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# TRADE HUB AND AFRICAN PARTNERS NETWORK

## VALUE CHAIN ASSESSMENT REPORT: SMALL RUMINANTS

Contact No.: AID-624-C-13-00002-00

May 2014

This publication was produced for review by the United States Agency for International Development. It was prepared by Abt Associates Inc. for the Trade Hub and African Partners Network.

**Recommended Citation:** Trade Hub and African Partners Network. “Value Chain Assessment Report: Small Ruminants.” Prepared for the Trade Hub and African Partners Network by Abt Associates Inc., Bethesda, MD, in collaboration with J.E. Austin Associates, Arlington, VA, May 2014.

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### **DISCLAIMER**

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development (USAID) or the United States Government.

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# ACRONYMS

AARA	Regional Food Security and Agricultural Agency
AGDP	Agricultural Gross Domestic Product
ASF	Animal Source Foods
ATP	Agribusiness and Trade Promotion
AU-IBAR	African Union-Interafrican Bureau for Animal Resources
BCEAO	Central Bank of West African States (BCEAO)
BDS	Business Development Services
BMS	La Bank Malienne de Solidarité
BNDA	Banque Nationale de Developpement Agricole
CAADP	Comprehensive Africa Agricultural Development Program
CAHW	Community Animal Health Worker
CBO	Community Based Organization
CBPP	Contagious Bovine Pleuropneumonia
CBT	Commodity Based Trade
CILSS	Comite Inter-Etats de Lutte contre la Secheresse dans le Sahel
COBAS	Commercialisation du <i>Bétail pour l'Approvisionnement de l'Abattoir de Sikasso</i>
CONFENABVI	Confederation des Federation Nationales de la Filiere Betail Viande
COMESA	Common Market for Eastern and Southern Africa
CORAF	Conference of African and French Leaders of Agricultural Research Institutes
CSM	Cotton seed meal
CVL	Central Veterinary Laboratory
CVO	Chief Veterinary Officer
DNPIA	Direction Nationale des Productions et des Industries Animales
DOD	Department of Defense (USA)
E-ATP	Expanded - Agricultural Trade Program
ECOFIL	Economie des Filières
ECOWAP	ECOWAS' Agricultural Policy
ECOWAS	Economic Community of West African States
ECTAD	Emergency Center for Transboundary Animal Diseases
EISMV	L'Ecole Inter Etats des Sciences et Médecine Vétérinaires de Dakar
ERL	Endemic Ruminant Livestock
ETL	Trade Liberalization Scheme of ECOWAS
EU	European Union
FAO	Food and Agriculture Organization
FCFA	West African Currency Franc
FEBEVIM	Fédération des Eleveurs de la Filière Bétail et Viande au Mali
FIDA	International Fund for Agricultural Development
FMD	Food and Mouth Disease
FtF	Feed the Future
FMD	Foot and Mouth Disease
GALVmed	Global Alliance for Livestock Veterinary Medicine and Diagnostics
GDP	Gross Domestic Product
GMM	Grand Moulin du Mali
GOM	Government of Mali
HA	Hectare
HPAI	Highly Pathogenic Avian Influenza
HUICOMA	Huilerie et Cotonnerie Maliene
ICT	Information and Communication Technology
IER	Institut d'Economie Rurale

IFDC	International Fertilizer Development Corporation
IGAD	Intergovernmental Authority for Development
ILRI	International Livestock Research Institute
IPR	Institute Polytechnique du Rurale
IRAM	Institute for Research and Applied Development
LCC-CRSP	Livestock Climate Change – Collaborative Research Support Program
LCV	Laboratoire Central Vétérinaire
LMIS	Livestock Marketing Information Service
LNA	Laboratoire de Nutrition Animale
LTC	Livestock Technical Committee
MLPI – 2	Mali Livestock and Pastoralist Initiative – 2
MMT	Millions of metric tons
MOLAF	Ministry of Livestock, Aquaculture and Fisheries
MMT	Millions of Metric Tons
NEPAD	New Partnership for Africa’s Development
NGO	Non-Government Organization
NTB	Non-tariff Trade Barriers
ODC	Other Duties and Charges
OIE	Organization International Epizootic (also WAHO-World Animal Health Organization)
OMA	Observatoire des Marche Agricoles
PADESO	Programme d’Appui au Développement Durable de l’Elevage au Sahel Occidental
PAFASP	Programme d’Appui
PCDA	Programme de Compétitivité et Diversification Agricoles
PIF	Partners in International Finance
PPR	Peste des Petite Ruminants
PROGEBE	Projet Regionale de Gestion Durable du Betail Ruminant Endémique
PTF	Financial International Partners
PVS	Performance Vision and Strategy (OIE)
RAHC	Regional Animal Health Center
RC	Regional Commission
REC	Regional Economic Commission
SACCO	Saving and Credit Cooperative
SADC	Southern Africa Development Commission
SNV	The Aid Organization of The Netherlands
S/R	Small Ruminants
SUKALA	Sucrerie de Kala Supérieur
SYNOBOACI	Conseil National des Sages de la Filiere Betail Viande in Abidjan
SYNABCCI	Syndicate National des Bouchers et Charcutiers de Cote d’Ivoire
TAD	Trans-boundary Animal Disease
TB	Tuberculosis
UEMOA	Union Economique et Monetaire de l’Afrique de l’Ouest
USAID	United States Agency for International Development
USAID/WA	USAID’s West Africa Regional Office
USDA-APHIS	US Department of Agriculture – Animal and Plant Health Inspection Service
VAT	Value-Added Tax
VCA	Value Chain Approach

# ACKNOWLEDGEMENTS

The following people contributed to the preparation of this report: Dr. Seydou Sidibe (researcher and author), Martin Webber, and Bill Noble. Editing support was provided by Deborah Dangay, Victoria Okoye and Leah Quin. Special thanks to those organizations that provided information used in the preparation of this report.

# I. INTRODUCTION AND BACKGROUND

## I.1 LIVESTOCK – SMALL RUMINANT VALUE CHAIN

In many West African countries, sheep and goats breeding is an informal rather than an organized activity because: (a) the animals receive no curative prophylactic medical treatment; (b) no method of good herd management is applied; (c) stables are of poor quality; and (e) animals are tied during the growing season to prevent crop damage. Distribution of sheep and goats in West Africa is not balanced and herds tend to be larger during the drier seasons. However, sheep and goats, due to their smaller size and relative self-sufficiency, are better suited to smallholder production than cattle.

## I.2 VALUE CHAIN ASSESSMENT

Following the Selection Report, the Value Chain Assessment Reports are the second step in planning activities for the Trade Hub and African Partners Network.

The assessment phase took place during May 2014. Assessments were carried out for each value chain recommended for targeted for partnership with and support from the Trade Hub.<sup>1</sup>

This livestock value chain assessment was commissioned by USAID/West Africa to assist in the design of a livestock program for Trade Hub Network. Livestock was strategically selected as it positively impacts the livelihoods of rural households and contributes to domestic and regional economies through cross-border trade. In addition, livestock is a crucial contributor to agriculture growth in the region, which is essential if the Millennium Development's goal of halving poverty and malnutrition by 2015 is expected to be achieved as this will require that the agriculture sector grow by a minimum of 6.8 percent per year.

The Value Chain Selection Reports provide brief overviews of each value chain; the Assessment Reports offer deeper perspectives about the current status, structure, performance, and challenges of the value chain. They update previously available information where possible. Based on this information and analysis, they recommend a vision and upgrading strategy for each value chain, and outline possible support roles for the Trade Hub in helping value chain stakeholders achieve their strategy.

