

# Chad's Livestock

## Securing Cross-Border Value-Chain Post-COVID-19

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## Abstract

Livestock contributes 6 to 7 percent of Chad's gross domestic product and over 35 percent of total wealth in rural areas. This paper analyzes trade and transport logistics facilitation measures for curtailing the adverse effects of trade disruptions arising from the COVID-19 pandemic. The analysis pays specific attention to measures related to behavior during border crossings and transactions along the trade corridors. The relevant actors do not understand the implication of the relevant measures; hence, there is a need

for a peer pressure in the framework of empowered professional organizations, enforcement of regional regulations through universal reliance on the Economic and Monetary Community of Central Africa's veterinary passport, as well as the practice of physical distancing through measures eliminating congestion at border crossing posts. A bolder post-COVID-19 reform will need to foster livestock-driven agro-industrialization.

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# Chad's Livestock: Securing Cross-Border Value-Chain Post-COVID-19<sup>1</sup>

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## **1. Introduction**

Livestock is the most important non-petroleum sector of the Chadian economy and the major sub-set and income source in the agriculture sector. According to the 2015 General Livestock Census, the number of livestock animals increased at an annual rate of 6 percent over the past decade, with livestock production estimated at more than 120 million animals in 2019. Goats account for the largest part of the production, with 32 percent. Sheep and cattle account, respectively, for 29 and 26 percent of the total. The other species (camels, donkeys, horses, and pigs) share the remaining 13 percent.

Although the growth rate seems sizable, the breeding sector's production level remains below potential compared to the rising market demand, particularly in Nigeria and the Central Africa region. The sector is characterized by low productivity that constrains it from creating quality jobs and generating enough income for the stakeholders. Weak infrastructure, technological capacities, and customs bottlenecks have long prevented the country from producing and exporting livestock and breeding products at its potential. The exports continue to fall short of the growing demand from its current market (Central African countries and Nigeria). It also falls short of its potential in new markets such as in Eastern and North Africa.

Global and regional trade disruptions by COVID-19 have had considerable adverse effects on perishable and agricultural products. Although it is too early to take stock of the pandemic's impacts, the crisis is expected to cause policy reversals by plunging many into poverty, especially the large vulnerable segment of the population that depends on agriculture for income. The pandemic's economic effects suggest that ensuring the post-crisis economic recovery and resilience while scaling up non-petroleum exports in Chad would require appropriate and rapid responses to eliminate the lingering constraints and effectively unlock the potential of the livestock sector. Globally and regionally, there have been efforts to mitigate the effect of such a severe shock.

There is a need to ensure that international trade continues to flow (World Bank, 2020) through a comprehensive set of actions that protect the supply chains. For Chad in general and the livestock sector, this implies reforms that enhance the value chain from production sites to border crossing and along the corridors up to destination markets. Some of these actions are health-related and pertain to sanitary procedures and social distancing. Other actions shall protect the production and trade processes. In particular, the pandemic has brought to the forefront the fragility of trade facilitation systems in Chad and other low-income African countries. These call for bold reforms of trade and transport logistics facilitation regimes, which may take time and resources to design and implement. However, there is a need for a medium-term plan, combined with short-term measures that can help mitigate the immediate risks.

FAO (2020) has provided guidance and measures applicable to the transport and delivery of food ingredients and food products; these can inform livestock's cross-border trade processing. These include measures related to behavior during border crossing and transactions along the trade corridors, such as a program along with the above guidance for livestock and meat value chains, including the following:

- Regulating the numbers of persons and animals at border crossing stations to avoid overcrowding
- Shortening queues through adequate physical distancing measures
- Using markings and making regular announcements to facilitate compliance with the physical distancing
- Encouraging the use of contactless approaches to comply with border crossing procedures
- Animal health measures to protect the livestock value-chain.

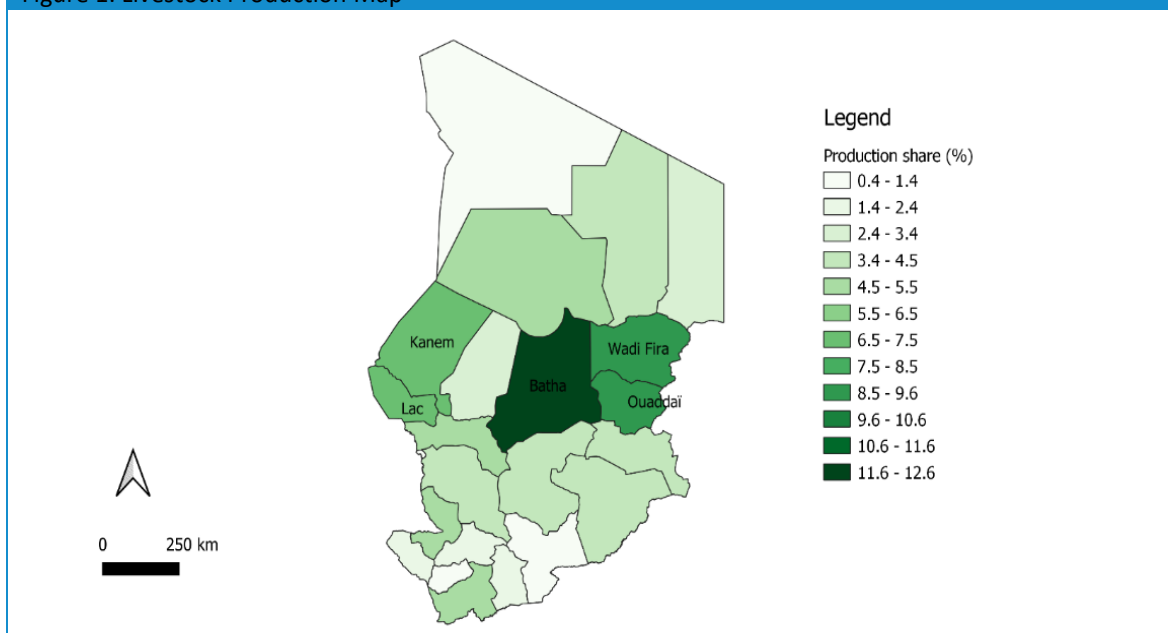
The above health-focused measures should be complemented by actions to protect and eventually improve income and welfare. These actions should have as the ultimate objective of developing the sector and creating quality jobs through (1) developing a general sector map and the livestock export process map to identify key segments of bottlenecks along the value chain and dismantle them; and (2) restructuring the sector to reduce informalities and intermediaries to create quality jobs and increase the share of the income accruing to the producers. The overall objectives are to attract private investments in the sector, enhance its competitiveness to stimulate its productivity, and export the livestock and breeding products to neighboring countries and potential new markets in Libya and East Africa over the medium-term. In the short-term, the focus would be to promote trade in current export markets, particularly in ECCAS and Nigeria.

This paper intends to provide the background and framework for an effective emergency response agenda and a post-COVID-19 recovery in the medium-term. This aims to strengthen and render more efficient the livestock sector and reduce the role of informal and unrecorded trade. These will boost production and exports, thereby improving the incomes of breeders and other actors in the livestock sector. It uses value-chain analysis to identify livestock trade bottlenecks and propose policy recommendations to address them. The paper uses data from the most recent livestock survey in Chad.

The paper first (Section 2) investigates the untapped potential of the Chadian export of livestock to provide recommendations for restructuring to boost productivity and exports, especially in the COVID-19 context. In doing so, it first explores the livestock production patterns and the regional markets. We then (Section 3) identify and analyze the livestock and meat value chain. In Section 4, we address the short-term measures to support the sectoral players in the context of the COVID-19 shocks. In Section 5, we offer a framework for a long-term structural response to unlock production and trade potentials for the sector's resilience.

