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Forest Law Enforcement, Governance and Trade in Central Africa

Jean Lagarde Betti

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Acronyms and Abbreviations

ADIE	Agence de Développement de l'Information Environnementale
AFF	African Forest Forum
AFLEG	Africa Forest Law Enforcement and Governance
CIFOR	Center for International Forestry Research
COMIFAC	Commission des Forêts de l'Afrique Centrale
DDEF	Direction Départementale de l'Economie Forestière
DGEF	Direction Générale de l'Economie Forestière
DRC	Democratic Republic of Congo
EU	European Union
FLEGT	Forest Law Enforcement Governance and Trade
FSC	Forest Stewardship Council
GDP	Gross Domestic Product
GFW	Global Forest Watch
GNI	Gross National Income
IGEFE	Inspection Générale de l'Economie Forestière et de l'Environnement
IMF	International Monetary Funds
MEF	Ministère de l'Economie Forestière
MINFOF	Ministère de la Foresterie et de la Faune
NTFP	Non-Timber Forest Products
PFD	Permanent Forest Domain
CAR	Republic of Central Africa
REDD	Reducing Emissions from Deforestation and Forest Degradation
RWE	Round Wood Equivalent

SGS	Société Générale de Surveillance
SIGICOF	Computerized Forest Infractions and Conflicts Management System
SIGIF	Computerized Forest Information Management System
SNCFF	Stratégie Nationale de Contrôle Forestier et Faunique
VPA	Voluntary Partnership Agreement
WHO	World Health Organization

Foreword

There is no doubt the Central Africa sub-region is rich in forest resources. The total cover of dense forests in Congo, DR Congo, Gabon, Central African Republic, Equatorial Guinea, and Cameroon is about 162 million ha out of which the dense forests of the DRC, the largest ones, cover 99 million ha, about 61% of the total dense forest area. With its forest resources, Central Africa produced nearly 8.4 million m^3 of timber. These important resources have for a long period contributed to population welfare in the sub-region. Unfortunately, Illegal logging has been clearly pointed out as an important cause of deforestation which negatively impacts on forest-dependent people in Central Africa sub-region. Moreover, the current legal and institutional frameworks are weak and enforcement of provisions problematic. In fact, coping with good governance in natural resources management has been challenging and problems arise when laws are incoherent, unrealistic and unenforceable, and fail to address forest land tenure and use rights.

Forest Law Enforcement and Governance and Trade (FLEGT) was initiated in 2003 by the European Commission (EU) as a comprehensive Action Plan that can set up a sustainable reform in the forestry sector, through legislation and markets and basically built upon voluntary agreements and strong commitment of producer countries. In furtherance of its mission and commitment to managing the African forests in sustainable manner, as well as generating and sharing knowledge and information for Sustainable Forest Management, the African Forest Forum commissioned a study to assess the status and performance of FLEGT and its impact on Sustainable Forest Management in the Central Africa sub-region.

This report covers an introduction to FLEGT, status of forests in the study area, including key elements of forest policy and legislation, challenges and opportunities for socioeconomic development and environmental protection in forestry. The report also addresses the status of FLEGT in selected countries and proffers the way forward to optimizing the benefits of FLEGT. It represents a very significant contribution to the discourse on FLEGT and indeed Sustainable Forest Management in Central Africa and credit should go to Dr. Jean Lagarde Betti who prepared it on behalf of the African Forest Forum.

Prof. Godwin Kowero

Executive Secretary, African Forest Forum.

Executive Summary

Trade in forest products is very important in Central Africa and the pressure on timber resources is alarming. Recent estimations from the Congo Basin indicated an annual deforestation rate of 0.16% and an annual forests degradation rate of 0.09%. This situation is mostly attributed to the high densities of rural populations who practice slash-and-burn shifting cultivation. Moreover, illegal logging and poor governance framework have been detrimental to the sustainable management of central African forests. Recent investigations indicated that less than 30% (over 39 million ha) of the forest concessions in Central Africa are managed in compliance with management plans officially approved in 2008. An informal logging economy is created at the village level and brings substantial revenues to many rural poor people. Informal logging revenues also reach external stakeholders, like administration, military, or political authorities, at all levels of the marketing chain, mostly in the form of informal taxes. The contribution of the formal forest sector to welfare in the sub-region has been acknowledged in the literature. Nowadays, this contribution has gradually and significantly decreased especially in countries such as Congo, Gabon and Equatorial Guinea where the oil sector has grown rapidly.

To improve the current negative trend of poor governance which characterizes the forest sector and fight against illegal logging, climate change and global warming reducing thereby rate of deforestation and degradation countries in Central Africa are implementing projects at regional, national and local levels under the instigation of multilateral organizations such as the World Bank and civil society organizations. The Forest Law Enforcement, Governance and Trade (FLEGT) process initiated by the EU in 2003 seeks to encourage the signature of voluntary partnership agreements (VPA) with tropical timber exporting-countries. As the primary destination of tropical timber, the assumption of the EU is that legality can contribute to sustainability efforts through the enforcement of forest legislations, provided that they adequately reflect the three pillars of sustainable forest management namely economic viability, social equity and environmental sustainability.

Indeed, most of the countries in Central Africa have enforced their legislation and implemented policies to reduce illegal logging and produce positive impacts, though the levels of implementation varies from one country to another. Countries members of the Central African Forest Commission have recently adopted the sub-Regional Convention on Forestry Control in Central Africa which is a regional initiative to harmonise the rules and procedures of monitoring forest activities at regional level. Since 2006 forest certification has rapidly evolved and more than 3 million hectares of FSC-certified forest areas have been registered in October 2008 in countries such as Cameroon, Congo and Gabon. Democratic Republic of Congo and Equatorial Guinea have no certified forest areas.

Moreover, countries have adopted regional guidelines for the exploitation and trade of non-timber forest products in 2008.

Overall, there is trend towards the reduction of illegal logging. The FLEGT-VPA system is an excellent opportunity which could effectively enhance this trend and improve the current situation of forest management, especially in countries with weak verification systems like those of the Congo Basin. It is also advisable that the FLEGT-VPA system covers all activities related to harvesting, processing and transportation of timber and not only those targeting international markets.

CHAPTER 1 Historical Background from a FLEG Process to the Development of FLEGT

To address the situation of poor governance which characterizes the forest sector worldwide, States are implementing working programmes at regional, national and local levels in order to improve the current negative trend, under the instigation of multilateral organizations such as the World Bank and civil society organizations. The Ministerial Declaration adopted during the Conference held in Yaoundé (Cameroon) in October 2003 on the process of the Africa Forest Law Enforcement and Governance (AFLEG) is an example. In this Declaration, representatives of African countries backed by the donor community commit themselves to promote the application of forest laws and good governance in their respective countries. A similar initiative took place in Bali in 2001 and brought together Southeast Asian countries under the East Asian Forest Law Enforcement and Governance Ministerial Declaration. The same concern about the state of forest governance was the focus of joint debates between European and North Asian countries at the Conference held in St. Petersburg in 2005 on the Process of Forest Law Enforcement and Governance (FLEG). Within the framework of G8, an annual meeting on the theme "Illegal Logging Dialogue" took place in Singapore in September 2006 under the aegis of the World Bank and the International Monetary Funds (IMF). More recently, the G8 reaffirmed its position on the need to improve the enforcement of forest law and the quality of governance.

The European Commission published the Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan in 2003, setting out a range of measures available to the European Union and its Member States to tackle illegal logging in the world's forests. The overall objective of the European Union FLEGT Action Plan is to reduce deforestation by ensuring that European companies buy timber only from producing countries which comply with ecological, social and economic requirements stipulated in their own forest legislations. The plan therefore seeks to develop and promote markets to ensure that only legally produced wood is imported into the EU by encouraging firms and consumers to pay the real cost of legal timber production, rather than seeking only lower prices. In concrete terms, the EU is currently preparing bilateral agreements with countries which export tropical timber to its Member States. Although these partnership agreements are supposed to be voluntary for exporting countries, they commit the EU and signatory countries to contribute to the improvement of forest governance by (EFI, 2009):

- establishing efficient systems for regulating forest practices;

- setting up systems for tracing wood and its by-products;
- issuing authorizations for wood exports to EU countries.

After signing the Voluntary Partnership Agreement (VPA-FLEGT), the two signatory parties have a transitional phase period to establish systems and tools to ensure the proper enforcement of its various provisions. The time factor is crucial because VPAs are bilateral agreements between two parties of international law, and therefore must comply with existing national procedures for the ratification of similar international agreements, for example by tabling them to the National Assembly or Parliament for countries such as Ghana, Congo and Cameroon. Basically, the authorization for exportation provided by VPAs is based on standards derived from national laws and regulations of each partner producing-country. Thus, these agreements focus mainly on environmental protection, rules governing the harvesting of species, payment of fees and taxes, conditions for wood processing, standards for the transportation of products and local community rights.

FLEGT is based on four fundamental principles:

- Measures to combat illegal practices in the forest sector constitute an intermediate step towards sustainable forest management and will remain a long-term objective;
- FLEGT is not a standalone objective, but is an integral part of overarching development policy goals which will help to achieve sustainable forest management;
- Measures to promote FLEGT are consistent with the international consensus on the shared responsibility of timber-producing and consumer countries in the sustainable and legal use of natural resources;
- FLEGT measures promote partners' own commitment to introduce and implement reforms in forestry policy to promote governance, combat corruption and enhance law enforcement.

