4,300	9,144	0	0	<b>13,444</b>

**Table 10: Animals Moved from Garissa Market to Nairobi and Mombasa (Source DVO Garissa)**

DESTINATION	SPECIES	2008	2009	2010	2011	2012
MOMBASA	<b>CATTLE</b>	36871	12538	23452	27904	26341
	<b>SHOATS</b>	13652	10510	18765	20985	26543
NAIROBI	<b>CATTLE</b>	45694	24833	36,765	45908	34564
	<b>SHOATS</b>	10559	33205	23906	28653	15781



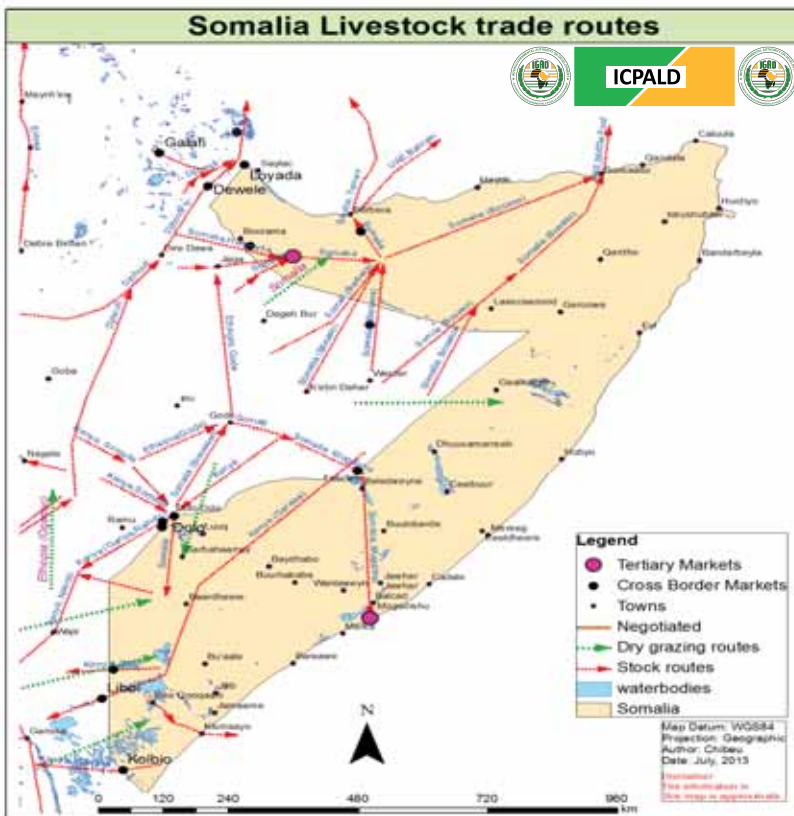
## 2.2.4 Somalia

### a) Cross-border stock routes and markets

Somalia has an estimated livestock population of 5.2 million cattle, 26 million sheep and goats, 6.2 million camels, 3 million poultry and some horses, donkeys and mules (Somalia Freedom from Rinderpest Infection \_ Final Dossier 2009). Camels are the most important domestic species in Somalia in terms of biomass and they are reared throughout the country. The majority of cattle are reared in Central and Southern Somalia while the northern part of Somalia has the largest numbers of sheep. Goats are mainly distributed in the northern and southern parts of the country. The key cross-border markets include Belet Hawo (Belet Xaawo), El-Wak (Ceel Waaq), Diff, Kolbio, Dolo and El-Berde (Ceel Barde) in Southern Somalia and Dila, Harirad in Somaliland and Goldogob, Burtinle and Las Anod (Laas Caanood) in Puntland. The entry points on the Ethiopian border link Ethiopia's main camel, sheep and goats catchment area (Gode, Liban and Afder in Ethiopia's Somali region) to the sea ports of Bosasso and Berbera.

The main catchment areas within Somalia itself are Hiran, Galgadud and Mudug regions in central Somalia. Throughout this catchment area, animals are both trekked and trucked to their final destinations. Sheep and goats have historically comprised by far the most significant proportion of this trade in terms of both numbers and value, although cattle have become increasingly important in recent years. The major secondary livestock markets include Burao, Tog Wajaale, Hargeisa, and Las Anod in Somaliland; Bossasso and Galkaiyo in Puntland and Belet-Weyne, Jowhar, Afgooye, Merka, Dinsor, Baidoa and Afmadow in Central and Southern Somalia. Figure 6 is a map of Somalia showing cross-border markets and routes (trade and dry season grazing).

**Figure 8: Somalia Cross-border Livestock Markets and Routes**



## b) Market and stock-route facilities and services

Market and stock-route facilities and services are summarised in table 11 below.

**Table 11: Summary on Market Facilities and Services, Somalia**

FACILITY/MARKET	Kolbio	Diff	El-Wak	Belet Hawo	Dolo	El-Berde
LM, BIP or both	LM	LM	LM	LM	LM	LM
Under veterinary authority (Y/N)	NO	NO	NO	NO	NO	NO
Staffing (Nil, poor, adequate)	Nil	Nil	Nil	Nil	Nil	Nil
Market information (Y/N)	No	No	No	No	No	No
Connection to the rest of country (tarmac, rail, marrum all weather marrum, rural primary road)	Rural primary road	Rural primary road	Rural primary road	Rural primary road	Rural primary road	Rural primary road
Main connecting secondary and tertiary markets	Connects to Garissa in Kenya	Connects to Garissa in Kenya	Connects to Wajir & Garissa in Kenya	To Mandera in Kenya Gedo in Somalia	Dolo Odo in Ethiopia Middle Shabelle in Somalia	Baidoa in Somalia
Telephone coverage (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
Market structures & services available (fencing, water, feed/hay, sheds, disposal sites, vaccination crash, loading ramp, emergency slaughter slabs, weighing scale, power-house)	None	None	None	None	None	None
Financial services available (banking, mobile money transfer, loan, livestock as collateral, forex services, livestock insurance schemes)	Hawala money transfer	Hawaala transfer money	Hawaala transfer money	Hawaala transfer money	Hawaala transfer money	Hawaala transfer money

FACILITY/MARKET	Dila	Harirad	Kalabaydh	Ainabo	Goldogob	Ferfer	Caabudwaq
LM, BIP or both							
Under veterinary authority (Y/N)	No	No	No	No	No	No	No
Staffing (Nil, poor, adequate)	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Market information (Y/N)	No	No	No	No	No	No	No

FACILITY/ MARKET	Dila	Harirad	Kalabaydh	Ainabo	Goldogob	Ferfer	Caabudwaq
Connection to the rest of country (tarmac, rail, marrum all weather road, rural primary road)	Rural primary road	Rural primary road	Rural primary road	Rural primary road	Rural primary road	Rural primary road	Rural primary road
Main connecting secondary and tertiary markets					Galgaduud	Ferfer in Ethiopia Beledweyn in Somalia	Galkayo
Telephone coverage (Y/N)	Yes	Yes	Yes	yes	Yes	Yes	Yes
Market structures & services available (fencing, water, feed/hay, sheds, disposal sites, vaccination crash, loading ramp, emergency slaughter slabs, weighing scale, power-house)	No services available	No services available	No services available	No services available	No services available	No services available	No services available
Financial services available (banking, mobile money transfer, loan, livestock as collateral, forex services, livestock insurance schemes)	Hawaala transfer money	Hawaala transfer money	Hawaala transfer money	Hawaala transfer money	Hawaala transfer money	Hawaala transfer money	Hawaala transfer money

Somalia has 2 regional veterinary diagnostic laboratories at Haregeisa and Galkayu 3 field laboratories at Beletweyn, Mogadishu and Baidoa (see Figure 3 and Annex 4). The country has 3 quarantine stations in Berbera (Somaliland), Bosaso (Puntland) and Mogadishu, all privately owned (see Figure 5 and Annex 5). There are six export slaughterhouses (two each in Mogadishu and Galkayo, and one each in Belet-Weyne and Burao) (see Figure 7 and Annex 6).

### c) Export performance

Several reports indicate that live animal exports from Berbera and Bosaso have often reached a peak of 3 to 3.5 million heads per year (FEWSNET, 2010; COMESA, 2009), and the observed normal trend is that there are fluctuations between 2 to 3.5 million heads per annum. An

estimated average of some 65% of this volume is considered to have originated from Ethiopia. Table 12 shows the export value for Somalia for the period 2006 to 2010. The total export value has risen from a low of 86,763,000 US\$ in 2006 to a high of 162,582,000 US\$ in 2010. Live sheep are the leading export earner followed by live goats and live cattle respectively.

**Table 12: Somalia's 5 – Year Livestock and livestock Products Exports**

Year	Export Value (1000 US\$)					Five Year Total (1000 US\$)
	2006	2007	2008	2009	2010	
Live Cattle	15,271	26,787	15,887	32,850	25,000	<b>115,795</b>
Live Goats	29,751	39,260	24,863	43,249	44,375	<b>181,498</b>
Live Sheep	40,835	49,153	45,200	68,700	72,000	<b>275,888</b>
Live Camel	48	14	20	20	20,550	<b>20,652</b>
Cattle meat*	0	0	0	0	0	<b>0</b>
Cattle offal*	0	0	0	0	0	<b>0</b>
Sheep offal*	0	0	0	0	0	<b>0</b>
Sheep meat*	0	0	0	0	0	<b>0</b>
Cattle hide (wet salted)	788	350	841	382	587	<b>2,948</b>
Skins (wet salted)	70	70	70	70	70	<b>350</b>
<b>Sub-Total</b>	<b>86,763</b>	<b>115,634</b>	<b>86,881</b>	<b>145,271</b>	<b>162,582</b>	<b>597,131</b>

Source: FAOSTAT 2012

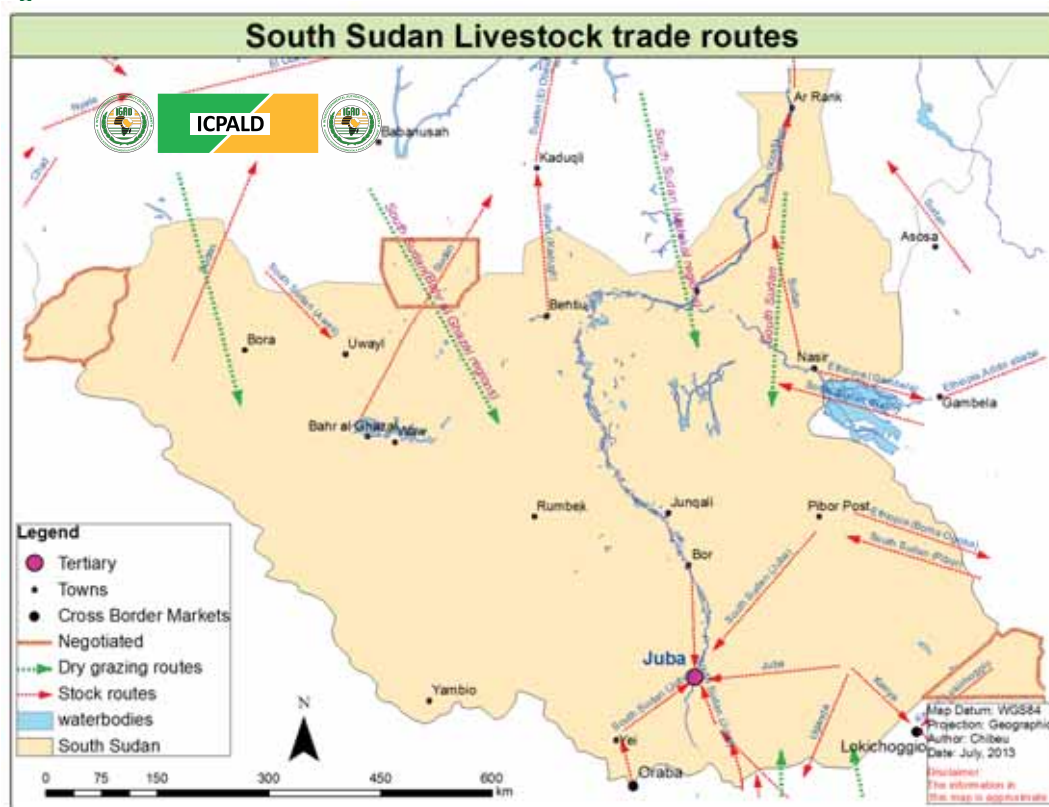
\*The zero (0) values reported for these commodities may reflect absence of data rather than reality given that the country has 6 export slaughter houses.

## 2.2.5 South Sudan

### a) Cross-border stock routes and markets

S. Sudan has a livestock population of 11.7 million cattle, 12.4 million goats and 12.1 million sheep (Ministry of Animal Resources and Fisheries (MARF2012)). The country's main cross-border markets in the north are Renk in Upper Nile State bordering Sudan, Nasri in upper Nile State bordering Ethiopia, Bentiu in Unity State bordering Sudan and Warawar in Northern Bahr El Ghazal bordering Sudan. The other cross-border markets are Nimule in Eastern equatorial bordering Uganda in the south and Narus with Kenya. Up until the comprehensive peace agreement (CPA), the flow of trade was mainly from the then Southern Sudan to Northern Sudan, Kenya and Uganda. However, in recent times after the CPA, the only notable cross-border trade has been with Uganda, with the flow having reversed. The latter is favoured by the close proximity of the fast growing city of Juba to the Ugandan border and the good road connection between the two countries via Nimule. Figure 7 is a map of South Sudan showing cross-border markets and routes (trade, dry season grazing and trans-humance).

Figure 9: South Sudan Cross-border Livestock Markets and Routes



## b) Market and stock-route facilities and services

Only two (Nimule and Narus) out of eight of South Sudan's cross-border markets serve as border inspection posts. The poor condition of stock-routes coupled with high insecurity and cattle raids do not favour cattle trekking in South Sudan as a whole. Juba the main tertiary market relies heavily on animals from Uganda which are trucked along the Nimule – Juba highway. Market information services are said to be available at Nimule and Narus. Table 13 summarizes the facilities and services available in South Sudan.

There are neither quarantine stations nor export slaughter houses in South Sudan. There are 3 diagnostic laboratories in South Sudan, namely: Juba, Malakal and Wau (see Figure 3 and Annex 4).

**Table 13: Summary on Market Facilities and Services, South Sudan**

FACILITY/MARKET	Renk	Nasir	Bentiu	Warawar	Nimule	Narus	Pibor	Raja
LM, BIP or both	LM	LM	LM	LM	Both	Both	LM	LM
Under veterinary authority (Y/N)	No	No	No	No	Yes	Yes	No	No
Staffing (nil, poor adequate)	Poor	Nil	Poor	Nil	Poor	Poor	Poor	Nil
Market information (Y/N)	No	No	No	No	Yes	Yes	No	No

Connection to the rest of country (tarmac, rail, all weather murram road, rural primary road)	All weather murram road	All weather murram road	All weather murram road	Rural primary road	Tarmac	All weather murram road	All weather murram road	Rural primary road
Main connecting secondary and tertiary markets	Joda	-	Rabkana	Aweil	Juba	Nadapal	Bor	-
Telephone coverage (Y/N)	Yes	Yes	Yes	No	Yes	No	Yes	Yes
Market structures & services available (fencing, water, feed/hay, sheds, disposal sites, vaccination crash, loading ramp, emergency slaughter slabs, weighing scale, power-house)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Financial services available (banking, mobile money transfer, loan, livestock as collateral, forex services, livestock insurance schemes)	Banking	Banking	Banking	-	Banking	Money transfer	Money transfer	-l

## b) Export performance

Since the CPA, there has been a reversal in trade – from exports to Uganda to imports from Uganda (see section on Uganda for estimates of this trade). While in the north, despite the strained border relationship with Sudan, it is highly probable that the long standing trade flow especially from northern areas such as Bahr El Ghazal, Upper Nile, and Unity States into Sudan due to the high demand in Khartoum, and the lucrative markets in the Middle East is still going on. Estimates of the trade volumes between South Sudan and Sudan are not available.

### 2.2.6 Republic of Sudan

#### a) Cross-border stock routes and markets

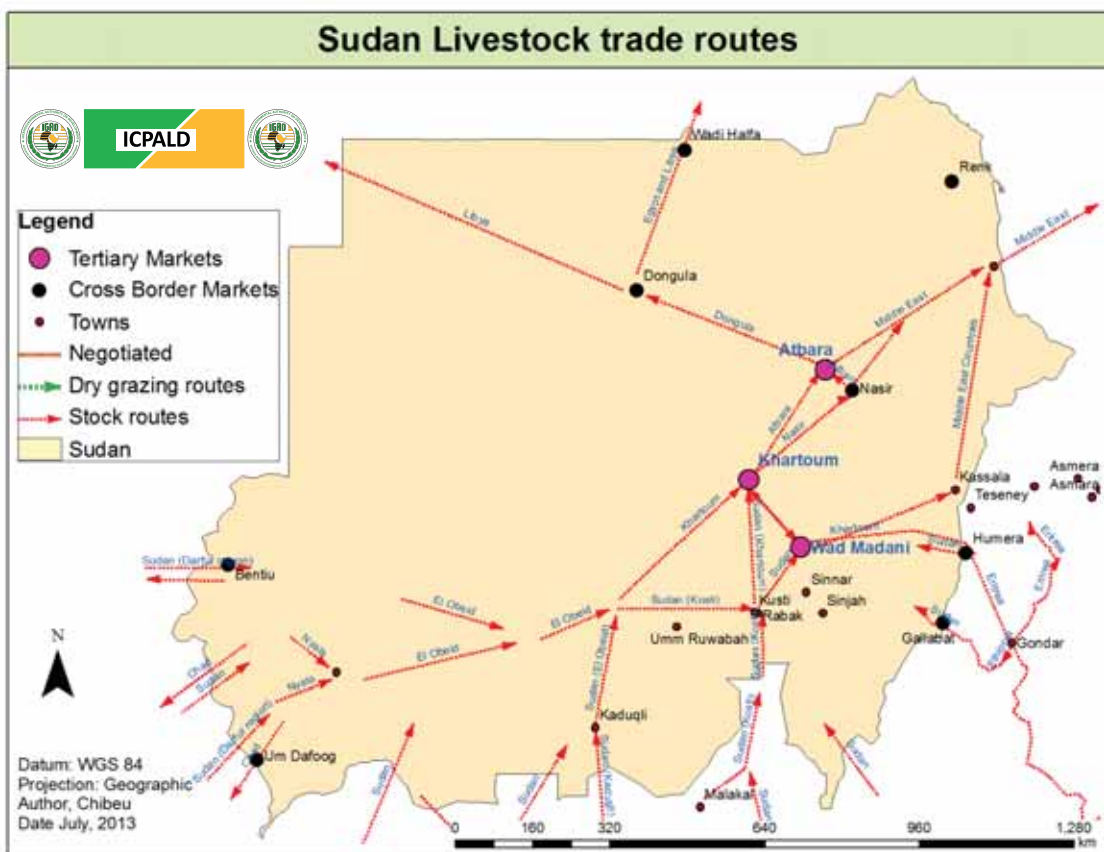
The Republic of Sudan has the second largest livestock population in the region after Ethiopia, with 29.4 million cattle, 39.1 million sheep, 30.5 million goats, and 4.6 million camels (Statistical Bulletin for Animal Resources, Issue No. 20, 2011). The country has over 30 cross-border entry points, but only 11 are active, namely: Awaad, Al- Lafa (Eritrea); Hamdaite, Galabat (Ethiopia); Al Radoom (South Sudan); Um Dafoog (Central Africa Republic); Khor Baranga (Chad); Milleet (Libya); Dongula (Libya and Egypt); and Wadi Halfa and Shalateen (Egypt). The vast majority of the inactive ones are on the southern frontier. Cattle movement from the west to the central parts of the country, particularly Khartoum is by trekking along traditional livestock movement corridors and it is done during the winter months. The winter months are ideal because of the cool temperatures and availability of water and pastures. Small ruminants are transported throughout the year by trucking.

Secondary markets are scattered across the country in each of the States, while tertiary markets



are located in the central and northern parts of the country, namely: Elmwalih and Dareselam in Khartoum State; Elshuwak and Gedarif in El Gedarif; Alkhawai and El Obeid in North Kordofan; Kosti in white Nile and Kassala in Kassala State. Figure 8 is a map of Sudan showing cross-border markets and routes (trade, dry season grazing and trans-humance).

**Figure 10: Sudan Cross-border Livestock Markets and Routes**



## b) Market and stock-route facilities and services

All the eleven cross-border markets are officially approved Border Inspection Posts (BIP) and are under the authority of an official veterinarian who is responsible for health checks on incoming consignments. Similarly, the Veterinary Services of Sudan carries out health certification for animals and animal products destined for the neighbouring countries. In addition, there are check-points/ vaccination sites along the major roads across the country.