## 2. Livestock and Chad's Economic Development

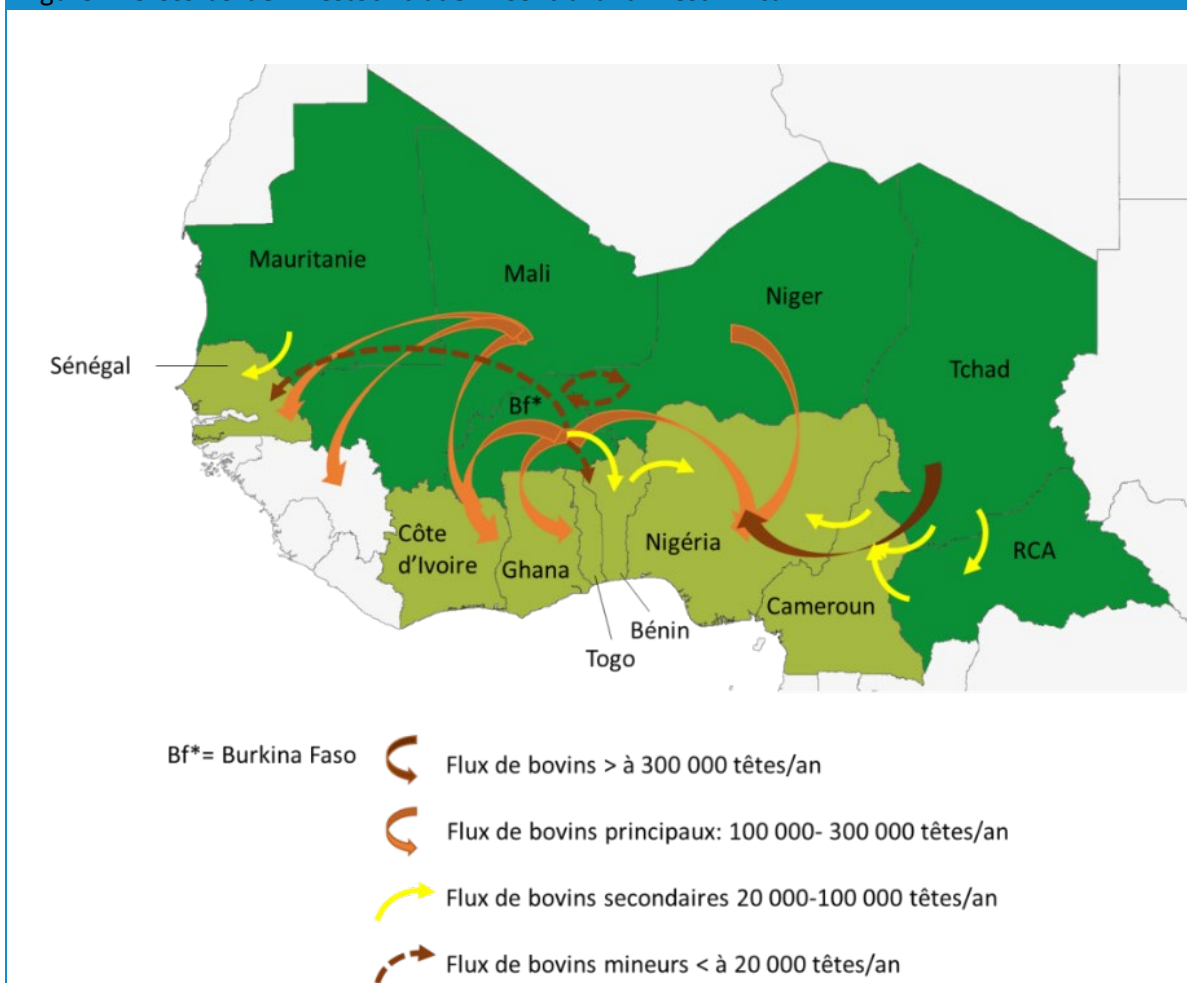
Figure 1: Livestock Production Map



Source: Livestock Census, 2012-2015

Livestock contributes 6 to 7 percent of Chad’s GDP; hence sustained and enhanced cross-border livestock trade can boost growth and enable an effective Chadian response to COVID-19. Livestock is a primary source of income for most rural households, with a total herd count of over 128 million animals of all species (RGE, 2015). Livestock contributes over 35 percent of rural zone total wealth. Livestock annual production is estimated at CFAF 5,000 billion with a net annual cash flow of more than CFAF 155 billion. Livestock provides direct or indirect income to 40 percent of the population. Livestock is also the largest non-oil export item, over 51 percent ahead of cotton for an estimated value of CFAF 134.7 billion (Reounodji, 2015). Although traditional and largely extensive, Chadian breeding presents significant development opportunities and is essential for food security and the fight against poverty. Cattle are a long-term investment that earns interest and is used for capital accumulation. Livestock is central to many other social transactions, including matrimonial exchanges. Beyond economic benefits, owning livestock is a source of prestige and social recognition, as well as a source of food, fertilizer, and savings.

Figure 2: Cross-border livestock trade in Central and West Africa



Source : IRAM-Issala-LARES selon Josserand/ATP, 2013, CEBEVIRHA, 2013, et rapports mensuels Tradehub 2013

Livestock production is diversified and depends on agroecological conditions. The 2012-2015 General Livestock Census (RGE, 2015) identified more than 93 million animals, with annual growth at around 6 percent. The livestock production as of 2019 is thus estimated at more than 120 million animals. Goats account for the largest part of the production with 32 percent. Sheep and cattle account respectively for 29 percent and 26 percent. The other species (camels, donkeys, horses, and pigs) share the remaining 13

percent. Livestock production is more concentrated in the country's central part, a Sahelian area, favorable to breeding. The Batha region is home to 12.6 percent of the total production and is followed by Wadi Fira (8.8 percent), Ouaddaï (8.7 percent) and Lac (6.5 percent), see Figure 1.

The demand for livestock products rises in line with population growth and urbanization in Nigeria and the ECCAS region. In Central and West Africa, the demand is highest in coastal countries, with Sahelian countries net-exporters. Chad is a major supplier of live animal trade to Nigeria and Cameroon. There is market potential in the ECCAS region; Chad's challenge is to dismantle the numerous impediments to cross-border trade and nurture sufficient supply response, see Figure 2.

There is a high correlation between the degree of openness of the economy and regional trade (Kamuanga et al. (2008)). Although Chad's levels of live animal products traded are steadily increasing, intra-regional trade could be intensified given the potential if more favorable policies to support the development of animal product processing are implemented. Chad and other Sahelian countries have traditionally been the major source of regional meat trade to relatively better-endowed consumers in Nigeria and other ECCAS countries, such as Gabon, Angola, the Republic of Congo, the Democratic Republic of Congo, and the Southern part of Cameroon (Figure 2). The cross-border movement of traded livestock has persisted despite armed conflicts, regional insecurity, and border closures.

