African Forest Forum

A platform for stakeholders in African forestry

Public private partnerships in the forestry sector in Central Africa

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AFF exists to voice the concerns of African forestry stakeholders, and to use science, indigenous knowledge, and experience to advocate for the increasing relevance of forests and trees outside forests to peoples' livelihoods, national economies and the stability of the environment.

In this regard, AFF provides independent analysis and advice to national, regional and international institutions and actors on how economic, food security and environmental issues can be addressed through the sustainable management of forests and trees outside forests. Operationally, AFF mobilises resources to address forestry and related issues that cut across countries and different African sub-regions with a view of enhancing the relevance and contribution of forests and trees outside forests to the livelihoods of the people of Africa and stability of their environment.

Vision
The leading forum that unites all stakeholders in African forestry

Mission
To contribute to the improvement of the livelihoods of the people of Africa and the environment they live in through the sustainable management and use of tree and forest resources on the African continent.

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Public private partnerships in the forestry sector in Central Africa

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ACRONYMS AND ABBREVIATIONS

AFF	African Forest Forum
APN	African Parks Network
CAT	Management and Transformation Convention
CEEAC	Communauté Économique des États de l'Afrique Centrale
CFs	Community Forests
CFAD	Concession Forestière sous Aménagement Durable
CFEs	Community Forest Enterprises
CIB	Congolaise Industrielle de Bois
CIBN	Compagnie Industrielle des Bois du Niari
CIFOR	Center for International Forestry Research
COMIFAC	Commission on Central African Forests
CTI	Industrial Transformation Convention
DRC	Democratic Republic of Congo
FAO	Food and Agriculture Organization of the United Nations
FIPCAM	Fabrique Camerounaise de Parquet
GDP	Gross Domestic Product
Ha	Hectare
ICCN	Congolese Institute for the Conservation of Nature
IFO	Industrie Forestière de Ouesso
INGOs	International Non-governmental Organisations
ITTO	International Tropical Timber Organization
LCA	Leader in Conservation in Africa
MAB	Man and Biosphere
MEDD	Ministère de l'Environnement, de la Conservation de la nature et du Tourisme
MEFDD	Ministère de l'Economie Forestière et de Développement Durable
NA	Not applicable
NGOs	Non-Governmental Organisations
NTFPs	Non-Timber Forest Products
NWFPs	Non-Wood Forest Products
OCC	Office Congolais de Contrôle
PGG	Permis de Gré à Gré (permit by mutual consent)
PFA	Permis Forestiers Associés
Placam	Placages du Cameroun
PPP	Public Private Partnership
RAPAC	Réseaux des Aires Protégés en Afrique Centrale
RECs	Regional Economic Communities

SAFBOIS	Société Africaine de Bois
SCPFE	Service de Contrôle des Produits Forestiers à l'Exportation
SCTB	Société Camerounaise de Transformation de Bois
SEFYD	Société d'Exploitation Forestière Yang Dong
SFM	Sustainable Forest Management
SFID	Société Forestière et Industrielle de la Doumé
SICOFOR	Sino Congo Forêt
Sida	Swedish International Development Cooperation Agency
SIFORCO	Société Industrielle et Forestière du Congo
SIM	Société Industrielle de Mbang
SMP	Simple Management Plan
SOFORMA	Société Forestière et des Matières ligneuses Africaines
SODEFOR	Société de Développement Forestièr
SPWPs	Secondary Processed Wood Products
SSV	Sale of Standing Volumes
STDev	Standard Deviation
UK	United Kingdom
USA	United States of America

EXECUTIVE SUMMARY

The African Forest Forum (AFF) commissioned this study in four of the ten countries in Central Africa (Cameroon, Democratic Republic of Congo, Gabon and the Republic of Congo) as part of its activities funded by the Swedish International Development Agency (Sida) through a project entitled “Strengthening Sustainable Forest Management in Africa”. The project seeks to generate and share knowledge and information through partnerships in ways that will provide inputs into policy options and capacity building for improved forest management in order to better addresses poverty eradication and environmental protection in Africa.

Central Africa is well-endowed with forests, covering 48% of the total land area of 530 million ha. Four countries (Cameroon, Congo, DRC and Gabon) were purposefully selected for this study because together they constitute about 87% of the forest in Central Africa and representing all biophysical landscapes. The methodology for data collection included focus group discussions, interviews with key informants and desk reviews of relevant reports including draft reports that were prepared by national consultants from the 4 selected countries, policy and legislative information related to the sector from various websites and scientific articles. Timber-based and NTFP-based enterprises were targeted to identify stakeholders and beneficiaries, the challenges and the probable future for value addition to forest products and their marketing.

Based on the study results some recommendations are proffered to policy makers (specific to forest/product type) and others for further research on public/private partnerships for both processed wood and NTFPs in Central Africa. The results indicate that in Central Africa, six forest management models exist and have their merits and demerits depending on the primary beneficiary (private sector, councils, communities or private individuals) and the socioeconomic focus of national governments to increase stakeholder participation in sustainable forest management or to ensure an increased financial contribution of the forestry sector to the country's GDP. It was observed that forest concessions form the dominant forest management model in Central Africa, with total surface of 7 058 958 ha in Cameroon, 13 685 971 ha in the Republic of Congo, 12 215 659 ha in the Democratic Republic of Congo (DRC) and 14 272 630 ha in Gabon.

Emphasis is also given on other evolving models of forest management such as community forests, council forests, sale of standing volumes and special permits based on mutual understanding between the public and the private individual or enterprises. In addition to PPPs under production forests in Central Africa, other forms are evolving in protected areas (mostly World Heritage Biospheres sites) in the Democratic Republic of Congo (DRC), the Republic of Congo and Chad but with yet immeasurable positive attributes. However, one qualitative positive attribute in the Odzala-Kokoua National Park in DRC is linked to deliberate involvement of other stakeholders such as local communities in the development of ecotourism activities.

Also examined is the contribution of the forestry sector to national income and employment as well as national trade balances associated with the export and importation of key wood products. Further analyses are made on trade aspects, in terms of efficiency in flows to various continents, the types of products exported; and finally some recommendations are proffered, including on the need for increased value addition within the countries and further research support for the generation of scientific evidence to support policy decision making.

1. INTRODUCTION AND OBJECTIVES OF THE STUDY

The African Forest Forum (AFF) commissioned this study in four of the ten countries in Central Africa (Cameroon, Democratic Republic of Congo, Gabon and the Republic of Congo) as part of its activities funded by the Swedish International Development Agency (Sida) through a project entitled “Strengthening Sustainable Forest Management in Africa”. The aim of the study is to facilitate the development of an organized private sector in forestry, including the identification and promotion of promising public private partnership (PPP) models or approaches for an all-inclusive forest compatible sustainable livelihoods development, including gender considerations. It is expected that the study will to generate and share knowledge and information through partnerships in ways that will provide inputs into policy options and capacity building for improved private sector development in forestry that willnot only contribute to sustainable forest management but also contribute to addressing poverty eradication and environmental protection in Africa.

African governments have their economic development based on market forces and strong private sector leadership. The private sector in forestry is almost non-existent as an organized entity that one can dialogue with in many African countries. It has to be organized and developed from the many diverse actors who largely operate informally in order to better coordinate their role in forestry development.

At the heart of public and private sector development in forest products industry are diversified groups of individuals, including men and women, youth and marginalized/disadvantaged/vulnerable groups. Facilitating the development of the industry demands the identification and understanding of the interactions between the different groups of actors and the forest resources in the context of their different needs, privileges, contributions, challenges and priorities. This is further complicated by the fact that gender disaggregated information about the categories and activities of users of forest resources in rural communities and their contributions to the local economy is seldom available.

The private sector development has a particularly strong role to play in poverty alleviation and environmental protection and could have significant impact on women and other marginalised groups. Gender disaggregated data and analysis is therefore crucial to helping realise such impact.

The results of this study could facilitate a better understanding of the key actors in both primary and secondary forestry production in the selected countries. This could in turn help evaluate how to strengthen and/or develop an all-inclusive actors into an organized and cohesive private sector in forestry that can articulate its issues, be heard, and attract attention and resources for its development and growth.

The studies targeted the identification of the different actors, assessment of their modus operandi, and an evaluation of the modalities for strengthening the evolving, largely informal, private sector in forestry, in addition to also mapping the public sector in forestry. The studies were undertaken in all forest types in the study countries, including but not limited to parklands, woodlands and savannah, moist forests, plantations and woodlots, and mangroves. The studies also sought to identify and promote promising public private partnership (PPP) models or approaches for forest compatible sustainable livelihoods development, and also identify ways to strengthen the capacity of the industry to address both social and environmental concerns in ways that can contribute to more sustainable, equitable and effective private sector development in the forestry sector.

Although there is no single and internationally accepted definition of PPP, in this study, PPP is understood as: a short or long-term contract between a government agency and a private party, for providing a public asset (in this case forest), in which the private party bears significant risk and management responsibility (World Bank 2012). The definition encompasses contracts in many sectors and for many services, provided that there is a public interest in the provision of the service, and that significant risk and management responsibility have been transferred to a private party (World Bank 2012). Also, the private sector is comprised of companies and individuals or groups of individuals.

1.1 Background

Central Africa encompasses the Congo Basin forests that form the second largest block of rainforest in the world after the Amazon forests. In this report, Central Africa is the region composed of Burundi, Cameroon, the Central African Republic, Chad, Congo, the Democratic Republic of the Congo, Equatorial Guinea, Gabon, Rwanda and Sao Tome & Principe (FAO, 2011). This region has a total land area of 530 million ha with a forest cover of about 255 million ha representing 48% of the total land area (FAO, 2011). Forest endowment varies among the countries, and this can be classified into five forest cover categories (Nair and Tieguhong, 2004); with the *low forest* cover countries being Chad and Burundi with less than 10% of the total land area under forest. One country, Rwanda, is within the *moderate forest cover* category with 18% of its land area under forest. Sao Tome & Principe has about 28% of its land mass under forest and is considered as having *adequate forest cover* while Central African Republic and Cameroon with 36% and 49% forest cover respectively, are considered as *high forest cover* countries. The remaining four countries, namely the Republic of Congo, Democratic Republic of Congo (DRC), Equatorial Guinea, and Gabon are considered as *very high forest cover* countries with over 50% of their land mass under forest cover (Table 1).

Table 1: Land area, forest cover, and forest cover proportion

Countries	Total land area ('000 ha)	Total forest area ('000 ha)	Forest as proportion of total land area (%)	Proportion of total Central African forest (%)
Democratic Republic of Congo	226,705	154,135	67.99	60.48
Cameroon	47,271	23,036	48.73	9.04
Congo	34,150	22,411	65.63	8.79
Central African Republic	62,298	22,605	36.29	8.87
Gabon	25,767	22,000	85.38	8.63
Chad	125,920	11,525	9.15	4.52
Rwanda	2,467	435	17.63	0.17
Equatorial Guinea	2,805	1,626	57.97	0.64
Burundi	2,568	172	6.70	0.07
Sao Tome & Principe	96	27	28.13	0.01
Total	**530,047**	**254,852**	**48.08**	**100.00**

Source: FAO, 2011.

1.2 Contribution of private forestry sector activities to national economies

The forestry sector in Central Africa contributes to the national incomes (i.e. GDP) and to creation of employment opportunities in this region. Only recorded income and employment statistics from public sources are available. Since many activities in the sector are conducted in an informal way, considerable and valuable information on the sector is lacking, making its contributions to be grossly underestimated.