As the first opportunity for the Trade Hub team to resume interacting with industry stakeholders and begin identifying lead firms and areas where the project can have a positive impact, the value chain selection and assessment process also provides an initial basis for dialogue and brainstorming/planning with key sector and value chain stakeholders. The phase, nonetheless, provides only a brief glimpse at each value chain and serves as a vehicle to commence discussion and sharing ideas with partners. The assessment is not a detailed value chain analysis.

### **I.3 ABOUT THE TRADE HUB AND AFRICAN PARTNERS NETWORK**

USAID/West Africa's strategic goal is to support the emergence of a politically stable and economically prosperous West Africa. The Trade Hub's goals are to promote increased regional trade in key agricultural commodities (a goal of Feed the Future, or FTF) and to reduce poverty through value-added exports (a goal of the Africa Competitiveness and Trade Expansion Initiative, known as ACTE).

The overall objective of the Trade Hub and African Partners Network is to increase Africa's share of world trade by increasing exports at a faster rate than the rate of growth in overall trade, and by improving West Africa's international private sector competitiveness in targeted value chains other than extractive industries.

The project will achieve two intermediate results: 1) improve the private sector capacity of the region's farmers and firms by addressing constraints to targeted value chains; and 2) improve the business enabling environment by addressing economy-wide constraints such as the transport and trade barriers that affect the efficiency of the region's ports, corridors, and borders.

At its heart, USAID/West Africa's Trade Hub and African Partners Network is a capacity building effort that will entail working with several key groups of African partners. The project's focus will be on developing associations and regional alliances that can act independently from donor support and take on a greater leadership role in promoting reforms, attracting buyers and investors, and adopting improved practices. The project will also work with individual companies that have a regional scope and could serve as lead firms in targeted value chains.

The Trade Hub will achieve its objectives by improving the private sector competitiveness of certain value chains. Based on the initial assessments made in USAID/West Africa's Feed the Future Multi-Year Strategic Plan, five value chains were pre-selected for the project: rice, maize, millet/sorghum, livestock (cattle), and livestock (sheep and goats). They were selected based on the following criteria: importance to intra-regional trade, high potential for value addition, production by a large number of stakeholders, and synergies with other supported value chains.

The Trade Hub team also examined the development potential of other value-added value chains and selected several for inclusion in the project's set of targeted value chains. This selection was based on six high-level criteria:

- Potential to increase trade
- Potential to create jobs
- Potential to attract investments (including from the U.S.)
- Number of households participating
- Extent of geographic dispersal in West Africa
- Current level of exports to global markets

The assessment phase thus focuses on the following short list of value chains:

**FTF Regional Value Chains**

- Maize
- Millet-Sorghum
- Rice
- Cattle
- Small ruminants

**Value-added Global Value Chains<sup>2</sup>**

- Apparel
- Cashew
- Honey
- Mango (and possibly other cut fruits/vegetables)
- Sesame
- Shea

West Africa is on the verge of a transformative change—if it can create a new dynamic for intra-regional and export trade. At present, intra-regional trade is inefficient, characterized by unpredictable distortions and uncompetitive practices, and subject to overly restrictive regulatory regimes. West African exports have limited success in the global marketplace due to poor quality, inconsistent supply, and high delivery prices, which can be traced back to the absence of economies of scale, high transaction costs, and a poor enabling environment.

The Trade Hub and African Partners Network aims to promote broader, more sustainable growth by improving both private sector capacity and the policies, rules, and practices that govern regional and external trade. This will achieve sustainable and measurable increases in regional and international exports, jobs, and investment by strengthening vertical and horizontal integration within value chains, assisting representative associations to become more effective and inclusive, and improving the enabling environment for trade. The project will also mount a cross-cutting effort to increase the professionalism of all major participants by providing role-specific competency training, facilitating access to modern technologies, and improving market linkages.

The Trade Hub will:

- **Leverage and strengthen already-identified or new private sector and public sector partnerships for commercial and development activities.**
- **Target the highest-impact opportunities in the value chains and policy regimes, to alleviate specific constraints hindering private sector growth.** The cornerstone of our structured approach to value chain development is identifying, in collaboration with our for-profit value chain partners and our public and nongovernmental organization (NGO) partners, where high-impact change can be achieved to maximize the return on project resources. Our trade and transport enabling environment staff will target specific policy and regulatory constraints which, once changed, will open up regional and external markets, reduce seasonal blockages, lower supply chain friction, and encourage trade-based investment and growth. They will work closely with stakeholders to advocate and enforce reforms.

The Trade Hub's higher level results targets are summarized in Table I below.

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<sup>2</sup> The home décor value and fashion chain was handled differently. A limited Trade Hub initiative is recommended for home décor and fashion. An assessment was not conducted for this value chain as it was no longer considered for a core Trade Hub focus.

**Table 1: Highest Outcome-Level Results**

<b>Results</b>	<b>Through Year 3</b>	<b>Through Year 5</b>
Increase in the value of global and regional transactions, on average, in targeted sectors of livestock, grains, and value-added products in West Africa	30%	50%
Creation of new jobs in Trade Hub-assisted West African firms	15,000	23,000
Facilitation of new investment in targeted sectors	\$62.5m	\$102.5m

Because different partners have different needs and levels of maturity, the project will tailor upgrading activities to each partner. We have recommended and will select value chains that offer opportunities to substantially contribute to achieving these objectives. We will choose value chains that can benefit from Trade Hub-supported activities such as:

- Improved buyer-seller intermediation
- Expanded use of grades and standards
- Increased access to and use of market information
- Increased access to and use of financial services
- More competitive transport and logistics enabling environment
- Reduced legal and regulatory barriers to trade

## 2. METHODOLOGY

Value chain assessment is the second of three phases that will lead to agreement on THN's target value chains:

1. Phase I: Select (recommend) value-added value chains
2. Phase II: Assess selected value chains
3. Phase III: Vet and obtain feedback, leading to confirmed selection

Eleven separate value chain reports present the findings of each value chain assessment.

As part of the research for the assessment reports, subject matter experts collected and updated data and trend information relevant to each of the value chains. The value chain assessments use a common set of criteria to describe the short-listed value chains and update information about them. In contrast to the selection process, which used subjective measures of only certain criteria based on expert opinion, the assessment utilizes the full set of criteria, quantifying them as much as possible. Based on this analysis, the report discusses strategic approaches that could be supported by the Trade Hub to achieve the "vision" the value chain.

The existing value chain studies and their conclusions were strongly considered in the assessment, and held meetings and phone/internet discussions with knowledgeable stakeholders. (Given time constraints, we did not collect primary market data from the field, or hold extensive interviews with a full roster of key informants.)

During the assessment, the team also began to analyze and discuss with stakeholders the opportunities and challenges with each value chain and make initial proposals for an upgrading strategy. If the stakeholders and the Trade Hub are able to identify a clear path for upgrading the value chain, it is more likely that the value chain will be ultimately included in the Trade Hub's set of focus value chains.

The small ruminant value chain assessment began with a review of existing documentation and conducted informal interviews by phone and skype with value chain stakeholders in Burkina Faso, Benin, Côte d'Ivoire, and Mali.

The assessment phase took place during May 2014. Stakeholders interviewed included representatives of producer organizations, livestock and meat traders, butchers, transporters, inter-professional organizations, and public administration officers. Livestock markets and abattoirs in Mali were visited and other observations made about the commercial movements of livestock products along trade and transport corridors. Private sector regional organizations, particularly the Confederation of National Federations of the Livestock/Meat Sector (COFENABVI), and national professional organizations such as livestock and meat cooperatives in Mali were interviewed.

