



## Local communities' perception of parks and reserves in Côte d'Ivoire: Do the Wanne people consider the Monogaga Classified Forest as a natural patrimony.

### Abstract

The Parks, Reserves and Classified Forests in Côte d'Ivoire are considered as to-be-conserved national natural patrimony. Their management seldom involves the local communities who live around or inside them. Farming practices exert a continuously high pressure on forest cover. In the case of Monogaga, local people (the *Wanne*) were allowed to stay in the forest after it had been declared classified. After a period of conflict between the *Wanne* and SODEFOR, the forest management authority, SODEFOR sought to understand why the *Wanne* people do not consider the entire forest as a patrimony to conserve and transfer to their children. The present study addresses this question. Local communities recognized several spatial units in the Monogaga Forest. The chiefs of lineage control and guarantee access to those units. In the subdivision of SODEFOR, each zone corresponds to a precise designation: one for agriculture and another one for conservation. For SODEFOR, the forest ecosystems constitute a national patrimony to conserve while taking into accounts land rights and access to resources. For farmers, land that is inalienable and some of its resources (raphia swamp, *kporo*) constitute a patrimony of the lineage. In the latter case, the use of land and resources obey complexes access rules. Those traditional access rules to land and resources are still in use in Monogaga.

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### Key-words

Access rules, conservation, local people, natural heritage, SODEFOR, Côte d'Ivoire

### 1. Introduction

Like the majority of African countries, Côte d'Ivoire does not escape from the vast movement of setting up permanent nature reserves, which have been on course since the 1970s (Cormier-Salem and Roussel, 2002). Here, like elsewhere, this seems to be a response to the dynamics of degradation, abuses, deforestation and loss of biodiversity.

Côte d'Ivoire has some of the world's renowned natural patrimonies. For example two of UNESCO's biosphere Reserves, which also have the status of World Natural and Cultural Heritage Sites, are located in Côte d'Ivoire: Taï National Park and Comoé National Park. Also the country has nine national parks and many reserves; nearly 25% of the surface of the country has a status of (inter) national heritage.

The establishment of heritages of nature in Côte d'Ivoire is not a new phenomenon. In the colonial period, between 1925 and 1945, 66 reserves were created (Ibo, 2000), and all corresponded to forest ecosystems. This early passion for the forest was

justified by the fact that in the context of colonial exploitation, emblematic forest resources of Côte d'Ivoire decreased quickly. This reduction was due, according to colonizers, to the fact that indigenous populations used to waste these resources. By giving up the activities of timber exploitation, the local populations turned themselves into cocoa growers (Verdeaux and Alpha, 1999).

The State of Côte d'Ivoire has always leaned heavily on international NGOs for nature conservation. Example is WWF's involvement in the Park of Comoé, located in the North-East, and the IUCN in Taï National Park in the South-West. Through this, several forests of South-West Côte d'Ivoire have been protected. They form a part of the *Guinean West African Hotspot*, which contains all the vestiges of the old Western Guineo-Congolian forests, including the Monogaga Classified Forest (MCF). During the process of setting up conservation areas, the populations were often moved before the classifications. In situation when they were allowed to stay, they were faced

with imposed access controls, which resulted in multiple conflicts that were sometimes very violent. The populations lost their right of access to spaces and resources and sometimes the rights to essential cultural places: thus Mount Niénokoué, a sacred mountain of the Oubi people, is now inaccessible for the ritual of worship because it is included in the Taï National Park (Adou Yao, et al., 2005).

Local people were not involved in the establishment of the protected areas, and this had led to the current invasion by cocoa growing farmers and poaching by hunters (Caspary, et al., 2001) In 1996, the area of land invaded in the parks and reserves for farming was estimated at 630,119 ha (by considering only the classified forests; FOSA, 2001). In most classified forests of Côte d'Ivoire, farmers and hunters continue their daily activities as if these forests were not patrimonies to conserve for them. In the case of Monogaga, the *Wanne* people who have lived in this forest for centuries protect only some parts, and not the entire forest.

