

Migration and land tenure changes in the central cotton basin of Côte d'Ivoire

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ABSTRACT

Context and Background:

Migration dynamics have always been at the heart of Ivorian agricultural development. From the colonial era to the present day, the areas of departure have remained virtually unchanged, but the areas of arrival have been modified.

Goal and Objectives:

The objective of this study is to show the impacts of the dynamics of Senufo cotton migrations on access to land in the central Ivorian cotton basin.

Methodology:

The methodology adopted was based on documentary research and field surveys. The documentary research consisted of consulting scientific publications and specialized works related to the research topic. The pre-survey consisted of making contact with the field in order to prepare the survey phase itself. The survey itself was based on interviews (individual and collective) and on the administration of the questionnaire. The questionnaire was administered to 433 migrant cotton producers, including 310 in Tiéningboué and 123 in Marandallah.

Results:

After a survey conducted in 23 villages in the sub-prefectures of Tiéningboué and Marandallah, it emerged that migration to the central Ivorian cotton basin is motivated by cotton cultivation. Indeed, 98% of migrants are Senufo cotton producers. The Poro region, with 83% of departures, is the main area of departure for migrants. The large influx of migrants into the villages of the study area has disrupted the modes of access to land. The current strategies for accessing land are renting (70.90%) and sharecropping (8.08%). These land transfers now give land a commercial character. Despite the cases of land conflicts recorded, the integration of cotton migrants is a success because the natives earn income through land rental.

Keywords:

Senufo migration, Land tenure, Cotton, Central cotton basin, Côte d'Ivoire

1. Introduction

The history of the settlement of Côte d'Ivoire is linked to migration. As a result, mobility appears to be a dominant feature of the country's settlement and is also the foundation of its economic, social, territorial and political systems (Bauchemin, 2005). However, from the colonial era to the post-colonial era, the agricultural sector has always been the pillar of the Ivorian economy. This agriculture, based on the coffee-cocoa pairing, developed more in the south of the country, which at that time was sparsely populated. These crops, described as a plantation economy, are very labour-intensive and require the perpetual conquest of new land. As a result, the plantation economy gave rise to waves of internal and international migration. The motives for these migrations were mostly to transform the primary forest into coffee and cocoa plantations. The North of Côte d'Ivoire, which lacked export crops that could match the coffee-cocoa pairing, was an area where many farmers migrated to the forest zone, which was conducive to the development of these choice crops (Aubertin, 1983). During the 1950s and 1960s, farmers in the north had few economic opportunities to improve their living standards. To alleviate their poor economic situation they migrated to the cities and the forest zone (Bassett, 2002). As a result, the populations of northern Côte d'Ivoire concentrated in the forested south, which became the preferred area for socio-economic investment.

This state of affairs marks the starting point for the disparities in unequal development between the North and the South. In order to correct these inequalities in development between the two ecological zones of the country, a multitude of agricultural development projects were launched in the north of Côte d'Ivoire. One of these projects is the cotton crop, which has been very successful, accounting for about 7% of the country's exports and generating foreign exchange earnings of about FCFA 100 billion (FIRCA, 2012). Since then, cotton has become the engine of development in the North and has slowed down the intensity of migratory flows towards the South. Indeed, cotton cultivation has reduced migration flows from the northern savannah zones to the southern forest zone of the country by changing destinations (Peltre-Wurtz & Steck, 1991). In other words, the introduction of cotton changed the north-south direction of migration to a new north-central trajectory. These migratory flows have in most cases concerned Senufo farmers since the beginning of the 1980s, with an increase in settlements during the period 1990-2000 (Dugué & *al.*, 2004). In this regard, some researchers referred to the term Senufo cotton migration (Le Roy, 1981).

In view of the above, migratory movements have not really stopped but have simply changed destination. The preferred destinations for migrants from the north are now the centre of Côte d'Ivoire. With the arrival of these Senufo cotton migrants, the area under cotton in this region has increased from 9098 hectares in 2011 to 14625 hectares in 2020, i.e. an increase of 70.93% in 09 years according to the surveys in this study. This evolution of cotton areas coupled with the adoption of cashew trees by cotton migrants, which is however forbidden to them, causes a race for land leading to land mutations. The race for land is leading to a redefinition of land tenure by landowners in the central Ivorian cotton basin.

This study, which falls within the framework of cotton migrations, is conducted to show the impacts of the dynamics of these migrations on access to land in the central Ivorian cotton basin. Specifically, the aim was to show the causes and potential areas of departure of these migrants towards central-northern Côte d'Ivoire in order to better understand the land tenure changes induced by their

presence. In addition, it aimed to identify the types of conflict that arise following the arrival of migrants and the different methods of resolution recommended. This study focused on the particular case of the central Ivorian cotton basin, specifically the sub-prefectures of Marandallah and Tiéningboué (Figure 1).