### 2.1 VALUE CHAIN ASSESSMENT PROCESS AND SUBSEQUENT STEPS

*Table 2: Steps in Value Chain Assessment and Final Selection*

Task	Method
Assess short-listed value chains	Assess the five preselected value chains and the other selected value chains against a full set of criteria through desk studies, review of existing value chains studies, and key informant

Task	Method
	interviews with partner network
Obtain USAID/West Africa's feedback on Value Chain Selection Report	Review Value Chain Selection Report; meet with value chain Development Specialist and value chain team
Submit Value Chain Assessment Report	Assess all VCs, obtaining data and information through value chain studies, desk research, and key informant interviews; include discussion of potential value chain vision, upgrading strategy and Trade Hub intervention
Prepare facilitation guide for value chain stakeholder vetting	Based on the assessments, prepare summary presentation and process for vetting value chains
Vet value chain selection and assessment with stakeholders	Hold session within Project Partners Kick-off Workshop with Trade Hub stakeholders
Refine value chain selection and assessment, based on stakeholder feedback and suggestions	Continue interacting with key stakeholders and USAID as required

The final selection will only take place after the official Project Launch event, which will take place on or shortly after July 15, 2014. Immediately following the Launch the Project will engage individual value chain partners to discuss and vet the Assessments and come to a common vision of the value chain and how the Project will work with them. The final action plans for each value chain will be set after the engagement meetings, and will take into account the stakeholder feedback.

## 2.2 SOURCES OF INFORMATION

The information and data collected come from stakeholders, livestock sector actors and officials of administration. Some information was also collected from customs services and regional organizations. Most of data come from different published reports.

## 2.3 DATA LIMITATIONS

The availability of quality and comprehensive data is problematic, and compiling recent information was a challenge. Many documents featured interesting information about the current livestock situation in West Africa— Such as the OCDE -ECOWAS study, *Livestock and regional trade in the Sahel and West Africa- Potential and Challenges*— but the data is largely outdated. Most countries lack formal coordination of the many sources of information available, including harmonization and validation methodologies for collecting and processing information.

# 3. DESCRIPTION OF THE VALUE CHAIN

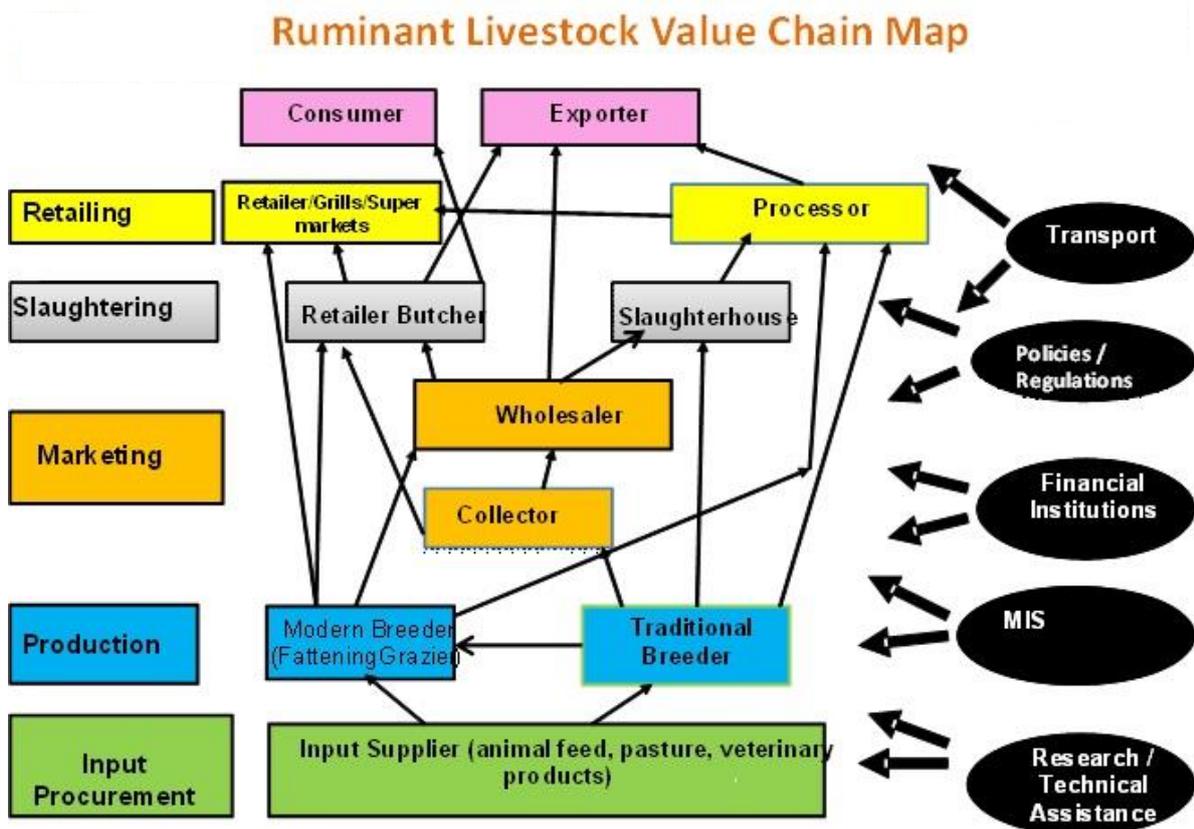
## 3.1 PRODUCTS INCLUDED IN THE VALUE CHAIN

The small ruminants' value chain includes live sheep and goats, meat from these animals, and assorted sub-products (such as hides).

## 3.2 VALUE CHAIN MAP

Activities and interrelations among the different actors in the value chain are mapped below, showing interrelation between actors against the economic environment.

Figure 1: Ruminant livestock Value Chain Map



## 3.3. PRODUCT FLOWS

A recent study indicated that small ruminants represent 17% of the total livestock volume in West Africa (OCDE, 2009). Official statistics show the number of small ruminants in West Africa is increasing.

The regional off-take rate for small ruminants is in the range of 30-35%. In Mali, the number of small ruminants is estimated at 12,458,525 head of sheep and 17,348,577 head of goat; in Burkina,

13,094,000 head of goat and 8,745,000 head of sheep and in Niger at 10,369,520 head of sheep and 13,760,687 head of goats.( National Livestock Directorates Reports, 2012).

Cote d'Ivoire and Senegal remain the largest importers of small ruminants from Burkina Faso and Mali. In 2012, Cote d'Ivoire imported 71,433 head of small ruminants from Burkina Faso. Senegal imported from Mali 85,951 head of small ruminants, mostly sheep. From April 2013 to March 2014, Cote d'Ivoire imported from Mali 145,787 head of small ruminants and from Burkina Faso 154,854 head of small ruminants (CILSS, 2014).

### **3.4. SMALL RUMINANTS DATA AND INFORMATION**

With more than 160 million small ruminants, West Africa stands out as a livestock region “par excellence.” Small ruminants play an important role in reducing poverty and improving food security and are often the only source of income and subsistence for pastoralists. This savings and insurance function will remain important as the commercial financial system (banks and insurance) is not readily accessible for the majority of pastoral populations.

The demand for sheep and goats rises significantly during major religious holidays: Tabaski (Eid al Adha), Ramadan (Eid al Fitr), and Easter, with the largest increase noted during Tabaski. During peak periods, price fluctuations are fairly clear. According to FAO (1982), tropical Africa has a sixth and a third of the global herd of sheep and goats, respectively. The total meat production from small ruminants in Africa was about 1.3 million tons (about 16% of global volume provided by sheep and goats). In West Africa, the total contribution of sheep and goats to the total volume of meat is respectively 10.9 % and 8.4%. Globally, the total volume of meat from sheep and goats in Africa, represents 12% of total meat production provided by these two species. According to a study, sheep and goats represent 17% of total volume of ruminants in Africa (OECD, 2009).

