

Original Research Article

The Problem of the Anthropisation of the Classified Forest of Haut-Sassandra (Côte D'ivoire)

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Article History

Received: 05.06.2021

Accepted: 10.07.2021

Published: 15.07.2021

Journal homepage:

<https://www.easpublisher.com>

Quick Response Code



Abstract: The study of migratory movements allows us to understand the logic of development in Côte d'Ivoire, and indeed in West Africa. Until recently, this country was a host country for a large number of African nationals, with a view to acquiring a higher level of income than in their countries of origin. The use of foreign labour to develop agricultural land has been one of the keys to the Ivorian miracle. This migration policy promoted by the Ivorian authorities has encouraged the massive arrival of African nationals, boosting the country's economic growth. However, this migration policy has had negative consequences on the forest. The importance of the anthropic factor in the degradation of forest areas must be taken into account. The anthropic actions of the populations on the classified forest of Haut-Sassandra induce the degradation of the latter by the presence of numerous camps and vast agricultural plantations. In this article, we will examine the main causes affecting the classified forest of Haut Sassandra. We will discuss the serious danger that the loss of biodiversity represents for the ecological balance of the natural rural environment and the well-being of mankind by taking into account biodiversity in the conduct of human activities. Using a qualitative and quantitative approach, we mobilised documentary research, direct observation, individual interviews and questionnaire administration. The results obtained indicate that the anthropic activity of migrants negatively affects the classified forest of Haut Sassandra. Ultimately, anthropic activities have led to the development and aggravation of deforestation in this area.

Keywords: Haut Sassandra, migration, anthropisation, de forestation.

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INTRODUCTION

The migration policy introduced by the Ivorian government since 1960 has encouraged the massive arrival of African nationals, boosting the country's economic growth. However, this migration policy has had negative consequences on the forest. The importance of the anthropic factor in the degradation of forest areas should not be ignored. Indeed, the anthropic actions of migrant populations on the classified forest of Haut-Sassandra have favoured the degradation of the latter through the presence of numerous camps and vast agricultural plantations

The main objective of Côte d'Ivoire's migration policy, following its independence in 1960, was to bring the concentration of populations and economic activities together (Brou K. and Charbit Y., 1994). It was during the 1970s that Côte d'Ivoire experienced a major agricultural revolution, known as the "Ivorian miracle". This revolution led to a change in

the country's agrarian practices with the emergence of commercial agriculture based on coffee and cocoa. These farming practices have spread to protected areas. Anthropogenic activities have therefore not spared the classified forests. Classified forests are one of the categories of the state forestry domain, which includes, among others: protected forests; protection perimeters and reforestation. Classified forests consist of a regulation of a determined, delimited and delimited space or perimeter that one wishes to preserve in its state for various reasons. It is therefore forbidden to exercise certain rights of use on the forest floor, which cause degradation, as in the case of clearing.

In order to guarantee rigorous protection of classified forests against agricultural expansion, the State of Côte d'Ivoire legally recognises these forest areas, emphasises N'guessan (1989). However, this protection has proved to be ineffective, as local populations, and especially migrants, continue to clear

forest plots for new agricultural areas (coffee/cocoa, rubber, cashew nuts, etc.). Indeed, it should be noted that Côte d'Ivoire is characterised by a strong migration of non-native populations from West Africa to rural forest regions to establish new commercial crop plots and thus accentuate the retreat of even protected forest areas.

In fact, the development of agriculture has been characterised by such a rapid rate of deforestation and has had repercussions on the forest cover, which is now estimated at 7.8% of the country's total area (Poverty Reduction Strategy Paper). Thus, one facet of the environmental problems facing the country is deforestation (TRAORE KASSOUM, 2018). The migration of populations in the classified forests of the central-western regions, specifically the classified forest of Haut-Sassandra, is very significant. This important migration has consequences on the forest and is even at the basis of the advanced degradation of this forest.