Most cross-border markets in the Republic of Sudan do not have or provide facilities and services except Wadi Halifa, Galabat, and Dongula. Wadi Halifa has a fenced market yard, water supply, feed supply, sheds, disposal sites and loading ramps; all in fairly good condition. Galabat and Dongula also boast of fenced market yards, fodder supply and shed even though all these facilities are in poor state and require major service and/or repairs. The exceptional case for Wadi Halifa could be attributed to the long standing trade between Sudan and Egypt. Similarly, the budding trade between Sudan and Ethiopia may have largely contributed to what exists at Galabat, modest as it may be. Thus, infrastructure is lacking at all the key cross-border points, and even where it exists, it requires refurbishment. Table 14 below summarizes the facilities and services available in Sudan.

**Table 14: Summary on Market Facilities and Services, Sudan**

FACILITY/MARKET	Awaad	Al- Lafa	Hamdaite	Galabat	Al Radoom	Um Dafoog
LM, BIP or both	BIP	BIP	Both	Both	Both	Both
Under veterinary authority (Y/N)	Yes	yes	Yes	Yes	Yes	Yes
Staffing (nil, poor adequate)	Poor	Poor	Poor	Fair	Poor	Poor
Market information (Y/N)	No	No	No	No	No	No
Connection to the rest of country (tarmac, rail, all weather marrum road, rural primary road)	Rural primary road	Tarmac	All weather marrum road	Tarmac	Rural primary road, except during rainy season	Rural primary road, except during rainy season
Main connecting secondary and tertiary markets	Kassala	Kassala	Gedarif	Gedarif	Nyala	Genaina
Telephone coverage (Y/N)	Y	Y	Y	Y	Y	Y
Market structures & services available (fenced market yard, water, feed/hay, sheds, disposal sites, crash for vaccination, emergency slaughter slabs, weighing scale, power-house)	Nil	Nil	Nil	Market yard fenced, with water and feed supplies and sheds	Nil	Nil
Market structures & services available (fencing, water, feed/hay, sheds, disposal sites, vaccination crash, loading ramp, emergency slaughter slabs, weighing scale, power-house)	Services available: mobile money transfer, loan, credit and foreign exchange	Services available: mobile money transfer, loan, credit and foreign exchange	Services available: mobile money transfer, loan, credit and foreign exchange	Services available: mobile money transfer, loan, and foreign exchange	Services available: mobile money transfer	Services available: mobile money transfer

FACILITY/MARKET	Khor Baranga	Milleet	Dongula	Wadi Halfa	Shalateen
LM, BIP or both	Both	Both	Both	BIP	BIP
Under veterinary authority (Y/N)	Yes	Yes	Yes	Yes	Yes
Staffing (nil, poor, fair, adequate)	Poor	Poor	Poor	Fair	Poor
Market information (Y/N)	No	No	No	No	No
Connection to the rest of country (tarmac, rail, all weather marrum road, rural primary road)	Rural primary road	Rural primary road	Tarmac	Tarmac	Tarmac
Main connecting secondary and tertiary markets	Genaina	Libya	Egypt	Egypt	Kassala
Telephone coverage (Y/N)	Yes	Yes	Yes	Yes	Yes



FACILITY/MARKET	Khor Baranga	Milleet	Dongula	Wadi Halfa	Shalateen
Market structures & services available (fencing, water, feed/hay, sheds, disposal sites, vaccination crash, loading ramp, emergency slaughter slabs, weighing scale, power-house)	-	-	Fenced yard, water and feed supplies, sheds	Fenced yard, water and feed supplies, sheds, disposal sites and loading ramps	-
Financial services available (banking, mobile money transfer, loan, livestock as collateral, forex services, livestock insurance schemes)	Services available: mobile money transfer	Services available: mobile money transfer	Services available: mobile money transfer and loan	Services available: mobile money transfer and loan	Services available: mobile money transfer and loan

There are two project based information systems in the republic of Sudan: Improvement of Livestock Production and Marketing (IPPM) project based in West Nile, Blue Nile, North Kordofan and Sinnar and the Sudan Institutional Food Security Information for Action /Food Security for Action Marketing Information System (SIFSIS/FAMIS) project, a national wide project. The projects provide information on prices, species, age, grade among others via SMS network. However, no market information services are available at any of the cross-border markets.

In addition to the Central laboratory at Soba and ELISA in Khartoum, the country has laboratories in each of the States (see Figure 3 and Annex 4).

Sudan has 9 export quarantine stations: Hamrat Elsheikh, Elshwak, Khartoum Airport, AllKadaro, Kassala, Barber, Dongola, Sawakin and Wadi Halfa (see Figure 5 and Annex 5).

The country has 7 export slaughter houses, 4 of them (Alkadaro, Ghanawa, Alsabalowga and National Karari) located in Khartoum State, and the other three: Attbara, Gedarif and Nyala in River Nile State, Gedarif and South Darfur respectively (see Figure 7 and Annex 6).

Various financial services among them, mobile money transfer, loans for traders and use of livestock as collateral in acquisition of the loans are available at Sudan's key cross-border markets.

### c) Trade performance

Table 15 shows Sudan's 5-year export earnings from extra-regional livestock and livestock products trade. Sanitary requirements by Middle East countries include vaccination and/or testing, and quarantine period for RVF, FMD, CBPP, Brucellosis and pox. The total value fell from a mini peak of 132,650,000 US\$ in 2006 to a low of 72,614,000 US\$ in 2008 before rising again to a peak of 250,212,000 US\$ in 2009. Export earnings from live sheep topped the list for the period 2006-2010, and again sheep topped in live animal exports for the period 2010-2012 (Table 16); the most plausible reason being that sheep is the preferred animal slaughtered during Muslim festivities in the importing countries. However, figures for beef and mutton exports for 2010-2012 (Table 17) need clarification.

**Table 15: Sudan's 5 – Year Livestock and Livestock Products Exports**

Year	Export Value (1000 US\$)					Five Year Total (1000 US\$)
	2006	2007	2008	2009	2010	
Live Cattle	520	1,500	776	5,185	1,500	<b>9,481</b>
Live Goats	3,218	6,200	3,800	3,850	5,756	<b>22,824</b>
Live Sheep	103,235	54,897	49,440	220,397	158,838	<b>586,807</b>
Live Camel	16,000	20,825	16,000	11,000	10,000	<b>73,825</b>
Cattle meat	0	3	5	0	11	<b>19</b>
Cattle offal	1	1	1	1	0	<b>4</b>
Sheep offal	0	0	0	0	0	<b>0</b>
Sheep meat	8,361	7,479	494	8,606	14,920	<b>39,860</b>
Cattle hide (wet salted)	1,315	2,299	2,098	1,173	1,173	<b>8,058</b>
Skins (wet salted)	0	0	0	0	0	<b>0</b>
<b>Sub-Total</b>	<b>132650</b>	<b>93204</b>	<b>72614</b>	<b>250212</b>	<b>192198</b>	<b>740,878</b>

Source: FAOSTAT 2012

**Table 16: Sudan's Live Animal Exports to Middle East Countries for the period 2010-2012**

Year	Sheep	Goats	Camel
2010	1782322	98268	5585
2011	2700171	142724	5191
2012	2406067	69610	8223

Source: MLFR, 2012<sup>2</sup>**Table 17: Sudan's Meat Exports to Middle East Countries for the Period 2010-2012**

Year	Beef (MT)	Mutton (MT)
2010		
2011		
2012		

Source: MLFR, 2012

Sudan imported<sup>3</sup> 27,387, 123,194 and 51,624 Head of cattle from Ethiopia in the years 2010, 2011 and 2012 respectively. In the same period it exported 4,401, 18,871 and 20,229 Head of cattle and 906,596, 3,230,381, and 197,202 MT of meat to Egypt respectively (MLFR, 2012). Sudan imports animals from Ethiopia and South Sudan both for its domestic markets and re-export to Egypt and Middle East countries.

## 2.2.7 Uganda

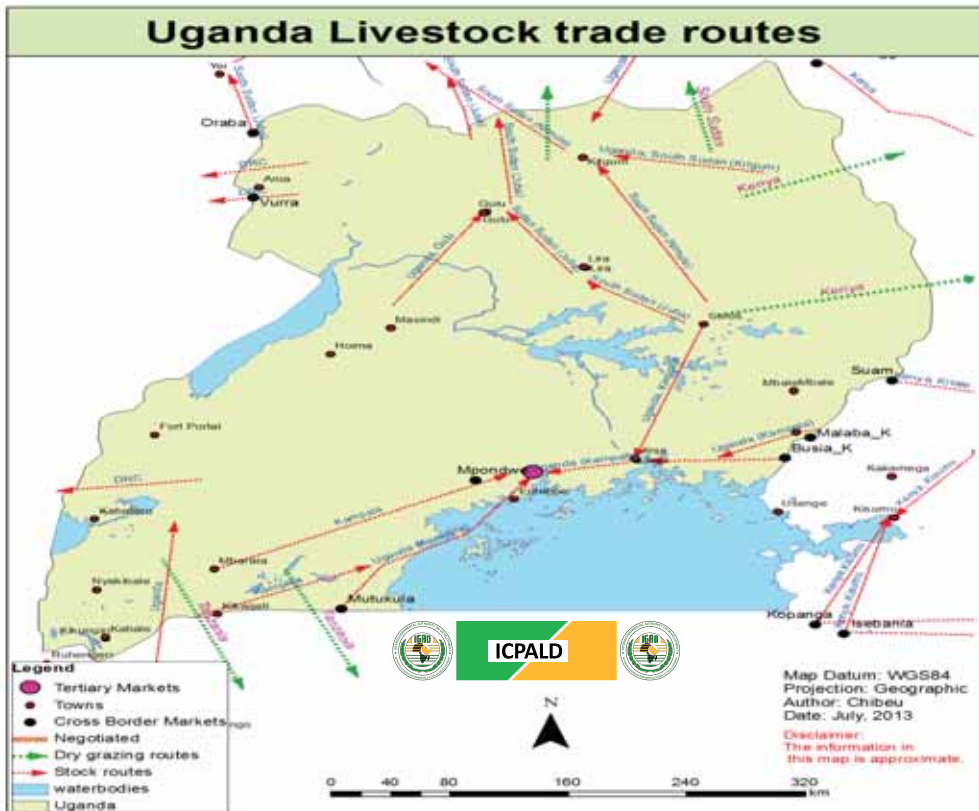
### a) Cross-border stock routes and markets

Uganda has a livestock population of 11,400,000 cattle, 16,000,000 sheep and goats, 3,200,000 pigs and 37,400,000 poultry (National Livestock Census 2008). The country has 8 main overland (terrestrial) border posts, namely: Busia, Malaba, Mutukula, Mpondwe, Oraba, Bibia, Kamweema and Kabingo. Other cross-border markets include Suam River, Lwakhakha and Sono on the Kenyan frontier; Goli, Paidha/Padea, Odramachaka, Vurra, Ntoroko, Ishasha River and Bunagan on the DRC frontier; Cyanika, Katuna, and Mirama Hills on the Rwandan frontier; and Kikagati on the Tanzanian frontier. There is at least a secondary market for every sub-county or district, while Kampala, the capital city is a tertiary market. Figure 9 is a map of Uganda showing cross-border markets and routes (trade and dry season grazing).

<sup>2</sup> Ministry of Livestock, Fisheries and Rangelands, Republic of Sudan

<sup>3</sup> These figures are higher than those given by Ethiopia as exports to Sudan for the same period for all species

Figure 11: Uganda Cross-border Livestock Markets and Routes



## b) Market and stock-route facilities and services

All cross-border markets are BIPs except Odramachaku, while among the BIPs, only Busia, Malaba, Oraba and Vurra are under the official veterinary authority of Uganda. Staffing is inadequate at all the BIPs.

Market information services are not available at any of the cross-border markets in Uganda; this is in spite of the existence of a livestock marketing information system, “Uganda-Foodnet Livestock Market Information System”. Uganda has banking, mobile money transfer and foreign money exchange services at most markets. Table 18 below summarizes the facilities and services available in Uganda.

**Table 18: Summary on Market Facilities and Services, Uganda**

FACILITY/MARKET	Busia	Malaba	Mutukula	Mpondwe	Oraba	Bibia
LM, BIP or both	BIP	BIP	BIP	BIP	BIP	BIP
Under veterinary authority (Y/N)	Yes	Yes	No	No	Yes	No
Staffing (nil, poor adequate)	Inadequate	Inadequate	Nil	Nil	Inadequate	Nil
Market information (Y/N)	No	No	No	No	No	No

FACILITY/MARKET	Busia	Malaba	Mutukula	Mpondwe	Oraba	Bibia
Connection to the rest of country (tarmac, rail, all weather murrum road, rural primary road)	Tarmac	Tarmac	Tarmac	All weather murrum road	All weather murrum road	All weather murrum road
Main connecting secondary and tertiary markets	Kampala	Kampala	Kampala	DRC	Juba, South Sudan	S.Sudan
Telephone coverage (Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
Market structures & services available (fenced market yard, water, feed/hay, sheds, disposal sites, crash for vaccination, emergency slaughter slabs, weighing scale, power-house)	None	None	None	None	None	None O
Financial services available (banking, mobile money transfer, loan, livestock as collateral, forex services, livestock insurance schemes)	Banking, mobile money transfer and foreign exchange	Banking, mobile money transfer and foreign exchange	mobile money transfer	mobile money transfer	Banking, mobile money transfer and foreign exchange	mobile money transfer

FACILITY/MARKET	Kamweema	Kabingo	Vurra	Odrachaku
LM, BIP or both	BIP	BIP	BIP	LM
Under veterinary authority (Y/N)	No	No	No	No
Staffing (nil, poor adequate)	Nil	Nil	Inadequate	Inadequate
Market information (Y/N)	No	No	No	No
Connection to the rest of country (tarmac, rail, all weather murrum road, rural primary road)	All weather murrum road	All weather murrum road	All weather murrum road	All weather murrum road
Main connecting secondary and tertiary markets	Kampala	Kampala	DRC	DRC
Telephone coverage (Y/N)	Yes	Yes	Yes	Yes

FACILITY/MARKET	Kamweema	Kabingo	Vurra	Odrumachaku
Market structures & services available (fencing, water, feed/hay, sheds, disposal sites, vaccination crash, loading ramp, emergency slaughter slabs, weighing scale, power-house)	None	None	None	None
Financial services available (banking, mobile money transfer, loan, livestock as collateral, forex services, livestock insurance schemes)	Mobile money transfer	Mobile money transfer	Mobile money transfer	Mobile money transfer

The central veterinary located at Entebbe is supported by district based field laboratories that are spread out throughout the country (see Figure 3 and Annex 4).

Uganda neither has export quarantine stations nor export slaughter-houses.

### c) Trade performance

Uganda's 5-year export performance is shown in Table 19. The export earnings over the 5 year period were stable ranging from 2,891,000 US\$ in 2008 to 4,436,000 US \$ in 2010. The main exports were hides and skins which were exported to Switzerland and China.

**Table 19: Uganda's 5 – Year Livestock and Livestock products Exports**

Year	Export Value (1000 US\$)					5-Year Total
	2006	2007	2008	2009	2010	
Live Cattle	1	1,474	1,667	3,835	3,938	<b>10,915</b>
Live Goats		50	28	88	174	<b>340</b>
Live Sheep	0	0	0	1		<b>1</b>
Live Camel	0					<b>0</b>
Cattle meat	8	32	35	0	0	<b>75</b>
Cattle offal	0	0	0	0	0	<b>0</b>
Sheep offal	0	0	0	0	0	<b>0</b>
Sheep meat	54	33	0	1	2	<b>90</b>
Cattle hide (wet salted)	3,339	2,578	1,161	88	322	<b>7,488</b>
Skins (wet salted)	0	0	0	0	0	<b>0</b>
<b>Sub-Total</b>	<b>3402</b>	<b>4167</b>	<b>2891</b>	<b>4013</b>	<b>4436</b>	<b>18,909</b>

Source: FAOSTAT 2012

Intra-regional trade statistics are only available with respect to South Sudan where it is estimated that formal CBLT from Uganda to south Sudan was worth US\$ 3.9 million and UD\$ 4.0 million in 2007 and 2010, respectively, while ICBLT was worth US\$ 3.3 million and 16.9 million over the same period. In 2012 Uganda's ICBLT exports to S. Sudan were worth US\$ 21.525 million (FAO 2012).

## 2.3 Discussion

Seven IGAD member States (Djibouti, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda) were covered in this study with an estimated total livestock population of 126,340,000 cattle, 138,916,000 sheep, 115,950,000 goats and 16,300,000 camels. Ethiopia has the highest number of cattle (52,000,000) followed by Sudan (29,000,000) and Kenya (17,000,000), while Sudan has the highest number of small ruminants (69,600,000), followed by Ethiopia (63,000,000) and Kenya (44,700,000). Somalia has the highest number of camels (6,200,000) followed by Sudan (4,600,000) and Kenya (3,000,000), while Djibouti has the least number of all the 4 species.

Cross-border markets were defined as overland or terrestrial places along international boundaries where livestock and livestock products are traded and /or veterinary services such as import & export inspection, certification etc are offered. In the latter case, they require legal framework establishing them as Border Inspection Posts (BIP). A total of 75 markets were identified (Djibouti 3, Ethiopia 13, Kenya 17, Somalia 13, South Sudan 8, Sudan 11, and Uganda 10), 49 of them are BIPs (Djibouti 3, Ethiopia 9, Kenya 17, Somalia 0, South Sudan 2, Sudan 11, and Uganda 9). Of the 49 BIPs, 41 are under the supervision of the respective national veterinary authorities (Djibouti 2, Ethiopia 9, Kenya 13, Somalia 0, South Sudan 2, Sudan 11, and Uganda 3) who perform health checks on incoming consignments; however, certification is done centrally. Overall, all the BIPs are grossly under-staffed. The case of Kenya (based on DVS Kenya report on Assessment of Port Entry Ports, December 2012) further shows that personnel manning the BIPs lack adequate training on import inspection and export certification and documentation; while essential BIP infrastructure facilities and services such as quarantine areas, bio-security measures and waste disposal system, disinfection of vehicles and creation of awareness for transporters and exporters/ importers are in most cases not up to standard.

The study observed that for the most part, cross-border markets in IGAD member countries are located in dry regions, far from major urban centers, dominated by mobile pastoral production systems, and with poor road networks. As a result, animals are trekked from these markets to secondary markets and/or tertiary markets through bush or not so well established and serviced stock routes. Even in situations where stock-routes exist, they are not legally established. In Kenya for example, stock-routes and holding grounds including the associated facilities and developments thereon that once existed as public entities have since been converted to private use by a few individuals. Long distance trekking is associated with weight loss, diseases, and theft in addition to the risks associated with insecurity and hostile communities, and harsh climate without water and pastures. Hence, trekking has to rely on the goodwill of the communities transited for services and security. Typical areas where animals are trekked for long distances include: Southern Somalia, Eastern and South Eastern parts of Ethiopia, Northern and North Eastern parts of Kenya, Southern and Western parts of Sudan, and the North Eastern parts of Uganda. In the case of South Sudan, trekking is associated with frequent attacks during which animals are stolen and/or human lives lost.





Malakal, South Sudan (Chibeu 2013)

In spite of the difficulties associated with trekking, it is worth noting that some of the cross-border markets are well connected to tertiary and secondary markets through major north-south and east-west international trunk roads such as Lagos- Mombasa (Kenya and Uganda), Cairo-Cape town (Kenya, Ethiopia and Sudan) and Ndjamena-Djibouti (Sudan, Ethiopia and Djibouti), and occasionally by rail. In addition, there are national highways linking some of the cross-border markets to secondary and tertiary markets.

Market facilities and services are lacking at many of the markets except for a few in Djibouti, Kenya and Sudan that have fenced market yards, water supply, sheds, disposal sites, loading ramps, weighing scale and vaccination crushes. In some cases, no land is alienated for the markets, or is at best on temporary basis without legal ownership status.



Damerjog Quarantine Station, Djibouti (Chibeu 2012)

Countries exporting live animals (Sudan, Ethiopia, Djibouti, and Somalia) and meat (Sudan, Ethiopia, Somalia and Kenya) to the Middle East have more developed corresponding infrastructure (export quarantine stations and export slaughter houses), and are therefore more advanced in this regard than the other countries and/ or relative to infrastructure for intra-regional/cross-border trade.