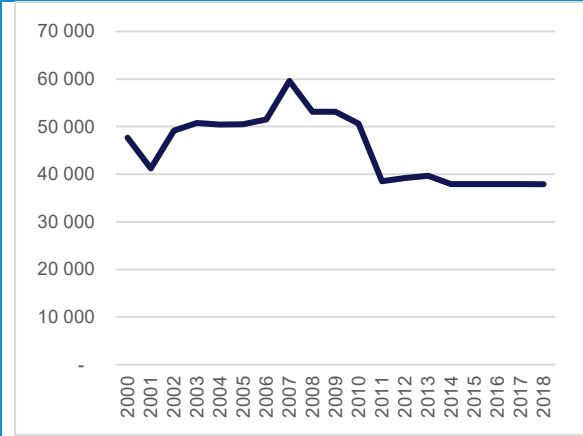
Sustained cross-border livestock trade will be crucial for protecting the herder's and communities' lifeline in border regions during the pandemic outbreak and the recovery period. Enhanced cross-border trade provides revenues for purchasing other basic commodity imports. The cross-border livestock trading operation is an integral part of a system through which export proceeds are used to import other manufactured goods from the Nigerian and Cameroonian markets. Increased revenue from livestock activities enables the herder to purchase other agricultural goods in the local market. Boosting livestock trade stimulates non-pastoral activities, job creation and increases productivity. This, in turn, has indirect multiplier effects on other income-generating activities in agricultural sectors. More importantly, it creates the conditions for initiating agro-industrialization. Accordingly, cross-border trade is the enabler of economic diversification. Overall, the spillover effect of cross-border trade could nurture economic growth and poverty reduction.

### 2.1. Market Potential in Central Africa

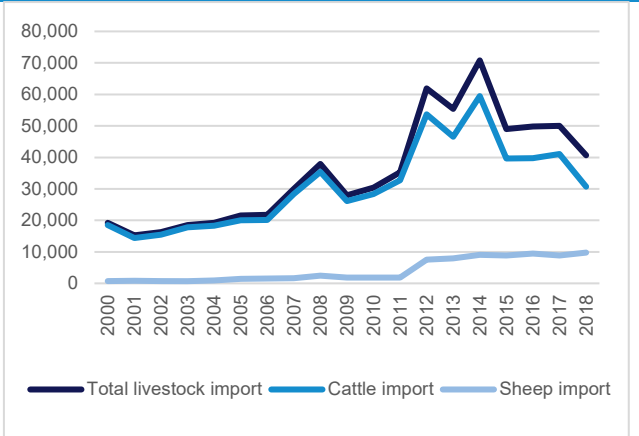
Chad remains a key supplier of livestock to the sub-region, particularly Nigeria and Central Africa. FAO estimates show that Chad has a strong presence in the livestock market (Figure 3). The most-traded animal is beef, with sales of nearly US\$ 45 million in 2009. Over the past two decades, beef sales have been broadly stable and remain above US\$ 30 million. Moreover, according to FAO estimates, goat ranks second in Chad's **livestock** exports, which has stabilized at around US\$ 8 million since the 2000s, with a peak observed in 2010. In addition, sheep exports are less significant, with sales not exceeding US\$ 2.5 million between 2000 and 2013. However, most of the livestock exports take place in the informal sector; hence the export potential is even larger.

Figure 3: Trend of livestock export of Chad (in thousands of dollars)

Figure 4: Trend of livestock import of ECCAS region (in thousands of dollars)



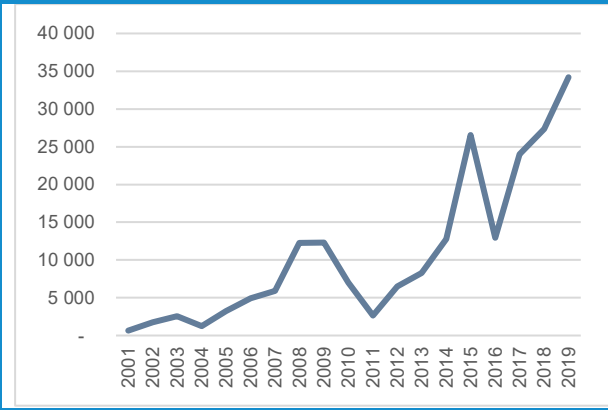
Source: FAOStat, estimates



Source: FAOStat, estimates

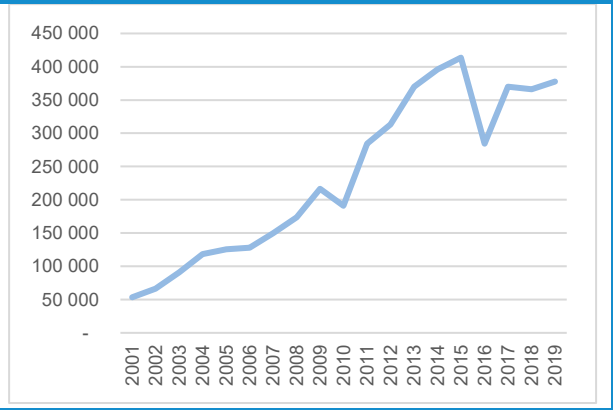
The livestock import of the Central Africa region, essentially composed of cattle, has been growing over the period, reaching more than US\$70 million in 2014 with a steep fall noticed since 2015 (Figure 4). Central Africa mainly imports cattle, sheep, and goats. The cattle import trend closely follows the path of the overall livestock demand in Central Africa. In 2018, 75 percent of the overall livestock imports of the region was composed of cattle. Sheep imports rank second. They have been increasing since the 2000s, from about \$ 2 million in 2000 to nearly \$ 10 million in 2018. But the demand for goats is much lower and has remained below US\$1 million since 2010, except in 2014.

Figure 5: ECCAS imports of meat and edible offal from Africa (in thousands of US dollars)



Source: FAOStat, estimates

Figure 6: ECCAS imports of meat and edible offal from the rest of the world (in thousands of US dollars)



Source: Trademap

Imports by the Economic Community of Central African States (ECCAS) of edible meat and offal have generally been on an upward trend for the past 20 years. Imports from Africa ranged from US\$ 650,000 to US\$ 34 million between 2001 and 2019, an average annual growth of 25 percent. Imports from the rest of the world are even more important (ranging from US\$50 million to US\$400 million between 2001 and 2019).

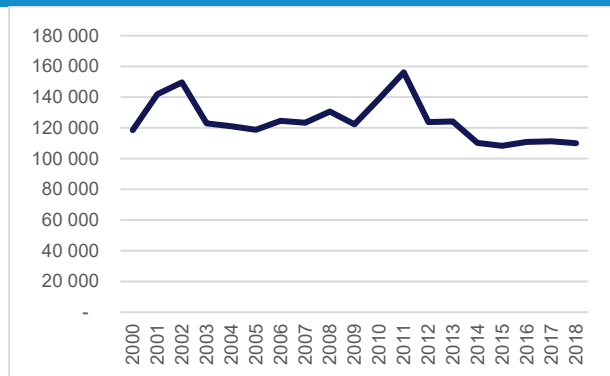
**2.2. Market Potential in Nigeria**

Nigeria’s livestock imports over the past two decades has not varied much, following a steady trend (Figure 7). Cattle have the largest share in Nigeria's demand for livestock. FAO estimates indicate that the demand is relatively stable and is around US\$ 100 million. As for sheep, demand is less significant and



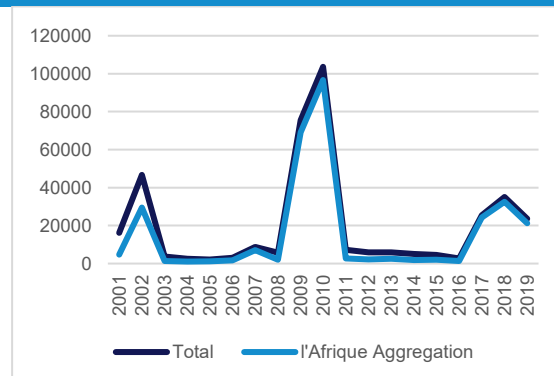
unstable over time. Demand generally remains below US\$ 15 million. Conversely, goat imports have been declining since the start of the decade, going from US\$ 15 million in 2000 to US\$ 1 million in 2017.