Faced to the invasion of the forest by farmers, SODEFOR, the official forest management authority questions why local people do not consider parks, reserves and classified forests as patrimonies to conserve? In order to address this question, a case study was conducted at the MCF to study the categorization of forest used by the *Wanne* and SODEFOR and the rules that they use to govern access. This paper shows the categorizations of the forest by the *Wanne* people and SODEFOR (the official manager of the forest) and analyzes the access rules to each unit described before discussing as to why for *Wanne* farmers not all the forest is considered as a heritage.

## 2. Materials and methods

### Study area

The Monogaga Classified Forest (MCF) located in South-western Côte d'Ivoire (figure 1) was classified in 1973. It covers an area of 40,000 ha, spanning two districts (Sassandra and San Pedro *départements*). The landscape of Monogaga is uniform and rises less than 130 m above sea level (Béné, et al., 1995; Chatelain and Piguët, 1999).

The forest is a low-altitude rainforests (Guillaumet, 1967; Guillaumet and Adjanohoun, 1971). It is characterized by several types of vegetations: *Eremospatha macrocarpa* and *Diospyros mannii* forest, in low-lying areas; *Diospyros* spp. and *Mapania* spp. Forest in the interfluvial zones; plants on hydromorphic soils, and coastal formations. Several Upper Guinean endemic species (*Anthonotha sassandraensis*, *Trichoscypha baldwinii*), threatened, rare and endangered species (*Gilbertiodendron splendidum*, *Placodiscus attenuatus*) can be found in Monogaga (Adou Yao, 2005).

Several local people live in MCF: the "indigenous" people ("autochtones") are the *Wanne* and the *Bakwe*, peoples that belong to the *Kru* ethnic group. The non-indigenous (people (migrants) are settlers who arrived at different times in the past from other regions of Côte d'Ivoire (e.g. *Bawle*, *Anyi* and *Guro*) and some foreigners from Burkina Faso, Mali, Liberia,...

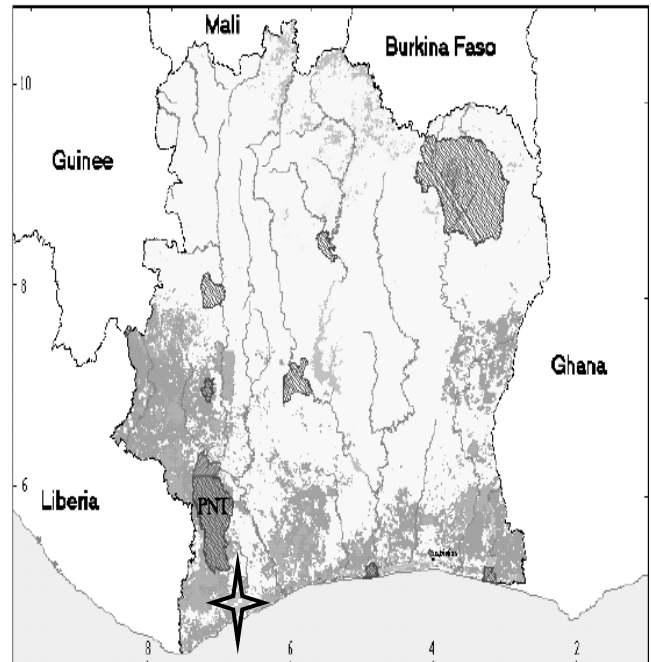


Figure 1: A map of Côte d'Ivoire showing the Monogaga Classified Forest (star) in the south-western part of the country.

Among local peoples, the study focused on the *Wanne* populations because they are the first inhabitants of the forest area and numerically the most important ones (11 villages out of 14 in the forest). They have lived in the region since the 14<sup>th</sup> century (Schwartz, 1993). They are mainly rice planters, lagoon and river fisherfolk; and are also intrepid sailors who once embarked on European ships (the famous *Kroumen*). Since the 1970s, and after contact with immigrant settlers, they began to grow coffee and cocoa trees, and more recently oil palm and rubber trees.