Sheep for export at Suakin Quarantine Station, Port Sudan, Sudan (Chibeu 2012)

The study observed that even though some of the countries (Ethiopia, Kenya and Sudan) have a better field veterinary diagnostic laboratory support network in comparison with the other countries, the laboratories in Eastern and South-eastern Ethiopia and Northern and North-eastern Kenya are far from the cross-border areas and may not adequately support disease control initiatives and health certification in the border areas. Market information systems with similar data collection methods, target audience and means of dissemination exist in Ethiopia, Kenya, Sudan and Uganda; but market information is not available at most of the cross-border markets; thus providing an avenue for exploitation of producers by traders and others through price fixing. Some forms of financial services are available at most cross-border markets in all the countries except Ethiopia where only banking services are available at Moyale. Thus, there is lack of correlation between the level of export trade and financial services available at cross-border markets in Ethiopia.

Sudan, Ethiopia, Djibouti and Somalia have registered higher export earnings from international livestock and livestock products trade than Kenya, Uganda and South Sudan for the same period of time; however, all the countries have experienced a significant upward trend over the years. Live sheep tops the export earnings for Sudan and the region as whole, while live cattle top the export earnings for Ethiopia. Thus, the northern cluster of countries (Sudan, Ethiopia, Djibouti and Somalia) with a long history of trading with the Middle East countries (favoured by geographical proximity) seem to be more commercially oriented than the southern cluster of countries (Kenya, Uganda and South Sudan). In South Sudan for example, a study has shown that although there is significant demand for livestock and livestock products in the country, the growth of the livestock sector cannot be sustained by the domestic market and therefore measures to address an export trajectory must be put in place (Musunga et al, 2010). In such a situation, significant changes will be needed to orient the sector to external markets.

The study observed that intra-regional livestock trade is on the rise, a majority of which is informal. Formal and informal trade are linked; what starts off as informal in one country ends up being formal in the importing country. The downside is that even though both forms of trade are beneficial to the producers and the national economies, informal trade is more associated with the spread of animal diseases. There is therefore need to ensure safe trade (protection of host animal and human populations) by improving cross-border routes and markets infrastructure and services (veterinary services and facilities, holding/ feeding grounds and water point, and

market information services), security, communication and creating awareness among value chain actors among other measures.

## ***2.4 Conclusion***

The study identified key cross-border markets and routes in the IGAD region whose infrastructure and services can at best be rated as poor or lacking. Yet against all these shortcomings, the available data clearly demonstrates significant upward trends in both intra-regional trade (even though largely informal) and international trade with the Middle East/ Gulf States; possibly due to the increased demand for livestock products in response to increases in human populations, particularly urban dwellers, and in their incomes. Investment in cross-border routes and markets infrastructure and services, improvement in security, communication, and awareness among value chain actors in tandem with the harmonisation of animal health standards, legislation and policies among IGAD member countries discussed in subsequent chapters would enhance the effectiveness of the control of TADs and zoonoses and thus protect host animal and human population, reduce producer losses and in turn increase their incomes as well as government revenues.

## 3. PRIORITY TRANS-BOUNDARY ANIMAL DISEASES INCLUDING ZOOBOTICS FOR REGIONAL AND INTERNATIONAL TRADE

### 3.1 Introduction

The OIE has listed diseases (OIE Listed Diseases ) with the objective to support Members' efforts to prevent the trans-boundary spread of important animal diseases, including zoonoses, through transparent and consistent reporting (Terrestrial Code, 2012). The criteria for the inclusion of a disease, infection or infestation are provided in the Terrestrial Code. Each listed disease has a Chapter to assist Member countries in the harmonisation of disease detection, prevention and control; while the requirements for notification are detailed in Chapter 1.1 of the Terrestrial Code. In general, these diseases have a particular danger in that their occurrence can evolve into epidemics which may threaten populations in a region, and have dire potential consequences in terms of international trade. In this regard, they are the subject of SPS measures; which are mandatory requirements instituted by governments to protect human, animal, and plant health. These commonly take the form of legislation, inspection, and testing requirements and border controls. It is therefore important that the public, in particular the players in the livestock industry are informed of these diseases and where they occur in the region in order to inform decision-making.

### 3.2 Results

Priority diseases were identified by stakeholders during the inception workshop for the SMP-AH project held in Addis Ababa, Ethiopia on 27th -30th August 2012. The Addis workshop built on the foundation laid at a previous Eastern African Chief Veterinary Officers' Coordination Meeting held in Zanzibar, 24th -26th 2010. Among the criteria used were the perceived economic impact on trade, transmissibility, zoonotic potential, and disease prevalence. The following nine (9) notifiable<sup>4</sup> diseases were prioritised: Foot and Mouth Disease (FMD), Contagious Bovine Pleuro-pneumonia (CBPP), Pestes Petit des Ruminants (PPR), Rift Valley Fever (RVF), Brucellosis, Sheep and Goat pox (SGP), Lumpy Skin Disease (LSD), Contagious Caprine Pleuro-pneumonia (CCPP) and Camel Pox (CP). For each disease, an overview on occurrence in space and time, current control interventions, diagnosis, and response capacity are presented. Data on disease occurrence was obtained from OIE/WAHID and AU-IBAR; however the former lacks spatial data necessary for geographical mapping. In the case of AU-IBAR, only part of the data in respect of Kenya, Somalia, and Sudan was good enough (geo-referenced) for mapping, while Ethiopia and Uganda did not provide spatial data. As a result, the AU-IBAR maps do not correspond to the OIE data presented in the respective disease tables, however, they provide a good indication of the disease situation.

#### 3.2.1 Foot and Mouth Disease (FMD)

FMD is widely distributed in all the IGAD Member countries. On the basis of OIE/WAHID data, serotypes A, O, Sat 1 and Sat 2 are present in Kenya, Somalia, Ethiopia, Sudan and Uganda. In addition, type C is present in Somalia, while Sat 3 is present in Uganda. There is no information on recent FMDV virus strains in circulation in Djibouti, Eritrea, and South Sudan. Some form of laboratory diagnostic capacity for FMD is present in all the countries, albeit at the central level only. The capacity varies from simple ELISA (Djibouti, S Sudan and Somalia) to non-structural protein ELISA, virus neutralisation, and PCR (Kenya, Sudan and Uganda). Table 20 shows the number of outbreaks reported to the OIE between 2007 and 2012, while Figure 12 is a map

<sup>4</sup> Means a disease listed by the Veterinary Authority, and that, as soon as detected or suspected, should be brought to the attention of this Authority, in accordance with national regulations

showing the spatial and temporal distribution on the basis of disease quarterly reports submitted to AU-IBAR by member countries for the same period.

**Table 20: Outbreaks of FMD Reported to OIE (all countries)**

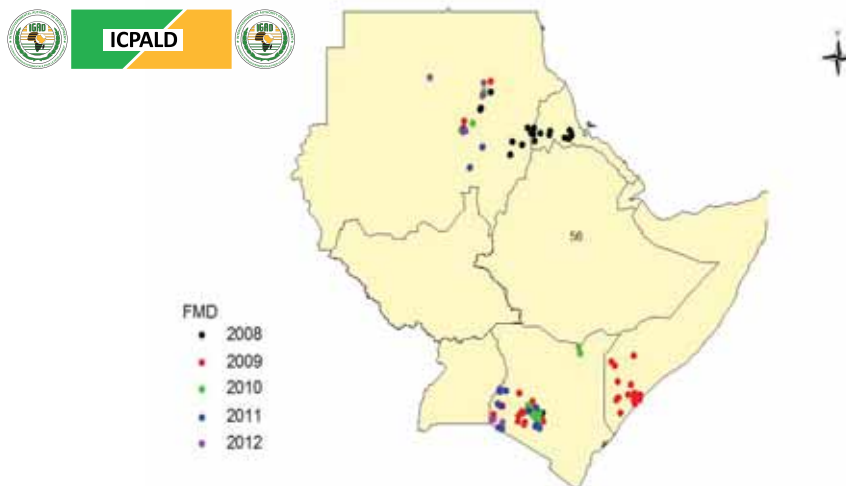
	2007	2008	2009	2010	2011	2012
Djibouti	-	-	-	-	-	-
Ethiopia	22	18	34	67	85	97
Kenya	39	43	62	61	60	49
Somalia	-	-	+	36	27	-
S. Sudan						
Sudan	4	14	6	9	9	7
Uganda	2	32	2+	4	20	-

Source: WAHID, OIE

**Key**

- : Surveillance data available
- + : Suspected cases
- 0 : Zero cases reported
- 1+ : More cases than the number indicated

**Figure 12: FMD Outbreaks Reported to AU-IBAR 2008-2012**



All the countries have prepared risk-based strategies within the precept of the Global FMD Strategy and are following the Progressive Control Pathway<sup>5</sup> for FMD (PCP-FMD) and as of March 2012, all except South Sudan were in stage 1<sup>6</sup>. Meanwhile, vaccination to contain outbreaks and for prophylactic purposes is the main control method across the countries. Kenya and Ethiopia are the only ones producing FMD vaccines; however, the production is not sufficient to meet demand in the region, necessitating importation from countries outside the region such as Botswana and South Africa. The policy on vaccine delivery varies across the region from fully commercial (Kenya and Sudan) to full government subsidy (Ethiopia and Uganda). Most countries have the necessary legislation in place for the control of FMD and other TADs, for

<sup>5</sup> The PCP describes a set of activities, divided into different stages, which can be used to evaluate the stage of advancement of a country or region in their FMD control and eradication programmes. The PCP-FMD seeks to assist countries that are still endemically infected so as to progressively reduce the impact of FMD and the load of FMD virus. Thus, in the advanced stages, the PCP-FMD dovetails with the OIE Pathway for FMD.

<sup>6</sup> Report of FAO, OIE and AU-IBAR Joint Meeting and Workshop on the Development of a Long Term Roadmap for the Progressive Control of FMD in Eastern Africa 2012-2022, March 2012

example, Disease Prevention Control Proclamation 267/2002- Ethiopia; Animal Disease Act CAP 364- Kenya; Animal Diseases Act 200- Sudan; and Animal Diseases Act CAP 38- Uganda; while the legal framework for S Sudan is still in draft form. However, enforcement of animal movement control was observed to be a problem in most countries, with some citing out-dated legislation as a contributing factor.

### 3.2.2 Contagious Bovine Pleuropneumonia (CBPP)

Between 2007 and 2012, CBPP has been consistently reported in Ethiopia, Kenya, Sudan and Uganda, while Djibouti has reported zero outbreaks. There is no data on Somalia since 2008 when the disease was last suspected (Table 21). Figure 13 is a map of disease occurrence for the same period as reported to AU-IBAR. Diagnostic capacity including ELISA, CFT, culture and identification is available in most countries at both the central and peripheral levels.

**Table 21: Outbreaks of CBPP Reported to OIE (all countries)**

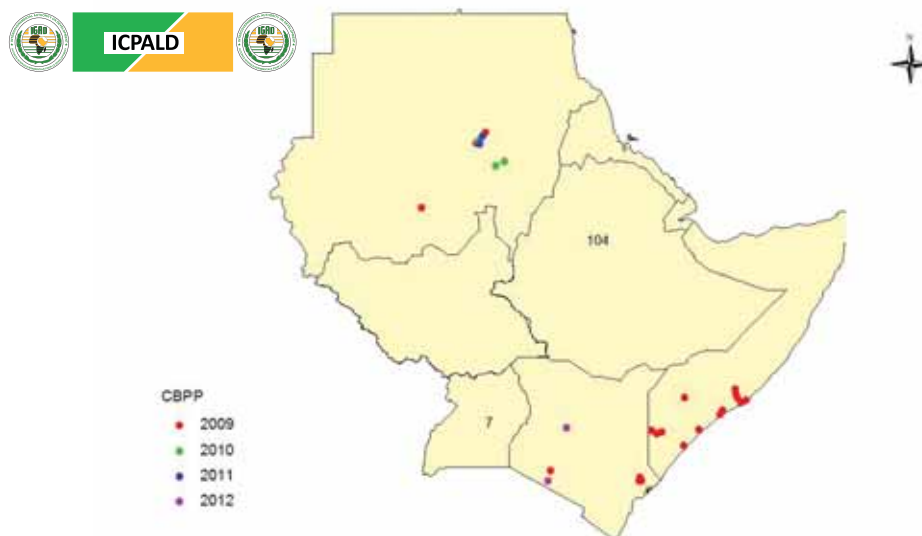
	2007	2008	2009	2010	2011	2012
Djibouti	0	0	0	0	0	-
Ethiopia	31	313	15	46	36	28
Kenya	12	+	3+	2+	2	+
Somalia	0	+	-	-	-	-
S. Sudan						
Sudan	0	1	4	4	2	0
Uganda	3	3+	4+	8	11	-

Source: WAHID, OIE

Key

- : Surveillance data available
- + : Suspected cases
- 0: Zero cases reported
- 1+ : More cases than the number indicated

**Figure 13: CBPP Outbreaks Reported to AU-IBAR 2008-2012**

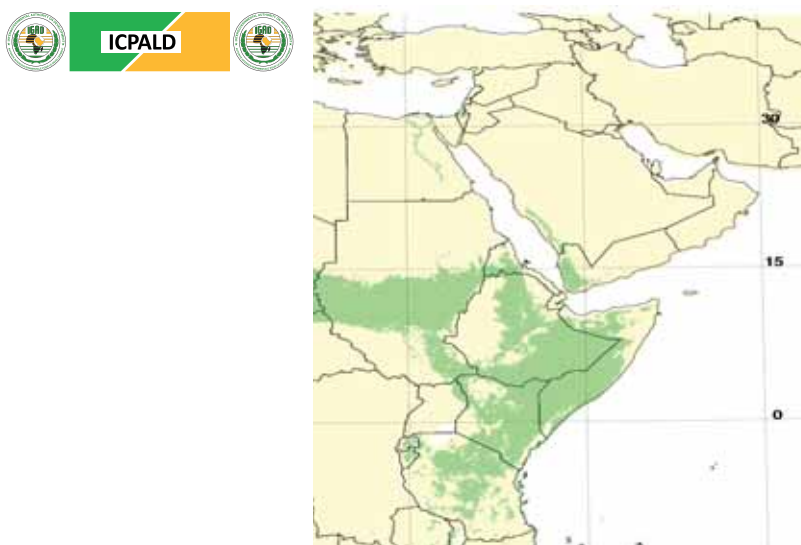


Control measures across all the countries except Sudan are routine in approach and include prophylactic vaccination and/ or vaccination in response to outbreaks, and livestock movement control. Sudan's approach on the other hand is time bound and goes beyond just movement control and vaccination as to involve stamping out and zoning with eradication as the ultimate goal. Unlike FMD, there is no specific regionally or internationally coordinated control programme for CBPP save for two AU-IBAR projects that are targeting it among other diseases mainly from a surveillance point of view<sup>7</sup>. Like in the case of FMD, most countries except Somalia and South Sudan have diagnostic capacity based on ELISA and CFT, both at central and regional/decentralized levels. Similarly, the countries produce CBPP vaccine. Challenges in CBPP control are similar to FMD, and include, weak enforcement of livestock movement and out-dated legislation.

### 3.2.3 Rift Valley Fever

The historic distribution of RVF is the sub-Saharan African continent, Madagascar and the Arabian Peninsula. Figure 14 below shows areas at risk from RVF epizootics in the Greater Horn of Africa. Thus, RVF is widespread throughout Africa and countries where evidence of the virus has been confirmed in the past are likely to be permanently infected (if maintenance vectors are present).

**Figure 14: RVF Epizootic Risk Map- Areas at risk from RVF epizootics in the Greater Horn of Africa are shaded green**



(Credit: Assaf Anyamba and DoD-GEIS & NASA Goddard Space Flight Center Rift Valley Fever Monitoring Team)

The most recent epidemic in the region was in 2007 as per WAHID OIE (Table 22). During the epidemic, Kenya and Sudan reported 15 and 1 outbreak(s) respectively to the OIE. Information from elsewhere<sup>8</sup> indicates that the epidemic also involved Somalia. Previous reported outbreaks in the region are: Sudan- 1973; Somalia- 1997, 1998, and 2006; and Kenya- 1997, 1998, and 2006. On the basis of the risk map *vis a vis* the number of countries that have reported outbreaks, it would appear that not sufficient surveillance has been conducted to map out RVF hot spots in all areas at risk of RVF epizootics.

7 Surveillance for Trade Sensitive Diseases in the IGAD Region and SMP-AH

8 Inter-regional OIE Conference on RVF, Mombasa, Kenya 13-15 November 2012



**Table 22: Outbreaks of RVF Reported to OIE (all countries)**

	2007	2008	2009	2010	2011	2012
Djibouti	0	0	0	0	0	0
Eritrea	-	-	-	-	-	-
Ethiopia	-	-	-	-	-	-
Kenya	15	-	-	-	-	-
Somalia	-	-	-	-	-	-
S. Sudan						
Sudan	1	-	-	-	-	-
Uganda	-	-	-	-	-	-

Source: WAHID, OIE

**Key**

- : Surveillance data not available
- + : Suspected cases
- 0: Zero cases reported
- 1+ : More cases than the number indicated

Risk management for RVF in different countries is based on a combination of measures including early warning and surveillance (vector, virus and sentinel) systems and contingency plans. Ethiopia, Kenya and Somalia have contingency plans, with Kenya now in the process of incorporating the RVF-RBDF<sup>9</sup> in its contingency plan, while Sudan has adapted the RVF-RBDF to its RVF Action Plan. The two countries (Kenya and Sudan) are the only ones using sentinel surveillance, while Somalia is planning to incorporate it (sentinel surveillance) in its surveillance programme. Only Kenya produces the RVF vaccine in the region.

**3.2.4 Pestes Petit des Ruminants (PPR)**

Since its rapid spread over the last one and half decades from its traditional endemic areas in West Africa, PPR is now endemic in all the IGAD countries. Ethiopia and Somalia have the highest number of reported cases in the region over the last 6 years, while their immediate neighbor, Djibouti has reported zero outbreaks over the same period (Table 23). A map on PPR outbreaks reported to AU-IBAR for the same period is presented in Figure 15.

**Table 23: Outbreaks of PPR Reported to OIE (all countries)**

	2007	2008	2009	2010	2011	2012
Djibouti	0	0	0	0	0	0
Ethiopia	64	67	75	113	85	63
Kenya	3	0	+	+	+	+
Somalia	-	+	+	+	19	54
S. Sudan						
Sudan	13	25	19	13	20	16
Uganda	1	9+	2	+	+	-

Source: WAHID, OIE

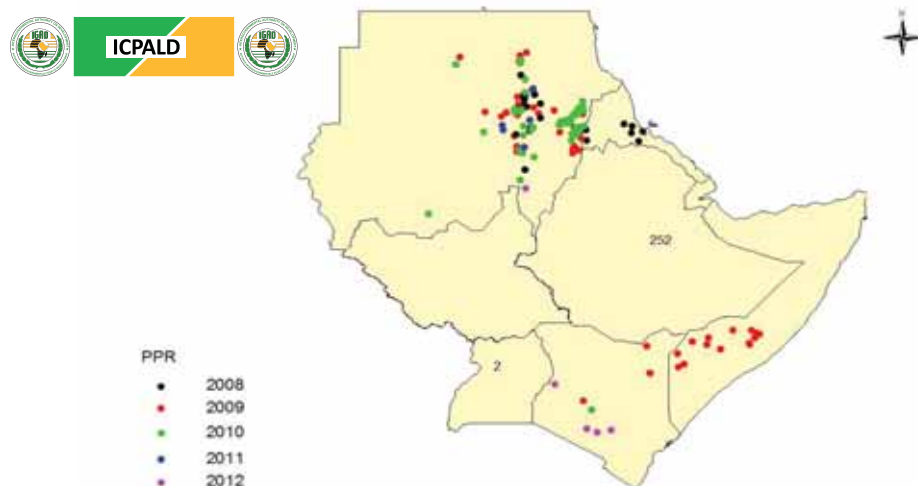
9 The RVF-RBDF is a phased approach to decision-making utilizing incremental responses to the escalating risk of an outbreak. It is recommended that the RVF-RBDF be part of/ is incorporated in a RVF contingency plan. The RVF-RBDF was reviewed in 2011 by representatives of the Horn of Africa and the Middle East at a meeting held in Dubai and hosted by ILRI and the African Union Inter-African Bureau for Animal Resources. The meeting recommended that the RVF-RBDF be developed as a framework for management of RVF risk in inter-regional trade. Thus the RVF-RBDF is useful for mitigating the risks of RVF in local populations and for export purposes



## Key

- : Surveillance data not available
- + : Suspected cases
- 0: Zero cases reported
- 1+ : More cases than the number indicated

Figure 15: PPR Outbreaks Reported to AU-IBAR 2008-2012



Most control efforts are country specific and routine in nature and are mostly donor/NGO driven emergency interventions based on vaccination. However, Ethiopia and Sudan have developed risk-based strategies within the framework of the AU-IBAR/ ILRI initiated PPR Progressive Control Strategy that draws on the lessons learnt in rinderpest eradication. Sudan has gone a step further by integrating PPR control with SGP; with further opportunities for taking on board other small ruminant diseases such as CCPP. However, like with the other TADs, regional coordination is lacking. Many countries have diagnostic capacity for PPR; ELISA test is available and used in Ethiopia, Kenya, Uganda and Sudan. Only Ethiopia, Kenya and Sudan produce PPR vaccine, while vaccine delivery varies from full commercial to full government subsidies.

