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Review Article

Transhumance pastoralism in West Africa – its importance, policies and challenges

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The Economic Community of West African States (ECOWAS) recognises transhumance pastoralism as a beneficial livestock production system that can contribute to food security together with economic and political stability. Thus, the subregional bloc put together the ECOWAS Protocol on Transhumance and supporting regulations to actualise these benefits. These policies seek to regulate transhumance pastoralism by ensuring that herd movements are along defined migratory corridors among member states. This review assesses the importance of transhumance pastoralism in West Africa, local and cross-border policies, and associated challenges, with emphasis on herder–farmer conflicts. It was realised that the movement of large numbers of livestock into rangelands (1) provides employment for many, and thus improves livelihoods; (2) improves productivity through high milk production and high fertility; (3) reduces moribund and combustible forage materials in the dry season; and (4) enhances seed dispersal, soil fertility and plant diversity on rangelands. This review shows that the ECOWAS cross-border transhumance protocols have led to infrastructural developments in some member states, but the partial enforcement of protocols has led to herder–farmer conflicts. We conclude that transhumance pastoralism and the regulatory policies have several benefits. However, to ensure policy compliance and avoid herder–farmer conflicts, the policies need to be reviewed and discernible gaps eliminated.

Keywords: conflicts, cross-border grazing, ECOWAS protocols, Ghana, herder–farmer conflict, literature review, livestock forage

Introduction

The Economic Community of West African States (ECOWAS) is one of the subregional blocs in sub-Saharan Africa. It was founded in 1975 (SWAC-OECD/ECOWAS 2008) with 15 member countries (Figure 1): Cape Verde, Senegal, Gambia, Guinea, Guinea Bissau, Sierra Leone, Liberia, Ivory Coast, Ghana, Togo, Benin, Nigeria, Mali, Burkina Faso and Niger. The mandate of ECOWAS is to promote economic integration among member states, which includes livestock production.

A year after the formation of ECOWAS, the Club du Sahel was formed by the Sahelian West African countries. This was expanded in 2001 to involve all West African countries, including Mauritania, Cameroon and Chad, under the new name Sahel and West Africa Club (SWAC). The purpose of this expansion was to take advantage of the interdependence and complementarities between the landlocked Sahelian countries and the coastal countries in the subregion (SWAC-OECD/ECOWAS 2008). In effect, this review covers pastoral activities in all the 15 West African countries in addition to Cameroon, Chad and Mauritania (Figure 1).

Transhumance pastoralism involves the production of various livestock, such as cattle, sheep, goats, camels, donkeys and horses, whereby the animals are herded from one place to another seasonally in search of feed and water for their sustenance, while escaping extreme temperatures, diseases and pests (Samuels et al. 2008). The natural resources provide a wide diversity of herbaceous (grasses, sedges and forbs) and woody plants (shrubs and trees) that serve as feed for the animals as well as water found in natural and manmade reservoirs. In view of the seasonal fluctuation of forage and water availability over varying spatial scales within and between host countries, cross-border grazing of these animals also becomes necessary to exploit the natural resources. To institutionalise cross-border grazing, ECOWAS saw the need to formulate policies to regulate livestock movements across borders to ensure peaceful cohabitation among member countries and to promote livestock production in the subregion. This review sought to understand: (1) the importance of transhumance pastoralism in West Africa; (2) whether the ECOWAS

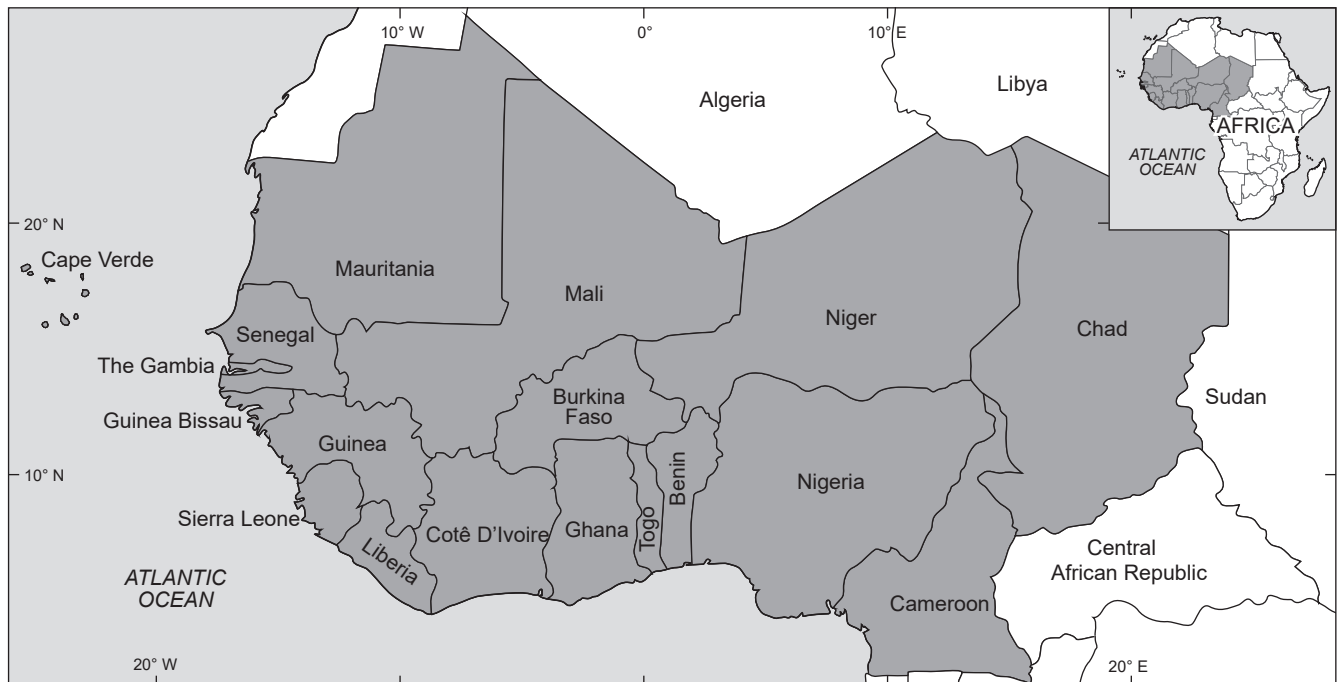


Figure 1: Map showing the West African countries comprising the 15 member states of the Economic Community of West African States (ECOWAS), plus Cameroon, Chad and Mauritania (adapted from SWAC-OECD/ECOWAS 2008)

protocol on cross-border transhumance pastoralism and other local policies are serving the purpose for which they were created; and (3) the challenges encountered by transhumance pastoralists in West Africa.

Ecological zones of the West African subregion

The West Africa subregion can be grouped as five main agroecological zones from north to south based on the length of the growing season, namely hyper-arid, arid, semi-arid, sub-humid or humid lands (Thornton et al. 2002; Kruska et al. 2003) (Figure 2). There is a latitudinal rainfall gradient, with the Sahel having the lowest annual rainfall of ~100 mm and the southern coast of West Africa having the highest annual rainfall of ~5 000 mm.

Rainfall in the West African subregion is highly variable in time of onset, duration and amount. These variabilities are more pronounced in the drier or Sahelian zones. In the summer (May–October), the subregion experiences moist southwestern winds from the Atlantic Ocean (Sultan and Gaetani 2016). This results in heavy rains that are usually of short duration. The dry season begins in November and ends in March. This period is characterised by dust-laden trade winds (Harmattan) originating from the north (Sultan and Gaetani 2016), causing reductions in humidity and visibility due to severe sand and dust storms.

The arid and semi-arid lands that fall in the Sahelian region have an average annual rainfall of ~100–200 mm in the northern parts and ~500–600 mm in the southern parts. This area has an annual average temperature range of approximately 22–36 °C and the vegetation is composed mainly of grasslands, shrubs and short trees (USAID

2018). The sub-arid zone (Sudan bioclimate) has one rainy season spanning from May–October, with an annual rainfall of ~600–1 200 mm. The vegetation of this area is mainly savannah and woodland. The sub-humid zone (Guinean bioclimate) is characterised by two rainy seasons, major (April–July) and minor (September–October), with annual rainfall of ~1 200–2 200 mm (USAID 2018). Vegetation in this area consists of savannah and seasonally wet and dry forest. The humid zone (Guineo-Congolian bioclimate) has two rainy seasons (April–July and September–October) or year-round rainfall, with an annual rainfall average of ~2 200–5 000 mm. Vegetation in this area is mainly dense forest (USAID 2018).

