

## **Impacts of international timber procurement policies on Central Africa's forestry sector: the case of Cameroon.**

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## 1. Introduction

Timber procurement policies have been introduced as part of a series of global forest governance arrangements that seek to influence domestic policy-making in timber producing and exporting countries. The main aim of global forest governance is to mitigate current trends in forest degradation and biodiversity loss by influencing national policies and practices (Bernstein et al., 2010). The timber procurement initiative aims at bridging the gap between international trade policies and national actions, and is concurrent with the globalization of timber trade that has resulted from the increasing wood consumption by BRIC countries (Brazil, Russia, India and China) (Kaplinsky et al. 2010; Putzel et al. 2011). Hence, the recent interest in timber procurement policies can be understood as part of an internationalization process through which “*policies within domestic jurisdiction face increased scrutiny, participation, or influence from transnational actors and international institutions, and rules and norms they embody*” (Bernstein and Cashore, 2000).

Timber procurement policies are mainly introduced in response to public concerns in consumer countries about the environmental impacts of timber extraction in producing countries, with international environmental NGOs at the forefront of raising awareness about the issue (e.g. Environmental Investigation Agency, 1996; FERN, 2009). Many timber buyers now demand that products come from verifiable and sustainable (or at least legal) sources so that the timber trade maintains credibility in the public opinion. As a response, timber procurement policies have focused on adding criteria other than price into the decision making process such as sourcing from well-managed forests (Simula, 2006; FERN, 2009).

The additional criteria in respect to timber procurement do not only relate to the production process, but also to decision-making on suitable standards. Whereas in the past standards on timber production were mainly formulated by governments, they are increasingly formulated in a stakeholder-inclusive forest governance process (Bernstein et al., 2010). In this context, the standards for legal timber do not only refer to transparency in timber trade but also to socially responsive forestry administration (Simula et al., 2009). Within this context, the last decade has seen much attention been paid to the role of forestry in poverty alleviation. It is increasingly recognized that timber procurement policies may have negative effects on the livelihoods of certain population groups such as artisanal timber producers who are engaged in traditional forestry practices and who operate in informal markets (Arrieff et al., 2010; Wit et al., 2010; Wiersum et al., this issue). Hence, the timber procurement policies may not only impact on forest management and trade, but also on government administration and on socio-economic development options for forest-dependent people. However, in the development and implementation of timber procurement policies the full range of effects that such policies will have on the different groups of people engaged in tropical timber production and trade have not yet been systematically assessed. For instance, the question of how such policies will impact on socio-economic development is still given little attention. For timber producing and exporting countries it is thus crucial to better understand the multidimensional costs and benefits of implementing measures to meet the criteria set in procurement policies.

This article aims to contribute to the evaluation of the effectiveness of current global forest governance arrangements at the national level. It assesses the implications and impacts of procurement policies at the national level. Using the Forest Law Enforcement, Governance and Trade’s Voluntary Partnership Agreement (FLEGT/VPA) between Cameroon and the European Union (EU) as a case study, this paper evaluates the potential impact of the

FLEGT/VPA at various levels. Firstly, it considers the impact on different forest management arrangements by comparing the management and implementation costs under different types of forest management. Secondly, it assesses the impacts on the forestry administration. And lastly, it considers potential impacts on more general socio-economic and development issues.

Several reasons justify the choice of the FLEGT Action Plan and of Cameroon as a case study for assessing the impact of international timber procurement policies at the national level. Firstly, the Plan can arguably be used as an example of a global timber procurement policy, with expected impacts in both consumer and producing countries. Secondly, the central Africa region has the largest number of countries engaged in the process around the world. The Republic of Congo was the first country in the region to have signed a VPA with the EU in April 2009 followed by Cameroon and the Central African Republic a year later. Recently, Gabon and the Democratic Republic of Congo (DRC) have also entered the negotiation process with the EU. Thirdly, timber exports from Central Africa represent a large share of tropical timber imports to the European timber market. Consequently, FLEGT can be seen as the main procurement policy in relation to international markets for Central Africa's timber, and the policy is likely to have an important impact on the forest sector of concerned countries.

Cameroon was selected as a case study for central Africa because for several reasons. Over time, the country has earned the reputation of being a "laboratory" for institutional reforms in central Africa (Nasi et al., 2006; Topa et al., 2010). In 1994 Cameroon became the first country in central Africa to adopt a new forest law after the Earth Summit of 1992. As a result, the country is well versed in implementing new approaches to sustainable forest management than other countries in the region. Cameroon was also the first central African country to open discussions with the EU on the FLEGT programme in 2004. These resulted in formal negotiations on the proposed VPA starting in November 2007, with the agreement signed in October 2010 and formally ratified in 2011. It is quite an ambitious process as it covers products destined not only for EU markets, but also for other international markets as well as for the domestic market. It also intends to be audaciously transparent by divulging previously government-controlled, strictly confidential, information.