### Data collection

The collection of data on how managers (SODEFOR and the *Wanne* people) subdivided the forest for their activities was done in three steps. First, we interviewed the head of SODEFOR (MPF) and his foresters in their head office of San Pedro. Then we consulted all the literature on the projects carried out in the MPF. We finally visited

the forest with the foresters while they were doing their activities to identify the different units they recognized in the forest and the activities in each of them (figure 2).

To collect data on local practices, we focused on keys informants i.e. land-owners, village chiefs, lineage heads, and other senior citizens (men and women) in each village with a comprehensive knowledge on the indigenous classification of the local environment and on various uses of resources (forests, land, and crop). Broadly, in each village, 12 to 15 informants were involved in the investigation, most of them either born or residing since a very long time in the studied areas.

The recording of local knowledge for this study relied on individuals with a comprehensive knowledge of the environment. The key informants held specific knowledge on the indigenous classification of the local environment and on various uses of resources (forests, land, cropping). They gave the traditional characterization of each area identified. The chiefs of lands, chiefs of villages, chiefs of lineage and some other elderly men or women of each village constituted these key informants. In total, in each village, 12 to 15 informants were involved in the discussion, mostly either born or residing for a very long time in the study areas. The discussions took place during group interviews, open interviews and participatory observations. In each of the 15 villages, we had a meeting of one or two hours with the key informants identified. After a while, we would move to the forest for participatory and field observations. This technique is central to the ethnographic process and anthropological fieldwork (Nabanoga, 2005). We were engaged in the daily farming activities of the villagers. We watched what farmers did and recorded what they said and asked questions about their own actions and the behavior of others. The purpose of this technique in this study was to produce comprehensive accounts (May, 1997) of different practices and uses of forest units and their resources by local farmers.

#### Data analysis

The data analysis about the recognition of the spatial units by SODEFOR and the *Wanne* people, the practices and the access rules for each unit and its resources, was qualitative. We combined the transcription of interviews, group discussions, and participating observations of various activities in the landscape. We analyzed them ethnographically to interpret SODEFOR and *Wanne* activities, underlying ideas about the forest, its spatial units, management practices, its resource management, and the access rules of these units. The words in local name are written in phonetic alphabet.

### 3. Results

### 3.1 Categorization of the forest

#### 3.1.1 SODEFOR's subdivision of the Monogaga Classified Forest

In the forest of Monogaga, SODEFOR has delimited spaces for each of the major activities that the authority is supposed to incorporate (Figure 2) in its management plan. These spaces are called "series" (SODEFOR, 1994). There are two series: the protection series, where all exploitation is banned, and the agricultural series, where farmers are allowed to grow crops (SODEFOR, 1995).

The inception and implementation of the plan were built on consultation with representatives of the villagers appointed to the "Commission Paysans-Forêt" (CPF) or *Farmers-Forest Committee (FFC)*, for the purpose of setting up "co-management" of the forest.

The choice of locations depends on very complex criteria that take into account environmental characteristics (proximity to the main road, nature and fertility of soils,) as well as earlier occupancy and certain rules of access to land ownership that existed before the forest was protected (SODEFOR, 1995). Thus indigenous farmers retain control over the sharing out and attribution of the lands allocated to settlers although SODEFOR is entitled to give its opinion.