### 3.2.5 Contagious Caprine Pleuro-Pneumonia (CCPP)

Outbreaks have been reported consistently in Ethiopia and Kenya, while Sudan and Uganda have consistently reported zero outbreaks (Table 24). Figure 16 shows the outbreaks as reported to AU-IBAR over the same time period. Diagnostic capacity (ELISA, culture and identification) exists in most countries and is available both at the central and peripheral levels. Control in all countries is based mainly on vaccination in response to outbreaks. Diagnostic and vaccine production capacities exist in a number of countries, including Ethiopia, Kenya, Sudan and Uganda.

Table 24: Outbreaks of CCPP Reported to OIE (all countries)

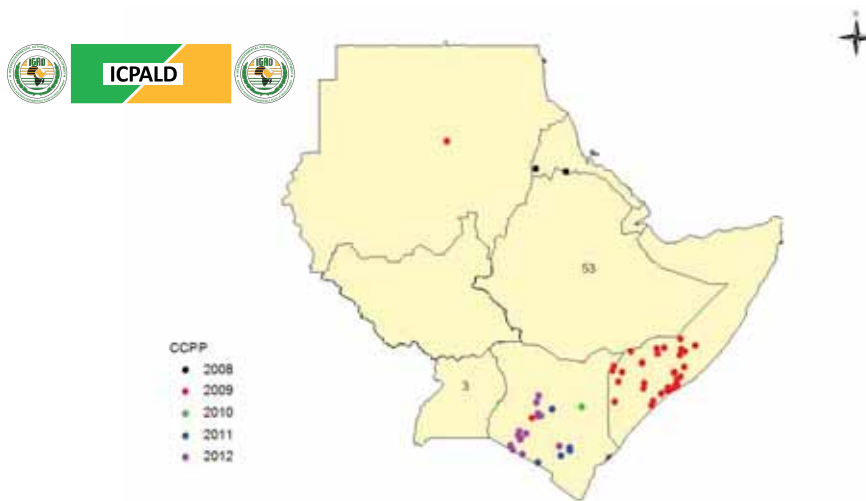
	2007	2008	2009	2010	2011	2012
Djibouti	0	0	0	0	0	0
Ethiopia	35	16	6	14	14	13
Kenya	6	7	17	5	8	2
Somalia	-	-	+	+	+	+
S. Sudan						
Sudan	0	0	0	0	0	0
Uganda	0	+	0	0	0	0

Source: WAHID, OIE

Key

- : Surveillance data not available
- + : Suspected cases
- 0: Zero cases reported
- 1+ : More cases than the number indicated

**Figure 16: CCPP Outbreaks Reported to AU-IBAR 2008-2012**



**3.2.6 Sheep and Goat Pox**

The disease seems to be a bigger problem in the two northern neighbours – Ethiopia and Sudan (Table 25) and Figure 17. Diagnostic capacity based on ELISA is available in Sudan and Uganda, but only at the central level. Sudan is controlling SGP alongside and PPR through a harmonised action plan. In Ethiopia and Kenya, vaccine is procured, distributed and administered/ applied in the field by the public, private sector and even farmers themselves.

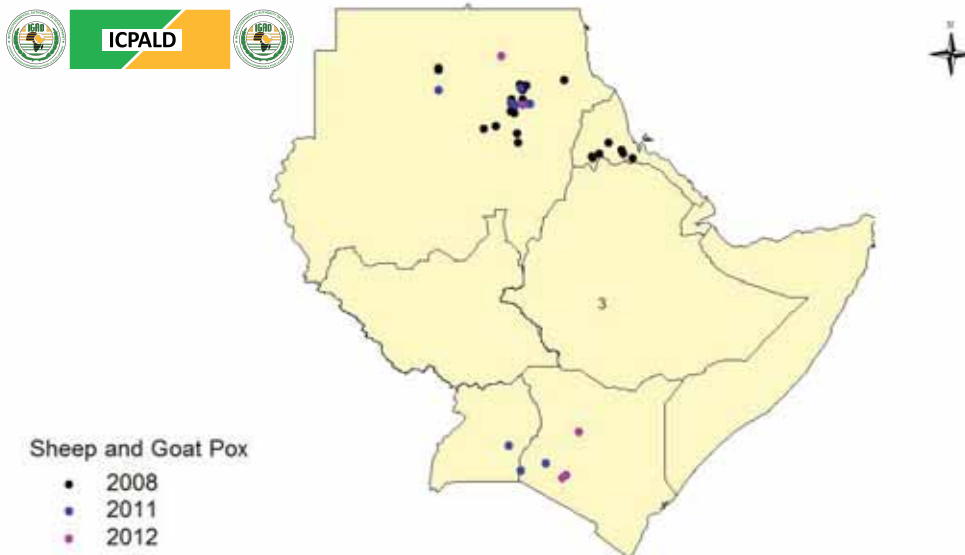
**Table 25: Outbreaks of SGP reported to OIE (all countries)**

	2007	2008	2009	2010	2011	2012
Djibouti	0	0	0	0	0	0
Ethiopia	179	297	270	310	197	171
Kenya	0	0	+	0	0	0
Somalia	-	+	+	+	+	+
S. Sudan						
Sudan	16	16	23	26	18	10
Uganda	-	-	-	-	-	-

Source: WAHID, OIE

Key

- : Surveillance data not available
- + : Suspected cases
- 0: Zero cases reported
- 1+ : More cases than the number indicated

**Figure 17: SGP Outbreaks Reported to AU-IBAR 2008-2012**

### 3.2.7 Brucellosis

Kenya has reported the highest number of outbreaks for the period 2007-2012, followed by Sudan and Uganda (Table 25 and Figure 18). However, all indications are that the disease is endemic in all the countries. Diagnostic capacity is available in all countries, including the peripheral laboratories. Sudan has an action plan for controlling the disease in dairy herds in the major dairying States. Brucellosis is among the diseases targeted under the One Health Approach in Kenya and Uganda.

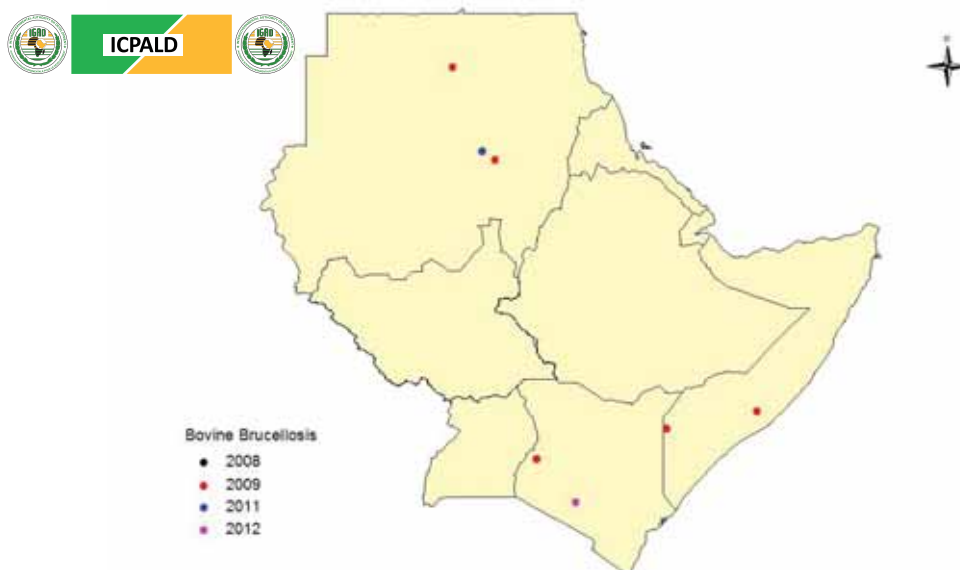
**Table 26: Outbreaks of Brucellosis ( *Brucella abortus*) Reported to OIE (all countries)**

	2007	2008	2009	2010	2011	2012
Djibouti	0	0	0	0	0	0
Ethiopia	+	+	+	+	+	+
Kenya	24	4	21	11	7	4
Somalia	-	-	+	+	4	+
S. Sudan						
Sudan	+	3	2+	2	2	0
Uganda	11	2	+	+	17	-

Source: WAHID, OIE

#### Key

- : Surveillance data not available
- + : Suspected cases
- 0: Zero cases reported
- 1+ : More cases than the number indicated

**Figure 18: Brucellosis Outbreaks Reported to AU-IBAR 2008-2012**

### 3.2.8 Lumpy Skin Disease

LSD has been reported at least as suspect in all the countries between 2007 and 2012, but with Ethiopia reporting the highest number of outbreaks throughout the period Table 26. Figure 19 shows the outbreaks as reported to AU-IBAR over the same period of time. Diagnostic capacity based on ELISA is available in Uganda, Ethiopia and Sudan. Control efforts are country specific and based mainly on vaccination. In Ethiopia and Kenya, vaccine is procured, distributed and administered/ applied in the field by the public, private sector and even farmers themselves.

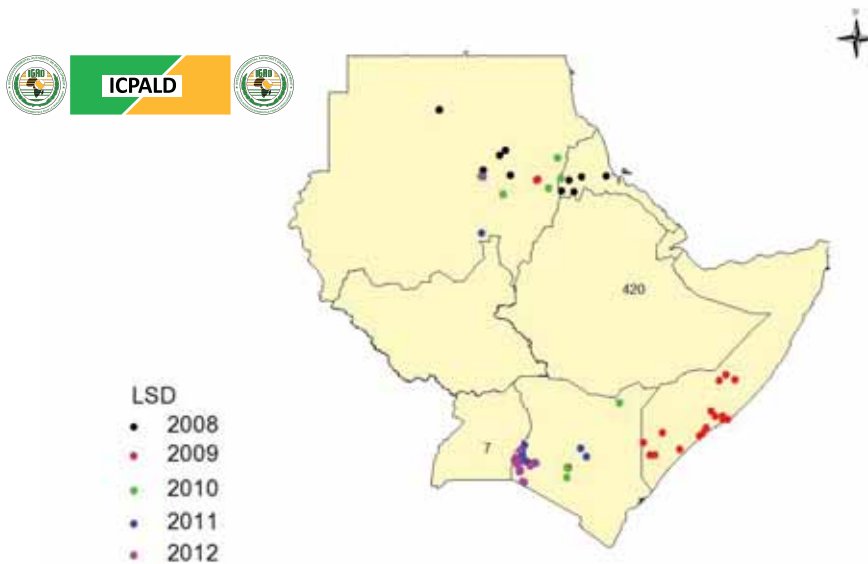
**Table 27: Outbreaks of LSD Reported to OIE (all countries)**

	2007	2008	2009	2010	2011	2012
Djibouti	0	0	2	0	0	0
Ethiopia	129	130	248	180	177	79
Kenya	9	0	0	0	0	0
Somalia	-	+	+	+	1	1
S. Sudan						
Sudan	41	6	0	6	6	2
Uganda	-	-	-	-	+	-

Source: WAHID, OIE

#### Key

- : Surveillance data not available
- + : Suspected cases
- 0: Zero cases reported
- 1+ : More cases than the number indicated

**Figure 19: LSD Outbreaks Reported to AU-IBAR 2008-2012**

### 3.2.9 Camel Pox

Outbreaks have been reported only in Somalia and Ethiopia (Table 27), with the former recording very high figures for the years 2011 and 2012. The outbreaks as reported to AU-IBAR are in Figure 20. The disease has not been reported in Djibouti, Kenya, Sudan, and Uganda. Laboratory diagnostic capacity doesn't seem to be available in the region.

**Table 28: Outbreaks of Camel Pox Reported to OIE (all countries)**

Camel pox	2007	2008	2009	2010	2011	2012
Djibouti	0	0	0	0	0	0
Ethiopia	-	2	+	+	+	-
Kenya	-	-	0	0	0	0
Somalia	-	+	+	+	48	17
S. Sudan						
Sudan	0	0	0	0	0	0
Uganda	0	0	0	0	0	0

Source: WAHID, OIE

#### Key

- : Surveillance data not available
- + : Suspected cases
- 0: Zero cases reported
- 1+ : More cases than the number indicated

**Figure 20: Camel Pox Outbreaks Reported to AU-IBAR 2008-2012**

### 3.3 Discussion

The study initially identified nine priority diseases: FMD, CBPP, PPR, RVF, Brucellosis, SGP, LSD, CCPP, and CP; two of them, brucellosis and RVF are zoonoses. A tenth disease, East Coast Fever (ECF) was proposed for inclusion at the validation workshop on the grounds that the disease so far is limited to Kenya, Uganda and South Sudan, but could easily spread northwards through trade. Of the original 9 diseases, all except RVF have been reported in all the 7 countries. RVF has not been reported in Djibouti, Ethiopia and Uganda despite some parts of these countries, particularly Ethiopia being at risk of RVF epizootics. Discrepancies were observed in disease outbreak reports to OIE and AU-IBAR, which shouldn't be the case in the spirit of transparency.

For all the 10 diseases, laboratory diagnostic testing capacity based on the OIE prescribed or alternative tests is available in most countries; thus giving leverage to the objective of harmonising the important elements of animal disease prevention, surveillance and control.

FMD is the only TAD that has attracted some form of regional/ international attention in terms of coordination and harmonisation of control efforts after the successful eradication of rinderpest that culminated in global declaration of freedom in 2010. Accordingly, all the countries have prepared risk-based strategies within the precept of the Global FMD Strategy and are following the Progressive Control Pathway for FMD (PCP-FMD). For the rest of the diseases, control efforts are country specific and routine in nature and are mostly donor/NGO driven emergency interventions based on vaccination. Exceptions to the latter are the case of PPR for which Ethiopia and Sudan have developed risk-based strategies within the framework of the AU-IBAR/ ILRI initiated PPR Progressive Control Strategy that draws on the lessons learnt in rinderpest eradication. Similarly, Sudan has a control strategy for CBPP that is time bound and goes beyond just movement control and vaccination as to involve stamping out and zoning with eradication as the ultimate goal. In the specific case of managing RVF risk, Ethiopia, Kenya and Somalia have contingency plans, with Kenya now in the process of incorporating the RVF-RBDF in its contingency plan, while Sudan has adapted the RVF-RBDF to its RVF Action Plan. Financing of disease control interventions is a common feature among all the countries for all the diseases studied.

The policy on vaccine delivery varies across the region from fully commercial (Kenya and Sudan) to full government subsidy (Ethiopia and Uganda). Opportunities exist for public-private partnerships in the delivery of veterinary services including the distribution and delivery of vaccines.

Most countries have the necessary legislation in place for the control of TADs, for example, Disease Prevention Control Proclamation 267/2002- Ethiopia; Animal Disease Act CAP 364- Kenya; Animal Diseases Act 200- Sudan; and Animal Diseases Act CAP 38- Uganda; while the legal framework for S Sudan is still in draft form. However, enforcement of animal movement control was observed to be a problem in most countries, with some citing out-dated legislation as a major contributing factor. Transhumance, nomadism, movement in search of markets within and between states and civil strife exacerbate disease spread.

Given that disease eradication particularly for OIE Listed Diseases will remain a major long term focus for governments and development partners, and that disease freedom is very much part and parcel of meeting export standards, even for the slightly less stringent bilateral agreements based on equivalence<sup>10</sup> of sanitary measures with Middle East countries and commodity-based trade, there is need to integrate this long term focus with the more affordable and achievable local and regional markets approach. Thus, a focus on local and regional markets apart from being affordable and achievable in the short and medium term, would ensure both food safety and security to the increasing number of urban dwellers in the region, benefit a large number of producers/ pastoralists, and concurrently augment export to international markets.

### **3.4 Conclusions and way forward**

- a) The absence of or inadequacy in national disease control strategies made worse by poor or limited harmonisation and coordination at the regional level, sub-optimal enforcement of zoo-sanitary measures, out-dated legislative frameworks and inadequate financial resources are the main constraints/ challenges in preventing and controlling TADs and zoonoses in the seven countries. Efforts made in addressing these challenges would promote safe regional and international trade.
- b) The commonality in challenges faced in controlling the diseases and livestock production systems implies that their acceptable risk<sup>11</sup> is about the same and therefore regional trade based on agreed health certification systems that are in line with international standards is quite feasible. Accordingly, IGAD in collaboration with COMESA and EAC should seize the opportunity and take the leadership in harmonizing health certification systems for the various diseases in order to promote intra-regional trade.
- c) Of the the ten diseases, top priority should be given to addressing FMD and PPR given their big impacts on trade and livelihoods (in the case of PPR) as well as the international attention they are already attracting in terms of formulation of control strategies, harmonization and coordination, advocacy and possible funding. However, due to the high tendency for FMD and PPR to co-exist with CBPP and CCPP and/or SGP respectively, a multi-disease approach would be preferred because of its added value.

<sup>10</sup> Means the state wherein the sanitary measure(s) proposed by the exporting country as an alternative to those of the importing country achieve(s) the same level of protection

<sup>11</sup> Means a risk level judged by each OIE Member to be compatible with the protection of animal and public health within its territory



d) Zoonoses are primarily animal diseases and veterinary services have the primary responsibility of controlling these diseases. Therefore, the “One Health Approach” as is already being practiced in some countries provides a good opportunity for veterinary services to enlist the support and collaboration of public health and wildlife authorities. In the specific case of RVF, it is to be noted that outbreaks do not result from trade, but rather outbreaks of the disease impact on trade. Thus, trade should not be disrupted if proper measures are put in place to mitigate the risk of the spread of the disease through trade in animals and animal products.

## 4. KEY RISKS TO CROSS-BORDER REGIONAL TRADE IN LIVESTOCK AND LIVESTOCK PRODUCTS AND PRIORITY DATA REQUIREMENTS FOR MONITORING AND EVALUATING SECURITY OF TRADE

### 4.1 Introduction

This chapter highlights the key risks<sup>12</sup> to cross-border regional trade in livestock and livestock products and priority data requirements for monitoring and evaluating security of trade in the IGAD region.

### 4.2 Situation analysis

Table 28 shows the initial listing of risks by 4 countries (Sudan, South Sudan, Djibouti and Kenya) that responded a questionnaire survey.

**Table 29: Risks to Cross-border Trade in Livestock and Livestock Products as Listed by 4 countries**

Risk	Sudan	South Sudan	Djibouti	Kenya
Animal diseases	V	V	V	V
High transportation costs/ stock routes do not exist or have been grabbed and/ or lack of holding grounds, water, grazing along stock-routes		V	V	V
Insecurity due to cattle rustling, theft, inter-tribal wars, sharing of resources	V	V		V
Taxation		V		
Inadequate market information	V	V		V
Traditional trade practices- e.g camel trade between Sudan and Egypt	V			
Animal smuggling	V			
Unavailability of services and facilities at markets		V		V

Table 29 shows how the risks were ranked in a follow-up questionnaire. Animal diseases pose the highest risk to cross-border trade, followed by insecurity (due to political instability, cattle rustling, theft, inter-tribal wars, sharing of resources, traditional camel trade between Sudan and Egypt and Libya), poor stock-routes infrastructure/ high transportation costs, government bureaucracy and corruption, and inadequate market information. Taxation/ excessive fees charges and poor market facilities and services tie at 6<sup>th</sup> position; poor policies was ranked 8<sup>th</sup> while limited operating capital and insurance for livestock traders pose the least risk for cross-border trade. The risks are highlighted in this order next below.

<sup>12</sup> Risk here is defined to include actions, events or entities that endanger, jeopardize or that are a hazard, menace or threat to the health of host populations (animals and persons) and traded animals and traders themselves and/or those actions that increase the cost of doing business or lead to financial losses.