Thus, in view of the long history of forest policy reform and the formal integration of the FLEGT timber procurement policy into the national forest policy, Cameroon offers a good case study for assessing the national impacts of the FLEGT timber procurement policy. Furthermore, as a very diverse array of timber management approaches exist within the country, such as long-term forest management units, community or communal forests, this allows for a comparative analysis of the effects of timber procurement policies on different forms of forest management.

## **2. Research methodology**

The assessment of the impact of the FLEGT policy in Cameroon is based on multiple data collection methods. This research methodology involved the acquisition and assessment of both policy documents from the Ministry of Forest and Wildlife (MINFOF) in Cameroon and policy evaluation reports from the Observatory for the Forests of Central Africa (OFAC). The main policy document used for Cameroon was the forestry law (Republic of Cameroon, 1994), the implementation decree (Republic of Cameroon, 1995) and the VPA legality grid (MINFOF, 2008). Since 2008, OFAC has established a National Working Group (NWG) in

Cameroon (as well as in the other five forested countries of Central Africa that are Gabon, the DRC, the Republic of Congo, the CAR and Equatorial Guinea) to collect data on the forestry sector. The data collected by the NWG at the national level include forest cover change, legal and institutional framework, forest management for timber production and biodiversity. The data collected by the NWG of OFAC are validated during a national workshop organized once a year with the participation of stakeholders from government institution, civil society organizations, and private sector and donor agencies. A summary of these data is available on the OFAC website ([www.observatoire-comifac.net](http://www.observatoire-comifac.net)) while the evaluation reports are published every two years (De Wasseige et al, 2009; 2012). For this study, the full data set was obtained and raw data for the period 2008-2011 were used to derive quantitative information used in the analysis. The OFAC source provided the information presented in table 1. These data were complemented by data from relevant bibliographic sources on legality in timber harvesting in Cameroon and Central Africa.

In addition, 13 open-ended interviews were held during the period XX to YY with key informants. The selected key informants included forest policy administrators, community forest managers, concession managers, forest management consultants, and three specialists from the main forest auditing companies in central Africa (SGS, Bureau Veritas and Smartwood).

Interviews lasted for about XX minutes each, and were divided into a common general part focusing on..., and a part specifically addressed to each category of interviewees, which focused on the category-specific costs, as detailed below. This protocol was tested on XX people before being adopted.

Three key informants from the forestry administration were selected amongst the VPA negotiators and included the Secretary General, the Technical Advisor and the Director of Forests of the Ministry of Forests and Wildlife (MINFOF). These three officials were selected because, in addition to being VPA negotiators, they also have the responsibility of preparing the forestry administration for the implementation of VPA. During the interviews, they were addressed questions related to the content of the VPA and the related costs for the Cameroon administration. Another key informant close to the forestry administration was the special technical advisor hired by the European Commission (EC) to technically support MINFOF in the preparation of the VPA, to whom cost-related questions were addressed in order to obtain clarification on the EC perspective about the costs of implementation.

Interviews on community forest management included XX advisors from SNV, an international NGO that has provided support to more than 15 forest managing communities in Cameroon since the second half of the 1990s mainly in the Eastern Region of Cameroon, and the manager of OPFCR a local NGO providing support to five forest managing communities in the Southern Region of Cameroon. Interviews focused on the costs of managing community forests, including timber harvesting, trading and related benefits.

Managers from a large-scale logging company, owning and managing eight forest concessions in the Eastern Region of Cameroon, for a total of xx hectares, provided data on the operational costs of managing forest concessions in Cameroon including labor, equipment and energy (fuel, lubricant, electricity) costs.

In Central Africa there are three main consulting firms (FRM, TERE and ONFI) that design forest management plans for private concessionaires. Managers from each of them were

interviewed with a specific focus on average “managing” costs per ha, including the preparation of a forest management plan from preliminary studies (feasibility study, forest inventory, socio-economic study, environmental impact study) to the final planning document.

Similarly, managers from the three forest auditing companies currently involved in forest certification in Central Africa (i.e. SGS, Bureau Veritas and Smartwood), were interviewed with a specific focus on forest auditing costs. In particular, the only one company among the three to have done pre-auditing for community forests in Cameroon, was specifically asked about community forests-related auditing costs.

The information collected was recorded, managed and assessed using MS Excel. All data received in terms of costs or price per ha (CFA/ha) were changed as needed as costs or price per cubic meter using the average production (m<sup>3</sup>/ha) for each type of forest title (concession, community forest, municipal forest).

### **3. The institutional setting: timber production regulations in Cameroon**

In Cameroon most forest resources are legally the property of the State (Republic of Cameroon, 1994; Bigombe Logo, 2004). Before 1994, the exploitation of commercial timber was based on a licensing system, in which exploitation licenses were allotted to commercial logging firms. But as a result of the government forest policies adopted at the beginning of the 1990s to stimulate the participation of rural communities in forest management, and to allow local people to formally access local forest resources for their own needs (Brunner and Ekoko, 2000), such more traditional approach was phased out and replaced with several logging titles and authorizations to harvest, each one with different attribution and management mechanisms (Global Forest Watch, 2000 and 2005; Topa et al., 2010).