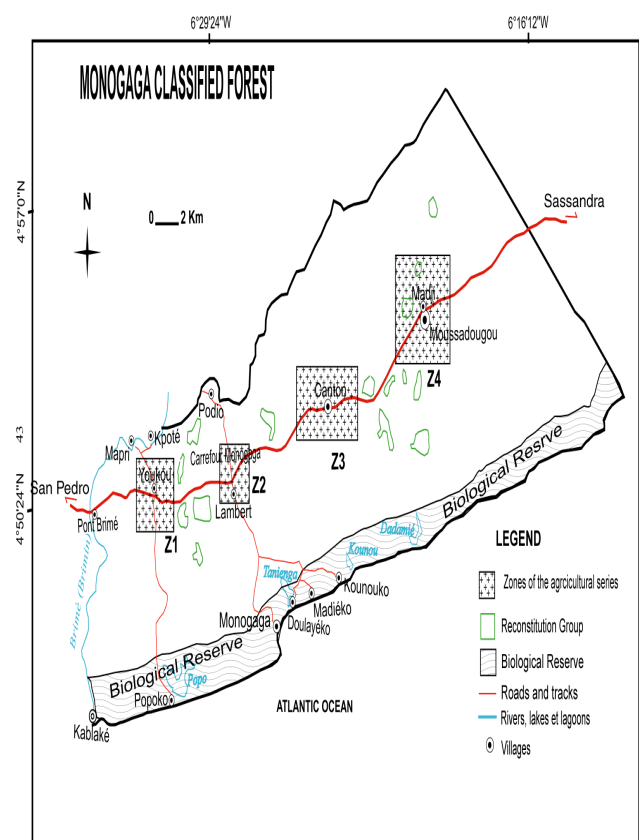


Figure 2: Monogaga Classified Forest as subdivided by Sodefor in its management plan of 1995 (Source: SODEFOR, 1995).

In its land use plan SODEFOR subdivided the protection series into different spaces called "groups".

- The "full protection group", also called a "biological reserve" (see map) is located on the sea shore: it is a 2-km wide band that includes the original village settlements that in fact have not yet been totally abandoned.
- Spaces that are considered to be degraded composed the "reconstitution group", also known as the "reforestation group", often formerly planted crop fields or plantations.
- The last group, called the "reserved natural forest" (Traoré and Zoh, 2003) is made up of all the other sections of the protected Monogaga area that are neither

used for agriculture nor replanted by SODEFOR, and that are outside of the agricultural series and the full protection group. These plots are the equivalent of the "production" series found in other protected forests in Côte d'Ivoire. This series does not exist in the land use plan for the Monogaga Classified Forest because the trees cover is so poor in valuable timber species that professionals find that logging operations are not worthwhile.

### 3.1.2 *Wanne* forest units and their criteria

Table 1 lists the main land or forests units recognized by *Wanne* people in the MCF. The identification of these units is based firstly on a division between low and upper lands. Some vegetation criteria are also taken into account.

**Table 1: The main spatial units as recognized by *Wanne* farmers in the forest of Monogaga.**

Spatial units		Vegetation cover criteria, Indicator species
<i>Kporo</i> "Black Forest"		Old growth forest; never cultivated or cultivated since more than 50 years; indigenous vegetation <i>Dialium aubrevillei</i> or Duabankyu ( <i>Kokosega tu</i> ), <i>Tieghemella heckelii</i> or Makore ( <i>bitu tu</i> ), <i>Diospyros sanza-minika</i> or Ebony ( <i>kake</i> ).
<i>Teteklwoa</i> "Old fallow or secondary forest"		Fallow older than 15 years and younger than 50 years old. Understorey bulkier (denser) than <i>kporo</i> <i>Elaeis guineensis</i> or wild oil palm ( <i>Baadjo</i> ), <i>Musanga cecropioides</i> or Umbrella tree ( <i>bedue</i> ), <i>Spathodea campanulata</i> or African tulip tree ( <i>bawa tu</i> )
<i>Piti</i> Young secondary forest		End of the harvest of crops until 15 years old, Several herbs and crops seedlings <i>Piti wake</i> , <i>Pitiatie</i>
<i>Gbadu</i> Swamps areas	<i>Gl ɔ</i> Raphia swamps	Flooded permanently, presence of Raphia palms <i>Raphia hookeri</i> ( <i>nĩmlĩ</i> ), <i>R. palma-pinus</i> ( <i>duo</i> )
	<i>Gbadu</i>	Temporarily or not flooded, characteristic species
<i>Kase</i> or <i>Za</i> Mangroves		Permanently flooded, presence of mangroves <i>Rhizophora racemosa</i> or red mangrove, <i>Avicennia germinans</i> or black mangrove, and <i>Conocarpus erectus</i> or Zaragosa
<i>Ge</i> Cultivated units or farms	<i>Didi de ge</i> Food crops farms	Spaces cultivated for food crops. Several food crops species Maize ( <i>djodjo</i> ), cassava ( <i>soklo</i> ), rice ( <i>seka</i> )
	<i>čečra de ge</i> Cash crops farms	Spaces cultivated for cash crops. Cocoa tree ( <i>coco</i> ), Coffee tree ( <i>c ɔfe</i> )
<i>Dji gbu bru</i> Littoral bush		Bulky bush vegetation bordering the sea, <i>Pandanus candelabrum</i> or screw pine, <i>Phoenix reclinata</i> or wild date palm
<i>Djro pl ɔ</i> Sacred groves		Diverse vegetations (forests, fallows containing trees, rocks, rivers..) corresponding to the other categories except farms and plantations

