

WHY MUST TANOÉ-EHY FOREST (SOUTH-EASTERN CÔTE D’IVOIRE) BE CONSERVED WITH A COMMUNITY-BASED APPROACH?

Didié Armand Zadou

Anthropologist Jean Lorougnon Guédé University, Côte d’Ivoire
Centre Suisse de Recherches Scientifiques en Côte d’Ivoire

Abstract

The Tanoé-Ehy Forest was identified as a top priority site for conservation in West Africa. However, this important forest is subject to strong anthropogenic pressures which through poaching, uncontrolled take offs of natural resources and some agricultural clearings. Given the importance of this forest and the intensity of threats, a pilot program for community-based management was initiated with people living alongside Tanoé-Ehy Forest for sustainable management of this forest. Since the usual methods for forest management by the government don’t often privilege the interests of local people, the main concern for this contribution is why must this forest be conserved with a community-based approach? This qualitative study demonstrates how local context is important to determine conservation policy, through an exploration of the importance of Tanoé-Ehy Forest to the maintenance of cultural references in this area, and local uses and users of the derivatives of this forest. In sum, we can say that Tanoé-Ehy Forest is a vital heritage for local populations dependent on natural resources for subsistence. Community-based sustainable management of Tanoé-Ehy Forest benefits autochthons, allochthons and foreigners. Thus, taking into account their interests in the conservation program of this forest is crucial.

Keywords: Tanoé, Ehy Forest, conservation policy, sustainable management , community, based approach, Côte d’Ivoire

Résumé

La Forêt des Marais Tanoé-Ehy a été identifiée comme un site prioritaire pour la conservation en Afrique de l’Ouest. Cependant, cette importante forêt est assujettie à de fortes pressions anthropiques qui se traduisent par le braconnage, le prélèvement incontrôlé des ressources naturelles et souvent des tentatives de défrichements agricoles. Vu

l'importance de cette forêt et de l'intensité des menaces, un programme pilote de gestion communautaire a été initié avec les populations riveraines pour une gestion durable de cette forêt. Etant donné que les méthodes habituelles de gestion forestière par l'Etat n'ont pas souvent privilégié les aspirations des populations locales, la préoccupation majeure de cette contribution est de savoir pourquoi cette forêt devrait absolument être conservée par l'approche communautaire? Cette étude qualitative vise à démontrer comment le contexte local est déterminant dans le choix des politiques de conservation de la nature. Cet article nous permet de comprendre comment l'existence de la Forêt des Marais Tanoé-Ehy contribue encore au maintien des repères culturels de la localité. Il nous permet aussi de savoir, les usages et les usagers des ressources de cette forêt. En somme, nous pouvons dire que la Forêt des Marais Tanoé-Ehy constitue un patrimoine vital pour les populations locales dépendantes des ressources naturelles pour la subsistance. Aussi, la gestion communautaire pour une gestion durable de la Forêt des Marais Tanoé-Ehy est bénéfique pour les autochtones, les allochtones et les allogènes. Ainsi, prendre en compte leurs intérêts dans le programme de conservation de cette forêt est crucial.

Mots clés: Forêt des Marais Tanoé-Ehy, Politiques de conservation, Gestion durable, Approche communautaire, Côte d'Ivoire

Introduction

For a long time, the African general forest management policy has considered local forest users ignorant and destructive (Ndotam, 2005). In developing this policy, government authorities ignored the knowledge and capacity of local communities to sustainably manage their natural forest heritage. They ignore that no one is more interested in or better at planning and implementing sustainable forest management than communities who rely on the forest for their livelihood. Forest management aims both to preserve and to produce because there is no production without conservation and no conservation without producing (Buttoud, 1998). However, the abusive system in which economically rich, biodiversity-poor industrialized nations exploit the natural resources of economically poor, biodiversity-rich southern countries for development has caused significant degradation of biodiversity in the southern countries (Compagnon, 2005). Today, economic, social and environmental impacts of the industrial development model testify, more than ever, its unsustainability.