In recent years there has been considerable progress towards SFM in Cameroon’s forest concessions. In 2003, no logging concession was managed according to an approved management plan and in 2008 the number of concessions with approved plans had increased to 65 covering 4.2 million ha (de Wasseighe *et al.*, 2012). Moreover, a number of logging enterprises selling their products to EU markets have voluntarily applied for FSC forest certification or legality verification (e.g. Vendenhaute and Heuse, 2006; Delvingt, 2010). The existing literature suggests that during the last decade the country has been experiencing a sharp decrease in the registered forest infractions in large-scale logging concessions (Cerutti and Fomété, 2008; REM, 2009).

The government has been involved in a number of initiatives to improve governance in the forestry sector namely the appointment of international NGOs as independent observers for monitoring forest law enforcement operations (Global Witness in 2000, replaced by Resource Extraction Monitoring (REM) in 2005), the publication of an atlas on Cameroon’s logging concessions (with Global Forest Watch of the World Resources Institute), and the signature of a VPA.

According to the current forest policy, rights to forest exploitation can legally be given to either commercial firms or (groups of) private people. The government has identified nine types of legal timber harvesting titles in Cameroon namely:

- **Forest concession rights:** Concession rights for commercial exploitation of forests are assigned after notice from an inter-ministerial committee, and following a public call

for tender. Concessions to a single company may not exceed a total area of 200,000 ha. After the concession is awarded, the company must sign a tentative agreement for a temporary contract of 3 years. During this period the company must prepare a sustainable management plan that must be approved by the forestry administration. Concessions are granted for a period of 15 years and are renewable.

- **Community forest titles:** Within the framework of the Cameroon policies to stimulate community forest management, local communities may be granted rights of use for a maximum area of 5,000 ha. Logging activities are conducted by the community. However, depending on the contents of a simple management plan that is approved by the forest authority, such activities can also involve selling standing volumes and issuing personal logging authorizations or permits. In any case, industrial exploitation with heavy machineries for skidding and log transportation is prohibited. Only artisanal and semi-industrial techniques with in-situ sawing of felled trees are allowed in community forests.
- **Municipal (or council) forest titles:** In addition to local community groups, forest use rights may also be granted to administrative organisations such as municipalities or village councils. Forest exploitation should be based on a management plan that is approved by the forestry administration and is decreed by the municipality heads. Any activity within these forests must comply with the management plan, and forest products of any kind belong exclusively to the municipality.
- **Three types of small timber exploitation permits:** which are granted for only one year, cannot be renewed and allow the exploitation or collection of well-defined quantities of forest products in a given area. There are three specific categories of permits: timber exploitation permits (which allow for the extraction of volumes of raw timber not exceeding 500 m<sup>3</sup>); firewood exploitation permits (for extracting both poles and firewood) and special products exploitation permits.
- **Two types of tree cutting authorizations:** consisting of either a personal cutting authorization or a wood recovery authorization (rescue cutting and wood collection). A personal cutting authorization is issued only for non-profit personal use and allows the bearer to collect a gross amount of up to 30 m<sup>3</sup> of wood. Timber recovery authorizations can be issued when a development project is likely to cause disruption or destruction in a forest. These permits are only issued when the applicant has conducted an environmental impact assessment that complies with the norms set by the environmental authority.
- **Sales of standing volume:** are issued for the non-permanent forest estates and consist of licenses to either log within an area not exceeding 2,500 ha or to remove a specified volume of standing timber.

The large number and wide variety of timber harvesting title types represent a major challenge for enforcing the forest law and for monitoring forest operations. Considering their size and exploitation requirements, of the nine types of legal timber harvesting titles only the forest concessions, the community forests and the municipal forests can be considered as suitable for sustainable timber production. Table 1 provides an overview of the status of the

allocation of these three main types of commercial timber harvesting titles. Community forests and municipal forests titles are exclusively granted to local communities or local municipal councils formed (in either case) by Cameroonian nationals (Cuny *et al*, 2004). The industrial logging concessions are granted to both Cameroonian and foreign companies. Most of these concern foreign investments; out of the ten biggest logging companies of Cameroon only two are funded by Cameroonian investors.

**Table 1.** Allocated forest exploitation titles in Cameroon (2008)

Type of title	Base for allocation	Duration of individual allocations	Number of allocated titles	Maximum size of allocated titles (ha)	Average size of allocated titles (ha)	Total allocated area (ha)
Forest concession	Surface area in hectares	15 years (renewable)	103	200,000	58,971	6,074,033
Municipal forests	Surface area in hectares	15 years (renewable)	6	Not defined	23,500	141,000
Community forest	Surface area in hectares	25 years (renewable)	177	5,000	3,57	632,330

Source: Observatory for the Forest of Central Africa (OFAC)

#### 4. Management costs in different types of forest management

A major issue when considering the impact of timber legality requirements on forest management, concerns the costs of implementing the required management practices. Considering the presence of different legal titles for forest exploitation, these costs might differ between specific exploitation arrangements.