The results show that, generally, criteria for vegetation cover and characteristic species are jointly used in the indigenous spaces classes of MCF. Sometimes, it is the relative abundance and size of species and not the unique occurrence in a unit that is used as indicator. For example, in old

growth forests and old secondary forests, species like *Tieghemella heckelii* and *Diospyros sanza-minika* are associated to both units but are found more commonly in old growth forest than in old secondary forest. Specifically, some other criteria are used to separate some subdivisions of main



classes. Thus, inundation for example is a criterion used for distinction between swamp areas (*gbadu*, and *gl*). Age is the identifier of non-cultivated forest (old growth, secondary forests). Depending on the nature of the crop cultivated the farm will be called *didi de ge* (food crop farm)/ *čičra de ge* (cash crop farm). Two categories are never subdivided: littoral bush and sacred groves (*dji gbu bru*, *djro pl*). For instance, even when the sacred object is a rock, the entire forest patch around it is considered as the sacred grove.

### 3.2 The access rules to the indigenous space units

To identify which space constitutes a heritage for local people, we recorded the access rules to each unit identified as shown in table 2.

For the *Wanne* farmers, the access rules are important criteria for accessing the units'

cultivation and their resources. Those rules are the main conditions to determine what, in the forest, is considered as patrimony to transmit to future generations. According to those rules, in a territory, some units are considered as heritage of lineage (*kporo*, *Gbadu*, *Dji gbu bru*, and *Djro pl*), an inheritance of all inhabitants of a village (*Gl* and *kase*) or individual patrimony like *Teteklwoa*, *Piti*, and *Ge*. Thus, for cultivation, members of lineage and migrants do not proceed in the same way. The first ones do not need permission while the latter ones need to conclude an agreement with the land chief (the *tutu k*ni), who is most of the time the chief of lineage too. On the contrary, in most cases harvesting and hunting are allowed to all inhabitants of villages.

**Table 2: The access rules to the indigenous land units as recorded among the *Wanne* farmers.**

Spatial units		Access rules	Owners
<i>Kporo</i> "Black Forest"		Only members of the lineage are allowed to cultivate A migrant should ask for the authorization of cultivation to the chief of land via the chief of the village or the "tutor". Harvesting and hunting are allowed to all inhabitants	Lineage/ sub-lineage. Managed by the chief of lands
<i>Teteklwoa</i> "Old fallow or secondary forest"		Anyone (Migrant or not), should request the permission of the farmer who has cultivated the area before. Harvesting and hunting are allowed to all inhabitants	The latest farmer who occupied the area and his descendants have a priority of usage
<i>Piti</i> Young secondary forest		Anyone (Migrant or not), should request the permission of the farmer who has cultivated the area before. Harvesting is allowed to all inhabitants for spontaneous plant species	The latest farmer who occupied the area and his descendants have a priority of usage
<i>Gbadu</i> Swamp areas	<i>Gl</i> Raphia swamps	Hunting, fishing and harvesting are allowed to all inhabitants of the village. Wine production is reserved to "autochthons" peoples. Harvesting and hunting are allowed to all inhabitants	All inhabitants of the village ("autochthones" and migrants)
	<i>Gbadu</i>	Only members of the lineage are allowed to cultivate A migrant should ask for the authorization for cultivation to the chief of land via the chief of the village or the "tutor". Harvesting and hunting are allowed to all inhabitants	Lineage/ sub-lineage. Managed by chief of lands
<i>Kase</i> or <i>Za</i> Mangroves		Harvesting and hunting are allowed to all inhabitants	All inhabitants of the village (autochthones and migrants)
<i>Ge</i> Cultivated units or farms	<i>Didi de ge</i> Food crops farms	The farm cannot be transferred automatically to children. Harvesting and hunting, must be allowed by the owner.	First to the farmer and his descendants and the lineage or sub-lineage
	<i>čičra de ge</i> Cash crops farms	The plantation can be transmitted to children. Transmissible. Harvesting and hunting, must be allowed by the owner.	Farmer and his family
<i>Dji gbu bru</i> Littoral bush		Authorization needed for cultivation. Harvesting and hunting are allowed to all inhabitants	Lineage/ sub-lineage. Managed by chief of lands