Importance of livestock production in West Africa

Livestock production in West Africa is an important contributor to millions of livelihoods (Molina-Flores et al. 2020), particularly those of rural dwellers, and also to the national economies of the various countries. According to Ilu et al. (2016), over 50% of West Africans own livestock. It is estimated that more than 100 million people rely on livestock production as their main or secondary means of livelihood (Nyberg et al. 2015). While on an average ~60% of people in the Sahelian countries depend on livestock production for their livelihoods (Molina-Flores et al. 2020), it is reported that about 87% of the active population in Niger engages in livestock production as their main or secondary source of income (SWAC-OECD/ECOWAS 2008). Apart from the production of livestock, there are other actors in the value chain that depend indirectly on livestock production, these include

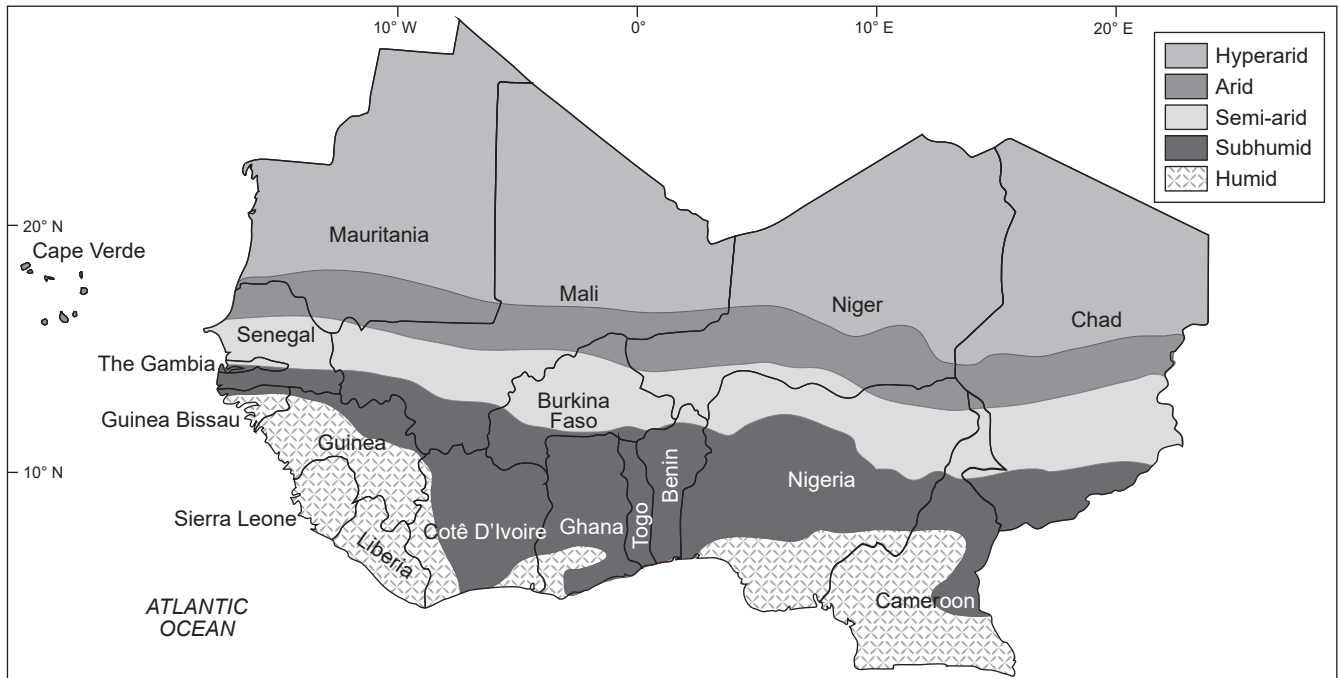


Figure 2: Agro-ecological zones of the West African subregion (adapted from Thornton et al. 2002 and Kruska et al. 2003)

middlemen who trade in livestock, transporters, and cottage cheese processors.

The contribution of livestock production to agricultural gross domestic product (GDP) in some Sahelian countries, such as Burkina Faso, Niger, Senegal and Mali, is reported to be between 37% and 82% (Molina-Flores et al. 2020). As a result of the contribution of the livestock subsector to agricultural GDP in Niger, the country's government has elevated the subsector into a fully functional ministry with its own budgetary allocation (SWAC-OECD/ECOWAS 2008). Among other non-Sahelian countries, the contribution of livestock production to agricultural GDP ranges between 4.5% in Cote d'Ivoire and 26.2% in Guinea (Molina-Flores et al. 2020).

Livestock production is essential particularly in the arid to semi-arid area, because the amount and variability of rainfall in those zones is not ideal for crop production. Apart from the two main products (milk and meat) derived from the production of livestock, other products like hides and manure also add to the income of the resource-poor livestock farmers in West Africa. Livestock also provide services like transport and draft power, although these other uses are not included in the computation of the contribution of livestock to the agricultural GDP. Therefore, the actual contribution is always higher than the reported values. There are also sociocultural uses of livestock in West Africa, such as use in the payment of dowry, and livestock ownership also acts as a status symbol in a pastoral society. Thus, individuals with larger cattle heads are counted among prominent members of the pastoral society (Martin et al. 2016). In times of financial need, owners might sell a few animals to cater for immediate needs, like paying off the school fees or medical bills of family members.

Above all, the most important benefit of livestock production in the West African subregion is its contribution to food and nutritional security.

West Africa is also rich in animal genetic diversity. According to DAD-IS (2019), West Africa has 63, 37, 21, 35, 6 and 10 indigenous breeds of cattle, sheep, goats, horses, donkeys and camels, respectively. Indigenous cattle breeds include 13 different shorthorn breeds and 12 zebu types. Among these indigenous breeds is the Azawak zebu, noted for their high milk yield, and Bororo cattle, noted for their adaptability to the arid Sahelian environment (Molina-Flores et al. 2020).

Transhumance pastoralism in West Africa

Traditional pastoral systems were historically concentrated in the arid and semi-arid Saharo-Sahelian area of West Africa owing to its low annual rainfall being too risky for crop production (IOM 2019). To the immediate south of this area is the sub-humid zone, which has sufficient rainfall to support crop production. Thus, the system of production employed here is agropastoral farming and the use of draught animals for various activities. Farther south is the humid agroecological zone along the Atlantic coast. This area was formerly not suitable for large ruminant production because of the incidence of diseases, foremost being trypanosomiasis (sleeping sickness) (IOM 2019). As a result of low rainfall in the arid and semi-arid zones limiting livestock forage supplies, and the disease situation in the humid zone, livestock production is predominant in the arid zone, with livestock and livestock products transported to the humid zone, resulting in pastoral movements towards the humid Atlantic Coast in the south (IOM 2019).