Figure 7: Trend of livestock import of Nigeria (in thousands of USD)



Source: FAOStat, estimates

Figure 8: Nigerian imports of meat and edible offal (in thousands of US dollars)



Source: Trademap

For the import of meat and edible meat, unlike ECCAS, Nigeria's imports of meat and edible offal have experienced a checkered pattern since 2001, with a peak in 2010. The protectionist policies explain this. Indeed, Nigeria imposed drastic measures prohibiting imports of beef meat. Since 2003, the bulk of global imports have come from Africa (Figure 8).<sup>6</sup> While the Nigerian government and trading community's concerns leading to recourse to imports bans or restrictions could be legitimate, this is by far the best approach. A preferred way forward is to promote exports and the use of market-friendly import regulations that foster a universal trade rule-of-law environment. The list of potential measures includes (a) a competitive foreign exchange regime, (b) use of the flexibilities built into the WTO law such as import restrictions for balance of payment or safeguard reasons, and (c) use of the anti-dumping provisions. As concluded by “the coherent and consistent pursuit of good trade policy requires not only a robust and appropriate domestic institutional framework and process for trade policy-making but also a supportive and institutionalized multilateral arrangement for trade policy surveillance” (Oyejide et al. 2005).

There is real potential for positioning in the livestock and edible meat and offal market for Chad. On the one hand, Chad's livestock production capacity is significant, with a preponderance of cattle. Moreover, this capacity is likely to be underestimated since the activities are carried out mainly in an informal way. An improvement in the logistics apparatus and a restructuring of the sector could make it possible to increase the supply from Chad. On the other hand, with requests for meat and edible offal worth up to \$ 100 million in Nigeria and \$ 30 million for ECCAS, Chad must implement policies that can make it possible to compete with other countries and, above all, ensure compliance of Chadian products with the regulatory requirements of Nigeria.<sup>7</sup> In addition, North and East African countries remain potential untapped markets that Chad can conquer should it improve its productivity and competitiveness.

### 2.3. Chad's Competitors

Among the top supplying countries in Africa, Namibia ranks first, accounting for the largest share over the past 5 years (48 percent). South Africa and Zambia follow, accounting respectively for 19 percent and 14

<sup>6</sup> The erratic trade policy of Nigeria and its detrimental impact have been widely debated and analyzed (Fasan 2015).

<sup>7</sup> Although Nigeria has banned the import of edible meats, the import ban is likely to be phased out as part of the African Continental Free Trade Area negotiations.

percent. Botswana and Kenya share 11 percent (Table 1). There is a need for aligning to international standards as most of Africa's imports come from countries outside the continent. These countries are better integrated into the global value chain (Table A1). Though the demand is not as important as in ECCAS, the ECOWAS market also offers Chad export possibilities. Data indicate that Togo is the top supplier of edible meat to the ECOWAS region, with 54 percent of the market share over the past five years. South Africa and Tunisia respectively rank second and third with 17 percent and 8 percent.

**Table 1: Top 5 supply countries in Africa of meat and edible meat to the Central Africa region (in thousands of USD)**

Exporters	2015	2016	2017	2018	2019	Average Share
Africa Aggregation	26 536	12 929	24 019	27 352	34 200	-
Namibia	14 067	4 550	8 910	16 419	15 809	48%
Zambia	65	532	1 517	1 969	13 771	14%
South Africa	6 775	4 824	5 545	4 381	1 994	19%
Botswana	594	258	373	2 240	1 419	4%
Kenya	1 369	2 012	2 477	1 781	598	7%

Source: Trademap

#### 2.4. Harnessing Cross-Border Trade Potential

While the opportunities for cross-border trade are recognized, there is no consensus on how to unlock them. For example, the government has indicated its intention to limit or ban the export of animals; various programs have focused on the production side of the cross-border movements and less on the trade aspects (Kamuanga et al. (2008)) The implication of all these actions is not understood by all relevant actors, which could lead to poor implementation or reversals. Actions are needed in the following direction:

- Education and empowerment of public and private stakeholders to enable an understanding of the benefits and costs associated with cross-border trade. This includes consensus building on what is realistic to undertake in the short to medium term to limit or ban cross-border exports of live animals.
- Profiles of informal and unrecorded trade and traders will be required. More specifically, there is a need to understand the policy drivers of trade outside the formal channels, or why there is low compliance with laws and regulations.<sup>8</sup>
- Harness the benefits of cross-border trade of animals as an integral part of the long-term objective of promoting the livestock value chains with export only after value addition.
  - Enable herders to sell their products (livestock) and purchase their basics for survival at fair prices, thereby fostering herders' wellbeing and other actors in border areas.
- Enhance investment by the regional government in pastoral livestock production and productivity to ensure sustained supply of good quality livestock to the growing cross-border market without depleting the livestock resource base.<sup>9</sup>

<sup>8</sup> Berhanul (2017) shows that informal cross-border trade between Kenya and Ethiopia could be reduced and welfare increased with cooperation to reduce livestock cross-border restrictions.

<sup>9</sup> Investments in value addition and livestock product processing facilities could provide additional marketing outlets to herders.

### 3. Livestock and the Meat Value Chain

The livestock value chain comprises a complex set of actors and processes by which a specific commodity is produced and reaches final consumers (see Figure A2 and FAO (2021)). The efficiency of the value chain depends on the flow of information and incentives for frictionless transactions. The costs and profit margins taken by sector participants and intermediaries at each stage in the chain impact the final price paid to farmers. Therefore, attention should be on ensuring that actors in the value chain fully understand the linkages between their actions and other upstream and downstream actors.

Meanwhile, reaping productivity and export opportunities would require mapping the value chain to identify the pitfalls. Such mapping will help identify policies for improving the value chain aspects that will greatly impact production and export and revenues accruing to the producers. It will be important to understand how Chadian cross-border actors are interconnected, the interests and power of various groups, associated revenues accruing to each class of actors, and the associated cost is crucial. Overall, Chad's positioning will require a two-pronged approach, focusing on nurturing appropriate interlinkage with the relevant segment of the chain on the one end and on the other, creating the necessary conditions for fully securing a comfortable position on the segment with comparative advantage. To this end, there is a need to identify key products along the entire value chains, the commercial interests of the actors involved in the value chain, especially their ability to affect prices and costs. It is also crucial to properly understand institutions and individuals responsible for regulating entry participation in the chain, who monitor compliance with trade regulations, including animal health-related. Finally, cross-border trade can be furthered through enhanced availability of information on the entire supply chain based on consumer preferences and prices.