In Cameroon, in terms of tax revenues, 21 301 131 011 FCFA (US$ 35620620) and 18 369 471 958 FCFA (US$ 30718181) were generated in 2011 and 2012 respectively (de Wasseige et al. 2014). The contribution of the forestry sector to GDP was about 6% in 2004 (de Wassiege et al. 2010) but has since dropped to 3.95% in 2013 (Eba'a Atyi et al. 2013). According to de Wasseige et al. (2014), formal logging led to the creation 13,000 direct jobs and 150,000 indirect jobs. Other estimates by Eba'a Atyi et al. (2013) put total direct employment in the forest sector at 22722 with 21902 linked to the timber sector and 802 to sport hunting. The informal sector employs several thousands of Cameroonians with about 44,000 in artisanal sawing, 460,000 in village hunting by villagers in adjoining forests and 90,000 for fuelwood collection and sale in urban centres (Eba'a Atyi et al. 2013).

In Gabon, the forest sector is in second place for state export earnings contributing about 6% and remains the primary employer in the private sector with about 12,868 jobs generated directly (MEFEPPN-FORAF 2008, Nasi et al., 2006). The **Republic of Congo** and **DRC** have GDP contributions from the forest sector of 5.6% and 1% respectively and direct employment of 7424 and 15000 respectively (Table 2).

Table 2: Contribution of the forestry sector to the GDP and employment in countries in Central Africa

Countries	Contribution to GDP, excluding oil sector (%)	Year	Contribution to direct employment	Year
Cameroon	6 (3.95)	2004 (2013)	13000	2006
Congo	5.6	2006	7424	2007
Gabon	3.5	2009	14121	2009
DRC	1	2003	15000	2007

Source: Bayol et al. 2010, Eba'a Atyi et al. 2013.

Four countries (Cameroon, Congo, DRC and Gabon) were purposefully selected for this study because together they constitute about 87% of the forest in Central Africa, representing all biophysical landscapes.

In the region, primary forest production remains the dominant economic forestry activity generating appreciable revenues to local, regional and national governments as well as contribution to employment for both men and women. However, the involvement of women in the sector remains minimal in the region, except with respect to the gathering and marketing of non-timber forest products (Ingram et al. 2015). Secondary and tertiary forest production remain weak, albeit increasing institutional support to strengthen them (COMIFAC 2014). The key actors in the forestry sector in the region include national governments as custodians of the resources, multinational companies as the major private sector exploiters of the forests for timber, local communities and councils as local custodians, and national and international non-governmental organizations (INGOs) as advisers on and promoters of sustainable forest management and conservation issues.

The ensuing sections are on the methodology and key results of the study. The discussion of the key results will dwell on the institutional and legal setting for sustainable forest management in Central Africa, the public-private partnership (PPP) models and approaches in forestry, the main private sector actors harvesting forest resources in the region, the tree species commonly harvested and their respective volumes, the destinations of the forest products traded. Other evolving PPP forest management models, including protected areas management models will also be discussed. The report ends with an examination of the performances of the forestry sector in the region with respect to trade balances in major wood products, un addition to some concluding remarks and recommendations on further interventions.

2. METHODOLOGY

The methodology for data collection included focus group discussions, interviews with key informants and desk reviews of relevant reports, policy and regulatory information from various websites and scientific articles. Timber and NTFP enterprises were targeted to identify stakeholders and beneficiaries, the challenges and potential for value addition to forest products and their marketing. Based on the results some recommendations are proffered to policy makers (specific to forest/product type) and recommendations for further research are formulated on the potential for public-private-partnerships in wood processing and NTFPs in Central Africa.

3. KEY RESULTS OF THE STUDY

3.1 Institutional and legal context for sustainable forest management in Central Africa

In almost all countries in Central Africa, the sustainable management of forests is under the ministries in charge of forests and other related activities. Forestry laws and regulations are the prevailing national legal instruments governing forest management. For example, in Cameroon, the '*concession forest management model*' came with the timber harvesting rights as defined in the 1994 Forest Law that included mainly the long-term rights to forest management units FMUs), short-term sales of standing volumes and small logging titles (30-cubic-meter personal authorizations, 300-cubic-meter cutting permits, and the recovery of timber following land conversion or special authorization). With this, the government's intention to sustainably manage FMUs was structured in ways to replace all licenses issued before 1994; and this approach gradually became the main source of commercial timber supply for Cameroon and by 2006 forests concessions operating with management plans already supplied 85% of commercial timber compared to only 30% in 1998 (Topa et al. 2009). The concession forest management model is guided by the establishment, approval and implementation of economic, social and environmental safeguards by the public forest administration, as detailed in forest management plans, that need to be scrupulously followed by the private sector while managing allocated forest areas. The public-sector monitors compliance of the private sector to SFM guidelines (Tieguhong 2016, Tsanga 2014, Cerutti et al. 2011, Topa et al. 2009).

In the Republic of Congo, according to the Law (Article 3, Law № 16-20 of Nov. 20, 2000 of the Forest Code) the Congolese forest area can be subdivided into two distinct categories of ownership including: The state forest domain and the domain belonging to private individuals. The state forest domain is divided into Non-Permanent Forest Estate (NPFE) and Permanent Forest Estate (PFE) (GoRoC 2014). Individuals can become owners of

private forests if the forests are located on land they own, or owners of forest plantations if they planted these forests on land belonging to the State (Articles 33, 34 and 35 of Law № 16-20 of November 20, 2000 of the forest code). However, exercising these rights is contingent upon obtaining a customary land title as required by the Law (Wafwana et al. 2013). The PFE is divided into several management units (FMUs) that constitute the basic units of management, protection, conservation, reforestation and production. In this regard, the Forestry Code distinguishes four types of exploitation titles that can be issued to private companies to exploit the Congolese forests: industrial transformation conventions, management and transformation conventions, plantations harvesting permits and special permits (Wafwana et al. 2013). Generally, in the Republic of Congo, the 2000 Forestry Code governs and regulates industrial timber exploitation, which is open to the private sector through public-private partnerships under the forest concession model and the same holds true for Gabon and DRC (Table 3). Forest industries have to exploit forest resources based on the rules and regulations embedded in the Forestry Code and related documents.

Table 3: Laws and regulations governing forest management

Countries	Forestry codes	Decree of Application	Source
Democratic Republic of Congo	2002 Forestry Code		GoDRC, 2014
Cameroon	1994 Forestry Code	1995 Decree of Application	Republic of Cameroon, 2004, 2005
Congo	2000 Forestry Code		GoRoCo, 2014
Gabon	2001 Forestry Code	-	Republic of Gabon, 2001

Source: Compiled by author

3.2 Public-private partnership models and approaches in forestry

In Central Africa, seven forest management models exist and have their merits and demerits depending on the primary beneficiaries (private sector, councils, communities or private individuals) and the socioeconomic focus of national governments to increase participation of actors in sustainable forest management or to ensure an increased financial contribution of the forestry sector to the country's GDP. Table 4 highlights some key positive and negative attributes of the different forest management models in Central Africa.

Table 4: Attributes of forest management models in Central Africa

Model	Primary beneficiary	Key positive attributes	Key negative attributes	Applicable countries &comments
Concession	Private sector	-Attributed through auction by government that collects area-based forestry fees -Require approved management plans from ministry in charge of forests -Forest remains state property and monitoring of management standards done by the state -Greater technical skills available in timber companies -Primary processing capacity available at the level of enterprises -Good knowledge of international markets for wood available in the private sector -Supply to international markets secured by multinational companies -Necessity for social responsibility contracts with employees and local communities	-Low area fees averaging US$4/ha in Cameroon (N=99) -Misuse or misdirection of annual forestry fees by the government -Low tertiary processing capacities -Big role of multi-national companies*	Cameroon, Gabon, Congo, DRC. In Gabon there are three titles[1] offered with different requirements. In Congo and DRC forest concession sizes may exceed one million hectares while in Cameroon and Gabon they are limited to 200,000 ha.
Council forest	Councils	-Government allocates forests to councils to manage sustainably on behalf of the state. -Require approved management plan, this enhances SFM -Forest ownership vested in concerned councils increases accountability -Poverty reduction and promotion of rural development enhanced -Supply to international markets secured	-Poor governance of revenues generated -Weak technical skills in councils -Business engagement with multi-national companies low -Low tertiary processing capacities leading to low revenue capture and employment	Cameroon

Model	Primary beneficiary	Key positive attributes	Key negative attributes	Applicable countries &comments
Community forest	Communities	-Government allocates forests to communities to manage sustainably on behalf of the state. -Community participation that increases ownership, sense of responsibility and accountability -Poverty reduction at the local level enhanced from forest benefits -Require simple management plans that enhance SFM -Supply to local markets secured	-No area fees paid, thus denying central government revenues -Forest remains state property, so no incentive for communities to invest in forest regeneration -Weak processing capacities and low value addition, thus, lower revenue capture -Elite capture of financial resources through under reporting of revenue generated from sales	Cameroon, with the process still evolving in Gabon and DRC
Sale of standing volume	Private sector	-Attributed by the government through public auction to increase transparency and better incomes -Pays high area fees averaging US$ 27/ha (N=111) in Cameroon -Supply to local markets secured by the private sector	-Presence of multi-national companies that siphon most of the profits outside national boundaries -Forest remains state property, so no incentive for private sector to invest in forest regeneration and SFM -No management plans required therefore jeopardizes SFM -Short duration cutting rights of a maximum 3 years on area of not more than 2500 ha, which discourages long term planning and investments -Cause for illegality and forest degradation	Cameroon
Plantations harvesting	Private sector	Control private sector performance in the quality		Congo

Model	Primary beneficiary	Key positive attributes	Key negative attributes	Applicable countries &comments
permits		of forest plantation operations		
Special permits	Private national individuals	Artisanal operations for local wood supplies	Not subject to any management rules, thus jeopardizes SFM	Congo and Gabon
Protected areas management	Communities, Private sector, National governments	Co-management and participatory conservation activities undertaken by all stakeholders	Dominance of private interest in profit making may undermine conservation goals	Republic of Congo, DRC and Chad

*A multi-national or transnational company is a private enterprise that focuses on exports and has its capital and headquarters of its mother company abroad and is characterised by the search for direct access to raw materials, the need to overcome certain obstacles to trade, the search for foreign outlets following the intensification of competition on the domestic market, have the tendency to process products abroad at a lower cost and to search for lower labour costs, all guided by the principle of developing or strengthening the company and not the country (Kleinert, 2001).

[1]The Gabonese legislation provides for three types of titles under the concession model. Forest concessions under sustainable management (concession forestière sous aménagement durable, CFAD) have an area ranging from 50,000 to 200,000 hectares. A permit holder can own several CFADs, with the total area not exceeding 600,000 hectares. Associated forest permits (permis forestiers associés, PFA) are permits for smaller areas (maximum 15,000 hectares if the permit is integrated into a CFAD, or 50,000 ha if the permit PFAs together to make their own CFAD). The permit by mutual consent (permis de gré à gré - PGG) is issued exclusively to national residents in the rural forest domain. This is for artisanal operations for a maximum of 50 trees in a perimeter that has been delineated by the administration. Unlike CFADs and PFAs where forest management is compulsory, PGGs are not subjected to special management rules. There are four title rights that give access to the exploitation of wood in Congo namely: Management and Transformation Convention (CAT), Industrial Transformation Convention (CTI), Plantations Harvesting Permits and Special Permits.

Source: Compiled by author

3.3 Who is harvesting the forests of Central Africa?

3.3.1 Forest concessionaires as main private sector actors

In the Republic of Congo forest concessions represent 13,685,971 ha or 40.25% of the national territory. The Congolese forest is sub-divided into 39 forest management units (FMU). Three are consecrated as conservation concessions while 36 are earmarked for industrial logging. The leading concession holders in terms of size include: CIB 1,696,800 ha (12.4%), IFO 1,159,642 ha (8.47%), SEFYD 1,144,123 ha (8.36%), Wang San Resources and Trading Company Congo 706,452 (5.16%), SIFCO 621,120 ha (4.54%), and Congo Déjia Wood Industries 613,106 (4.48%). There are many other companies with over 500,000 ha of forests such as MOKABI SA, LIKOUALA Timber and Thanry Congo.