The pastoral system predominantly employed in the West Africa subregion is transhumance, which is defined as “the regular movement of flocks among fixed points to exploit the seasonal availability of pastures” (Morris 2017). Transhumant herds usually move from agro-ecologically vulnerable lands with limited vegetation cover (such as characteristic of the Sahel) towards areas with better range and water resources (Figure 3). Movements by transhumant pastoralists are mainly in three forms. First, there is movement within the same country but from a location limited in water and forage to other locations within the same country but with better forage resources and water for livestock. This type of movement is experienced at the onset of the rains in the Sahelian part of the subregion. The rains allow the growth of short-lived forage resources rich in quality. Ruminants are herded in all directions to take advantage of this rich forage resource (Figure 3). The second type of movement with livestock occurs when the dry season begins in the arid Sahelian parts of Mauritania, Niger, Mali and Chad. This movement is towards the south, with the destination being coastal countries (e.g. Nigeria, Ghana, Togo, Ivory Coast and Benin). It is at this stage that borders are crossed as livestock are herded from the north towards the coast (Figure 3). This cross-border transhumance system is based on the complementarity of crop and livestock production. Pastoralists arriving from the north provide crop farmers with animal products like meat and milk, and the farm fields are also enriched with cattle manure as the animals graze on them. In return, the pastoralists receive grains and vegetables from the crop farmers and sometimes take care of the crop farmers’ animals. This cordial relationship between herders and farmers has largely been lost over time. This is because of the increase in ownership of livestock by crop farmers in

the south (IOM 2019). The third type of pastoral movement is from the coastal countries back to arid areas, which happens at the onset of the rains in the coastal countries. The purpose of this movement is to enable crop farmers in the coastal countries to plant their crops without risk of destruction by pastoral livestock. While this was originally a return trip by the transhumance pastoralists, back to their base in the arid and semi-arid zones of West Africa, many agropastoralists in the south currently engage in such trips to take advantage of the highly nutritious pastures of the Sahel during the rainy season and also to protect their crop fields from destruction by ruminant livestock (Thebaud 2017; IOM 2019). As a consequence of the droughts in the 1970s and 1980s in the arid and semi-arid zones and the drop in instances of trypanosomiasis in the humid and sub-humid zones, the movement of livestock between the Sahel and the coast has become an annual occurrence (IOM 2019).

Transhumant pastoral systems involve carefully mixed herds which can include indigenous camels, cattle, sheep and goats. Mobile herds are usually owned by extended family members, but mainly the family heads and their adult sons, and the livestock are usually herded by young men (IOM 2019). The Fulani are the predominant subregional ethnic group practicing transhumance pastoralism.

The Fulani originated in the Senegambia region but have spread across West and Central Africa (Bukari and Kuusaana 2018) through centuries of gradual migrations. Danver (2015) reports the Fulani population stands at ~25 million. They form the majority ethnic group in Guinea and are a dominant ethnic group in several Sahelian countries (i.e. Niger, Senegal, Mauritania, Mali and Burkina Faso); Fulani are also present as a minority ethnic group in the coastal countries (i.e. Nigeria, Togo, Ghana, Benin, Liberia, Cote d’Ivoire and Sierra Leone).

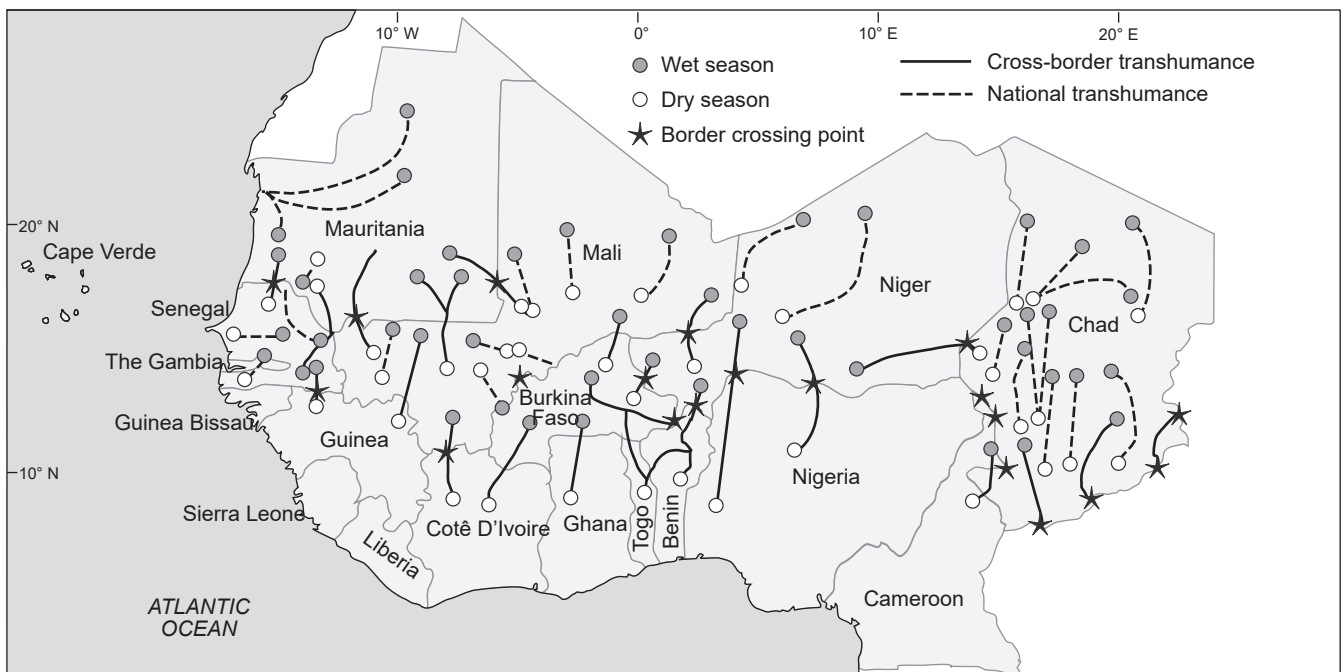


Figure 3: Transhumance routes in West Africa (adapted from OECD 2014)

A group of Fulani transhumance pastoralists will operate under the authority and oversight of the *rugga* (Azalou et al. 2021). The responsibility of the *rugga* is to manage the group and to liaise with traditional and administrative authorities along their route and to negotiate for access to grazing fields, water points, and other needs of the team like a temporary camping site. Negotiation may be for access to grazing fields for manure or for milk or cash. The *rugga* works closely with the *garso* who is directly responsible for the herd and takes decisions on the route to be followed (Azalou et al. 2021). The route is meant to be chosen without destruction to reserves, fields and the properties of hosts. Pastoralists are also required to carefully choose their route back home to avoid crop fields that have been planted. The same routes are usually followed for generations, leading to the establishment of close relationships with the sedentary indigenous hosts. However, herders and crop farmers have not maintained peaceful coexistence in recent times (see below); therefore, this situation merits policies to regulate their activities in the West African subregion.

Importance of transhumance pastoralism in West Africa

Pastoralists in West Africa have stuck to the practice of transhumance herding of livestock despite the challenges. This is attributable to their resilience and the continuous support of ECOWAS member states in promoting the practice. Transhumance pastoralism offers numerous benefits not only to the pastoralists but also to nations where this is practiced. Some benefits include:

- Transhumance pastoral livestock production serves as a means of employment for countless people, reducing poverty and hunger (FAO 2021), thereby improving the livelihoods of many resource-dependent rural dwellers. As pastoralists trek to new communities for livestock forage and water, they might also sell milk as well as livestock to the host communities for cash. Transhumance pastoralism also contributes significantly to the economies of the countries involved. For instance, the contribution of pastoralists to the GDP of Chad was estimated to be 27% in 2018, when self-consumption was included in the calculation (COAG 2020). In years of low rainfall in southern areas, failed crops are sold to pastoralists for grazing or exchanged for milk; this reduces the negative effect of failed crops on the farmers (FAO 2021).
- Technological advancements and a focus on commercial livestock production are leading to the erosion of livestock genetic biodiversity. This entails: a preference for high-input, high-output breeds introduced from developed countries for commercial purposes; the promotion of single production traits, such as dairy animals, to the detriment of dual-purpose breeds; and cross-breeding, which can lead to the loss of indigenous breeds (Blench 2001). Transhumance pastoralists have resisted the pressure to erode the genetic makeup of their indigenous breeds. As such, many local breeds that are more adaptive to the African environment and more resistant to local diseases have been preserved. As stated earlier, West

Africa is rich in animal genetic diversity and is credited with at least 13 indigenous shorthorn cattle breeds and 12 zebu breeds (SWAC-OECD/ECOWAS 2008). These indigenous breeds of livestock are efficient utilisers of the available forage and water in arid and semi-arid zones. Pastoralists in turn produce useful animal-based products by using this low-input pastoral system. According to Doreau et al. (2012), as a result of physiological recycling mechanisms the indigenous breeds used by pastoralists tolerate longer watering intervals, making them more adaptive to water stress.