This work aims to contribute to the various reflections already initiated on the problem of the destruction, or even disappearance of the Ivorian forests by focusing on the anthropisation of the classified forest of Haut-Sassandra in Côte d'Ivoire. From a methodological point of view, the work favours a mixed approach based on a documentary analysis, individual interviews on the management of the Upper Sassandra classified forest with regard to anthropic activities, direct observations in the sector and a questionnaire to quantify our data.

After 1) identifying the reasons for people settling in the Upper Sassandra Forest and 2) analysing the practices or activities in this classified forest, 3) we will assess the consequences of the anthropisation of the Upper Sassandra Forest.

MATERIALS AND METHODS

Our reflexion on the "problem of the anthropisation of the classified forest of Haut-Sassandra by migrants", follows a methodology and is rooted in a certain number of theoretical considerations that it is important to elucidate before progressing in our activity.

Data Collection

The techniques therefore call on several mechanisms to achieve the expected results N'DA P. (2015).

Using a qualitative and quantitative approach, the techniques we used were: documentary research, direct observation, individual interviews and a survey. The mixed research techniques used in this study involved the following tools: a reading grid, an

observation grid and interview guides and questionnaires.

For this study we opted for two types of sampling. Theoretical sampling, or sampling by reasoned choice, which made it possible to choose resource persons on the basis of their skills and their representativeness. Contrast sampling allowed us to focus on actors directly involved in forest degradation. This formalised and consolidated the choice of the target population.

Migrants residing in the forest, the main actors in the degradation of the forest. The indigenous populations, specifically the older ones, to inform us about the history of the arrival of the migrants.

The authorities (SODEFOR and EAUX ET FORETS agents). Thus, the inclusion and exclusion criterion consisted of choosing all the actors in the forestry game in the study area.

As there are no statistical data available on the migrants living in this forest, we turned to a community leader under the orders of SODEFOR and the chiefs of the various communities as a guide. It was this leader who, knowing the various social actors, enabled us to identify our sample, with their availability. The latter helped us to visit a large number of camps in the forest. At the end of this process, it should be noted that 50 individuals responded to our request. Among these 50 individuals, we have 45 men, i.e. 90%, and 5 women, i.e. 10% of the surveyed population

Use of the data collected

The data collected was processed using Sphinx 5.1 The information thus processed was used to prepare this article.

Presentation of the study site

Located in a dense semi-deciduous forest zone between 6°52' and 7°24' North latitude and 6°59' and 7°10' West longitude, the Haut-Sassandra Classified Forest is bounded to the West by the Sassandra River and covers an area of 102,400 ha (Sodefor, 1994). It straddles the Department of Vavoua, to the north-east, and the Department of Daloa, to the south-east, from which it is respectively about 45 and 100 km away. It is part of the Centre-Ouest forestry or administrative region. The demarcation of the Haut-Sassandra classified forest was carried out in 1974, in accordance with the classification order of 23 November 1974, thus maternalising the conventional classification limits (SF 1 to SF 99).

In 1989, the operation was continued in the V12 enclave on internal boundaries created to curb the