**Table 30: Ranking of Risks to Cross-border Trade in Livestock and Livestock Products**

Risk	Djibouti	Ethiopia	Kenya	Somalia	S. Sudan	Sudan	Uganda	Total	Rank
	Score*								
Animal diseases	-	-	6	-	3	3	2	14	1
Poor market facilities and services	-	-	5	-	6	5	7	23	6
Poor stock-route/ high transportation costs	-	-	4	-	4	2	6	16	2
Insecurity due to political instability, cattle rustling, theft, inter-tribal wars, sharing of resources, traditional camel trade	-	-	2	-	1	4	9	16	2
Taxation/ excessive fees and cess charges	-	-	7	-	5	6	5	23	6
Inadequate market information (prices, markets etc)	-	-	3	-	2	7	8	20	5
Government bureaucracy and corruption	-	-	1	-	8	8	3	20	4
Inadequate operating capital/ insurance for livestock traders	-	-	8	-	9	9	4	30	9
Poor policies	-	-	9	-	7	9	1	27	8

\*The smaller the score, the higher the magnitude of the problem

#### **4.2.1 Animal diseases**

Animal diseases were cited by all the four countries during the initial appraisal stage and were placed at number one in the overall ranking. However, one of the countries (Kenya) scored animal diseases as a low risk to cross-border trade arguing that the disease status is generally the same for either side of the border; except when it involves a third country transiting through either country. The high ranking for animal diseases is in agreement with current knowledge that animal diseases constitute the single most important non-tariff barrier to trade in livestock and livestock products world-over. It was evident in Chapter 4 that all the IGAD member countries have a high burden of the most important TADs and zoonoses and that disease control systems are not well-functioning because of being under-resourced among other reasons. The situation is even more worrying among the pastoralists who historically have had the worst veterinary services and coincidentally occupy the arid and semi-arid lands that form most of the cross-border ecosystems within the region.

The key opportunities are:

- i) Improved control of endemic TADs through regionally coordinated and harmonized disease control programmes
- ii) Improved in-country enforcement of sanitary measures, especially livestock movement control
- iii) Improved access to animal health care services in pastoral areas
- iv) Commonly agreed upon regional animal health certification systems
- vi) Commonly agreed upon animal identification and traceability systems.

Data requirements for monitoring and evaluating security of trade

- i) Epidemiological analyses on the distribution of the diseases in time and space.

- ii) Progress made in the implementation of regionally coordinated disease control measures.
- iii) Transparency and credibility among Member States based on levels of disease notification, reporting, feedback and inter-country/ cross-border harmonization meetings for exchange of information and confidence building.
- iv) The extent of preparedness to respond to disease outbreaks.
- v) National laboratory diagnostic testing results.
- vi) Veterinary Service delivery statistics to assist in deploying veterinary services as and when required to ensure disease control and quality assurance for livestock and livestock products.
- vii) Risk analyses to determine the potential threat of the diseases to livestock trade in the region.
- viii) Records of export and import

### **4.2.2 Insecurity**

At the initial appraisal stage, all the responding countries (Kenya, South Sudan and Sudan) except Djibouti cited insecurity as a risk, and was ranked second overall. At individual country level, it was ranked highest in South Sudan, followed by Kenya, and Sudan, with Uganda ranking it lowest. In Uganda for example, insecurity is thought to be confined to only a small part of the country in the North-East, while in South Sudan, much of the insecurity is clan or ethnic based cattle raiding by 'young warriors', encouraged by the rampant availability of guns. Insecurity as a risk to cross-border livestock trade is associated with political instability, socio-cultural traditions such as cattle rustling, theft, inter-tribal wars and conflict over resources. Cattle rustling is a growing problem; a problem that has been with the region since time immemorial and has been compounded by the mushrooming of small arms. High level of insecurity in turn impedes livestock trade, adversely affecting trekking routes, leads to theft, loss of human life and other innumerable wastage (Little and Mahmoud, 2005).

The key opportunities are:

Data for monitoring and evaluating the security of trade

- i) Compliance with the rule of law and number of peace dialogue initiatives conducted by governments and civil societies
- ii) The number of investments and number of youth employed
- iii) Development and implementation of a regionally coordinated livestock identification and traceability system with database

### **4.2.3 High transportation costs and poor stock-route infrastructure**

High transportation costs and poor stock-route facilities and services were cited by 3 countries at the initial appraisal, and later ranked third among the key risk to cross-border trade. Some of the reasons cited for this risk include:

- i) Previously gazetted (public) stock-routes no longer exist and the infrastructure has been run down or converted to personal use.
- ii) Animal welfare is more often than not compromised in vehicle transportation over vast distances.
- iii) High fuel and vehicle maintenance costs due to poor roads
- iv) Cash payments by the trader to middlemen, drovers, water and feed suppliers and informal taxes along the way
- v) Quality deterioration of animals due to live weight loss as a result of long distance trekking
- vi) In the case of South Sudan, trekking is considered a very insecure

The key opportunities are:

- i) Demarcation and development of trekking routes through carefully sited water points, with feed provisions along the routes, and possibly the construction of holding grounds (both on trekking routes and at market sites).
- ii) Investment in appropriate truck designs, particularly a design that would allow for the safe movement of livestock while still enabling the transport of consumer goods for the return trip (for instance, removable partitions)
- iii) Improvement of road infrastructure
- iv) Capacity building /awareness on animal welfare along the chain

Indicators for monitoring and evaluating the security of the trade are:

- i) Updated maps of stock-routes and points of embarkation and disembarkation, including services available
- ii) Transporters' compliance with sanitary and animal welfare concerns

#### **4.2.4 Government bureaucracy and corruption**

Even though government bureaucracy and corruption was not cited by any country during the initial appraisal stage, it later emerged as the top risk when it was included in the list and countries asked to rank. Some of the reasons and/or examples given include the imposition of non-tariff barriers by importing countries in spite of treaties to the contrary and expensive transaction and unclear conduct of government officials (customs, immigration and veterinary).

Key opportunities are:

- i) Awareness creation among the key government officials

Indicators for monitoring and evaluating security of trade

- i) Trade volumes and efficiency of cross-border transactions.

#### **4.2.5 Inadequate market information**

Updated and reliable information on supply and demand in the nearest livestock market, prices, animal health services, weather forecasts among others are crucial for guiding livestock and meat supply chain actors' decisions. Elsewhere in this report (chapter 3), it was noted that market information is hardly available in pastoral areas, especially in remote border areas. Previous studies have also shown that in many parts of the region, livestock prices are not integrated spatially (Barrett et al. 1998, Little 2001). The implication of the absence of spatial integration is that any intervention in one market or area will not induce significant changes in other markets. For instance, improvements in livestock price in neighboring countries may not be disseminated to supply markets in a catchment area of a given country. Under such circumstances, pastoralists and traders often rely on informal means, such as local market brokers to obtain market information (Little, 2000).

Key opportunities

- i) Putting in place/ strengthening livestock marketing information systems that serve all the four levels of livestock/ meat chain actors (producers/ pastoralists, traders, processors and exporters) equally well. Some countries already have such systems offering a variety of services which could be improved upon to serve the pastoral communities. The systems already in place include:

- Ethiopian Livestock Market Information System (LMIS) – price, volume (animal type, breed, age class, gender and grade) and early warning information
- Kenya - Livestock Information Network and Knowledge System (LINKS) (sales and prices)
- Uganda - Foodnet Livestock Market Information System
- Sudan- Improvement of Livestock Production & Marketing project in four states (White Nile, North Kordofan, Blue Nile and Sinnar) and SIFSIA- FAMIS Project Livestock Information Network and Knowledge System (LINKS) - Eastern Africa

Indicators for monitoring and evaluating security of trade

- i) Assessment of the information needs
- ii) Collation and storage of information
- iii) Dissemination of the information

#### **4.2.6 Poor market facilities and services**

As was observed in this study, most cross-border markets in the region lack the basic infrastructure facilities and services such as market yards, fencing, and water and feed supply, sheds, disposal sites, loading ramps and emergency slaughter houses. Similarly, most cross-border markets do not carry out quality assurance services such as import and transit inspection and export certification.

Key opportunities are:

- i) Construction/ rehabilitation of market infrastructure (market yards, fencing, and water and feed supply, sheds, disposal sites, loading ramps and emergency slaughter houses)
- ii) Establishment/ and provision health inspection and certification of animals for cross-border trade

Indicators for monitoring and evaluating security of trade

- i) Updated maps of cross-border markets infrastructure facilities and services.
- ii) Risk analyses to determine the potential threat of the diseases to livestock trade in the region.
- iii) Records of exports and imports.

#### **4.2.7 Taxation/ excessive fees and cess charges**

Multiple or excessive taxation by government departments and local authorities is common in the region. The situation is made worsened by the fact that most local authorities do not plough back the money in the form of services.

Key opportunities

- i) Harmonization and minimization of taxation
- ii) Ploughing back of revenues to improve on infrastructure facilities and services

Indicators for monitoring and evaluating security of trade

- i) Records of fees charged
- ii) Infrastructure facilities and services to facilitate trade

#### **4.2.8 Poor policies**

Limited or lack thereof government support and regulation of cross-border trade means that livestock traders have difficulties securing formal financing and credit facilities. A case in point is

the Ethiopia/Somalia border where it became increasingly difficult since mid-2006 due to trade restrictions and closures enforced with unpredictable frequency and strictness. Furthermore, since the cross border livestock trade is considered illegal, traders risk their animals being confiscated without compensation.

#### Key opportunities

- i) Collection of data on economic significance of cross border livestock trade for evidence-based policy dialogue

#### Data requirements for monitoring and evaluating security of trade

- i) The number of policies formulated by member States and at the regional level that mainstream the livestock industry particularly in the border arid and semi arid areas and maximize its potential and open up unexploited opportunities for the prosperity of the region.
- ii) The level of investment in cross-border areas supporting trade

### ***4.2.9 Inadequate operating capital/ insurance for livestock traders***

Financing of livestock trade is a problem owing to the informal nature of the business. This is compounded by lack of insurance, trade contracts and unwillingness of financial institutions to engage. In addition, currency exchange rates across international borders are unpredictable resulting in Forex losses for livestock traders.

#### Key opportunities

- i) Provision of banking services at cross-border markets and loan facilities to value chain actors
- ii) Formation of cooperative societies by value chain actors
- iii) Provision of insurance services for livestock value chain actors

#### Indicators for monitoring and evaluating the security of the trade

- i) The number of banks operating at cross-border markets
- ii) The number of livestock and livestock products value chain actors benefitting from loan facilities and insurance services



## 5. CURRENT INSTITUTIONAL, POLICY, LEGAL AND NORMATIVE FRAMEWORK SUPPORTING REGIONAL TRADE IN LIVESTOCK AND LIVESTOCK PRODUCTS

### 5.1 Introduction

Policy, institutional, regulatory and normative factors are important in determining the business environment under which specific enterprises operate, which in turn determine the growth potential and overall competitiveness of the enterprise. This chapter describes the Regional Policy Framework on Animal Health within the context of Trade and Vulnerability of the Member States of IGAD adopted by the IGAD Council of Ministers in July 2012 with the purpose to identify any stifling factors that may need to be addressed (or taken into account) on the one hand, as well as supportive aspects that present opportunities for growth and vibrancy of livestock and livestock products trade. The chapter also highlights on the national policies, strategies and legislation.

### 5.2 Regional level

**Article 1 (Trans-boundary Animal Diseases (TADs), Diseases of Production, Animal Welfare and Livestock Emergencies)** recognizes that animal diseases pose serious challenges to the livelihoods of large portions of the poor in the region and to their national economies and the fact that the challenges are shared among member states and the solutions therefore require a coordinated approach at the regional level as well as harmonization of national livestock policies at IGAD level in order to establish effective and sustainable mechanisms. Member States have accordingly agreed to launch a process of harmonization of livestock policies and regulations at the IGAD level, with a view to addressing their common challenges in a coordinated manner with the assistance of the IGAD Secretariat. In this regard, specific measures dealing with TADs, diseases of production, animal welfare and livestock-related emergencies are well elaborated. In the specific case of capacity for TADs and livestock-related emergencies, the main focus is on the need to pool expertise at the regional level, through IGAD, to guide decision making on such measures and on the prioritization of resource allocation; enhance national and regional capacity for early warning and response for livestock-related emergencies, building on existing capacity where relevant; and develop the means of incorporating emergency response into national development. At the national level, there is need to enhance animal disease surveillance and reporting systems to make them more effective, transparent and subject to epidemiological verification; coordinate and where appropriate, synchronize and standardize surveillance and collection of animal health data, ensuring timely dissemination of the results in order to alert other member States; and complement investment in national veterinary infrastructure with networking mechanism between laboratories and other institutions in the region to share experience, resources, training, expertise and access to medicines and biologics.

On resources and coordination, the policy outlines the need to work through IGAD to raise funds for improved institutional and laboratory capacity at regional and national levels; collaborate to identify priority interventions and disease control measures in order to use limited resources for maximum regional impact; and to coordinate and harmonize disease control and prevention programmes across the region. The policy framework also highlights the need to ensure that due consideration is given in the process to those measures which are likely to address the specific disease-related constraints of the poor, women and vulnerable livestock keepers. This is particularly relevant to the current study with regards to PPR which impacts both trade and livelihoods of the poor, women and vulnerable livestock keepers. In order to address animal

welfare concerns, the policy calls for the development of regional standards and guidelines for animal welfare based on relevant OIE instruments under the facilitation of IGAD. Finally, the policy requires that sustainable mechanisms are instituted by which regular and timely coordination can take place between member States on the above and related issues.

However, zoonoses are conspicuously missing both in the article title and the measures thereof; in the latter case, the need for inter-sectoral (public health ministries and institutions mainly) collaboration at all levels is indispensable. Similarly, animal identification and traceability as tools for disease control and food safety respectively are missing; never mind that the former is also an important tool for dealing with animal theft or cattle rustling. Cattle rustling and the insecurity it imposes in the region is perhaps one of the biggest threats, not just for livestock and livestock trade enhancement, but to the entire development in the region. No meaningful commercialization and competitiveness of the livestock sector (and indeed the rest of the economy) can be achieved with the current state of insecurity and the continued escalation of arms in the hands of civilians. A clear policy and regulatory framework for control and enforcement of mechanisms for eliminating this menace such as animal identification is necessary.

### **Article 2 (IGAD Representation and Participation in International Standard-Setting Institutions)**

recognizes that member States' ability to export livestock and livestock products is heavily constrained by sanitary standards and conditions set by importing countries and that national sanitary standards among IGAD countries generally reflect international standards set particularly by Codex and the OIE, while the use of these standards for trade-related purposes is regulated by WTO. The article also recognizes the importance of membership to international standard-setting and trade-regulating organizations, noting that all IGAD member States are also members of both OIE and Codex while only Djibouti, Kenya and Uganda are members of the WTO. The article goes on to explain that IGAD member States' influence in the development of sanitary standards and trade rules even though highly desirable is only marginal and could be enhanced by a coordinated approach to member States' representation and participation in these institutions. Accordingly, specific short, medium and long-term measures are spelt out on what needs to be done to realize the policy objective.

In the short-term, mobilize national expertise in the form of regional ad hoc working groups to identify the most relevant international sanitary standards, assess the extent to which IGAD member States can comply with them, and make recommendations on the best way forward and at the same time encourage and support the accession to the WTO of those IGAD member States that have yet to join the trading system. It is nearly 4 years since the policy framework came into effect, yet the two measures have as yet to be implemented. It is presumptive that the implementation of these two measures is a prerequisite for implementation of the other specific measures.

A medium term measure is to establish a regional forum which supports member States to develop harmonized positions on sanitary issues of common interest in order to better influence the development of relevant international standards. This measure if implemented, would dovetail with the already on-going initiatives at the pan-African and regional levels by AU-IBAR and SADAC respectively. A long term measure of IGAD in the context of representation and participation in international standard-setting institutions is to develop a core team of negotiators with a view to improving the region's institutional capacity to negotiate and to build on regional synergies where appropriate, in order to strengthen its member States' representation at international bodies such as the OIE, Codex and the WTO. At the same time, with other interested parties such as AU-IBAR and COMESA, promote acceptance of risk management approaches to meeting sanitary requirements for trade such as commodity-based trade and compartmentalization.

### **Through Article 3 (Regional and National Capacity Building and Provision of Livestock Services),**

member States recognize that strengthened national veterinary and institutional structures can enhance the ability to respond to emergencies and to satisfy the regulatory requirements of international trade and that timely and effective delivery of veterinary services can have a substantial impact on vulnerability and poverty. Moreover, given the speed at which animal diseases can spread from one part of the IGAD region to another, a capacity constraint in one part of IGAD affects the entire region's ability to respond to disease outbreaks; therefore if strengthened, the IGAD Secretariat has the potential to play a critical role in addressing these capacity constraints by serving as a centre of expertise at the service of its member states and also as a conduit for technical input from other institutions. At the same time, the article recognizes that private sector actors have an important role to play in the delivery of private goods as well as public goods through sanitary mandates and public-private partnerships which permit government to perform its functions of regulation and quality control. Accordingly, member States have agreed on a number of measures in order to enhance the regional capacity to assist national compliance with international standards, among them, to devise strategies through IGAD, on how to strengthen national capacities, both technically and with respect to effective legal and regulatory frameworks.

Member States have agreed to uphold the principle that initiatives to strengthen national capacities should be strategically allocated in order to respond to the specific weaknesses of any of its member States, and respect the principle of intra regional equity in any allocation of resources. The former is particularly true and important for South Sudan and Somalia which have recently emerged from war and therefore are faced with capacity constraints. Member States also subscribe to the need to develop a regional framework to define, enhance and enable the respective roles of private and public sector actors in the supply of animal health and related services, encouraging collaboration where appropriate.

The IGAD member States have agreed to work under the facilitation of IGAD towards establishing regionally acceptable levels of risk and to harmonise sanitary standards with which to achieve them. At the same time, the member States have agreed to establish minimum standards for veterinary service provision across the region, which will be implemented through a combination of training and regulation. In a similar vein, the member States have agreed to adopt common definitions, standards, qualifications, selection criteria, and training and regulation for the various cadres of para-professionals operating in the IGAD region, including community based animal health workers, in those countries where they also work in cooperation with their governments. Last but not least, member States have a duty to ensure that regional standards are based on relevant OIE and Codex standards and serve to facilitate trade. Last but not least, member States have to ensure that in strengthening capacities to deliver animal health and related services, due consideration is given to the specific needs of poor, women and vulnerable livestock keepers.

#### **Article 4 (Intra-regional Trade in Livestock and Livestock related Products, Inputs and Services)**

recognises that the development of an IGAD-wide free trade area as a key part of the vision since the creation of the revitalised IGAD in 1986, reaffirmed by the 2003 IGAD Strategy which identified the livestock sector as one of only two areas of immediate priority for economic cooperation and integration. To this end, the Heads of State recommitted themselves to this longstanding vision at their 12<sup>th</sup> Ordinary Summit in June 2008 where they instructed the Secretariat to develop and implement regional integration policies and programmes. Pending the establishment of the free trade area, there is urgent need to develop an integration plan to initiate and fast track a system of free movement of livestock and livestock products across borders, for trade purposes, which is subject only to meeting agreed animal health and food safety standards, to protect the sanitary status of the importing country. The article also recognises that the development of a free trade area is compatible with national regulations and requirements relating to import and export licences, exchange control, statistical services, documents, identification, documentation and certification, analysis and inspection, and quarantine and sanitation.

Accordingly, member States have agreed to launch a process that will progressively and in line with respective countries' rules and regulations, remove tariff and non-tariff barriers to intra-regional trade in livestock, livestock products, livestock inputs and livestock services, subject to meeting animal health and food safety standards. The process would also harmonise national regulations on livestock trade including standardisation of cross-border trading procedures and documents; and ensure that at the national level no trade and competition distortive practices such as subsidies and monopoly operations undermine the economic interests of other members. These policy instruments are considered particularly important in dealing with multiple taxation and government bureaucracy and corruption which were cited among the key risks to cross-border trade. Already some countries have formalised bilateral agreements on trade including livestock and livestock products, namely: Sudan- Ethiopia; Ethiopia- Djibouti; and Ethiopia-Kenya; or already belong to regional trading blocs such as Kenya and Uganda (EAC) and all IGAD member States are also members of COMESA.

**Article 5 (Institutional Provisions)** underscores the need for strengthening the institutional capacity of the IGAD Secretariat by establishing an effective livestock unit whose duties and responsibilities would be determined by the executive Secretary in consultation with the member states, but should include serving as the technical arm of the Secretariat for the livestock sector in general with a particular focus on poverty alleviation and livelihood security in the pastoralist communities; convening technical expertise within the region and facilitating decision making up to highest levels; assisting the executive secretary to discharge his responsibilities as assigned to him in the Regional Policy Framework; and providing technical support to member States' multidisciplinary and multi-agency livestock policy hubs in support of inclusive, evidence-based and poverty and gender focussed policy processes. Other responsibilities and duties include facilitating member States' access to information sources of relevance to the elaboration and implementation of policy in the livestock sector; coordinating relations with relevant technical institutions in the field of livestock, including AU-IBAR, FAO, the OIE and Codex; and undertaking studies of relevant international standards, reviewing member States' approaches, strategies and capacities and recommending appropriate steps to achieve compliance.