The assumption of the EU is that legality can contribute to efforts to ensure sustainability through the enforcement of forest legislations in force provided that they adequately reflect the three pillars of sustainable forest management namely economic viability, social equity and environmental sustainability. The verification of the legality of tropical timber is regarded as a mean to improve the management and conservation of tropical forests. This is based on the prospect that European purchase mechanisms will require in the long term that timber is harvested legally and sustainably. To try to pre-empt certain weaknesses in the FLEGT-VPA system, the EU has decided to supplement the current framework by adopting a special regulation or resolution on "Due Diligence". This future regulation once in force is expected to help tropical timber importers to reduce the risks of illegality in their international transactions. From this standpoint, the regulation on "Due Diligence" in the FLEGT-VPA will impose on importers the obligation of resources, results and accountability. Such a regulation is especially necessary. A similar regulation dating from 1900 and known as the Lacey Act already exists in the United States. It has been reviewed in 2008 to adapt

it to the current trends and include timber. In other words, the aim is to hold, not only States but also true co-authors and major beneficiaries of economic crimes such as multinationals operating in this sector, accountable for illegal transactions.

Trade in forest products plays a key role in the trade flows between EU and ACP countries (Wardle and Michie, 1999). Although the emergence of Asia in general and China in particular, seems to weaken the privileged position of the EU in trade in forest products with developing countries (IUCN, 2009; Kaplinsky et al., 2010), the EU remains the primary destination of tropical timber exported by the Congo Basin countries (Eba'a Atyi et al., 2009). This trend is visible at a time when the whole international community and the European Union in particular have decided in the framework of the fight against illegal logging, climate change and global warming, to reduce rate of tropical forest deforestation and degradation through the implementation of forest governance improvement programme (FLEGT). The Forest Law Enforcement, Governance and Trade (FLEGT) process initiated by the EU seeks to encourage the signing of voluntary partnership agreements (VPA) with tropical timber exporting-countries.

CHAPTER 2 Status of Forestry in Central Africa

FOREST COVER AND TYPE, AND FOREST LANDSCAPES CHANGES

Forest cover and types

The total cover of dense forests in the six countries is about 162 million ha out of which the dense forests of the DRC, the largest ones, cover 99 million ha that is 61% of the total dense forest area. The dense forests of Equatorial Guinea cover only 2 million ha that is an area 50 times smaller than RDC's forests (Table 1) (Eba'a-Atyi et al., 2008; de Wasseige *et* al., 2009). Five types of forest vegetation are found in these countries. However the most widespread is the lowland dense forest which covers about 142 million ha that is 88% of the area of the dense forest vegetation and the least dominant is the mangrove forest which covers 192,618 ha (Table 1).

Table 1: Forest types and forest cover (ha) in the six countries of Central Africa in 2008

Types of vegetation	Cameroon	Congo	CAR	DRC	Gabon	Equatorial Guinea
Lowland dense forest	16,467,570	14,384,835	4,614,732	83,761,542	20,982,690	1,972,044
Sub-montane forest (900-1500 m)	270,540	612	1,440	5,995,494	14,445	27,450
Montane forest (>1500 m)	17,685	0	0	955,071	36	2,619
Swamp forest	0	4,108,545	27	8,200,098	17,766	0
Mangrove	120,348	0	0	0	71,919	351
Total dense forests	16,876,143	18,493,992	4,616,199	98,912,205	21,086,856	2,002,464
Forest-cropland	4,501,395	5,805,468	1,816,380	21,144,384	3,120,219	624,438

Types of vegetation	Cameroon	Congo	CAR	DRC	Gabon	Equatorial Guinea
mosaic						
Forest-savanna mosaic	5,867,865	1,351,890	22,774,437	28,592,334	185,931	28,647
Dense deciduous forest (Miombo)	105,984	1,251,531	922,923	28,023,714	176,643	0
Other vegetation	14,066,352	6,824,178	30,970,737	50,825,421	1,404,630	39,231
Cropland	4,873,077	215,514	917,676	825,390	33,480	2,637
Total Others land uses	29,414,673	15,448,581	57,402,153	129,411,243	4,920,903	694,953

Sources: Adapted from consolidated data on land cover produced by UCL, JRC and SDSU (State of Forests Report in Congo Basin 2008).

Forest landscapes changes: deforestation, degradation and reforestation rate

A recent analysis of satellite images dating from 1990 and 2000 and which focused only on densely forested areas of the Congo Basin, estimated the average annual rate of net deforestation to be 0.16% (the annual rate of net deforestation is the difference between gross deforestation and gross recovery, gross deforestation being the fraction of the total forest cover removed by human activities and gross recovery the fraction of the total forest cover which recovers from degraded forest to dense primary forest) (Duveiller et al., cited Eba'a-Atyi et al., 2008; Hansen et al., 2008a cited Eba'a-Atyi et al., 2008). The highest net deforestation rates were observed in DRC and Cameroon (Table 2) mostly because of their highest densities of rural populations who practice slash-and-burn shifting cultivation. The relatively high population growth rate in these two countries exerts an increasing demand on surrounding lands for agricultural development to meet growing food needs. However, deforestation remains relatively modest in the Congo Basin especially when savanna ecosystems are separated from dense forests in the analysis of the phenomenon. Higher national deforestation rates in the world have been published (FAO, 2009). However, these include figures from savanna ecosystems which are often more populated and more active in farming than dense forest ecosystems. Moreover, deforestation is much more pronounced around major urban areas. In addition to deforestation, recent studies have estimated the average annual rate of net degradation of dense forests in the Congo Basin

to be 0.09 % (Duveiller et al., 2008 cited Eba'a-Atyi et al., 2008 and de Wasseige et al., 2009). This measure of degradation is quantitative only as it is based only on significant and detected changes in forest cover. Thus quantitative changes for instance the changes in species composition are overlooked. Degradation is largely offset by recovery that is transition from degraded forest to dense primary forest, when considered nationally.

Table 2: National average annual deforestation and reforestation rates in the dense forest zones of the Congo Basin between 1990 and 2000

Country	Gross deforestation (%)	Net deforestation (%)
DRC	0.21	0.20
Congo	0.07	0.02
CAR	0.19	0.06
Cameroon (*)	0.14	0.14
Gabon (*)	0.09	0.09
Eq. Guinea (*)	0.10	
Congo Basin	0.17	0.16

Sources: Adapted from Duveiller et al., 2008 and Hansen et al., 2008a. (*) Because the sampling rate is low in the study of Duveiller et al., 2008, the figures for the Equatorial Guinea are drawn from Hansen et al., 2008a.

FOREST LOGGING IN CENTRAL AFRICA: PRODUCTION AND TRADE

Harvested timber volume and species logged

Central Africa produced nearly 8.4 million m³ of timber. Gabon is the biggest producer with 3.4 million m³ that is 40.5% of the total production while the DRC is the smallest producer with 310,000 m³ (Eba'a-Atyi et al., 2008; de Wasseige et al., 2009). However unprocessed logs are in volume the most important type of products the forest sector of Central Africa exports to international markets with Gabon still being in the lead with 53% of exported logs (Table 3). Sawnwood represents the second most important timber export. Cameroon is the biggest exporter of this product because it early imposed bans on log exportation since 1999 (Eba'a-Atyi et al., 2008). The most commonly logged species are: ayous (*Triplochiton scleroxylon*), sapelli (*Entandrophragma cylindricum*), azobé (*Lophira alata*), Iroko (*Milicia excelsa*) and Movingui (*Distemonanthus benthamianus*). Their importance as species logged rely on whether they are exported as logs or as sawnwood and on their abundance in each country (Eba'a-Atyi et al., 2008).

Table 3: Harvested timber volume and primary species logged by country in 2007

Country	Production (m^3)	Main species logged
Cameroon*	2,296,254	Ayous (*Triplochiton scleroxylon*), sapelli (*Entandrophragma cylindricum*), tali (*Erythrophleum* sp.), azobé (*Lophira alata*), iroko (*Milicia excelsa*)
Congo	1,330,980	Sapelli (*Entandrophragma cylindricum*), sipo (*Entandrophragma utile)*, bossé (*Guarea cedrata*), iroko (*Milicia excelsa*), wengué (*Millettia laurentii*)
Gabon	3,350,670	Okoumé (*Aucoumea klaineana)*, azobé (*Lophira alata*), okan, movingui (*Distemonanthus benthamianus*), ozigo (*Dacryodes buetnerii)*
Equatorial Guinea	524,799	Okoumé (*Aucoumea klaineana)*, tali (*Erythrophleum ivorense or Erythrophleum suaveolens)*, azobé (*Lophira alata*), ilomba (*Pycnanthus angolensis)*
DRC	310,000	Sapelli (*Entandrophragma cylindricum*), wengué (*Millettia laurentii*), sipo (*Entandrophragma utile)*, afrormosia (*Pericopsis elata)*, iroko (*Milicia excelsa*)
CAR	537,998	Ayous (*Triplochiton scleroxylon*), sapelli (*Entandrophragma cylindricum*), aniegré (*Aningeria* spp.), iroko (*Milicia excelsa*), sipo (*Entandrophragma utile)*
Total	8,350,701	

* Data 2006.
Source: National Ministries of forestry

Industrial Timber Processing

Distribution of industrial timber processing plants

In Central Africa, industrial timber transformation facilities are mainly oriented towards primary processing (sawing, peeling and slicing). Out of the 225 industrial processing units listed, 177 (nearly 80 %) are sawmills. Gabon owns the highest number (73) of industrial plants and is followed by Cameroon (60). These two countries combined own 60 % of the sub-regional processing capacity (Eba'a-Atyi et al., 2008). The existence of sawmill units does not necessary imply that they are operational. This fact is especially verified in DRC where the worsening the socio-political context of the 90s led to the stoppage or abandonment of many plants, the machinery of which is now obsolete. Official statistics do not record artisanal sawmills which often operate in the informal sector and which if considered as an entity, can contribute significantly to the timber processing sector. According to the 2008 Report on the State of Forests, peeling plants are often associated with plywood facilities and thus incorporate a secondary processing component. A growing

number of sawmills are associated with industrial planting facilities and produce planed sawn wood (flooring, moulding, etc.). The amount of processed dried wood has also risen sharply in recent years through Central Africa (Eba'a-Atyi et al., 2008).