#### 3.1. Profile of Livestock Traders and Trade Routes

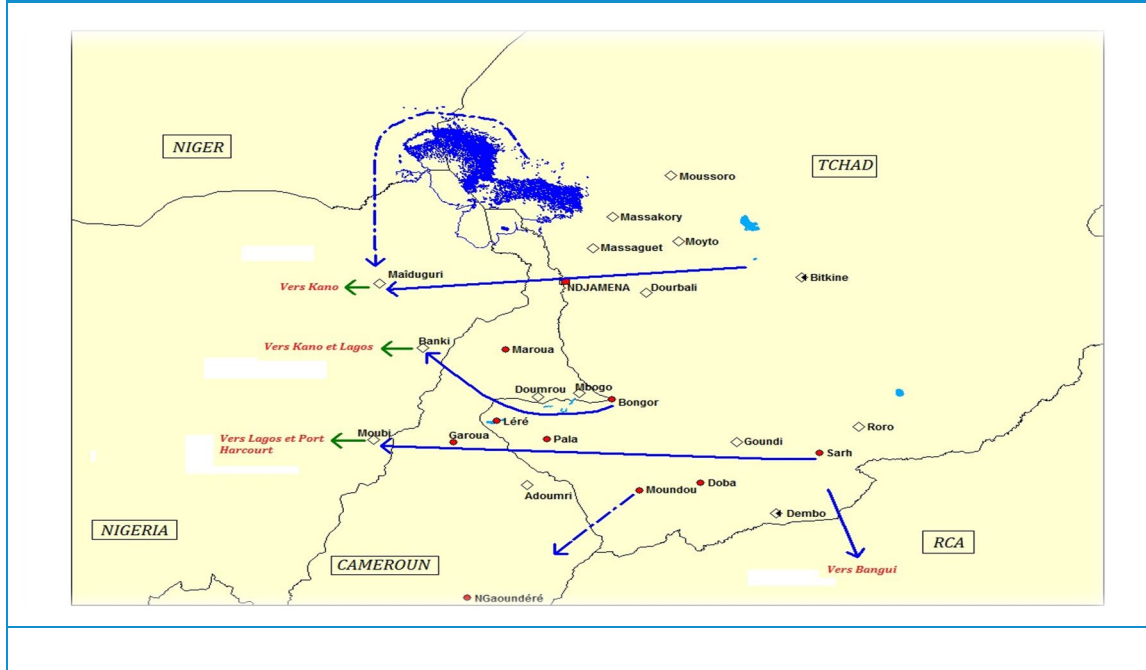
Understanding how the value chain is coordinated and structured is essential for identifying the policy reform focus. Such an understanding helps explain the challenges the sector faces and how the value chain structure influences the ability of smallholder farmers to gain access to skills, support services to upgrade and improve quality for better prices. Cross-border trade involves a network of traders operating under a complex organizational structure (Kamuanga et al. (2008)). Informal interpersonal relationships primarily govern business transactions. The trading functions are distributed among several complementary actors as follows (see Mahamat (2017)):

- *Breeders*: they are at the lower tip of the chain, composed of uneducated producers who focus only on weight and the animal's value, with little attention to animal health.
- *Small scale (petty) traders* buy animals from producers at a discounted price and sell them when the price is right. They may also try to add value to purchased animals through supplementary feeding and treatment. Some traders buy animals at village markets and sell to larger markets when the price is higher. Another category of small-scale livestock trader buys animals at low cost in a market and then sells them later at a profit when the price is higher. This group sometimes, while waiting for the right price, would continue grazing or feeding or ensure the animal meets sanitary and phytosanitary norms, which increases the animal's market value.
- *Collectors or unpatented traders*: they are independent traders who supply animals in response to orders or requests from actors further up the supply chain. They purchase and transfer animals on behalf of their clients from smaller markets to larger markets. For cross-border trade, they sometimes regroup themselves to export. They often collaborate with licensed traders for the establishment of the livestock passport. Unpatented traders are active in the secondary markets

and in the southern sector (Pala). They rely on a solid network in Cameroon to circulate with a simple laissez-passer; hence they do not obtain the livestock passport. They sell much of the livestock in the Adoumri markets. Collectors are also present in the Center sector (Bongor) and rely on merchants from Maroua in Cameroon to establish health passes in the veterinary posts of Gobo and Moulvouday. The Dallara or Sabbaba, or Samsara act as brokers for the traders; negotiate the best price for the latter against a 10 percent levy. The Rakadja or Dealer serve as intermediaries between traders in the markets; they are free agents taking advantage of their knowledge of the market to negotiate directly with traders who ignore the price. The Cherek agents of large traders: provide Nigerian traders with reliable information on the availability and prices of livestock in the various markets.

- *The Damin*: they are traders established long enough in Cameroon and Nigeria. They play a variety of roles. They guarantee and welcome traders to the markets; they can also serve as brokers or serve as facilitators to secure Cameroonian laissez-passer for exporters who do not have a passport before crossing from Chad.
- *Licensed traders*: they control the relay markets of cross-border networks. They manage the sector between Pala, Adoumri, and Mubi. Traders from Bongor manage the sector which goes from Bongor or Guelengdeng to Banki; traders from N'Djaména control the sector that goes from N'Gueli to Maïduguri; those using the Borkou-Ennedi\_Tibesti (BET) route share the export sector for camels to Libya.
- *Freight forwarders*: they help traders with customs formalities, collaborate with the conveyors who do not necessarily have a family relationship with traders, and work as day laborers of traders. The Dallala or Sabbaba or Samsara: Act as a broker for the traders; negotiate the best price for the latter against a 10 percent levy.

Figure 9: Chad livestock export trade route



There is a need to regulate the sector to reduce the number of intermediaries and ensure that the breeder has a higher share of the final price. The political economy of these various interest groups needs to be studied. Weaker actors composed of breeders and uneducated traders will have to be empowered to reduce the rent currently accrued to these intermediaries. A related aspect of limiting predatory behavior is understanding the various interest groups dominating the major cross-border routes. Livestock production and trade contribute directly or indirectly to many households' livelihoods in the rural areas in Chad. Livestock is marketed through the ethnic, clan, and various forms of kinship, often capitalizing on using the same local language on the two sides of the border. The main cross-border routes are as follows (see PAFIB (2017) and **figure 9**):

- The main export channel comes through N'djamena; it is particularly active from September to April. Animals cross the Chari river at the N'Guéli or N'Djamena-Farah exit post to reach the Maiduguri market in Nigeria.
- A second route goes from the Center and the South of Chad mainly in the rainy season, crossing the Logone via Bongor to Yagoua in Cameroon, then in Nigeria.
- A third goes from southern Chad and CAR, mainly in the dry season via Pala and Coutéré towards Nigeria via Cameroon.
- The last route goes to the CAR with animals connected by truck from Fort-Archambault to Bangui. This route is almost abandoned due to insecurity.

### **3.2 Livestock and Meat Value Chain Support Priorities**

The main shortcoming in nurturing an effective integration in the value-chains profitable segments lies in professional organizations' weaknesses. This is evidenced by the weak human and institutional capacity at the national and sub-regional level for leading the modernization of the slaughtering and meat distribution sector. An essential element of boosting production and cross-border trade of livestock products is the role of professionals and how they are organized to facilitate trade effectively, protect producers' rights and ensure they receive a fair share of the price and the safety of consumers. Livestock sector operators need an adequate legal and regulatory framework, combined with a sustained program for skill improvement that will improve Chad's meat supplies to coastal countries in Central Africa and Nigeria. There are currently several professional organizations at the production, processing, and marketing chains of animal products. These organizations need to be matured to effectively exploit the potential of this sector to support economic diversification.

The market network composition is key to understanding the actors along the value chain. The livestock cross-border trade is formed by segmented networks composed of actors seeking to maximize their own interests. Therefore, various groups would have divergent and competing interests that are best resolved through exchanges and competitively determined prices. Livestock trade networks are dominated by socially embedded business transactions primarily government by agent-specific social network) FAO (2015). The key dimension is the position along the supply chain and whether and how such agents have market leadership that could lead them to influence the price-setting process. In Chad's case, there is a long and complex livestock value chain connecting producers mostly in the rural zone to the main city of N'djamena and the main consumption basins in Nigeria and ECCAS, with most trade going through Northern Cameroon. Regional livestock trade is usually unrecorded; it hardly goes through official checkpoints, and when they do cross through official points, they do not comply with administrative and sanitary procedural requirements. This is compounded by a set of tariffs and non-tariff barriers that depress prices and discourage important private sector investment in the regional road network.