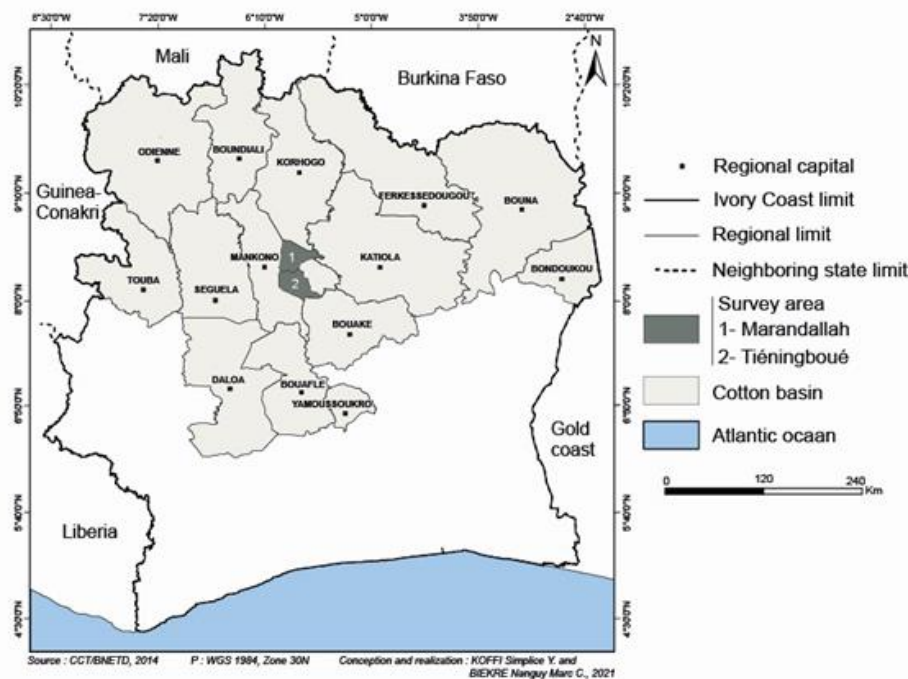


Figure 1: Location of the study area in the central Ivorian cotton basin

2. Materials and methods

2.1. Documentary research

No scientific progress can be made without recourse to previous literature. Therefore, the documentary research consisted of consulting scientific publications, specialised works and statistical data with the aim of gaining a broader understanding of migrations in relation to land tenure changes in the cotton-growing areas in general and in the central cotton basin of Côte d'Ivoire in particular. This documentary approach was a very important phase insofar as it enabled the main lines of this work to be identified. This stage was based on the initial research question and allowed us to collect information from online databases. All the publications consulted helped to clarify the various aspects of the subject.

2.2. The field survey

The field survey was carried out in two phases. A pre-survey phase and a survey phase. The pre-survey phase was conducted separately for the two sites selected for the research. For the Tiéningboué site, it took place from 5 to 11 January 2020. And that of Marandallah took place from 5 to 11 February 2020. During this phase, the various villages of the two sub-prefectures in which the surveys took place were located and listed. The pre-survey consisted of making contact with the field in order to prepare the survey phase. Meetings with the prefectural, sub-prefectural and customary authorities were initiated with a view to obtaining official authorisation from them to conduct the surveys in their respective districts.

The survey phase itself was also conducted in two steps. The first step, scheduled from 1 to 14 February 2021, was devoted to individual and group interviews with all the actors involved and able to provide information on migration and land tenure changes in the villages surveyed. This stage was very enriching because it coincided with the 2020-2021 cashew nut season. The resource persons involved in the interviews were, on the one hand, the Sub-Prefect, the managers of the supervisory structures such as the National Agency for Rural Development Support (ANADER) and the Ivorian Company for Textile Development (CIDT). On the other hand, there are the village chiefs, the chiefs of non-indigenous and indigenous communities. The discussions focused on the issues and impact of the Senufo cotton migrations. The main objective of these interviews was to collect qualitative data on the issue of cotton migration in these areas.

The second very crucial step in scientific research was the administration of the questionnaire. This phase of the research took place in a single round, from 2 June to 15 July 2021.

The choice of sites was made on the basis of data provided by the administrative authorities. The sub-prefecture of Tiéningboué has 71 villages and that of Marandallah has 21 villages. As it was not possible to cover all of these villages and in accordance with the objectives of this study, selection criteria were defined. The choice of villages was made in order to understand the dynamics of migration and land tenure changes in relation to cotton and cashew production in the central Ivorian cotton basin. The criteria used were villages with a high density of Senufo migrants and villages with high cotton and/or cashew nut production in the two sub-prefectures.

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Due to the large number of villages (92) in the two sub-prefectures, the villages to be surveyed were selected using the systematic spatial method with a sampling rate of 1/4. The application of this method revealed 16 villages to be surveyed in Tiéningboué out of 71 (Figure 2). In the sub-prefecture of Marandallah, with a smaller number of villages (21), the same method was applied, but with a sampling rate of 1/3, which enabled us to obtain 7 villages to be surveyed in the said sub-prefecture. In the end, 24 villages were visited.

As several villages met the above criteria, the simple random or probabilistic method was adopted. A random draw without discount was carried out until the number of villages defined by sub-prefecture was reached.

For the selection of the sample, a census of producers per village was carried out with the CIDT and the cooperative accountants. Following this census, the number of producers in the villages of the Marandallah sub-prefecture was divided by 1/3 and those of Tiéningboué by 1/4, the data for which are given in Table 1.

Table 1: Distribution of surveyed farm managers by village in the sub-prefectures of Tiéningboué and Marandallah

Sub-prefecture	Villages surveyed	Listed producers	Producers surveyed
Tiéningboué	Tiéningboué	98	26
	N'guéssédougou	93	23
	Dabakalatou	61	16
	Tiéfindougou	43	22
	Tioniférékaha	112	25
	Gbingoro	51	21
	Bouhodougou	56	15
	Daouvogo	53	13
	Ninakri	104	26
	Kalifadougou	41	16
	Mouroufédougou	54	18
	Sibirikaha	106	27
	Soundougoutou	49	13
	Nahouaplékaha	99	21
	Mamouroukaha	75	20
	Koromabla	10	8
Tiéningboué ensemble	16	1105	310
Marandallah	Bogosso-tiéningbé	109	36
	Dotékaha	53	18
	Mamakaha	14	5
	Marandallah	30	10
	Nangounakaha	38	13
	Sirikikaha	103	34
Yébissoulou	21	7	
Marandallah ensemble	7	368	123
Total study area	23	1473	433

Source: Our surveys, 2021

As shown in Table 1, the questionnaire was administered to a total of 433 cotton migrants, i.e. 123 migrants in the sub-prefecture of Marandallah and 310 in the sub-prefecture of Tiéningboué.

3. Results and discussion

3.1. Results

Throughout history, migration has always been driven by factors. These factors are natural, human, social and even political. In the case of Côte d'Ivoire, migration has played and still plays an important economic role. At this level, it is imperative to first determine the socio-demographic profile of migrants in order to identify the main causes of cotton migration to the central Ivorian cotton basin.

3.1.1. The socio-demographic profile and the causes of migrants' departures to the central Ivorian cotton basin

Migration to the central Ivorian cotton basin is qualified as cotton migration insofar as those who migrate to this area are mostly cotton producers. Indeed, the socio-demographic profile shows a predominance of nationals over non-nationals (Figure 2).