- The annual cyclical movement of large numbers of livestock across rangelands ensures a supply of forage and water for livestock. Additionally, grazing reduces moribund and combustible materials in rangelands (COAG 2020), which reduces the fuel load for accidental/unintended fires in the dry season; heavy fuel loads lead to hot fires that can destroy plant and animal biodiversity because rangeland fires open up the area and expose it to erosion and invasive species (Jhariya and Raj 2014).
- Rangelands (unlike forests environments that often contain plant species that attract more funding for protection) can lose plant diversity without notice (Blench 2001). Mobile transhumance contributes to seed dispersal, soil fertility and plant biodiversity. Plant seeds consumed but not digested are spread across the grazing fields and trekking routes. Since transhumance livestock trek long distances, undigested seeds may be dropped several kilometres away from where they were grazed, ensuring plant conservation and diversity. For instance, a single sheep can potentially carry over 25 000 seeds for hundreds of kilometres (FAO 2021). The presence of seeds in the gut of livestock also serves as a means of scarification to enhance seed germination (COAG 2020).
- The transhumance pastoral system contributes significantly to food security through higher productivity. Livestock under this system exhibit increased herd productivity through higher milk production and higher fertility. Livestock breeders operating under the framework Plate Forme Paysanne du Niger have reported that the interval between births in transhumant herds is 1 year, but sedentary herds have an interval of 2 years in the Sahel. According to them, livestock numbers will be halved in 20 years if the system is discouraged (SWAC-OECD/ECOWAS 2008). The annual rate of reproduction under the transhumance system in Niger is 69%, which is higher than the 61% recorded for the sedentary system (De Verdière 1995). The FAO (2011) states that livestock raised under the mobile pastoral system produce 20-times more human-edible protein than the amount consumed, whereas livestock raised under the supposedly efficient systems consume twice the amount of human-edible protein that they produce.
- Interactions between leaders of transhumance pastoralists and their hosts build social relationships between communities, promoting social integration and relative peace. For example, bilateral agreements between Niger and Burkina Faso and between Niger and Mali have led to relatively peaceful coexistence among migrating and host pastoralists in those countries (SWAC-OECD/ECOWAS 2008).

Policies for transhumance pastoralism in West Africa

At the 43rd session of the ECOWAS Council of Ministers, held in Abuja, Nigeria, in October 1998, member states adopted Decision A/DEC.5/10/98 relating to regulations on transhumance among member states (ECOWAS 1998). These regulations consist of Four Chapters with 20 Articles. Article 1 in Chapter 1 sets out the main principles of the rules governing transhumance within ECOWAS member states; Article 2 spells out specific definitions of main terms. Key definitions applicable to our review are:

- “*Transhumance between States* means the seasonal movement between Member States of herds leaving their usual grazing areas in search of water and pasture.”
- “*Quarantine* means the act of placing animals entering a particular region under veterinary observation with a view to determining their state of health.”
- “*Stray animals* means animals that are allowed to move around freely or in parks without the supervision of a herdsman. Also included in this category are animals grazing in national parks or game reserves, even when they are under the supervision of a herdsman” (ECOWAS 1998).

Chapter 2 of the document dealt with the object and scope, with two Articles therein. Article 3 in Chapter 2 identified the types of animals considered for transhumance among member states, namely: Bovine, Caprine, Cameline, Equine and Asinine. Article 4 in the same chapter clarifies that the animals not covered in the decision protocol are those transported for commercial purposes and all other live animals apart from those mentioned in Article 3.

Chapter 3 of the document explains the condition of movement of animals, outlined in Articles 5–9. Article 5 mentions the ECOWAS International Transhumance Certificate (ITC) as a requirement for movement of animals across borders. This is meant to achieve three things: i) help authorities to monitor the herds before they leave the country of origin; ii) protect local herds from diseases; and iii) create awareness about the arrival of transhumance animals in a host community (ECOWAS 1998). Articles 6–9 consist of how the ITC will be verified when animals are herded to other countries, the routes to follow, and how to deal with animals arriving without certificates.

Chapter 4 spells out the supervision of mobile livestock with Articles 10–13. These articles emphasise supervision at all times and the number and minimum age of the herdsman. It also stipulates out how stray animals should be handled.

Chapter 5 contains Articles 14–19 which make it clear what is to be done when transhumance livestock arrive in host countries:

- “Article 14 – Each host country shall fix the period during which migrating livestock may enter into and depart from its territory and inform the other States accordingly.”
- “Article 15 – Each State shall define the areas where transhumant animals may be stocked and shall determine the maximum capacity of each zone thus identified. The accompanying herdsman must pen up his herd in the zone of which he is directed by officials, at the point of entry.”
- “Article 16 – Herdsmen accompanying transhumant livestock and who are legally admitted into the host country shall be given protection by the authorities, and their fundamental rights shall be guaranteed by the judicial

institutions of the host country. In return, such herdsmen shall observe all laws and regulations of the host country, particularly those concerning the conservation of forest reserves and forest resources and the management of watering points and pastoral land.”

- “Article 17 – Any dispute between farmers and nomadic herdsmen shall first be judged by an arbitration commission on the basis of information gathered by the said Commission.”
- “Article 18 – This commission shall be composed of representatives of the herdsmen, farmers, livestock officers and agricultural officers, officials from the ministries of Forest and Water Resources and local political and administrative authorities.”
- “Article 19 – In the event that an amicable settlement is not reached, the dispute may be resolved in the law courts in conformity with the rules governing settlement of contentious issues” (ECOWAS 1998).

Chapter 6 deals with publication of decisions in official publications of ECOWAS and in the individual member states (ECOWAS 1998).

While the decision document contained a framework for transhumant pastoralism among ECOWAS countries, it lacked the structure for implementation. As a result, at the 49th session of the ECOWAS Council of Ministers held in Dakar, Senegal, 26–28 January 2003, member states adopted Regulation C/REG.3/01/03 relating to the implementation of the regulations on transhumance among ECOWAS member states.

Apart from these two major policies outlined above, ECOWAS has several other policy documents on transhumance pastoralism and livestock production (IOM 2019):

- ECOWAS Regional Agricultural Policy for West Africa: ECOWAP, Abuja, 2005.
- ECOWAS Commission, Department of Agriculture, the Environment and Water Resources, Adopted Guiding Principles for the Development of the Livestock Industry within ECOWAS, Abuja, 2009.
- ECOWAS/CEDEAO/OECD, Formulation and Implementation of a Regional Agricultural Investment Program (PRIA). Pastoral and Organization of Cross-border Transhumance, Abuja, 2009.
- ECOWAS Commission, Strategic Action Plan for the Development and Transformation of Livestock Sector in the ECOWAS Region (2011–2010), Abuja, 2010.
- ECOWAS, Regional Agricultural Investment Plan (RAIP), Abuja, 2015.

The Sahelian countries have added two more policy documents to the seven mentioned above established by the entire ECOWAS member states (IOM 2019):

- N'Djamena Declaration on the Contribution of Pastoral Livestock Herding to the Security and Development of the Saharo-Sahelian Areas, N'Djamena, May 2013.
- Nouakchott Declaration on Pastoralism – Mobilizing Jointly an Ambitious Effort to Ensure Pastoralism without Borders, Nouakchott, October 2013.

Furthermore, several bilateral agreements on cross-border transhumance have been made (IOM 2019):

- Memorandum of Understanding on Livestock Transit between the Republic of Niger and the Republic of Mali, 1988 (Niger–Mali).

- Agreement on Pastoralism between the Republic of Burkina Faso and the Republic of Mali, Bamako/Ouagadougou, 1988 (Burkina Faso–Mali).
- Framework Agreement Regulating Transhumance between the Republic of Mali and the Republic of Cote d'Ivoire, Abidjan/Bamako, 1994 (Mali–Cote d'Ivoire).
- Zoo-sanitary Agreement between the Republic of Senegal and the Republic of Mali, Dakar/Bamako, 1994 (Senegal–Mali).
- Memorandum of Understanding Creating a Consultation Framework between Republic of Burkina Faso and the Republic of Niger on Cross-Border Transhumance (Burkina Faso–Niger).

Contribution of policies to improved transhumance pastoralism and sustainable rangeland management

The ECOWAS is the only subregion in Africa with operationalised legislation to regulate subregional livestock movements (WISP 2008); however, the eight member states of the Intergovernmental Authority on Development (IGAD) form a northeast Africa subregional bloc which is developing and operationalising similar policies. This is a commendable achievement in comparison with other subregional blocs. Here, extensive consideration of the Ghana experience in the southern coastal region and a brief consideration of the Niger experience in the northern Sahelian region are intended to assess whether the coming into force of policies and regulations on transhumance pastoralism in West Africa has benefited member states.

