

## **Livestock and ecosystems in the Sahel: the good, the bad and the ugly**

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Livestock on the move in The Gambia. Photo: ICRAF/Alagie Bah

***Cross-border herding of livestock has both positive and negative effects on both herder and host communities but there are solutions at hand, finds a congress of experts.***

The livestock sector plays a significant social, economic and ecological role across Africa. According to the African Union, about [40% of the African landmass](#) is used for pastoralism, though this differs between countries, with a pastoralist population estimated at 268 million.

The [Organisation for Economic Co-operation and Development](#) estimates that there are 60 million head of cattle, 160 million small ruminants and 400 million poultry in West Africa and the Sahel, translating to about 44% of the agricultural GDP in the region.

In the Sahel, livestock rearing is practised by over 20 million pastoralists and is a crucial adaptation strategy in the region's harsh climate. The sector is changing rapidly in response to globalization, population increase, demand for livestock products, and climate change.

Further to these challenges, the sector is facing shrinking grazing zones and partitioning of grazing land into small, privately owned plots, forcing pastoralists to move their animals,

either domestically within their countries seasonally or cross-border from one country to another, in search of pastures and water.

### **Transhumance: an overview**

Transhumance is an old practice that involves regular seasonal movement of herders and their livestock, mainly driven by the search for pasture and water during the dry and wet seasons. This movement varies with distance travelled and seasonal timing depending on climatic conditions.

In West Africa and the Sahel, transhumance faces increasing pressure as a livelihood and adaptation strategy for the changing social, economic, political and environmental conditions.

In recognition of the role played by livestock in West Africa, the Economic Community of West African States (ECOWAS) developed a [regulation on transhumance](#) in 1998 that allows free passage of transhumant livestock between member states, subject to obtaining an International Transhumance Certificate. The certificate provides the number of herds, livestock, vaccination status and health conditions, movement itinerary, and border post crossings. Further, it requires headers to respect the host country's laws and local bylaws.

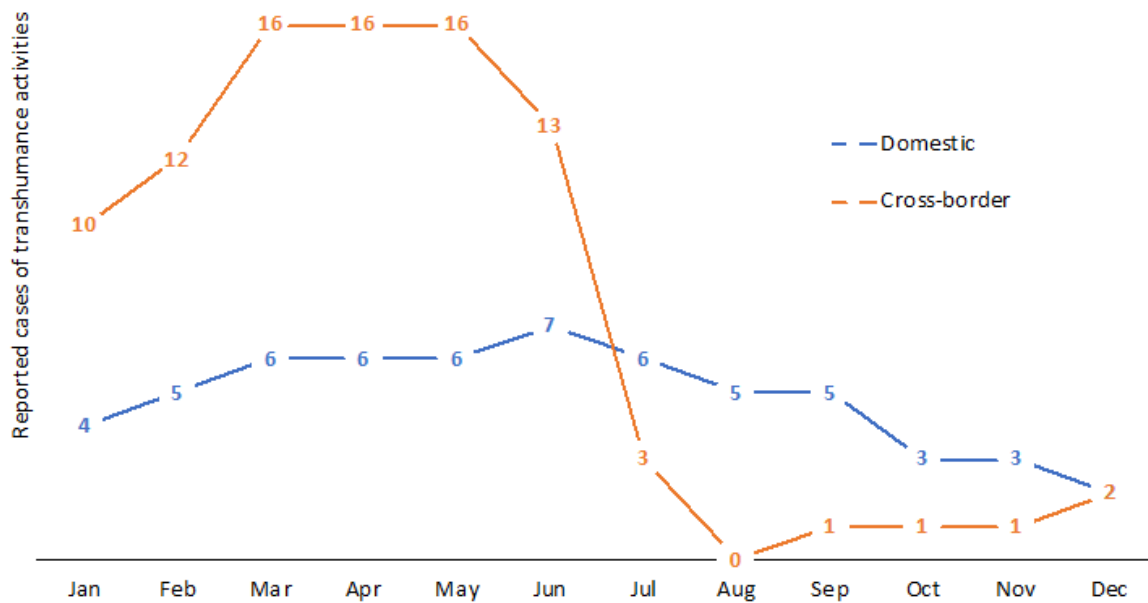
### **Transhumance in The Gambia**

A recent [study](#) by ICRAF scientists established that The Gambia experiences both cross-border (Senegal–Gambia) and domestic (intra-regional and inter-regional) transhumance. Active transhumance is carried out in the dry months between January and June when there is insufficient fodder in Senegal and then significantly reduces during the wet seasons between July and December to minimize conflicts with crop farmers. On the other hand, domestic transhumance is very low and fluctuates much less throughout the year.

‘Domestic transhumance is almost a continuous process throughout the year,’ said Alagie Bah, the study leader, ‘with less detrimental socioeconomic and ecological impacts, while the cross-border one commences during the dry season and ends during the onset of the rainy season, and has notable positive and negative impacts.’

Lalisa Duguma, a co-author of the study, established that transhumance varies between regions and seasons.