The small ruminant production in West Africa is not very developed. Average herd size is small and does not encourage homeowners to improve their farming practices. Production of small ruminants is a subsidiary or minor activity; it is not specialized livestock production. In addition, it generates a comparatively small percentage of total farm income, although this percentage is higher for smaller producers.

## **3.3 MAIN ACTORS IN THE VALUE CHAIN**

The main actors in small ruminant value chain are producers, traders and processors. These actors are individuals, firms or MSMEs.

### **3.3.1 DESCRIPTION OF THE VALUE CHAIN ACTORS**

#### **3.3.1.1 Lead Firms**

Lead firm include feed companies, who sell supplemental feeds and complete rations for fattening and often provide training on better feeding practices. Opportunities have been identified for feed companies to increase these types of to better market supplemental feeds and complete rations for fattening and provide training on better feeding practices.

#### **3.3.1.2 MSMEs**

The MSMEs include private veterinary pharmacy, veterinary clinic, and animal feed shop and operate to improve the production and productivity of sheep and goats.

### 3.3.1.3 Other Actors and Stakeholders

International organizations, ministries, umbrella regional organization (COFENABVI, APSS) support development of the small ruminant value chain. They also help to enhance the building capacity of national and regional organizations.

### 3.3.2 RELATIONSHIPS BETWEEN KEY ACTORS

Producers: Generally producers in West Africa raise small ruminants and sell only if they need some money for familial expenses.

Collectors: Assemble sheep and goats; are generally are commissioned by traders and receive commissions from this service.

Traders: Engaged in different aspects of the small ruminant trade. Some traders are brokers and facilitate the trade between the seller and the buyer. A live animal market includes the seller (herder or smaller trader), the broker-dealer (selling on behalf of the seller) and the buyer (larger trader or butcher). The negotiations are based on trust and sealed with a verbal commitment. Livestock trader associations represent their members when a problem occurs.

Middlemen: Operate in the informal sector and often contributes more to increasing prices than to facilitating trade, which increases the transaction costs of shipping livestock to the coastal countries. Yet they can save exporters time and money, such as when checkpoints proliferated on the Côte d'Ivoire route. They secure the transactions and insure interface between buyers and sellers.

Meat Products Wholesalers: Slaughter a number of head a day to sell to retailers, butchers, and restaurateurs.

Retail-slaughters: Do not have large operations but slaughter small quantities every day for direct sale to the market. Some in this group operate shops sell grilled meat (*dibiteries*) or have traditional roasting ovens, particularly for mutton and goat.

Retail butchers: Small meat retailers in markets in large cities and neighborhoods.

Grillers and *dibitiers*: Mainly small economic actors who do not slaughter the animals but buy sheep and goat carcasses from wholesale butchers in large urban centers, and sell grilled meat. Some large *dibitiers* in Mali, Niger, Nigeria, and Senegal can sell between 20 and 30 sheep and goat carcasses a day.

Skins processors: Processors can be divided into two categories—cottage-type and industrial. Cottage-type is the traditional trader of shoes or bags made with sub-products in local market. There are some exports of skin to Europe such as TAN ALIZ in Burkina.

### 3.3.3 OPPORTUNITIES AND ISSUES

The intrinsic qualities of sheep and goats, plus several recent developments, create a number of opportunities within this value chain, namely:

- An increasingly high demand for sheep meat in local markets.
- Government's commitment and support to increase meat exports
- Higher number of individuals engaged in fattening practice.
- Farmers' awareness rising about the number of export abattoirs.
- Low necessary entry investment.

- Herd size is easily adaptable to the available food or fodder or as a complement.
- Sheep and goat meat meets the needs used to meet large needs of a family or a village community, due to limited ability to conserve meat at that level.
- Small ruminants are often used to cover one-time large financial needs of families, who are easily able to market these products in their community.
- The relatively short cycle of small ruminants (8-9 months between the farrowing) allows quick observation of the effects of interventions to improve productivity (genetics, health, exploitation and national development techniques).

Despite these advantages, the market for sheep and goats is still largely traditional, so a significant percentage are sold and slaughtered outside controlled meat marketing channels. Specific constraints to regional marketing include:

- Irregular supply markets and poor infrastructure
- Multiplicity of intermediaries
- Inadequate institutional and regulatory frameworks
- Inadequate marketing facilities and transportation
- Unprofessional actors
- Difficult access to credit
- Lack of reliable market information to the market
- Limited use of modern business management techniques

In addition, small ruminants tend to wander and often lack proper care and monitoring, so they are frequently stolen. In some communities, some social groups (including women) are banned from raising sheep and goats. Sellers and buyers also often follow the practice of selling animals "by eye," instead of measuring weight and quality.

# 4. DISCUSSION OF VALUE CHAIN ASSESSMENT CRITERIA

## 4.1 MARKET INFORMATION

Coastal livestock markets in Côte d'Ivoire and Ghana import large volumes of sheep and goats. The market is also characterized by seasonality: Peak periods are the last two quarters of the year with the biggest increase usually in December. The main external suppliers of the Ivorian market are Burkina Faso, Mali and Niger. In 2007, from these countries, the Ivorian market imported 315,123 head of sheep and 531,281 head of goats.

In Nigeria, a downward trend has been registered: Imported numbers have fallen from about 1,745,000 in the late 1990's to just over 100,000 head in 2002. This is a consequence of a policy to support local livestock against imports in the early 2000's. However, pressures to increase this market, have continued including: demographic change and increasing urbanization; the creation of a new international cattle market in Kano and the development of all frontier markets; contract management by professionals.

### Current size

In West Africa, the contribution of sheep and goats to the total volume of meat is respectively 0.9 % and 8.4% (OCDE, 2009). Across Africa, sheep and goats represents 12 % of total meat production and 17% of total volume of ruminants in Africa (OCDE 2009).

In the Sahel countries, the most important producers of small ruminants are Mali (12,458,525 sheep and 17,348,577 goats), Niger (10,369,520 sheep and 13,760,687 goats), Burkina Faso (13,094,000 sheep and 8,745,000 goats). (2012 Statistics)

### Market trends

Terminal markets of livestock/ meat chain products in West Africa are coastal countries: Senegal, Benin, Côte d'Ivoire, and Ghana. There are two kinds of coastal market: live animals and meat. The meat market is not well-developed, and the market for hides and skins is not included in this report as it will not be a focus of this project.

Demand is increasing for animal products throughout West Africa due to the combined effects of rapid population growth, urbanization, changes in food styles and increased household income.

In 2012, formal market statistics showed that Senegal imported from Mali 85,951 head of sheep and Cote d'Ivoire imported from Mali 13,287 head of sheep. Nigeria imported from Burkina Faso 130,902 head of sheep and from Niger 160,309 head of sheep. Ghana imported from Burkina Faso 10,199 head of goat (CILSS, 2013).

From March 2013 to April 2014, the total value of cattle and small ruminant cattle exports from Sahel countries to coastal countries was \$261 million (CILSS, 2013).