In recognition that the above duties and responsibilities require the livestock unit to engage with a wide range of issues and institutions, the Executive Secretary is supposed to ensure that the staffing of the livestock unit reflects the broad and multidisciplinary nature of its work and that the Unit has sufficient veterinary capability to engage with international veterinary issues and institutions. Accordingly, it is appreciated that ICPALD has been established as provided for in this Article and the centre is working towards meeting its duties and responsibilities.

### **5.3 National level**

At the national level, three sets of documents exist, namely:

- General development and agriculture related documents
- Livestock and other related development documents
- Veterinary / animal health and other livestock related policies, strategies, Acts/ legislations

In general, the agriculture and livestock development documents outline the contribution to the achievement of broader national goals and objectives as framed by the respective national constitutions and development blue prints. The development blue prints cater for economic growth, trade, food security, improved livelihoods, poverty alleviation, environmental protection, stakeholder resilience to shocks among others. The animal health and related livestock policies

outline some of the challenges faced, inter alia: weak animal disease management capacity, poor infrastructure for production, limited value addition before marketing, underdeveloped marketing systems, low compliance with sanitary measures, low animal productivity, effects of climate change, underfunding and understaffing of its institutions. The policies outline practices, processes and guidelines to counteract these challenges and position the animal resource industry as one of the leading contributors to national wealth. Land is recognized as a critical factor in animal production and appropriate land-use systems are recommended. In addition, the policies advocate for gender parity in accessing factors of animal production and aims at correcting the imbalance in provision of labour in the livestock sub-sector. Training of the youth with a view to ensuring a seamless transition from the ageing animal keepers is recommended and concurrently the significance of security and adequate credit for animal enterprises emphasized. The various policies identify institutions that will act independently or collectively to deliver services in the animal resource industry, while providing frameworks for linkages, collaboration and Public-Private-Partnerships that will enhance synergy among various actors in order to develop, protect and conserve animal resources for the benefit of human beings.

For all the 10 diseases, control is constrained by the unavailability of funds and/or absence of clearly defined financing strategies. Of particular concern is the failure among many countries to anchor disease contingency plans into national disaster prepared plans.

Common challenges in the internal regulatory regimes among IGAD member States have previously been highlighted (Desta 2007) and include:

- Incomplete, out-dated and incoherent sanitary and food safety regulations
- Multiple and excessive taxation of livestock destined for export
- Legal uncertainties and weak and inefficient judiciary
- Disregard for the rule of the law in day-to-day administrative decision making
- Ineffective coordination among different levels of government in the enforcement of the laws
- Absence of established communication channels between stakeholders in the livestock industry and relevant government institutions
- Overall lack of capacity to use law as an instrument to implement policy decisions

For example, the study observed that even though most countries have the necessary legislation (Disease Prevention Control Proclamation 267/2002- Ethiopia; Animal Disease Act CAP 364-Kenya; Animal Diseases Act 200- Sudan; and Animal Diseases Act CAP 38- Uganda) to control all the priority TADs and zoonoses, it is out-dated or still in draft form as is the case with South Sudan. Other gaps in policy, legislative and institutional frameworks have been highlighted in the preceding chapters.

## 6. THE CAPACITY OF KEY FORMAL AND INFORMAL STRUCTURES TO DEVELOP, ADMINISTER AND IMPLEMENT EFFECTIVELY, MONITOR AND EVALUATE REGIONAL LIVESTOCK TRADE PROTECTION RESPONSIBILITIES

### 6.1 Introduction

Stakeholder analysis is a means to understand whose problems and opportunities are being analyzed and who will lose out and how, from a proposed project intervention. In this regard, SWOT analyses were conducted to assess the strengths and weaknesses of the various key formal and informal structures to develop, administer and implement effectively, monitor and evaluate regional livestock trade protection responsibilities. The key actors/ partners assessed in this study are pastoralists and agro-pastoralists, traders and transporters, processors exporters (butchers, slaughter-house operators and exporters of live animals, meat, and hides and skins), local authorities, and government ministries/ departments responsible for Veterinary Services, Livestock Marketing, Trade and Commerce, Customs, Immigration and Law Enforcement. The risks to cross-border highlighted in the previous chapter were used as a checklist in constructing the SWOT matrices. The results of the analyses and opportunities for intervention (how the strengths can be built on to overcome the weaknesses and opportunities utilized to minimize threats) are presented below.

### 6.2 Results of SWOT analyses

#### 6.2.1 Producers (pastoralists and agro-pastoralists)

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• They value and care for their animals and many are willing to pay for animal health care services</li> <li>• Understand survival and coping mechanisms for their livestock</li> <li>• Are rich in ethno-veterinary/ indigenous knowledge on animal diseases</li> <li>• Availability of CAHWs amongst producers/ pastoralists</li> <li>• Some pastoralists already report diseases directly or through CAHWs</li> <li>• Common communities across borders fosters good relationship</li> <li>• Have traditional animal identification systems which are used against cattle theft</li> <li>• Have traded informally for a long time</li> </ul>	<ul style="list-style-type: none"> <li>• Many producers are not commercially oriented and are unable to pay for animal health care services</li> <li>• Some pastoralists have gotten used to free animal health care services, courtesy of NGOs, FAO and governments themselves</li> <li>• Have little knowledge on issues beyond pastoral activity</li> <li>• Some indigenous knowledge and practices are not in tandem with science</li> <li>• Do not always report disease occurrence</li> <li>• Common communities may collude against and /or sabotage national interests</li> <li>• Cattle theft and rustling</li> <li>• Livestock movement may spread diseases, create conflicts among pastoralists themselves and other resource users e.g land for agriculture farming</li> <li>• Many of the traditional animal identification methods are subject of animal welfare concerns and damage the value of the hides and skins and are not in line with international standards</li> <li>• Modern animal identification and traceability systems may not be acceptable by pastoralists due to cost among other considerations</li> </ul>



Opportunities	Threats
<ul style="list-style-type: none"> <li>• Modern animal identification techniques that are line with international standards</li> <li>• Improved access to animal health service in pastoralist areas.</li> <li>• Ensuring food safety/ SPS requirements at the margins to assure consumers and allow supply to more integrated and longer, supermarket dominated supply chains</li> <li>• Porous borders facilitate cross-border sharing of resources</li> </ul>	<ul style="list-style-type: none"> <li>• Trade bans following disease outbreaks</li> <li>• High vulnerability to disasters</li> <li>• Insecurity</li> </ul>

### Opportunities for intervention

- Promotion of good animal husbandry measures including disease reporting, compliance with zoo-sanitary measures, animal welfare requirements, drug and residue management practices, and animal identification and traceability systems that are in sync with international standards leveraging on existing traditional animal identification systems
- Integration of pastoralists' ethno-veterinary knowledge with contemporary veterinary scientific knowledge
- Improved access to animal health care services
- Provision of information on market prices and requirements (import regulations, inspection and certification procedures) and product quality and safety
- Training in business skills and acceptance/ appreciation of livestock rearing as a business
- Market linkages
- Formation/ strengthening of producer associations to lobby and champion the interests of pastoralists
- Sensitisation and awareness for peaceful co-existence among the different communities

### 6.2.2 Livestock traders and transporters

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Are a largely motivated group</li> <li>• Usually have networks within country and across borders</li> <li>• Have access to price information at secondary and terminal markets and therefore determine prices at primary markets</li> <li>• Ability to switch routes and sources of animals in the face of disease outbreaks/ quarantines</li> <li>• Have own animal identification systems</li> <li>• Familiarity with stock routes used for trekking animals to the markets</li> <li>• Clan-based trade routes facilitate trade</li> <li>• Existence of some basic level of organization (traders' associations) in some countries to lobby for their interests</li> </ul>	<ul style="list-style-type: none"> <li>• Reliance on clan structures for capital, insurance and access to routes that are not quickly interchangeable</li> <li>• Agents of spread of diseases</li> <li>• Unwillingness and/or poor cooperation in disease outbreak reporting</li> <li>• High tendency to circumvent trade and movement regulations</li> <li>• Conspiracy by common communities across borders in cattle theft/insecurity</li> <li>• Price fixing by cartels (tribal based or other common interest)</li> <li>• The non-existence of traders' associations in some countries to lobby interests</li> <li>• Cattle theft and rustling</li> <li>• Animosity between communities along borders</li> </ul>



Opportunities	Threats
<ul style="list-style-type: none"> <li>• Establishment and/or improvement of livestock marketing infrastructures and services at markets and stock-routes</li> <li>• Build efficiency into the ancient and resilient trading systems</li> <li>• Availability of markets on both sides of the border</li> <li>• Availability/ existence of clan-based financial and insurance structures</li> <li>• Improved access to market information and regulations governing trade in livestock and livestock products</li> </ul>	<ul style="list-style-type: none"> <li>• Competition from other sources of supply</li> <li>• Limited sources of formal financing and insurance</li> <li>• Hitches associated with currency exchange across borders</li> <li>• Income levels threatened by costs imposed by bureaucratic bottlenecks.</li> <li>• Limited access to veterinary services in pastoralist remote areas</li> <li>• Traditional clan-based trading systems face extinction due to inefficiency</li> <li>• Quarantines and trade bans</li> <li>• Insecurity due to civil strife and political unrest</li> </ul>

**Opportunities for intervention**

- Sensitisation and awareness on disease recognition and reporting, good zoo-sanitary measures, animal welfare concerns, and integrity issues.
- Improved access to financial services such as credit, banking, and insurance
- Training on business skills
- Formation of traders’ associations and capacity building to become effective stakeholder institutions for joint strategy and action
- Provision of information on market requirements and linkages (import regulations, inspection and certification and quality standards)

**6.2.3 Processors and exporters**

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Highly motivated and explorative</li> <li>• Generally financially stable and insured</li> <li>• Ability to employ technically competent managers</li> <li>• Fairly well informed about their trade</li> <li>• Aware of international livestock trade dynamics</li> <li>• Able to determine or influence market prices</li> <li>• Have networks in domestic and destination countries</li> </ul>	<ul style="list-style-type: none"> <li>• Inability to meet standards</li> <li>• Use of out-dated technology and inferior infrastructure</li> <li>• Limited to primary processing</li> <li>• Cause artificial shortages</li> <li>• Largely not organized so as to take advantage of economies of scale</li> <li>• Little influence on policy formulation and legislation</li> <li>• Low compliance with the law</li> <li>• Limited involvement in trade negotiations</li> </ul>
Opportunities	Threats

<ul style="list-style-type: none"> <li>• High demand for meat and meat products as a consequence of rapid population growth and urbanisation</li> <li>• Availability of legislation and regulations governing abattoirs and slaughter houses to meet ISO and CODEX standards</li> <li>• Capacity to cater for the needs of different animal species</li> <li>• Ease of access to financing and insurance</li> </ul>	<ul style="list-style-type: none"> <li>• Quarantines and trade bans</li> <li>• Regulatory framework not harmonized in the region</li> <li>• Competition from sources outside IGAD with more advanced meat technologies and/or cheaper sources of animals</li> <li>• Unreliable animal supply due to climatic fluctuation etc</li> <li>• Campaign against red meat consumption</li> <li>• Political instability</li> </ul>
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#### Opportunities for intervention

- Improvement on pre-slaughter handling of animals
- Improvement in slaughterhouse and environmental hygiene
- Promotion of appropriate slaughter house technology and infrastructure
- Availability of information on market requirements including import regulations, inspection, product quality standards and certification procedures
- Skill development on business and sanitary requirements
- Formation of processors' associations to lobby and champion the interests of processors

### 6.2.4 Local authorities

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Make by-laws and regulations, and enforce them</li> <li>• Some are elected and therefore have political clout</li> <li>• Own and run livestock markets and abattoirs and collect revenues</li> <li>• Are in contact with producers and traders</li> </ul>	<ul style="list-style-type: none"> <li>• Do not take an all-inclusive consultative approach while prioritising their livestock related investments</li> <li>• Do not plough back sufficient money for the development and maintenance of infrastructure and services</li> <li>• Poor coordination between counties</li> <li>• Use political clout to destabilize veterinary authorities</li> <li>• Inadequate commitment to enforce policies and regulations</li> <li>• Suffer from poor management</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Development of livestock marketing and infrastructure</li> <li>• Improved delivery of veterinary services</li> </ul>	<ul style="list-style-type: none"> <li>• Insecurity</li> <li>• Disease quarantines</li> </ul>

#### Opportunities for intervention

- Sensitisation on the need to plough back revenues to improve marketing infrastructure
- Sensitisation on the need for wider and all-inclusive approach to decision making with respect with livestock related investments
- Strict enforcement of laws and by-laws

## 6.2.5 Departments/ Ministries of Veterinary Services, Livestock Marketing, Trade and Commerce, Customs, Immigration and Law Enforcement

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• The existence of legally established veterinary services in all the countries</li> <li>• Current knowledge on priority TADs and zoonoses, including risk factors is sufficient to facilitate control interventions</li> <li>• Laboratory diagnostic capacity for most of the identified priority diseases exists in at least one or more member countries</li> <li>• Some countries have established inter-sectoral collaboration on zoonotic diseases</li> <li>• Some countries are already piloting animal identification systems based on new technology that is in line with international standards</li> <li>• Most national veterinary services participate in the preparation of national legislation and regulations</li> <li>• All countries except South Sudan have the official policy and legislation on animal disease control, food and veterinary public health and animal welfare</li> <li>• Countries are enforcing laws and regulations pertaining to animal disease control, food and veterinary public health and animal welfare</li> <li>• Existence of bilateral trade agreements for some countries based on equivalence of sanitary measures</li> <li>• All IGAD member States are members of OIE and Codex except South Sudan, while three (Djibouti, Kenya and Uganda) are members of WTO</li> </ul>	<ul style="list-style-type: none"> <li>• Limited resources (human, financial and infrastructural) particularly in pastoral areas</li> <li>• Limited understanding of the epidemiology, risk factors and distribution of the priority diseases</li> <li>• Weak capacity for disease control strategy formulation, prevention, early detection and rapid response.</li> <li>• Inadequate capacity and capability to assure safe trade (risk analysis, health certification, animal identification and traceability)</li> <li>• Delayed disease notification and or under-reporting</li> <li>• Decentralisation of veterinary services e.g Uganda</li> <li>• Capacity constraints in some member States which ultimately affect the entire region's ability to respond to disease outbreaks</li> <li>• Variations in policies and legislation among IGAD member States</li> <li>• Weak enforcement of sanitary measures, particularly animal movement control</li> <li>• Out-dated legal and regulatory framework</li> <li>• Weak intra- and inter-country coordination</li> <li>• Majority of the member States have as yet to attempt animal identification</li> <li>• More often than not, technical staff in IGAD member countries are not accorded the opportunity to comment on or input into standard-setting by OIE and Codex</li> <li>• Not all IGAD countries are members of OIE, WTO and Codex</li> <li>• National sanitary requirements generally reflect international standards set by OIE and Codex</li> <li>• Bilateral agreements are not in place between all countries in IGAD region</li> <li>• IGAD member countries' membership in many RECs has led to pulling in different directions, waste of resources and rivalry rather than cooperation and collaboration.</li> </ul>
Opportunities	Threats

<ul style="list-style-type: none"> <li>• The priority animal diseases identified are common among the 7 countries</li> <li>• Existence of veterinary professional regulatory bodies in most countries and ability to provide continuing education programmes</li> <li>• IGAD's desire to develop a free trade area</li> <li>• The establishment of ICPALD</li> <li>• Livestock has been identified as one of two only areas of immediate priority for economic cooperation and integration of IGAD</li> <li>• On-going regional initiatives such as the SMP-AH project on the development and adoption of common SOPs for control of TADs and zoonoses; Surveillance for Trade Sensitive Diseases (STSD) project and WB Supported Project on Drought and Resilience</li> <li>• Existing traditional animal identification systems</li> <li>• On-going initiative by AU-IBAR that creates a forum for member States to develop harmonised positions on sanitary issues of common interest in order to better influence the development of relevant international standards</li> <li>• AU-IBAR's position to implement projects through the RECs</li> </ul>	<ul style="list-style-type: none"> <li>• Excessive/ multiple taxation</li> <li>• Civil strife and political unrest in some countries</li> <li>• Cattle theft and rustling</li> <li>• Socio-cultural practices and beliefs among pastoralists</li> <li>• Political interference and manipulations</li> </ul>
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### Opportunities for intervention

- Collaboration among countries in identifying priority interventions and disease control measures in order to use limited resources for maximum regional impact, including pooling and sharing expertise, experience, training and other resources at regional level.
- Harmonization and coordination of disease control and prevention programs across the region, including inter-sectoral collaboration in the control of zoonoses
- Strengthening of national and regional capacity for disease control strategy formulation, prevention, early detection and rapid response
- Enhancement of national level disease surveillance and reporting capacities for effectiveness, transparency and epidemiological robustness.
- Active participation in international standard-setting on animal health and food
- Harmonisation and compliance with standards
- Reviewing the policy, legal and regulatory frameworks in member States
- Improvement in law enforcement

# 1. PRIORITY OPPORTUNITIES TO IMPROVE SERVICE DELIVERY

## 7.1 Introduction

The reasons behind the underperformance of the livestock sub-sector in the arid and semi arid parts of the IGAD region have been highlighted in the preceding sections of this report. This section now sets a basis for development of interventions in the sector by clustering all the main constraints and challenges and pulling together into one section all the main opportunities which could be taken advantage of in the design of practical interventions. The constraints/ challenges are grouped into 4 main clusters, namely: market infrastructure and services; harmonisation and compliance with standards, TADs and zoonotic diseases, and macro-environment; upon which, the respective opportunities are prioritized.

## 7.2 Constraints/ Challenges

### 7.2.1 Market infrastructure and services

- Poor market and stock-route infrastructures
- Inadequate market information on pricing and market requirements including import regulations, inspection, product quality standards and certification procedures
- Limited capacity of value chain actors in terms of lobbying, negotiation, and finance
- Poor market orientation among a majority of the producers
- Inadequate dry season feed resources along the stock route
- Limited value addition on livestock and livestock products

### 7.2.2 Harmonisation and compliance with standards

- Limited national capacity in risk analysis, import and transit inspection, and export health certification
- Limited technical capacity for participation in international standard- setting
- Not all IGAD countries are members of OIE and Codex
- Inability to trace-back and forwards animals and animal products in accordance with international standards and guidelines on animal identification and traceability
- Need for producers to know the requirements of the importing countries
- Inability to meet standards
- Use of out-dated technology and limitation to primary processing
- Poor animal husbandry practices and improper use of antibiotics and other drugs

### 7.2.3 TADs and zoonoses

- Limited understanding of the epidemiology, risk factors and distribution of the priority TADs (FMD, CBPP, LSD, PPR, SGP, CP, CCPP) and zoonoses (RVF and brucellosis) in the region
- Limited access to veterinary services, particularly in arid and semi arid areas
  - Inability by producers to pay for animal health care services and over-reliance on free animal health care services
  - Limited national governments resources (human, financial and infrastructural)
  - Decentralisation of veterinary services in some countries
- Limited technical capacity
  - Weak national and regional capacity for disease control strategy formulation, prevention, early detection and rapid response.
  - Delayed disease notification and /or under-reporting
  - Capacity constraints in some member States which ultimately affect the entire region's ability to respond to disease outbreaks
- Low compliance by value chain actors with zoo-sanitary measures particularly livestock movement and weak enforcement of zoo-sanitary measures, particularly animal movement control
- Weak intra- and inter-country coordination
- Weak collaboration between animal and public health authorities

### 7.2.4 Macro-environment

- Poor policies and variations in policies and legislation among IGAD member States
- Out-dated national legal and regulatory frameworks
- Insecurity due to:
  - Cattle rustling, theft, inter-tribal wars and sharing of resources
  - Traditional trade practices and smuggling
- Trade malpractices, government bureaucracy and corruption
- Limited technical capacity for participation in international trade negotiation
  - Not all IGAD countries are members of WTO
  - IGAD member countries' membership in many RECs has led to pulling in different directions, waste of resources and rivalry rather than cooperation and collaboration.