‘The key areas where transhumance is common are the Upper and Central River regions,’ he said, ‘involving both large and small ruminants in search of pasture, water and, to some extent, market opportunities.’



Reported cross-border and domestic transhumance cases in Upper and Central River regions of The Gambia throughout the year. Note that there is a high intensity of transhumance activity from January to June. Numbers on the figure show the perception of respondents. Source: the study

According to Peter Minang, another co-author, The Gambia is essential for livestock departure, transit and arrivals, especially during the dry season.

‘Transhumance practices are deeply integrated into the country’s traditional livestock production system to cope with climate change and variability,’ he said.

However, Ebrima Sanneh, regional forestry officer for the Central River Region and another co-author, noted that transhumance activities are significant contributors to illegal cutting of priority trees.

‘Our assessment shows that cutting of priority trees — such as *Acacia seyal* and *Khaya senegalensis* — averaged at 44 and 33 trees per hectare, which if not well regulated can lead to the loss of these species. Already, *Khaya senegalensis* is on the IUCN Red List of threatened species,’ he said.



*Ficus capensis*



*Acacia sieberiana*



*Khaya senegalensis*

Abusive cutting of tree branches in already open community forests and farmlands by transhumant herders. This directly contributes to the degradation of ecosystems, noting that most of the indigenous priority trees regenerate at a slow rate compared to the speed of destruction. Source: the study

### **The transhumance congress**

To address the dynamic issues of transhumance, the [Large-scale Ecosystem-based Adaptation project](#) conducted a two-day congress in The Gambia, 18–19 November 2021. Titled, Transhumance, Livestock Management and Ecosystem Resilience, the congress brought together over 120 participants drawn from government, donor agencies, multilateral institutions, communities, research and academe, extension agents, farmers and local governments directly in charge of natural resources, to share their views and experience of transhumance.

Broadly, the conference explored the status of transhumance, its effects on community livelihoods and ecosystems, institutional and policy frameworks in place, and the way forward for transhumance and livestock management.

### **The good, the bad and the ugly of transhumance**

Transhumance activities have various positive and negative effects on livelihoods and landscapes. The effects can be broadly looked at from social, economic and ecological perspectives.

Transhumance is a lifestyle and cultural identity for some communities. Over the years, the movement of herders and animals has created cross-border and domestic social ties that enhance peaceful co-existence among communities. It also serves as an avenue for

networking and indigenous knowledge sharing as a cultural practice. Transhumance is also a traditional adaptation strategy to pastoralist communities. There are, however, instances of conflicts between crop farmers and herders due to crops and trees damaged by livestock.

Economically, transhumance generates income for both migrant and host communities. The migrant communities sell milk, meat and live animals to the host communities during dry periods, ensuring food supply throughout the year and supporting the food market chain. The host communities also generate income from the sale of pasture and water and renting camping areas to migrants. Livestock taxation is also a contributor to national and regional development and there is significant generation of employment that supports household economies in the host communities.

However, there are also cases of animal mortality, especially weaker individuals, as they travel long distances. They also contribute to the transfer of diseases from one region to another, implying high animal vaccination and treatment costs. Livestock intrusion also increases the cost of restoration in already degraded agricultural and forest ecosystems through, among others, fitting tree guards.



Tree guards in The Gambia for protection from livestock. This significantly increases costs related to the restoration of degraded ecosystems. Photo: ICRAF/Lalisa Duguma

Ecologically, transhumance contributes significantly to soil fertility through manuring the areas of movement and settlement. Livestock movement also promotes the resilience of drylands ecosystems, preserves biodiversity and ensures livestock productivity. On the other hand, herders also destroy crops and trees to feed their animals. Cutting trees exposes them to physiological stress that reduces their potential to grow and regenerate. Livestock movement is a significant contributor to pollution and low quality of drinking water and also reduces ground cover, exposing the land to soil and water erosion.

### **Towards a sustainable solution**

Various management practices are already in place but need enhancement to control transhumance. These include developing local conventions and bylaws to guide livestock movements within communities, districts and regions. There is need for compliance and enforcement with the laws and regulations for domestic and cross-border transhumant communities.

Clear harmonization of regional frameworks, such as the ECOWAS Protocol on Transhumance, national policies and local arrangements are also key to better management. This can be complemented by establishing grazing routes and respecting community norms and rules related to natural resource management, predominantly pasture and water.

There is also a need for innovations in livestock management, including fodder production, processing and storage for dry seasons, animal fattening to improve productivity with a minimal number of animals, proper fencing, and localized water supplies.

The congress also developed a resolution and roadmap towards sustainable management of transhumance and conducted institutional and policy mapping to establish the roles of various groups involved in livestock management. These management strategies, if well implemented, can go a long way to ensuring that livestock is well managed to benefit both communities and ecosystems.

### **Download the technical brief**

Bah A, Duguma L, Minang P, Muthee K, Duba D, Sanneh E, Jallow P. 2021. [\*Transhumance: tree growing and ecosystem resilience in The Gambia\*](#). ICRAF Technical Brief No. 02/2021. Nairobi, Kenya: World Agroforestry (ICRAF).



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