



A PLATFORM FOR STAKEHOLDERS IN AFRICAN FORESTRY

CROSS-BORDER TRADE IN FOREST PRODUCTS AND SERVICES AND TRADE IMPACTS IN AFRICA



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Cross-border trade in forest products and services and trade impacts in West Africa

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Table of contents

Table of contents	ii
List of tables	iv
List of figures	v
CHAPTER 1 Introduction	1
CHAPTER 2 Overview of trade in forest products and services in West Africa	3
CHAPTER 3 Capacities of national public forest administrations in climate change in West African countries	9
CHAPTER 4 Forest products trade, trade potentials and impacts in West African countries	22
Benin	22
Burkina Faso	24
Cape Verde	24
The Gambia	25
Ghana	26
Guinea	28
Ivory Coast	29
Liberia	33
Mali	34
Nigeria	36
Senegal	38
Sierra Leone	39
Togo	39
Forest products trade in the West African sub-region and associated trade impacts	40
Sub-regional needs and international trades in forest products	42
Timber product trade	42
Non-timber forest products trade	43

The role of small and medium forest enterprises.....	45
Efficiency in value chain	46
CHAPTER 5 Conclusions and recommendations	51

List of tables

Table 1. Main timber species harvested and traded in West Africa.	7
Table 2. West Africa - regional timber flows 2007.	8
Table 3. Availability of policies in respect of extraction of forest products in Benin.	9
Table 4. Availability of policy in respect of extraction of forest products in Guinea.	16
Table 5. Agencies directly linked with climate change activities in Ivory Coast.	17
Table 6. Availability of policy in respect of extraction of forest products in Liberia.	18
Table 7. Individual roles in Nigeria climate change sector.	20
Table 8. Availability of policy in respect of extraction of forest products in Nigeria.	21
Table 9. Important timber and non-timber species traded in Benin.	23
Table 10. Important timber and non-timber species traded in Ghana.	26
Table 11. Timber estimate and exported between 2003 and 2012.	27
Table 12. Countries of export of timber and non-timber products from Ghana.	28
Table 13. List of ten prevalent timber and non-timber species traded in Ivory Coast.	30
Table 14. Timber and non-timber species traded in Ivory Coast and beyond.	31
Table 15. Timber estimates and trade in the last ten years (1000 m3).	32
Table 16. Countries of export of the timber products from Ivory Coast.	32
Table 17. The most important and prevalent timber and non-timber species in Liberia.	34
Table 18. Mali wood imports between 2000 and 2009	35
Table 19. List of important timber and non-timber species most traded in Nigeria.	38

List of figures

Figure 1. Map of West-Central African countries showing timber resources flows across the sub-region.....	5
Figure 2. Generalised value chain for timber trade in West Africa.....	48
Figure 3. Generalised value chain for NTFPs trade in West Africa.....	49

List of plates

Plate 1. Low grade/low cost timber from chainsaw operations (common in timber markets in Ghana/Nigeria).	41
Plate 2. A band saw in Ijebu Ode, Nigeria.	47
Plate 3. Chainsaw milling in action along Nigeria-Cameroun border.	48
Plate 4: Weighing de-pulped seeds of <i>Baillonella toxiperma</i> in CODEVIR, and, right, kernels of <i>Irvingia gabonensis</i> in an 11 litre measuring bucket.	50
Plate 5: Left: <i>Ricinodendron heudelotii</i> grains (foreground) and fruit (background); Right: <i>Gnetum africanum</i> (weighed for the market).	50

Acronyms and abbreviations

ABE	Agence Béninoise pour l'Environnement
ABERME	Agence Béninoise d'Electrification Rurale et de Maîtrise d'Energie
ACP	Africa, the Caribbean, and the Pacific
AFD	Agence Française de Développement
ANDE	Agence National de l'Environnement
AU	African Union
CBDD	Centre Béninois pour le Développement Durable
CBRST	Centre Béninois de la Recherche Scientifique et Technique
CDM	Clean Development Mechanism
CEBENOR	Centre Béninois de Normalization et de Gestion de la Qualité
CeCPA	Centre Communal de Promotion Agricole
CEIB	Centre d'études et d'initiatives pour la préservation de la biodiversité et la sécurité alimentaire
CENAGREF	Centre National de Gestion des Réserves de Faune
CENAPI	Centre National de la Propriété Intellectuelle
CENATEL	Centre National de Télédétection et de Suivi Ecologique
CEPAG	Centre de Perfectionnement et d'Assistance en Gestion
CeRPA	Centre Régional pour la Promotion Agricole
CIDA	Canadian International Development Agency
CNDD	Commission Nationale pour le Développement Durable
CODEVIR	Union of village development Committees
COMIFAC	Commission des Forêts d'Afrique Centrale
CRA	Centre de Recherche Agricole

CREPA	Centre Régional pour l'Eau Potable et l'Assainissement à faible coût
CRHOB	Centre de Recherches Halieutiques et Océanologiques du Bénin
DFID	UK Department for International Development
DGASP	Directorate Agriculture, Forestry and Livestock
DGE	Direction Générale de l'Energie
DGE	Direction Générale de l'Environnement
DG-Eau	Direction Générale de l'Eau
DGFRN	Direction Générale des Forêts et des Ressources Naturelles
DNCC	National Directorate of Commerce and Competition
DNEF	Direction Nationale des Eaux et Forêts
DSS	Directorate of Forestry Service
EPA	Environmental Protection Agency
EU	European Union
FAO	Food and Agricultural Organisation of the United Nations
FAST	Faculté des Sciences et Techniques
FC	Forestry Commission
FCPF	Forest Carbon Partnership Facility
FDA	Federal Department of Agriculture
FLEGT	Forest Law Enforcement, Governance and Trade
FMC	Forest Management Contract
FSA	Faculté des Sciences Agronomiques
GACON	Ghana Association for the Conservation of Nature
GDP	Gross Domestic Product
GEF	Global Environment Facility

GFMC	Gambian Forest Management Concept
HFZ	Hills Face Zone
IDA	International Development Association
IDID	Initiative pour un Développement Intégré et Durable
IMSP	Institut de Mathématiques et Sciences Physiques
INRAB	Institut National des Recherches Agricoles du Bénin
ITTC	International Timber Trade Council
ITTO	International Timber Trade Organisation
LACEEDE	Laboratoire Climat, Eau, Ecosystèmes et Développement
LaMHYA	Laboratoire de Modélisation et d'Hydrodynamique Appliquée;
LCDF	Local Capacity Development Facility
LEA	Laboratoire d'Ecologie Appliquée
MEHU	Ministère de l'Environnement, de l'Habitat et de l'Urbanisme
MEPN	Ministère de l'Environnement et de la Protection de la Nature
MESRS	Ministère de l'Enseignement Supérieur et de la Recherche Scientifique
MEST	Ministry of Environment, Science and Technology
MISD	Ministère de l'Intérieur, de la Sécurité et de la Décentralization
MLNR	Ministry of Lands and Natural Resources
MOFA	Ministry of Food and Agriculture
MPREPE	Ministère du Plan, de la Restructuration, de la Prospective et de l'Economie
MSP	Ministère de la Santé Publique
N	Naira (Nigeria's currency)
NAMA	Nigeria Airspace Management Authority