## 4.2 CONTRIBUTION TO ECONOMIC GROWTH

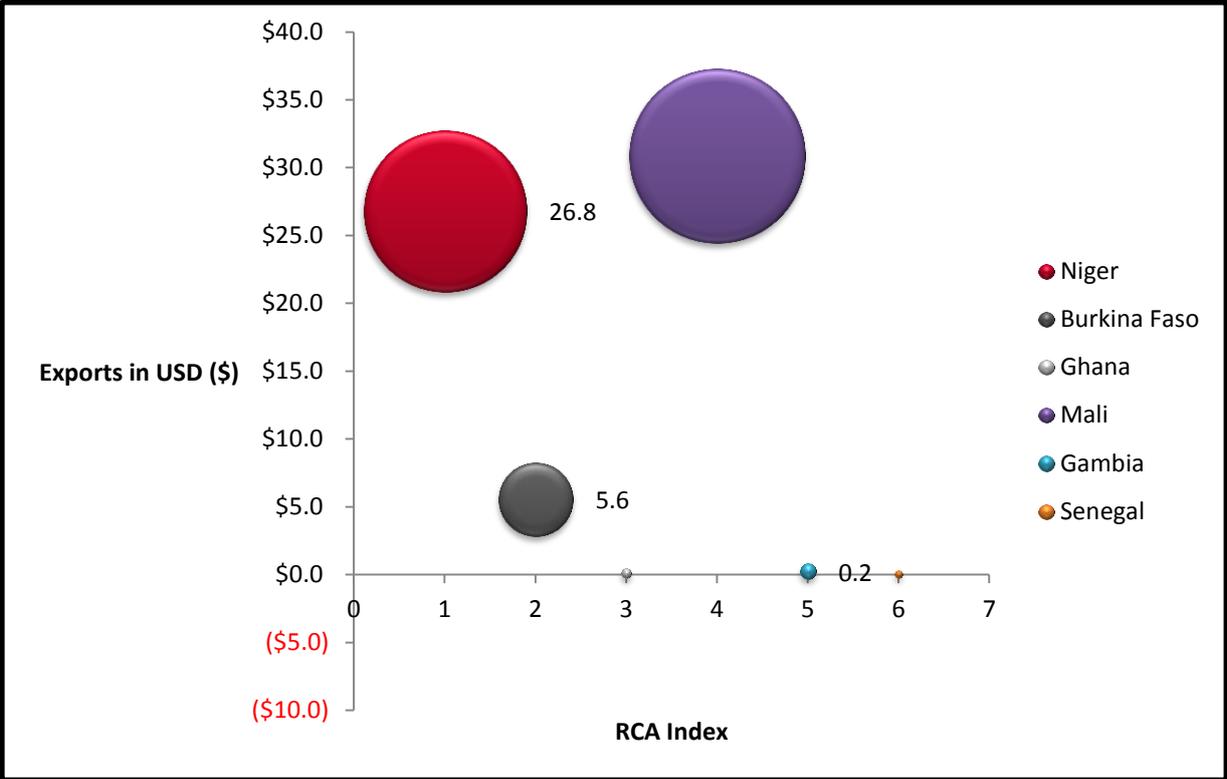
### 4.2.1 POTENTIAL TO INCREASE TRADE

Producing and marketing small ruminants during the Tabaski religious holiday is an innovative way to increase trade, especially for export. In this period, a lot of sheep are sold in Ghana and Cote d'Ivoire from Burkina Faso and Mali. Producers take the opportunity to fatten their sheep a few months before Tabaski and produce higher-quality animals to export in this period of time through better breeding and grazing. New methods of transporting these animals (by trucks overall) to neighbors countries after fattening, increase their revenues. Therefore, fattening operations need to have better least cost feed rations to take better advantage of trucking opportunities for marketing their animals.

To meet regional demand for small ruminant products, animal production and productivity needs to increase as does intra-regional trading of animal products between the ECOWAS member states.

Annex 3 contains an analysis of Revealed Comparative Advantage (RCA) for small ruminants in West Africa (2011), in which 1 is the break-even point. A graphic presentation for the region is below:

**Figure 2: RCA Small Ruminants (Sheep and Goats), 2011**



For example, the RCA for Burkina Faso is 5.6, giving it a revealed comparative advantage for small ruminants compared to the rest of the countries in the reference group. Niger has a revealed comparative advantage of 26.8, and Mali takes the lead with an RCA of 31.

### 4.2.2 POTENTIAL TO CREATE JOBS

Small ruminant management is a large source of employment, particularly in meat processing. Women are very active in the feed and milk production and children take care of small ruminants. FAO estimates that for 100 head of cattle, the number of workdays needed for slaughtering,

processing and marketing is respectively 20 days, 80 days and 4 days. Although milk is not examined in this assessment, this is an important sub-value chain and it plays a big role in the creation of jobs.

Increased job opportunities will result from focusing more on quality over quantity and shortening the time it takes to raise and bring quality cattle to slaughter weight (which improves overall productivity of the sector). A new generation of actors is playing a big role in promoting trade and introducing new technologies. The estimated number of jobs directly generated by livestock activities is significant and well-integrated into most rural households. Agriculture in general and the livestock sector in particular provide 52.5% of jobs in West Africa. At least 50% of the cash income of mixed farmers in Africa is derived from the sale of livestock products (Winrock International).

#### **4.2.3 POTENTIAL TO ATTRACT INVESTMENTS**

Uneven access to water, feed and ramps at markets plus high weight loss and mortality during transit are disincentives for entrepreneurs to invest in the livestock industry. Traders in coastal countries will pay premiums for quality animals, but there is a shortage of these animals being marketed. Investment opportunities will follow removal of barriers to increased production and shortening the supply chain from production to end markets. New business investment models in contracting for feeder calves, fattening and then marketing finished cattle would have beneficial effects on a number of participants in the value chain.

The projected demand for meat through 2020 and beyond puts West Africa's livestock value chain in a good position because of its relatively large supply of pastoral resources, water, and livestock. Business entrepreneurs are needed to invest along the livestock value chain. Suppliers of feed, veterinary drugs and other health services will need to invest in businesses to serve livestock pastoralists, agro-pastoralists, and peri-urban operators in the production of improved quality livestock for the export markets. The domestic market will also benefit. Examples of investments are vaccination sites, better equipped markets and abattoirs and more trucks for animal transportation.

#### **4.2.4 POTENTIAL TO GENERATE VALUE ADDITION**

An important feature of the added value of livestock industries lies in its "redistributive" character. A large part of the population is active in this value chain, and receives benefits. The contribution of the value chain to the rural economy is large because of the vast number of poor rural households in most of these countries. In terms of export revenues, the livestock sector is the largest after cotton

Small ruminant sub-products are very important in the coastal markets, including meat and by-products, such as skin used to manufacture shoes, belts and bags.

#### **4.2.5 POTENTIAL TO GENERATE MARKET-BASED IMPROVEMENTS IN PRODUCTION YIELDS**

Increased yields will depend in part on genetic selection of sheep and goats and improvement of feeding practices for these animals, which could increase meat yield to 60-65% from the current 50-55%. The absence of a sufficient and balanced diet, the presence of diseases, and poor grazing all limit the productivity and yields of small ruminants. Genetic improvement of breeds and improvement of feed and animal health are important elements of a strategy to increase production.

Commercialization of livestock operations remains low with animals still primarily held as a "bank of assets" to be sold in times of difficulty. Producers lack access to credit which further restricts their ability to invest and commercialize the industry. Private sector feed companies frequently have shortages of quality animal feed. Yet West Africa countries have the potential to have sustained production growth where there is enough native pasturelands. (Mauer, et al, 2011)

Opportunities exist to improve off-take rates by developing livestock producer groups/associations for management of pastures and for accessing affordable credit for fattening livestock. The objective will be to create incentives for herders to “convert livestock assets to cash.” Business models are needed that support investments in the specialization of livestock production in specific agro-ecological zones.

Financial institutions, animal health service providers, and private sector feed companies will have to engage in these specialized business ventures. Private sector companies, like Bounafama (AMI Groupe), a feed company in Mali, reported they see business opportunities in the provision of technical training and sale of animal feed to specialized livestock groups.