##### 4.1 Management costs in forest concessions

In Cameroon, the average size of a forest concession is approximately 58,971 hectares (Table 1). Theoretically, within such a space, annual harvesting operations would be conducted in approximately 1,966 ha to produce around 13,762 m<sup>3</sup> of commercial logs per year. Table 2 summarizes the direct costs of compliance, verification and forest certification for an average forest concession in Cameroon based on information provided by the three main certification bodies active in Central Africa: Bureaveritas, SGS and Smartwood. Although the development of a forest management plan is a legal requirement, it is considered the first step to improve forest management and illustrates the additional indirect costs that a company would incur before seeking verification of legality and/or certification. On average, a company managing a forest concession in Cameroon needs to invest 294,855 US\$ to develop its forest management plan. Such a company also has to acquire and maintain a legality certificate, a service that can cost about 7,737 US\$ annually with the independent verification bodies that are currently operating in the country.

**Table 2.** Direct costs of compliance, legality verification and forest certification for an average forest concession in Cameroon<sup>(1)</sup>

Cost item	Total		Costs per hectare		Costs per cubic meter of harvested timber	
	CFA <sup>(2)</sup>	US\$	CFA/ha	US\$/ha	CFA/m <sup>3</sup>	US\$/m <sup>3</sup>
Annual baseline	244,591,810.00	489,184.00	124,411.00	248.82	17,773.00	35.50

timber harvesting operation costs <sup>(3)</sup>						
Generation of a forest management plan	147,427,500.00	294,855.00	2,500.00	5.00	357.10	0.71
Direct annual legality verification (TLTV) <sup>(4)</sup>	3,868,497.60	7,737.00	65.60	0.13	9.40	0.02
Pre-audit sustainable forest management certification	2,335,251.00	4,671.00	39.60	0.08	5.70	0.01
Initial certification audit	22,013,874.30	44,028.00	373.90	0.75	53.40	0.12
Chain of custody audit (lump sum)	2,755,200.00	5,550.00	-	-	-	-
Annual surveillance audit	2,335,251.00	4,671.00	39.60	0.08	5.70	0.01

<sup>(1)</sup> Costs are based on figures provided by Bureaveritas, SGS and Smartwood

<sup>(2)</sup> CFA = Communauté Financière Africaine franc

<sup>(3)</sup> Operation costs based on one annual coupe

<sup>(4)</sup> Costs provided by the certification firm SGS

If the forest enterprise decides to acquire sustainable forest management (SFM) certification after the forest management plan<sup>1</sup> has been elaborated, it requires about 54,249 US\$ to complete the initial phases of the certification process (pre-audit, initial audit and Chain of Custody –CoC – audit). It should be emphasized that these are only the direct costs related to forest certification, and as a whole, they can be estimated at 0.96US\$/ha. The indirect costs required for obtaining forest certification are much higher and depend on the specific local situation of the concession. Elaborating a forest management plan costs about 5 US\$/ha (or 0.71 US\$/m<sup>3</sup>) which is more than five times the direct costs of certification. In addition to the preparation of forest management plans, companies aiming for forest certification must also incur additional costs for improving their environmental and social practices; however, the level of these costs varies with each case.

#### 4.2 Management costs in community forests

Procurement policies do not yet have a significant impact on community forestry, because most products supplied by community forests are destined for local markets. However, in the long run community forests would increase their participation in international timber trade, given their expected increase in number and capacity. Nevertheless, respondents from the community forest managing stakeholder group have expressed worries that the widespread application of procurement policies will take community forests out of business, given the high and even prohibitive costs of verifying legality and certifying the level of sustainability.

In 2008, there were already 177 community forests allocated, covering 632,330 ha. Considering a cutting cycle of 25 years, it is possible to estimate that approximately 25,239 ha of community forests will be harvested each year if all the 177 community forests were active. If we further assume that the harvest in a community forest is equal to 7 m<sup>3</sup>/ha, then

<sup>1</sup> The forest management plan in this case is based on three main analyses: the forest inventory, the socio-economic study and the environmental impact assessment. The forest management plan includes measures related to timber harvesting, silvicultural techniques, participation of local population and measures to protect environmentally sensitive sites.

the annual national harvest from community forests will be 177,052 m<sup>3</sup>/year. The figures presented by Lescuyer et al. (2009) suggest that the whole business chain (from timber harvest to the delivery of sawn wood to the final consumer) requires 0.15 job/m<sup>3</sup> when artisanal logging and processing techniques are used. This suggests that community forests could provide 26,558 jobs for rural (sawn wood production) and urban (selling) poor people. Currently, timber production from community forests in Cameroon is not monitored by the forestry administration and is part of the informal sector. However, if community forest initiatives are abandoned because it is too expensive for communities to meet the costs of verifying legality, more than 25,000 poor people will be unemployed and even urban middle-class Cameroonians (who depend on community forests and the informal sector for obtaining construction timber products) will be affected.