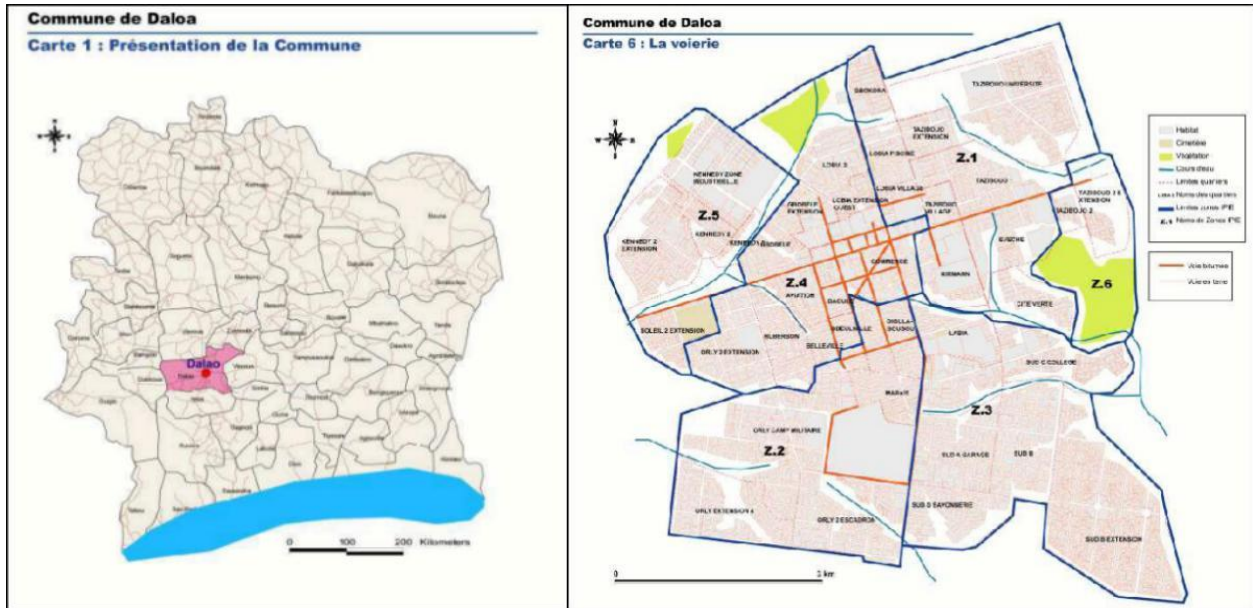
advance of clandestine agricultural occupation (SF 100 to SF 121).

The delimitation work undertaken during the preparation of the management plan increases the classified area by approximately 96 ha of reforested land, taken from the rural forest estate (i.e. 96,000 m x 10 m) and for which a classification order should be prepared.

With regard to the easements encumbering the land, we have mainly three tracks used by the local populations (SODEFOR, management of the classified forest of Haut-Sassandra, p. 10).

These are the tracks linking:

- Pélési to the Gbeubly enclave (East-West of the forest);
- Pélési to Belle-ville (North-South, Eastern part);
- Belle-ville to the V12 enclave (East-West, South-West part).



Theoretical Basis

Cote d'Ivoire, a land of hospitality, a model country in West Africa in terms of the rise of its economy, was a prized land for all actors in the sub-region. Paradoxically to all expectations, the crisis of the 1980s became an indication of the decline of the Ivorian economy. The efforts made by the state to restore the indicators of the Ivorian economy have made Côte d'Ivoire a country whose economy is in double figures according to the World Bank. Against all expectations, this declaration of the World Bank remains socially an illusion because we note an unequal distribution of resources or wealth on the populations. In search of better living conditions or cultivable land, the populations of the arid zones migrate to the forest zones where the climate and vegetation are favourable to agriculture. This reality will subsequently favour a process of degradation of the country's forests through the phenomenon of migration. This social mobility of migrants results in the disappearance of our forests, causing the desert to advance.

Researchers interested in the motivations of migrants (Tartakovsky E. and Schwartz S. H., 2001) distinguish three types of motivation for emigrating: preservation (search for security), personal development

and materialism (financial improvement). They show that these motivations vary and are linked to the values and personality of each individual in a given socio-historical context. Exploring this dimension of the migration issue by these actors via the theory of motivation has allowed us to understand the reasons that drive migrants to migrate to this classified forest of Haut Sassandra. It is important, however, to analyse the structuring of their networks using social network theory. This theory, transposed to the issue of migration and forest degradation, has enabled us to identify the networks used by these migrants for their settlements in the Upper Sassandra forest.

Exploring this dimension of the issue of migration by these actors via the network theory in the conception of Burt R. S. (2001) and Granovetter (2000), allowed us to understand the networks of relations or created, used by these actors in the quest for cultivable land in this forest. Indeed, networks constitute social capital, i.e. social relations available to the migrant in his or her social environment and which can enable him or her to achieve his or her goals. In other words, the existence of these relationships gives him either direct access to people who can help him in his search for a plot of land, or access to intermediary people.