Primary industrial timber processing products in Central Africa in 2007

The volume of primary industrial timber products processed in Central Africa in 2007 was nearly 1.7 million m^3. Countries may be ranked as follow based on the volume they produced: Cameroon with 766,490 m^3, Gabon with 563,002 m^3, Congo with 277,510 m^3, CAR with 102,041 m^3 and Equatorial Guinea with only 28,721 m^3. Sawnwood is by far the most important processed product with a total volume of 1.2 million m^3 that is 70% of the total volume of all timber processing products of the region in 2007 (Eba'a-Atyi et al., 2008).

The comparison of these productions of processed products with the exported volume of the same products, shows only slight differences. While these weak differences between volumes produced and exported may be in part due to inconsistencies in data, it nonetheless suggests that little of the industrially processed timber is sold on local markets. In all countries of the sub-region, most of the local demand is met through the informal timber sector. This informal sector is mostly supplied either through traditional wood processing operations (pit sawyers) or by recovering the waste materials of by-products from the formal sector. However, in either case these transactions are not captured as part of the formal timber sector market.

Rate of industrial timber processing

Data available from countries indicate that the number of industrial plants does not provide a complete picture of the volume of wood processed because as mentioned above some of the processing units are not operational and information on processing capacities of these plants is often incomplete. Based on statistics on factory input volumes, which are fairly well monitored in all countries except DRC, it is possible to estimate the processing rate for each country using statistics on logged volumes (Table 4) (Eba'a-Atyi et al., 2008). For example, Cameroon is the most active timber processing country, with nearly 75% of timber processed in-country. This is as a result of a policy introduced through the Forest Code of 1994, which imposed a ban on exportation of logs for five years. This strict policy has been somewhat relaxed by allowing the exportation of some logs through a quota system. Nonetheless its impacts have been significant (Eba'a-Atyi et al., 2008). Congo is the second most active timber processing country with a processing rate of approximately 65%. Overall the timber processing rate in Central Africa remains low although it has been increasing and exportation of logs still dominates. By improving the conversion rate in each country, the contribution of the forest sector to national economies could be increased, especially if companies operating in the sub-region move beyond mere primary processing of wood. Incentive policies aimed at removing current obstacles to an augmentation in processing

rates could help to achieve this. Paradoxically, exportation of raw logs transported over hundreds of kilometres is still often more profitable than sawn timber.

Table 4: Annual rates of industrial timber processing in Central Africa in 2007

Country	Processing plant input volume (m^3)	Volume logged (m^3)	National processing rate (%)
Cameroon	1,716,566	2,296,254	74.8
Congo	861,768	1,330,980	64.7
DRC	-	310,000	-
CAR	128,473	537,998	23.9
Gabon	1,131,566	3,350,670	33.8
Equatorial Guinea	73,151	524,799	13.9

Source: National ministries of forestry (Adapted from Eba'a-Atyi et al., 2008).

Timber exportation in Central Africa

Unprocessed logs represent the most important type of product exported from Central Africa. Gabon is the biggest logs producer and exporter with nearly 53% of sub-regional log exports (Table 5) (Eba'a-Atyi et al., 2008). The second most important type of timber export of the sub-regional is sawnwood. Cameroon is the only exception in the sub-region where the volume of exports of processed products exceeds the volume of logs exports. As mentioned above, this can be seen as a result of a deliberate policy to encourage within - country timber processing. Gabon is the biggest producer of peeled veneer and plywood owing to the abundance of Okoumé, which is specially adapted to this type of processing (Eba'a-Atyi et al., 2008; de Wasseigne et al., 2009). Slicing remains a marginal activity which generates high added values but requires exclusively very high-quality timber. The main destination of overall timber exports from Central Africa remains the European Union despite the rapidly growing importance of Asia. For instance, China has recently become the main destination for Gabonese timber exports. Gabon is also the only exporter of logs for pulp and paper in the region (Table 5).

Table 5: Volumes and types of timber products exported through the formal sector in Central Africa in 2007

Exports	Volume (m^3)						
	Cameroon	Congo	Gabon	Equatorial Guinea	CAR	DRC	Regional total
Logs	266,000	522,497	1,938,079	547,299	193,213	208,087	3,675,175
Sawnwood	613,000	209,122	157,856	600	76,042	30,382	1,087,002
Peeled veneer	64,286	15,307	144,135	31,101	4,300	0	259,129
Sliced veneer	3,204	0	1,889	0	0	1,392	6,485
Plywood	22,000	1,755	28,384	0	740	6,762	59,641
Planed sawnwood, flooring, molding	3,205	0	0	0	0	1,152	4,357
Log for pulp and paper	0	250,746	0	0	0	0	250,746

Source: National ministries of forestry (Adapted from Eba'a-Atyi et al., 2008)

Domestic timber sales

Domestic timber is used here to differentiate it from the timber harvested, processed and exported by the industrial forestry sector also known as formal sector. Despite there are instances where the distinction between domestic and industrial timber disappears, the two sectors show clear boundaries which can be used to distinguish them, especially in the case the Congo Basin countries. The domestic timber market is characterized by the following features: no logging titles, use of chainsaws or mobile saws on the fields, few trees per operation, sawn timber on domestic market and export mostly to neighbouring countries where there is enough timber.

Recent studies carried out in selected countries (Cameroon, Gabon, Congo and DRC) generated the first figures on volumes of the domestic timber. Total volumes of sawnwood ranked in order of importance are estimated to be about 990,000 m^3 in Cameroun, 350,000 m^3 in DRC, 78,000 m^3 in Gabon and 70,000 m^3 in Congo (Cerutti et al., 2010). However, these figures are mainly indicative and certainly underestimated because only the major cities such as Libreville in Gabon and Kinshasa in DRC were sampled as study sites and the duration of the study in Congo and DRC was only six months instead of 12 months in Cameroon and Gabon. Overall, the results show that chainsaw timber production is mostly

informal and often illegal in the Congo Basin. However, an increasing attention is much more given to the sector in all current regulatory frameworks in the region.

To make the domestic timber sector more efficient and create integrated local small industries, local investors introduced portable sawmills which replaced in most cases chainsaws. Portable sawmills are used today in all harvesting operations for processing timber destined for the domestic market. Portable saws are often rented from local timber businessmen by small-scale loggers. However the number of portable sawmills bought by small-scale loggers themselves to start their own timber business is increasing. The most common portable sawmills used for example in Cameroon is the brand *Lucas Mill*, which is currently sold on the market for about 20 million CFAF. Depending on the timber species and local conditions, portable saws ensure higher recovery rates and better quality products than chainsaws. Moreover, they can be carried around from one operation site to another via the common pick-up trucks used on the rural roads of the Central Africa region.

It is important to note that the costs borne by the informal logger may constitute substantial revenue at local level, especially in Cameroon and Gabon. Indeed, an analysis of the distribution of the operational costs which average 22,200 CFAF/m^3, showed that about 50% of the costs are to pay wages to local labour, mainly sawyers, carriers and assistants. About 7% in average that is 1,600 CFAF/m^3 is paid to the customary owner of the tree to be logged.

In other words, an informal logging economy is created at the village level and brings substantial revenues to many rural poor people. An indirect effect of the expansion of the informal logging at village level is that many people invested in this activity devote less time to their traditional farming activities. As a consequence, the new loggers recruit workers to cultivate their food crops fields and pay them with the money earned through informal logging. In other words, revenues generated through informal logging are disseminated in the local economic network.

Informal logging revenues also reach external stakeholders, like administration or different elites, mostly in the form of informal taxes. We found that off-the-record or informal taxes are often collected by administrative, military, or political authorities, at all levels of the marketing chain. Due to their nature, such informal taxes are difficult to quantify comprehensively. Nonetheless, based on operations monitored in this analysis, we could estimate them to be about 2,000 CFAF/m^3 or 9% of the total operational costs. These taxes may seem reasonable transaction cost when we consider the highly positive impact of this sector on the local economies. However, from the viewpoint of States, and when extrapolated about the total volume of informal timber sales on domestic markets as estimated above, this transaction cost can be considered as a loss of direct and formal revenues of about 6.6 billion CFAF per year.

The bulk of the informal timber comes from degraded ecosystems, mainly degraded forests, young or old fallows and cocoa plantations. However, primary forest remains an important source of timber for the informal loggers. It is noteworthy that primary forests from where informal timber is extracted are almost entirely located in the NPFD (Non-Permanent Forest Domain). Therefore, despite the ecological impact remains the same whether a forest is harvested in the PFD (Permanent Forest Domain) or in the NPFD, from legal point of view forest degradation in the NPFD should not be a concern.

The adoption, interpretation, and enforcement of the forest law, its gaps and weaknesses as well as the informal nature of the economic networks above-described and the prevalence of poverty in rural Congo Basin, are at the root of many conflicts occurring in rural areas around chainsaw lumber production. Despite the multiple forms these conflicts may take on the fields, most of the parties concerned prefer negotiating solutions to conflicts, avoiding violent or physical confrontations.