Ghana's experience with transhumance pastoralism

Transhumant livestock found in Ghana originate mainly from Mali, using Burkina Faso as a transit country, and other herds originate from Niger and transit through Togo. However, the actual number entering Ghana is undocumented.

Ghana has eight transhumance approved entry points with quarantine stations: at Hamile and Kupolma in the Upper West Region; at Paga, Namoo, Pusiga and Mognori in the Upper East Region; and at Dzodze and Aflao in the Volta Region. Significant numbers of pastoral herds also enter Ghana through unapproved routes, particularly at

Wechiaw, Selmua and Tumu in the Upper East Region, at Feo in Upper West Region, and at Elebu in the Western Region. In addition, some herds congregate in Gushiegu in the Northern Region even though it is not a border town.

There are traditional cross-border (Burkina Faso–Ghana) routes in Ghana along the Sissili and Red Volta rivers. Apart from those routes, transhumant livestock enter the country through villages, move along transit villages, and then settle at destination communities in the Northern, Upper West and Upper East regions (Table 1).

As part of the implementation of the subregional ECOWAS transhumance policies, Ghana introduced two national policies: 'Livestock Development in Ghana – Policies and Strategies (2004–2014)' and 'Ghana Livestock Development Policy and Strategies (2015–2023)'. However, these policies and strategies have been largely ineffective because of inadequate implementation and the lack of effective monitoring and evaluation mechanisms. These shortcomings necessitated the Peasant Farmers Association of Ghana and the Ghana National Association of Cattle Farmers to engage a consultant to formulate a new pastoral policy, taking into consideration the ECOWAS International Transhumance Protocol. The new policy spells out responsibilities and timelines for implementing the recommended strategies, as well as monitoring and evaluation processes in assessing the progress and limitations in the implementations, for redress where necessary.

Establishment of community fodder banks and ranches in Ghana

In 2013, 900 ha in Ghana were put into four fodder banks by the government to provide supplementary feed to grazing cattle in Amankwaa in the Kwahu Afram Plains District, in Mem Chemfre in the Kwahu Afram Plains North District, and in Forifori and Wawase in the Kwahu Afram Plains South District. The 272-ha Wawase and Amankwaa fodder banks were converted into ranches by the end of 2020. Each ranch is fenced off and includes paddocks, management and veterinary offices, herders' housing, a feed storage shed, a quarantine shed, a handling facility, cattle kraals, calf and milking pens, dugouts with water and bole holes. Pasture, comprising mainly the stylo (*Stylosanthes guianensis*), Guinea grass (*Panicum maximum*) and elephant grass (*Pennisetum purpureum*), has been established. The ranches have been stocked with cattle belonging to owners

Table 1: Transhumant entry points, transit and destination routes in northern Ghana (Akunzule 2012)

Region	District	Entry point	Transit locality	Destination routes
Northern Region	Central Gonja	Tuluwe	Mankpang, Butei	Buipe, Old Buipe, Nwanpe
	Central Gonja	Tuluwe	Npaha, Kopedeka, Npotusu	Dedreport, Lampor
	Central Gonja	Yapei	Fulfulso, Mile 40, Kassanjane	Lipo, Gbrige
Upper East Region	Kassena Nankana West	Paga	Navrongo, Bonie, Chuchulige, Twenia, Asonia, Katui	Nankong
	Kassena Nankana West	Paga	Nania, Tolon, Nyania, Asonia, Katui	Nankong
	Kassena Nankana West	Pusiga	Tumu	Nankong, along the Sissili River
Upper West Region	Kassena Nankana West	Pusiga	Nankong	Bakonsa in Buisla South District
	Lambrussie-Karni	Hamile	Not specified	Not specified
	Lambrussie-Karni	Fiemoa	Not specified	Not specified
	Sissala	Kupulma	Not specified	Not specified

within the Afram Plains. The cattle owners contribute to the running of the ranch by sharing the ranch revenue generated from the sale of milk and cattle. As a result of the establishment of these ranches, herder–crop farmer conflicts are appreciably fewer.

Contributions to Ghana from international partners

The Ghana Developing Communities Association (GDCA) and Acting for Life (AFL, a French nongovernmental organisation) have aided the construction of a few facilities sponsored by the European Union and the French Development Agency. Table 2 shows what has been achieved by this sponsorship.

In view of the aforementioned it can be concluded that the ECOWAS transhumance protocol has created the awareness needed for the formulation of policies to regulate pastoral activities in Ghana. It has also helped to secure partners for the provision of some facilities in Ghana.

Niger's experience with transhumance pastoralism

Niger is the largest landlocked country in West Africa, with a land area of nearly 1.3 million km². All ethnic groups in Niger keep livestock but the groups that practice livestock mobility are the Fulani, Tuareg, Arabs and Toubou (IOM 2019). While the Fulani mainly keep cattle and sheep in the south, the Tuareg, Arabs and Toubou keep goats and camels in the drier northern parts of the country (Laville 2021).

Transhumance pastoralism is practiced within and across the borders of Niger. During the wet season, which usually lasts for 3–4 months, pastoralists from the south move north into the Sahara Desert to make use of the rich pasture, the oasis and salt licks found at Ingall in the Agadez Region (IOM 2019). However, the direction of livestock movement is towards the south in the dry season to take advantage of the limited water and pasture there (Laville 2021). The dry season is also characterised by cross-border movements mainly along four routes: 1) Niger – Burkina Faso – Cote d'Ivoire – Ghana; 2) Niger – Benin – Togo – Nigeria; 3) Niger – Nigeria; and 4) Niger – Chad – Cameroon – Nigeria.

Niger's policies on transhumance pastoralism are rated the best among the ECOWAS member states (IOM 2019). There are over 15 policies and regulations governing mobile pastoralism. Key among these policies are:

- Law No. 61-05 of 26 May 1961. This law determined the northern boundary beyond which was demarcated

exclusively for pastoral use and not for agricultural production. This boundary is pegged at an isohyet of 300–400 mm.

- The Rural Code of 1991. This affirmed law No. 61-05 of May 1961 declaring land north of isohyet 300–400 mm as public land with only communal and no private ownership. Thus, any who flout the law and engage in agricultural activities are not entitled to any compensation in the event of destruction of crops by livestock.
- Ordinance No. 93-15 of March 3, 1993. The coming into force of this law has helped in the creation of transhumance corridors and routes in pastoral areas (WISP 2008).
- Ordinance of Pastoralism of 2010. This grants transhumance pastoralist the right among other things to graze their livestock in protected forests and in ranches in crisis situations and also to enter into the agricultural zone after crops have been harvested in late December and early January (Laville 2021).

Niger strongly supports the implementation of the ECOWAS protocol of transhumance (1998) since the country experiences low rainfall and prolonged drought that necessitates the movement of their livestock in search of water and pasture annually (IOM 2019). Going by the dictates of the ECOWAS protocol, Niger has a bilateral agreement on transhumance with Burkina Faso, has established both national and regional committees to oversee transhumance activities, has established structures to issue International Transhumance Certificates for cross-border livestock, and has opened up the borders to hosts' livestock from neighbouring countries for free. According to WISP (2008), "at least 250 000 ha of highly degraded land have been rehabilitated, the impact of conflicts on the management of agropastoral resources is minimal, and transhumant populations report particular satisfaction with the securing of transhumance axes." However, because the level of compliance of the ECOWAS transhumance protocol in neighbouring countries is low, Niger suffers greatly when their animals cross over to other countries (Laville 2021). Notably, one major challenge facing Niger, and similarly other member countries, is herder–farmer conflicts.