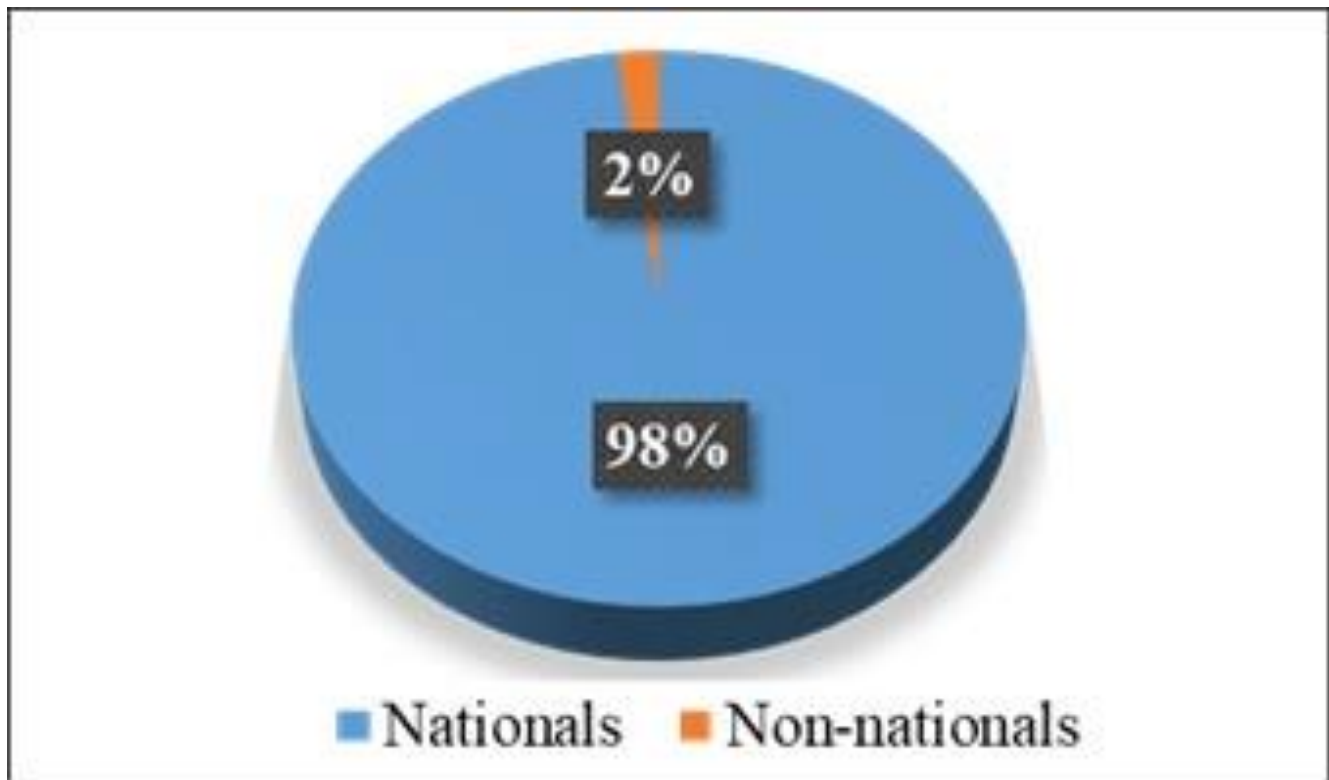


Figure 2: Socio-demographic profile of migrants to the sub-prefectures of Tiéningboué and Marandallah

Source: Our surveys, 2021

The 98% of nationals are mainly Senufo migrants who produce cotton, compared to 2% of foreigners of Malian and Burkinabe nationality. The major facts that motivated the departure of cotton migrants to the villages concerned by the study are more of a pedological and socio-economic nature. In fact, the migrants belong to the former cotton-growing areas by virtue of their village of departure. These former cotton-growing areas are already in a situation of land saturation linked to demographic growth, the modernisation of production tools and the exhaustion of land. These migrants, who have no other activity than farming, are always looking for new quality farmland that is available, fertile and suitable for cotton growing.

The results of the surveys showed that 79% of mobility was voluntary while 21% was forced to migrate. Indeed, northern Côte d'Ivoire has suffered from over-exploitation of plots of land which has led to the unproductivity of the land. Studies have shown that nearly 80% of arable land is permanently cultivated in the cotton zones. Thus, the results of surveys in Tiéningboué reveal that 52.26% of migrants had to leave their area of origin due to lack of land, compared to 38.71% due to crop damage. In addition, 05.17% of the respondents migrated to Tiéningboué for health reasons, while 21.37% migrated to abandon agriculture in favour of other occupations and 3.88% for other reasons (Figure 3).