The majority of community forests that are currently under exploitation in Cameroon have received technical support from donor agencies through international non-governmental organizations (INGOs). In 2007, the Belgian NGO Nature+ conducted a study in a number of community forests in Cameroon to estimate their management costs (Julve et al., 2007). Although no community forest in Cameroon is currently certified, under the Forest Stewardship Council (FSC) system, there have been pre-audits for two groups of community forests: one with three community forests and the other with four. The costs of each pre-audit were entirely covered by the World Wildlife Fund (WWF).

Table 3 gives the cost estimates of managing a community forest based on a study of Julve *et al.* (2007) on the community forest of Medjoh in east Cameroon. As can be seen, these costs are considerably higher per hectare or cubic meter than those of a forest concession. For example, a certification pre-audit for a community forest costs 0.96 US\$/ha, i.e. 12 times higher than the pre-audit of a forest concession (0.08 US\$/ha). This difference can be explained by the fixed costs of the travel expenses of the auditors from Europe. Since the FSC pre-audits correspond to a pioneer initiative in the country, it is possible that, over time, these fixed costs are reduced as local auditing capacity increases. Similarly, the administrative procedure for forest management plans and the annual reporting of forest operations have now been simplified. However, even with these changes, it will still be very costly and difficult for community forest managers to meet the exigencies of verifying legality or certification standards, especially without technical assistance from the forestry administration. According to the Cameroonian law, the forest administration is obliged to provide such assistance but this is not often applied.

**Table 3.** Management costs for a community forest with a certification pre-audit

Cost item	Amount (CFA)	Amount (US\$)
Preparation of a simplified forest management plan	8,195,000.00	16,390.00
Operational costs (Personnel, Lukas Mill, fuel, maintenance of equipment)	89,640.00 / m <sup>3</sup>	179.30 / m <sup>3</sup>
Pre-audit sustainable forest management certification <sup>(1)</sup>	481.00 / ha	0.96 / ha

<sup>(1)</sup> These costs were provided by Smartwood

<sup>(2)</sup> CFA = Communauté Financière Africaine franc

Source: Julve et al. (2007), and the interviews to four managers of community forests from the Dja et Lobo Division of the South Region in Cameroon

Julve et al. (2007) showed that village forest communities are capable of making substantial profit if their sawn wood is sold in the international rather than in the local market. As discussed in section 3.1, industrial logging with skidding tractors is not allowed in community forests. In such forests it is only possible to apply artisanal techniques in which logs are processed on the felling site with chainsaws. Nevertheless, this process usually produces low quality lumber that is not accepted in the international market and consequently sold in local markets. To produce export quality lumber, community forest managers need to acquire either special chainsaws equipped with specified gauges or Lukas mills (small sawmills equipped with wheels that can be displaced up to the felling site). According to Julve et al. (2007), such equipment would allow a community to harvest approximately 65 trees per year and obtain 500 m<sup>3</sup> from a forest covering 5,000 ha.

#### 4.3 Management costs in municipal forests

Municipal forests have an average size of approximately 23,500 ha, considerably smaller than the forest areas under concession. Both schemes have similar management requirements but the costs per hectare for the municipal forests are expected to be higher due to fixed costs that have to be met during the preparation of forest management plans and auditing costs derived from the verification of legality and forest certification processes. In the case of a municipal forest, the costs related to the development of a management plan per unit area will be at least 25% higher because the regulations governing forest inventories in Cameroon require that the sampling intensity be doubled when the forest area is less than 50,000 ha. The forest auditing costs (certification or legality verification) also increase by at least 10% compared to forest concessions.

#### 4.4 Comparison of costs between different forest management types.

The estimated costs that have to be made in the different types of forest management systems to meet the VPA requirements in compared in respect to compliance costs, certification costs and sustainability certification costs in Table 4, 5 and 6 respectively. These calculations are based on the average surface areas of forest concessions (58,971 ha), municipal forests (23,500 ha), and community forests (3,572 ha), but also on the total area allocated for each forest management unit type (especially table 6). The average surface areas are calculated from data shown in table 1.

**Table 4:** Costs of legality compliance for average-sized forest management units (FMUs) in concession, municipal and community forests in Cameroon

<b>Cost component</b>	<b>Concessions</b>	<b>Municipal forests</b>	<b>Community forests</b>
<i>Per hectare(US\$/ha)</i>			
Forest management plan	5.00	6.25	3.28
Compliance with agreements and conventions <sup>(1)</sup>	0.10	0.11	0.15
Independent verification	0.13	0.25	1.25
<b>Total</b>	<b>5.23</b>	<b>6.61</b>	<b>4.68</b>
<i>Per average-sized FMU (US\$)</i>			
Forest management plan	294,855.00	143,750.00	11,716.16
Compliance with agreements and conventions <sup>(1)</sup>	5,897.10	2,530.00	535.80

Independent verification	7,666.23	5,750.00	4,465.00
<b>Total</b>	<b>308,418.33</b>	<b>152,030.00</b>	<b>16,716.96</b>

<sup>(1)</sup>These correspond to the costs of compliance with international agreements and conventions signed by Cameroon

**Table 5.** Additional sustainability certification costs for average-sized FMUs in concession, municipal and community forests in Cameroon