Globally, many people suffer as a result of the destruction of forest heritage, depriving them of the natural resources from which they draw their livelihoods (Ndotam, 2005).

Large scale clearing of forests for agricultural purposes, uncontrolled logging, and unprecedented rates of poaching no longer ensure the sustainability of southern countries' wealth in biodiversity (Aubertin, 2005).

A change of mindset in the management of natural resources is essential, allowing a return to traditional management, unlike current methods heir to the colonial, exclusionist, centralist, and interventionist policies for conservation. Community-based systems for natural resources management are becoming widespread and are proving viable options for sustainable management of natural resources in both tropical and temperate countries.

The Côte d'Ivoire is among the tropical countries which experienced the highest rates of deforestation. In fact, from 15 million hectares of forest in the early 20th century and 12 million hectares at the period of its independence, current forest cover is optimistically estimated at approximately three million hectares. However, the colonial authorities had taken early actions to safeguard natural resources. For example, the decree of 20 July 1900 set out the contours of a forest cover of Côte d'Ivoire. Since that date, from 1920, a large network of classified forests and parks and reserves were established. At the independence, these protected areas covered more than five million hectares (Ibo, 1993).

After independence, the legal and institutional foundations were in place to continue conservation of natural resources of Côte d'Ivoire. Despite all these measures, after independence natural resources experience significant degradation. Agriculture was placed with intensive logging at the center of Ivorian development plans, replacing forest with farmland. Ultimately, this left Côte d'Ivoire the largest producer of coffee in Africa, and the largest producer of cocoa worldwide.

Most remaining forests fragments are relatively small and, accordingly, farmers encroach on protected areas more frequently. Authorities even suggest decommissioning of at least part of some protected areas as a solution to the lack of arable land. The effects of deforestation and poaching of wildlife in general is dramatic: the fauna is scarce in most of national parks and reserves.

The situation is even more alarming in rural areas where forests are not protected and are subject to open access for uncontrolled exploitation. Such exploitation threatens the Tanoé-Ehy Forest (TEF) in south-eastern Côte d'Ivoire, which has been identified by researchers of the *Recherche et Actions pour la Sauvegarde des Primates en Côte d'Ivoire (RASAP-CI)* Program as a site of high conservation value, following preliminary surveys conducted in the Ivorian forests in 2004 (Koné et al., 2004; 2006a). Multidisciplinary scientific studies have shown the exceptional nature of this forest in its richness and diversity of flora and fauna, both in endemic and

widespread West African species (Bene et al., 2007; Adou Yao, 2007; Koné Tidiani et al., 2009; Ahon, 2010).

This swamp forest is located at the interface of the Tanoé river and Ehy lagoon. The TEF is the last forest relic in rural area, and is subject to strong anthropogenic pressures that result in poaching, uncontrolled harvesting of natural resources, and sometimes attempts to clearing for agriculture, both by individuals and agro-industrial enterprises despite the importance of its ecological, biological and socio-cultural functions (Koné et al., 2006b).

In order to safeguard and sustainably management this important forest heritage for local people and scientists, a pilot community-based management program was initiated with the communities living alongside the TEF in September 2006. This program is developed through collaboration between the *Conservation des Espèces et Populations Animales* (CEPA), West African Primates Conservation Association (WAPCA), and the *Centre Suisse de Recherches Scientifiques en Côte d'Ivoire* (CSRS), with the support of various national and international partners. The steps towards officially designating TEF a Voluntary Nature Reserve (VNR) for community-based management are currently underway. Once the official status of protection of TEF is achieved, this will be a first project of its kind in Côte d'Ivoire.