RESULTS

Reasons for people settling in the Upper Sassandra Forest Reserve The different ethnic groups present in the forest

Table-1: The different ethnic groups present in this forest

Groups Ethnic	Absolute Value	Relative Value
Lobi	28	40%
	25	35,72%
Djimini	7	10%
Baoulé	5	7,14%
Other	5	7,14%
Total	70	100%

Source: DIGBO 2020

This table presents the different ethnic groups present in the classified forest of Haut-Sassandra, through which we have a significant number of the Lobi and Mossi (Burkinabé) population. They represent more than 2/3 of our respondents, with a percentage of 40% and 35.72%, i.e. an overall Burkinabe population estimated at 7572% of the migrants on the site. This is followed by the Djimini population, with 10 per cent. Finally, we have the Baule population and other ethnic groups, which represent 7.14% of our respondents. This massive presence of the Burkinabé shows that they are the most dominant in this forest, while at the same time pointing out that they were the first to infiltrate the forest during the Ivorian crises of 2002 to 2011.

Indeed, the various ethnic groups present in the Haut-Sassandra classified forest are mostly non-native (Burkinabe). The presence of these ethnic groups has encouraged the illegal and abusive anthropisation of the Haut-Sassandra classified forest. Anthropisation was accentuated by crises in 2002 and 2011, for cultivation

Table-3: The arrival of migrants in the FCHS

Mode of arrival	Absolute value	Relative value
Through a parent	40	57.14%
By themselves their will	20	28.57%
Through a friend	10	14.29%
Total	70	100%

Source: DIGBO 2020

Table-3 presents the relationships through which migrants arrived in this forest. This is dominated by kinship relationships (57.14% of respondents). In fact, according to our respondents, it was their parents who gave them portions of land or forest to integrate them. There are also respondents who migrated to the forest themselves without the help of a third party in order to improve their income. According to the study, 28.57% of respondents have done so. Finally, there are those who arrived through friendships, who represent

and/or economic purposes, as argued by TmitE *et al.*, (2019, P 7024).

The populations of Pélézi, Dania, Monoko-zohi and Belleville also infiltrate the classified forest and settle there, but in small camps to clear forest plots in order to increase their cultivation areas and their income from coffee and cocoa. This phenomenon can also be observed in the enclaves of Amani-Kouadiokro and V12, where many migrants have moved to the south of the classified forest.

Reasons for the arrival of migrants in the FCHS

Table-2: Motivations for the arrival of migrants in the FCHS

Reasons	Absolute value	Relative value
Economic	40	57.14%
Autonomous	18	25.71%
Wellness	7	10%
Crisis	5	7.15%
Total	70	100%

Source: DIGBO 2020

Table-2 highlights the reasons for the arrival of migrants in the FCHS. It shows a large number of migrants motivated by economic reasons (57.14% of respondents). As for those who seek to be autonomous, they are 25.71%. Those who are motivated by the search for well-being represent 10% of the respondents. Finally, we have those who infiltrated the forest during the 2011 military-political crisis (7.15% of respondents). It is worth noting that of all the reasons for migration to the FCHS, economic motivation is the most important.

Basis of migrant infiltration into the Haut-Sassandra classified forest

the smallest percentage of respondents. They account for 14.29%. The analysis of this table shows that the arrival or penetration of migrants was more through networking.

The arrival of migrants in the classified forest of Haut-Sassandra is based on several reasons, which are political, structural and economic.

At the political level, the anthropisation of this forest follows the migration policy of Côte d'Ivoire,

characterised by an ultra-liberalism based on the plantation economy, adopted as soon as it gained independence in 1960 in order to make the concentration of populations and economic activities coincide (Brou K., & Charbit Y., 1994). This saw a rush of non-natives into Côte d'Ivoire and a massive occupation of the forests with the complicity or otherwise of the local populations and certain authorities. Taking advantage of this political opening, these migrants developed structural strategies to make the occupation of the Ivorian forests more complex. These structural strategies are dominated by kinship relations, with a high percentage as shown in Table-3.