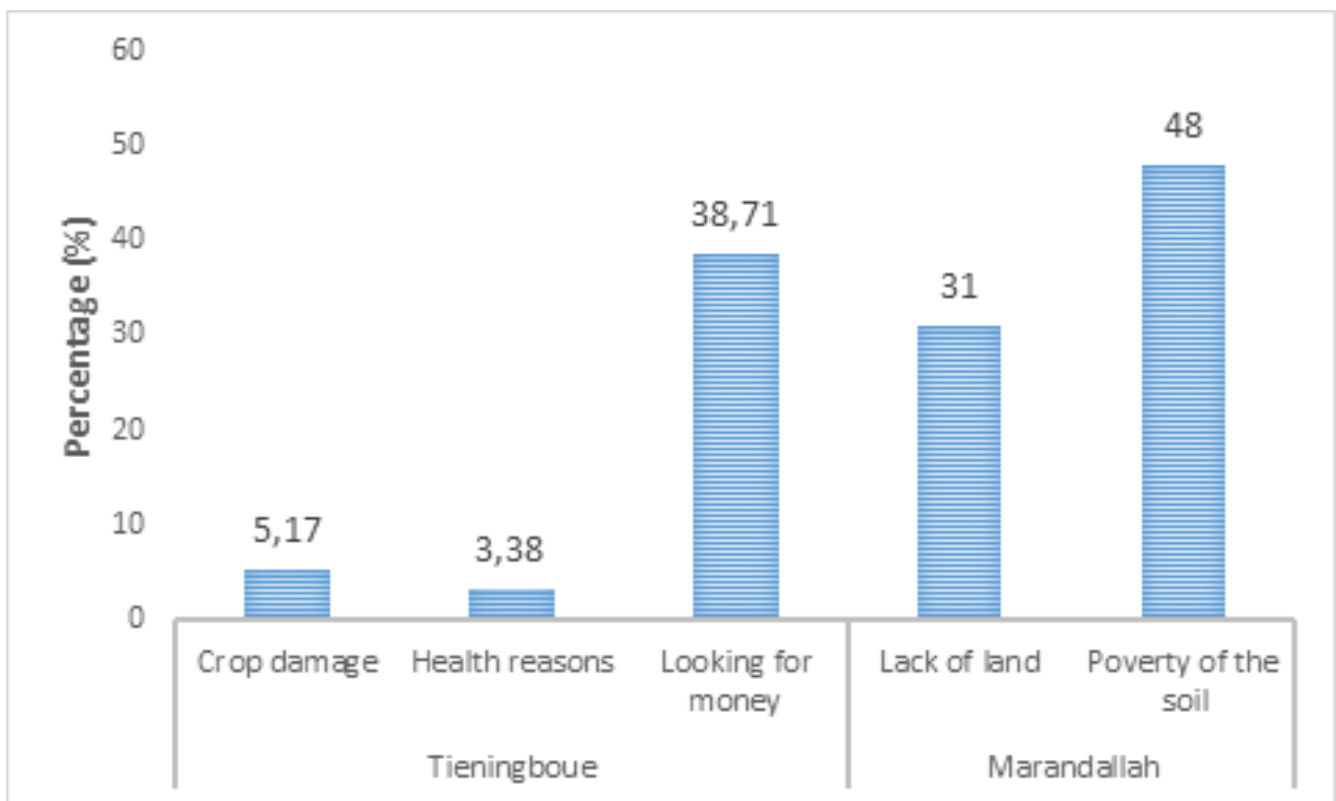


Figure: 3: Motives for the departure of Senufo cotton migrants to central Côte d'Ivoire

Source: Our surveys, 2021

In the sub-prefecture of Marandallah, the main reasons given are the lack of land and poor soil, which account for 31% and 48% of the migrants' presence in Marandallah respectively.

In-depth analysis of the figure shows that 83.26% of Senufo migrated to the central Ivorian cotton basin because of lack of land, compared to 48% for reasons of infertility of land in their village of departure. In addition to these main reasons, there are health reasons (3.38), crop damage, and problems with the sharing of cotton income (38.71) that were not well resolved with the elders. With the causes of migration thus defined, it is useful to determine the main areas of departure.

3.1.2. The main departure points for cotton migrants to central Côte d'Ivoire

The two sub-prefectures of Tiéningboué and Marandallah have seen a rapid increase in Senufo cotton migrants. These migrants are looking for fertile land for yam production and more particularly for cotton cultivation.

Furthermore, the socio-demographic profile of cotton migrants shows that, overall, the sub-prefectures of Korhogo (41.80%) and Dikodougou (33.71%) are the main areas from which migrants depart (Table 2).

Table 2: The various departure points of cotton migrants to the sub-prefectures of Tiéningboué and Marandallah

	Marandallah		Tiéningboué		Total study area	
	Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)
Boundiali	4	3,25	38	12,25	42	9,69
Dikodougou	15	12,19	131	42,25	146	33,71
Ferkessédougou	0	0,00	20	6,45	20	4,61
Korhogo	85	69,10	96	30,96	181	41,80
M'bengué	4	3,25	18	5,80	22	5,08
Ouangolodougou	4	3,25	0	0,00	4	0,92
Sinématiali	8	6,50	0	0,00	8	1,84
Burkina Faso	2	1,62	0	0,00	2	0,51
Mali	1	0,84	7	2,29	8	1,84
Total	123	100,00	310	100,00	433	100,00

Source: Our surveys, 2021

The domination of migrants from Korhogo (69.10%) and Dikodougou (12.19%) is also confirmed in Marandallah. This domination is expressed as follows in the sub-prefecture of Tiéningboué: Korhogo (30.96%) and Dikodougou (42.25%). A very small proportion (2.35%) of these migrants come from Mali and Burkina Faso, two countries that border Côte d'Ivoire.

The importance of migration flows from the Korhogo sub-prefecture is explained by its high population density, which has led to a reduction in cultivable land. The new migrants coming from the dense area of Korhogo benefit from the old land 'conquered' by the first arrivals. Thus, the first migrants, who are better equipped, develop new land in order to improve their agricultural productivity.

Having started in the sub-prefecture of Korhogo, Senufo cotton migration has increased and now affects the other sub-prefectures of northern Côte d'Ivoire, Ferkessédougou, Boundiali, Ouangolodougou and Sinématiali, and even Mali and Burkina Faso.

In the sub-prefecture of Tiéningboué, the surveys revealed that 10.49% of these settlements took place between 1980 and 1998, 61.18% between 1998 and 2010 and 28.33% between 2010 and 2020. In the migrants' current farms, cotton represents about 60% of the cultivated area and rice, with 15% of the area, is the second most important crop after cotton. The frequent change in the area of residence is attributed to the changes brought about by the migrants. Indeed, the sub-prefecture of Dikodougou, which used to be a host area, has now become a departure area. This observation justifies the analysis of the migratory relays before the migrants settled in the areas studied.