CONTRIBUTION OF THE FORESTRY SECTOR TO GROSS DOMESTIC PRODUCTS AND TAX REVENUES

Contribution to Gross Domestic Products and tax revenues

Based on an analysis of economic indicators (Table 6) poverty is widespread in the sub-region. Democratic Republic of Congo (DRC) and Central African Republic (CAR) which represent together more than 73% of the total sub-regional population are classified among the low income countries in the world (GNI per capita less than $935, based on the World Bank ranking, 2006). Moreover Cameroon and Congo are classified as lower middle income. Only two countries, representing only 2% of sub-regional population are upper middle income (Gabon) or high income (Equatorial Guinea). These general economic figures are aggravated by the high disparities in distribution of national wealth. These bad economic pictures place the management of forest resources in the Congo Basin in a context of generalized poverty among populations. The most of the people in the sub-region depend on small-scale slash-and-burn shifting agriculture for subsistence, a farming practice which uses forests as land reserves for expansion. Moreover, people in the Congo Basin subsist by harvesting forest products for both food and domestic energy such as firewood and charcoal (de Wasseige et al., 2009).

The important role of the formal forestry sector in the Congo Basin since the colonial era is well acknowledged in literature but the contribution of the sector to GDP has gradually and significantly decreased especially in countries such as Congo, Gabon and Equatorial Guinea where the oil sector has been growing rapidly (Eba'a-Atyi et al., 2008. de Wasseige et al., 2009). Based on data collected from ministerial departments in charge of economy and finances in the countries concerned, the lowest contributions of forest sectors to GDP

occur in Equatorial Guinea (0.22%) and DRC (1%) (Table 6). If in Equatorial Guinea, the decline in importance of the forestry sector in the economy is entirely due to the boom of oil sector, in DRC, the collapse of the forest sector is mostly due to the disintegration of the economic and State institutions in charge of this sector combined with a poor infrastructure network (CTB, 2007; de Wasseige et al., 2009). The latter factor is the most striking, occurring in a country which has urgent needs of financial resources (the country with the lowest GNI per capita) and largest forest area of the continent. Cameroon generates the largest revenue from the forest sector in the sub-region (Table 6).

However, the consideration of the role of the forestry sector role in national economies cannot be restricted only to its contribution to GDP. For example, despite it represents only 6.3% of GDP in CAR, timber exports contributed to 41% of national export revenues in 2007. In rural forested areas throughout the Congo Basin, the formal forestry sector is by far most important private source of employment. In CAR and Gabon, the forest sector is the second largest employer after the State. Its importance lies in the large proportion of employees who comes from surrounding rural areas compared to DRC where there is very little rural employment in the formal sector (de Wasseige et al., 2009).

Table 6: Contribution of the forestry sector to GDP and tax revenues in the Congo Basin

Country	Contribution to GDP (%)	Contribution to tax revenues (million €)
Cameroon	6.0	62.1
Congo	5.6	10.0
Gabon	4.3	31.3
Equatorial Guinea	0.2	13.8
DRC	1.0	1.7
CAR	6.3	-

Sources: Cameroon: Ministère des Finances; Congo: Document stratégique de Réduction de la Pauvreté (DSRP); DRC: World Bank; CAR: Institut centrafricain de Statistiques et d'études économiques et sociales; Gabon: Direction générale des Impôts; Equatorial Guinea: Documento de la 2da Conferencia Económica.

Contribution of trees and forests to livelihoods in the region

The forests of the Congo Basin are exploited by rural communities and timber companies at different scales to meet various conflicting interests. The forests contribute in several ways to rural livelihoods (Tieguhong et al., 2010; 2009; Tieguhong and Zwolinski, 2008). The growing importance of timber exploitation is however jeopardizing these livelihoods and the conservation of biodiversity. For example, 61% of the top 23 timber species exported from

Cameroon have important non-timber values for local communities (Tieguhong and Ndoye, 2007). It is therefore argued that a balanced approach which takes into consideration the interests of both rural communities and timber companies is needed in the process of forest exploitation. This will require among other things the development and implementation of sustainable forest management plans by timber companies, the exclusion of timber species which are important to local communities from logging, compensations for timber companies for their compliance with management plans, and the involvement of rural communities in monitoring the activities of timber companies (Ndoye and Tieguhong, 2004).

Other efforts were invested by governments in following the areas to ensure that communities participate and benefit from the management of forests in the region: the redistribution of annual forest royalties (Cerutti et al., 2010; Karsenty, 2000), the creation of community forests (Topa et al., 2009), council forests (Assembe-Mvondo, 2009; Assembe and Oyono, 2004) and community hunting areas (Assembe, 2006). These initiatives have enhanced the participation of local communities in sustainable forest management and the sharing of benefits, especially in Cameroon. The other countries of the sub-region such as the Democratic Republic of Congo, the Central African Republic and the Republic of Congo are in the process of adapting and testing the approaches following lessons learnt from Cameroon. Shortcomings of these approaches have been identified and have prompted authorities to initiate processes to revise initial working tools. For example, the revision of the Manual of Procedures and the 1994 Forestry Law in Cameroon are being achieved (Assembe-Mvondo, 2009; MINFOF, 2009).

LEGAL AND INSTITUTIONAL FRAMEWORK FOR TIMBER PRODUCTION AND TRADE

Status of forest management implementation

Nearly 39 million ha of forest have been allocated to 275 timber concessions in Central Africa and only 11.3 million ha that is less than 30% of these forest concessions are managed in compliance with management plans officially approved in 2008 (Eba'a-Atyi et al., 2008; De Wasseige et al. 2009 cited by Cerutti et al., 2010) (Table 7). Congo owns the largest area of forest allocated to concessions (12 million ha to 52 forest concessions) while Cameroon has the highest number of allocated forest concessions (103) but they cover only 6 million ha approximately that is approximately half of the area of concessions in Congo. In 2007, Cameroon owned the largest size of annual harvestable areas which represented 88% of the total number of forest concessions in the country. There is still no data available on the establishment and implementation of management plans from DRC (Djiré, 2003).

Table 7: Status of forest management implementation in Central Africa in 2008

Countries	Forest concessions					
		Management process not started	Under definitive agreement (management plan approved)	Under provisional agreement (management plan in preparation)	Total concessions allocated	Total annual harvestable areas in 2007
Cameroon	Area (ha)		4,207,862	1,866,171	6,074,033	247,758
	Nb		65	38	103	91
Congo	Area (ha)	3,696,109	1,907,843	6,371,718	11,975,670	181,687
	Nb	27	3	22	52	26
Gabon	Area (ha)		3,449,131	6,018,597	9,467,728	74,392
	Nb		11	33	44	12
Equatorial Guinea	Area (ha)					
	Nb					
CAR	Area (ha)		1,739,055	582,789		81,684
	Nb		8	3	11	10
DRC	Area (ha)				9,170,246	
	Nb		0		65	
Total area (ha)		3,696,109	11,303,891	14,839,275	39,009,521	585,521
Total number		27	87	96	275	139

Source: Data collected by the FORAF Project, 2008. Nb = Nombre.

Status of forest certification in Central Africa in 2008

During the past years, forest certification has rapidly evolved from zero hectare in early 2006 to more than 3 million hectares of FSC-certified forest areas in October 2008, which are spread over three countries namely Cameroon (899,822 ha), Congo (834,302 ha) and Gabon (1.3 million ha) (Eba'a-Atyi et al., 2008). According to the last Report on the State of Forests in Central Africa, these FSC-certified forest areas are managed by seven companies out of which four are located in Cameroon (Wijma, SEFAC, TRC, Pallisco), one in Congo (CIB) and two in Gabon (CEB and Rougier-Gabon). Apart from the FSC (Forest Stewardship Council) system, Keurhout is another sustainable forest management

certification system which has granted certificates to about 1.2 million hectares of forests in Gabon (Table 8). These Keurhout certificates are being gradually replaced by FSC certificates. Some companies in Central Africa have also opted for an environmental management certification (ISO 14001) to supplement the certification of legality or sustainable forest management (FSC or Keurhout). It is primarily the case in Gabon with 549,327 ha of forest areas with ISO 14001 certification. Once again there are no certified forest areas in DRC and Equatorial Guinea.

Table 8: Status of forest certification in Central Africa in 2008

Type of certificate	Cameroon		Congo		Gabon		CAR		DRC		Total number of conces-sions	Total certified area (ha)
	Number of conces-sions	Certified. area (ha)	Number of conces-sions	Certified. area (ha)	Number of conces-sions	Certified. area (ha)	Number of conces-sions	Certified. area (ha)	Number of conces-sions	Certified. area (ha)		
Certificates of legality (TLTV, OLB)	21	1,722,786	0	0	2	622,399	1	195,500	1		25	2,540,685
FSC	8	899,822	2	834,302	4	1,304,963					14	3,039,087
ISO 14001					1	549,327					1	549,327
Keurhout					2	1,166,027					2	1,166,027
PAFC			0	0							0	0
Total of certified sustainable management forests	8	899,822	2	834,302	4	1,304,963					14	3,039,087
Total	29	2,622,608	2	834,302	9	3,642,716	1	195,500	1		42	7,295,126

(*) In Equatorial Guinea there are no certified forests either for sustainable management or for legality.
Source: Data collected by the FORAF Project, 2008.

Monitoring of illegal logging and implementation of forest management

Data on illegal logging are limited in the Central Africa. However, most of the countries have enforced their legislation and implemented policies to reduce illegal logging and produce positive impacts. Nonetheless, the majority of policy reforms targeted large-scale, industrial, export-oriented forestry operations and neglected the small-scale, chainsaw timber production, which is mostly sold on domestic markets but also exported to the regional markets (Plouvier et al., 2002 cited by Cerutti et al., 2010).

