



## Climate migrants in the Senegal River Delta: The case of Fulani pastoralists

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### Abstract

Within the various categories of migrants observed in the contemporary migratory landscape of Senegal, a particular type, little studied, is embedded, known as climate migrants. This article focuses on such migrants, taking the Senegal River Delta in the northwest of the country as the observation site, where agriculture, particularly extensive farming, fishing, and forestry, constitute the main economic activities. The analyses are developed based on ethnographic data collected between 2022 and 2023 as part of a doctoral research project. The results support the idea that climate change imposes impoverishing challenges on many pastoralists. To survive and potentially thrive within pastoralism, a significant portion, notably the Fulani, migrates within the country and abroad, particularly to Mauritania, where the Haalpulaar people form the second largest ethnic group, overrepresented on the Mauritanian right bank of the Senegal River.

**Keywords:** Migration, climate change, pastoral activity, Senegal River delta

### Introduction

In view of the exacerbation of global warming, climate migrants are the focus of particular attention in research on internal and international migration. Identifying them scientifically in their geographical and socio-cultural diversity has become a necessity for understanding contemporary migratory movements and implementing inclusive climate policies. Hence the relevance of this study on an agro-ecological zone in Senegal.

Back in 2018, the World Bank warned that "worsening climate impacts in three densely populated regions of the world could push more than 140 million people to migrate within their own countries by 2050." (BM, 2018). Among these regions, sub-Saharan Africa comes into the picture, polluting the least but paradoxically suffering the most from the effects of climate disruption (GIEC, 2023) [4]. Within Senegal, migratory flows relating to the latter are intensifying, while in recent years waves of migration to Europe by means of makeshift pirogues have been unprecedented in terms of numbers and deaths.

Climatic migration in Senegal remains a little-explored subject in the analysis of Senegalese migration dynamics. One of the most recent studies on the subject concerns the fishing sector: *the clandestine emigration of artisanal fishermen from Saint-Louis in Senegal against a backdrop of climate change* (Ba and Ngom, 2023). While it highlights the role of global warming in the depletion of fish stocks in Saint-Louis, and the effects of maritime and coastal erosion in the displacement and clandestine emigration of fishing families whose concessions have been confiscated or threatened by violent swells, it fails to identify the migratory flows of pastoralists in the Senegal River Delta, whose activity is fundamentally dependent on the climate.

Since the droughts of 1973-74 and 1983-84, this particular social group has been enduring what Christian Santoir (1994) [10] calls "pastoral decadence". In the face of this, "bouncing back" is a necessity to avoid "disappearing" into

nomadic life (Bernus, 1995) [3]. And migration in the face of climatic austerity is one of the survival strategies employed by pastoralists in the Senegal River Delta, who are increasingly deserting this agro-ecological zone where pastoralism was once on a roll. This is despite the regional Great Green Wall initiative to counter desertification in the Sahel (Mugelé, 2018) [8]. As a result, three questions emerge as guiding threads for this research: How do pastoralists in the Senegal River Delta migrate? How is this migration a strategy of adaptation or pastoral resilience to climate change? And why do some Senegalese migrants end up settling permanently in Mauritania?

We postulate that the environmental degradation observed in the Senegal River Delta in recent years because of global warming has strongly impacted pastoral and agropastoral activities in the area, leading pastoralists to migrate to other locations where they hope to find a favorable environment conducive to the development of their activities.

After presenting the methodological elements used in this article, we turn to the migration of pastoralists in the Senegal River Delta under the impact of climate change. In the third part, we'll look at how migration enables people to bounce back from pastoral activity, on the one hand, and to settle permanently in Mauritania, on the other.

### Methodology

This article is based on a purely qualitative approach which, according to Mc Millan and Schumacher (2006), refers to the body of survey research in which researchers collect situational face-to-face data, describe, and analyze individual and collective social actions, beliefs, opinions, and perceptions. They interpret phenomena in the sense in which people conceive them. The results presented here are based on monographs and semi-structured interviews with pastoralists and migrants in the Senegal River Delta.

In the absence of a sampling frame as such, we opted for network sampling, commonly known as snowball sampling. This consisted in using the subjects of the study to direct us

towards other relevant subjects in their environment. We were able to conduct 117 semi-structured interviews with Fulani herders in Saint-Louis, Dagana and Podor (Senegal). This sample size was sufficient to reach information saturation. Informal discussions were also held to obtain additional information. To gain a better understanding of the issues at stake in our research, we also carried out a series of observations in the Senegal River Delta, to gain first-hand experience of the effects of climate change on local pastoral practices. The interviews were conducted in Pulaar and subsequently translated into French.