NFP	National Forest Programme
NIMET	Nigeria Metrological Agency
NRM	Natural Resource Management
NTFP	Non-Timber Forest Product
NWFP	Non-Wood Forest Product
OAU	Organisation of African Unity
OFEDI	Organisation des Femmes pour la gestion de l'Energie, de l'Environnement et la Promotion du Développement Intégré
PNUE	Programme des Nations Unies pour l'Environnement (UNEP)
PROGERFOR	Projet de Gestion des Ressources Forestières
PSF	Petroleum Support Fund
REDD	Reduced Emissions from Deforestation and Forest Degradation
RMRDC	Raw Material Research and Development Council
SADA	Savannah Accelerated Development Authority
SMFE	Small and Medium scale Forest Enterprise
SODEFOR	Société de Développement des Forêts
TSC	Timber Sales Contracts
UNCCD	United Nations Climate Change Department
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
VPA	Voluntary Partnership Agreements
WWF	Worldwide Wildlife Fund

Executive summary

Forestry and rural development are on the cusp of major changes in West Africa with Forest Law Enforcement and Trade (FLEGT) measures already affecting the international timber trade, with knock-on effects for wider patterns of forest exploitation. New opportunities for carbon conservation and bio-energy and new streams of carbon finance may greatly enhance the value of land, with significant impacts on the natural landscape and the place of forests within it. At the same time, the drivers of deforestation and degradation, many of which lie outside the forest sector, are intensifying in their effects, under the hydra-headed pressures of population growth, urbanisation, unemployment and political conflicts as well as consequent anthropogenic activities in and around the forests in the West African sub-region.

In the majority of countries with considerable potential for REDD, illegal activities (extraction of timber and NTFPs) have been significant drivers of deforestation. These call for careful examination. Although there are forest policies in virtually all countries in the sub-region, their implementation is too weak to address contemporary challenges in the forestry sector. Also, the extent to which policies and laws are implemented, the level of understanding of the issues surrounding forest law compliance, the use of emerging and appropriate technologies, and the participation of local communities in monitoring forest law compliance vary among countries in the sub-region; comparing and the sharing of knowledge and experiences, therefore, is of great importance. On the other hand, there are excessive restrictions on legal access of local communities to forest resources. Such restrictions have promoted and encouraged the surreptitious and illegal extraction of forest resources and the encroachment on forest lands in much of the West African sub-region. Illegal logging and trade, both on a large scale, are negatively affecting the profitability and competitiveness of the forest industry, in addition to the predicted impact on global warming.

Timber trade in the West African sub-region is influenced by local, regional and overseas demands, with Europe being an important market for the major producing countries in the region, though increasingly trade among the countries is also becoming manifest. Much of the demands in the local and national markets are now being satisfied with cheap rough-sawn and low-grade timber used in construction and joinery. Trade in timber and non-timber products in the sub-region is characterised by limited availability of statistics and a high volume of trade based on unrecorded or illegal forest product movements. Foreign markets and other important destinations for timber exports from West Africa are Europe, USA, China and India, with buyers from the latter two nations becoming increasingly active in the sub-region. While the European countries and USA are supporting initiatives to eradicate illegal logging, limited concern is being shown by either Indian or Chinese buyers, who are allegedly complicit in some of the illegal trade. Failure to curtail such activity will undermine efforts being made under the FLEGT and other initiatives.

Comparative analysis of the export and customs procedures throughout West Africa shows a strong similarity among systems and the roles of the government forestry and customs authorities. The former is responsible for verification of exports and contract conformity and issuing of certificates of origin, and the latter for final inspection against export and loading statements. However, in many West African countries, implementation demonstrates weaknesses and widespread opportunity to circumvent requirements. The trends show booming local demand for low-grade and low-cost timber and plywood, due mainly to increased demands for housing arising from relatively significant growths in the economies of the sub-region. Not surprisingly, in view of the informal nature of this trade, it has not translated into significant increases in GDP per capita.

The informal sector is important in wood processing across the sub-region, supplying significant quantities of sawn-wood, furniture and joinery to urban, peri-urban and rural markets. Together, these markets are much larger in volume than the exports leaving the formal sector. Generally, with low rates of conversion, the informal sector is a bigger consumer of wood fibre than the formal sector. However, there is potential for broadening opportunities for improved efficiency across the sector. In Ghana, for example, this has contributed significantly to the economy and sometimes adds real value, whereas the formal sector detracts from value. There is thus need for the encouragement of Small and Medium Forest Enterprises (SMFEs) to overcome financial distress and improve efficiency to enable them contribute significantly to employment, poverty reduction and sustainable livelihoods.

Non-timber forest products (NTFPs) are of considerable significance in the economies of the sub-region, and underpin the livelihoods and coping strategies of the poor. However, their use and management is frequently constrained by forestry laws developed to promote conservation and sustainable management of timber species, but inappropriate for the rational management of the resources in question. This underscores the need to move from the old sustained timber yield view of forest management towards a multiple-use approach.

Forest trade and value chain analyses in West Africa should ordinarily be simple; however, such analyses present a complex scenario. The complexity arises from administrative processes to the technical aspects of the trade. Obsolete industry equipment as well as inadequate and unreliable data also makes its application a daunting task. Forest governance remains a huge challenge in most West African countries. Policy and market failures underpin the poor forest governance in the sub-region and are evident in badly functioning and distorted markets with poor and perverse incentives to manage and conserve the resource. The impacts of the scenarios on climate change are far-reaching and need to be frontally addressed. Capacity building and strengthening, commitment to international processes and ordinances are keys to addressing observed institutional and policy weaknesses in the sector.

CHAPTER 1 Introduction

Good governance is fundamental to achieving positive and sustained development outcomes in the forest sector, such as efficiency in resource management, an increased contribution to economic development and environmental services, and an equitable distribution of benefits (FAO and ITTO, 2010). Forestry and rural development are influencing major changes in West Africa, while Forest Law Enforcement and Trade (FLEGT) measures are already affecting the international timber trade, impacting also wider patterns of forest exploitation. New opportunities for carbon conservation and bio-energy and new streams of carbon finance may greatly enhance the value of land, with significant impacts on the natural landscape and the place of forests within it. At the same time, global climate change is having a major effect on forest ecology, while the drivers of deforestation and degradation, many of which lie outside the forest sector, are intensifying in their effects, with the pressures of population growth and consequent anthropogenic activities in and around the forests in the West African sub-region.