In DRC, based on GIS estimates, forest concessions cover 12,215,659 ha. This is distributed among 18 logging companies; with top five of Switzerland capital origin

occupying 73.8% or 9,009,360 ha. These top companies include: SODEFOR (26.5%), SIFORCO (17.1%), SOFORMA (11.8%), CFT (9.6%) and FORABOLA (8.8%). Six national companies have 1,280,472 ha; representing 10.5% of the total concession area in DRC. These companies include: SEDAF (5.5%), LA FORESTIERE DU LAC (1.5%), WOOD COMPANY (1.2%), ONATRA (1.0%), HOUSE NBK SERVICE (0.8%) and ENRA (0.5%). The remaining seven companies have their capital origin from France (3.5%), Italy (3.3), Belgium (3.1%), Lebanon (2.9%), USA (2.6%) and Portugal (0.3%).

In Cameroon, forest concessions or forest management units occupy 30.64% of the national forest area. There are 111 forest management units in Cameroon covering a total of 7,058,958 ha out of which 66% (5,071,000 ha) are managed concessions, with the average size of forest concessions being 63,594 ha (de Wasseige et al. 2015). Other estimates indicate that 79 forestry concessions had approved management plans in 2015, with total area under management close to 5.6 million ha (Cerutti et al. 2016). According to Cerutti (2016), there were 91 concessions that were composed of 106 FMUs in 2016, because each concession can include more than one FMU. Top companies having large concession areas include PALLISCO, SEFAC, Filière Bois, CIBC and SEBEC.

In Gabon, in terms of area coverage, the top five concession holders include: Rougier Ocean Gabon (8.1%), Compagnie Forestière du Gabon (7.6%), Compagnie Equatoriale des Bois (7.54%), Lutexfo-Soforga (5.85%) and Société Forestiere de Tchibanga (5.63%); making a total of 34.72%. As of 2016 Gabon, had 14,272,630 ha of concession forests that were divided into 150 concessions, with average size of 95,151 ha. Out of this, about 50% or 7,181,420 ha were under management and about 17% were certified (Midoko 2016); which is equivalent to 27.8% of all certified forests in Africa (Teketay et al. 2016). According to Teketay et al. (2016), there are 5,446,625 ha of certified forests in Central Africa, representing 73.54% of all certified forests in Africa. These certified forests are found in Cameroon (12.7%), Gabon (27.8%) and the Republic of Congo (33%) (Table 5).

Table 5: Summary of main features of forest concessions in central African countries

Features	Cameroon	Congo Republic	DRC	Gabon
Total size of concessions (ha)	7,058,958	13,685,971	12,215,659	14,272,630
Number of concessions/FMUs	111	39	NA	150
Average size of concessions (ha)	63,594	350,922	NA	95,151
Area under SFM (ha)	5,071,000	2,443,186	NA	7,181,420
Area certified (ha)*	940,945	2,443,186	0	2,062,494
Proportion of total exports in logs (%)	48	56	81	0
Proportion of log exports by top five companies (%)	47	58.2	64.6	NA
Proportion of intra-African trade (%)**	5.3	3.2	6.3	NA
Nationality of larger concessions holders	Italian, French, Chinese	Singapore, France, Chinese	Switzerland, France, Belgium	French, Chinese

*Teketay et al. (2016) ; **Tieguhong, et al. (in prep.); NA= Not available.

3.3.2 Forest products produced

In Cameroon, from 2009 to 2014, a total of 7,281,710 m^3 of five wood products categories in varying proportions was produced and exported to various countries in the world: logs (48%), sawnwood (47%), veneers (2.8%) and plywood (1.74%) and parquet (0.01%) (Figure 1) (Tieguhong 2016).

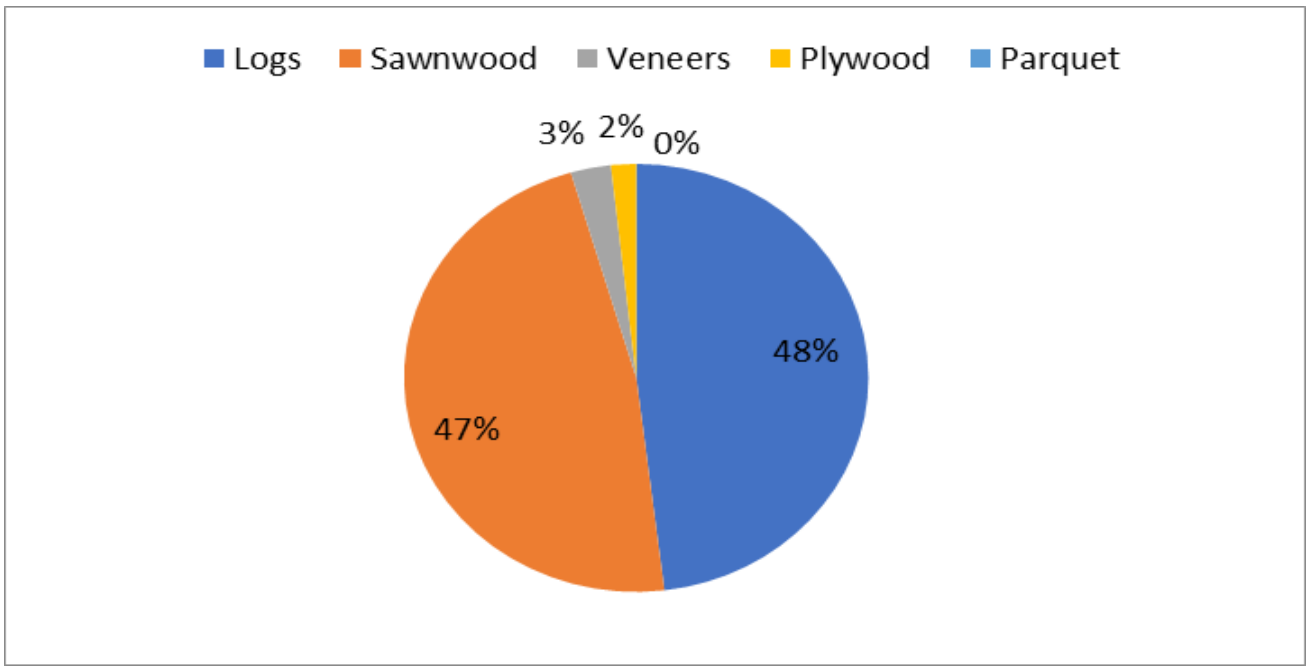


Figure 1: Categories of wood products in Cameroon

During the same period (2009-2014) about 8,300 tons of NTFPs were exported from Cameroon to other countries in the world. The production and trade in secondary processed wood products is still weakly developed in Cameroon.

In Gabon, no logs have been exported since 2010. The five main wood products categories processed in the country totaled 1,542,180 m^3 between 2009 and 2014, and were: sawnwood (59.19%), poles (14.16%), sliced veneers (24.01%), tranchage (2.19%) and peeled veneers (0.46%) (Midoko 2016).

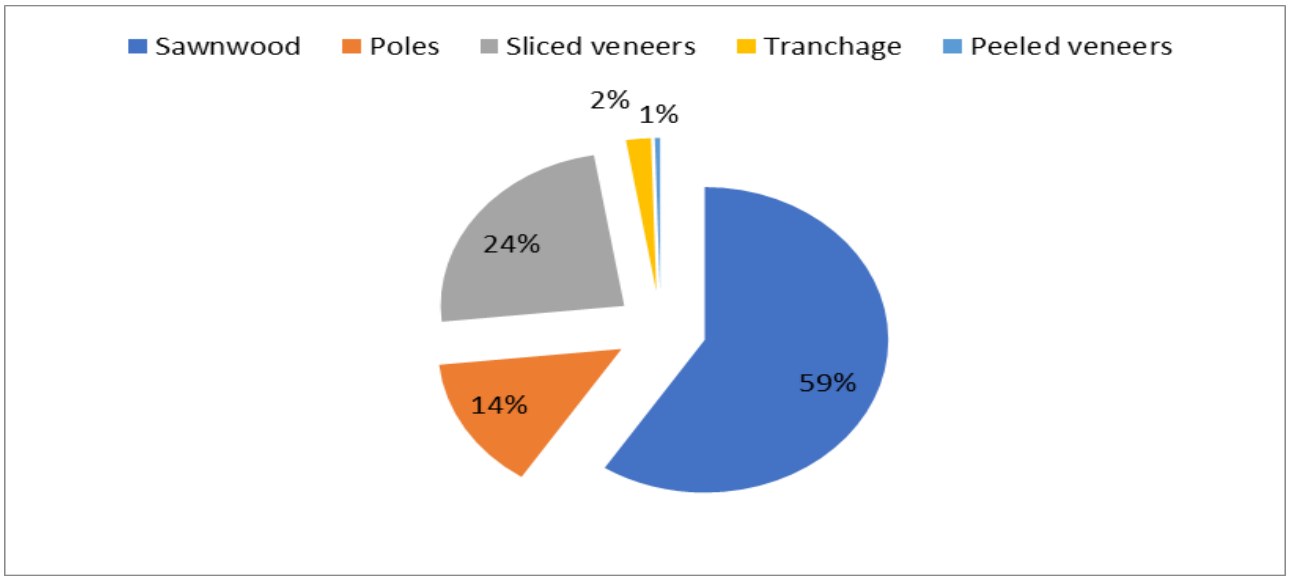


Figure 2: Categories of wood products in Gabon

In DRC, according to OCC (2014), 192,756 m^3 of wood was produced and exported comprising of 81% logs and 19% sawnwood. These products were worth US$ 70,642,869 (72% logs and 28% sawnwood) (Mbangilwa 2016). **In the Republic of Congo**, from 2009 to 2014, 12,799,610 m^3 of wood was produced and exported by 38 companies in six principal product categories including: logs (64.75%), sawnwood (12.09%), sliced veneers (2.19%), plywood (1.14%), poles (8.78%) and wood chips/shavings (11.04%) (MEFDD, 2015).