<i>Djro pl</i> Sacred groves	No cultivation, hunting and harvesting apart from harvesting of medicinal plants that are collected only by the priest of the sacred grove. It's not allowed to get in without authorization	The priests of lineages and sub-lineage
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#### 4. Discussion

##### 4.1 The SODEFOR forest: a heritage to be protected and regenerated

The SODEFOR's program of conservation and management in the Monogaga classified forest has given rise to a vast and complex reorganization of the territory, separating spaces devoted to agriculture and forestry production, from spaces reserved for conservation. This reorganization has modified the social organization: villages are reshaped, FFC commissions created. These two traits are found in almost all externally-driven processes for the constitution of natural patrimony, which includes the process that followed the decision to protect the Monogaga forest. These are processes for which the models, incentives and actors are essentially found outside the local circle. On this topic see Cormier-Salem, et al. (2002) and Bassett (2002) on the territorial reorganization that goes along with the setting up of conservation sites, in the vicinity of the Comoé reserve in northern Côte d'Ivoire. These processes run counter to villagers' perceptions and practices, triggering discontent and conflict. The Monogaga forest is no exception.

##### 4.2 The forest: a heritage of the local populations?

"I would like to know why the *Wanne* farmers do not want to transfer the MCF to their children." Trough this question, the section Head of MCF expressed his worry and bewilderment at the difficulty encountered when trying to obtain acceptance of and compliance with protection objectives. Clearing of trees continues, and the number of new settlers who are given land to work by indigenous inhabitants is far from diminishing; indeed it doubled between 1992 and 2002 (Traoré and Zoh, 2003) and tripled since 2004.

Indeed, it would seem that the densest and darkest forest cover is not what *Wanne* farmers like best. When farmers are asked what type of lands (*tutu*) constitutes a desirable family inheritance, they give their preference to swamp lowlands that are suitable for growing rice, as well as cassava, maize and vegetables. Plots of this kind are always among the most valued, because they enable a family to grow the subsistence crops that are indispensable to its daily diet: rice and vegetables that are produced by the joint efforts of men and women.

For *Wanne* farmers, outside of these humid swamp areas, the quality of a plot of land in farmers' eyes depends first of all on the nature of its vegetation.

This determines the amount of work to be done to prepare it for planting. Recent grassy fallow lands (called *piti*) are much sought after, because they ensure immediate income with relatively little work. But *piti* are not suitable for coffee and cocoa plantations that at the outset require the shade of thick tree cover and soil fertility that exists only old growth and secondary forests.