A number of processes and instruments have been initiated to mitigate negative trade practices and their impacts on the forestry sector. They include the FLEGT Action Plan, which sets out the contribution of the European Union (EU) to addressing illegal logging, with particular emphasis on trade. The Plan specifies the creation of voluntary partnership agreements (VPAs) between the EU and timber-producing country governments, which commit both parties to developing a timber-licensing scheme under which only legally produced and licensed timber will be allowed into EU markets. Moreover, the FAO/ITTO Initiative on Forest Law Compliance and Governance developed best-practice guidelines to address law compliance in the forest sector and organised five regional workshops to encourage the exchange of views between stakeholders on forest law compliance and governance issues, challenges and solutions (FAO and ITTO, 2010). Many West African countries were represented in those workshops.

Despite these efforts, several million hectares of forest lands are converted to non-forest land uses without prior authorisation each year in West Africa. Millions of additional hectares of forests are exploited unsustainably and thus become degraded, often beyond their capacities to fulfil their ecological, economic and social functions in the long run. Increasingly, a significant proportion of the world's timber, as well as non-timber forest products (NTFPs), are coming from forests that have been or are being degraded. In many cases, such products are harvested, transported, processed and traded in violation of national forest laws. Illegal logging and associated trade have far-reaching environmental, social and economic consequences, including the loss of biodiversity and habitats, political instability, increased income disparities, and market distortions. Although the extent of illegal forest activities is difficult to quantify, their economic cost is likely to be large. In 2008,

the World Bank estimated that illegal logging alone caused annual losses in global market value of more than USD 10 billion and in government revenue of as much as USD 5 billion (World Bank, 2008). In the West African sub-region, rapidly growing urban demand for wood and wood-fuel and increasing agricultural demand are likely to result in continued reduction in forest cover (FAO, 2009).

The magnitude of the problem has prompted governments, with the help of international and non-governmental organisations as well as the private sector, to step up their analyses of socio-economic causes and consequences of insufficient forest law compliance. It has been submitted that issues to be resolved include: uncertainty surrounding land-use and land-use changes, forest tenure and use rights, flawed forest policy and legal frameworks, weak forest law enforcement, insufficient information on forest resources, coupled with increasing demand for forest products and, corruption and lack of transparency.

Recently, a new dimension to forest law compliance has received particular attention. It is based on an increasing recognition of the role of forests in both mitigating and adapting to climate change. Deforestation and forest degradation in the tropics accounts for about 20% of global emissions of carbon dioxide. This makes forests the second most important contributor to global warming after fossil fuels and the largest source of greenhouse gas emissions in most tropical countries. On the other hand, well-managed forests, and a reduction in deforestation, can make a substantial contribution to climate-change mitigation by reducing forest-related greenhouse gas emissions and by sequestering carbon in growing forests.

Given the importance of forests in climate-change mitigation, proposals have been made within the United Nations Framework Convention on Climate Change (UNFCCC) and its Bali Action Plan to consider measures to encourage reduced emissions from deforestation and forest degradation (REDD) in the scope of a post-2012 climate-change regime. Such measures would also include considerable compensation to encourage REDD. For this, investments and financial flows of up to USD 20 billion per year could go to the forest sectors of developing countries on the assumption that such flows would increase the economic incentives for protecting forests and thereby help to reverse the main drivers of deforestation and forest degradation.

CHAPTER 2 Overview of trade in forest products and services in West Africa

In many West African countries, a historical driver of deforestation has been non-compliance with forest-related laws and the poor governance of the forest resource. The substantial amount of illegal activities in the sector is a symptom of this failure. In the majority of countries with considerable potential for REDD (that is, countries with large forest areas and high levels of deforestation and degradation), illegal activities – both conversion of forests for agricultural purposes, and forest degradation, particularly that caused by illegal logging – have been the most significant drivers of deforestation (World Bank, 2008).

The illegal extraction of forest resources, including timber, fuel-wood, medicinal plants and wildlife, and the associated trade in these products, is having a major ecological impact in the sub-region. As a consequence, West African forests are becoming more vulnerable to climate change and to degradation of soil and water resources. Their continued degradation contributes to an increase in rural poverty, reducing environmental quality, and resulting in substantial losses in state revenues due to forgone taxes and fees. Trans-boundary illegal timber trade has been identified as being among the major causes. This is a complex phenomenon in the sub-region, and its magnitude is becoming increasingly difficult to assess. In some West African countries, post-conflict situations exacerbate this problem (FAO and ITTO, 2010). Most countries have legislation to regulate the harvesting and trade of timber and NTFPs, but the capacity for enforcement is weak and corruption and poor governance are also major obstacles to sustainable forest management. Illegal forest resource extraction and related trade at the national and international levels are a consequence of: cross-sectorial policy weaknesses; lack of commitment among stakeholders to respect, adhere to, and enforce forest policies and regulations; deficient regulatory and legal frameworks; and, limited institutional capacity for law enforcement, which can, and in fact also, lead to corruption and abuse of processes.

Excessive restrictions on legal access to forest resources (including unclear and insecure tenure, and overly bureaucratic procedures) have promoted the illegal extraction of forest resources and the encroachment of forestland. Illegal logging and trade, both on a large scale (such as commercial forest concessions) and on a small scale (such as pit-sawing, distorted timber markets) are negatively affecting the profitability and competitiveness of the industry. The extent to which policies and laws are implemented, the level of understanding of the issues surrounding forest law compliance, the use of emerging and appropriate technologies, and the participation of local communities in monitoring forest law compliance

vary among countries in the sub-region. Comparing and the sharing of knowledge and experiences, therefore, are of great importance.

Informal trans-border trade plays a prominent role in West Africa, based on the exploitation of differences between national regulations. According to Meagher (2003), trans-border trade remains, by far, the most efficient, organised and institutionally deep-rooted system of trade in the West African sub-region. Any modification could therefore have tremendous economic, social and environmental impacts in West Africa. Globalisation changed the geography of trans-border trade from its operation as local and regional export-import circuits to engage in inter-continental relations (Meagher, 2001). These developments introduced scale and geographic distinctions among small-scale, rural, and intra-regional trans-border trade (EU-ACP, 2004).

Timber trade in the West African sub-region is influenced by local, regional and overseas demands, with Europe being an important market for the major producing countries of West Africa. Export restrictions render trade in timber resources illegal. As with local markets, much of the demand is for cheap rough-sawn and low-grade timber used in construction and joinery and regional markets are a further stimulus for illegal chainsaw logging. In countries with export oriented industries, some low-grade materials may be available to the local market, but the demand is largely met by supply of rough-sawn planks produced illegally *in-situ* by chainsaw logging gangs. Planks may then be transported illegally to major urban centres through illegal routes, or with quasi-legal status because of fees sometimes being paid for official transport documents. Some of the reported flows of timber resources in the sub-region (Figure 1) include:

- ▶ sawn-timber from Ivory Coast and Ghana to the Sahel;
- ▶ logs and sawn-timber from Cameroon to northern Nigerian states;
- ▶ plywood from Ghana to Benin, Nigeria and Togo;
- ▶ sawn-timber from Guinea Conakry and Liberia to Ivory Coast;
- ▶ sawn-timber from Sierra Leone to Guinea Conakry; and,
- ▶ sawn-timber from Ghana and Nigeria to Benin and Togo.