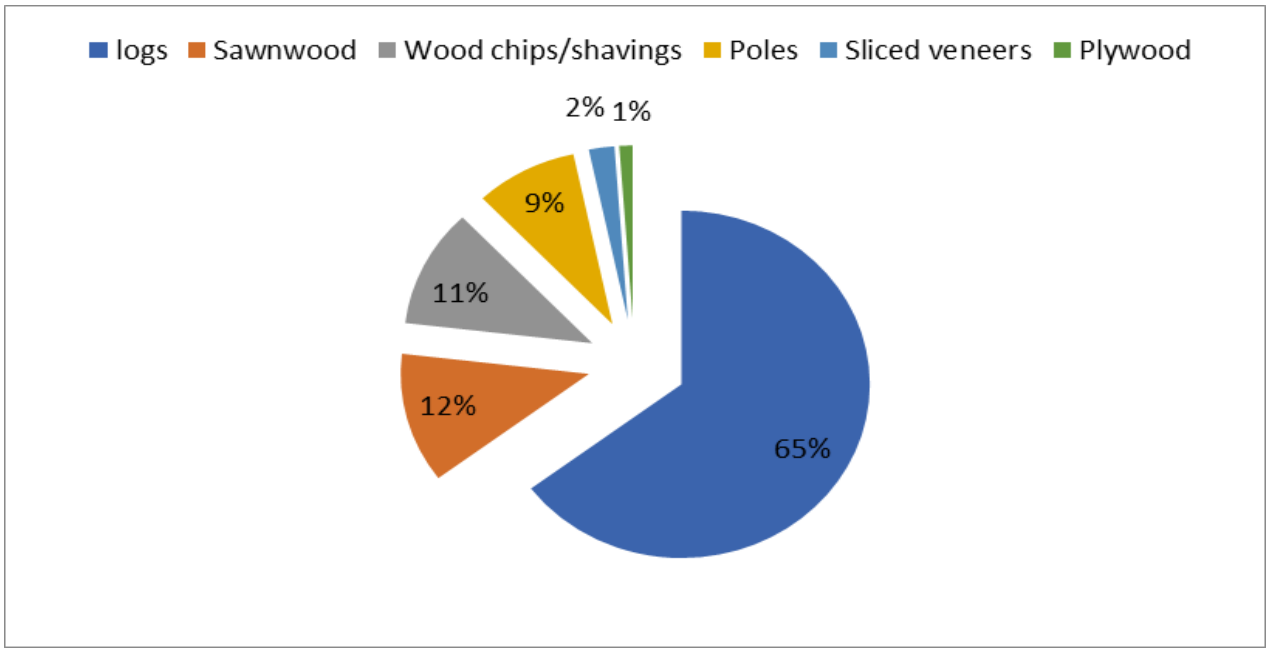


Figure 3: Categories of wood products in DRC

3.3.3 Producer companies

In Cameroon, out of a total of 96 companies that exported logs from 2009 to 2014, top five companies exported 47% of the 3,502,217 m^3 produced. The top five companies were: SIM (13.42%), SFID (11.73%), CCT (9.06%), ALPICAM (7.11%) and PALLISCO (5.83%). Also 150 companies were involved in the production and export of the 3,539,297 m^3 of sawnwood from Cameroon with top five, ten and 20 companies respectively exporting 41%, 60% and 80%. The remaining 130 companies exported a mere 20%. Top five exporting companies of sawnwood over this period included: ALPICAM (10.38%), SFID (10.28%), GRUMCAM (8.17%), SIM (7.09%) and STBK (4.82%). A total of 11 companies exported veneers from Cameroon, with leading five companies exporting 97% of the 226,514 m^3 of veneers. The top five companies exporting veneers included: ALPICAM (52.39%), ECAM VENEERS (18.31%), PLACAM (16.62%), SNCOCAM (6.08%) and TRC (5.37%). Top plywood exporting companies in Cameroon include: ALPICAM (68.43%), SNCOCAM (18.68%), PLACAM (9.86%), TRC (1.88%) and SCTB (1.13%). The production and export of NTFPs was carried out by 37 companies in with leading five, ten and twenty companies producing and exporting 66.4%, 88% and 96% respectively. Top five companies included: CRELICAM (20.52%), AFRIMED (18.09%), CALOMBA (10.12%), PHARMAFRIC (10.12%) and MARTIAL et Cie (7.51%) (Tieguhong 2016).

In the Republic of Congo, there were 38 logging companies in the private forestry sector. Total volume of logs produced was 8 287 446 m^3. Top five producing companies were: IFO (14,21%), CIB (13,89%), ACI (10,71%), CIBN (9,71%) and SICOFOR (9,63%) totaling 58.21% (Koubouana 2016).

In DRC, 36 companies produced and exported 156,464 m^3 of logs in 2014 with top five companies exporting 64.58%. These companies were: SODEFOR (18.6%), SIFORCO (16.37%), Trans M (15.3%), FORABOLA (7.74%) and SICO BOIS (6.57%). With respect to sawnwood, 25 companies produced and exported 36292 m^3 of sawnwood in 2014 with top five companies exporting 82.77%. These companies were: SIFORCO (62.34%), SODEFOR (6.75%), Trans M (6.35%), SOFORMA (4.18%) and La Foresterie (3.15%) (Mbangilwa 2016).

3.3.4 Destination of products produced

In Cameroon, from 2009 to 2014, about 3.5 million m3 of logs were exported to different continents with Asia leading with about at 89%, Europe 9% and Africa 2%. During the same period, about 3.45 million m^3 of sawnwood was exported to five continents: Europe (67%), Asia (19.3%), Africa (7.4%), Americas (4%) and Oceania (2.3%). With respect to veneers, about 82% of the 203,799 m^3 of veneers were exported to Europe, 11% to Africa and the remaining 7% to America, Asia and Oceania. With respect to plywood, European countries (67.8%) were the highest importers of plywood from Cameroon followed by countries in Africa (29.7%), Asian countries with only 1.9% and countries in the Oceania (0.6%). Leading five companies exported over 99% of the 108,692 m^3 of plywood. Most of the

NTFPs were imported by European countries (48%) followed by Asian countries (25%), American continent (23%) and other African countries imported a mere 4% (Tieguhong 2016).

In Gabon, between 2009 and 2014, about 1,542,180 m^3 of wood was exported from Gabon to five continents in varying proportions: Europe (73.43%), Asia (23.17%), Africa (4.33%), Americas (0.93%) and Australia (0.15%) (Midoko 2016).

In DRC, the 192,756 m^3 of wood produced was exported to 45 countries in the world. In terms of continental destinations, 50.06% went to Asia, 45.69% to Europe, 3.23% to within Africa and 1.05% to the American continent. Top five countries imported 75.97% of the wood were China (39.82%), France (15.73%), Portugal (8.56%), Belgium (7.17%) and Turkey (4.69%). The other 40 countries imported the remaining 24% of wood of all categories. Breaking this down to product categories, 21 countries imported logs with 55.47% going to Asia, 44.3 to Europe, 0.1% to Afric,a and 0.12% to the Americas. Top five countries imported 90.52% of the 156463.4 m^3, they were: China (48.62%), France (20.27%), Portugal (11.21%), Belgium (5.77%) and Turkey (4.65%). In terms of sawnwood, 40 countries imported 36292 m^3 in 2014 with 26.61% to Asia, 51.69% to Europe, 16.68% to within Africa and 5.04% to the American continent. Top five countries imported 51.39%; they were: Morocco (11.31%), China (12.87%), England (10.71%), Belgium (8.5%) and Portugal (8%) (Mbangilwa 2016).

For **the Republic of Congo**, logs have four mega destinations: Asia (85.98%), Europe (13.64%), Middle East (0.30%) and Africa (0.06%). In Asia, China commands 93.93% of the logs imported followed by India (3.13%). In Europe, France commands 26.34% of the exported logs, followed by Italy (25.36%) and Portugal (14.69%). The exports of eucalyptus poles is mostly to other African countries with 93.25% going to DRC and 18.99% to Angola. In the same vein, plywood from Congo is mostly imported by African countries including: Reunion Island (57.48%), Angola (19.35%) and Equatorial Guinea (12.71%). Europe remains the main importer of sliced veneers from Congo (76.90%); with 48.89% to France, 14.69% to Belgium and 12.54% to Spain. Countries on the American continent import about 10% of the sliced veneers. With respect to air-dried sawnwood Europe imports over 50% of production from Congo with 31.36% to Belgium, 15.30% to the Netherlands, 14.27% to France, 12.83% to Germany and 11.45% to the United Kingdom. Other African countries import 6.06% of the air-dried sawnwood with 22.40% to Senegal and 16.01% to Tunisia. Asian countries also imported about 30.19% of the air-dried sawnwood with 73.15% to China and 17.94% to Malaysia. With respect to kiln-dried sawnwood, about 50% of production goes to Europe with United Kingdom importing a lion share (51.54%), Belgium (12.04%) and Germany (10.09%) (Koubouana 2016).

3.3.5 Principal timber species exploited in the formal sector

Opportunities in the marketing and trade in the forestry sector may be linked to the availability of desirable tree species, type and quality of products. The export of logs and

sawnwood are the two types of products examined against the desirable timber tree species.

Exports in form of logs

In Cameroon, from 2009 to 2014, a total of 37 tree species comprised the timber export in the form of logs. Most of the tree species were in the promotion categories such as Tali (*Erythropleum ivorense*) with 22.25%, Okan (*Cylicodiscus gabonensis*) with 22.22%, Dabéma (*Piptadeniastrum africanum*) with 7.36% and Bilinga (*Nauclea diderrichii*) with about 4%. In addition are species that require a specified annual quota for exportation in the form of logs include Ayous/Obéché (*Triplochyton scleroxylon*) and Azobe (*Lophira alata*) with 13.5% and 4.6% respectively (Tieguhong 2016).

In DRC, the top five species exploited for export as logs are: *Millettia laurentii* (26.11%), *Entandrophragma cylindricum* (20.56%), *Milicia excelsa* (11.84%), *Pericopsis elata* (10.07%), and *Entandrophragma utile* (5.82%). Other prominent species exploited include: *Prioria balsamifera* (3.31%), *Guarea cedrata* (2.89%), *Khaya entotheca* (2.43%), *Entandrophragma angolense* (1.94%), *Entandrophragma candollei* (1.36%), *Pterocarpus soyauxii* (1.29%), *Nauclea diderichii* (0.69%) and *Erythrophleum suaveolens* (0.66%) (Mbangilwa 2016).

In Gabon, although the sample size of this study was very small, in term of the data that were gathered from the local companies, Okoume (*Aucoumea klaineana*) still remains on the top (25.4%) of the list in term of wood production; followed by Tali (*Erythrophleum ivorense*) with 14.2%, Okan (*Cylicodiscus gabunensis*) with 13.7%,Padouk (*Pterocarpus soyauxii*) with 11.5% and Belinga (*Nauclea diderrichii*) with 8.4% (Midoko 2016).

In the Republic of Congo, forest management inventories show that there are over 300 tree species but only 52 are currently being logged. The most exploited species include: *Aucoumea klaineana* (34,79%), *Entandrophragma cylindricum* (27,22%), *Entandrophragma angolense* (4,76%), *Triplochiton scleroxylon* (3,12%) and *Erythrophleum ivorense* (2,87%).The five most exploited species included: Okoumé (34,79%), Sapelli (27,22%), Sipo (4,76%), Ayous (3,12%) and Tali (2,87%) - totaling 72.76% (Koubouana 2016).

Export of sawnwood by tree species

In Cameroon, over a period of six years (2009-2014), 29 timber tree species were of interest to timber companies for sawnwood production and export. Top five species for sawnwood were (Ayous 21.83%, Sapelli-21.30%, Iroko 14.84%, Azobe 7.71% and Frake 5.15%); they constitute about 70% of the 3,658,881 m^3sawnwood exported from Cameroon (Tieguhong 2016) (Tieguhong 2016).

In Gabon, the top five sawnwood species exported included *Aucoumea klaineana* (38.19%), *Pterocarpus soyauxii* (14.88%), *Cylicodiscus gabunensis* (14.76%), *Guibourtia sp.* (7.25%) and *Nauclea diderrichii* (5.60%); they constituted 122,464 m^3 exported by the

sampled companies. Only two species of trees were transformed into veneers: *Aucoumea klaineana* (96.71%) and *Gossweilerodendron balsamiferum* (3.29%) and made up the 190,130 m^3 exported (Midoko 2016).

In the Republic of Congo, 731304 m^3 of air-dried sawnwood was exported between 2009 and 2014 represented by top five species: Sapelli (68.03%), Sipo (8.22%), Okoume (4.1%), Iroko (3.15%) and Tali (3.04%). In terms of kiln dried sawnwood 234,255 m3 was exported and represented by top five tree species: Sapelli (32,84%), Afrormosia (23,92%), *Aningeria altissima* (8,90%), *Chrysophyllum spp.* (8,57%) and Ayous (5,96%). In terms of the production and export of veneers, 99.7% of the 124,613 m^3 were from Okoume, 0.23% from *Prioria balsamifera (Agba)*, 0.07% from *Terminalia superba* and the remaining 0.01% from Sipo (*Entandrophragma utile*) (Koubouana 2016).