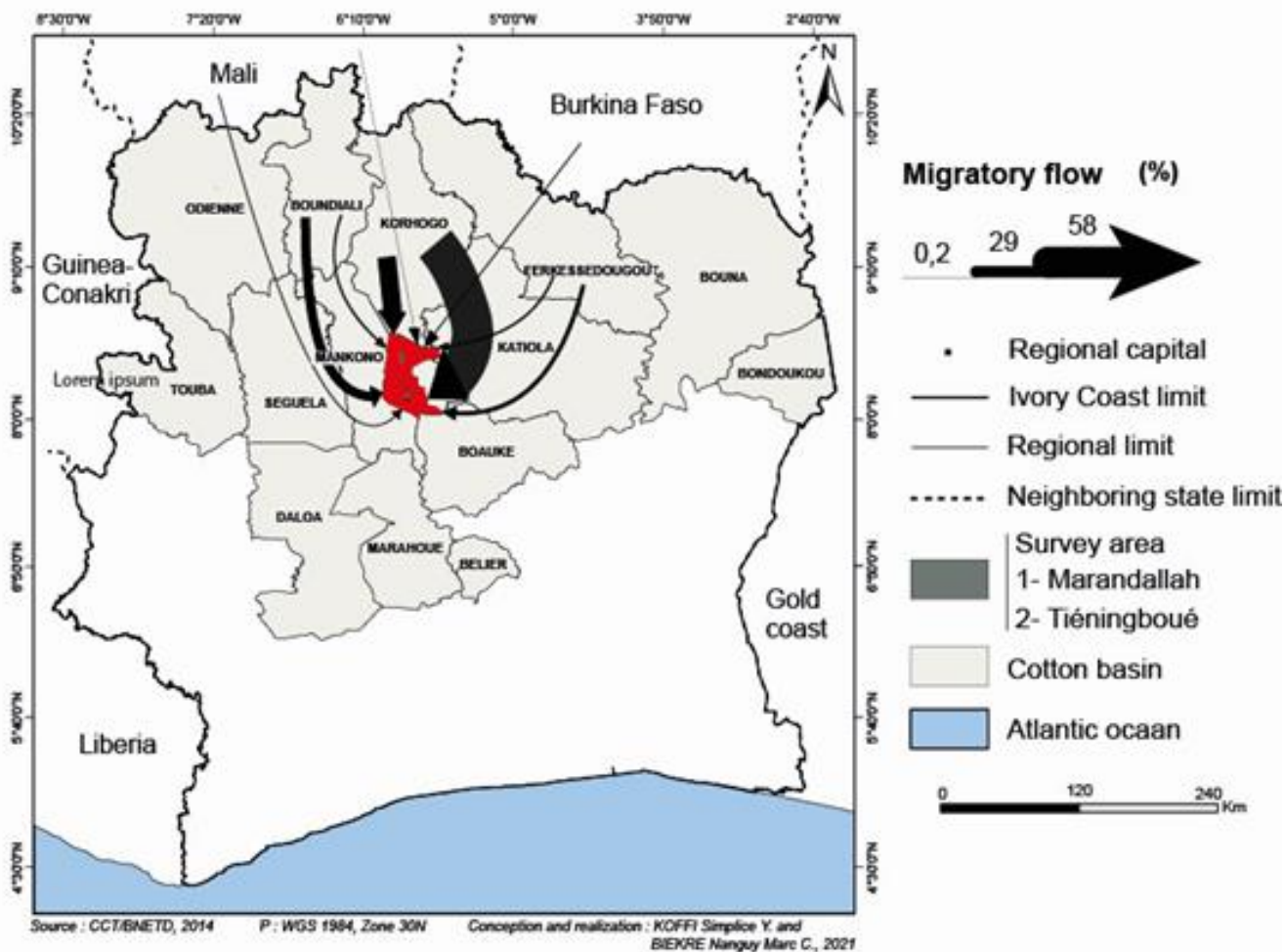


Figure 4: Migration flows of cotton producers from the north to the central Ivorian cotton basin

3.1.3. A high rate of migratory relocation to the sub-prefectures of Tiéningboué and Marandallah

The majority of the migrants interviewed transited through one or more zones before settling in the sub-prefectures of Tiéningboué and Marandallah (Table 3).

Table 3: Proportion of migrants who transited other areas before arriving in the sub-prefectures of Tiéningboué and Marandallah

Nature of Migration	Transited migrant		Non-transited migrant	
	Number	Percentage (%)	Number	Percentage (%)
Sub-prefecture surveyed				
Tiéningboué	229	52,88	81	18,70
Marandallah	64	14,78	59	13,62
Total	293	67,66	140	32,32

Source: Our surveys, 2021

A more detailed analysis of the figures in Table 3 shows that 293 migrants transited through other areas before ending up in the sub-prefectures of Tiéningboué and Marandallah, a rate of 67.66%, compared with 32.32% who did not transit elsewhere. The results of this study show that the sub-

prefectures of Mankono and Dianra were the main transit zones for Senoufo migrants because of the fertility of the soil.

The 32.32% of the population that migrated directly or did not migrate in a split manner is made possible by the demand of the first migrants and/or the proximity between the departure and arrival areas. The latter have less agricultural equipment and techniques. Most of them are grafted to the old ones. On the other hand, the majority of respondents who have made the transition or migratory relays between their respective villages and their current area of settlement are well equipped with agricultural equipment, especially oxen, and have production techniques acquired in the migration relays between the places of origin and the new host area. The fundamental reason for all these direct or indirect migrations towards the central Ivorian cotton basin and particularly towards the sub-prefectures of Tiéningboué and Marandallah is the search for available and more fertile land for agriculture.

3.1.4. The causes of migration to the sub-prefectures of Tiéningboué and Marandallah

The choice of arrival areas is based on several factors. There are natural factors and human factors. Natural factors include fertile soils, availability of land and adequate rainfall. These factors favour a good yield in terms of cotton productivity. Indeed, the sub-prefectures of Tiéningboué and Marandallah are covered by ferralitic soil. Thus, the quality of the soil is appreciable and conducive to crop development. This soil is rich in organic material and is favourable to cash crops such as cotton and cashew nuts. The richness of the soil is also conducive to food crops such as rice, yams, maize, groundnuts and cassava.

In addition to the availability of land and the fertility of the soil, there is also very favourable rainfall in the sub-prefectures of Tiéningboué and Marandallah (Figure 5).