Cost component	Concessions	Municipal forests	Community forests
<i>Per hectare (US\$/ha)</i>			
Forest management planning <sup>(1)</sup>	0.50	0.55	0.40
Compliance with certification standards <sup>(2)</sup>	0.34	0.37	0.37
Total compliance costs	0.84	0.92	0.77
Certification	0.83	1.66	9.26
<b>Total costs</b>	<b>1.67</b>	<b>2.58</b>	<b>10.03</b>
<i>Per average-sized FMU (US\$)</i>			
Forest management	29,485.50	12,650.00	1,428.80
Compliance with certification standards	20,050.14	8,510.00	1,321.64
Total compliance costs	49,535.64	21,160.00	2,750.44
Certification cost <sup>(3)</sup>	48,945.93	38,180.00	35,827.16
<b>Total costs</b>	<b>98,481.57</b>	<b>59,340.00</b>	<b>38,577.60</b>

<sup>(1)</sup> This includes an environmental impact assessment and additional biodiversity studies and social studies on indigenous people

<sup>(2)</sup> This includes the establishment of permanent sample plots and additional support for community development

<sup>(3)</sup> This includes pre-audit and initial audit

**Table 6.** Estimated costs of meeting legality and/or sustainability for different timber producers in Cameroon

	Concessions	Municipal forests	Community forests	All forest types
<i>Size of allocated forests</i>				
Total allocated area (ha)	6,074,063	141,000	632,330	6,847,393
Number of allocated FMUs	103	6	177	286
<i>Costs per hectare (US\$/ha)</i>				
Legality	5.23	6.61	4.68	16.52
Sustainability	1.67	2.58	10.03	14.28
<b>Total</b>	<b>6.9</b>	<b>9.19</b>	<b>14.71</b>	<b>30.8</b>
<i>Costs for the whole area allocated to timber production (Thousand US\$)<sup>(1)</sup></i>				
Legality	31,767.35	932.01	2,959.30	35,658.66
Sustainability	10,143.69	363.78	6,342.27	16,849.74
<b>Total</b>	<b>41,911.03</b>	<b>1,295.79</b>	<b>9,301.57</b>	<b>52,508.40</b>
Percentage of total costs (%)	79.82	2.47	17.71	100

<sup>(1)</sup> Computed from the total allocated area by the costs per hectare

The tables show that the highest costs per unit area for legality compliance are for municipal forests, given that their forest management plans are more expensive than those of concessions or community forests (Assembe-Mvondo & Sangkwa, 2009). The high costs of management plans for municipal forests are related to the high sampling intensity of the forest inventory that is legally required for all Forest Management Units (FMUs) smaller than 50,000 hectares (see section 3.2). The forest management plan with the lowest cost is the one for community forests, since the law only requires a simple plan for these forests. For all forest management types the costs of legality compliance are derived from the requirements of the international agreements and conventions signed and ratified by the Cameroonian government. Such requirements, however, are not very well known to the country's timber producers. If these producers intend to meet the legality requirement of international markets they will have to comply with such international agreements and conventions which, for example, include the safety regulations of the International Labour Organization (ILO) for forestry workers.

As for the sustainability certification requirements, the costs per unit area are higher for community forest managers given the high costs of certification that arise when these small forests are taken individually. On average, the managers of concessions, municipal forests and community forests will have to provide about 98,482, 59,340 and 38,578 US\$ per FMU, respectively (Table 6). The additional forest management planning costs involved here, are related to the required environmental impact assessment, the additional studies on biodiversity and the specific studies of interest for indigenous people. Other aspects of compliance with certification standards include the establishment of permanent sample plots and the requirement to support local communities in their effort to improve their own well-being. It is not expected that the implementation of Reduced Impact Logging (RIL) techniques will increase compliance costs significantly because such techniques involve an optimized planning of the road network that reduces the costs of road building.

As expected by the VPA it will cost the timber producers of Cameroon a total of about 35.6 million US\$ to meet legality requirements and 53 million US\$ to satisfy the sustainability requirements put forth by timber procurement policies. This latter figure includes 52.5 million for forest certification and 0.5 million for chain of custody certification for 93 industrial enterprises involved in timber product exports (Table 6). About 80% of the costs would have to be borne by the industrial companies managing the forest concessions. However, it seems unlikely that local communities and municipal councils will be able to afford the amount expected from them (9.3 and 1.3 million respectively) given their weak financial capacities and the level of poverty. It is important then that donors and international organizations intervene so as to keep these producers in business.

## **5. Impacts on forestry administration**

There are three main ways through which the FLEGT process and its related VPA will affect (in some cases already affects) the forestry administration (government) of Cameroon: i) the forestry administration will face some costs related to the implementation of the VPA, ii) the VPA implementation will affect forest revenues and tax collected by the government, and iii) it will impact related to the legal framework and its implementation.