At the economic level, the arrival of migrants in the FCHS is motivated by reasons of improving income and satisfying basic needs, which is supported by 57.14% of respondents. Also, the search for autonomy is to be taken into account to explain the penetration of 25.71% of migrants. Following these, we have those who are driven by the search for greater

well-being (10%). Finally, we have those who infiltrated the forest as a result of the Ivorian crisis from 2002 to 2011. They are the least numerous with a rate of 7.15%.

These populations migrate to rural areas to establish new plots of commercial crops and thus accentuate the retreat of forest areas. Deforestation and forest degradation are also influenced by a range of structural problems related to the international economic system as well as the socio-economic characteristics of the country itself (Chalendar, 1994).

In doing so, the political, structural and economic motivations behind the occupation of the FCHS raise the flaws of the forest protection system in Côte d'Ivoire at the macro, meso and micro levels.

The different agricultural activities of the peoples present in this FCHS
Perennial crops grown by migrants

Table-4: Perennial crops grown in the FCHS

Different cultures	Absolute value	Relative value
Cacao	65	92.86%
Café	4	5,71%
Anacarde	1	1.43%
Total	70	100

Source: DIGBO 2020

Table-4 highlights the different perennial crops grown in the FCHS. These activities are largely dominated by cocoa cultivation, with a percentage of

92.86%. The few photos below illustrate the predominance of cocoa cultivation over other cash crops.



Photo 1: Cocoa trees in production



Photo 2: Cocoa pods



Photo 3 and 4: Drying cocoa beans



Photo 5: Coffee trees



Photo 6: Anacardiars

Then we have coffee cultivation, with a percentage of 5.71% and cashew nuts with 1.43%. These different photos highlight the different crops

grown in the FCHS, which are the basis for the degradation of this forest.

Different food crops in the FCHS

Table-5: Different food crops grown in the FCHS

Cultures	Absolute value	Relative value
Plantain banana	40	57.14%
Maize	10	14.29%
Cassava	8	11.43%
Taro	5	7.14%
Yam	4	5.71%
Other	3	4.29%
Total	70	100%

Source: DIGBO 2020

This table shows the different food crops grown in FCHS by the infiltrators. These crops are largely dominated by plantain (57.14%). It should be noted that in this region, plantain is the staple food of

the indigenous population. It has therefore become a commercial crop, which explains the rush of migrants to grow this food.



Plantain, a popular crop in the region

Banana cultivation is followed by maize and cassava, which account for 14.29% and 11.43% respectively of the food crops grown in this forest.

These first three crops are so popular that they have become cash crops for these migrants.



Maize field in production



Cassava field

Finally, taro, yam and other food crops grown in the FCHS represent 7.14%, 5.71% and 4.29% of food crops grown in the FCHS respectively.



Taro field



Yam field



Bean field

The different activities of the occupants of the FCHS are dominated by perennial crops. The different activities practised in the FCHS result in food crops being largely dominated by banana cultivation with a percentage of 57.14%.

The illegal occupation of the FCHS makes it impossible to control the different activities in the area. In this regard, WöIL (1992) estimates that about 50% of the Ivorian forest reserves are illegally occupied by farmers who grow food crops in association with coffee and cocoa. Accelerated population growth in some regions, accompanied by this 'land hunger' for the exponential development of coffee and cocoa growing areas, are responsible for new forms of land appropriation to the detriment of forest areas (BERGONZINI AND Lanly 2000, Kouadio *et al.*, 2000).

It goes without saying that the non-natives and allochthones (migrants) who occupy the majority of the FCHS are not aware of the risks of degradation, depletion and disappearance of this heritage, which is their fault.

DISCUSSION

Consequences of the anthropisation of the Haut Sassandra forest

Forests are plant formations essential to life on earth that cover about 30.6% of the world's land area (FAO, 2015). According to this Institution, forests are sources of food, shelter, fuel, clothing and medicine for many populations. According to the FAO, 60 million

indigenous people depend almost entirely on forests. While forests provide crucial services for life on earth, deforestation has become massive.