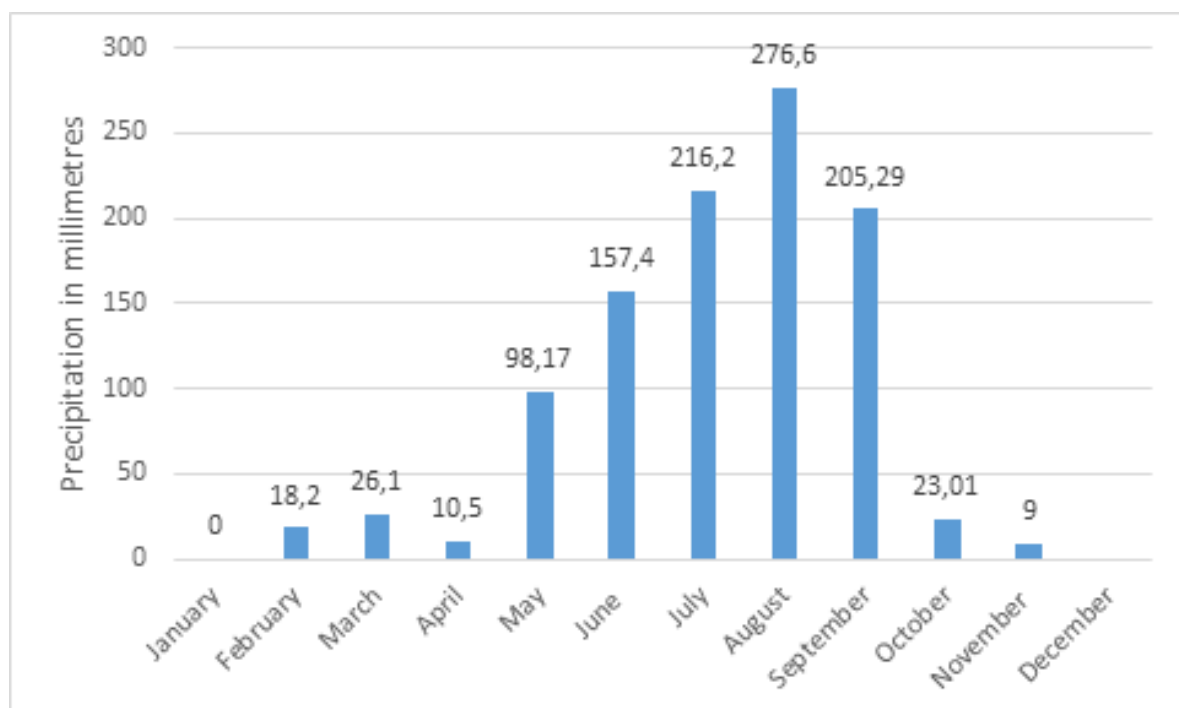


Figure 5: Rainfall in Tiéningboué and Marandallah in 2019

Source: CIDT Tiéningboué and our survey, 2021

The observation in Figure 6 shows a long rainy period that extends over 7 months i.e. from May to October. An average of 1249 mm of rain falls per year. The difference in rainfall between the driest and wettest month is 251 mm of rain. This rainy period fits well with the cotton development cycle. The dry season is the right time to harvest cotton. Basically, the natural factors that benefit the central Ivorian basin are assets on which the cotton migrants have based themselves to settle in the villages.

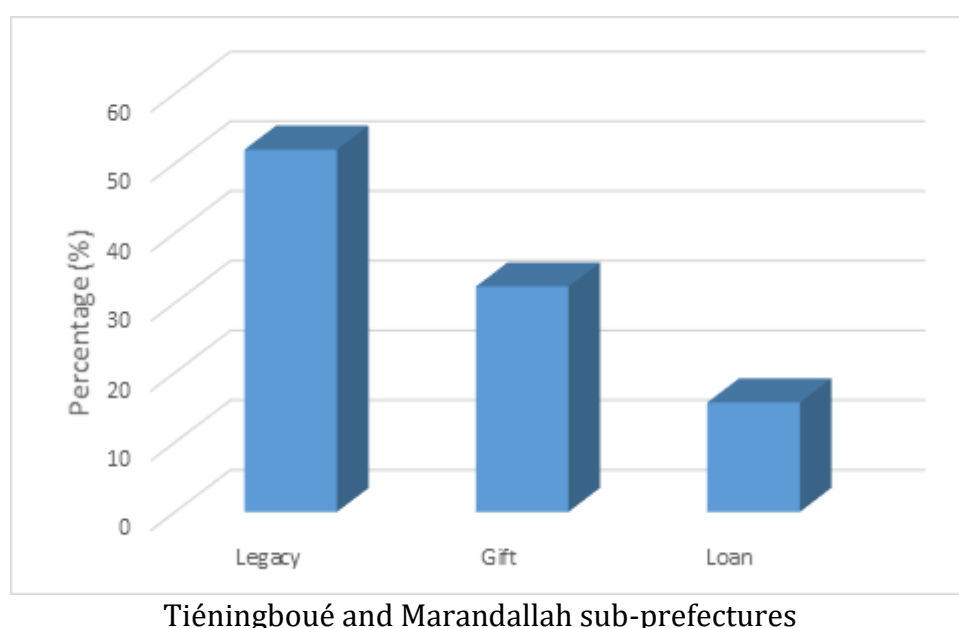
In terms of human factors, the low level of cotton cultivation by the indigenous population is the main reason for the Senufo migration from the north to the central cotton basin. In addition, the cotton villages and/or camps in the sub-prefectures of Tiéningboué and Marandallah have a low population growth rate. This low growth rate is compounded by the fact that the landowners, who are mainly traders, are not interested in agriculture. Those who are interested in agriculture prefer cashew nuts and mangoes. In addition to these perennial crops, they grow cassava, yams and plantains. All these crops are not grown on large areas despite the presence of fallow land suitable for cotton. This situation leaves high margins of exploitable land. In contrast to this area, in the northern villages, the only possibilities for expansion are very small and concern fallow land and lowlands. The availability of fallow land is one of the reasons for the arrival of the Senufo cotton migrants. Of this multiplicity of factors, what is most important to farmers is the resource of land availability and soil fertility. But the presence of cotton migrants in this area is already causing land changes.

3.1.5. Land tenure changes brought about by the presence of cotton migrants

The strong presence of cotton migrants in the sub-prefectures of Marandallah and Tiéningboué has modified the modes of access to land. In order to better understand the ongoing transformation of land tenure brought about by the arrival of cotton migrants, it is essential to know the land tenure system before their arrival.

Before the different waves of migration to the central cotton basin, land was a commodity and could not be sold. At that time, the different modes of access were inheritance, gifts and loans (Figure 6).

Figure 6: The different modes of access to land before the large influx of migrants in the



Source: Our surveys, 2021

The mode of access by inheritance represented about 52% against 32.33% for gifts and 15.70% in the form of loans. The predominance of access by inheritance is explained by the fact that land is transmitted from generation to generation. Thus, before or after the death of the manager of the lineage land heritage, most young indigenous people are bequeathed a portion of land. In fact, every year, many young people take their destiny into their own hands around a farm to which they have full rights. The 32.33% rate of access to land by donation is linked to the fact that the first Senufo migrants obtained land free of charge from the owners when they settled. Subsequently, these migrants became owners of large areas of cultivable land. Before the arrival of the cotton migrants from the north in the Centre-North of Côte d'Ivoire, access to land was not subject to commodification in this geographical area. But this system was disrupted with the influx of cotton migrants.