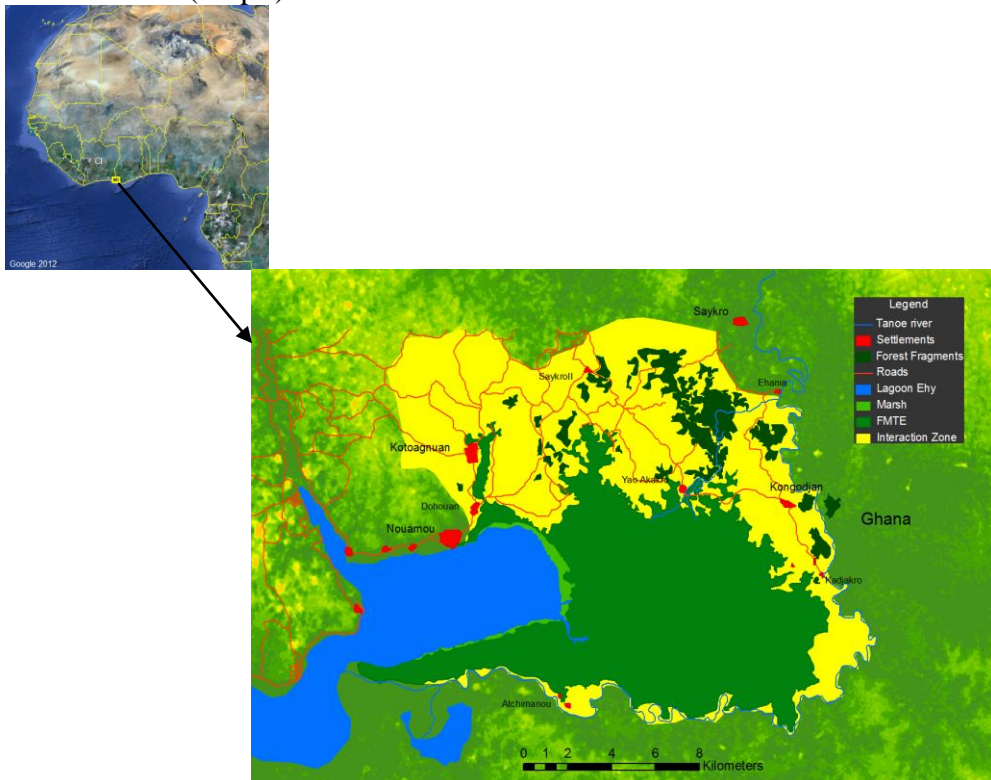
This study demonstrates community-based management of forest policy, showing stakeholders this new approach to forest management in Côte d'Ivoire. Specifically, we show how TEF is still involved in the perpetuation of traditional practices and guarantee the maintenance of cultural references. We also show the social and economic character of the forest through the uses and users of its derivatives.

2. Methodology

2.1. Geographical framework

This study was conducted in Tanoé-Ehy area, composed of Tanoé-Ehy Forest (TEF) and its periphery. This area is located in the south-eastern corner of Côte d'Ivoire, in the Department of Tiapoum at the interface of the sub-prefectures of Tiapoum, Nouamou and Noé. The TEF is a rural area forest. It is characterized by its flora but also by its exceptional simian wildlife. In fact, TEF is the only forest in Côte d'Ivoire which still houses three of the most threatened monkeys in the world: *Cercopithecus diana roloway*, *Cercocebus atys lunulatus*, and *Ptilocolobus badius waldroneae*. This forest exhibits high endemism of Guinea area in the east of Sassandra river. Because TEF is swampy, it has been protected from exploitation. Local teams carried out the pilot program for community-based management in six villages around this forest: Dohouan and Kotoagnan in the sub

prefecture of Nouamou, Kongodjan-Tanoé, Kadjakro and Yao-Akacro in the sub prefecture of Noé, and Atchimanou in the sub prefecture of Tiapoum. Furthermore, three other villages are included in the TEF conservation program despite their relatively remote location to this forest: Nouamou in the sub-prefecture of Nouamou, and Saykro and Ehania-Tanoé in the sub-prefecture of Noé. They are included because these villages have ancestral ties with TEF (Map I).



Map I: Map of Tanoé-Ehy area, the geographical framework of this study (Cobo, 2012)

2.2. Sociological framework

This study combined desk research, direct observation and social inquiry. It focused on different strategic groups at the local level directly or indirectly involved in the process of implementation of community-based management of Tanoé-Ehy forest. In a qualitative approach, individual and group interviews were conducted using an interview guide developed for this purpose. Those interviews were from the institutions (state and private) involved in the process and the heads of various social groups formed in all villages of Tanoé-Ehy area. The social groups included notabilities, women’s organizations, youth organizations, and local teams for biological monitoring in the forest, awareness, research and local development actions support in the villages.