### **4.3 IMPACT ON FOOD SECURITY**

Households rely on livestock for food (meat and milk), transport, fuel, and in the barter for cereals. Livestock trade has the potential to contribute significantly to improved nutritional status of the region through the expanded availability of protein sources and income for vulnerable producers in the Sahel who have a comparative advantage in livestock production

Meat and milk are good sources of protein which makes livestock an important activity for addressing malnutrition. Vitamin A deficiency is common in African children and is caused by low intakes of animal source foods, which increases vulnerability to infections, malaria and parasites. Meat contains high levels of energy and provides a combination of iron, zinc and heme protein, which improves bioavailability of iron and zinc from cereal and other plant sources. Goat milk is more nutritious and easier to digest than cow milk, and for an equal amount of milk, goats require less grazing space. In addition to milk, the most widely consumed animal products are meat and skins—in fact, dried ruminant skin produced in Niger is used for human consumption in Nigeria. Milk produced by small ruminants plays a role in the nutrition of children in the rural areas. The minimum calories required by a 65-kg person in a situation of food security is 2,400 kcal (FAO), generally supplied by cereals, roots and tubers. The daily animal protein requirement is at least 55 g for the well-nourished and about 17 g for the less affluent. Apart from people in urban centers and herders, communities involved in food production are far from reaching these minimums.

Small ruminants provide food security for households through meat and sales of live animals. As climate change impacts occur, small ruminants can be adaptive to variable feed availability and provide assets for families in times of food scarcity and when food prices increase.

### **4.4 SOCIAL IMPACT**

Women play a large role in this value chain as they are very active in the production of small ruminants. Goats are the most appropriate way to improve food security and income for poor families because of their hardiness, production and its prolific appearance. Families in need should be identified in each country of the region. A large genetic pool of small ruminants allows for matching breed types to different agro-ecological areas.

### **4.5 COMPETITIVENESS**

Export-quality livestock decreases during the rainy season as agro-pastoralists are busy farming and animals have available forage. Transportation and handling costs make up a large component of final delivered price for the livestock. The cost of a truck shipment depends on the season.

Seasonal price varies by location and by type of market. During the dry season, livestock numbers increase and prices fall from their current levels. The absence of formal, commercial segments (with opportunity to go to scale) discourages incentives for investment.

To penetrate and capitalize on regional markets, local traders need to position themselves to compete with major beef exporting countries, particularly Argentina, Brazil and South Africa. The higher prices paid in coastal markets for quality meat should be an incentive for livestock traders to deliver animals to these markets. However, the livestock exporters will have to prepare to be more competitive by properly conditioning animals before arrival to minimize weight loss in transit, and avoiding delays when animals arrive in the terminal coastal markets. Ideally, livestock should be pre-contracted (sold) before they are put on a truck in the origin country.

Livestock are currently managed at a low input-low output level of production. The improvement in livestock production requires matching up production systems with the right genetics, feed and animal health services to meet market requirements. The objective of improved productive systems is for greater marketable outputs of livestock products with the same or smaller national inventory.

Competitiveness of the small ruminant sector is limited by the low productivity of West African animals. The costs of production are high. Improving the competitiveness of small ruminant products (live animal, meat and skins) requires minimizing production costs, improving the quality of products, and strengthening the infrastructure for processing/marketing and fluidity of transactions. Small ruminants tend to be durable, giving them inherent advantages over cattle.

Regional competitiveness of the livestock sector is limited by heavy administrative procedures, exchange rates, conditions and transport infrastructure, and various taxes. Strategies to improve the sector's competitiveness should focus on developing more attractive prices reflecting improved animal quality. Infrastructure should then be developed to equip markets, intensify production systems, and privatize animal health services to make them more efficient.

The main comparative strengths of the value chain are: large supply of small ruminants, large and fluid national and regional markets, and then existence of new young entrepreneurs who want to improve the trade. The main comparative weaknesses in the value chain are: seasonal characteristic of supply, the lack of formal contracts between actors, weak organizational capacity and low professionalization of actors. Additionally, during the period when the animal feed is difficult to obtain (end of the dry season), the animal becomes expensive.

The main regulatory and legal constraints that the value chain must overcome to achieve an improved level of competitiveness include: lack of norms and standards, non-application of ECOWAS protocols related to the free movement of people and goods, and lack of harmonized regulations.

In an attempt to increase government revenue, many countries have set up multiple road barriers where various taxes are collected on traded animals. This imposes additional charges that are not necessarily marketing costs as no value is added for the money they collect. Such taxes are charged per truck whether the truck carries only one animal or is filled with animals, adding to the cost of doing business. Imposition of too many charges on animals in transit limits the competitiveness of smallholder production.

## **4.6 FACTORS THAT WOULD SUPPORT UPGRADING**

- Professionalization of actors: Improving the day-to-day management of key businesses, after receiving training in trade negotiation and in technical skills
- Reduction of transaction costs: transport, alimentation, animal health, price
- Improving market system information: To know in real time the number and the prices of animal in different markets; to have information about means of transport.
- Strengthening the infrastructure for processing/marketing and fluidity of transactions: Market, abattoirs must be equipped and secure, and commercial movement of animal must be facilitated.

#### **4.6.1 CHAMPIONS FOR CHANGE**

A new generation of actors is leaders of firms, who have the ambition to change the small ruminant trade by sensitizing other actors to modernize the sector, improving the quality of their product and enabling environment. Examples include:

- FADEL-SA, a Mali private financial group which sensitizes traders to save money instead relying on financial institutions.
- Bounafama (AMI Groupe), a feed company in Mali, which tries to convince producers to improve feeding of their animals with appropriate animal feed.

#### **4.6.2 ACCESS TO FINANCE**

The region lacks significant credit to purchase animals. Access to credit by small-scale traders would help to increase competition in the market and reduce the margins received by the better-capitalized, larger traders. Bankers are reluctant to lend to traders because of inherent risks of their business. The small ruminant actors need to have access to financial institutions to produce and commercialize and to access financing at the small ruminants' fattening period.

#### **4.6.3 PRODUCTIVE INFRASTRUCTURE**

Productive infrastructure should be available in order to improve the trade in small ruminants. These include improved roads to facilitate transport of cattle, weighing stations to get the real yields, loading ramps to facilitate the loading of animals.

#### **4.6.4 SYNERGIES WITH EXISTING PROGRAMS**

USAID/WA coordinates with regional organizations (e.g. ECOWAS, UEMOA, and CILSS) in the dissemination of technology on best practices and the implementation of regulations to reduce marketing inefficiencies. Trade Hub should collaborate with these organizations and other USG programs such as the Livestock Value Chain programs, PCDA in Mali, REGIS-ER and PAFASP in Burkina and Niger. The greatest impact on the livestock subsector will be made if the Trade Hub can effectively facilitate and integrate policy changes in support of livestock production, marketing and trade.

A number of stakeholders are supporting the development of the livestock subsector: USAID and others international donors and organizations (AU-IBAR, FAO, World Bank, bilateral European countries, SNV, etc.), GOM, and local NGOs. Coordination and synergies between them are important to avoid duplication of efforts and activities that could directly harm the development of the private sector.

#### **4.6.5 POLICY ENVIRONMENT**

West Africa's policy environment supporting livestock has had mixed results. Existing policies, like Mali's head tax and restrictions on export of livestock younger than a certain age discourage innovation and constrict off-take. Investors face production and marketing risks, and yet they have limited access to improved services, e.g. feed and business advisory services. West African public services control the production and marketing of livestock vaccines, but the prices have not changed, even adjusting for the cost of living. When these constraints are set within the context of forecasted negative impacts of climate change on the livestock subsector, need is clear for governments to have a proactive policy agenda that includes private-sector stakeholders.