The value chain shall also ensure clear mapping of key players' roles from breeders to the final consumer. Given that value is added at each stage of the chain, it is crucial to reduce intermediaries to avoid loss of such value-added in bulky intermediaries. The production is organized around raising ruminants and animals with short life cycles; producers are mainly rural dwellers with low to no education. Overall, producers and cross-border traders are socio-economically very heterogeneous. This affects the individual producers' bargaining power; a professional organization adequately structured is the best way to increase that power. Mobilizing and galvanizing small-scale producers' energy would bring together socio-vocational categories that can facilitate common actions, including group procurements and financing. Chadian producers can join and take advantage of the larger umbrella structures.

The structuring of the value chain intervention could be around four dimensions. The first dimension is the strengthening of production capacities. To that effect, a differentiated approach shall be tailored to each of three systems, namely the pastoral; the semi-sedentary (agro-pastoral) with potential; and the intensive system in peri-urban fattening and ranches/state farms. The second dimension is the market structure, with objective empowerment of traders to comply with standards and regulations and position themselves on markets at national, regional, and international levels. The third dimension of intervention is cost-effective connectivity between production centers and consumption centers. This could entail, among others, (a) providing adequate means of transport of live animals; (b) measures to expedite and streamline procedures and land border crossing land and air borders; (c) quarantine facilities; (d) elimination of tariff and non-tariff barriers; and (e) the positioning in destination markets. The fourth dimension is livestock-driven agro-industrialization, which will require investments to boost production and compliance with international standards (appropriate trucks: livestock and refrigerated trucks, modern slaughterhouses, laboratories, etc.).

#### **4. Response to Covid-19 and Other Challenges**

The specific actions for the short-term response comprise health-focused and short-term actions as follows:

- The establishment of the regulatory framework for the peer-pressure and pooling of breeders, logistics supply-chain operators, and distribution to facilitate their insertion in the lucrative segments of the regional and global value chain of livestock products.
- The enforcement of regional regulations through universal reliance on the CEMAC veterinary passport relative to the transhumance and regional trade of live animals.<sup>10</sup>
- The practice of physical distancing through measures eliminating congestion at border crossing posts. Such measures would authorize access to the border posts only for animals for which formalities have been completed. They also entail decentralization of export formalities processing posts, bringing them closer to breeders' production sites.

##### **4.1. Organizing Cross-Border Trade to Scale Up Its Performance**

Efficient organization of the actors is a prerequisite for boosting livestock production and cross-border trade. The biggest challenges facing cross-border traders are long queues leading to the long waiting times at customs, which themselves nurture corruption and other unethical behaviors. The strengthening of member-driven organizations requires long-term and continuous back-stopping support and guidance. This includes training in farmer extension services, and it needs adequate resources. Cultural and

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<sup>10</sup> In line with Decree N ° 1/94-CEBEVIRHA-018-CE-29 of March 16, 1994.

traditional practices can limit the engagement of some beneficiaries, such as women in leadership positions. There is a need for a program aiming to establish linkages between producers and cross-border suppliers of genuine services.

There are three main groups of functions (production, marketing, and/or processing) before the product reaches the consumer; these three functions are performed by actors who are nominally different but who in practice perform several functions. Traders of livestock and animal products from the second group of actors, in which there are two distinct sub-groups—collectors and actual traders. Collectors attend cattle markets in different countries to assemble live animals or their products (hides and skins). They are generally commissioned by traders and are paid a service commission fee; they take advantage of their access to lack of financial resources to engage in trade on their own account.

Traders in live animals, animal products, and/or by-products require effective marketing strategies. There is a need to create and operationalize platforms that would support the contractual arrangements between livestock producers and traders or between traders from Chad and livestock/meat traders in the Coastal countries. In the current setting, each actor relies on its own information channels on export markets.<sup>11</sup> The dysfunctional organization works to the advantage of the middlemen who are more interested in increasing prices than in facilitating trade; this, in turn, increases the transaction costs of shipping livestock to the coastal countries, undermining competitiveness on consumer markets. One underlying problem is the fact that the information system on regional markets is not sufficiently developed.<sup>12</sup>

Meat trade almost stopped export in the 1970s following the closures of the main ranches. In 1970-74 there were three ranches: Abougoudam (Ouad-dai region), Ifenat –Ouadi-Rime (Batha region), and the ranch of Bachom near Massakori (Baguirmi region), they are no longer operational. Some exports are currently undertaken using refrigerated trucks or air freight (very expensive) to Congo Brazza, Equatorial Guinea, and Gabon. It is expected that export to Angola and Gabon will be done in the near future using modern refrigerated slaughterhouses in the Chadian Region of Logone. Furthermore, live animal exporters to Nigeria and Central Africa almost exclusively go through Cameroon that serves as a transit zone. There is a need to organize and intensify exchanges between exporting and importing groups as the current dysfunctional organization works against Chad's herders.

#### **4.2. Streamlining Transport and Border Crossing**

Appropriate laws and regulations of cross-border livestock trade are essential for ensuring adequate supply response. Cross-border traders report challenges with logistics, clearance delays due to lack of agency coordination, extensive paperwork, and congestion. The trade facilitation reforms required are complex and cross-cutting; they create risks for both producers and traders by reducing animal's weights, and in the case of the meat trade, the delays could undermine the norms and standards and hence lead to either rejection on arrival in the export market or being sold at a significantly reduced price. A fair price of livestock will provide the necessary incentive for enhanced production to respond to the high demand in livestock and meat value-chain producers in Coastal Central African countries and Nigeria. Associated measures shall also limit the share captured by intermediaries, which will nurture increased productivity.

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<sup>11</sup> Actors of meat-supplying countries in most West African countries are coordinated under the “*Cadre National de Concertation (CNC)*.”

<sup>12</sup> One such system is the « Réseaux régionaux de systèmes d'information de marchés agricoles au service des organisations des commerçants » by the CILLS.

Appropriate cross-border mobility laws and regulations are also critical to the maintenance of high pastoral livestock productivity. Chad is a member of several regional and international livestock trade conventions but has not yet translated the conventions into national regulations. CEMAC countries have adopted a regional framework at the regional level, which is aligned with that of the ECOWAS region; the Chadian cross-border livestock movement and trade goes through informal channels or unrecorded. As a result, the sector's contribution is largely unknown, which, in addition to the lost fiscal revenues, undermines the ability to formulate and implement policies to effectively boost the profitability and productivity of the pastoral sector (Berhanu 2017).