### 1. Presentation of the study area

A bridge between the republics of Mauritania and Senegal, the Senegal River Delta is in north-western Senegal, downstream of the river valley between Dagana and Saint-Louis. The Senegal River Delta lies between latitudes 16° and 14°4 North and longitudes 15°30 and 16°30. It covers an area of around 6,000 km<sup>2</sup>, with an estimated population of 60,000 and a density of 13.7 inhabitants per square kilometer. The delta and valley are focal points for intense agro-pastoral and commercial activities, with the Wolof, Maure and Peul being the main players (Sy, 2022).



Source: Bourgoïn et Diop, 2023

Fig 1: Map of the Senegal River Delta

## Results and discussion

### 1. Migration of pastoralists in the Senegal River Delta under the impact of climate change

Climate change is a reality about which the nomads, semi-nomads, transhumants and agropastoralists of the Sahel are among the most informed laymen, since their activities depend on rainfall, soil health and the ecological state of plant cover. Although the concept derives from climatological sciences, whose language is not very accessible, and lacks equivalence in the vernacular languages of Africa, most of the phenomena to which it refers are not nonetheless strange to sub-Saharan pastoralists, in this case those of the Senegal River Valley. They are now experiencing them daily, in a context where global warming is tending to intensify (IPCC, 2023), to the detriment of their traditional subsistence activities. Thus, when referring to climate change, the transhumant herders surveyed point to rainfall irregularity (late, deficient, early rains), rising temperatures, impoverishment of plant cover, desertification, disappearance of plant and animal species, etc. These are all factors that are affecting their livelihoods. These phenomena are experienced by pastoralists as both stressful ordeals and challenges to be overcome. Faced with the erosion of pastoral rangelands, which are subject to galloping salinization in the River Delta (see photo below), pastoral farms are adopting various strategies to cope with climate change. These include, for example, combining pastoralism with sedentary agriculture, and large-scale pastoral mobilization to maximize the use of fodder and water resources that are unevenly distributed in space and

time. These mobilities can take place from one region to another, or from one country to another, as in the case of cross-border movements between Senegal, Mali, Mauritania, Niger, Chad, etc.

The CILSS (Inter-State Committee for Drought Control in the Sahel) and the CaSSECS (*Carbon Sequestration and greenhouse gas emissions in (agro) Sylvopastoral Ecosystems in the sahelian*) project are working to secure cross-border mobility from the point of view of greenhouse gas emissions.

In the Senegal River Delta, the effects of climate change are increasingly combined with a few deleterious factors, such as the shrinking of pastoral areas due to demographic growth, settlement expansion, agricultural or agro-industrial colonization of nearby areas, and the lack of inclusive land-use planning. As a result, many pastoralists are threatened with abandoning pastoralism in favor of other income-generating activities. Young Fulani, already suffering from animal depopulation or destocking, are opting not for pastoral mobility with part of their family, but for individual migration as a means of adaptation or even resilience.

### 2. Migrating to rebound in pastoral activity

The migration of young transhumant herders to peri-urban and urban areas, as well as to other countries, is often associated with rural exodus. However, a closer look at the migration plans of young pastoralists reveals that for some, it is seen as a strategy to revive pastoralism, with a return to the native village as a means of better socio-professional repositioning. The destination of migrant pastoralists and

the choice of occupations they undertake there provide a clear indication of their pastoral prospects. Those who move to cities such as Dakar or Mbour generally engage in activities that are disconnected from pastoralism. Most work there as hired shopkeepers or "Becëk-men", i.e. itinerant traders. While they're there, urbanity often wins them over, leading them to abandon their pastoral tradition and their village. On the other hand, there is a less significant category of migrant pastors who choose a destination based on their pastoral profession. It is this category that interests us most in this section. These are pastoralists who migrate to a given location to work as paid shepherds. This is the case of Hamadou, who tells us about his trip to Saloum, where a wealthy Serer agropastoralist entrusted him with his herd of cattle. He explains his recruitment in the following terms: "It's my uncle who's in Saloum, and he's the one who got me involved with him [the employer] by calling me on the phone. I told him for a long time that I wanted to go there. The existence of relatives in the host area and ICTs therefore play a quintessential role in the realization of the migration plans of young pastoralists, who do not generally choose their destination by chance.