Governments' capacity has diminished to deliver improved knowledge and technology on livestock to the private sector. Good business practices will emerge that will support an open, formal, efficient and commercial supply chain for livestock and meat.

Policy priorities include harmonization of rules and practices, adoption of a common external tariff, and policies related to customs procedures and charges that differ in neighboring countries and create illegal commerce.

## **4.7 CLIMATE RESILIENCE AND ENVIRONMENTAL SUSTAINABILITY**

Given the probable impact of climate change on pasturelands in West Africa countries, small ruminants have high potential for positively impacting the largest number of rural households. In an ILRI study, researchers found 30 percent of the milk consumed in central Malian households came from small ruminants. Women and children consume the milk from small ruminants and actively market them. Furthermore, currently two international organizations, ILRI and UNDP, are researching indigenous sheep and goats breeds, which would be complementary to USAID's FTF livestock program. Finally, researchers at Yale University found that with declining rainfall and increasing temperatures, livestock herders in Africa will shift to production of sheep and goats. (Seo, et al., 2006)

Forecasted impacts of climate change on livestock production can cause changes in production patterns. Livestock patterns are already changing, as is the incidence of animal diseases. Herders will change the structure of their herds to include more small ruminants. In the south, smaller herds are evident with cattle and small ruminants. Climate change affects crop and livestock weights. Pastoralists in drier areas focus on being a breeding herd and selling yearling stock to producers in the higher rainfall areas of southern areas. The shift to small ruminants needs to be accompanied by more commercial off-take as shoats can be easily die if this fragile ecosystem if not managed properly. Livestock insurance could be a strategy to reduce and better manage risk.

## **4.8 OTHER HURDLES TO SUCCESS**

The main regulatory and legal constraints that the value chain must overcome to achieve improved competitiveness are uneven quality standards, overly high transportation costs, and inadequate and uncoordinated livestock market information systems. Infrastructure constraints include lack or inadequacy of roads, weighing stations, loading ramps, cattle dips, slaughtering and processing facilities (which raises transaction costs, contributes to uneven information between producers and traders, and discourages investment in processing).

## **4.9 SWOT ANALYSIS**

### **1. Strengths**

- Large numbers of small ruminants in Sahelian countries
- Strong regional organization (COFENABVI, UEMOA, ECOWAS)
- Many traditional producers' countries and consumers' countries

### **2. Weakness**

- irregular supply markets, poor infrastructure
- inadequate marketing facilities and transportation,
- difficult access to credit

- lack of reliable information in the market for sellers and buyers,

### 3. Opportunities

- Increasingly high demand for sheep meat in local markets.
- Relatively short cycle of small ruminants (8-9 months between the farrowing) allows quick observation of the effects of interventions to improve productivity (genetics, health, exploitation and national development techniques)
- Herd size is easily adaptable to available food or fodder or as a complement.

### 4. Threats

- Recurring drought
- Continued lack of access to financing opportunities

# 5. VISION AND UPGRADING STRATEGY

## 5.1 VISION

Small ruminant value chain actors in West Africa will professionally supply quality livestock/red meat for West African markets in sufficient quantity to meet the region's demand at competitive prices.

## 5.2 UPGRADING STRATEGY

- Improve livestock feed and health for a competitive supply of meat for the West African market.
- Make competitive, quality, healthy and nutritious products available in sufficient quantity and expand market share in the region.
- Help ease road harassment as well as administrative hurdles and reduce transport costs.
- Facilitate access to financing for producers and traders.
- Make available relevant information to ruminant livestock professionals to enable them to make decisions.
- Contribute to the professionalization of the regional ruminant livestock organizations and facilitate improvement of the region's trade exchange environment.
- Make organizations and private actors in the ruminant livestock value chain capable of implementing consistent policies and effective advocacy to defend their interests.
- Strengthen equitable relations between and among women and men, emphasizing the decision-making process (activities, external relations, etc.) and access to services, opportunities and benefits of the project.

The Trade Hub should contribute to the professionalization of ruminant livestock value chain actors along the trade and transport corridors in West Africa by facilitating intra-regional trade and building the capacities of the stakeholders and actors involved in the trade. The project could also help facilitate and apply existing regulations, leading advocacy and training to improve trade performance. Key objectives include reducing transportation costs and increasing access to financing in the region.

## 5.3 RISKS AND MITIGATION

Risks include lack of government responsiveness in changing policies to facilitate improvements to this value chain, as well as value chain actors who are not fully engaged in this productive process.

## 6. ADDITIONAL INFORMATION NEEDED

In the future, the project should closely work with stakeholders to get recent data on trade flows, production, and participants. Working with bilateral missions will be required in each country in order to coordinate and harmonize activities.

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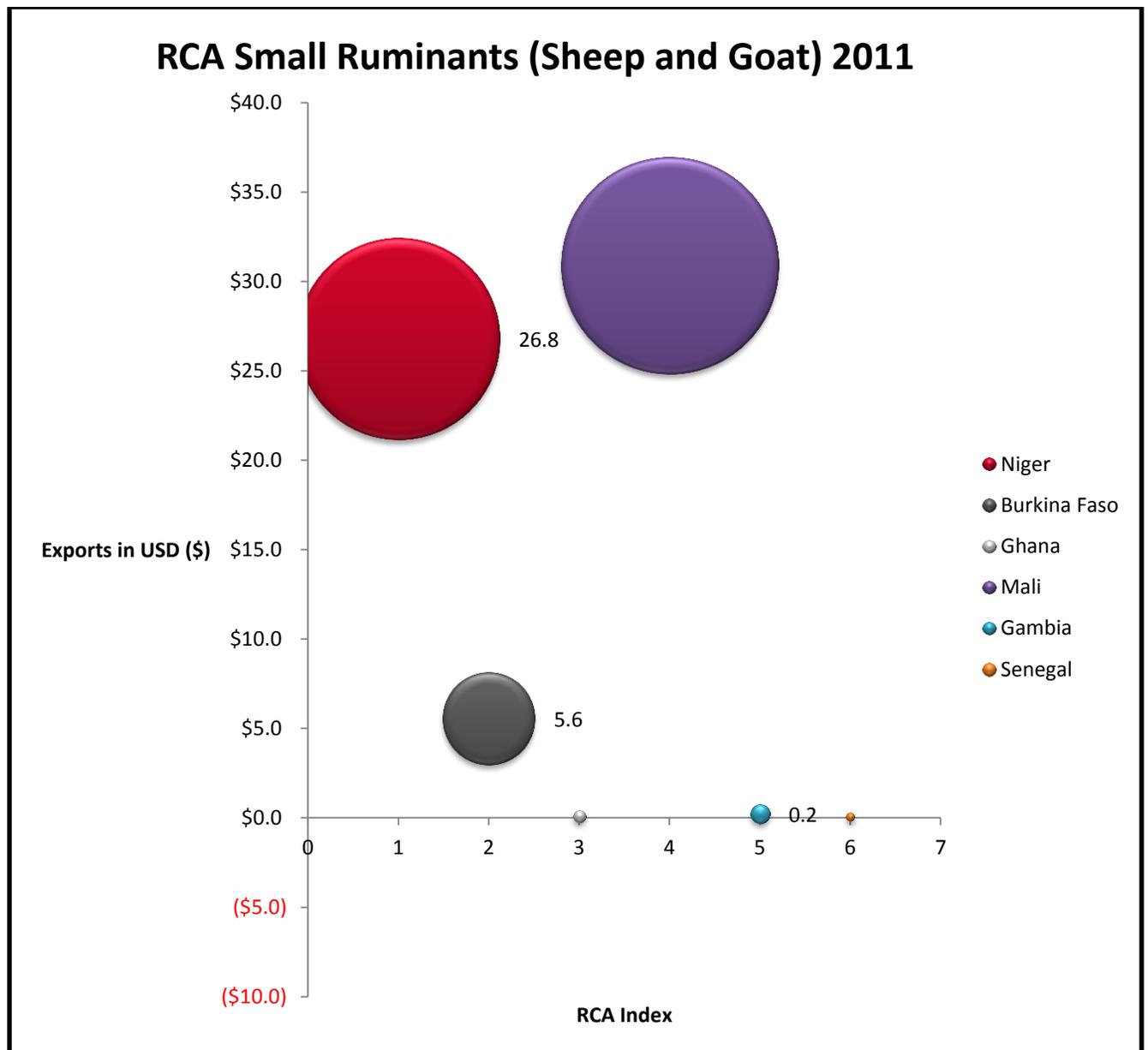
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# ANNEX 2: PERSONS AND ORGANIZATIONS INTERVIEWED