Cameroon is at the centre of global concerns about illegal logging and the forest verification system provides insights on ways to improve forest governance at national and regional levels (Cerutti and Fomete, 2008). The introduction of independent observers in the allocation of forest titles and in forest control activities has been instructive in terms of independence of verification processes and potential impacts on forest management practices. Illegal harvests by individuals or small businesses in Cameroon were roughly estimated at about one million m^3 Round-Wood Equivalent (RWE) in 2002 out of which 10% entered the official export market and the rest was sold and consumed on informal domestic markets (Plouvier et al., 2002). Although such recent estimates of the informal timber sector are not available in other countries of the region, several indications show that it is insignificant (Cerutti et al., 2010).

In terms of regional initiatives to monitor illegal activities in the timber sector, the Central African Forest Commission (COMIFAC) countries have recently adopted the Sub-Regional Convention on Forestry Control in Central Africa which is a regional initiative to harmonize the rules and procedures of monitoring forest activities at regional level. From this perspective, the recent sub-regional legal instrument adopted in 2008 clearly states that the goal is to obtain a label to enable the traceability of COMIFAC timber products in the medium and long terms. Created since 2002, *the* Central African Network of Parliamentarians *for the Sustainable* Management of Forest Ecosystems is another interesting regional initiative which leads parliamentary debates that engaged ministers in charge of finances and forests on subjects relevant to corruption, law enforcement and national budget allocations for the development of forestry sector (Topa et al., 2009). Quantifiable results on most of these initiatives are yet to be achieved. Perhaps longer timeframes are needed for their visibility.

Non timber forest products

The scientific and policy interest of the exploitation and trade of non-timber forest products (NTFPs) has increased rapidly over the past 15 years with reforms engaged in the forestry

sector in the region. This is illustrated by the increasing amount of scientific literature and policy changes at both regional and national levels. A recent review made on the state of information and knowledge available on the NTFP in the Congo Basin confirmed the abundance of documentation on various aspects of NTFP such as production, employment, income generation, profitability, financial capital. There are however important disparities among countries and products (ACP-FORENET 2010; Ndoye and Tieguhong 2009; Tieguhong *et al*. 2009a; Mala 2008). This section gives an overview of information available on both plant and animal NTFPs in the six countries, regional directives on exploitation and trade of NTFPs and the status of legal framework and the internalization of the directives by member countries of COMIFAC.

Plant NTFPs

The Congo Basin forest cover represents 70% of the African forest cover and shelters about 50% of animal and plant species (FAO, 2005). It is estimated that more 65 million persons live in or surrounding forests and depend on natural resources as a source of food (FAO, 2005; Hoare, 2007; Tabuna, 2007). This indicates that an important part of rural economies is depends on the exploitation of forest products such as NTFPs. From a country to another, hundreds of plant species have been identified during rural and urban market surveys and inventories. These species have generally multiple uses which can be grouped under three broad categories namely food consumption, medicinal and a various other uses. These categories are described in the following paragraphs.

(i) Food consumption is one of the most important uses of NTFPs in the sub-region. The parts consumed include fruits, leaves, roots, barks of species (Hladik and Dounias, 1996; FAO, 1999; Clark and Sunderland, 2004; Ndoye and Awono, 2005; Bikoué and Essomba, 2007; Manirakiza, 2007; Tabuna, 2007; Noubissie et al., 2008; Mala, 2008). The proportion of NTFPs consumed as food varies from a country to another. In CAR, more than 65% of the NTFPs are used for food while among the pygmies this proportion is close to 90%. The most important products are wild yams, honey, mushrooms and wild fruits such as *Irvingia* spp. (Hladik and Dounias, 1996; Tieguhong and Ndoye 2004; 2006).

(ii) Medicinal uses have a key importance for forest-dependent populations who live in remote areas without modern health infrastructures (FAO, 1997). It is estimated that 80% of the African population uses NTFPs in the treatment of common ailments (WHO, 2003). In DRC, the proportion of the population using these products for medicinal purposes ranges between 61 and 91% (Ndoye and Awono, 2005). In Cameroon, 500 species are used in traditional medicine (FAO, 1997; Betti, 2002) et 66% of tree species used for timber also serves in the traditional medicine (FAO, 1999; Laird, 1999; Sheemann, 1999; Tieguhong and Ndoye, 2004 ; Tabuna, 2007).

(iii) The third category includes a diversity of uses that cannot be covered in the first two categories. These include exudates, barks to make tools, stems, rachis and petioles of *Raphia* spp. and *Elaeis guineensis* for the construction of houses and crafting. They also include NTFPs used in the production of cosmetics and tattoos (Noubissie et al., 2008; Sven, 2001; Tchatat et al., 1999; Ibid, 2002; Mala, 2008).

Although hundreds of NTFP plant species have already been inventoried in the Central African sub-region, there is still much work to do to determine all the ecological and socioeconomic potentials of forests resources. Out of several hundreds of NTFP species, only a dozen has been pointed out as having high importance from a commercial point of view in the six countries (FAO, 1999; Sunderland et al., 1999; Manembet, 2000; Sven, 2001; Clark et Sunderland, 2004; Sunderland and Ndoye, 2004; Tchatat and Ndoye, 2006; Mala, 2008). These species are listed as follows: *Baillonella toxisperma*, *Gnetum africanum, G. buchholzianum*, *Laccosperma secundiflorum, Eremospatha macrocarpa*, *Cola acuminata, C. nitida*, *Irvingia gabonensis, I. wombolu*, *Dacryodes edulis*, *Piper guineense*, *Garcinia lucida, G. mannii, G. kola*, *Marantaceae (Megaphrynium* spp., *Sarcophrynium* spp., *Marantochlo*a spp., etc.), *Ricinodendron heudelotii*, *Prunus africana*, *Pausinystalia johimbe* and *Tabernanthe iboga*.

Over the past fifteen years, priorities have been put on *Gnetum spp., Baillonella toxisperma, Prunus africana, Pausinystalia johimbe* and rattans (*Laccosperma secundiflorum* and *Eremospatha macrocarpa*) (Sunderland et al., 1999). Despite the interest given to these species, there are still disparities in available information among the countries concerned. Similarly, there is still limited information on the trade of NTFPs of *Irvingia spp.* and *Ricinodendron hedeulotii* in DRC, CAR and Congo (Sven, 2001; Clark and Sunderland, 2004; Hoare, 2007; Mala, 2008). Some products such as palm wine whose importance as local beverage, in enhancing social cohesion and generating income is well known, does not appear in the list of PFNL of high economic value. This is true for charcoal which deserves greater attention (Ndoye and Awono, 2005). Knowing their potentials and available information, these products could be taken into account to enrich the list of the 13 most important species of the Congo Basin validated in 1998 (Sunderland et al., 1999). Key information on the 13 plant NTFPs known for their high economic value is summarized in Table 9.

Table 9: Distribution of plant NTFPs with high economic value in the six countries of Congo Basin

Species	Main use	Part use	Habitat	*In-situ* Conservation	Domestication status	Distribution
Baillonella toxisperma	Medicinal, food	Fruits Bark	PF, Pl	***	W	Cameroon, Gabon, Equatorial Guinea, Congo, DRC
Gnetum africanum & *G. buchholzianum*	Food	Leaves	PF, SF, Fl	***	W, T, C	Cameroon, CAR, Congo, DRC, Equatorial Guinea, Gabon
Laccosperma secundiflorum & *Eremospatha macrocarpa*	Crafting	Stem	PF, SF	**	W	Cameroon, CAR, Congo, DRC, Equatorial Guinea, Gabon
Cola acuminata & *C. nitida*	Food	Fruits, grains	Pl, AG	*	W, C	Cameroon, Gabon
Irvingia gabonensis & *I. wombolu*	Food cosmetic	Fruits, grains	PF, SF, AG	*	W, T	Cameroon, Gabon, Equatorial Guinea, Congo, RDC
Dacryodes edulis	Food	Fruits	AG, SF		C	Cameroon, Gabon, Equatorial Guinea, Congo, CAR, RDC
Piper guineense	Food	Grains	SF		W, C	Cameroon, Gabon, Equatorial Guinea, Congo, RDC
Garcinia lucida, G. mannii & *G. kola*	Medicinal	Bark	SF, PF	***	W, C	Cameroon, Gabon
Marantaceae	Packaging	Leaves	SF	**	W	Cameroon, Gabon, Equatorial Guinea, Congo, RDC
Ricinodendron heudelotii	Food	Fruits, grains	SF, PF, AG		W, T	Cameroon, Gabon, Congo, RDC, Equatorial Guinea
Prunus africana	Medicinal	Bark	PF, AG	***	W, C	Equatorial Guinea, RDC, Cameroon
Pausinystalia johimbe	Medicinal	Bark	PF	***	W, C	Cameroon, Gabon, Equatorial Guinea, Congo
Tabernanthe iboga	Medicinal	Resin	SF	**	W, C	Cameroon, Gabon, Equatorial Guinea, Congo, RDC

Notice: PF: Primary forest; Human modified landscape (SF: Secondary forest; Pl: Plantations; Ag: Agroforests; Fa: fallow); W: Wild; C: Cultivated, T: Tolerated; *** High; ** Medium; * Low;

Source: Adapted from Sven Walter (2001) and Wilkie (1999)