3. Results and discussion

3.1. The Tanoé-Ehy Forest, a site of maintenance of the cultural reference marks

The local names for the Tanoé-Ehy Forest (TEF) include “*assah*” and “*azah*,” meaning “the mud” in the *Agni* and *N'zema* languages. Residents were frequently overheard to say that “*assah swallows when one goes there*”. Investigations in the bordering villages of TEF show that this common forest heritage presents great cultural and social values for the bordering populations in several communities.

According to the residents, some local species of monkeys found in this forest, “*folêh*” (*Colobus vellerosus*) and “*assibêh*” (*Procolobus verus*), are key elements for rituals practiced in some villages. For example, feces of *Colobus vellerosus* are very essential for the ceremonies of purification of the tenth children who are rejected by autochthons, who believe these children carrying misfortune to the families or communities (Gléanou, 2009).

These feces are also used in the purification of *Akan* women who commit adultery, an act prohibited by the local tradition. *Live individual of Procolobus verus* is used for the annual worship of “*Assoué*” river in the village which bears the name in the Department of Tiapoum. According to the residents with which we had talks, this monkey which remains alive having to turn over, according to the ancestors, with all misfortunes likely to fall down on the village throughout the year of the worship of the river.

Clearly, preservation of monkeys in the TEF is also beneficial for the local population. The safeguarding of these species has an implication in the durability of the cultural values of this area. These cultural values are the best guarantees of morals in the traditional communities of *Akan*. This opinion was expressed by one notable of the village of Dohouan in these terms:

“when researchers say not to kill the monkeys, it is for our well being also thus us one must help them in this work”.

3.1.1. Sacred sites in the surroundings of the Tanoé-Ehy Forest

One of the specificities of the Tanoé-Ehy Forest (TEF) is that it abounds in many sacred sites which are periodically attended by the autochthons of the locality. The sacred sites in this area are often rivers which mostly found at the edge of the TEF. Indeed, in the traditional universe of much of Ivorian communities, there are artificial sacred sites arranged by men for initiations and natural sacred sites which are places of first meetings between the founders of the villages and the geniuses or other guardian powers of such place (Cartry, 1993). Table I shows the various sacred rivers present in the bordering villages of Tanoé-Ehy area.

Table I: Sacred sites indexed in the bordering villages of the Tanoé-Ehy Forest

Villages	Sacred sites indexed
Atchimanou	Tanoé river
Dohouan	Dohouan river - Dayonnin river
Ehania-Tanoé	Ehania river - Tanoé river
Kadjakro	Dayonnin river - Tanoé river
Kotoagnuan	Kotoagnuan river - Akissi beyon n'gbain river
Nouamou	Ehy lagoon - Tamsé river
Saykro	Tanoé river
Yao-Akakro	Douegnan river

Source: Data of social investigation

To understand the tradition of the *Akan* communities about land management, we discussed with the “*assièh minnin*” (head of land in *Agni*) of Kotoagnuan, the elder Ehy Bilé, principal admirer of the Ehy lagoon. In this interview, we wanted to include the subject of the worship of the rivers and their relationship with the TEF because all worship ceremonies of sacred rivers in TEF occur here. Thus, the TEF is an important place of traditional practices in this area. Another interview with one of the agents of the tradition of the locality reveals that among *Akan* people in general, all the rivers which bear a name are sacred rivers, and adored by the natives of the places. The name which the river carries is that of the protective genius and benefactor of the village. The autochthons have a significant representation of this genius with which they owe obedience and respect. For the autochthons, the genius must be feared because, according to the agent of the tradition:

"if somebody does not respect the interdicts of Ehy, he will die if he transgresses this interdicts in the village".