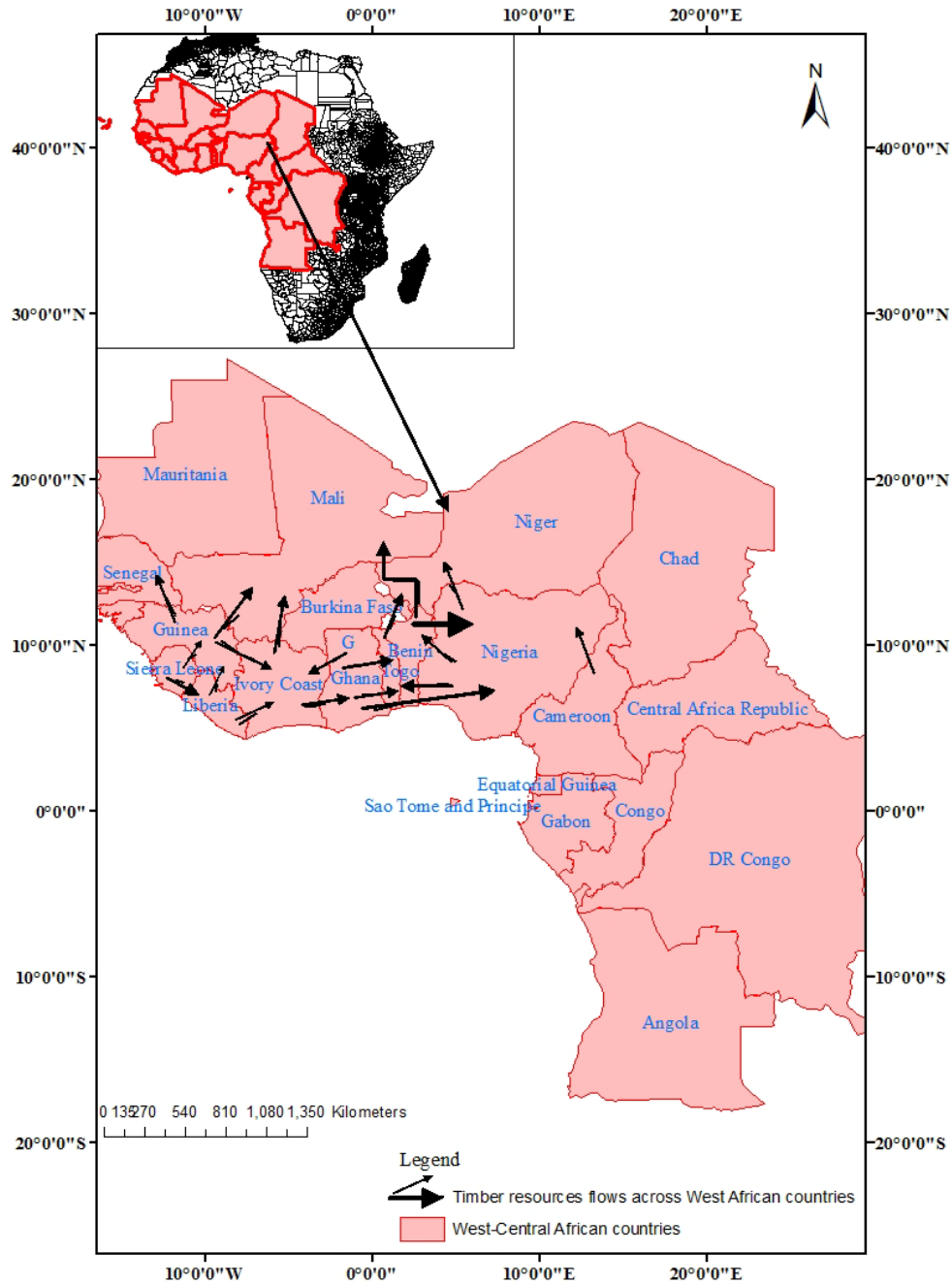


Figure 1. Map of West-Central African countries showing timber resources flows across the sub-region

Trade in timber and other forest products and services in West African countries is characterised by limited availability of statistics and a high volume of trade based on unrecorded or illegal timber movements. This means that the true volume and value of the trade is unknown (Blackett and Gardette, 2008). Table 1 shows some of the main timber species harvested and traded in West African countries while Table 2 shows regional timber flows in West African countries.

In addition to European markets, other important destinations for timber exports from West Africa are USA, China and India with buyers from the latter two nations becoming increasingly active in the sub-region. Indian buyers are particularly focused on sawn-timber and poles of *Tectona grandis* while Chinese interest is in logs and sawn-timber of a wide variety of species including *cam wood*, *Triplochiton scleroxylon* and false-teak or *vene*. While the European countries and USA are supporting initiatives to eradicate illegal logging, limited concern is being shown by either Indian or Chinese buyers, who are allegedly complicit in some of the illegal trade. Failure to curtail such activity will undermine efforts being made under the FLEGT initiative.

Blackett and Gardette (2008) reported that teak logs harvested from plantations in Ivory Coast constituted an important component of the cross-border timber trade. Much of the production is apparently transported via Burkina Faso to Ghana and Togo. The logs are processed and re-exported directly, mainly to India. Teak is the main export species of Ghana despite the fact that Ghana has limited teak plantations and there were no official records of any teak imports. There are also considerable areas of teak plantations in Benin, Togo and Nigeria. Teak from Benin is exported illegally, either directly or via Togo, and from Nigeria it is exported directly.

Ghana directly exports large quantity of the plywood manufactured in the country to Nigeria without any consideration on the legality of the timber source. With the continuing depletion of Nigeria's forest resource and collapse of timber industries, it can be expected that in the future there will be growing cross-border trade in sawn-timber as well as plywood. Having no timber resources, the Sahel region is totally dependent on supply of timber coming from Ghana, Guinea Conakry, Ivory Coast and Togo. This dependence will continue and is expected to add to the pressure on remaining forest resources in the sub-region.

Table 1. Main timber species harvested and traded in West Africa.