Indeed, the massive deforestation that is taking place is leading to the destruction of ecosystems, resulting in the fragmentation and disappearance of natural habitats. At the same time, this leads to the disappearance of the ecosystem services provided by forests, which are essential to life. However, human activity is massively destroying forest ecosystems on a local (the case of the Haut Sassandra Classified Forest) and even global scale, thus threatening its own sustainability. Open access to the Haut Sassandra Forest without the possibility of eviction by SODEFOR agents even extends to the conduct of farming activities. In other words, the farmers develop activities in accordance with their exploitation objectives to the exclusion of the specificity of the said forest. As Amani Y. C. (2011), the choice of an activity, a profession, an agricultural crop is their decision alone. Activities are done, undone and redone at their whim. Conversions from an annual agricultural activity (rice, banana, food crops) that requires little space (on average 0.5 to 1 ha) to a perennial one (coffee, cocoa, rubber, oil palm) that requires large areas of forest (around 7 ha) take place without hindrance. In this context, where each migrant farmer tries to maximise the benefits of his or her accession and presence, he or she is not far removed from the behaviour of loggers who, for economic reasons, log in massive quantities.

On the question of agriculture, a SODEFOR agent (our 2020 survey) stresses that it is important to differentiate between commercial agriculture, which is

responsible for 40% of deforestation in the FCHS, and subsistence agriculture, which occupies less than a third of cultivated land. Indeed, the latter activity is essential for the survival of local populations, as it contributes to food security.

Agriculture, which is one of the engines of the Ivorian economy, is highly dependent on climatic hazards. Today, cocoa production, of which Côte d'Ivoire is the world's leading producer and exporter, accounts for about a third of export revenues and more than 10% of tax revenues. This activity provides direct and indirect income to millions of people. The Haut-Sassandra, which is currently the loop of Ivorian cocoa, will experience a drop in production and even a displacement of this loop because of the deforestation of the area and the abusive destruction of the FCHS. With the illegal and abusive destruction of this classified forest will come climate change. Thus, cocoa production will be impacted by climate change. The massive disappearance of the rainforest in favour of grasslands and crops will reduce evapotranspiration (evaporation + transpiration of plants) and therefore the humidity of the air and the regional climate of the Haut-Sassandra. Agriculture will therefore also suffer the effects of climate change, particularly the increase in temperature, which may make the land drier and less fertile.

Forests are home to more than 80 per cent of the Earth's biodiversity and are one of the last refuges for many animal and plant species. For this reason, deforestation is a disaster for both humans and other species, with an estimated 27,000 plant and animal species disappearing each year as a result. This loss of biodiversity, which may be irreversible, cuts humanity off from invaluable services and resources. Indeed, food systems are highly dependent on biodiversity and a considerable proportion of medicines are directly or indirectly of biological origin.

Thus, as some of our respondents argued during our interviews: "the forests provide a panoply of medicinal plants for the health care of a large proportion of the country's inhabitants who depend on traditional medicines and more than half of these come from the forest. It is said that more than a quarter of modern medicines are derived from forest plants.

CONCLUSION

At the end of the reflection on the "problem of the anthropisation of the classified forest of Haut-Sassandra", it emerged that the FCHS has been illegally occupied by migrants whose actions are harmful to the

area. In fact, the actions of the non-natives and foreigners who occupy the majority of the FCHS degrade and damage this heritage.

Their arrival in the classified forest of Haut-Sassandra is based on several reasons, which are political, structural and economic. These political, structural and economic reasons for occupying the FCHS thus establish the shortcomings of forest protection actions in Côte d'Ivoire at macro, meso and micro levels.

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Cite This Article: Digbo Gogui Albert *et al* (2021). The Problem of the Anthropisation of the Classified Forest of Haut-Sassandra (Côte D'ivoire). *EAS J Humanit Cult Stud*, 3(4), 145-153.