In the interior of Senegal, the areas targeted by young pastoralists seeking employment as shepherds are generally rural. This is where pastoralism is practicable. Consequently, the continuity of the traditional activity in the host area helps to maintain the link between migrant herders and their livestock. It also strengthens it, in that migrant herders often return to their native village with an additional

herd, reflecting the gains they have made on their journey. This input is acquired by the migrant herdsman in two ways: either by barter (animals given in exchange for the herdsman's services), or by payment in cash, which is subsequently converted into a herd. Outside the country, Mauritania is a destination of choice for young migrant pastoralists seeking employment as shepherds. Bordering on the Saint-Louis region, this Sahelian country with its vast pastoral rangelands attracts young Fulani pastoralists because of the importance of pastoralism in the region, the high demand for labor among the Moors in particular, and the many cultural traits shared with the latter. They generally migrate to Mauritania after the rainy season, where they stay for months or even years. Most are unmarried, and their return generally depends on their satisfaction with their migration project.

Migration to Mauritania is a resilience strategy for some transhumant herders who have experienced the destocking or decapitalization of their herds. Indeed, like migrant herders within the country, migrant herders in Mauritania generally return with an additional herd of which they are proud. Sometimes, this addition to the family herd includes imported Mauritanian breeds, whose crossbreeding with local breeds has the advantage of enabling genetic improvement, which in turn brings economic returns. Hamady Sadio Ba, a shepherd interviewed in Podor, took pleasure in showing us (in the photo below) his herd reconstituted thanks to his migration to Mauritania. This young shepherd is currently in Mauritania.



Source: Authors, 2022

Photo 1: Return migrant with sheep breeds from Mauritania

When comparing the work of shepherds in the interior of the country with that in Mauritania, most migrant shepherds maintain that the latter is more profitable. S. Diallo, a young shepherd who once migrated to Mauritania, corroborates: *"the Moors are more generous than the Senegalese when it comes to paying shepherds; they'll do anything to make sure you stay with them. There's also more space over there."* Continuing, he suggests that "they [the Moors] can even bewitch you to stay [as a shepherd]. There are also villains who may consider you a slave."

In the light of the above, it's important to remember that the migration of young pastoralists, which concerns only the mobility of men and not animals, is not necessarily a factor

of social mobility (socio-professional reconversion), nor can it be equated with rural exodus. It is a strategy of pastoral reinforcement or repastoralization for young migrant pastoralists seeking to be employed as shepherds, and whose migratory project consists of returning to their native village with a herd.

### 3. Final migration of Fulani from Senegal to Mauritania

In Africa, Mauritania was the first land to welcome the Senegalese Peuls of the Ferlo, whose contact with the right bank of the river preceded the settlement of the Arab-Berbers. Indeed, long before the birth of the Tekrur kingdom, the nomads of the Ferlo migrated to this less

deserted part of the country as a retreat or for maximum pastoral exploitation in a context where agriculture was underdeveloped. After decolonization, many Fulani continued to cross the river freely to reach the right bank of Mauritania in search of pasture for their herds. This traditional mobility made border demarcation problematic, and for decades the nomadic Fulani of Senegal, freely shuttling back and forth between the right and left banks, seemed unaware of where each state's territory began and ended. Consequently, since the Senegal-Mauritania conflict of 1989, triggered by the encroachment of a herd on crops on the border between the two neighboring countries, Senegalese pastoralists have become very cautious in their cross-border mobility in both zones.

Indeed, pastoral movements from Senegal to Mauritania have fallen off considerably in recent years, while the transfer of Mauritanian herds to Senegal continues to intensify on major religious festivals such as the Magal de Touba and Tabaski. Today, what is most noticeable is the migration of young Fulani without herds to Mauritania in search of work. Surveys reveal that most Fulani herders in Dagana, Podor and Matamois in Saint-Louis prefer to migrate to Mauritania than to other regions of Senegal. This can be explained by the fact that some of the Ferlo Fulani identify more closely with the Moors than with other Senegalese ethnic groups, from a socio-cultural point of view. And history has shown that, over the centuries, the Haalpulaar community settled in Mauritania has come to dominate demographically, becoming the second largest ethnic group after the Moors, who are over-represented in the country's official statistics. And the fact that Senegal's white Moors, most of whom are traders, prefer to work with the Haalpulaar than with other ethnic groups, illustrates the cultural proximity between these two ethnic groups, who are said to share the same paternal Arab ancestor.