French name	Common/Trade name	Scientific name
Acajou	African mahogany	<i>Khaya ivorensis</i>
Ako	Antiaris	<i>Antiaris toxicaria</i>
Azobe	Ekki	<i>Lophira alata</i>
Badi	Opepe	<i>Nauclea diderrichii</i>
Frake	Black afara, idigbo, emeri	<i>Terminalia ivorensis</i>
Framire	Afara	<i>Terminalia superba</i>
Fromager	Ceiba	<i>Ceiba pentandra</i>
Iroko	Iroko	<i>Melicia excelsa</i>
Lingue	Afzelia	<i>Afzelia africana</i>
Niangon	Niangon	<i>Heritiera utilis</i>
Samba	Wawa	<i>Triplochiton scleroxylon</i>
Sapele	Sapele, utile	<i>Entandrophragma spp</i>
Teak	Teak	<i>Tectona grandis</i>
Vene	False-teak, African rosewood	<i>Pterocarpus erinaceus</i>

Table 2. West Africa - regional timber flows 2007 (Source: Blackett and Gardette, 2008)

From	To	Product	Volume (m ³)	Status
Benin	Togo	Squared logs	100 000	Illegal
Ghana	Benin	Plywood	2 500	Legal
	Benin	Lumber	Unknown	Illegal
	Benin (in transit to	Teak sawn-timber	Unknown	Illegal
	Ivory Coast	Lumber	Unknown	Illegal
	Nigeria	Plywood	74 500	Legal
	Nigeria	Lumber	Unknown	Illegal
	Sahel region	Lumber	39 000	Legal
	Sahel region	Lumber	260 000	Legal
	Togo	Plywood	6 700	Legal
	Togo	Lumber	Unknown	Illegal
Guinea Conakry	Ivory Coast	Logs and sawn-timber	Unknown	Illegal
	Sahel region	Lumber, plywood &	Unknown	Illegal
Ivory Coast	Ghana	Manufactured products	290 000	Legal
	Ghana	Teak logs & sawn-timber	250 000	Illegal
	Sahel region	Logs & sawn-timber	Unknown	Legal & Illegal
	Togo	Teak logs & sawn-timber	Unknown	Illegal
Liberia	Guinea Conakry	Logs & sawn-timber	Unknown	Illegal
	Ivory Coast	Lumber	Unknown	Illegal
Nigeria	Benin (in transit to	Lumber	Unknown	Illegal
	Sahel region	Poles	Unknown	Legal
	Togo	Lumber	Unknown	Illegal
Sierra Leone	Guinea Conakry	Logs & sawn-timber	Unknown	Illegal
	Liberia	Lumber	Unknown	Illegal
Togo	Sahel region	Lumber & veneer	Unknown	Illegal

CHAPTER 3 Capacities of national public forest administrations in climate change in West African countries

A key identified driver of climate change in West Africa is agricultural and forest land use (AFOLU), deforestation for food, fuel and fibre as well as urbanisation and infrastructural development. Yet, the capacities of forestry administrations in the sub-region to handle the emerging issues in the forestry sector have increasingly elicited debates and concerns. This section of the report therefore examines the capacities and readiness of the authorities saddled with the responsibility of forest governance in the sub-region to address these emerging issues.

In Benin, the forestry administration is anchored in the national government, and the country has a good forest policy, which has been in operation since 1994 and was revised in 2012. The key priorities of the country's forest policy are: the promotion of decentralised forest, wildlife and natural resources management; participatory and sustainable management of forests and natural resources; improvement in service delivery technology; acceleration of institutional reform in the forestry, wildlife and natural resources sector. The minimum requirement for entry into the forest service is a high school certificate. Table 3 shows the availability or otherwise of policies in respect of extractions of forest products in Benin.

Table 3. Availability of policies in respect of extraction of forest products in Benin.

Extraction activities	Timber		Non-timber	
	Yes	No	Yes	No
Illegal extraction	X		N/A	
Product tracking	X		N/A	
Product certification		X	N/A	
Control of illegal cross-border trade		X	N/A	

There is no climate change section or department in Benin, but there is a UNCCD focal point. Personnel involved in climate change activities are in diverse sectors but they all

contribute to climate change mitigation activities. Their activities include reforestation and afforestation, promotion of income-generating activities, promotion of new technologies, promotion of botanical gardens, and prevention of disasters. However, logistics available are inadequate for the climate change activities and challenges. The sources of funding for climate change programmes in Benin are International and Multilateral organisations, National Government, NGOs, faith-based organisations, Community-based organisations and the private sector.

There are various government agencies and NGOs that are directly linked involved with climate change activities in Benin, as listed in the box below:

Government agencies/departments	
ABE	<i>Agence Béninoise pour l'Environnement;</i>
ABERME	<i>Agence Béninoise d'Electrification Rurale et de Maîtrise d'Energie;</i>
CBDD	<i>Centre Béninois pour le Développement Durable;</i>
CBRST	<i>Centre Béninois de la Recherche Scientifique et Technique;</i>
CEBENOR	<i>Centre Béninois de Normalization et de Gestion de la Qualité;</i>
CeCPA	<i>Centre Communal de Promotion Agricole;</i>
CENAGREF	<i>Centre National de Gestion des Réserves de Faune;</i>
CENAPI	<i>Centre National de la Propriété Intellectuelle;</i>
CENATEL	<i>Centre National de Télédétection et de Suivi Ecologique;</i>
CEPAG	<i>Centre de Perfectionnement et d'Assistance en Gestion;</i>
CeRPA	<i>Centre Régional pour la Promotion Agricole;</i>
CNDD	<i>Commission Nationale pour le Développement Durable;</i>
CRA	<i>Centre de Recherche Agricole;</i>
CREPA	<i>Centre Régional pour l'Eau Potable et l'Assainissement à faible coût;</i>
CRHOB	<i>Centre de Recherches Halieutiques et Océanologiques du Bénin;</i>
DGE	<i>Direction Générale de l'Environnement;</i>
DGE	<i>Direction Générale de l'Energie;</i>
DGFRN	<i>Direction Générale des Forêts et des Ressources Naturelles;</i>
DG-Eau	<i>Direction Générale de l'Eau;</i>

DGFRN	<i>Direction Générale des Forêts et des Ressources Naturelles;</i>
FSA	<i>Faculté des Sciences Agronomiques;</i>
FAST	<i>Faculté des Sciences et Techniques;</i>
IMSP	<i>Institut de Mathématiques et Sciences Physiques;</i>
INRAB	<i>Institut National des Recherches Agricoles du Bénin;</i>
LACEEDE	<i>Laboratoire Climat, Eau, Ecosystèmes et Développement;</i>
LaMHYA	<i>Laboratoire de Modélisation et d'Hydrodynamique Appliquée;</i>
LEA	<i>Laboratoire d'Ecologie Appliquée;</i>
MEHU	<i>Ministère de l'Environnement, de l'Habitat et de l'Urbanisme;</i>
MEPN	<i>Ministère de l'Environnement et de la Protection de la Nature;</i>
MESRS	<i>Ministère de l'Enseignement Supérieur et de la Recherche Scientifique;</i>
MISD	<i>Ministère de l'Intérieur, de la Sécurité et de la Décentralization;</i>
MPREPE	<i>Ministère du Plan, de la Restructuration, de la Prospective et de l'Economie;</i>
MSP	<i>Ministère de la Santé Publique.</i>
Non-governmental organisations:	
OFEDI	<i>Organization des Femmes pour la gestion de l'Energie, de l'Environnement et laPromotion du Développement Intégré;</i>
IDID	<i>Initiative pour un Développement Intégré et Durable;</i>
CEIB	<i>Centre d'Etudes et d'initiatives pour la préservation de la biodiversité et la sécurité alimentaire.</i>

In Burkina Faso, forest policies relate more to ecological problems (particularly, those relating to the drought in the 1970s). Though policies and legislations still bear semblance to those of the colonial period, the current policies have evolved after the centralised management of the 1970s, to the current forest policy, which is based on a participatory option and is implemented in the framework of a programme approach, which aims at rationalising resource use. The natural forest management programme, one of the three key aspects of the policy, aims at managing and using forest resources in ways that allow the current generations to derive maximum benefit while ensuring their sustainability for the satisfaction of future generations. The identified strategic policy objectives include: i) adding value to natural forests to ensure their protection and the preservation of the natural environment; ii) satisfying people's needs for forest products, especially firewood for urban

consumption; and, iii) contributing to the achievement of socio-ecological balance to ensure a continuous and sustainable development.