## 7.3 Priority opportunities

The respective priority opportunities for improving service delivery are:

### 7.3.1 Market infrastructure and services

- Development and improvement of infrastructure for cross-border trade
- Sensitisation of local authorities on the need for all-inclusive consultation in decision making with respect to livestock related investments and for plough back of revenues to improve marketing infrastructure and services
- Provision of information on market prices and requirements (import regulations, inspection and certification procedures) and product quality and safety
- Training in business skills for value chain actors and improved access to financial services such as credit, banking, and insurance
- Formation/ strengthening of value chain actors' associations to lobby and champion the their respective interests
- Improvement of dry season grazing reserves /feed availability along the stock routes
- Promotion of value addition and diversification of livestock and livestock products

### 7.3.2 Harmonisation and compliance with standards

- Regional harmonization of certification (establishment of regionally acceptable levels of risk and harmonization of sanitary standards based on OIE and Codex standards and guidelines to achieve them)
- Capacity building for all value chain actors with regards to meeting sanitary standards including good animal husbandry measures such as drug and residue management practices
- National level capacity building in risk analysis, import and transit inspection, and export health certification
- Technical capacity building to facilitate participation in international standard- setting (OIE and Codex)
- Mobilization and formation of regional ad hoc working groups to identify the most relevant international standards, assess the extent to which member States can comply with them, and make recommendations on the best way forward
- Encouragement and support for the accession to the OIE and Codex of those member States that have yet to join the standard-setting bodies
- Collective representation in relevant international organizations where their collective interest would be best served if they speak with one voice at these organizations, ideally through a single representative with an IGAD wide mandate.
- Promoting the acceptance of risk management approaches such as commodity-based trade and compartmentalisation to meeting sanitary requirements for trade



- Undertaking regular studies of relevant international standards, reviewing member States' approaches, strategies and capacities and recommending appropriate steps to achieve compliance
- Regional harmonization of animal identification and traceability based on international standards, leveraging on existing traditional animal identification systems
- Capacity building in animal identification and traceability

### 7.3.3 TADs and zoonoses

- The identification of 10 priority diseases provides a baseline for decision making and resource allocation. The efforts already undertaken through the SMP-AH project in developing SOPs for 9 these diseases could be leveraged on.
- Enhancement of national level disease surveillance and reporting capacities for effectiveness, transparency and epidemiological robustness.
- Harmonization and coordination of prevention and control efforts for TADs across the region, with an ecosystem risk-based targeting approach in order to save on limited resources and for maximum impact, including inter-sectoral collaboration in the control of zoonoses
- Collaboration among countries in identifying priority interventions and disease control measures in order to use limited resources for maximum regional impact, including pooling and sharing expertise, experience, training and other resources at regional level.
- Strengthening of national and regional capacity for disease control strategy formulation, prevention, early detection and rapid response
- Risk management of climate related animal diseases based on climate prediction models and surveillance (vector, virus and sentinel) systems and contingency plans. In the specific case of RVF, it is to be noted that outbreaks do not result from trade, but rather outbreaks of the disease impact on trade. Thus, trade should not be disrupted if proper measures are put in place to mitigate the risk of the spread of the disease through trade in animals and animal products.
- Improved enforcement of sanitary measures particularly livestock movement control
- Sensitisation and creation of awareness among value chain actors on timely disease reporting and compliance with zoo-sanitary measures
- Improved access to animal health care services in arid and semi arid areas including through public-private partnerships
- Establishment of minimum standards for veterinary service provision across the region that can be implemented through a combination of training and regulation

### 7.3.4 Macro-environment

- Sensitisation and awareness for peaceful co-existence among the different communities, enforcement of the rule of law, and community involvement in dialogue and peace initiatives

- Addressing the unacceptable social practice of cattle rustling by promoting gainful employment for the youth and disadvantaged groups.
- Making use of animal identification which besides its primary purpose of assisting in disease surveillance and control efforts is also useful in cases of livestock theft.
- Collection of data on economic significance of cross border livestock trade for evidence-based policy dialogue
- Regional harmonization of SPS policies, laws, regulations, and procedures
- Review of the law at national level and possibly law reform process with a view to developing a coherent, up to-date, complete, accessible and enforceable set of sanitary and food safety regulations for the livestock industry as well as addressing the problems of multiple and excessive taxation of the livestock sector and any other laws and practices that discourage business and investment in the sector.
- Provision of basic legal training to veterinarians serving in regulatory functions as well as to private sector people working in the livestock sector
- Encouragement and support for the accession to WTO of those member States that have yet to join the trade regulating organization
- Improvement of IGAD member States' negotiation skills with trading partners
- Harmonisation of national regulations on livestock trade including standardisation of cross-border trading procedures and documentation

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## ANNEXES

### Annex 1: Terms of Reference



## REGIONAL INTEGRATION SUPPORT PROGRAMME (RISP II) CONTINUATION

### TERMS OF REFERENCE (TORs) FOR:

#### **CONSULTANCY TO IDENTIFY AND MAP KEY CROSS-BORDER LIVESTOCK ROUTES AND MARKETS AND PRIORITY TRANSBOUNDARY ANIMAL DISEASES INCLUDING ZOOBOTICS FOR REGIONAL AND INTERNATIONAL TRADE**

#### **BACKGROUND INFORMATION**

##### Beneficiary Countries

IGAD - Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda

##### Contracting Authority

IGAD, Djibouti, REPUBLIC OF DJIBOUTI

#### **Introduction**

Economic integration in the Eastern and Southern Africa-Indian Ocean (ESA-IO) region is driven by the Common Market for Eastern and Southern Africa (COMESA), the East African Community (EAC), the Inter-Governmental Authority for Development (IGAD) and the Indian Ocean Commission (IOC) through a wide array of initiatives which aim at addressing both common issues such as trade, investment and supply-side constraints and sub-regional specificities as well as specific sectors such as renewable energy, bio-diversity and marine resources. COMESA and EAC are both in the process of harmonising trade, investment and macro-economic policies with the ultimate aim of establishing a fully fledged Common Market and a Monetary Union. The two organisations are also engaged, together with the Southern African Development Community (SADC), in the Tripartite Process, which aims at establishing a single market encompassing all their twenty-six Member Countries. IGAD is championing the Horn of Africa Initiative, which is an integrated response strategy to promote peace, security and development in the sub-region. IOC is leading on sustainable development programmes, especially aimed at island economies.

Since 2002, the four Regional Organisations have decided to join-up their efforts, through the Inter-Regional Committee (IRCC) in the programming and implementation of regional programmes and projects under the European Development Fund (EDF), with a view to improve coordination in the implementation of regional integration programmes, especially in order to

avoid the duplication of activities. The Regional Integration Support Programme (RISP) is one of the key regional economic integration programmes implemented under the 9th EDF following that principle. The purpose of the RISP was to develop the capacity of the ROs and their Member/ Partner States in policy formulation, implementation and monitoring of regional integration as well as multilateral and regional trade. The RISP was implemented jointly by COMESA and EAC and contributed significantly in furthering the integration road maps of the two organisations, namely by facilitating the launching of the COMESA Customs Union and the EAC Common Market in 2009.

The 10th EDF RISP Continuation aims at consolidating the achievements made through the 9th EDF while expanding support to all four Regional Organisations in contributing to the economic integration in the ESA-IO region. The RISP continuation focuses directly upon the agreed economic integration agenda of COMESA and EAC, by assisting the ROs in fulfilling their mandates of progressing towards FTAs and CUs. Through the IOC, the inclusion of island state specificity in the COMESA agenda will be ensured, while IGAD's functional cooperation programme in support of the Regional Integration agenda of the ESA region will also be included.

The programme is expected to achieve six results to attain its specific objective:

- **RESULT 1:** Regional policies and regulations for the implementation of the regional integration mandates and agenda are designed and/or adjusted;
- **RESULT 2:** Trade development, trade facilitation instruments and strategic, regulatory and technical preparatory works of trade related infrastructure designed and/or adjusted;
- **RESULT 3:** Regional institutions established and strengthened to implement and monitor regional policies and regulations, including institutions that service private sector at regional level;
- **RESULT 4:** Management capacities of the ROs improved to meet international recognised standards of governance;
- **RESULT 5:** Member/Partner States capacity to address trade related issues and to implement their trade liberalisation and regional integration commitments is enhanced;
- **RESULT 6:** Capacity of the region to negotiate and implement multilateral trade agreements is enhanced.

As a regional institution, the proposed IGAD Centre for Pastoral Areas and Livestock Development (ICPALD) will be established under result 3. The proposed study to "Identify and map key cross-border livestock routes and markets and priority trans-boundary animal diseases including zoonotics for regional and international trade" is required to support IGAD member states in determining the adequacy of the existing policies, laws, services and facilities supporting/ facilitating cross border livestock trade and to identify obstacles and appropriate responses to the threat of spread of priority animal diseases.

## Background

The major development challenges in IGAD arid and semi arid areas is the inability of MS to invest adequately in key productive sectors including livestock and dryland agriculture while promoting to sustainable management of natural resources. In addition the IGAD region is faced with twin challenges of demonstrating good performance in managing and improving the contribution of livestock sector to the national economy in one hand and the welfare and livelihood of herders in other hand. The existing structure of the livestock marketing is based upon an interwoven

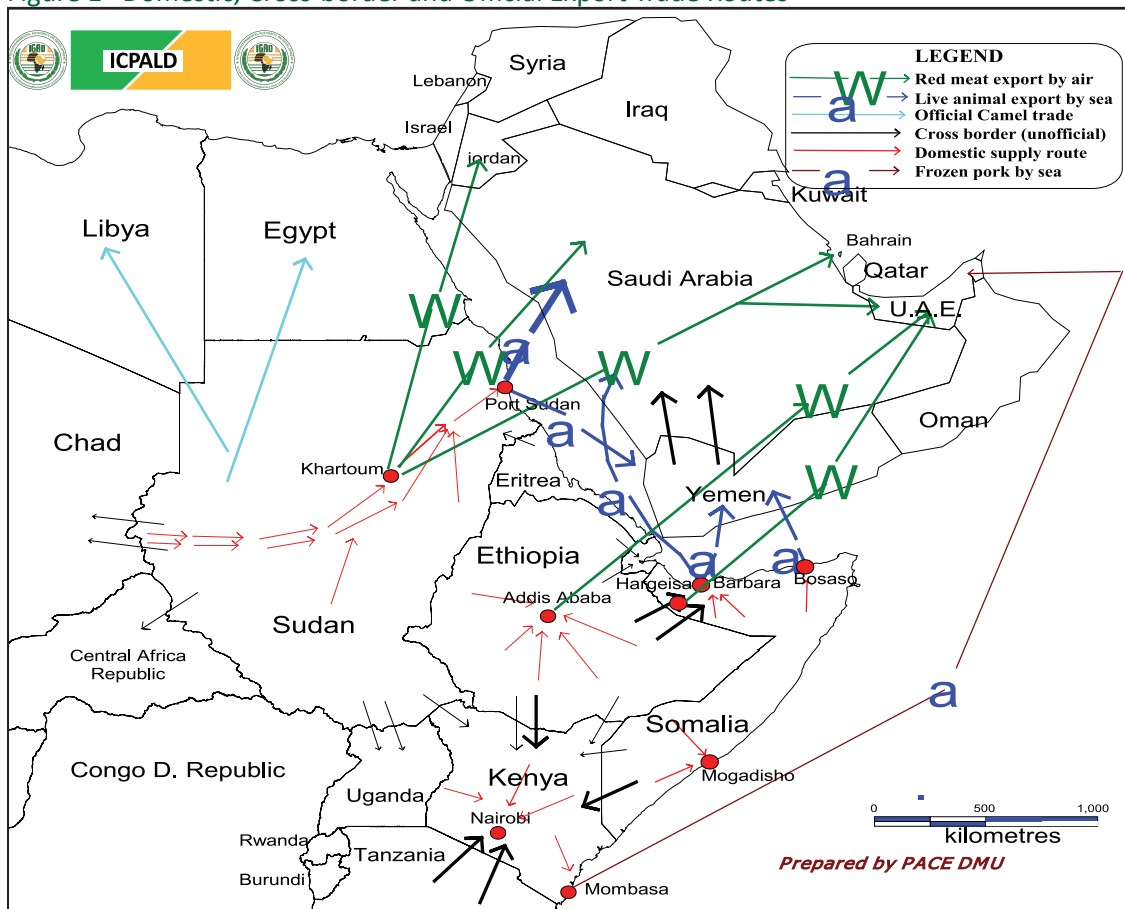
matrix of primary markets at the village level, secondary markets at the local town/district level, and terminal markets (in major towns/cities) for final domestic sales or exports. Marketing margins are extremely high because of the inadequate infrastructure and poor organization and under development. Poor transportation infrastructure impedes the movement of livestock and livestock products from producer centres to urban markets. The long chain of middlemen together with informal and formal levies and taxes imposed on by the local authorities and other entities erode most of the producers' market share of profit. In addition, there is often inadequate provision of cold storage facilities at urban markets, poor markets distribution and organization.

Local, regional and international trade in livestock and livestock products has historically been an important source of local and foreign exchange for IGAD member states. It has been observed overtime that the degree of stimulus provided by regional and international export markets significantly affects the rate and degree of livestock development in the member states. The expected long-term trend in total world demand for livestock and livestock products is for increased demand except for products from countries where livestock is subject to sanitary restrictions because of trans-boundary animal diseases (TADs) including zoonosis. In addition, the cyclical swings in livestock demand and supply, which are likely to be exacerbated by climate-related diseases (e.g. outbreak of recent rift valley fever) and unsound regional (and MS) policies may increase risk, discourage output and reduce competitiveness of livestock and products from IGAD MS.

In the world where traditional marketing channels with ad hoc sales are being gradually replaced by coordinated links among pastoralists, processors, retailers and others require well coordinated policies it is important that IGAD member states are informed of the key cross-border livestock routes and markets and priority animal diseases in the IGAD region and the facility and service gaps that need to be addressed to ensure that the animals traded locally, regionally and internationally do not threaten host populations and meet the required regional and international zoo-sanitary standards. The Sanitary and Phytosanitary (SPS) Agreement, finalized with the establishment of the World Trade Organization (WTO), seeks to ensure that quarantine regulations are not used to unfairly to protect domestic producers. It is thus important that the key cross-border livestock routes and markets and priority animal diseases in the IGAD region are mapped to show the available animal health services and facilities to inform resource (human, physical and financial) allocation for animal disease control and trade by IGAD and Member States (see Fig. 1). Given the great economic potential of livestock in the IGAD region, member states will find effective surveillance and control of trans-border diseases attractive in the future. Such collective action would benefit all the producers of all MS through access to regional and international markets. In this regard IGAD is seeking an external consultant who will "Identify and map key cross-border livestock routes and markets and priority trans-boundary animal diseases including zoonotics for regional and international trade".



Figure 1 Domestic, Cross-border and Official Export Trade Routes



## OBJECTIVES & EXPECTED RESULTS

### Overall Objective

The overall objective is to “Identify and map key cross-border livestock routes and markets and priority trans-boundary animal diseases including zoonotics for regional and international trade”. The results of this study are required to support IGAD member states in determining the adequacy of the existing policies, laws, services and facilities supporting / facilitating cross border livestock trade and to identify obstacles and appropriate responses to the threat of spread of priority animal diseases.

### Specific Objective

The specific objectives are as follows:

1. Provide key stakeholders with a clear picture of the key cross-border livestock routes and markets and priority trans-boundary animal diseases including zoonotics for regional and international trade to inform debate and decision making and resource allocation at regional and national levels,
2. Highlight the key risks to cross-border regional trade in livestock and livestock products, and prioritize data requirements for monitoring and evaluating security of the trade,
3. Describe the current institutional, policy, legal and normative framework supporting regional trade in livestock and livestock products, noting strengths as well as weaknesses,

4. Drawing on global best practices, assess the capacity of key formal and informal structures (ministries, agencies, partners, communities, among others) to develop, administer and implement effectively, monitor and evaluate regional livestock trade protection responsibilities,
5. Identify and prioritize opportunities to improve service delivery and
6. Develop a draft proposal with a budget to address the prioritized opportunities (5 above).

### Proposed Methodology and Approach

The consultant will develop the methodology and approach to undertake the assignment while taking into account principles of conflict, environment and gender sensitivity and responsiveness; partnership; subsidiarity and complementarity; and how the recommendations will be aligned to IGAD's global strategy. The consultant will also take the lead in facilitating the 2-days consultative workshop to receive and validate the report. Although the exact process will be finalized during the inception period ahead of the validation workshop in consultation with the consultant, the outline for the process is as follows:

- General familiarization with programmes and projects of Divisions of IGAD, ICPALD and IGAD satellite organs including review of organizational documents and meetings with key staff
- Develop workshop methodologies and materials in conjunction with ICPALD management.
- Ensure that Workshop must be participatory and must be designed to provoke critical review and thinking amongst the participants,
- Compilation of workshop report

The lead consultant, in consultation with the ICPALD Coordinator, will prepare the workshop programme, facilitate the workshop and produce workshop documentation.

### Specific tasks are:

- Design a process for facilitating the workshop to generate agreed outputs
- Work with the ICPALD Coordinator to develop a workshop program and working document(s)
- Facilitate the workshop in one of the IGAD member states
- Document the proceedings and prepare an edited workshop report
- Produce a report after the workshop

### Expected Outputs

The following are the expected outputs:

- Inception, draft and final reports
- An interactive map(s) showing the key cross-border livestock trade routes, markets and the associated services and facilities and priority animal diseases,
- Staffing and training needs to support an effective animal identification and health and certification system at key cross-border markets clearly indicating MS institutions that can be tasked to meet this need
- A draft proposal addressing the priority areas identified including an indication of the cost of not investing additional resources (maintaining the status quo).

## LOGISTICS AND TIMING

### Location

The consultancy service is a mix of desk-based work and field missions at IGAD in Djibouti and countries where needed.

### INDICATIVE PLANNING

- Commencement date: Beginning 15 September 2012
- Period of implementation: 3 month (non-continuous)
- Foreseen end date: 15 December 2012

Project management

The Intergovernmental Authority on Development (IGAD), Djibouti, REPUBLIC OF DJIBOUTI

The consultant will liaise with the IGAD (Contact: IGAD RISPII Coordinator, Mr Yufnalis Okubo, [Yufnalis.okubo@igad.int](mailto:Yufnalis.okubo@igad.int) and Procurement Officer, [igad@igad.int](mailto:igad@igad.int)) for initial briefing and any other required information and possible support during the implementation of the assignment. Facilities to be provided by the Contracting Authority

IGAD will provide appropriate facilities (furnished office space, Internet connection, backstopping and secretarial support for travels and mission) at its Headquarters in Djibouti, REPUBLIC OF DJIBOUTI.

### Other

- Travel expenses (air ticket and per diems) agreed by the RISP II Coordinator will be arranged and paid directly by the Imprest Account of the Workplan of the RISP II project in accordance with prevailing EDF rules and Regulations. Exceptionally the travel may be pre-financed by the contractor but only upon prior agreement by the Supervisor on itinerary and costs notwithstanding that all EDF rules and regulations will have been observed for the claim to be receivable.
- The same arrangements also apply for any meeting or workshop deemed necessary during the course of the expertise; its logistics and costs will be organized and financed by the IGAD Secretariat.
- The Provision for expenditure verification for this contract is not required.

## REQUIREMENTS

Key experts

The Consultancy will comprise of 1 Senior Team leader for a total of **65 man-days** during the period 15 September 2012 – 15 December 2012.

Key Expert 1: Team Leader

The profile of the experts should be as follows:

## Qualifications and skills

- Master's Degree or equivalent in veterinary science / animal health, veterinary economics or related fields
- Knowledge and experience of using participatory approaches
- Strong analytical skills
- Excellent communication skills and fluency in English

## General professional experience

- A proven successful track record in writing national and regional strategies and policies
- Proven experience in the /youth sector; particularly at the programming and policy level
- Experience in conducting and facilitating TADs and zoonotics priority setting with national, regional and international organizations
- Good inter-personal skills and able to negotiate shared positions.
- Have Practical knowledge of inter-disciplinary development

## Specific professional experience

- At least 5 years work experience in the livestock programming and policy development
- Strong understanding of development and humanitarian needs and issues of the IGAD region having worked in at least three of the eight IGAD Member states.

## REPORTS & DELIVERABLES

### Reporting requirements

The following reports must be produced:

- Inception Report - 15 days after signing of the contract
- Draft Report - end-November 2012
- Validation Meeting Report – 7 days after the workshop
- Final Report - 14 days after the validation workshop and all comments received from Contracting Authority

### Language

The draft report is to be presented in English and the final report in English.

### Number of report(s) copies

- Six (6) copies in both electronic and hard copy formats
- A hard copy will only be enclosed by the consultancy firm / expert with its/his invoice.

Reports will be edited electronically using MS® WORD and MS® EXCEL and will be provided in non-protected editable formats.

The Project Manager is responsible for approving the reports.