## 5.1. Costs for the Government of Cameroon

According to Vandenhoute (2009), the country's forestry administration will have to face a few challenges before the VPA is implemented; the main ones are:

- Adapting and implementing a national forest law enforcement strategy
- Recording all data of the forestry sector in a centralized database
- Ensuring an appropriate monitoring of all cases of disputes
- Digitalizing forest inventory results for all types of forest titles
- Monitoring the bestowment of officially secured documents
- Building human resource capacity among MINFOF staff in charge of forest law enforcement and monitoring.

These activities require government funding. In addition to the financial support provided by the EU, the Cameroonian government will have to spend about 1.5 million US\$ to facilitate the implementation of the VPA. As can be seen in Table 7 such resources would be mainly devoted to computer equipment and staff training. It is not expected that the government will hire new personnel exclusively for VPA-related issues, so it is important that the current staff is trained to upgrade their capacities to deal with the new technological environment and the new procedures.

**Table 7.** Costs of the implementing the VPA for Government of Cameroon

Cost item	Amount (CFA)	Amount (US\$)
Computers	94,000,000	188,000
Vehicles	230,000,000	460,000
Development of a Central Database	120,000,000	240,000
Internet access for all regional delegations of the Ministry of Forests and Wildlife	80,000,000	160,000
Mobile telephones and connection kits for data transfer	2,000,000	4,000
Development of a computerized link between the databases of MINFOF and the Ministry of Finance	60,000,000	120,000
Furniture and air conditioners	15,000,000	30,000
Printing equipment	50,000,000	100,000
Personnel training <sup>(1)</sup>	82,500,000	165,000
<b>Total</b>	<b>733,500,000</b>	<b>1,467,000</b>

<sup>(1)</sup> Training of 60 staff members from several public administrations

## 5.2 Impacts on tax revenues

The contribution of the forestry sector to State tax revenues has improved considerably since verification of legality began. For example in 2007, the central government was able to transfer the equivalent of 50% of the area based forest tax collected that year (6.7 billion CFA or 13.26 million US\$) to the local councils of Cameroon's forested region (Cerutti et al., 2010). These resources are to be used directly for local development and poverty alleviation. Once all the currently identified production forest is allocated, the amount of area-based tax revenues transferred to local councils will amount to 14 million US\$ (7 billion CFA). However, (at least) half of this amount might not be generated if Cameroon is not able to meet the legal requirements of procurement policies governing timber products in the EU, USA and

Japan. It can be anticipated that, failure to implement the VPA will result in substantial losses for the government in terms of tax revenues collection.

### 5.3. Impacts on the legal and regulatory framework

As the FLEGT policy is explicitly aimed not only at fostering timber legality, but also more generally at improving forest governance, this policy impacts the current legal and regulatory framework. Within the current legal and regulatory framework some shortcomings and lack of clarity with respect to procurements policies have detected (Lawson & MacFaul, 2010). Being aware of these legal framework weaknesses, the government of Cameroon has launched a participative revision process of its forest policy and legislation. This revision process should be a suitable platform to update the current provisions on procurement policy with some requirements of the signed VPA. However, it is still not yet clear whether FLEGT will substantially influence the enforcement of forestry legislation in practice. In the light of recent work done by Cerutti and Lescuyer (2011) in Cameroon on domestic timber market, one might be reasonably skeptical as it was observed that there is a lack of (financial) incentives to change current practices).

## 6 Impacts on socio-economic and development issues

### 6.1. Market impacts

Cameroon's timber industry is highly dependent on European markets with about 74% of its exports value coming from timber products sold in EU markets (Eba'a Atyi, 2009). The link between national production and the EU markets has strengthened since 2003 when Cameroon introduced a policy on log export regulation that banned raw log exports of several species. This regulation led to an increase in timber processing activities in the country. It is estimated that in 2006 about 95% of the total log production from the industrial sector in Cameroon was processed within the country. Although the percentage of the log production processed in the country has declined since then, it is still estimated to be above 75%. Contrary to Asian Markets, EU markets prefer processed products (particularly lumber) to raw logs.

Since the beginning of the process of adopting procurement policies that favored timber products from legal origin, logging and timber processing companies in Cameroon have not tried to divert to other markets with less stringent requirements. Instead, they have developed various initiatives to meet the requirements of the EU markets. This trend is illustrated by the increase in certified sustainably managed forest areas under the FSC system, which have shifted from zero in 2004 to more than 700,000 ha in 2011 (FSC, 2011).

The prices of timber products exported from Cameroon have not been strongly affected by current procurement policies. There are reports that FSC certified timber products have received price premiums in the Netherlands and the UK; for example, the price of certified Azobe lumber is said to have increased by about 5% in markets for public works in the Netherlands (Yene Yene, 2011). The implementation of the VPA in Cameroon has potentials for providing the country with a market access advantage in Europe, especially if combined with the ongoing process of certification of sustainable forest management, compared to

other tropical timber exporters from Central Africa where the VPAs are not expected to be implemented sooner.