However, political, institutional and legal provisions are sometimes in contradiction with these objectives. For example, the low price of forest products (firewood more specifically) as well as the tax system and regulation with few incentives have long ignored the organised private sector operating in forestry businesses.

The current national forest policy is based on the code of the environment, the Forest code and other laws relating to rural development. The review of policies, laws and environmental and forest regulations shows a number of deficiencies. SMFEs and NWFPs have so far been ignored by planners and legislators in Burkina Faso; the current legislation tends to consider firewood as a solution to energy problems faced by the country, favouring a low price for firewood, which leads to greater deforestation. Regulatory frameworks have been designed primarily to mitigate the environmental impact of large scale forest exploitation, instead of promoting development of community forest management operations and creating added value.

There is no climate change department in Burkina Faso. Government policy in Burkina Faso is inflexible with standardised rules on access and tenure rights applicable to all forest resources, irrespective of the nature of the provided goods and services, their location or existing customary settings and other prevailing circumstances. This makes it difficult for some forest-dependent communities to use forest resources for adaptation. Nevertheless, the current decentralisation process presents a real opportunity for local communities to define how to manage their forest resources. In addition, draft regulations governing the exploitation of NWFPs are being developed. These developments require that actors (local communities and SMFEs) are well informed about these issues, and can seize these opportunities.

In Cape Verde, the Ministry of Environment, Rural Development and Marine Resources is responsible for supporting forestry development and protected areas. It is also responsible for issues concerning the protection of environment and nature. Under this Ministry is the Directorate Agriculture, Forestry and Livestock (DGASP), which is responsible for the implementation of government forest policy. The responsibilities of this Directorate are to develop strategies for the preservation and development of forests and to establish and implement policies, strategies and programmes to fight desertification and poor land management. The Directorate of Forestry Service (DSS) is a part of DGASP and its specific responsibilities are to: i) contribute to defining the national forest policy and coordinate its implementation; ii) strengthen the enforcement of forest laws and regulations and international agreements and standards related to forestry; and iii) develop, update and coordinate implementation of planning tools in the sector, including the Forest Action Plan, Programme and Forest Management Plans.

The DSS also plans forest protection activities in the country to:

- ▶ ensure their integrity and proper use of trees and soil;
- ▶ define the technical criteria for the issuance of license for cutting and pruning trees;
- ▶ grant permits for felling or cutting of trees;
- ▶ connect with public and private institutions aimed at protecting the environment with the objective of preservation or expansion of forests;
- ▶ prevent violations of the laws and regulations governing forestry activities and promote the prosecution of these violations;
- ▶ take part in activities that aim to control entry into the country of forest products and seeds and exercise other similar functions as determined by superiors.

In Gambia, until 1985, all government programmes on forestry were sketchily mentioned only in the five-year development plans, and focused mainly on plantation management. There was no coherent policy on the way forward for the sustainable management of forest resources. In addition to lack of will, there was also the constraint of inadequate human resources in the department. Staff members were thinly spread, leading to unsupervised operations on the part of commercial fuel-wood cutters and other licensed forest users. Government policies were ill-defined and thus attracted only half-hearted measures and support. The forestry services seriously lacked the trained staff and financial endowment necessary to formulate and implement holistic forest policies and regulations.

However, new forestry Legislation and Regulations were enacted in 1998. Stakeholders in the forestry sector have confirmed that Gambia's forestry policy is recording some multiple successes that can gain the country a robust reputation and serve as a point for learning by many West African countries on sustainable forest management. A National Forest Programme (NFP) was also designed to halt the rapidly degrading forest environment amidst a growing threat of desertification, particularly in the West Coast and Lower River Regions of the country. The three-year partnership agreement between the government of Gambia and the FAO sought to empower communities with legal security, skills and knowledge necessary to sustainably manage their natural resources as well as conserve remaining bio-diversity. The country began implementing the Gambian Forest Management Concept (GFMC) through the Forest Policy to promote community-based forest management, which promotes participatory forest management at the local, district, regional, and national levels.

The NFP is a three-year pilot project, aiming to address the issue of environmental degradation by supporting the sustainable exploitation and management of forest resources the world over, through community forest-based enterprise development and reforestation.

The pilot project is being implemented in the Lower River and West Coast Regions. As one of the most important outcomes of the forest policy dialogue after the UNCED World Summit in Rio, NFP was the first commonly agreed framework in pursuit of sustainable forest management, which is applicable to all countries and to all types of forests (Dampha, 2001). The NFP served as a framework to put international agreements on sustainable forest management into practice.

The 2010-2019 Forest Policy and the current Forestry Bill of 2010 seek to update the 1998 Forest Act, and they aim at consolidating these achievements and making further progress in the greening of the environment and improvement of the forestry sector. The measures put into effect include:

- ▶ forest protection, and afforestation in areas with low forest cover;
- ▶ sensitisation of communities and closer collaboration with the Ministry of Agriculture to minimise conversion of forest to agricultural land and to monitor livestock grazing;
- ▶ improved utilisation of mangroves by-products, particularly oysters;
- ▶ the expansion of the regional fire management approach to all regions to help reduce the occurrence of bush fires, which affects 79% of the population each year.

More vigorous promotion of the participatory forest management concept to fulfil the policy objective of encouraging private participation in forest resource management and transferring of 200 000 ha of forest land to the communities by 2019 is also in place. As at 2006, only 18 000 ha were under community forestry. Currently, the state owns 88% of the forest and 70% of other wooded lands and the policy for these include: i) heightening of conservation efforts for some species in areas low in species diversity; ii) discouragement of commercial fuel-wood harvesting in areas low in fuel-wood stock density; iii) discouragement of permits for timber tree harvesting to maintain timber species for the future; and, iv) pursuit of alternative energy sources for fuel-wood and charcoal.

Other activities include strengthening the use and adoption of new inventions on energy-saving stoves in rural and urban areas and increasing the use of the mass media for awareness creation on the current state of the forest, involving simplification for the understanding of the rural communities.