In DRC, from 2005 to 2011, a total of 1,995,939 m3 of wood was exploited in DRC, with the top six species representing 72.3% of the total, and comprising of: *Entendrophragma cylindricum* (21.5%), *Millettia laurentii* (12.8%), *Prioria balsamifera (*11.9%), *Millicia excelsa* (10.1%), *Entendrophragma utile* (9.1%), and *Pericopsis elata* (6.9%). In 2011, about 35,260 m3 of wood was exported from DRC comprising primarily of Sapelli (47.47%), *Millicia excelsa* (19.87%), *Millettia laurentii* (9.96%), *Pericopsis elata* (8.78%) and *Entendrophragma utile* (4.15%) (Mbangiwa, 2016).

3.3.6 Export of NTFPs by species

In Cameroon, from 2009 to 2014, eight special forest products were recorded as exported at the Douala seaport with a total weight of 8067 tons; these were: Ebene wood (56.95%), pygeum barks (26.27%), voacanga seeds (7.70%), yohimbe barks (6.52%), raphia nuts (1.33%), gum Arabic 0.27%), charcoal (0.91% and rattan (0.04%) (Tieguhong et al. 2015). Detailed statistics are not available for the other countries, however most priority NTFPs are documented in each country (Table 6).

Table 6: Priority NTFPs in central African countries

NTFP	Uses	Countries where product is a priority				
		Cameroon	Gabon	Congo Rep	DRC	Count
Cola acuminata	Food	1	1	1	1	4
Dacryodes edulis	Food	1	1	1	1	4
Garcinia kola	Food & medicinal	1	1	1	1	4
Gnetum spp	Food & medicinal	1	1	1	1	4
Piper guineensis	Food & medicinal	1	1	1	1	4
Cola edulis	Food	1	1	1	0	3
Cola nitida	Food	1	1	1	0	3
Elaeis guineensis	Food	1	1	1	0	3
Afromomium spp	Wrapping leaves	1	1	1	0	3
Baillonella toxisperma	Food and wood	1	1	0	0	2
Rattans (Eremospatha spp &Lacosperma spp.)	Furniture/Artisanal products	1	0	0	1	2
Ricinodendron heudelotti	Food	1	1	0	0	2
Irvingia spp.	Food & medicinal	1	1	0	0	2
Raphia hookeri	Palm wine	1	1	0	0	2
Trichoscypha abut	Food, latex	1	1	0	0	2
Dacryodes buettneri	Food	0	1	0	0	1
Dacryodes macrophylla	Food	0	1	0	0	1
Prunus africana	Medicinal	1	0	0	0	1
Voacanga africana	Medicinal	1	0	0	0	1
Acacia spp.	Cosmetics, medicinal	1	0	0	0	1
Gambya lacourtiana	Food	0	1	0	0	1
Afrostyrax lepidophyllus	Medicinal	0	1	0	0	1
Antrocaryon klaineana	Food	0	1	0	0	1
Hua gaboni	Food	0	1	0	0	1
Panda oleosa	Food & medicinal	0	1	0	0	1
Poga oleosa	Food & medicinal	0	1	0	0	1
Pseudospondias longifolia	Food	0	1	0	0	1
Grewia coriacea	Food	0	0	0	1	1
Maranthaceae spp.	Wrapping, utencils	0	0	0	1	1
Ipomoea invoucrata	Food	0	0	0	1	1
Dioscorea spp.	Food	0	0	0	1	1
Psophocarpus scandens	Food	0	0	0	1	1
Pteridium aquilinum	Food	0	0	0	1	1
Satyrium buchananii	Food	0	0	0	1	1
Megaphrynium macrosstchyum	Wrapping, utencils	0	0	0	1	1

Source: Author's compilation from Ingram et al. (2012).

3.3.7 Transformation/processing units

Regarding the types of industries, DRC has 17 industrial sawmills with sawing as the main activity, 2 industrial mills carrying out sawing and peeling, 1 industrial mill sawing, peeling and slicing. Artisanal loggers use chainsaws.

In Gabon, industrial timber transformation facilities are mainly oriented towards primary processing (sawing, peeling and slicing). However, there are still few secondary processing units, and not well known.

According to Eba'a Atyi (2008), Gabon has the highest number of industrial plants (73), followed by Cameroon (60). As of 2008, these two countries represent 60% of sub-regional processing capacity. Further, an official communication from the Ministry of Forestry and Wildlife (MINFOF) in Cameroon mentioned 199 timber processing units (TPU) on Cameroonian territory, divided among the first (71), second (75) and third (53) degree of processing capacity (Cerutti et al., 2016).

3.3.7 Other evolving management models

Aside the concession forest model, four other prevailing models (Council forest model, community forest model, sale of standing volumes model and protected areas management model) are being implemented mainly in Cameroon with following brief characteristics.

The council forest management model

In Cameroon, local councils and their people get financial benefits from their forests in three forms: revenue generated from the sale of timber from their council forests, annual forestry fees from nearby forest concessions and salaries paid to locally recruited forestry staff (Eba'a Atyi et al. 2013). This PPP model requires the government to completely transfer the management and land ownership of designated forests from the State to the council, with government giving technical and monitoring support to the management of the forests. The councils act as managers of the forests for profit gain to the councils that operate as private entities.

The concept of council forest is one of the innovations of Cameroon forest law in 1994 that designates a natural forest as part of the permanent forest estate requiring classification on behalf of the concerned councils, or a tree plantation on council territory (Republic of Cameroon 1994; 1995). With this legal reform, there is a complete transfer of management of forests from the State to the council as well as land ownership and with the opportunity provided to several councils to join together in order to create and manage one council forest (Cuny 2011). The first council forest was classified in 2001 and by 2015 there were 63 council forests demanded/requested, 26 classified, 20 with management plans and 10 with annual exploitation permits (Table 7) (MINFOF 2015). The evolution of the total area covered by different categories of council forests is provided in Figure 11 showing total area

requested, total area classified, total area under management plans and total area with exploitation permits to be 1,545,316 ha, 721,912 ha, 554,828 ha and 241,466 ha respectfully (MINFOF 2015).

Table 7: Status of council forests in Cameroon in 2015

	Requests for council forests		Classified council forests		Council forests with approved management plans		Annual operational permits issued (AOP)		
Year	No.	Total area (ha)	No.	Total area (ha)	No.	Total area (ha)	No.	Total area (ha)	Authorised volume (m^3)
2012	45	1,079,647	15	381, 835	10	266,198	8	10,913	173,242
2013	52	1,146,007	16	402, 230	10	266,198	6	7,788	179,947
2014	52	1,146,007	19	498,150	11	283,424	11	11,023	271,879
2015	63	1,545,316	26	721,912	20	554,828	10	10,350	241, 466

Source: MINFOF 2015

It is important to highlight that requests for council forests by councils in Cameroon cover almost all the agro-ecological zones of the country (MINFOF 2015). Moreover, despite the progress made since 2001, the development of council forests faces some challenging governance issues related to accountability mechanism between the councils and the management entities headed by the mayor of the council (Assembe 2006). Several constraints still hamper the process of council forest allocation, and low socioeconomic benefits realised by local populations (Cuny 2011). The principal issues under discussion are the simplification of procedures of classification, land registration be free of charge, requirements of a provisional management agreement, afforestation incentives, and creation of regional forests (Topa et al. 2009). Almost all council forests are exploited in partnership with logging concessions using the log selection system as generally practised by the concessionaires.

There is paucity of literature on the performance of council forests with respect to their financial contributions to the main stakeholders (councils and communities), which calls for a special study in its own right to assess and provide concrete data on income generated and their sharing mechanisms to ensure transparency in governance arrangements.

The community forests model

The Cameroonian Forestry Law N° 94/01 of 20 January 1994 and its Decree of implementation 95/531PM of 23 August 1995, define community forestry with the aims to: increase the participation of local populations in forest conservation and management in order to contribute to improving their living standards and secure substantial benefits for village communities as well as to motivate them to better protect forest cover (MINEF 1998).

Community forests are actually a subset of the forests used by communities (FAO 2012, Topa 2009).

In this PPP model, a community makes a request to the central government to manage a specific forest area in its locality and the government studies the request before accepting or refusing to allocate the said forest to the community. In case the government approves the request, the community will be in charge of harvesting and managing the forests for its own benefit while the government will play a supervisory role, and with some technical support provided, to ensure sustainable management of the forest.

The prerequisites for exploiting a community forest by a local community include the necessity to:

- have legalised associations or common initiative groups,
- conduct an inventory to determine the resources found in the forest, and
- the elaboration of a comprehensive simple management plan (SMP).

The communities have customary rights to their community forests that do not involve the transfer of land ownership, but rather the transfer of the right to manage and use the forest land. From 2006 to 2015, the number of requests for community forests increased from 352 to 622. Those with simple management plans increased from 157 to 326 while those with and annual exploitation permits (AEC) increased from 21 to 163 (Table 8).

Table 8: Evolution of community forests in Cameroon

Year	Total number of requests for CFs	Provisional mgt conventions	No of SMPs	Number of final mgt convention	Number of AEC
2006	352		151	85	21
2007	386		169	135	51
2008	408		236	159	64
2009	425		257	164	75
2010	477		291	182	142
2011	494	45	299	209	141
2012	510	61	302	262	151
2013	539	74	306	263	117
2014	560	112	320	267	117
2015	622	141	326	274	163

Source: MINFOF 2015

In terms of the evolution of the total land area covered by community forests in Cameroon, the total area requested/demanded by communities increased from 1.3 million to over 1.8 million hectares in 2015. This increase goes alongside the increase in the area of community forests with simple management plans and having annual exploitation permits as well as overall increases in the volume of wood exploited (Table 9).

Table 9: Evolution of the area and volume exploited from community forests

Year	Total area demanded/ requested (ha)	Area under provisional management conventions (ha)	Area under SMP (ha)	Area under final mgt convention	Area under AEC (ha)	Authorised cutting volume (m^3)	Volume actually exploited (m^3)
2006	NA						
2007	1,306,708						
2008	1,321,271					57,000	11,887
2009	1,393,629				12,504	73,490	9,672
2010	1,502,348				21,644	139,567	16,412
2011	1,562,228	178,499	991,292	750,795	21,644	146,579	31,367
2012	1,617,683	331,033	1,009,723	909,459	22,338	147,107	9,452
2013	1,684,833	393,858	1,070,779	899,872	17,563	119,528	13,530
2014	1,743,594	449,286	1,122,228	918,034	16,444	420,114	32,795
2015	1,853,116	104,799	1,144,140	940,206	23,428	198,306	NA

Source: MINFOF 2015

According to Lescuyer et al. (2015), community forestry, as conceived in the forest codes enforced in Central Africa, face significant challenges in achieving the objectives that were initially set. Although enshrined in the forestry law and having received various financial support, formal community forestry is a relative failure in Cameroon (Beauchamp and Ingram 2011, Cuny 2011). The number of active CFs remains low, most are operated by private operators under contract, and management faces many malfunctions (Lescuyer et al. 2015). Experiments currently implemented in Gabon seem to follow the same path, while the DRC hardly operationalize its community forestry approach, fourteen years after it was introduced in the Forest Code. The persistence of these blockages, already reported ten years ago in Cameroon, tends to support the assumption of a political resistance to promote decentralized forest management in the Congo basin countries. As observed in Gabon, Decree N° 001028/PR/MEFEPEPN (Art. 1) fixed the conditions for the creation of community forest in 2007 as a poverty reduction strategy, which are supposedly allowed in the rural forest domain (Republic of Gabon 2007).