Animal NTFPs

Animal NTFPs of Central Africa include game meat, products from artisanal fishing, various invertebrates (insects, locusts, snails, termites and caterpillars and larvae) and mushrooms. Game meat has been a product of particular concern for decades because of the ecological importance of wildlife on one hand and the relationship which exists between wildlife and the livelihoods of people in terms of food, medicinal and spiritual uses on the other hand (Delvingt, 2000; Fargeot et Diéval, 2003; Wright, 2003; Nasi et al., 2008)). Game meat is an important source of income and food for households and social cohesion for forest dependent populations. From an economic perspective, it is estimated that 1.0 to 3.4 million tonnes of game meat is consumed each tear by populations of the sub-region (De Merode et al., 2004). Trade of game meat represents a considerable fraction of the Gross Domestic Product (GDP) in countries such as Gabon (1.0%) and CAR (2.5%) (Delvingt, 2000; Fargeot, 2004). Hunting generates incomes to forest-dependent populations (Tieguhong and Zwolinski, 2009). Between 1995 and 1996, hunters earned individual incomes ranging from 20 000 CFAF (40.0 USD) to 35 000 CFAF (66.4 USD, exchange rate of 1 USD = 527.3 FCFA) per month during hunting seasons in areas covered by ECOFAC project (Delvingt, 2000). However, it has been demonstrated that profit margins of the trade of animal NTFPs especially game meat are limited by competition from other sources of proteins and the features of the products which do not allow large scale trade and thus restrict productivity (Fargeot, 2004)

In addition to domestic food consumption, game meat supplies the highest protein intake to rural populations. Daily intakes of game meat range from 75 to 164 g in the sites of ECOFAC Project. These figures are greatly higher than values reported in other African forest-dependent areas (Fargeot, 2004; Delvingt 2000; Delvingt et Dévial, 2000). Hunting supplies between 30% and 80% of protein intakes in rural households of the sub-region. In term of biomass, recent estimations based on hunting and trade data indicated that the products are made mainly of wild ungulates (60%), small monkeys (15 à 30%) and rodents (less than 15%) (Fargeot, 2004). From a social perspective, hunting is an important mean to strengthen social cohesion by through the redistribution of game meat within village communities (Delvingt, 2004).

Apart from game meat, the other animal NTFPs such as snails, termites, caterpillars, larvae and mushrooms also contribute to rural economies, food consumption and social cohesion within villages (Dijk, 1999; De Merode, et al., 2004; Vantomme et al., 2004; Ndoye and Awono, 2005; Mala, 2008). For example, freshwater fishes supply between 25% and 50% of the proteins intakes of the diet of forest dependent people in Central Africa (Watson and Brashares 2004). It has been demonstrated that when the supply of game meat and fish decreases during the raining season, people tend to eat caterpillars and others insects (Vantomme et al., 2004). The most commonly consumed caterpillar in the sub-region is *Nudaurelia oyemensis* hosted by sapelli trees (*Entandrophragma cylindricum*) (Lewis 1998;

Mapunzu, 2002; N'Gasse, 2003). The other species of caterpillars are more country specific. For example, *Imbrasia obscura*, *I. truncata*, *Pseudauthera discrepans* and *Anaphe* spp. are specific to CAR (N'Gasse, 2003); *Cirina forda*, *Imbrasia epimethea* and *Imbrasia ertli* specific to DRC (Mapunzu, 2002); *Imbrasia spp.* and *Coeliades libeon* are specific to Congo-Brazaville (Moussa, 2002). The larvae of the butterfly species *Rhynchophorus phoeonicius* are often gathered from raphia palm tree (*Raphia spp*.) as well as on the other palm trees (Dounias, 2003; N'Gasse, 2003).

The trade and consumption of animal forest products do not only have advantages but also some disadvantages. Among these, there is the extinction of some mammal species such as wild pigs (*Potamochoerus porcus*), buffalo (*Syncerus caffer*), hippopotamus (*Hippopotamus amphibius*) and forest elephant (*Loxodonta africana*) in certain areas. The overall levels of hunting these mammals are low in the sub-region ranging from 1.0% to 18% of the total population. However the total biomass removed is much higher ranging from 8% in Kinsangani (DRC) to 76% in Gamba (CAR) (Fargeot and Diéval, 2000; Puit, 2003; Thibault and Blaney, 2003). This indicates the risk of possible extinction for these mammals. The second disadvantage is the spread of diseases because some of these animals seem to the vectors of certain epidemics such as Ebola. The trade of game meat is widely documented in the literature on fauna conservation in the region (Robinson and Bennett, 2000; Dethier and Ghuirghi, 2000; Delvingt, 2000; Bakarr et al., 2001; Delvingt, 2000; Fargeot, 2004; Nasi et al., 2008; Mala, 2008). Table 10 provides for each country the list of non-timber forest products on which information is available in the sub-region.

Table 10: List of non-timber forest products on which information is available per country in Central Africa

Countries	Non-timber forest products
Cameroon	*Cola acuminata.* and *C. nitida (Kola nuts), Dacryodes edulis, Eremospatha macrocarpa* and *Laccosperma secundiflorum* (rattan), *Garcinia kola* and *G. lucida, Gnetum* spp., *Irvingia* spp., *Monodora myristica, Pausinystalia johimbe, Prunus africana, Ricinodendron heudoletii, Tetrapleura tetraptera, Xylopia aethiopica* Game meat, caterpillars and larvae, honey, Palm wine
Gabon	*Dacryodes edulis, Irvingia* spp., *Gnetum spp., Prunus africana, Eremospatha macrocarpa* and *Laccosperma secundiflorum, (rattan),* Game meat
Equatorial Guinea	*Dacryodes edulis, Irvingia* spp., *Gnetum africanum, Laccosperma secundiflorum, Eremospatha macrocarpa* (rattan), Game meat
CAR	*Kyllinga erecta, Eremospatha macrocarpa* and *Laccosperma secundiflorum* (rattan), *Piper guineense, Rauvolfia vomitora, Xylopia aethiopica,* Game meat, cartepillars, palm wine
DRC	*Dacryodes edulis, Garcinia kola, Gnetum* spp., , *Eremospatha macrocarpa* and *Laccosperma secundiflorum* (rattan), *Maranthaceae* Game meat, caterpillars, larvae, palm wine, charcoal, mushrooms, forages, honey

Some figures on the socioeconomic importance of NTFPs in Central Africa

NTFPs are very important to the well-being of rural and urban populations in Central Africa (Tieguhong *et al*. 2009a&b). They contribute to food security, health and income of people, provide employment for minorities and women, and consolidate the cultural capital of communities. A range of 60 to 80% of rural poor – Human development index ranging between 0.361 and 0.703 - meet their needs directly from natural resources. Because mainly the poor are involved in harvesting and marketing NTFPs at local level, it is reasonable to assert that all actions aimed at developing the NTFP sector should be connected to strategies to combat poverty in the same way as the development of the agricultural sector (Ndoye et al., 2006). The socioeconomic importance of NTFPs can be illustrated by a few figures on their market values at both national and regional levels.

At national level, the domestic market of *Dacryodes edulis* in Cameroon amounts to US$7.5 million. In 2001, the sales of rattan in the markets of Douala and Yaounde in Cameroon and Kinshasa in DRC were estimated to be US$290,000. Nine NTFPs sold in 28 markets of Cameroon, brought in 840 million CFAF during the first half of 1995. In Cameroon, rural populations earned revenue of US$700,000 in 1999 and US$600,000 in 1998 from the sales of *Prunus africana* and *Pausinystalia johimbe* (Tieguhong et al., 2009a). In this same country, women who trade *Gnetum* spp. achieve daily profit margins which vary between 16

and US$160. In DRC, traders of charcoal and palm wine earn in average 216 and US$166 per month.

At regional level, nearly 650 tonnes of *Dacryodes edulis* are exported every year from Cameroon to Nigeria, Gabon and the Republic of Congo. In 1985, the quantity of kola nuts (*Cola* spp.) exported from Cameroon to Nigeria and Chad amounted to 1,100 tonnes which are worth CFAF 187 million whereas exports of *Gnetum* spp. to Nigeria were estimated at 428 tonnes in 1992. In Cameroon, the export sales of four NTFPs (*Irvingia* spp., *Cola acuminata*, *Gnetum* spp., and *Dacryodes edulis*) amounted to CFAF 309.9 million in 1995 and CFAF 503.3 million in 1996. The sales of *Irvingia gabonensis* in Gabon, Equatorial Guinea, Nigeria and CAR was estimated at US$260,000 in 1997.

At international level, annual exports of *Gnetum* spp. from Central Africa to France and Belgium are estimated at US$2.9 million. Whereas barks of *Prunus africana* brought in a revenue of US$700,000 to rural communities of Cameroon , its processing at the level of international pharmaceutical companies provided the latter with US$200 million in 1999 (Tieguhong and Ndoye, 2006).

Adoption of regional guidelines for sustainable management of plant NTFPs

The adoption of regional guidelines for the exploitation and trade of non-timber forest products in 2008 was the most important policy change that launched the regional perspectives for the development of the NTFP sector in Central Africa. The legal provisions of the regional guidelines are adaptable to local contexts the overall vision being the reduction of poverty, the acceleration of growth, the creation of jobs appropriate legal and institutional environments for the development of the NTFP sector. These guidelines lay the common foundations for an appropriate internalization of plant NTFPs within the policy, legal, fiscal and institutional frameworks put in place by countries of the sub-region to ensure the sustainable management of forest resources. They address critical issues including:

- the definition of NTFPs;
- the access to NTFPs including the types of right to access and exploitation, and the management agreements ;
- the value chain of the NTFP sector including harvesting and storage, transportation, processing and trade;
- the fiscal provisions including taxation and financing of NTFPs;
- the offences and penalties including control and monitoring of activities within the sector;
- the institutional and legal provisions including professional structures, capacity building, statistics and implementation of the guidelines.