With this intention, interdicts are thus established to be in phase with the geniuses of the ancestors in order to profit from their protection in the villages of Tanoé-Ehy area.

3.1.2. Interdicts related to the Tanoé-Ehy Forest

The Tanoé-Ehy Forest (TEF) is named for the confluence of the Tanoé River, the Ehy lagoon and the rivers which border the various surrounding villages. Because of this, local populations recognize this name and will fear for the two respective dominating geniuses of the Tanoé river and the Ehy lagoon. The denomination of the TEF is similar to that of community natural area called “*Kër Cupaam*”, located at the interface of the Reserve of Popeguine and the Natural Reserve of Somone in Senegal in West Africa. This denomination comes from the name of the local protective genius called “*Mame Cumba Cupaam*,” or “*the good fairy of the paddlers*”.

According to local elders, this genius guided the sailors and all the travelers to a good port at the head land of the course of Naze. Thus, to simplify the pronunciation, the name of "*Kër Cupaam*" was adopted by all the residents of the locality (Diop, 2009).

These two examples return our reflexion to the representation which the autochthons have of the geniuses, benefactors, and guards of the villages and sacred sites. The sacred sites in the African communities arise as places of meeting and communication with the geniuses. The ecological NGO Green Cross-Cote d'Ivoire defines a sacred forest in these terms:

"a sacred forest is a wooded area, feared and venerated, reserved with the cultural expression of a human community, and whose accesses and management are regulated by the traditional capacities".

Because of the strict respect of interdicts in sacred forests, these are areas whose ecological integrity is much appreciated and are thus important in biodiversity conservation. The sanctification of spaces and the vegetable and animal species which live there, help maintain a permanent balance between the man and his environment (Zannou, 2000).

In the study area, Wednesday ("*manin*" in Agni and "*manan*" in *N'zema*) is the day when entry in the forest ("*kpolê*" in Agni and "*kpokê*" in *N'zema*) is prohibited.

According to the head of land ("*azrèh minni*" in *N'zema*) of Nouamou:

"it is the day of the geniuses and the other inhabitants of the forest. Before, when somebody returned that day, these are the tom-toms that you heard. One could also lose oneself and to find other side in Ghana or one could even disappear easily"

Women are not authorized to cross the Tanoé while menstruating, regardless of the day of the week. In addition, the women are forbidden to cross sacred rivers on Wednesdays and are subject to fines if they do not respect this interdict. These fines consist in offering a live individual of goat (*Capra hircus*) to the protective geniuses to avoid attracting curses on one. It is undoubtedly for this reason that Wednesday is the principal market day in the locality.

The analysis of this cultural landscape supports our assertion that for the *Akan*, the surest and most effective method to protect a site, it is to allot it a sacred character. Thus, it becomes a site of worship and initiation for the community, and in same time an excellent conservation area of biodiversity that this space abounds (Gomé, 1998).

The TEF is not officially sacred. However, this forest is also protected by interdicts of the surrounding sacred rivers, which are the foundations of the social and cultural values of the *Akan* in general, and those of south-eastern corner of Côte d'Ivoire in particular.

3.2. The Tanoé-Ehy Forest, a site of provision of natural resources for subsistence

3.2.1. Practice of fishing and clothes industry of traditional objects

Fishing is one of the principal activities of the populations living in the periphery of the Tanoé-Ehy Forest (TEF). It is practiced on the majority in the rivers inside the TEF using the dugout canoes which are the traditional means of transportation in the study area. The lumber which constitutes the raw material for the manufacture of the dugouts comes from this forest. Moreover, the majority of canes being used for manufacture of the bow nets, traditional instruments for fishing, are also taken in the TEF. However, these people also recognize the importance of the forest. The head of the village of Kadjakro said: *"this forest is a pot for us"*.

He says that because nearly all fishing practiced in this area occurs there. Let us note that fishing is practiced by the autochthons, allochthons and foreigners.

According to bordering populations, all the markets of the villages and surrounding cities are supplied by fish primarily from the TEF and surrounding rivers. The head of the village of Kadjakro explained again:

"there are two veritable economic periods in our locality here. The first is for cocoa and coffee, and the second is for fish".