There is a need to expedite the implementation of regional livestock cross-border movement and trade regulations. This will require at the national level a comprehensive policy that provides the necessary national legal and institutional framework for the enforcement of implementation of regional instruments to secure frictionless livestock mobility (Turner and Schlecht 2019). From the local to cross-border points and at the final destination where the Chadian livestock could be sold at the best prices. A key instrument is the International Transhumance Certificate (ITC) that regulates the following, COMESA (2010):

- Control of departing livestock herds;
- Protection of animal health of local herds in the host country. Timely information about populations of 'host areas' of the arrival of herds from neighboring countries. Rights and obligations of non-resident mobile herders in host countries legislation;
- Identification of required documentation such as sanitary and phytosanitary certificates and authorized itinerary followed and the land border entry points.
- Specific actions are needed to ensure compliance with the physical distancing requirement implied by the COVID-19. These include streamlining the process during the completion of the required documentation at the border crossing point and along the corridors. Streamlined implementation of the laws and regulations related to transhumance is essential to protect other cross-border economic activities and the environment. The specific provisions are as follows:
  - Recognition of livestock mobility within and between countries as a rational and productive form of land use;
  - Protection of the rangelands as communal areas under controlled access management systems;
  - Protection of pastoral resources from alienation or encroachment, particularly strategic resources (dry season water, dry season grazing, livestock corridors, etc.);
  - Provision for flexible tenure arrangements that focus on rights of access and control rather than ownership and which accommodate multiple-use and overlapping rights of access;
  - Establishment of conflict management mechanisms focused on mediation, negotiation, and consensus;
  - Decentralization of management decisions to the level of communities with space for traditional institutions and systems to function effectively.
- Cross-border trade will be facilitated through the implementation of regional livestock passports or zoo-sanitary export certificates. The regional trade of live animals of Chad, as is the case of other African countries, is plagued by numerous issues that are applicable to agro-ecological zones rather than following the official national borders. The non-exclusive list of such binding constraints includes the following:



- Lack of knowledge of the sector; unreliable data (informal/unregistered; no methodologies specific to livestock trade);
- Abnormal practices: weakness of sub-regional governance, due to the lack of quality human and institutional resources;
- Insecurity along with the commercial circuits;
- Sanitary barriers: animal health due to transboundary and zoonotic diseases;
- Insufficient and under-equipped marketing and processing infrastructure.

As a response to these multi-country constraints, Chad, together with other CEMAC countries, has adopted cross-border regulations that are in conformity with the International Sanitary Code of the World Organization for Animal Health. These regional regulations are, however, not consistently implemented. In Chad, one explanation is the multiplicity of poorly organized markets, including collection markets in production areas where the herder usually sells the animal to an intermediary who will, in turn, sell to at relay border markets, and then to other intermediaries that dominate the consumer markets in urban centers. The regional livestock marketing circuits are made up of well-structured routes because they are very old, based on the complementarity between agro-ecological zones. The poor implementation of the regional texts leads to the prevalence of predatory strategies (private or public), which lead to circumvention strategies. This also comes with informal payments that further erode the final price received by the producer.

#### **4.3. Reducing Congestion at Border Crossing Points**

The border crossing time could be shortened by addressing congestion at land border crossing points. Congestion leads to the long stay of live animals at the border, substantially raises total logistics cost, and undermines competitiveness. As has been established in the literature on port dwell time, timely service is a critical determinant of improved efficiency along the supply chain in Africa. Actions could focus on three main topics: i) streamlining the border post operations; ii) improving trade competitiveness through actions specifically focusing on reducing border crossing time on trade; and iii) supply chain performance, focusing on the most on the weakest links. One area in which competitiveness can easily be improved is the skill enhancement of importers and clearing and forwarding agents, with the ultimate objective of aligning professional behaviors to standards comparable to benchmark countries. Even more important, low competency and cash constraints explain why most cross-border traders engage in actions that ultimately prolong border crossing. There is a need for actions to reduce congestion caused by live animals in border crossing formalities areas, hence increasing transparency and limiting rents prone opportunities Raballand et al. (2012).

#### **4.4. Medium-Term Response to COVID-19**

The full opportunities for the livestock value chain will require bold policy reform consistently implemented over several years. The livestock can drive economic transformation and nurture post-COVID-19 sustainable development if a comprehensive reform addresses a critical set of constraints. To that effect, there is a need for a bold multi-layer program to facilitate cross-border and international exports. The export expansion would provide foreign exchange to purchase a much-needed investment for transformational infrastructure. Trade expansion could materialize if the country can attract foreign direct investment (FDI) through multinational companies that will bring managerial, technical, and design skills at the same time that their networks facilitate access to new export markets areas. When appropriate policy reforms complement these investments, the livestock sector's expansion will foster

productivity and have spill-over effects on other economic activities. The country could first leverage greater integration into regional and global markets.

The bold program could be structured around three dimensions, with the first focusing on the production side. The first dimension of the reform would aim to unlock the untapped potential through investment in cross-border and regional infrastructure and policy reform to enhance the efficiency of trade and transport logistic services. Targeted investments would aim to improve the efficiency of transportation and logistics services, which directly impact quality. Such investments shall be supported by reforms to the business enabling environment and infrastructures such as improved storage and warehousing facilities that can accommodate while preserving quality. This would be an integral part of trade facilitation reforms that will expedite cross-border and movement in transit countries.

The second dimension would be a concerted effort for integration into the regional value chains. This could focus on harnessing the underutilized potential by moving into the livestock value chain's higher level, such as supplying Nigeria and ECCAS countries with quality meat. This will, therefore, require learning from benchmark countries' progress through enhanced processing. In that endeavor, the focus could be on interventions to improve competitiveness, productivity, and income. This shall include a focus on continuous capacity development for improved production practices, strengthening extension services, better management for improving quality and handling from the farm through the movement of live animals and processing. Support the producers' group in marketing to reduce the impact of intermediaries to fetch better prices.

The third dimension is to adopt an end-to-end supply chain approach. In turn, this will require proper attention to the needs of the small-scale actors that need to be empowered to be subcontracted by larger firms. There will also be a need to address investment in storage and processing facilities, together with health-related standards, shall also be prioritized. Stakeholders should also be exposed to best practices from peer countries on improved productivity, farmer groups' governance, sector regulation, and marketing systems, improving gender outcomes and women's participation, value addition, and branding, raising domestic consumption.

Evidence-based outreach and education will be required, hence the need to boost data gathering and undertake periodic studies to identify priority binding constraints for collective actions and opportunities of partnership with actors from other countries who can augment sector expertise. To more effectively move up the value chain, there would also be a need for support for greater participation of women and youth in the sector. Youth tends to be more receptive to implementing and adopting more market-friendly practices. This will, in turn, nurture diversification of income streams and ensure food security. Diversification can be both horizontally by engaging in non-agriculture or livestock activities; it could also be vertical by inserting more lucrative market segments of the value chain. Furthermore, there would be a need to explore market diversification to markets outside the West and Central Africa region, where quality requirements and standards are within Chad's reach. Such markets are in Africa, the Middle East, or Asia.

The medium-term focus on trade and transport logistic facilitation shall build upon and complement previous interventions. A World Bank project is currently focusing on improving pastoralists and agro-pastoralists' resilience in certain areas of the region and empower Chad and other Sahelian countries for a swift and effective response to exogenous shocks that could affect pastoral activities. .

Other activities, although they are trade facilitation focused, are dated and did not take a comprehensive view. The Joint World Bank, ECOWAS, CORAF and CILLS "Initiative to Promote Trade of Livestock and Meat in West and Central Africa": a) explored the issues linked to the different dimensions of the national and regional stock farming policies; b) to present a set of recommendations concerning the streamlining of

the domestic market and trade policy at the borders of the ECOWAS area; c) analyzed the operations of the value chains and the various actors that informed proposals for structuring and improving the performances of the value chains; d) the veterinary and health issues both in terms of herd management and concerning the different links in the values chains from the producer to the end consumer. These conclusions provide useful guidance for medium-term policy reforms.

## **5. Conclusion**

The COVID-19 shock has exacerbated the numerous constraints that have plagued Chad's livestock production and trade for years. This paper builds the case for a comprehensive response, with short-term and medium-term actions for eliminating the lingering constraints and effectively unlocking the livestock sector's potential. Among these constraints, priority should be paid to reducing the uncertainty along the global and regional supply chains. The response should therefore pay attention to the fragility of Chad's trade facilitation systems. This would entail bold reforms of trade and transport facilitation regimes, which will take time and resources to design and implement. However, there is a need for a medium-term plan, combined with short-term measures that can help mitigate the immediate needs.