Considered as specific reference measures for the sustainable management of NTFPs and adaptable to the context of each country, these guidelines are, moreover, a major

contribution to the implementation of the Convergence Plan. The targeted objective is that each COMIFAC country should have an appropriate political, legal and institutional framework that promotes the contribution of NTFPs to food security, achievement of the right to food, poverty alleviation, conservation and the sustainable use of biodiversity and to sustainable management of Central African forests.

Status of legal framework for the exploitation and trade of NTFPs in Central Africa

In the six countries, all forest Codes provide some legal provisions for the exploitation and trade of NTFPs, albeit shortcomings in their implementation. These provisions are more in favour of plant than animal NTFPs. Generally, the trade of animal NTFPs, especially game meat is banned except in Cameroon where the law has recently authorized the activity on specific markets and days. This measure is an opportunity to monitor the activity and the entire sector. Concerning the level of law enforcement, it is still poor in the region because most of the legal provisions are not adapted to the context and/or because forestry officials and forces of law and order abuse their role as controllers, which facts affect negatively the volume of products collected. Only one of the six countries in the region has finalized a national strategy on NTFPs. Three of them are advanced in the process of internalization of the sub-regional guidelines while the others are still at the preliminary consultation phase. The status of legal framework for the exploitation and trade of NTFPs is summarized in Table 11.

Table 11: Summary of status of legal framework for the exploitation and trade of NTFPs in the six countries of Central Africa

	Cameroon	CAR	Congo	DRC	Equatorial Guinea	Gabon
Availability of legal provisions for the exploitation and trade of NTFPs	yes	yes	yes	yes	yes	yes
Level of law enforcement	poor	poor	poor	poor	poor	poor
Availability of national strategy of NTFPs	no	no	Yes	no	no	under development
Status of internalization of NTFPs regional directives	advanced	yes	yes	advanced	yes	advanced

MAIN CHALLENGES AND OPPORTUNITIES FOR SOCIO-ECONOMIC DEVELOPMENT AND ENVIRONMENTAL CONSERVATION

Several challenges need to be addressed to move towards sustainable forest management in Central Africa (Tieguhong, 2009; Topa et al., 2009; Tieguhong and Betti, 2008; COMIFAC, 2008). Some of these include

- **The revision and adaptation of the legal and institutional frameworks in order to be able to address persistent and emerging problems such as poverty alleviation, growth, and employment and climate changes**

The current legal and institutional are facing some implementation problems in term of enforcement of provisions. In many cases like in Cameroon, some provisions have been enforced since the forest reform was undertaken in 1994. The recent development and adoption of the strategy document for growth and employment in member countries and the challenges of the Millennium Development Goals (MDGs) are good opportunities to channel the contribution of the forest sector to poverty reduction and overall economic development in the region.

The recent signing of Voluntary Partnership Agreements by some countries of the sub-region (Cameroon and Congo) implies that legal and institutional frameworks need to be revised and adapted at both regional and national levels. The concern is about how the said influential position of COMIFAC can be diluted by national negotiations on VPAs by countries which fact contradicts the Cotonou Agreements regulating trade between EU and African Countries (Assembe-Mvondo, 2010).

Accordingly, regional legislative responses like those observed in the climate change debate, are weak. Moreover, with the introduction of the new paradigm on Reducing Emissions from Deforestation and Forest Degradation (REDD), a regional approach is of paramount importance to address problems of regional or global significance. The current perception is that COMIFAC member countries have not yet got their own agenda and solutions to deal with these emerging issues.

- **The need to improve and set-up operational forest statistics and information nodes at both national and regional levels as tools for sound decision-making**

Most of the statistics in forest and environment sectors are not consistently provided. The figures on deforestation and slash-and burn agriculture do not seem to reflect the reality. They are based on the extrapolation and there are methodological issues for both timber and non-timber forest products. The creation of regional centres such as the Agency for the

Development of Information on the Environment known by its French acronym as *Agence de Développement de l'Information Environmental* (ADIE) is a pretty good opportunity to tackle the issue. The major problem remains the lack of commitment from member countries to give their financial contributions to ensure the smooth functioning of the centre.

- **The need to increase the level of investments on studies to better understand forest resources and improve knowledge of forest ecosystems**

Generally, the level of investment remains very low in the sub-region and most of the inventories carried out so far were made mainly for the purpose of developing management plans for timber or conservation concessions. Very few studies have been carried out to understand the dynamics of forest ecosystems and its potential to improve growth. Suitable financial means should be given to forest services or to firms acting on behalf of the forest services to inventory and provide reliable data on the state of forest resources at both national and regional levels.

- **The economic role of the informal timber sector**

This challenge should help to define common methodologies to monitor this sector in the future and to sustain it. Recent studies conducted by CIFOR have already provided some figures which confirm the socio-economic importance of this sector. But most of its activities seem to be considered as illegal. This partly justified why most efforts have been invested to sustain the formal timber sector which focused mainly on the exportation of timber, while the local supply of timber for domestic uses has received no interest from policy-makers.

- **The restructuration of the timber processing sector**

The Congo Basin is leading the exportation of timber produced from natural forests but the region is weakly involved in the processing of timber for the production of housing materials and furniture. This trend must be reversed because it creates balance of payments problems to countries by increasing imports of secondary processed wood products.

- **The establishment of appropriate accountable mechanisms to improve governance problems related to forest monitoring and enforcement institutions**

The recent regional agreement on forest control is an opportunity to enhance the establishment of the components of these mechanisms by member countries.

- **The high dependency of COMIFAC and Regional Initiatives on external funding**

The high dependency of regional bodies on external funding is the most critical issue to address in the Congo Basin. Indeed, it causes the priorities of the counties to change with agendas of donors which usually impose their opinions in forestry debates. In addition, the support of the International Community usually lacks of focus and is translated into several

poorly coordinated projects, which are poorly captured and implemented by national institutions and have limited impacts on the field (Topa et al., 2009). For instance, in 2009, there were more than 60 projects managed by ministries of forests and environment and more than 10 managed by other Government services with components involved in protection, renewal and valorisation of natural resources. This is a confused and fragmented management method. To sustainably forge ahead, the countries of the region need to revive and internalize efforts and funding of activities for sustainable resources management, for example by earmarking at least 10% of revenues yielded by natural resources for their own development and management. Other key issues which need to be tackled in Central Africa to ensure sustainable forest management are summarized in Table 12.

Table 12: Summary of the status of key issues affecting the implementation of sustainable forest management in Central Africa

Key issues	Progress on the issue					
	Cameroon	CAR	Congo	DRC	Equatorial Guinea	Gabon
Timber trade tracking	Under discussion	Not yet established	Under discussion	Not yet established	Not yet established	Not yet established
Export procedures trends in domestic production	Not yet established	Not yet established	Not yet established	Not yet established	Not yet established	Not yet established
Export procedures trends in domestic consumption	Not yet established	Not yet established	Not yet established	Not yet established	Not yet established	Not yet established
Export procedures trends in exports	Exists	Exists	Exists	Exists	Exists	Exists

CHAPTER 3 FLEGT in Central Africa: Causes of Illegal Forest and Manifestations

ILLEGAL FOREST LOGGING: CAUSES AND MANIFESTATIONS

The principles initiated jointly by the FLEGT Action Plan and the EU regulation, which advocate sustainability through forest legality should impact positively natural resources of the Congo Basin countries. Indeed, since the Rio Summit in 1992, most of the States in Congo Basin have adopted new legislations consistent with the pillars of sustainable forest management (Assembe-Mvondo, 2009). As a consequence, these countries share the following innovative elements: (a) obligation to manage production forests on the basis of management plans; (b) involvement of local populations; (c) increase of the cover of conservation forests; (d) reduction of the negative impacts of logging; (e) institutionalization of specific forestry tax legislations; (f) institutionalization of control mechanisms and penalties, etc. The adoption of sustainable forest practices by the countries of this sub-region has increased the cover of forests being managed and led to significant progress in FSC certification and the institutionalization of independent observation in the control and monitoring of forest exploitation (Eba'a Atyi et al., 2009). However, despite progress towards the sustainable management of forest resources, many problems related to governance of the forest sector still persist. These problems include illegal logging, corruption, lack of knowledge on tropical forest biodiversity, insufficient resources, lack of transparency in transactions, computerization of part of the processing sector (Topa et al., 2009). As a result, the principles supported by the two EU regulations can improve efforts aimed at strengthening the actions taken at national and sub-regional levels.

Concerning illegal harvesting activities, Contreras-Hermosilla (2002) recognized that understanding their causes is a precondition to designing effective counter-initiatives. He also observed that the causes have not been studied in detail. This situation persists despite a number of initiatives aimed at stopping illegal logging. Illegal logging has been clearly pointed out as an important cause of deforestation which negatively impacts on forest- dependent people in Central Africa sub-region; however there are obviously others important drivers (Topa et al., 2009). Indeed, illegal logging may be seen as the most important factor when attention is first focused on an affected country, while in fact attention has been diverted from other important problems which might thus worsen. In the case of Congo Basin countries, the causes of key illegal forest activities reported by CBFP (2006) are: institutional problems, lack of government capacity, corruption, lack of transparency,

poor governance, weak penalties, and rate of artisanal logging. There are several manifestations connected with illegal forest activities. Some anecdotal evidence from Cameroon and Congo can illustrate the trends in illegal forest activities.