With the arrival of cotton migrants in the sub-prefectures of Tiéningboué and Marandallah, major transformations took place in the modes of access to land tenure. Indeed, new modes of access to land have appeared in the land tenure landscape (Table 3).

Table 4: New modes of access to land by cotton migrants in the central Ivorian basin

Mode of access to land	Mode of access to land before the arrival of migrants		Mode of access to land after the arrival of migrants	
	Number	Percentage (%)	Percentage (%)	Number
Legacy	225	51,70	69	15,93
Gift	140	32,33	0	0,00
Loan	68	15,70	22	5,08
Rental	0	0,00	307	70,90
Sharecropping	0	0,00	35	8,08

Source: Our surveys, 2021

The table shows that the mode of access by donation, which in the past represented 32.33%, has disappeared with the significant presence of cotton migrants in the central Ivorian basin. The influx of cotton migrants has given rise to new forms of access to land. These are renting and sharecropping. The renting of land in the cotton basin represents 70.90% of the modes of access to the land resource, as against 8.08% for sharecropping. This change is more marked in the Tiéningboué sub-prefecture than in Marandallah. The disappearance of the mode of access by gift is explained by the fact that Koro landowners no longer give land free of charge because of the excessive flow of migrants. These new techniques of access to land use were developed to avoid the sale of land, which is formally forbidden in the study areas. The adoption of sharecropping (8.08%) as a method of accessing land is linked to cashew nut cultivation. Indeed, with this mode of access to land, the migrant has the possibility of growing cashew nuts according to the clauses of the contract that binds him to the landowner.

With the race for land caused by the large influx of migrants and to secure access to land, annual acquisition fees have been introduced by the natives. These fees vary between 5,000 and 20,000

FCFA. In fact, 325 out of 433, i.e. 75% of the migrants pay a fee of between 15,000 and 20,000 FCFA per year. These sums are not static but can change according to the years and the type of relationship that exists between the migrant and the landowner.

Despite the land tenure changes that have been made to secure access to land in the central Ivorian cotton basin, there are still cases of land conflicts.

3.1.6. Land conflicts linked to cotton migration and their resolution in the sub-prefectures of Tiéningboué and Marandallah

The land resource is static and the population, whether migrant or not, is dynamic (increasing). This creates a mismatch between supply and demand. This mismatch creates tensions over the control and management of land. The causes of these conflicts are multifaceted. The root causes are mass migration and transhumance. The results of the study reveal an average of 200 cases of land conflicts per year of all kinds in the sub-prefecture of Marandallah alone. These include expropriation of land (26.09%) by cotton migrants through cashew cultivation, a crop that marks space or asserts land ownership, farmer-herder conflicts (52.88%) and intercommunity conflicts (21.03%) (Table 4).

Table 5: Typology of land conflicts in the sub-prefectures of Tiéningboué and Marandallah

	Number	Percentage (%)
Expropriation of land	113	26,09
Conflict between farmers and herders	229	52,88
Inter-community conflicts	91	21,03

Source: Our surveys, 2021

Inter-community conflicts and expropriations of land together account for 47.12%; they do not reach the rate of farmer-herder conflicts, but constitute a real problem in this area because of their diversity and complexity. The majority of these conflicts are generally linked to non-compliance with contracts between the guardian and the migrant. The complexity of these conflicts also lies in the multiplicity of actors. These conflicts often involve generations that were not present when the contract was signed. Because of the oral nature of contracts, it is difficult to trace the commitments made by parents who are now deceased. In view of the increase in cases of land conflicts, strategies for resolving them have been developed.

Land conflicts in the central Ivorian cotton basin are resolved through administrative and/or customary channels (Figure 7).

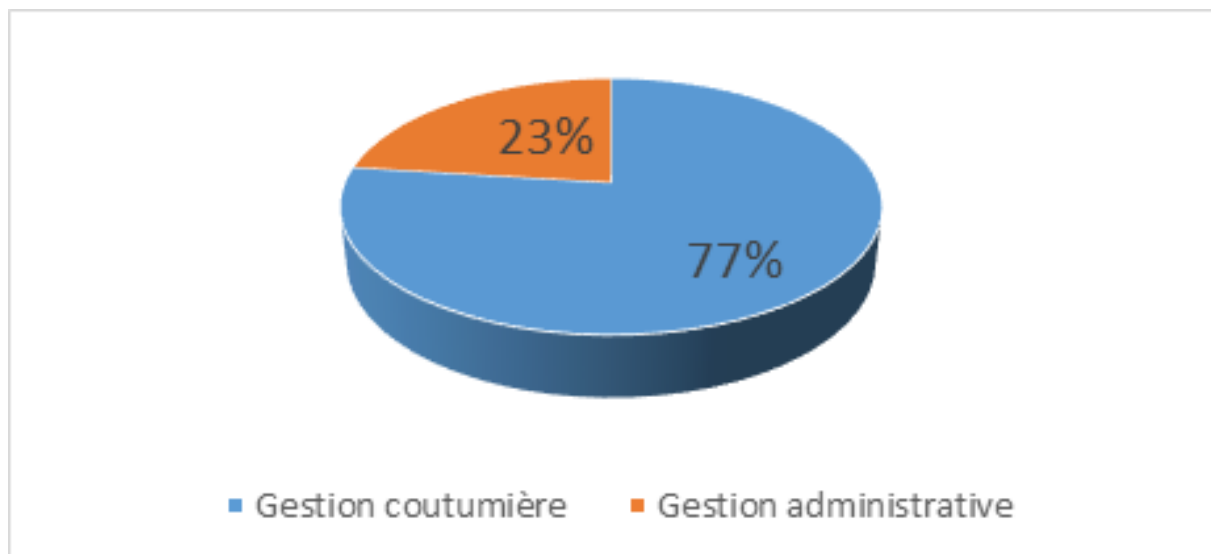


Figure 7: Strategies for resolving land conflicts in the sub-prefectures of Tiéningboué and Marandallah,

Source: Our surveys, 2021

The analysis of the figure shows that the customary management of land conflicts is the strategy most used by the cotton migrants; 77% against 23% who resort to administrative management. For the migrants, the administrative management of land conflicts requires resources and compliance with a procedure that is often too long. For this reason, they prefer customary regulations. The different types of regulation used are, among others, amicable regulation, where the accused and the complainant seek together to resolve the conflict between them through conciliation. At this level, the parties involved (the accused and the complainant) are summoned to the village or canton chief to find a solution to the conflict. However, in the event of failure or dissatisfaction on the part of one party during a customary judgment, recourse to administrative or judicial management is recommended.