However, although a simple management plan is required there is no technical guideline to regulate community forests and the non-permanent forest domain designed mainly for community forestry activities tend to be poorly managed by the forestry administration (Massoukou, 2007). According to Meunier et al. (2011), very few community forests have been established throughout Gabon and that rural communities strive to develop their own logging operations, all this pointing to a very slow process. However, achieving the paramount objectives of establishing community forests in Gabon and other countries in Central Africa would necessitate an effective devolvement of rights and responsibilities from the central government to local communities, along with proper regulatory norms (FAO 2016, Yobo and Ito 2015). Lescuyer et al. (2015) add that without a massive simplification

of procedures for creating and managing CFs, it is unlikely that communities will use this option to sustainably manage their forest resources and raise their living standards through the commercialization of timber and NTFPs.

Sale of standing volumes (SSV) model

In Cameroon, under the 1994 Forest Law, short-term logging rights include the sale of standing volumes (ventes de coupe) and small titles (30-cubic-meter personal authorizations, 300-cubic-meter cutting permits, and the recovery of timber following land conversion or special authorization). Sale of standing volume models are established on a maximum of 2,500 ha by government in the rural domain or in the non-permanent forests (forests that can be converted to non-forest uses if local communities so decide) and auctioned to the private sector in a competitive process with harvesting permits executed for a maximum of three years (Topa et al. 2009). It has been argued that the short-term logging rights give room for corruption and mismanagement of forests because they are free from the obligations for developing and implementing management plans with long term vision. In 2014, there were a total of 111 SSV rights awarded covering a total area of 235,783 ha and worth over 413 million FCFA (US$ 6,911,086) to the government. Unit area fees appear to be very high under the SSV rights averaging 16,154 FCFA (US$ 27) and STD=15,064 FCFA (US$ 25) with a maximum of 67,500 FCFA (US$ 113) per hectare and a minimum of 600 FCFA (US$ 1)/ha (Table 10).

Table 10: Characteristics of sale of standing volume rights in Cameroon (N=111)

Characteristics	Area (ha)	Price/ha (CFAF) (US$)	Total value (CFAF) (US$)
Maximum	3,200	67,500 (113)	155,220,000(259,565)
Minimum	250	600 (1)	609,000(1,018)
Average	2,124	16,154 (27)	37,232,699(62,262)
Standard deviation	481	15,064(25)	36,246,944(60,614)
Sum	235,783	-	4,132,829,576(6,911,086)

Source: MINFOF 2014 data (and own calculations).

As may be observed in Table 10, the prices per ha vary from one SSV to another because each SSV is offered on a competitive basis through an auction process. The SSVs are not contiguous and prices are affected by accessibility as well as the type of private sector competitors interested and making a bid for each. However, the fact that the standard deviation of the price per ha is slightly lower than the mean, implies that in absolute terms there are no significant variations associated with the bidding process. Rather, some differences could be associated with accessibility and the inherent quality of the SSVs (e.g. density of desirable timber species, topography, size, etc.). The sum represents the total value of all the products of the SSVs and their individual area fees as offered by the private sector to the government during the auction process (Tieguhong 2016).

PPPs in protected areas model

Protected areas in Central Africa have hitherto been managed as a state property, as was the case during colonial administrations, and with anti-poaching activities safeguarding their protection and in complete disregard of other stakeholders (Gami, 2016). However, this approach has been observed to fail in delivering desirable results, and more recently it has been recognised that the involvement and participation of all stakeholders are prerequisites to ensuring sustainable conservation goals (Pyhälä et al. 2016; Forlemu, 2015; Borrini-Feyerabend et al., 2013; Morgan et al., 2011; Baldus, 2009; Campese, 2009; Greiber et al., 2009; Lamarque et al., 2009; Mapedza, 2007; GEF, 2006; and Beltran, 2000).

According to Agnangoye (2015), there are good reasons for making the state monopoly of the management of protected areas to be more encompassing of all stakeholders. Some of these reasons include:

- the absence or weak consideration of protected areas in national budgetary allocations;
- the weak capacities of protected area managers to mobilise finance capital from diverse sources;
- pressures on the ecological integrity of sites from diverse drivers;
- dependence on external financing based on limited programme cycles (Gami 2016).

General observations on PPPs

The promising potential benefits from using the PPP approach have encouraged promoting their adoption in the management of various parks in Central Africa including the Salonga National Park in DRC with the signature of a letter of Agreement between WWF and the Congolese Institute for the Conservation of Nature (ICCN) in August 2015. Similar agreements have been observed in the Republic of Congo, Chad and other parts the Democratic Republic of Congo that give rise to networks of protected areas using the PPP model in Central Africa.

Key management models for protected areas in Central Africa include: governments alone; governments with the support of international non-governmental organizations (INGOs) as well as national NGOs, as well as those with the full involvement of local communities in conducting management and economic activities (Table 11).

Table 11: Examples of PPP models in protected areas in Central Africa

Country	Name of protected area	Associated partners under PPP	Start date of partnership	Status of the protected area
Republic of Congo	Parc National d'Odzala-Kokoua	African Parks Network (APN) MEFDD	2010	Parc National UNESCO (MAB)
	Parc National		2014	National Park

Country	Name of protected area	Associated partners under PPP	Start date of partnership	Status of the protected area
	de Nouabalé-Ndoki			
	Parc National d'Odzala-Kokoua (PNOK)	Leader of Conservation in Africa (LCA)	2010	Congolese Government for promotion of tourism in PNOK
Democratic Republic of Congo	Parc National des Virunga	Foundation Virunga & ICCN	2007-2009	UNESCO World Heritage Site
	Parc National de la Caramba	African Parks Network (APN) ICCN	2007-2009	UNESCO World Heritage Site
	Parc National de la Salonga	WWF	2015	UNESCO World Heritage Site
Chad	Parc National de Zakouma	African Parks Network (APN)	2010	

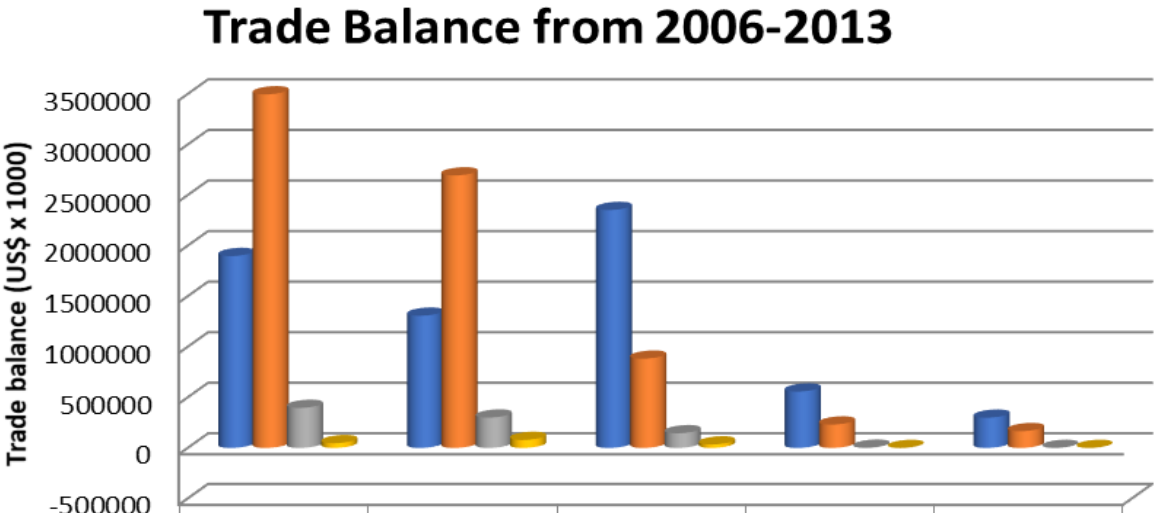
Source: Gami 2016.

The application of the PPP models is innovative and disallows the monopoly of the state to the administration, financial and technical management of protected areas (Gami 2016). The recent letters of agreement for the management of some protected areas in Central Africa under the PPP models are yet to provide concrete and measurable outcomes in terms of financial benefits to the communities, local development, reduced threats to the integrity of the parks and better co-management and governance arrangements. In addition, the implementation of the PPP agreements is made under various conflicting conditions between key stakeholders. This is why there is a need to reinforce capacity in this domain.
The consideration of local populations and other stakeholders in management decisions and implementation is vital. In this regard, the importance of the network of protected areas in each country of Central Africa and the evolving models of PPP in managing protected areas in the region are important considerations. The key stakeholders (Government, NGOs, communities, private sector) need continuous interactions and consultations in all co-management initiatives in the region in order to attain expected conservation outcomes as well as benefits to each stakeholder.

The Network of Protected Areas in Central Africa (RAPAC) under the auspices of COMIFAC and CEEAC started reflections on the use of PPP approach in protected areas management in the region with a training workshop organised in June-July 2014 in Douala, Cameroon. Over 30 participants were trained during this workshop including park managers, staff of RAPAC and government representatives in charge of parks. In the same vein, COMIFAC in its 5th Strategic Area of Intervention of the Convergence Plan clearly reiterate the need for using the PPP approach in protected areas management in Central Africa (COMIFAC 2014).

3.4 Are partnerships in timber business helping regional economies?

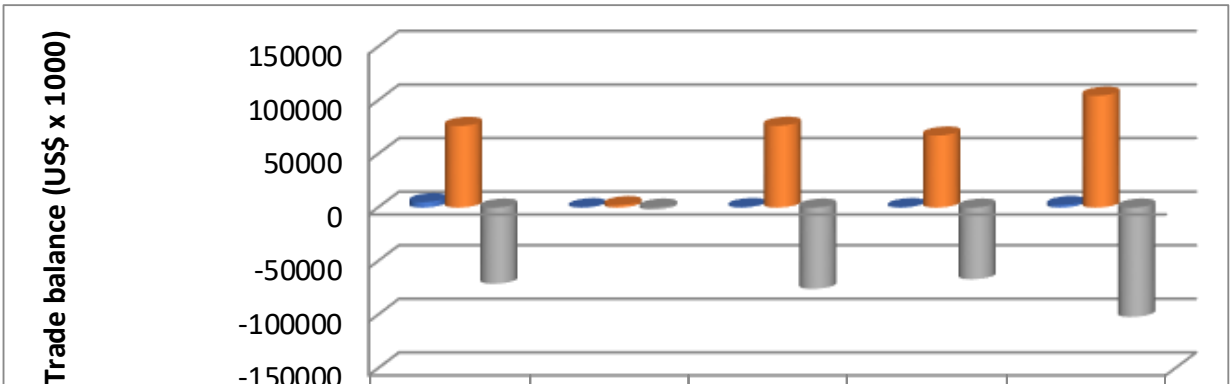
One way to understand how partnerships are rewarding to countries is to examine trade balances in traded commodities. In this perspective, most Central African countries, with the exception of the Republic of Congo, have positive trade balances for producing and trading in logs and primary processed forest products such as sawnwood, veneers and plywood. Specifically, the Republic of Congo has a negative trade balance of US$ 557,000 over a period of eight years associated with the importation of plywood (Figure 4).