Issues that lead to herder–farmer conflicts

Over the past two decades, the relationship between pastoralists and sedentary farming communities has rapidly deteriorated, such that West Africa represents a subregion

Table 2: Transhumance facilities in Ghana that are sponsored by the European Union or the French Development Agency

Description of project	Location
Construction of livestock market and auxiliary facilities at Bulpe, Central Gonja District, Savannah Region	Bulpe
Construction of livestock market and auxiliary facilities at Gushegu, Gushegu Municipal District, Northern Region	Gushegu
Construction of water points at Jankpihi, Karaga District, Northern Region	Jankpihi
Demarcation of grazing reserves (100 acres) at Jankpihi, Karaga District, Northern Region	Jankpihi
Construction of campsites at Jankpihi and Didogi, Karaga District, Northern Region	Jankpihi and Didogi
Construction of water point at Mpaha, Central Gonja District, Savannah Region	Mpaha
Demarcation of grazing reserves at Mpaha, Central Gonja District, Savannah Region	Mpaha
Construction of campsite at Buipe, Central Gonja District, Savannah Region	Buipe

with increasing conflict intensity (Raleigh and Dowd 2017). Violent conflicts between farming and herding communities have claimed thousands of lives and displaced tens of thousands of people. Additionally, many women have become widows and single parents due to the death of their husbands through such conflicts (Agyemang 2017). These farmer–herder conflicts have come to dominate the conflict and security discourse in West Africa and now represent a major source of instability in the region. Table 3 shows the causes and effects of herder–farmer conflicts in West Africa.

One of the most critical consequences of escalating conflicts in West Africa is food insecurity, which increased by 10% between 2018 and 2019, to affect over 12 million people (Global Network Against Food Crises/FSIN 2020). Insecurity disrupts productive activities, markets and trade flows, and it drives up food prices. Continuous insecurity hinders access to fields, pastoral transhumance routes and markets, with severe consequences for food security. Conflict is also a major driver of displacement, responsible for at least 1.2 million refugees and 4.4 million internally displaced persons across West Africa (Global Network Against Food Crises/FSIN 2020).

Extensive efforts have been directed to tackling farmer–herder conflicts (Kwaja and Ademola-Adelehin 2018), though little progress has been made. More-effective solutions are required to thwart conflict escalation and

reduce the negative impacts on livelihoods and food security (Kwaja and Smith 2020). These efforts embrace several topics: Malthusian and neo-Malthusian theories of human population growth and increasing scarcity of natural resources; scarcity caused by climate change; political ecology that attributes conflict to the distribution, management and control of natural resources rather than to scarcity; the ‘resource curse’ approach which considers that an abundance and not a scarcity of natural resources leads to conflict (Mehlum et al. 2006). Herder–farmer conflicts have also been examined using psychosocial theories on frustration, aggression and relative deprivation, and through the perspective of security, peace and conflict resolution (Majekodunmi 2018). The general trend with all these approaches has been a progression from a narrow determinist focus to a wider constructivist or post-structuralist view.

Herder–farmer conflicts have also been recorded in a wide variety of settings, with different tribal, religious and livelihood combinations, different levels of abundance or scarcity of natural resources, and different histories of pastoral settlements. There are different opinions as to the relative contributions of these factors to herder–farmer conflict. It has been challenging to prioritise and chart a clear path to solutions to this complex problem. To move forward, the root causes and common themes underpinning herder–farmer conflict in different settings across West Africa must

Table 3: Causes and effects underpinning herder–farmer conflicts in West Africa

Causes	Effects	Reference
Indiscriminate grazing and movement of cattle at night	Destruction of farms and farm produce by transhumance cattle; food crop yield losses; cattle rustling	Agyemang (2017)
Scarcity of land	Cropping on designated grazing areas	Otu and Impraim (2021)
Exploitation of transhumance herders by harvesting livestock forage and selling it to them	Herders resort to farms and reserves for forage to meet the needs of their animals	UNOWAS (2018)
Discrimination against pastoralism on land ownership rights	Promotes social division and enmity between herders and farmers	Otu and Impraim (2021)
Decentralisation and transfer of natural resource management to rural communities	Privatisation and commercialisation of land reduces the extent of grazing lands	Ntumva (2022)
Blocking of transhumant tracks and corridors	Ignoring blockades and grazing on former grazing areas	SWAC-OECD/ECOWAS (2008)
Insurgency and political instability	Pastoralists in a politically unstable country force their animals into other territories	UNOWAS (2018)
Transhumance corridors passing through protected areas where grazing is forbidden	Grazed animals stray into protected areas	SWAC-OECD/ECOWAS (2008)
Unregulated common use of water sources	Depletion or pollution of community water bodies	Moritz (2006)
Effects of climate change	Inadequate forage and water for pastoral livestock	SWAC-OECD/ECOWAS (2008)
Spraying of farms with herbicides and insecticides	Loss of animals perceived by herders	Agyemang (2017); Hagan et al. (2021)
Rapes of women and girls on farms	Violence inflicted on communities and violation of culture and taboos	Agyemang (2017)
Language barriers	No dialogue and negotiations	Agyemang (2017)
Improper siting of farms in relation to kraals and cattle movement paths	Crop damage; some farmers shoot cattle that stray onto their farm	Moritz (2006)
Some herders carry deadly weapons (AK47s, pump-action guns)	Intimidation, tension and mistrust; loss of human life with little provocation or community displacement; cattle rustling	Agyemang (2017); Djohy (2017)
Uncontrolled burning of grasses by herders for fresh pasture	Wildfires destroy food-crop farms	Agyemang (2017)

be identified and prioritised. These conflicts have evolved and escalated over time and the solutions that will be effective today will differ from those that worked in the recent past. As such, this review considers three case studies of herder–farmer conflicts—in Ghana and Benin—to determine the common underlying causes of these conflicts in different settings and to propose the most-effective interventions.

Cross-border transhumance in Ghana

Unlike many other West African countries, Ghana did not experience a significant influx and settlement of Fulani pastoralists until the 20th century. Before this time, the Fulani were only involved in dry-season transhumance and cross-border livestock trade within Ghana. Indeed, initial settlements in northern Ghana were brokered by livestock traders with long-standing relationships with local communities. Settlements started at the turn of the century, and by the 1930s they were the most numerous migrant ethnic group in Ghana (Tonah 2006); significant immigration also occurred in the 1950s and 1960s. At that time Fulani from Niger, Mali and Burkina Faso settled permanently in northeast Ghana as well as on the coastal savannah plains around Accra. Many Fulani who lost their cattle during the droughts of the 1970s likewise settled in Ghana and took up herding cattle for indigenes (Tonah 2006). Since the 1990s, both settled and transhumant Fulani populations have grown and spread southward into the sub-humid and humid zones.

Cattle entrustment plays a central role in Fulani–indigene relations in Ghana. Their major livelihood opportunity was herding cattle for wealthy members of cattle-keeping indigenous groups. Thus cattle-entrustment on a patron–client basis was the foundation for Fulani settlement in Ghana (Tonah 2006). Fulani herders are dependent on their patrons for grazing rights and for land to build and farms on. They also draw on the goodwill and social networks of their patrons and are entitled to their protection where necessary. They have rights to the milk obtained from the herd as well as, on average, one cow every 3 years. In short, patrons are responsible for the welfare and good behaviour of their herders, while herders ensure the protection and increase of the patron’s herd as they slowly build up their own. Universal basic education, a declining interest and skill in herding, and a concurrent increase in cattle ownership as a good investment among indigenous groups have increased the demand for skilled herding labour over the years. Currently, most Fulani in Ghana still herd cattle entrusted to them by indigenes. Fulani who fell out of favour with their patrons can be dismissed and evicted. This is the basis for the enduring stereotype of Fulani as foreign servants brought to Ghana to work for wealthy Ghanaians (Olaniyan et al. 2015).

The Ghanaian government has generally not facilitated the long-term settlement and integration of the Fulani in Ghana (Tonah 2003). The list of Ghanaian ethnic groups on census forms does not include Fulani, who must therefore be registered as foreigners (Bukari and Schareika 2015). Even if born in Ghana, Fulani are explicitly excluded from Ghanaian citizenship by the constitution. Unless they have a parent or grandparent born in Ghana before 1957, the only routes to citizenship are marriage or naturalisation after long stays (Bukari and Schareika 2015).