The agenda shall aim to improve economic resilience. Such resilience materializes through a stronger and more efficient livestock sector to reduce the role of informal and unrecorded trade by promoting ethical behavior and professionalization of the actors. These will boost production and exports, thereby improving the incomes of breeders and actors in the livestock sector. The policy reform agenda should complement projects aiming at improving the resilience of pastoralists and agro-pastoralists in certain areas of the region and empower Chad and other Sahelian countries for a swift and effective response to exogenous shocks that could affect pastoral activities. The reform should also build on previous trade facilitation efforts and take a comprehensive view.

## Appendix

Figure A1: ECCAS imports of meat and edible offal from the rest of the world (in thousands of US dollars)

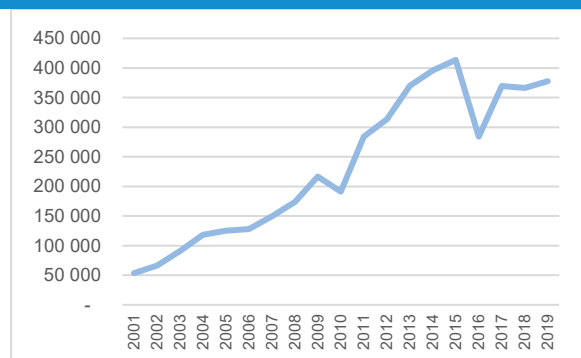
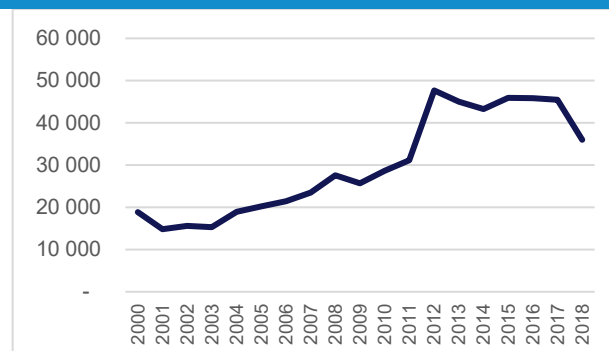


Figure 9: Trend of livestock import of CEMAC (in thousands of USD)



Source: Trademap

Table A1: Top 10 supplying countries worldwide of meat and edible meat to the Central Africa region (in thousands of USD)

Exporters	2015	2016	2017	2018	2019	Average Share
United States	62 685	51 767	76 767	63 923	66 339	17%
Brazil	61 229	51 198	34 270	48 069	45 278	12%
Belgium	38 371	27 093	47 069	44 869	42 524	10%
Netherlands	42 059	23 475	33 045	41 964	46 401	10%
France	47 250	13 590	26 394	22 542	20 331	7%
Germany	32 672	24 227	20 394	19 988	19 566	6%
Poland	19 584	10 827	26 970	28 867	27 285	6%
India	27 840	24 417	24 895	15 151	17 313	6%
Türkiye	14 855	9 108	24 294	20 715	24 847	5%
Namibia	14 067	4 550	8 910	16 419	15 809	3%

Source: Trademap

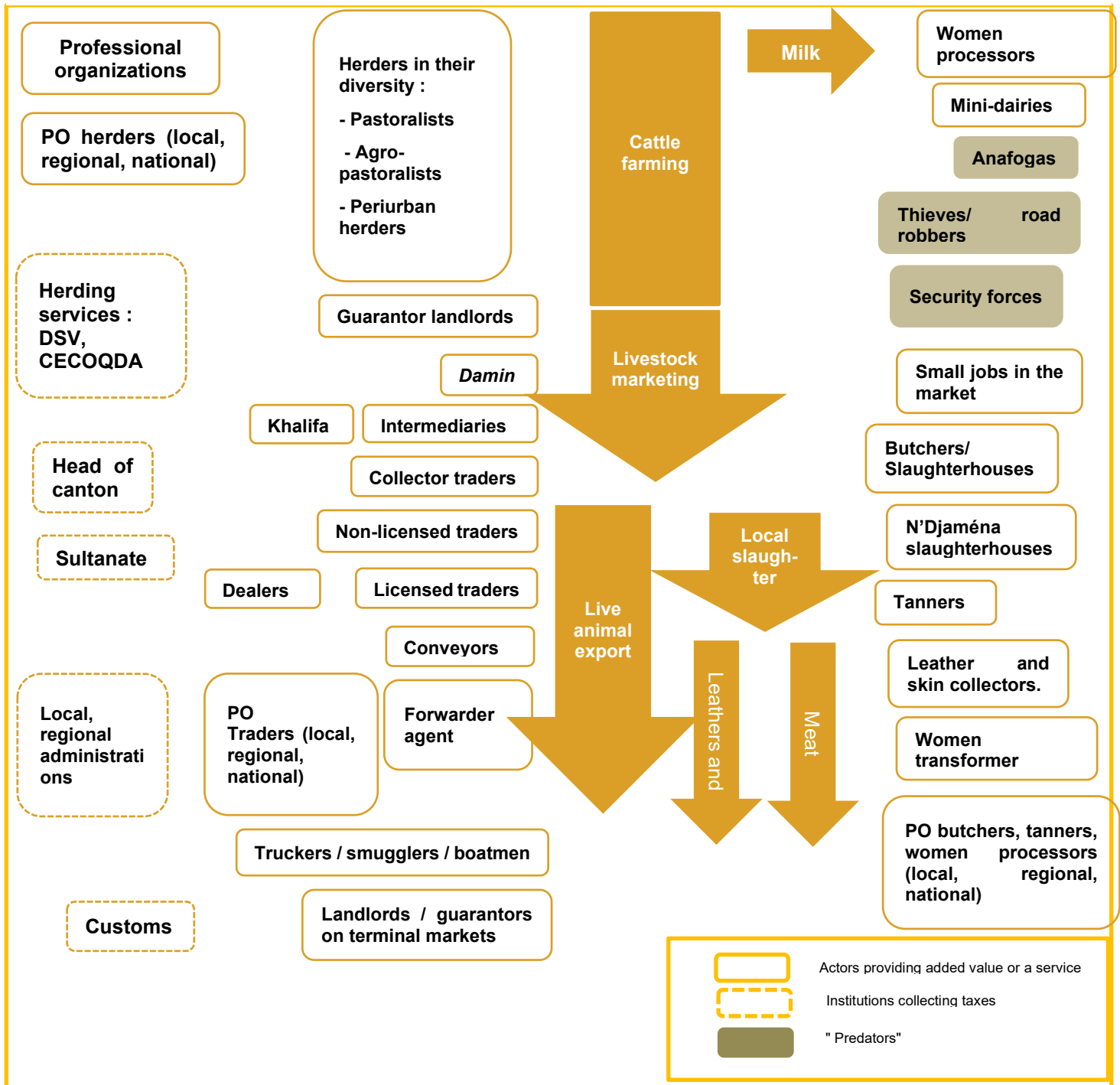
Table A2: Top 5 supply countries in Africa of meat and edible meat to ECOWAS (in thousands of USD)

Exporters	2015	2016	2017	2018	2019	Average Share
Africa Aggregation	10968	15279	11376	6935	5782	-
Togo	3711	9340	8251	3426	2317	54%
South Africa	2065	2992	1352	1100	1286	17%
Tunisia	1011	933	264	750	1010	8%

Morocco	1182	775	505	676	359	7%
Ghana	1342	958	606	155	155	6%

Source: Trademap

Figure A2: Livestock production and marketing structure



Source: Bovine Sector Support Project - Meat (PAFIB)

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