## Annex 2: List of Persons Met

NAME	COUNTRY	DESIGNATION	EMAIL
Dr. John Kinisio	South Sudan	Director General, Veterinary services	<a href="mailto:winapa89@yahoo.ik">winapa89@yahoo.ik</a>
	South Sudan	Director, Disease and Vector Control	<a href="mailto:alumaraaba@yahoo.com">alumaraaba@yahoo.com</a>
Dr. Aluma Araba	South Sudan	Director, Disease and Vector Control	<a href="mailto:alumaraaba@yahoo.com">alumaraaba@yahoo.com</a>
	South Sudan	Deputy Director, Disease and Vector Control	<a href="mailto:tabatereke@yahoo.com">tabatereke@yahoo.com</a>
Dr. Alor Kwaja Kuol	South Sudan	Deputy Director, Epidemiology	<a href="mailto:alorkwaja@yahoo.com">alorkwaja@yahoo.com</a>
	South Sudan	Senior Inspector, Investment and Planning	<a href="mailto:ladoloyugu@yahoo.com">ladoloyugu@yahoo.com</a>
Dr. Taban Tereka Matia	South Sudan	Deputy Director, Disease and Vector Control	<a href="mailto:tabatereke@yahoo.com">tabatereke@yahoo.com</a>
	South Sudan	IGAD/MARF Veterinary Officer	<a href="mailto:jmosabi@yahoo.com">jmosabi@yahoo.com</a>
Dr. Harun K Kirigia	South Sudan	CSSO Veterinary Officer	<a href="mailto:hkkirigia@yahoo.com">hkkirigia@yahoo.com</a>
	Sudan	Director General, Animal health & Epizootic Disease Control	<a href="mailto:Khidirfaki59@hotmail.com">Khidirfaki59@hotmail.com</a>
Dr. John N Lado	South Sudan	Senior Inspector, Investment and Planning	<a href="mailto:ladoloyugu@yahoo.com">ladoloyugu@yahoo.com</a>
	Sudan	Technical Officer, Office of the Under-Secretary	<a href="mailto:elhamalsayed@yahoo.com">elhamalsayed@yahoo.com</a>
Dr. John Kang Gang	South Sudan	Deputy Director, Animal Production	<a href="mailto:johnkanggangyatyat@yahoo.com">johnkanggangyatyat@yahoo.com</a>
	Sudan	Head of Epidemiology	<a href="mailto:Fatihrahman89@yahoo.com">Fatihrahman89@yahoo.com</a>
Dr. Joseph M Mosabi	South Sudan	IGAD/MARF Veterinary Officer	<a href="mailto:jmosabi@yahoo.com">jmosabi@yahoo.com</a>
	Sudan	Epizootic Disease Control	<a href="mailto:amirajawish@yahoo.com">amirajawish@yahoo.com</a>
Dr. Kamal	Sudan	Under-Secretary, ministry of Livestock, Fisheries and Rangelands	
Dr. Khidir Elfati	Sudan	Director General, Animal health & Epizootic Disease Control	<a href="mailto:Khidirfaki59@hotmail.com">Khidirfaki59@hotmail.com</a>
	Ethiopia	Director General- Marketing	
Dr. Ahmed M Shildeldin	Sudan	Director General, Animal Production	
Dr. Elham Alsayed Merghani	Sudan	Technical Officer, Office of the Under-Secretary	<a href="mailto:elhamalsayed@yahoo.com">elhamalsayed@yahoo.com</a>
	Ethiopia	epidemiologist	<a href="mailto:yismayehu@gmail.com">yismayehu@gmail.com</a>
Dr. Isam Abdel Mageed	Sudan	Director of Epizootics	<a href="mailto:isammageed@hotmail.com">isammageed@hotmail.com</a>
	IGAD/ Djibouti	Agriculture & Environment Division	<a href="mailto:Tegueste.shimelis@igad.int">Tegueste.shimelis@igad.int</a>
Dr. Elfatih-Ahmed Abdirahman	Sudan	Head of Epidemiology	<a href="mailto:Fatihrahman89@yahoo.com">Fatihrahman89@yahoo.com</a>
	Djibouti		<a href="mailto:Blouce_54@hotmail.com">Blouce_54@hotmail.com</a>
Dr. Nada Mohammed Hassan	Sudan	Epizootic Disease Control	<a href="mailto:nadamrvet@yahoo.com">nadamrvet@yahoo.com</a>
Dr. Amira Awad Salih	Sudan	Epizootic Disease Control	<a href="mailto:amirajawish@yahoo.com">amirajawish@yahoo.com</a>
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Dr. Amira Obied Yousif	Sudan	Epizootic Disease Control	<a href="mailto:amirayo@yahoo.co.uk">amirayo@yahoo.co.uk</a>
	Kenya	Department of vet services	
Mr. Fetu	Ethiopia	planning	
Mr. Geday	Ethiopia	Director General- Marketing	

Mr Henok	Ethiopia		
Dr. Alemayehu Mekonnen Anbessie	Ethiopia	Senior Veterinarian, Quarantine	<a href="mailto:Alemalemayehu22@gmail.com">Alemalemayehu22@gmail.com</a>
	Kenya	Livestock marketing services division (LMSD)	<a href="mailto:mainalmd@yahoo.com">mainalmd@yahoo.com</a>
Dr.Yismayehu	Ethiopia	epidemiologist	<a href="mailto:yismayehu@gmail.com">yismayehu@gmail.com</a>
	Kenya	Livestock-trader Moyale / official of Livestock traders assoc	Tel. 0712136323
Dr. Mesfin Sahle Forsa	Ethiopia	Centre Director, Sebeta	<a href="mailto:Mesfins99@gmail.com">Mesfins99@gmail.com</a>
	AU-IBAR/ Kenya	Chief Animal health Officer	<a href="mailto:baba.soumare@au-ibar.org">baba.soumare@au-ibar.org</a>
Mrs. Tegeste Shimelis	IGAD/ Djibouti	Agriculture & Environment Division	<a href="mailto:Tegeste.shimelis@igad.int">Tegeste.shimelis@igad.int</a>
	AU-IBAR/ Kenya	VetGov Project coordinator for IGAD Region	<a href="mailto:samuel.wakhusama@au-ibar.org">samuel.wakhusama@au-ibar.org</a>
Mr. Warsama Osman Ahmed	Djibouti	Technical adviser, Ministry of Agriculture	<a href="mailto:warsamaosman@gmail.com">warsamaosman@gmail.com</a>
Mr. Ismael Elmi Habaneh	Djibouti		<a href="mailto:Blouce_54@hotmail.com">Blouce_54@hotmail.com</a>
Dr.Moussa Ibrahim Cheick		CVO	<a href="mailto:pace@intnet.dj">pace@intnet.dj</a>
Dr. Yonis Mahamoud Adar			
Dr. Said Waiss			
Dr. Nicholas Kauta	Uganda	CVO	<a href="mailto:nicholaskauta@yahoo.co.uk">nicholaskauta@yahoo.co.uk</a>
Dr. Robert Mwebe	Uganda	Epidemiologist	<a href="mailto:wmeberoberobert@yahoo.com">wmeberoberobert@yahoo.com</a>
Dr. William maritime	Kenya	Department of vet services	
Dr. Manga	Kenya	Department of vet services	
Dr. Bernard Moenga	Kenya	Department of vet services	<a href="mailto:bomoenga@yahoo.com">bomoenga@yahoo.com</a>
Dr. I. M Rashid	Kenya	DVO Garissa	<a href="mailto:siyatonle@ymail.com">siyatonle@ymail.com</a>
Dr. Ekhuya Amutete	Kenya	DVO Moyale	<a href="mailto:eamutete@gmail.com">eamutete@gmail.com</a>
Mr. John Maina	Kenya	Livestock marketing services division (LMSD)	<a href="mailto:mainalmd@yahoo.com">mainalmd@yahoo.com</a>
Mr. Kalicha Wario	Kenya	KLMC	<a href="mailto:klmc@livestockcouncil.or.ke">klmc@livestockcouncil.or.ke</a> ; <a href="mailto:livestockcouncil@gmail.com">livestockcouncil@gmail.com</a>
Mr. Galma Boye Taffi	Kenya	Livestock-trader Moyale / official of Livestock traders assoc	Tel. 0712136323
Mr Tom Kinara	Kenya	LMSD	<a href="mailto:tkinara@yahoo.com">tkinara@yahoo.com</a>
Dr. Baba Soumare	AU-IBAR/ Kenya	Chief Animal health Officer	<a href="mailto:baba.soumare@au-ibar.org">baba.soumare@au-ibar.org</a>
Dr. Hiver Boussini	AU-IBAR/ Kenya	Animal health Officer	<a href="mailto:hiver.boussini@au-ibar.org">hiver.boussini@au-ibar.org</a>
Dr. Sam Wakhusama	AU-IBAR/ Kenya	VetGov Project coordinator for IGAD Region	<a href="mailto:samuel.wakhusama@au-ibar.org">samuel.wakhusama@au-ibar.org</a>

## Annex 3: List of Validation Workshop Participants



VALIDATION WORKSHOP ON KEY CROSS-BORDER LIVESTOCK ROUTES, MARKETS AND PRIORITY ANIMAL DISEASES FOR REGIONAL AND INTERNATIONAL TRADE, (JUBA, JUNE 20-21, 2013)

	Name	Telephone	Email	20 <sup>th</sup> June, 2013	21 <sup>st</sup> June, 2013
	1. Dr. ABAKAR RAJAB	0922246097	abulcarrajab@yahoo.com	✓	✓
	2. Abdul Monium Osman	09 332 4225	abulmonium@gmail.com	✓	✓
BO964339	3. Dr Kauta Nicholas	0772 679257	nicholaskauta@yahoo.com	✓	✓
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CO138471	5. Dr. Elfatih Ahmed AlRahman	+249912699233	fatihrahman89@yahoo.com	✓	✓
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A1929304	13. PALICHA WARIO	+25472536799	palichagufu@yahoo.com	✓	✓
	14. Shibeshi Teshome	251-911 936070	Shiky@yahoo.com	✓	✓
EPI330178	15. Bewket Siraw	251-93533876	besiad123@gmail.com	✓	✓
EPI370618	16. Teshome Bekede	251-911360655	tesha.mdr26@yahoo.com	✓	✓



	Name	Telephone	Email	20 <sup>th</sup> June, 2013	21 <sup>st</sup> June, 2013
16.	KELIFA Hussien NBSIRO	+251 911116049	kelifa_hussien@yahoo.com		
17.	Jacob M. Konk	+211 95242879	Jacobkonk@yahoo.com		
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20.	AMEHA SEBSIBE	+254 721233045			
21.	Dr. Abdi Mahamud	00253 77764644	ame-vp1@wmail.ca		
22.	Dr. Sowda Mahamud Roble	+252618131410	Sowda.roble@yahoo.com		S. Roble
23.	Alhassan Ali Hassan	+252615524112	hassan185@hotmail.com		
24.	Ameha Sebsibe		ameha.sebsibe@igad.int		
25.	Christin Jephie		christin.jephie@igad.int		
26.					
27.					
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35.					

## Annex 4: veterinary Diagnostic Laboratories

Country	Main (central) diagnostic laboratories	Regional diagnostic laboratories	Satellite diagnostic laboratories
Djibouti	Central laboratory in City of Djibouti	None	None
Ethiopia	Sebeta	Mekele, Semra, Dire Dawa, Jijiga, Hirna, Asela, Yabelo, Soddoo, Mizan Tefari, Bedele, Asosa, Kombolcha, Bahr Dar	None
Kenya	Kabete and Embakas	Kericho, Eldoret, Nakuru, Karatina, Garissa and Mariakani	Isiolo, Lodwar, Witu and Ukunda
Somalia	None	Haregeisa and Galkayu	Beletweyn, Mogadishu and Baidoa
South Sudan	Juba	Malakal and Wau	
Sudan	CVRL and ELISA labs in Khartoum	Kadagli, Abu-Jebaiha, Efula (South Kordofan), Rabek (White Nile), Damazin (Blue Nile), Kassala (Kassala), Gedarif (Gedarif), Port Sudan (Red Sea), Nyala and El-Radoum (South Darfur), Elfashir (North darfur), Geninia (West Darfur), Atbara (River Nile), Dongola (Northern State), Medani (Gezira), Sennar (Sennar), Soba and ELISA (Khartoum)	
Uganda	Entebbe	None	Mbale, Mbarara, Rakai, Kiboga, Soroti, Kitgum, Moroto

## Annex 5: Quarantine Stations

Country	Quarantine station	City / town where located
Djibouti	Damerjog	Outskirts of City of Djibouti
Ethiopia	Jijiga (2)	Jijaga
	Dire Dawa	Dire Dawa
	Mile (2)	Mile
	Adama	Adama
	Addis Ababa	Addis Ababa
	Metema	Metema
Kenya	Sirma on Ol Pejeta Ranch	Laikipia County
Somalia	Berbera	Berbera
	Bosaso	Bosaso
	Mogadishu	Mogadishu
South Sudan	None	
Sudan	Hamrat	Hamrat
	Elsheikh	Elsheikh
	Elshwak	Elshwak
	Khartoum Airport	Khartoum
	AllKadaro	Khartoum
	Kassala	Khartoum
	Barber	Barber
	Dongola	Dongola
	Sawakin	Sawakin/ Port Sudan
	Wadi Halfa	Wadi Halifa
Uganda	None	

## Annex 6: Export Slaughter Houses

Country	Slaughter-house	City / town where located
Djibouti	First one is under construction	Djibouti
Ethiopia	Luna Export Slaughter House,	Modjo
	Modjo Modern Export Kera Plc	Modjo
	Organic Meat Export Private Limited	Modjo
	Elfora Agro Industries Private Limi,	Debrezeit
	Elfora Metehare	Metehare
	Hashim Nuru Jiru Private Limited Co,	Debrezeit
	Abergelle International Livestock	Mekele
	Asheref Agricultural and Industrial PLC	Bahirdan
	Melgawondo	Wondogenet
Kenya	Farmers Choice Butchery	Nairobi
	Choice Meat Butchery	Nairobi
	Kenchic Ltd	Nairobi
	Kenya Meat Commission	Athi River
	Mombasa Slaughter House	Mombasa
	Quality Meat Packers	Nairobi
Somalia	2 in Mogadishu	Mogadishu
	2 in Galkayo	Galkayo
	1 in Burao	Burao
	1 in Belet-Weyne	Bele-Weyne
South Sudan	None	
Sudan	Alkadaro	Khartoum
	Ghanawa	Khartoum
	Alsabalowga	Khartoum
	National Karari	Khartoum
	Attbara	Attbara
	Gedarif	Gedarif
	Nyala	Darfur
Uganda	None	





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### 1.3 Export slaughter houses

Slaughter House	Volumes of export in 2010	Volumes of export in 2011	Volumes of export in 2012
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2. You are provided with a large (A1 Size) simple administrative map showing some major towns and roads of your country.

2.1 Using the map, locate (by Sketch) the livestock markets and trading routes indicating the origins, and destination of livestock in your country. Use the key as shown in the table below.

		Key to use
Markets	Secondary	●
	International Cross-border Points	★
	Tertiary Market	■
Trading Routes*	Minor trading route (Primary/ Secondary)	
	Major trading route (Tertiary)	

\*where animals are moved on foot, please use a dotted line- whether primary or secondary

2.2 Use another copy of the map to sketch dry season grazing / migratory patterns, including the names of the various destinations/grazing locations and the watering points along the migratory routes

**3. National priority diseases**

**3.1 Please list your country’s priority trans-boundary animal diseases, stating the intervention policy and legal supporting instruments where applicable (if feasible, please attach a copy)?**

Disease	Policy	Legal instrument(s)
1		
2		
3		
4		
5		

Please provide any additional information pertaining policy implementation including the level of implementation in respect of each of the above diseases (please attach more paper if space provided below is insufficient)

If vaccination is part of the policy, specify whether it is free, cost-shared or fully commercial

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For each of the priority diseases, show on a map of your country by administrative units, the disease status (endemic, epizootic or free (presumed free). Colour codes: Endemic- red; epizootic- yellow and free- no colour

**3.2 Please list your country’s priority zoonotic diseases, stating the intervention policy and legal supporting instruments where applicable (if feasible, please attach a copy)?**

Disease	Policy	Legal instrument(s)
1		
2		
3		

Please provide any additional information pertaining policy implementation including the level of implementation in respect of each of the above diseases (please attach more paper if space provided below is insufficient)

If vaccination is part of the policy, specify whether it is free, cost-shared or fully commercial

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For each of the zoonotic diseases, show on a map of your country by administrative units, the disease status (endemic, epizootic or free (presumed free). Colour codes: Endemic- red; epizootic- yellow and free- no colour

**4. Please indicate the countries you have traded with, in the last three (3) years as per the tables below.**

**4.1 Countries you have exported to**

Country	Animals/ products*	Quantity/ Volumes		
		2010	2011	2012

\* For each animal species or commodity, please use a different row

Please attach a sample copy of the sanitary requirements by the trading partner (importing country) for each animal species/ commodity

**4.2 Countries you have imported from**

Country	Animals/ products*	Quantity/ Volumes		
		2010	2011	2012


\* For each animal species or commodity, please use a different row

Please attach a sample copy of your sanitary requirements to exporting countries for each animal species/ commodity

#### 4.3 Please address the following questions on market information system

Type of livestock market information system in country/ region	Type of information collected, analysed and disseminated	Who is the target audience?	How is information disseminated?

#### 4.4 Types and sources of livestock marketing information needed by different actors

Actors	Type of information	Source of information
Traders		
Transporters		
Exporters		

### 5. Risks to cross-border trade

#### 5.1 Please use the table below to list and explain the main challenges/ risks to cross-border regional trade in livestock and livestock products?

Main category of challenge	Sub-category	Explanation


**5.2 What are the priority data requirements for monitoring and evaluating security of the trade (minimizing SPS/disease related risks etc)?**

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**6. For each of the key international cross-border points/ markets (refer to question 1.1), Please address the following.**

Name of cross-border market	Is it approved by the government as a Border Inspection Post (BIP)? YES/NO	Is BIP under the authority of an official veterinarian who is responsible for health checks on incoming consignments? YES/ NO	Does your country carry out health certification for animals and animal products that are traded at the cross-border market and exported to the neighbouring country? YES/ NO	If the answer to previous column is YES, is it conducted by the national competent authority? YES/ NO	If the answer to previous column is NO, who does health certification and why


What staffing and training needs do you consider necessary for an effective animal health certification system for cross-border trade? Please indicate the training institutions in your country or otherwise that could be tasked to meet the needs --

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**7. Do you have an animal identification system in place, particularly at cross-border markets and /or in border areas of your country in general? (Y/N)**

If yes, what method(s) do you use? -----  
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What training and staffing needs do you consider necessary to support effective animal identification at key cross-border markets? Please indicate the training institutions in your country or otherwise that could be tasked to meet the needs -----

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**8. Please provide information on the status of facilities and services at each key cross-border point (refer to question (1.1) - use a separate table for each key cross-border point/market**

Name of key cross-border market: -----

Type of facility/ service	Available (Yes / No)	If yes, status (poor, fair or very good)	Needed action to improve/ enhance service/ facility
Fencing/ security			

Water			
Fodder			
Sheds			
Disposal sites in case of deaths			
Loading ramps			
Market price information monitoring			

**9. Please list the veterinary infrastructure in your country according to four main categories (Veterinary offices/ posts, veterinary diagnostic laboratories, quarantine stations and vaccine production centres) and provide the necessary data as requested in the tables below.**

**9.1. Veterinary field services**

Region/County/Province/State*	Number of vets	Number of paravets	Livestock estimates by species**	National priority diseases usually present*

\* Use the most convenient unit/aggregate applicable to your country for purposes of TADs control

\*\* For these two columns, please create enough rows to fit the number of species being considered

Please provide any additional information on veterinary field services/ disease control

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**9.2 Veterinary Diagnostic Laboratories**

Diagnostic laboratory	Location (Region/County/Province/State)	Commonly diagnosed priority diseases

Please provide any additional information on diagnostic laboratoriers

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**9.3 Veterinary Quarantine stations**

Quarantine station	Diseases tested for, by species	Number of animals passed through (January 2010 to date) - by species	If terminal quarantine station, indicate the export destination(s)

Please locate the quarantine stations on a map and show the direction of animal movement, including means of transport

Please provide any additional information on quarantine stations

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**9.4 Vaccine production Centres**

Vaccine Centre	Location (Region/County/Province/State)	Vaccines produced	Annual capacity

Please provide any additional information on vaccine production


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**10. What services do federal, state and local governments offer for the taxes/ levies derived from livestock?**

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## IGAD Nations

Created by Arab Atlas 



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