The state-led expulsions of Fulani pastoralists by Ghana’s Operation Cow Leg (OCL) also shows clearly how Fulani citizenship status and rights are limited. The OCL is a joint police and military taskforce set up by the government to evict ‘alien’ Fulani herders from Ghana; it is also described as a peacekeeping team that intervenes to curb violent herder–farmer conflicts. The OCL was first used in April 1988 when herder–farmer conflicts escalated across Ghana (Tonah 2003). Since then it has become the main government response to these conflicts, deployed in 1999, 2000, 2010, 2015, 2016 and 2018 (Bukari and Schareika 2015). However, it has not proved to be a sustainable approach to solving the problem.

Herder–farmer conflict in Gushiegu, Ghana

Gushiegu District in northern Ghana is one of the earliest areas of Fulani settlement in Ghana, with a long history of cattle entrustment and co-habitation with local tribes. Most cases of violent herder–farmer conflicts in Gushiegu have been between Konkomba and Fulani, although they do involve other groups as well. The Konkomba have a long history of violent attacks on neighbouring tribes: the Dagomba in 1940; Nanumba in 1981; Nawuri, Basare, Nchumuru, Gonja in 1992; Mossi in 1993; and Nanumba, Dagomba and Gonja in 1994–1995 (Olaniyan 2015).

Another important driver of herder–farmer conflict in Gushiegu is the changing dynamics of cattle entrustment. Like all patron–client relationships, there is an inherent imbalance of power with cattle entrustment. The interests of both parties are not always aligned. It is in the interest of the patrons to maintain the status quo while their clients seek independence. This is very pronounced among the Fulani because they are strongly motivated to rebuild their own herds. Thus, cattle entrustment is fraught with “misunderstandings”; herders who build up their own herds and become independent are penalised or evicted for “insubordination.” Both the patrons and the wider community resist this loss of dominance over the Fulani, who are still stereotypically regarded as inferior and servants to the community. These changing dynamics have caused hostility, evictions and violent attacks against Fulani. One example is a Fulani herder who decided to leave his patron and also refused to pay his patron a 50% share of the maize harvest grown on the patron’s land by the herder; the dispute ended in a violent community attack on the herder’s household, resulting in his death (Olaniyan 2015).

Government responses to herder–farmer conflicts in Gushiegu have been more balanced. Notable among these conflicts in Gushiegu is the December 2011 attack by Konkomba farmers on Fulani in five villages, which left 13 Fulani dead and at least 870 displaced, including some citizens of Burkina Faso (Olaniyan 2015). The primary motivation for the attack was to intimidate Fulani into vacating the area. Acquiring the property of fleeing Fulani also played a part as the division of the spoils caused serious infighting among the perpetrators (Olaniyan 2015). The Gushiegu District Council dispatched a joint police and military task force in response. Several perpetrators were arrested, prosecuted and jailed. Displaced Fulani were protected from further violence and housed in a camp for

internally displaced persons until their resettlement was negotiated with community leaders. The consulate of Burkina Faso was also involved in arrangements for the burial and welfare of their citizens (Olaniyan 2015). However, since the underlying causes of conflict have not been resolved, the violence has continued.

Herder–farmer conflict in Agogo, Ghana

Pastoralists visited the Agogo area, a town in the Ashanti Region, for transhumance from the 1970s and began to settle in the area in the 1990s. They were tolerated but not well received by the local populace. Conflicts were mostly nonviolent until the late 1990s. In 1997, farmers in Agogo reported the presence of Fulani pastoralists with more than one thousand ‘strange’ cattle to the District Assembly. The government of Ghana dispatched a team of veterinary and security officials to expel them, but the expulsion efforts failed; in 1999, a group of armed young men shot and killed three Fulani pastoralists (Tonah 2006).

Between 2006 and 2008, several large areas of land were ceded by the Agogo Traditional Council (ATC) to “outsiders,” generating tens of thousands of dollars in revenue. These included migrant farmers, pastoralists, and national and international agribusiness companies. Notable among these was the acquisition of 190 acres by four cattle owners (two ‘Ghanaian’ and two ‘Fulani’) through formal lease agreements with the ATC. Many transhumant Fulani flocked to the area after this. Agribusinesses also had large-scale leases, such as the Norwegian company ScanFarm Ltd, which acquired 48 000 acres (Bukari and Kuusaana 2018).

Chiefs acted largely without consulting local communities or elders. Land was often allocated without consideration for peaceful co-existence; for example, land surrounded on three sides by active farms might be allocated to pastoralists for grazing (Bukari and Kuusaana 2018). As a result, competition and conflict among the different user groups increased sharply. Some of these large landholdings included plots appropriated from smallholder farmers and pastoralists who were displaced. Minority groups such as indigenous youths and pastoralists bore the brunt of this land ‘scarcity’ created by the ATC management strategy (Bukari and Kuusaana 2018).

The cattle owners’ lease agreement was challenged in court and overturned in 2011. The court subsequently ordered the expulsion of all pastoralists in the area and the government revived the OCT team. However, the effort was implemented selectively, often protecting the interests of well-connected ‘Ghanaian’ cattle owners. Not all Fulani were evicted and new settlers or transhumants were not prevented from entry (Bukari and Kuusaana 2018).

Pastoralists are vulnerable to displacement because they have the most insecure form of tenure—mostly undocumented informal leases from usufruct freeholders or the ATC (Bukari and Schareika 2015). This is easily overturned when anti-Fulani sentiment rises leading to their expulsion. The presence of many unauthorised Fulani in the area does not help appease the situation. Foreign agricultural companies have been in a much stronger position because they are not subject to the same level of prejudice, are compliant with current government policies

and have legally secured leases. They have not lost their lands despite the fact that they are also involved in land disputes (Bukari and Kuusaana 2018).

Between 2006 and 2016 the Ghanaian media reported over 100 cases of violent conflicts between herders and farmers, with more than half of these occurring in Agogo (Bukari 2017). The media itself has played a significant role in fostering conflict. Articles reporting herder–farmer conflicts are generally uncritical and unbalanced: they portray Fulani as undesirable others at the margins of Ghanaian society, promoting a state of moral panic. This is accomplished by three forms of othering: criminalisation, alienation and stigmatisation (Narthey and Ladegaard 2021). Media reports consistently describe Fulani as aliens or noncitizens. This terminology ascribes a certain moral authority and superiority to other tribes at the expense of the Fulani. Media reports reinforce this alienation, drawing clear battle lines between opposing sides. This in turn provides a firm basis for stigmatisation, constructing the entire ethnic group as a social and an economic nuisance, deserving disapproval and moral exclusion (Narthey and Ladegaard 2021). Quotes by farmers, government officials and traditional rulers are frequently used to give credence to this discriminatory discourse while the Fulani voice is mostly unheard (Narthey and Ladegaard 2021).

Cross-border transhumance in Benin

Benin is a notable exception regarding cross-border transhumance in West Africa, a coastal country with strong pastoral cohesion and representation despite the minority status of Fulani. This is the outcome of well-established rights of citizenship and access to and ownership of natural resources for autochthonous Fulani, backed by both customary and constitutional laws. In recent years, several active pastoralist associations have been established which successfully lobby for pastoralist rights and issues at local, national and regional levels (Djohy 2017).

Benin has a well-developed cross-border transhumance regulatory framework that is in compliance with ECOWAS rules. Some investments have been made in equipping the transhumance routes and cross-border reception areas with watering points and rest areas. The exclusive pastoral use of these areas is protected by law. Regulations governing transhumance and conflict resolution follow the ECOWAS guidelines, except that herders are required to pay a fee to enter reception areas (IOM 2019). Several forest reserves have pastoral management plans, and pastoralists (both Beninois and foreign transhumants) can access grazing in these areas for a fee (Djohy 2017).

This approach allows for annual sensitisation and negotiation with local communities and thus minimises the chances of encroachment/crop damage and subsequent conflict. The government is clearly seen to be regulating transhumance, and this is reassuring to Beninois farmers. Animosity towards pastoralists and competition for limited dry-season resources between local pastoralists and transhumant pastoralists are thereby minimised.