In Ghana, forestry administration is handled by the National Government with a clear forest policy, which has been in use since 1994. The implementation of the policy is by regional and district governments. Ghana's 1994 forest and wildlife policy does not address climate change specifically, nevertheless, issues on climate change are captured in the preamble and background. The minimum requirement to be a forest officer in Ghana is a Higher National Diploma, or its equivalent.

The focus of Ghana's forest policy seeks to develop a national forest estate and timber industry that provides a full range of benefits for society in an ecologically sustainable manner while conserving the environmental and cultural heritage. However, Ghana has no climate change policy at present. The two main government organisations responsible for national programmes and activities on climate change in Ghana are the Environmental Protection Agency (EPA) and the Forestry Commission (FC). The EPA has an over-arching role in climate change issues in Ghana, and coordinates activities at various stages. They are doing fairly well regarding international programmes such as REDD, CDM and RIP.

There is also a climate change unit at the FC. Other Government agencies that are directly linked with climate change activities in Ghana include the:

- ▶ Ministry of Environment, Science and Technology (MEST);
- ▶ Ministry of Energy;
- ▶ Ministry of Food and Agriculture (MOFA);
- ▶ Ministry of Lands and Natural Resources (MLNR), and,
- ▶ Savannah Accelerated Development Authority (SADA).

NGOs include the Tropenbos International, the Ghana Youth Volunteers for the Environment, and the Ghana Association for the Conservation of Nature (GACON).

The activities engaged in by the climate change related institutions include coordination of programmes on climate change mitigation and adaptation, and awareness creation and education of the populace about REDD+ initiatives. Funding for climate change programmes comes from international and multilateral organisations (UN and the World Bank) and the national government (Ministry of Finance and Economic Planning).

The availability or otherwise of policies controlling extraction of forest products in Ghana is presented in *Table 4*, which reveals that there is no policy in-force controlling the extraction of non-timber forest products in the country.

In Guinea, the establishment of the Second Republic in April 1984 led to a new awareness and recognition of the need for responsible natural resource management (NRM) of forest, wildlife, water, and soil resources. The National Directorate of Waters and Forests (*Direction Nationale des Eaux et Forêts*, or DNEF) is legally responsible for managing all forests, national or otherwise, in Guinea. By 1990, following the lead of other countries in the West African sub-region, Guinea had developed a forestry policy reflecting the nation's attitude towards the future of its forest lands. Similar to efforts in other countries in the sub-region, the DNEF attempted to transform itself from a "service of repression" to a service that works in collaboration with local populations. "Old school" military-trained forest guards are now

rare, and many new forest agents have been trained in participatory methods. The new Forestry Code made provisions for devolution of forest control to Guinea's elected rural councils, in which a state forestry service representative supports each elected committee. In 1996, the ministry took a step further in permitting legal establishment of village woodlots and private forests.

Guinea's forestry policy objectives are grounded in six underlying principles, which are:

- ▶ ensuring the sustainability of its renewable natural resource heritage;
- ▶ protecting and managing areas set aside as permanent forest land;
- ▶ employing "best practices" that yield record products and benefits for an indefinite period;
- ▶ bolstering and regulating all aspects of the harvesting, processing, and marketing of forest products;
- ▶ getting government, business, organisations, associations, and local communities closely involved in forestry policy; and,
- ▶ ensuring the effective use of corresponding policy instruments.

Table 4. Availability of policy in respect of extraction of forest products in Guinea.

Extraction activities	Timber		Non-timber	
	Yes	No	Yes	No
Illegal extraction	X		N/A	
Product tracking	X		N/A	
Product certification		X	N/A	
Control of illegal cross-border trade	X		N/A	

Ivory Coast's forests are owned by the National government and local communities. The country has had a forest policy since 1965, which is adjudged to be fair. The forest policy has recently been reviewed, and is to be forwarded to the Parliament for adoption. The key focuses of the policy include: i) the classification of forests and their ownerships; ii) protection and conservation of forests (forest management); iii) right of forest usage; and, iv)

fighting against illegal exploitations of forest resources and fraud. The state government is in-charge of forest policy implementation in Ivory Coast.

Ivory Coast has no climate change policy at present. Nevertheless, there is a climate change section under *Ministère de l'Environnement, de la Salubrité et du Développement*. The highest qualification of the Officer in-charge of the climate change section in Ivory Coast is a Master of Science degree in a forestry related field. Agencies directly linked with climate change activities are listed in *Table 5*.

Table 5. Agencies directly linked with climate change activities in Ivory Coast

Government agencies	Non-Government agencies
Ministère de l'Environnement, de la Salubrité Urbaine et du Développement Durable	Jeune Volontaire pour l'Environnement
Ministère des Eaux et Forêts	SOS Forêts
Ministère de l'Agriculture	Croissance Verte
Direction de la Météorologie	UFEMCI
Société de Développement des Forêts (SODEFOR)	
Agence National de l'Environnement (ANDE)	

In Ivory Coast, only REDD+ project funding information is available, and the funding has been from international/multilateral organisations, the national government and non-governmental organisations. The international funding organisations include AfDB, FAO, UNDP, UNEP, FEM, the ACP secretariat and EU. Climate change activities in the country are still at awareness and capacity building levels. There is a lack of technical and logistic materials for work in the Ministry's climate change section.

In Liberia, forests are owned by the national government. The country has had a good forest policy since 1976. However, the state governments are in-charge of the forest policy implementation. The key focus of forestry administration in Liberia is on 3Cs - conservation, commercial and community. This is to promote a balance between economic viability, social acceptability and ecological integrity. As in Ghana, the minimum requirement to be enrolled as a forest officer is a Higher National Diploma. Table 6 presents the availability or otherwise of policy controlling the extraction of forest products in Liberia.

Table 6. Availability of policy in respect of extraction of forest products in Liberia

Extraction activities	Timber		Non-timber	
	Yes	No	Yes	No
Illegal extraction	X		X	
Product tracking	X			X
Product certification		X		X
Control of illegal cross-border trade	X			X

Liberia has no climate change policy, as yet. Nevertheless, there are Government agencies responsible for climate change activities, e.g. the:

- ▶ Environmental Protection Agency;
- ▶ Forestry Development Authority;
- ▶ Ministry of Lands, Mines and Energy;
- ▶ Ministry of Agriculture;
- ▶ Ministry of State for Presidential Affairs; and,
- ▶ Ministry of Internal Affairs.

Also some NGOs are active in climate change work, e.g. Action against Climate Change, Society for the Conservation of Nature of Liberia, Sustainable Development Institute, and Save My Future Foundation. The activities of these agencies and organisations include: building resilience of communities to coastal erosion and establishment of early climate warning systems.

The sources of funding for climate change activities in Liberia are International and Multilateral organisations, the National Government, NGOs and the Private sector. Some of these organisations are: GEF, LCDF, FCPF, EPA, FDA, Fauna and Flora International, Conservation International and Arcelomitta. Nationally, there is inadequate budgetary allocation for climate change work in Liberia. Hence, logistics are also inadequate and the capacity of the national public forest administration in climate change work is weak.