	Cameroon	CAR	DRC	Congo rep	Gabon
Round Wood	1897697	1307549	2352564	557053	298742
Sawnwood	3496642	2694656	882602	231241	166004
Veneer	396024	300180	144882	2275	554
Plywood	46653	78956	34856	-557	84

Figure 4:Trade balance in logs and primary processed wood products (2006-2013)

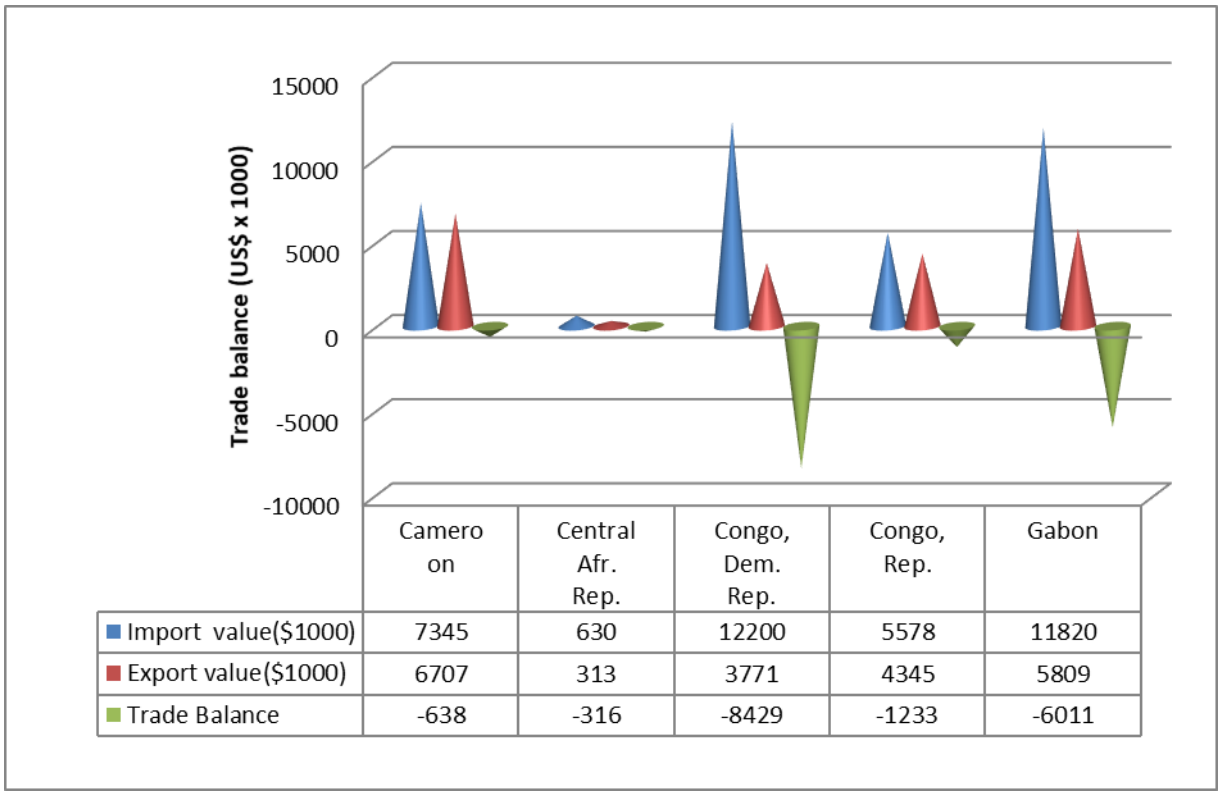
From ITTO (2015) trade data, secondary processed wood products (SPWP) such as wood furniture, builder wood, mouldings, cane and bamboo products and other SPWP are produced and exported from Central African countries, and they are also imported in large quantities. Looking at the trade balances for these products, Cameroon, Gabon, DRC and the Republic of Congo are net importers of wood furniture, builder wood and cane and bamboo products. From 2006 to 2013, Cameroon, Central African Republic, DRC, Republic of Congo and Gabon had negative trade balances (trade deficits) of over US$ 71million, US$ 2 million, US$ 76 million, US$67 million and US$ 102 million respectively associated with the importation of wood furniture (Figure 5).



	Cameroon	Central African Republique	Congo, Dem. Rep	Congo, Rep.	Gabon
Export value($1000)	5181	419	543	440	2424
import value($1000)	76247	2344	76395	67279	104435
Trade balance	-71066	-1925	-75852	-66839	-102011

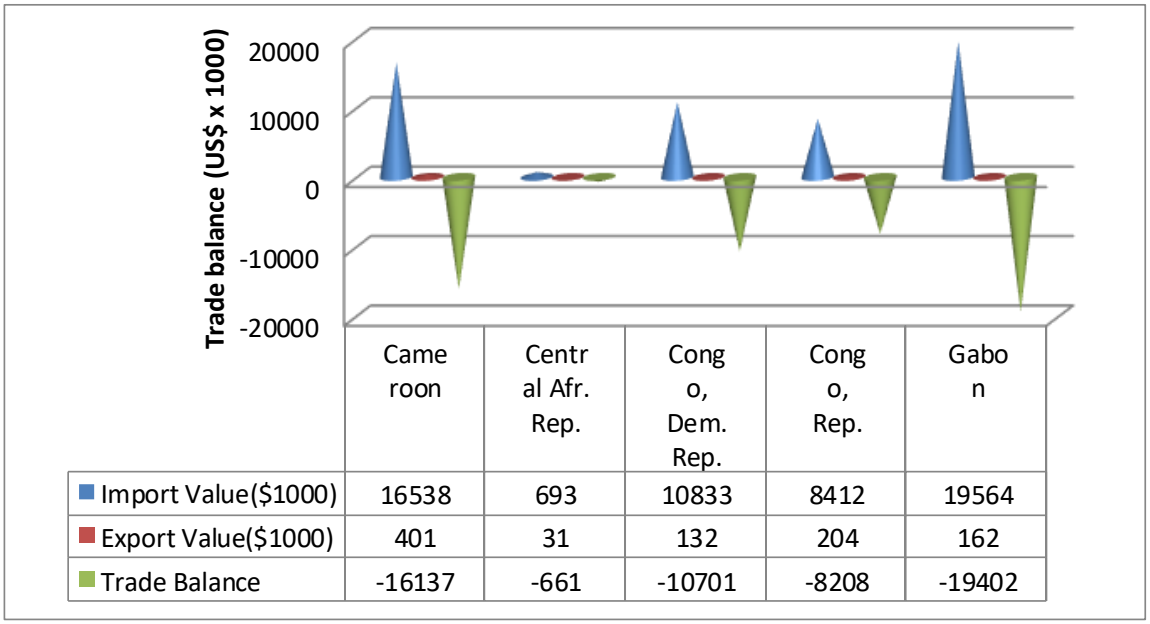
Figure 5: Trade balance for wood furniture (from 2006 to 2013)

From 2006 to 2013, Cameroon, Central African Republic, Republic of Congo, DRC and Gabon had negative trade balances (trade deficits) of over US$ 638,000; US$ 316,000; US$ 8.4 million, US$ 1.2 million and US$ 6.0 million respectively associated with the importation of builder wood (Figure 6). During the same period, Cameroon, Central African Republic, Republic of Congo, DRC and Gabon had negative trade balances (trade deficits) of over US$ 16.1 million US$ 661,000, US$ 10.7 million, US$ 8.2 million and US$ 19.9 million respectively associated with the importation of cane and bamboo products (Figure 7).



	Cameroon	Central Afr. Rep.	Congo, Dem. Rep.	Congo, Rep.	Gabon
Import value($1000)	7345	630	12200	5578	11820
Export value($1000)	6707	313	3771	4345	5809
Trade Balance	-638	-316	-8429	-1233	-6011

Figure 6:Trade balance for builder wood (from 2006 to 2013)



	Cameroon	Central Afr. Rep.	Congo, Dem. Rep.	Congo, Rep.	Gabon
Import Value($1000)	16538	693	10833	8412	19564
Export Value($1000)	401	31	132	204	162
Trade Balance	-16137	-661	-10701	-8208	-19402

Figure 7:Trade balance for cane and bamboo (2006 to 2013)

3.5 The dilemma

The questions that require urgent responses in Central Africa countries reside on: why Asian countries are restricting forest harvesting and export of logs but countries in the Central Africa, apart from Gabon, take comfort in exporting logs and primary processed products such as sawnwood, veneers and plywood? How can Cameroon and other countries in the sub-region move ahead to address the impediments that discourage investment in downstream production of secondary processed wood products such as wood furniture, builder wood, cane and bamboo products and other finished products? How can national policy changes tackle and reverse this trend?

According to ITTO (2016) log export restrictions would be fine if there were signs of growing investment in processing; however, most West and Central African producer countries have a long way to go to put in place the conditions that encourage investment in downstream production capacity. Until this is addressed it will be difficult to see production in many countries move beyond sawnwood, plywood and veneer (ITTO, 2016).

3.5.1 Export Gains or losses for Central African economies

Continental exports of wood products

In DRC, 81% and 19% of the 192,756 m^3 of wood produced and exported are logs and sawnwood respectively, worth respectively 72% and 28% of US$ 70,642,869 earned. In terms of continental destinations, 50.06% went to Asia, 45.69% to Europe, 3.23% to within Africa and 1.05% to the American continent. The proportions that went to Africa and America fetched a relatively higher value per m3 than those imported by into Asia and Europe (Table 12).

Table 12: Value/volume indices based on continental wood flows from DRC

Continent	Proportion of volume imported (%)	Proportion of value imported (%)	Value/volume index
Asia	50.06	48.61	0.971
Africa	3.23	4.82	1.492
Americas	1.05	2.05	1.952
Europe	45.19	44.52	0.985

Source: Author calculations

Exports based on product categories

Highlights on unit wood product values for different products are given in Table 13.
Table 13: Unit wood product values-based product categories (e.g. Cameroon)

Wood product	Total volume (m3)	Total Value (US$)	Value/volume index (US$/m3)
Roundwood	20,301	5,749,707	283.2
Sawnwood	14,395	7,183,062	499
Veneers	640	843,601	1318.3
Plywood	304	166,541	548.2
Total	35640	13,942,910	391.2

Source: Author calculations from FAOSTAT 2014.

A unit product of sawnwood, plywood and veneer fetch 1.76, 1.94 and 4.66 times more value than a unit of roundwood exported. This further reinforces the case for value addition in the region.

4. CONCLUSIONS AND RECOMMENDATIONS

In Central Africa, different models of management and governance are being used in the management of forests and protected areas under public-private partners (PPP), which contrast with hitherto monopolistic state management during historic colonial administrations.

Currently, the disparities in forest management models reside on forest ownership whereby the states retain ownership under the concession, community, sale of standing volume and special logging rights models but not under the council forest model.

Financial resources generated by the concession and sale of standing volume models primarily go to the state central treasury (public sector) or are siphoned by multi-national companies to their parent companies abroad (private sector), while money generated under the council, special logging rights and community forest models are supposedly retained at the local level for socioeconomic development (if not by some corrupt officials in charge of their management).

In terms of resource sustainability, the forest concession and council forest models stand better chances of ensuring positive outcomes due to technical exigencies associated with approved forest management plans as opposed to the simple management plans required for the management of community forests or the absence thereof in the case of special permits.

The short duration and limited area allocated under the sale of standing volume model and the special logging titles is prone to wanton destruction of the forests due to the complete absence of planned management and post-harvest operations. These models follow the hit and run scenario, with little application of reduced impact logging techniques.

The management of protected areas is gradually making some headways towards adopting PPPs with early cases already being tried in the Republic of Congo, the Democratic Republic of Congo and Chad, to which hasty conclusions on their successes or failures could be mistaken. Time is needed for the PPP models governing protected areas in the region to mature and for the correct lessons to be learnt and shared among all stakeholders (communities, governments and private sector).

While the Central African region is endowed with forest resources, and several policy changes and varying institutional arrangements have been made to ensure sustainable social, economic and ecological management the forest resources and to support local development; almost all the countries in the sub-region have low capacities for value addition on their forest products. This has led to several negative outcomes including net

negative trade balances with respect to several processed wood products such as wood furniture, builder wood and cane/bamboo products.

The status-quo has to change for countries in the sub-region to fully benefit from the potential economic contributions of the forestry sector to local, national and regional development. This may require increased political and central government will and action to support investments in the development of the forestry sector in the region. It will also require development of scientific evidence to demonstrate the benefits that countries stand to gain from such efforts.