## 6.2. Impacts on the forest industry

Timber companies engaged in certification have clearly improved the efficiency of their field operations and have established internal auditing systems that monitor the whole production process. Such an improvement of field operations by logging companies can be at least partly attributed to public procurement policies in some EU member countries such as the Netherlands which constitute a niche market for timber products from Cameroon, especially Azobe products used in construction. It is well known that the Dutch public is very sensitive to environmental issues, and the companies that first adopted forest certification in Cameroon (e.g. GWZ and TRC) export their product to the Netherlands. This shift towards legality verification or forest certification has increased the production costs for timber companies. However, most of the costs are related to compliance with the Cameroonian law, although additional costs related to changes in management practices do exist in the case of forest certification. Considering the capacity of the forest industry to access capital and the efforts made by companies to meet costs related to forest certification or legality verification, It can be assumed that the forest industry would be capable of meeting the cost of upgrading field operations and related auditing by independent bodies when the VPA is implemented.

## 6.3. Social and development impacts

It is estimated that the formal forestry sector in Cameroon employs 13,000 people and that about 8,000 of these jobs are located in the remotest parts of the country where the government is not able to open and maintain roads (MINFOF, 2008). The salaries generated by these employees of the forestry sector constitute the main financial source for the local economies in such regions. Additionally, the contribution of forest enterprises to the maintenance of public roads is essential in these areas. Consequently, if Cameroon does not implement the VPA, the reduction of exports to the EU will lead to a major setback in the economic dynamics and the local development of these landlocked regions.

Currently the government of Cameroon generates about 52 million US\$ in forest taxes annually. Tax recovery has substantially improved since 2004 (Topa, G, 2010) as illegal activities decrease in the country. Meeting the requirements of procurement policies either on legality or on sustainability would consolidate and secure the tax revenues from the forestry sector for the government of Cameroon. On the other hand, a failure to satisfy these policies will make tax revenues uncertain, given that in such a case most of the activities would be occurring illegally.

The most problematic aspect of timber production in Cameroon is the informal forestry sector which produces about one million m<sup>3</sup> of sawn timber for consumption in the national market and employs an estimated 150,000 people (Lescuyer et al. 2009; Cerutti & Lescuyer, 2011; Kishor & Lescuyer, 2012). About 20% of the total timber production of the informal sector comes from community forests that can be potentially monitored by the forestry administration (Eba'a Atyi, 2009). The remaining 80% comes either from other forest titles

for which the administration has shown a lack of monitoring capacity, or from unregulated/illegal sources such as trees felled on individual farms. Because of the low financial capacity of local rural actors and difficult access to capital by forest managing communities, these actors cannot meet costs related to independent auditing and/or upgrading of management systems. One can reasonably therefore assume that, if the VPA is implemented to include all categories of actors and all markets, (as it is intended) and the small scale operators are required to bear the cost of implementation, the national market and the housing and furniture industries in Cameroon will face an important crisis with the self-employed people in the informal sector running risk of losing their means of livelihood. As such, the VPA may have a perverse impact of increasing poverty instead of reducing it. It seems realistic to postpone the implementation of the VPA for the national market until the forest administration is able to set feasible regulations for the current informal sector.

## **7. Conclusions**

The Cameroonian experience shows that timber procurement policies such as FLEGT have the potential to contribute to the sustainable management of forest resources in Central Africa. The positive impact of FLEGT will be especially felt in industrial forest concessions in which harvested timber products are exported to international markets. However, the implementation of FLEGT brings substantial financial costs for forest managers and national governments. In the case of industrial companies with foreign capital this will not constitute a major issue. However, the costs of implementing FLEGT VPA are too high for small forest managers who currently operate as the main suppliers of the national markets (community forests and actors in the informal sector). This category of producers could therefore be driven out of business if the VPAs are strictly implemented and without any further support from government authorities and/or other partners. In this sense, procurement policies may have perverse effects on poverty reduction and turn up at odd ends with the overall goals of the whole FLEGT Action Plan. The findings of this paper reinforce the opinion of Bernstein et al., (2010) which state that, when an internationalization process focuses on larger issues such as global trade, its influence will be rather limited compared to the cases where the focus concerns management practices in a specific context of forest resource utilization. In fact, FLEGT in Central Africa may represent a disincentive to one of the most important aspects of governance: participation of community (informal) actors in trade. This is because one of the most important approaches to increased participation of Cameroon nationals in forest management is through the management of community forests, the others being through council forests and informal lumber production for domestic markets. As already mentioned in section 4.4 it would be difficult for communities and local councils managing forests to meet the costs of legality verification required under the VPA if there are no external support. Communities as well as local councils may be driven out of the timber sector to leave room for a few more powerful industrial operators, resulting in a decrease participation of local actors.

In preparation for implementing the VPA, Cameroon's government should devote special attention to community forests. Local officials involved in granting community forest titles should provide more assistance to local communities in meeting VPA requirements. to avoid that forest managing communities pay additional costs to obtain proof of legality (according to the figures given in Table 4 such costs could amount to about 5,000 US\$ per community).

Finally it should also be noted that, within the informal sector, community forests would be the easiest segment to monitor since their resource allocation is already documented and the forestry administration can go straight into monitoring the production process.

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