Despite compliance with ECOWAS guidelines, regulation of transhumance in Benin has drawn some criticism

from pastoralists, mostly because it is not regulated in neighbouring countries. The 2019/2020 transhumance season was fixed for December to May, which coincides with the usual dry season. However, owing to climate change, many areas in the Sahel and even on the savannahs are now dry by October. The number of cattle allowed is capped at 150 000, which is reasonable for a country the size of Benin, but is much smaller than the number that wish to enter. Transhumance herds can only stay in the northern half of Benin, although the designated cattle routes extend to the south for use by Beninois and foreign pastoralists travelling to Nigeria or Togo. This ensures some resources for Beninois pastoralists and minimises foreign transhumant contact with southern populations that are unaccustomed to them. Overall, the guidelines have been unsuccessful in reducing herder–farmer conflicts in Benin, with only three human conflict-related deaths recorded in the 2018/2019 dry season.

The situation in 2019/2020 was quite different due to the effects of climate change and international relations. The wet season of 2019 recorded low rainfall levels across West Africa; the uncharacteristic dryness led to several violent herder–farmer clashes in northern Benin in early December. Cross-boundary transhumance commenced on 15 December and by the 26th, it was cancelled for security reasons. Nigerian pastoralists were given a concession to enter with 50 000 cattle during March and April but at least 400 Burkinabe pastoralists and their herds remained stranded at the border with Benin. Beninise herds moving to Togo were also unable to pass (Bagna 2020). As of June 2020, 18 deaths had been recorded and local Fulani pastoralists in many communities were being threatened with eviction (Service Regional D'information Pastorale 2020).

To combat high levels of smuggling from Benin, Nigeria prohibited the transport of certain goods across all its land borders in August 2019. In October 2019, the ban was extended to all goods including cattle, restricting movement of pastoralists between Benin, Niger and Nigeria.

The arrival of COVID-19 in West Africa in March 2020 led to movement restrictions both between and within countries. Thus, the critical threshold of 75% inhibition of pastoralist movement was reached in Niger, Mali, Burkina Faso, Senegal, Chad and northern Nigeria (NFCP 2020).

Conflict prevention and mitigation

There have been successful attempts at preventing pastoral conflicts in some parts of Africa. The West African countries of Mauritania, Niger and Mali have each established a Pastoral Code. This Code seeks to regulate traditional forms of open access to rangeland resources while also taking into account modern legislative measures to protect individual and group-specific land rights. In the example of Mauritania, the Code stipulates that local conventions regarding land use are to be negotiated between all land users, comprising sedentary farmers, local government bodies and transhumant herders. Options for mobility are to be conserved, and wetland access is guaranteed for pastoral users. The Support Programme for the Pastoral Herding Sector in Niger ('PASEL' in French) was

established by the Swiss Agency for Development and Cooperation (SDC) to reduce the incidence and intensity of conflicts between pastoralists and agriculturalists on key transhumance routes. It has reduced the incidence of violent conflicts by: integrating all relevant levels of government and traditional authorities within a hierarchy of progressively senior dispute resolution processes; demonstrating win–win benefits for both bordering communities and pastoralists; clearly marking the borders; and working with community leaders and administrative authorities to ensure that when disputes emerge, they are resolved transparently and equitably (Agyemang 2017).

Herder–farmer conflict mitigation has not always been successful (ECOWAS 1998). The ECOWAS Protocol on Transhumance (ECOWAS 1998) provides guidelines for resolving such disputes. Any dispute between farmers and herders should first be judged by an arbitration committee through negotiation after information gathered by the said committee. This committee must comprise representatives of the herdsman, farmers, veterinary and agricultural officers, and local administrative authorities. However, to achieve successful arbitration there is a need for capacity-building in negotiation skills of the committee members. If an amicable settlement is not reached, the dispute may be resolved in the law courts in conformity with the rules governing settlement of contentious issues.

Evaluation of ECOWAS transhumance policies and discernible gaps

The evidence from this review favours the finding that transhumance policies in West Africa have been beneficial. They have created the awareness in member states of the need to cooperate and support livestock production as a whole in the subregion. The policies have also led member states to attach more importance to livestock production by supporting the construction of some facilities and to some extent planned grazing activities in their respective countries. Policies have provided the framework for pastoral movements for sustainable use of natural resources and cohabitation for regional integration. The existence of subregional policies that encourage cross-border livestock production has attracted funding, such as the 'Regional Sahel Pastoralism Support Project' (PRAPS) for the Sahelian countries to protect pastoral systems, and the 'Regional Dialogues and Investment Project for Pastoralism and Transhumance in the Sahel and Coastal Countries of West Africa' (PREDIP), with an overall objective to strengthen the contribution of pastoralism and cross-border transhumance for food and nutrition security, equitable socio-economic development and regional integration, and also the 'Integrated and Sustainable Livestock Farming and Pastoralism in West Africa' (PEPISAO) project, financed by the French Development Agency (AFD), with the aim of curbing farmer–herder conflicts. However, despite all these efforts and support, weaknesses in the transhumance policies have led to conflicts that have claimed several lives.

A careful review of the ECOWAS Protocol on Transhumance (ECOWAS 1998) together with exchanges with several major stakeholders in cross-border pastoral transhumance has revealed that the coming into force of

the transhumance regulations have created awareness about mobile pastoralism, particularly in the southern coastal countries, and the need to support both the herders and their livestock trekking into the south. The various challenges encountered since the roll out of the ECOWAS protocol has exposed several gaps that need to be addressed to strengthen the policies and make their implementation more effective and successful. These gaps include the following:

1. The protocol makes no provision for how animals will be catered for in abnormal years, such as in years of prolonged drought or during a pandemic like COVID-19. At such times, host nations are unwilling to accept cross-border animals; at the same time, herders in the Sahelian regions will be desperate to seek forage for their livestock, as they otherwise risk losing their animals and means of livelihood.
2. There appears to be no commitment by member states to contribute a percentage of their annual budget for agriculture or livestock production. This failure has led to a long wait in many countries to mobilise resources in the provision of facilities to implement the protocol.
3. Grassroot organisations involved in livestock activities have been excluded in implementation of the protocol. Organisations such as the Association to Revive Herding in Niger (AREN), the Cattle Farmers' Association (CFA) in Ghana, the National Association of Professional Organizations of Ruminant Breeders (ANOPER) in Benin, and the Pastoralism Communication Network (RECOPA) in Burkina Faso were not consulted. These are but a few of such grassroot associations or organisations that already deal with key stakeholders in the livestock business that could easily be used to reach out to members to understand salient issues about the ECOWAS protocol.
4. The protocol fails to address how the administration bottlenecks and bureaucracy in service delivery in member states should be dealt with.
5. The transhumance policy document is strong on awareness creation, the provision of facilities, and the enforcement of regulations by member states but not on resource maintenance. Host nations tend to block access to grazing fields and water bodies when they realise resource utilisation is not done sustainably.
6. The policy strategies are mostly strong yet the policy structures are often weak. For example, despite the use of certificates for livestock, many countries like Ghana and Nigeria have no proper documentation of animal numbers entering or leaving their borders.
7. Member states are not bound by the spirit and letter of the protocol to not enact other regulations in their sovereign states that could undermine the ECOWAS guidelines. As a result, the Benue State government passed legislation in Nigeria banning open grazing. In Ghana, between 2006 and 2008, the Agogo Traditional Council sold over 48 000 acres of grazing land to ScanFarm Ltd for other uses apart from grazing (Bukari and Kuusaana 2018).
8. The policy document does not reference the creation of cross-border commissions to coordinate transhumance activities, which would be a more-effective way of managing the activities of mobile pastoralists and their

hosts. For example, establishing bilateral commissions between Benin and Burkina Faso, Benin and Nigeria, or Benin and Niger, or a multilateral commission among Benin, Burkina Faso and Niger might be more efficient in handling matters of cross-border transhumance.

9. The protocol outlines no provision for state support of the security of mobile pastoralists.

Conclusions

Annual cyclical movement of large numbers of livestock into rangelands in West Africa serves as a means of employment for many, thus improving the livelihoods of pastoralists, improving productivity through high milk production and high fertility, reducing moribund and combustible rangeland materials in the dry season, and enhancing seed dispersal, soil fertility and plant diversity. This review shows that the ECOWAS cross-border transhumance protocol has led to some infrastructural developments in some member states, whereas only partial enforcement of the policies has led to herder–farmer conflicts. It can be concluded that transhumance pastoralism and associated regulatory policies have several benefits. However, to ensure policy compliance and avoid herder–farmer conflicts, the transhumance policies need to be reviewed and discernible gaps eliminated.

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