Some key recommendations from this study:

- National governments need to better negotiate with multinational partners and to also look inward on how best to significantly increase value addition to forest products in Central Africa,
- More research is needed to better understand forest products trade flows and patterns as well as the technical and financial performance of private sector partners involved in the exploitation of forest resources under the current and potential evolving forest management models in Central Africa.

REFERENCES

Agnangoye J.P. 2015. Experience de gestion des aires proteges en mode partenariat public-privé (ppp) : leçons apprises en Afrique centrale. Presentation aux JAP5 du RAPAC. Yaounde.

Assembe, M.S., 2006. Forestry income management and poverty reduction: empirical findings from Kongo, Cameroon. *Development in Practice*, 16, 68–73.

Bayol N., Demarquez B., de Wasseige C., Eba'a Atyi R., Fisher J-F., Nasi R., Pasquier A., Rossi X., Steil M., and Vivien C. 2010.La gestion des forets et la filliere bois en Afrique centrale. In: de Wasseige C., de Marcken P., Bayol N., Hiol Hiol F., Mayaux P., Desclée B., Nasi R.,BillandA.,DefournyP.,Eba'a R. (Eds.). The Forests of the Congo Basin. State of the Forest 2010. Office des publications de l'Union Européenne. Luxembourg. p. 276.

Beauchamp E. and Ingram V. 2011. Impacts of community forests on livelihoods in Cameroon: Lessons from two case studies. *International Forestry Review* Vol.13(3), 2011.

Beltran J. 2000. Indigenous and Traditional Peoples and Protected Areas Principles, Guidelines and Case Studies. Beltran J. (Ed.). World Commission on Protected Areas. Best Practice Protected Area Guidelines Series No. 4.IUCN. 133 pp.

Borrini-Feyerabend, G., N. Dudley, T. Jaeger, B. Lassen, N. Pathak Broome, A. Phillips and T. Sandwith 2013. Governance of Protected Areas: From understanding to action. Best Practice Protected Area Guidelines Series No. 20, Gland, Switzerland.

Burgin, S & Zama, F.E. 2014. Community-Based Tourism – Option for Forest-Dependent Communities in 1A IUCN Protected Areas? Cameroon Case Study. SHS Web of Conference,
DOI: 10.1051/shsconf/20141201067

Campese, J. 2009. Rights-Based Approaches to Conservation: An Overview of Concepts and
Questions.In,Campese, J., Sunderland, T., Greiber, T., Oviedo, G (eds.), Rights-Based Approaches: Exploring Issues and Opportunities for Conservation. CIFOR: Bogor, 1-40.

Cerutti P.O., Tacconi L., Nasi R., Lescuyer G., 2011. Legal versus certified timber: Preliminary impacts of forest certification in Cameroon. *Forest Policy and Economics*, 13: 184-190.

Cerutti P.O, Mbongo M. and Vandenhaute M. 2016. State of the timber sector in Cameroon (2015) – Report. FAO/CIFOR, 2016. 42 pp.

COMCAM Reports 2009-2014. Rapport d'activités de spécification des produits forestiers au Port de Douala. Douala.

COMIFAC 2014. Plan de Convergence pour la Gestion Durable des Ecosystèmes Forestiers d'Afrique Centrale. Edition 2. 2015-2025. COMIFAC. Yaounde. Cameroon. 33 pp.

Cuny P. 2011. Etat des lieux de la foresterie communautaire et communal au Cameroun. Tropenbos International Programme du bassin du Congo. Wageningen, Pays-Bas. Xviii + 110pp.

de Wasseige C. Tadoum M. Eba'aAtyi R. and Doumenge C. 2015. The Forests of the Congo Basin - Forests and Climate Change. Eds: de Wasseige C. Tadoum M. Eba'a Atyi R. and Doumenge C. - 2015. Weyrich Belgium.128p.

de Wasseige C., Flynn J., Louppe D., HiolHiol F. and Mayaux Ph. 2014. The Forests of the Congo Basin - State of the Forest 2013. Eds: de Wasseige C., Flynn J., Louppe D., HiolHiol F. and Mayaux Ph. - 2014. Weyrich Belgium.328p

Eba'aAtyi R.. Lescuyer G.. Poufoun J.N. and Fouda T.M. (Eds). 2013. Etude de l'importance économique et sociale du secteur forestier et faunique au Cameroun. Eba'a Atyi R., Lescuyer G., Poufoun J.N. and Fouda T.M. (Eds).CIFOR. 278 pp.

FAO. 2016. Community-based forestry can be a driving force in boosting sustainability and people's livelihoods. http://www.fao.org/news/story/en/item/384146/icode/ News Article 23-02-2016.

FAO, 2012. Guidelines for institutionalising and implementing community-based forest manangment in Sub-Saharan Africa. FAO, Rome. 67pp.

FAO 2011. State of World's Forests 2011. FAO Rome. Italy. 176pp.
Forlemu, F. 2015. An Analysis of Co-management on the Development and Preservation of Natural of Natural Resources on the Mt Cameroon National Park.Ecole de Faune: Garoua.

Gami N. 2016. Le Partenariat public-privé (PPP) dans les aires protégés du bassin du Congo. L'example deu Parc national d'Odzala-Kokoua en République du Congo. In: Buttoud G. and Nguinguiri J.C. (Eds.). La gestion inclusive des forêts d'Afrique centrale. FAO-CIFOR. pp. 35-44.

GFW 2009. A first look at logging in Gabon. A Global Forest Watch Report. 56 pp.

Global Environment Facility (GEF). 2006. The Role of Local Benefits in Global Environment Programs.Evaluation Report no. 30. Washington D.C.

GoDRC (Government of the Democratic republic of Congo). 2014. Mai Ndombe REDD+ Emission Reductions Program Idea Note (ER-PIN). Kinshasa, DRC.

GoRoC (Government of the Republic of Congo). 2014. Republic of Congo Emission Reductions program Idea Note (ER-PIN). Brazzaville. Republic of Congo.

Greiber, T., Janki, M., Orellana, M., Savaresi, A., Shelton, D. 2009. Conservation with Justice: A Rights-based Approach. IUCN Environmental Policy and Law Paper No 11. IUCN:
Gland.

ITTO 2016. The ITTO Tropical Timber Market (TTM) Report, ITTO Market Information Service (MIS),Vol. 20 (2). 16th – 31st January 2016.

ITTO 2015. Biennial Review and Assessment of the World Timber Situation 2013-2014. International Tropical Timber Organization. Yokohama, Japan. 226 pp.

Karsenty A. 2007. Overview of Industrial Forest Concessions and Concession-based Industry in Central and West Africa and Considerations of Alternatives. Rights and Rseources Initiative's efforts in Central and west Africa. 45 pp.

Koubouana F. 2016. Secteur forestier : Partenariats Public-Prive (PPP) dans le secteur forestier au Congo. Rapport l'AFF. 83pp.

Lamarque F., Anderson J., Fergusson R., Lagrange M., Osei-Owusu Y. and Bakker L. 2009. Human-wildlife conflict in Africa.Causes, Consequences and Management Strategies. FAO
Forestry Paper 157. Rome. Italy.
Lescuyer G., Tsanga R., Mendoula E.E., Ndume Engone H.C. 2015. Stock taking of small-scale forestry enterprises involved in commercialization of timber in Central Africa. Expert Workshop « Creating an enabling environment for the development of community-based forest enterprises in Africa » Douala, 18-20 November.
Mapedza E. 2007. Keeping Campfire going: political uncertainty and natural resource management in Zimbabwe. Gatekeeper Series 133. IIED.

Massoukou, L. 2007. La rétrocession d'une partie des revenus de l'exploitation forestière aux populations locales gabonaise : efficacité, équité et pérennité. Diplôme de Master en Agronomie et Agro-Alimentaire Spécialité : Foresterie Rurale et Tropicale.

Meunier Q., Vermeulen C., Moumbogou C. (2011). The first community forests of Gabon: Are they doomed from the start ? Parks & Reserves, 17-22.

Mbangilwa M. 2016. Public-Private Partnerships (PPP) in the forestry sectorin DRC. Consultancy report submitted to AFF. 84 pp.

MEFDD, 2015. –Annuaire des statistiques forestières, République du Congo, année 2014. 142p.

MINFOF 2015. Tableau statistique des forets communautaires et communales. MINFOF. Yaounde. 2p.

MINFOF 2014. Titres d'Exploitation Attribués aux Exploitants Forestiers: situation du 07 Juillet 2014. MINFOF. Yaounde. 6p.

Morgan, B., Adeleke, A., Bassey, T., Bergl, R., Dunn, A., Fotso, R., Gadsby, E., Gonder, K., Geengrass, E., Koulagna K.D. 2011. Regional Action Plan for the Conservation of Nigeria- Cameroon Chimpanzee (Pan Troglodytesellioti). IUCN/SSC: San Diego.

Nair CTS and Tieguhong J.C. 2004. African forests and forestry: An overview. Paper presented at the International Workshop on Lessons Learnt on Sustainable Forest Management in Africa. KSLA/AFORNET/FAO Project. Nairobi, 9-13 February. 28pp.
OCC (Office Congolais de Contrôle). 2014. Data http://occ.cd/jaa/extranet/

Pyhälä, A., Orozco, A. O., Counsell, S. 2016. Protected Areas in the Congo Basin: Failing Both People and Biodiversity. Rainforest Foundation: London.

Republic of Cameroon. 1994. Loi No 94/01 du 20 janvier 1994 portant régime des forêts. de la faune et de la pêche. Republic of Cameroon.

Republic of Cameroon. 1995. Décret N° 95/531/PM du 23 août 1995 fixant les modalités d'application du régime des forêts (Yaoundé. Cameroun).

Republic of Gabon. 2007. Law No03/2007 of 27th August 2007 related to National Parks.
Republic of Gabon. 2001. LOI N0016101 du 31 decembre 2001 PORTANT CODE FORESTIER EN REPUBLIQUE GABONAISE.

SCPFE 2015. – Exportation des produits forestiers du Congo, rapport statistique, année 2014.149p

Teketay D., Mbolo A.M.M., Kalonga S.K. and Ahimin O. 2016. Forest certification in Africa: achievements, challenges and opportunities. African Forest Forum, Nairobi, Kenya. 156 p.

Tieguhong J.C., Kowero G., Piabuo S. M. and Mutta D. (In press.). Promoting African integration through trade in forest products: Cameroon shows the way. *International Forestry Review.*

Tieguhong J.C. 2016. Report on Public-Private Partnerships (PPP) in the Forestry Sector in Cameroon. African Forest Forum. Nairobi. Kenya. 67 pp.

TieguhongJ.C., Sonne N. and Nzene D.H. 2015.Mapping of forestry investments and timber trade involving Chinese companies in Cameroon.WWF Report. 32pp.

Topa, G., Karsenty, A., Megevand, C. & Debroux, L. 2009. The Rainforests of Cameroon: Experience and Evidence from a Decade of Reform. The World Bank and PROFOR, Washington DC, United States.

Tsanga R., Lescuyer G. and Cerutti P.O. 2014. What is the role for forest certification in improving relationships between logging companies and communities? Lessons from FSC in Cameroon. *International Forestry Review* Vol.16(1), 2014

Wafwana M.E. et al. 2013. La législation forestière en République du Congo. http://www.lexology.com/library/detail.aspx?g=b221171f-cc7f-4af0-908d-d92b5a43f5ee

Yobo C.M. and Ito K. (2015). Trade of the most popular Indigenous fruits and nuts, threats and opportunities for their sustainable management around the Ivindo National Park (INP), Gabon. *International Journal of Biodiversity and Conservation*, 7(2): 85-102.

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