	<b>Nom Prénom</b>	<b>Service</b>	<b>Occupation</b>	<b>Tel</b>	<b>Mail</b>
1	Issaka Sawadogo	COFENABVI	President	(225)771990 15	<a href="mailto:cofenabvi-ao@yahoo.fr">cofenabvi-ao@yahoo.fr</a>
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9	Bocoum	Consultant	Consultant	(223) 66728131	
10	Aboubacar Ba	Traders Syndicat	Président	(223)667151 36	

# ANNEX 3: REVEALED COMPARATIVE ADVANTAGE (RCA)



**Table 3: Export data from 2011 except Niger (2013) and Gambia (2010)**

A	C	D	G	M	N	O	P
Products	Niger	Burkina Faso	Ghana	Mali	Gambia	Senegal	World
Ruminants (meat of sheep or goat, fresh, chilled, frozen)	\$325	\$11	\$1,004,256	\$11,453	\$14,129	\$89,199	\$6,335,975,000
Ruminants (live sheep and goat)	\$13,329,806	1,933,181	\$24,826	\$15,929,273		\$2,439	\$1,822,868,000
Ruminants-Total	\$13,330,131	\$1,933,192	\$1,029,082	\$15,940,726	\$14,129	\$91,638	\$8,158,843,000
Country Total Exports	1,098,000,000	768,000,000	23,731,000,000	1,139,000,000	\$133,000,000	\$4,251,000,000	
World Total Exports							17,999,547,615,000
RCA Ruminants	\$26.8	\$5.6	\$0.1	\$30.9	\$0.2	\$0.0	
RCA (Ruminants Meat)	\$0.0	\$0.0	\$0.1	\$0.0	\$0.3	\$0.1	
RCA (Live Ruminants)	\$119.9	\$24.9	\$0.0	\$138.1	\$0.0	\$0.0	
Product year different							

**Source: Country export data from UN Comtrade, country totals from WTO.org aggregated, World exports from Intracen.org**

### Explanation of Revealed Comparative Advantage

The idea to determine a country's 'strong' sectors by analyzing the actual export flows was pioneered by Liesner (1958).

The procedure was refined and popularized by Bela Balassa (1965, 1989) it is popularly known as the Balassa Index. Alternatively, as the actual export flows 'reveal' the country's strong sectors it is also known as Revealed Comparative Advantage.

Balassa defined the export performance of a specific product/industry from a country – as measured by revealed comparative advantage index – as the relative share of the country's export of the product in the world export of the same product, divided by the overall share of the country in world exports. More specifically, the revealed comparative advantage index of product j exported from country i (RCA<sub>ji</sub>) can be expressed as follows:

$$RCA_{ji} = (X_{ji}/X_{jw}) / (X_i/X_w), \text{ where:}$$

$X_{ji}$  = exports of product j from country i  $X_{jw}$  = world exports of the product j  $X_i$  = exports of country i  $X_w$  = world exports

The RCA index ranges from 0 to infinity with 1 as the break-even point. That is, a RCA value of less than 1 means that the product does not have export comparative advantage, while a value above 1 indicates that the product has a "revealed" comparative advantage.

For the case of small ruminants (sheep and goats):

Export data ( $X_{ji}$ ) for each country are shown in row 4 under their respective country names; so the formula can be written as X (small ruminants, Nigeria); X (small ruminants, Burkino Faso), etc

$$X_{jw} \text{ or } X \text{ (small ruminants, World) is in cell P4} = \$8.1 \text{ Bil (rounded)}$$

$X_i$ , total exports of the countries, are shown in row 5

$X_w$ , world total exports, Cell P6 = \$18Trillion

RCA (small ruminants, Burkina Faso) =  $(D4/P4)/(D5/P6) = 5.6$ . This means that Burkina Faso has a revealed comparative advantage for small ruminants compared to the rest of the countries in the reference group, since its RCA is greater than 1. Niger has a revealed comparative advantage of 26.8, and Mali takes the lead in exports of small ruminants with an RCA of 31 (rounded). This means Mali has the largest comparative advantage in the sample in exporting small ruminants to the rest of the world.

These calculations are limited to some degree by the availability of export data

# ANNEX 4: OTHER DATA

**Table 4: Table : Small Ruminants flows from Burkina Faso, Mali and Niger to Benin, Nigeria, Senegal, Togo and Cote d'Ivoire**

	QUANTITY	VALUE
AVRIL 13	59 581	2 609 276 233
MAI 13	47 138	2 351 119 902
JUIN 13	43 273	2 005 166 500
JUILLET 13	51 551	3 035 713 500
AOUT 13	53 596	3 035 713 500
SEPT 13	79 165	4 554 815 000
OCT 13	262 614	27 879 164 500
NOV 13	62 783	3 315 149 000
DEC 13	56 426	3 398 024 500
JAN 14	97 846	5 810 200 000
FEB 14	36 363	3 094 184 000
MARCH 14	74 533	4 094 118 500
<b>TOTAL</b>	<b>924 869</b>	<b>65 182 645 135</b>

Source: ( CILSS, 2014)

**Table 5: Estimation of number of sheep and goat by region in Niger, 2012 (Annual report)**

2 012	Sheep	Goats
Agadez	437 353	727 494
Diffa	756 125	1 153 122
Dosso	806 789	1 074 505
Maradi	1 858 835	2 568 508
Tahoua	2 246 890	2 545 136
Tillabéri	1 457 323	1 786 592
Zinder	2 629 660	3 806 241
Niamey	176 544	99 090
<b>Total</b>	<b>10 369 520</b>	<b>13 760 687</b>

**Table 6: Growth in Numbers of Sheep and Goats in Burkina Faso**

Species	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Goats	10 036	10 337	10 647	10 966	11 295	11 634	11 983	12 342	12 713	13 094
Sheep	6 703	6 904	7 111	7 324	7 544	7 770	8 003	8 243	8 491	8 745

**Table 7: Small Ruminants in Mali**

Number					Abattoirs		Presented and sold			
Date	Sheep	Goats	Sheep	Goats	Sheep	Goats	Sheep		Goats	
							Presented	Sold	P	V
<b>2008</b>	10249657	14272716	247086	374899	335840	16941	4481488	0	2225827	0
<b>2009</b>	10762140	14986352	343697	503924	500301	14954	2728617	1442237	1464870	880062
<b>2010</b>	0	0	330873	603974	331321	22279	4367825	1947269	0	0
<b>2011</b>	12458525	17348577	374585	658793	550888	28776	4142381	2445240	2617194	1695900
<b>2012</b>										