The majority of transhumants surveyed in Dagana and Podor report having relatives in Mauritania. The presence of relatives in this host country is an enormous asset for the integration of pastoralists in the Senegal River valley. It often leads to a definitive marriage with this Islamic republic. The curious question we asked ourselves during our investigations was: why do some of the migrant herders

recruited as shepherds end up settling permanently in Mauritania, even though the latter is more arid than Senegal, and the Senegal River Delta remains an area with significant agro-sylvo-pastoral potential? To this question, Alhassane replies: "In Mauritania, the grass is richer. Cows have a better chance of producing during the year there. Whereas in Senegal, cows often stay for two years to produce heifers. This opinion is widely shared by Senegalese shepherds in Mauritania. Abou Ba, a Senegalese shepherd in Mauritania, originally from Ringandé (Médina Ndiathbé) argues: "Senegal heewani ladde" bushes are less numerous in Senegal". These and other testimonials support the idea that pastoralism is more favorable in Mauritania than in Senegal, where climate change in the Senegal River Delta is combined with a shrinking pastoral area. Since the creation of the SAED (Land Management and Exploitation Company of the Senegal River Delta) in 1965 and the construction of the Diama dam in 1988, hydro-agricultural developments have multiplied in the area, to the detriment of pastoral rangelands and to the benefit of large-scale agro-industrial investments. As a result, the lack of space has deprived many pastoralists in the Senegal River valley of large-scale pastoral mobility, which represents a traditional strategy of resilience to climatic hazards. In Mauritania, on the other hand, low human densities in vast tracts of scrubland enable the cultural accumulation of livestock without setbacks.

While the migration of pastoralists to Mauritania, as we saw above, enables some of them to return to pastoralism in the country of departure, this return can also take place in the host country, where the shepherd employed by the Moors as a shepherd can become economically independent by building up his own herd. Comparing pastoral conditions between Senegal and Mauritania, he is likely to make a definitive residential choice for the latter. This choice is reinforced when the migrant marries a Mauritanian woman, particularly a Fulani. Some Senegalese Fulani migrants have even brought their families to Mauritania, where the majority of Mauritanian Fulani have Podorois and Matamois ancestors. The latter are over-represented in Kaédi (Kayhaydi), whose history is closely linked to Fulani settlement in this mid-valley (Leservoisié, 1993) [6].



Source: Leclerc, 2014 [5]

Fig 2: Geographical distribution of ethnic groups in Mauritania

In Mauritania, a growing number of Fulani pastoralists are turning to trade as part of their socio-professional life in the country. This category of people, who have not found their niche as shepherds, often move to Mauritania's big cities such as Kaédi, Nouakchott, Rosso, Nouadhibou, Kiffa and Boghé, where they are generally hired by Moors as shopkeepers. Some, however, manage to open their own stores and integrate as itinerant traders, farm workers or tailors. This category of migrant's swarms in Mauritanian cities, where the lifestyle is, in many respects, conducive to long stays or even permanent residence.

### Conclusion

What is the point of thinking about climate migrants in the Senegal River Delta? On the one hand, this agro-sylvo-pastoral zone is currently undergoing profound upheavals due to climate change, which is having a direct impact on the economic activities of local populations living off agro-pastoral resources. And secondly, in the added value that their examination brings in relation to contemporary migration dynamics in Senegal and Africa in general. This examination of the link between climate change and migration, which no longer needs to be proven, allows us in many respects to decentralize our gaze on what is often referred to as the climate migrant. The latter is very often overlooked or poorly considered in the analysis of contemporary migratory movements in Senegal.

An account of climate migrants thus demonstrates that people do not emigrate solely for the economic, political, cultural, or social reasons generally highlighted in studies of migration in Senegal. The article shows how the effects of climate change on pastoral activities have led Fulani pastoralists in the Senegal River Delta to reinvent new strategies by developing other activities, and to develop adaptation or resilience strategies. These strategies have led some to move within the country, while others have moved across the border, from Senegal to neighboring countries such as Mauritania, the preferred destination for young Ferlo pastoralists.

The results also show that many young Fulani from the Senegal River Delta end up settling permanently in Mauritania, where pastoral activity is favored by the presence of vast pastoral rangelands, enabling large-scale mobility as a resilience strategy against climatic aridification. What's more, in Mauritania's larger cities, such as Kaédi and Nouakchott, some young pastoralists are turning to other occupations in favor of urbanization, which poses the problem of perpetuating the traditional link to livestock in the host country.

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