3.2.2. Taking away of building materials and firewood

The Tanoé-Ehy Forest (TEF) constitutes a significant source of building materials of the dwellings of some residents for which, the cost of the modern building materials of the houses are very high taking into account the currently difficult socio-economic context. Some of them, on this subject say that:

"today, one cannot buy sheet and cement; therefore it is in mud there that us one manages a little to make our house".

The firewood remains the first source of energy for the rural population in general. This forest being the last forest reserve of the area, its presence facilitates with the residents acquisition wood of heating, contrary to the cases observed in other areas of the country where one must traverse long distances to supply oneself out of firewood, have regard to very thorough deforestation almost everywhere in the country.

3.2.3. Therapeutic virtue of the resources of the Tanoé-Ehy Forest

This forest relic is likely essential in the acquisition of the medicinal plants, because Africans maintain this culture of traditional medicine. In the fact, the local populations of forest and savanna areas believe in a total

balance between the resources of nature, supernatural forces and humans (Posey, 1995; Bahuchet, 1997; Gami, 1997).

The floristic richness of the Tanoé-Ehy Forest (TEF) is thus very beneficial for the local populations who do not have great financial means for dispensaries, where pharmaceutical products are relatively expensive. Since acquisition of the natural resources of the TEF is accessible to all residents, most choose the medicinal plants from this last forest of the Tanoé-Ehy area.

4. Conclusion

This study showed why the Tanoé-Ehy Forest (TEF), the last forest relic in the south-eastern of Côte d'Ivoire, was identified like a priority site for the conservation and intended for a community-based management for a sustainable management. Around this forest there is a composite population made up by the autochthons, the natives of Tanoé-Ehy areas, the allochthons which are nationals coming from other regions of Côte d'Ivoire and foreigners. Many socio-economic and cultural parameters related to the existence of the TEF solidify the relationship between this forest inheritance of the rural area and the local communities. This forest is important to the maintenance of ancestral practices for the autochthons while the TEF strongly contributing to the subsistence of the bordering populations including autochthons, allochthons and foreigners.

In Côte d'Ivoire, the early policies of natural resource and forest protection did not give anticipated results. In practice, these methods inherited from colonization did not account for the concerns of bordering populations. Thus, the success and the durability of this new method of community-based management as a sustainable model of forest management in Côte d'Ivoire will depend on how well the aspirations and the interests of the local communities are considered. This study suggests that the conservation of this forest relic through a community-based approach guarantees the success and the durability of this new experiment of sustainable management of the forests in Côte d'Ivoire.

Acknowledgments

At the end of this work, we would like very much the institutions and organizations which contributed to its realization:

- the Jean Lorougnon Guédé University (Côte d'Ivoire) - Department of Human and Social Sciences ;
- the *Centre Suisse de Recherches Scientifiques en Côte d'Ivoire (CSRS)* - Department of Biodiversity and Food Security / Primates and other vertebrates research group ;

- the *Coordination du Programme de Recherche et Actions pour la Sauvegarde des Primates en Côte d'Ivoire (RASAP-CI)* and partners (CEPA-WAPCA-PBNF-MBZ-WFN-SOS Forêts-ACB-CI-MINEDD/DEPN...);
- the *Programme d'Appui Stratégique à la Recherche Scientifique en Côte d'Ivoire (PASRES)* ;
- the *Institut des Sciences Anthropologiques de Développement (ISAD)* - Félix Houphouët- Boigny University (Côte d'Ivoire) ;
- the *Laboratoire des Sciences de l'Environnement (LSE)* - Nangui Abrogoua University (Côte d'Ivoire) ;
- the administrative authorities, the traditional authorities and the local population of Tanoé-Ehy area in the Department of Tiapoum (South-eastern Côte d'Ivoire).