3.2. Discussion

The Ivorian economy has always been linked to migration encouraged by the colonial and post-independent authorities (Bauchemin, 2005). The migration discussed in this paper also plays a role in the economy, but this migration, which is mostly internal to Côte d'Ivoire, is motivated by parameters other than encouragement by the authorities. This study has revealed that the agricultural landscape of the central Ivorian cotton basin is dominated by migrants from the north of the country. The fundamental reasons for the massive departure of cotton farmers from the north to the sub-prefectures of Tiéningboué and Marandallah are the lack of available land (83.26%) and soil exhaustion (48%) in the areas of departure. These two factors are at the origin of the new cotton pioneer front in Central Côte d'Ivoire. The reasons for migration to the central cotton basin are the ease of acquiring land, its abundance and its under-exploitation (Tuo & *al.*, 2018).

Some previous studies carried out, like this research, confirm the modification of migratory trajectories (Koné & Ouattara, 2021). However, unlike these writings, the current results describe a

high rate of migratory relays towards the sub-prefectures of Tiéningboué and Marandallah. Indeed, 67.66% of the migrants surveyed transited through other areas before settling in the reception areas.

Senufo migrations are ancient and the main departure zones were the dense Korhogo zone and the reception zones were the sub-prefectures of Dikodougou and Sirasso (Demont, 1998). The results of the present research confirm the age of the migrations as well as the departure zones (as 83% of the migrants interviewed come from the Poro region) but contradict the reception zones identified by previous studies (Demont, 1998). Indeed, yesterday's receiving areas have become today's departure areas. Thus, 33.71% of departures to the sub-prefectures of Tiéningboué and Marandallah come from Dikodougou. These results are confirmed by the study carried out by some previous studies. These earlier studies state that the sub-prefectures of Dikodougou and Sirasso no longer receive migrants today, but have become departure zones for migration towards the central cotton basin in search of arable land (Dugué & *al.*, 2004; Tuo & *al.* 2018). The search for available arable land must be combined with rainfall (on average 1249 mm per year) and the low level of cotton cultivation by the indigenous population (traders par excellence).

Since the massive arrival of migrants, the central Ivorian cotton basin has undergone profound land changes. These changes are linked to a race for control of the land. Native landowners seek to benefit from land rent through land rental (70.90% of migrants have access to land through rental), while migrants extend the plots of land granted to them. We are therefore witnessing a commodification of land. Today, without money, it is difficult to gain possession of a portion of land. This assertion is confirmed by the results of studies in the central cotton basin in 2004. The results of this study indicate that the collection of land fees by indigenous people is interesting and sometimes exceeds 500,000 FCFA per year per owner (Dugué & *al.*, 2004). Similar findings were made in Bouaflé where, due to the scarcity of land, Burkinabe migrants became interested in cotton cultivation. This interest led to a redefinition of the modes of access to land resources; this is the emergence of the rental market for land (Koffi, 2013). This interest has led to a redefinition of the modes of access to land resources, with the emergence of the rental market for land (Koffi, 2013). There are also land mutations linked to the migration of Senufo cotton farmers in the Department of Bouaflé. These changes are supported by a rental market that develops around the cotton economy. Indeed, indigenous landowners receive land royalties per hectare that vary between 20,000 and 25,000 FCFA/year (Koffi & Akoué, 2016).

The integration of Senufo cotton migrants in the central Ivorian cotton basin seems to be successful despite the cases of land conflicts that have been observed. The natives are aware of the importance of the presence of migrants on their land. In fact, a decline in migrant populations in the sub-prefectures of Niakara and Marandallah would lead to a reduction in the land rents of the natives as well as the cessation of their participation in the construction of infrastructure (Dugué & *al.*, 2004).

4. Conclusion

The study has shown both the reasons for the departure of migrants to the central Ivorian cotton basin and the reasons for their choice of the sub-prefectures of Tiéningboué and Marandallah. The main reasons mentioned are the exhaustion of land in the areas of departure and the availability of land in the places of reception. It is an internal migration because the migrants are mainly Senufo cotton producers. The main departure area is the sub-prefecture of Korhogo. The massive arrival of

migrants in Tiéningboué and Marandallah has disrupted the modes of access to land. Indeed, the former modes of access based on inheritance and gifts have been transformed, giving way to the commodification of land. The commodification of land is supported through renting and sharecropping. According to the survey results, the majority of migrants pay an annual fee per hectare to the landowners. The integration of cotton migrants is successful for the moment in the central Ivorian cotton basin. However, this region is not immune to the issue of land conflicts, for which customary resolution strategies have been developed. Given the diversity of actors and the typology of conflicts, the central Ivorian cotton basin is not immune to the risks of land insecurity in the future.

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7. Author's contribution

As the single author, I carried out the literature search, data analysis and writing of this paper. However, my Masters and PhD students participated in the field survey.

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9. Key terms and Definitions

Senufo cotton migration is one of the pillars of agricultural migration in Côte d'Ivoire. Unlike the agricultural migration towards the southern forest region to create cocoa, coffee, oil palm and rubber plantations, the Senufo cotton migration is directed towards the central-northern and central-western parts of the country. This migration by the Senufo ethnic group is based on cotton production.

Land tenure is defined by the custom or law that structures the relationship between individuals or groups of people in relation to land. This custom or law can change, as is the case in Tiéningboué and Marandallah. Indeed, the cotton migration orchestrated by the Senufo people is contributing to a change in the modes of access to land.

Central cotton basin is one of the subdivisions of the Ivorian cotton basin. This subdivision is located in the centre of the country. In addition to the central cotton basin, there is the northwestern and the northeastern cotton basin.