At present the crops that provide the best income are these cash crops. An inheritance that includes coffee and cocoa plantations in full production is of course highly valued. Plots that offer thick shade cover are also appreciated, because new plantations can be created. But farmers prefer old fallow lands, *teteklwoa*, to *kporo* or "black" forest plots, spaces that have never been cultivated, or where no one remembers as having ever been cultivated. According to the farmers, the soils of old fallow fields recovers a degree of fertility equivalent to that of the black forest floor when not cultivated for more than 15 years. When they are cultivated again these soils require less intensive preparation than the *kporo* plots; the woody strata are less dense and there are fewer big trees, which are so hard to fell. Old fallow fields are also much appreciated because, people who last cultivated them have an individual priority of utilization of these spaces. Replanting them does not trigger the cumbersome process of attribution of land that has never been cultivated, and which is held in common by the lineage group. It is also relatively easy, on these individual plots, to set up a guest-host arrangement with a settler, and contract out the agricultural work without having to submit to the exigencies of the land chiefs.

Within the various nested territories of lineage or of lineage subgroups, there are spaces that cannot be turned over to individuals. Some lands have the status of common property: to have access to the resources they offer it suffices to be a member of the lineage group or to live in the village. As an example, raffia swamps (*Gl*), are exploited by the community as a whole, for the materials (palm leaves and rachis) that are necessary for building villagers' homes and the precious palm wine (*banji*). While all villagers, even the settlers who have arrived most recently, can harvest palm leaves, only indigenous villagers have the right to draw the palm wine.

Other lands are strictly reserved for subgroups, but are not open to everybody: they are dedicated to the worship of tutelary divinities (*djro*), and generally date from the time of the group's arrival

at the village location. Each lineage subgroup has its *djro pl* and each plot is entrusted to a priest who carries out rituals and sacrificial ceremonies, harvests medicinal plants, gathers wild fruit and dead wood, and prepares the space for ceremonies. Some woody species that are needed for the ceremonies may be planted, such as the "monkey's dinner-bell" tree, *Hura crepitans* L. Hunting and cultivating are forbidden, but in some villages gathering or picking are permitted.

Currently, the access rules are in majority followed by the indigenous peoples. But more and more, some members of the communities in different protected areas have started transgressing those rules. With the arrival of migrants some *Wanne* peoples sell parts of *kporo*, *gbadu*, *kase*, and even *djro pl*. That creates several conflicts inside the community.

Local people do not respect the boundaries set by SODEFOR. For them, the forest is theirs and they do not need SODEFOR to manage it. As a way of showing that, they cultivated the reforestation groups of the protected series. They burned and cut the trees of SODEFOR notably because, according to them, they would benefit nothing from SODEFOR anyway if they take care of those trees.

Not the entire forest constitutes a heritage for all local peoples. Some parts (*Gbadu*, *Djro pl*) are considered as inheritance according to lineage, lineage sub-group. In some other protected areas, the same situation exists. The Taï National Park does not entirely constitute a patrimony for the *Oubi* and *Guere* peoples. For them, only the sacred Mount Niénokoué, inside that park represents the heritage that should be transferred to future generations (Adou Yao 2005). In the Ehotilé Islands National Park, the entire site is considered as a cultural patrimony. Its classification was requested by the local community who argued the fact that it was their ancestors place. Nevertheless, that does not impede them to exert some pressures on this park.

### Conclusion

Based on the access rules of both forest managers (local people and SODEFOR) to the different units and their resources, this study showed a contradiction between patrimonial perceptions of SODEFOR and of *Wanne* farmers concerning the organization of activities. For SODEFOR, the forest ecosystems constitute a national patrimony to conserve but which combines land right and access of resources. For farmers, it appears that land is inalienable. This land and some of its resources (raphia swamp, *kporo*) constitute a patrimony for the lineage. In the latter case, the use of land and resources is governed by complex access rules. A member of the lineage can cultivate on *gbadu*, *kporo*. He just has to inform the lineage chief; but for the fallows, he should ask the latest

farmer who cultivated the area before him. Hunting and collecting are allowed to everyone, even to immigrants. Some other categories of space like young fallows, farms and plantations are individual inheritances and their permission is needed to acquire land to cultivate and collect resources. Those traditional access rules to land and resources are still in use in Monogaga. In its new management plan, SODEFOR should therefore involve the chiefs of lineage, who play an important role in those forest ecosystems, in the structures of negotiations.

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