First of all, REM (2007) made this observation about Cameroon:

"Generally speaking, it highlights a number of improvements made in forest law enforcement. These include in particular the diffusion of the National Strategy for forestry and Wildlife control known by its French acronym as '*Stratégie Nationale de Contrôle Forestier et Faunique'* (SNCFF) among the Provincial Forest Law Enforcement Brigades, the provision of military training to MINFOF (Ministry of Forestry and Wildlife) law enforcement officers, a growth in the number of pre-court settlement of fines, the continuation of the thematic law enforcement missions and the establishment of a commission to investigate the traceability of community forests transport documents.

The quality of the forest law enforcement work, however, seems to have dropped during 2006. Several factors appear to be responsible for this including law enforcement officers not systematically following SNCFF procedures, a lack of resources available to them, the unequal way similar infractions are handled in terms of whether or not Official Statement Offence and mission reports are issued, the lack of follow- up of forest related cases, 'the law of least effort' applying to investigations, and finally the under-utilisation of information management tools on forest law infractions and legal cases. The legal process is slow and the sanctions and penalties imposed on parties guilty of breaking forest law are not sufficiently dissuasive, while at the same time MINFOF is publishing lists of cases which appear to be both incomplete and incoherent."

Similar comments have been made by REM (2008) in its mandate as Independent Observer in Congo:

"The semester presented in this report revealed a strong political commitment by the government to improve forest and fauna resource management and exploitation practices. This commitment is also illustrated by the opening of negotiations on a Voluntary Partnership Agreement between the Republic of the Congo and the EU as part of the FLEGT process. Nevertheless, several areas of improvement concerning the forest Administration were identified: some of the processes dealing with the definition or allocation of Forest Units showed irregularities and a considerable lack of transparency; the number of law enforcement missions conducted by Ministry of Forest Economy (MEF) during the first half of 2008 reveals a coverage rate that is insufficient compared to the quarterly missions planned by the forest Administration; this, combined with the non-dissuasive nature of fine amounts and their low recovery rate, creates a situation in which certain types of infractions become recurrent; not updating the litigation registers and delays in transmitting the necessary documents to the General Department of Forestry Economics

(DGEF) were commonly observed during REM's field missions; the DGEFs' difficulty in applying certain provisions on logging permit allocation is known to the Ministry".

A FEW ACHIEVEMENTS OF FOREST VERIFICATION SYSTEMS IN A FEW CONGO BASIN COUNTRIES

For better tackling illegal forest activities, each COMIFAC member Sate adhered to the process of implementing sustainable management and conservation, two objectives set up in the COMIFAC's Convergence Plan. To reach these objectives, the forest sector needs, among other things, an effective forest verification system:

- Congo verification system: According Assembe-Mvondo (2008) evaluation the logging audit in Congo is based on two essential elements. Firstly, its legitimacy springs from the November 2000 forests Code and its subsequent application texts. These legal instruments empower sworn forest administration personnel to carry out concrete and theoretical verification at all levels of the forestry chain. Secondly, the Congolese verification model depends on the internal organs of the Ministry of Forest Economy and Environment, especially the *Direction Générale de l'Economie Forestière* (DGEF), the *Direction des forêts*, the *Inspection Générale de l'Economie Forestière et de l'Environnement* (IGEFE), and the SGS (*Société Générale de Surveillance*). At decentralised level, regional offices also have power to carry out controls. The government organs are supported by the taxation authorities and customs. Lastly, Global Forest Watch (GFW) supports monitoring of concessions through mapping and remote sensing, and REM/Forest Monitor carry out Independent Observation activities. In practice, however, impacts of verification system are still moderate in terms of results.

- Gabon verification system: According Assembe-Mvondo (2008) assessment, the current Gabonese forest verification system is based on two main pillars. First, its legitimacy based on the 2001 Forest Law and other texts. Second, its organizational framework, concerning several departments of the Ministry of Water and Forests as well as other Ministries, such as the Ministry of Justice, the private company (Société Nationale des Parcs à Bois du Gabon- SNPBC), and Global Forest Watch (GFW). The forest control and verification system described above is embedded in administrative and bureaucratic macrostructure of organs. The absence of the third party - an independent observer - and the lack of involvement of civil society are easily noticed.

- Democratic Republic of Congo (DRC) verification system: According Assembe-Mvondo (2008), the verification system in the DRC is based on provisions of the 2002 Forest Code and its application decrees. However, the legal and regulatory framework is little known by the forest administration and other stakeholders operating in the sector. Along the same line, the verification system is manly the business of the Inspection and

Control Board (DCI) and its various branches spread around the country, coupled by many other administrative structures with official mandates, like justice, the Custom administration, the National and Administrative Incomes Head Office and the Congolese Control Office. The verification system is also getting support from Global Forest Watch (GFW), for the monitoring of logging activities through mapping and remote sensing. However, one notes the constant interference in the verification system of administrative bodies that have a military role (armies), but with no established mandate. This aspect of interference is a result of the absence of the definition of clear roles for some actors, which is currently observed in the timber sector. Indeed, some actors are taking advantage of the unclear situation. The factors that explain the current situation of the forest verification in DRC can be traced back to the history of the country, which has been marred by armies' conflicts.

- Cameroon verification system: Based on Fomete and Cerutti (2008) report, the verification system is implemented by the National Control Brigade with their regional branches. At Central level, there are also some structures such as SIGIF (forest database), SIGICOF (information management system), the custom services and the PSRF (Forestry Revenue Enhancement Program). All these administrative services receive the support of Global Forest Watch, the Independent Observer (OI) and SGS. Cameroon has gained considerable experience of verification operations in the management of the permanent forest estate, using a range of actors (NGO and private sector .etc). While Cameroon's experience shows how important external oversight can be to improve information dissemination and transparency, it warns against any over- simplistic interpretation of the institutional requirements for forest verification. The Cameroon case shows that external support and pressure can play an important role in establishing forest control and verification systems. However, national ownership and secure funding mechanism are critical for the effectiveness of the system.

Whatever may be the case in the countries of the Congo Basin, illegal commercial logging for timber is only one aspect of the broader issues on forest governance, although it has received the bulk of international attention through the FLEGT Programme.

CHAPTER 4 Some Lessons Learnt from FLEGT in Congo Basin

The last five years have been marked by rapid policy changes and implementation mechanisms aiming to improve forest governance in the Congo basin. If the major changes observed have used the Plan of Convergence as an entry point, the level of implementation varies from one country to another, and the following lessons can be drawn from the implementation of FLEGT process:

- In Congo, the efficiency of control and verification system does not depend on the multiplicity of organs, if those structures do not have clearly separated mandates. Second, the presence of an independent Observer does not automatically guarantee good results. Therefore, the implementation of the VPA should reinforce and improve the current verification system;

- In Gabon, the current verification system needs to be strengthening by new measures such as an Independent Observer, the forest exploitation information system and the national forest strategy. These measures should prepare the ground before the signature of the VPA;

- In the DRC, the main lesson learnt from the rapid assessment of the verification system is that the monitoring model cannot be separated from the other State organs. The verification system is reflective of other administrative institutions which are characterized by their fragility as a result of decadence during the civil war;

- One lesson that can be drawn from Cameroonian experience is that the control and verification systems must rely on objective procedures with clear legal prescription for decisions to be taken at key nodes in the system. Another one is that if Ministry does not buy into reform process or the reforms are pushed through a number of terms, even the application of objective criteria does not necessarily achieve real governance improvements. These two lessons should be taken in account when the VPA will be implemented.

Conclusion and Way Forward

At global level, there is an overall trend towards a reduction in illegal logging activities despite the phenomenon is still persistent (Lawson and Macfaul, 2010). The FLEGT-VPA system is an excellent opportunity which could effectively enhance this trend and improve the current situation of forest management, especially in countries with weak verification systems like those of the Congo Basin. Indeed, VPAs between the European Union and the producing countries of Congo Basin can play a broader and crucial role beyond preventing illegal logging activities by reaching member States through spillover effects on domestic and regional timber sectors. Therefore, it is vital that the FLEGT-VPA system covers all activities related to harvesting, processing and transportation of timber and not only those targeting international markets.

By 2013, at least five of the six timber-exporting countries of the sub-region namely Cameroon, Congo, Gabon, Central Africa Republic, and Democratic Republic of Congo should have signed VPAs with the EU in the framework of FLEGT. Currently, Cameroon and Congo have already signed their VPAs with EU respectively in 2010 and 2009. To date it is still difficult for the European importers to confirm whether timber products exported these two countries derived from timber harvested in compliance with national laws. Starting in 2012, all timber products entering the EU from these countries will require a license showing that they are only legally produced timber. As the EU is the largest customer of Central Africa for timber exports, the VPAs will provide additional incentives to countries of the sub-region to involve themselves further in tackling illegality in the forestry sector. VPAs' negotiations with Gabon and the Central Africa Republic are ongoing, while negotiations with DRC should start soon.

Globally, the FLEGT-VPA Action Plan can improve and strengthen the legal and technological arsenals of each of the Congo Basin countries in tackling forest criminality and achieving the sustainable management of forests. However, the negotiations of FLEGT-VPA clauses held in an unbalanced manner between an EU delegation representing the interests of 27 Member States on the one hand, and representatives of a single timber producing country, on the other hand. Therefore, there is a kind of formal imbalance in negotiations whereas two political and economic bodies similar in many respects to the EU bodies exist in Central Africa (Assembe-Mvondo, 2010). Hence, negotiations of FLEGT-VPA may instead be violating some sub-regional regulations governing forest exploitation - especially the 2008 COMIFAC Protocol on forests control in Central Africa - and contribute *de jure* and *de facto,* to weaken the process of integration of a homogeneous political and economic block in Central Africa.

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