References:

- Adou Yao C.Y. (2007). *Protection de la Forêt des Marais Tanoé, Côte-d'Ivoire: consolidation du système de gestion participative pour la préservation de trois primates gravement menacés d'extinction, Rapport d'inventaire préliminaire de la flore de la FMT, 29 pages.*
- Ahon B. (2010). *Inventaire de la faune aviaire de la Forêt des Marais Tanoé-Ehy, (Tiapoum - Côte-d'Ivoire) : Rapport final pour RASAP-CI, 31 pages.*
- Aubertin C. (2005). *Représenter la Nature ? « ONG et Biodiversité », Paris, Edition IRD, 210 pages.*
- Bahuchet S. (1991). *Les Pygmées Aka: le monde des Aka. Encyclopédie des Pygmées Aka. Livre 1, fascicule 2, Paris Selaf, 242 pages.*
- Béné J.C. & Apkatou B. (2007). *Protection de la Forêt des Marais Tanoé, Côte-d'Ivoire: consolidation du système de gestion participative pour la préservation de trois primates gravement menacés d'extinction, Rapport d'inventaire préliminaire de la faune simienne de la FMT, 34 pages.*
- Buttoud G. (1998). *Les politiques forestières. Que sais-je, PUF, Paris, 125 pages.*
- Cartry M. (1993). *Les bois sacrés des autres : les faits africains. In : les bois sacrés. Colloque international de Naples. Collection du Centre Jean Bésard, PP.193-198.*
- Compagnon D. (2005). *Gérer démocratiquement la biodiversité grâce aux ONG ? in Représenter la Nature ? « ONG et Biodiversité », Paris, Edition IRD, PP. 179-204.*
- Diop B. (2009). *Diagnostic de l'état de la conservation de la biodiversité dans l'Espace Naturel Communautaire Kër Cupaam : perspectives pour une valorisation durable des ressources naturelles au Sénégal, Mémoire de Master, Université de Liège, 55 pages.*

- Gamin. N. (1997). *Etude ethnozoologique dans et autour de la réserve de Konkouati (village N'tié-tié de cotovindou). Rapport final UICN, PROGECAP/GEF, Congo Brazzaville, 78 pages.*
- Gléanou E. (2009). *Logique des acteurs dans la mise en œuvre de la gestion communautaire à la FMTE, sud-est de la Côte d'Ivoire, Mémoire de DEA, Université de Cocody-Abidjan, 90 pages.*
- Gomé H. (1998). *Forêt sacrée Patrimoine écologique vital de Côte d'Ivoire, PACIPE, 169 pages.*
- Koné I. (2004). *Identification des sites abritant encore les singes Cercopithecus diana roloway, Cercocebus atys lunulatus et Piliocolobus badius waldroneae en Côte d'Ivoire, Rapport final pour CEPA, 42 pages.*
- Koné I. (2006a). *Conservation des Primates en Afrique de l'Ouest : la Forêt des Marais Tanoé identifiée comme un site de haute priorité. Rapport pour WAPCA Côte-d'Ivoire et la Division de Wildlife en Côte-d'Ivoire, 38 pages.*
- Koné I. (2006b). *Echanges avec les autorités coutumières et administratives des villages situés à la périphérie de la forêt de la lagune Ehy sur les enjeux et stratégies de la conservation de ladite forêt, Rapport de mission pour CEPA, 13 pages.*
- Koné T. (2009). *Fish diversity in a unique environmental complex, Tanoé Forest-Lower stream Tanoé river-Ehy lagoon.*
- N'dotam I. (2005). *Gestion des aires protégées au Tchad : contraintes et perspectives pour une gestion participative, Mémoire de DESS, Université de Kinshasa, 102 pages.*
- Posey D. (1995). *Indigenous People and Traditional Resource Rights: a basic for equitable relationships? Green College for Environmental policy and Understanding. Oxford, OX26HG, 56 pages.*
- Ibo J. (1993). *La politique coloniale de protection de la nature en Côte d'Ivoire de 1900 à 1958, in Revue Française d'Histoire d'Outre Mer, Tome LXXX, N° 298, PP.83-104.*
- Zannou F. (2000). *Pour une gestion communautaire durable des ressources naturelles en Afrique, Rapport UICN, Niamey, 16 pages.*