Mali has a forestry law relating to the management of forest, wildlife and fisheries resources. The law is legally based on the 1933 London (Colonial) Conference on the Conservation of flora and fauna in their Natural State and the (Colonial) Decree of 4th July 1935 creating the forestry system in French West Africa (AOF). The African Convention on the Conservation of Nature and Natural Resources adopted by the Organisation of African Unity (OAU), now

African Union (AU), was largely inspired by these texts. The codification of post-independence legislative and regulatory texts relating to forestry, fauna and fishing dates back to 1968, after which the texts were fundamentally revised in 1986 and 1995.

In Mali, the current forest policy is very adequate and covers all issues relating to the forestry sector. Law No 95–004 defines the national forest estate in relation to its components, viz. state forest estate, local authority forest estate and private forest estate, distinguishing between two different types of estate, i.e. “classified” and “protected”, depending on the management system in question. The law and its implementing regulations (decrees and orders) were responsible for stipulating the conditions of forest resource management and it has been complemented by Law No 95-003 governing the exploitation, transportation and trade of wood.

The Ministry of the Environment and Decontamination is the political unit responsible for the management of forest resources, though it does share this task with other departments, such as those of agriculture, breeding and fishing, mining and energy, which has resulted in the creation of an institutional framework for management of environmental issues. The National Directorate of Water and Forest is the coordination unit for national forest policy. Mali has no climate change desk at present. However, climate change related work is carried out by these departments.

Mali has also signed and ratified various international legal instruments, including the Convention on Biological Diversity, the UN Convention on Desertification and the UN Framework Agreement on Climate Change to deal with the environmental challenges presented by the MDGs. However, of all the above-mentioned laws, Law No 95–004 and its implementing regulations is the main legal tool governing the protection and management of forest resources.

Nigeria's national forest policy came into being in 2006. The Federal Government is in-charge of the forest policy. However, the implementation of forest policy is by state governments, which by the extant statutes own the forests. There are some private forest owners, who engage in the establishments of plantations of both indigenous and some exotic timber species. The key focus of Nigeria forest policy is sustainable management of the forest resources and maintenance of environmental stability.

Nigeria has a climate change policy, and the climate change issues are addressed by the section of the policy, which has to do with National and International cooperation. There is equally a climate change section at the Ministry of Environment, and the highest qualification of the officer in-charge of this section is a Ph.D. in climatology or allied disciplines. Other agencies that are directly involved in climate change activities are Members of the Inter-ministerial Committee on Climate Change, which include the:

- Federal Ministry of Agriculture;

- ▶ Federal Ministry of Water Resources;
- ▶ Federal Ministry of Science and Technology;
- ▶ Federal Ministry of Health;
- ▶ Federal Ministry of Industries;
- ▶ Federal Ministry of Petroleum Resources;
- ▶ Federal Ministry of Niger Delta;
- ▶ Federal Ministry of Foreign Affairs;
- ▶ Federal Ministry of Finance;
- ▶ Nigeria Metrological Agency (NIMET);
- ▶ Energy Commission of Nigeria;
- ▶ Nigerian National Petroleum Corporation, and,
- ▶ National Population Commission.

Table 7. Individual roles in Nigeria climate change sector

Designation	Role
Ag. Director	Head of Department
Deputy Director	Head (V&A) Division/Multilateral Unit
Assistant Director	Head (AE&O) Division
Assistant Director	Head (Mitigation/GHG Inventory) Division
Assistant Director	Head (Renewable Energy) Division

The organisational structure of the climate change section includes the Office of the Director and four divisions: vulnerability and adaptation, renewable energy, mitigation and greenhouse gas inventory, and awareness, education and outreach. *Table 7* above shows the individual roles at the climate change section.

Table 8. Availability of policy in respect of extraction of forest products in Nigeria

Extraction activities	Timber		Non-timber	
	Yes	No	Yes	No
Illegal extraction	X		X	
Product tracking		X		X
Product certification		X		X
Control of illegal cross-border trade	X		X	

The funding for climate change activities comes mainly from International Agencies and the National Government. The former include: UNDP, CIDA, World Bank, and the Government of Japan through JICA. Nigeria has prepared its first National Communication document with the second underway. The project undertook mitigation activities including greenhouse gas inventory, and is currently working on its NAMA. *Table 8* above gives details of availability of policies controlling the extraction of forest products in Nigeria.

CHAPTER 4 Forest products trade, trade potentials and impacts in West African countries

BENIN

Benin has developed large teak plantations, with GTZ assistance, and has maintained large protected forests under management plans (Popoola, 2011). It has never been an important country for timber trade, but it was self-sufficient and able to meet local demands for sawn-timber, poles and firewood. However, considerable illegal timber flow from chainsaw gangs operating mainly in the protected forests is a common occurrence. The same has been reported in teak plantations in the country. Also, some timber of indigenous species like *iroko*, *lingue* and *samba* has been observed flowing illegally into Benin from Ghana via Togo and Nigeria, and out to Sahel countries. Teak is exported without any processing to India as logs, and false-teak logs are squared and shipped to China. *Table 9* shows the important timber and non-timber species traded in Benin.

Timber shortages have arisen in the last decade, and Ghana and Nigeria have become the main suppliers. In recent years the demand for teak and false-teak, driven by Indian and Chinese exporters, has strongly affected harvest rates and trade in these species. Timber shortages are limiting local processing industries, which now survive by using wood of unknown origin. Also, there are trade conflicts among forest products stakeholders in Benin. The causes of these conflicts include the disagreement between local communities and the loggers, who are supported by factions within the same communities and conflicts caused by politicians interfering in logging activities to facilitate their election. Communities also accuse the forestry administration of illegal logging process. There is a problem of harmonisation of forest exploitation procedures in Benin as in other countries in the region.

Table 9. Important timber and non-timber species traded in Benin

No	Timber			Non-timber		
	Internationally traded	Nationally traded	Locally traded	Internationally traded	Nationally traded	Locally traded
1	<i>Azizelia africana</i>	<i>A. africana</i>	<i>A. africana</i>	<i>Adansonia digitata</i>	<i>A. digitata</i>	<i>A. digitata</i>
2	<i>Khaya senegalensis</i>	<i>K. senegalensis</i>	<i>K. senegalensis</i>	<i>Tamarindus indica</i>	<i>T. indica</i>	<i>T. indica</i>
3	<i>Ceiba pentandra</i>	<i>Anogeissus leiocarpa</i>	<i>A. leiocarpa</i>	<i>Vitex doniana</i>	<i>V. doniana</i>	<i>V. doniana</i>
4	<i>Milicia excelsa</i>	<i>Pterocarpus erinaceus</i>	<i>P. erinaceus</i>	<i>Vitellaria paradoxa</i>	<i>V. paradoxa</i>	<i>V. paradoxa</i>
5		<i>Daniellia oliveri</i>	<i>D. oliveri</i>	<i>Parkia biglobosa</i>	<i>P. biglobosa</i>	<i>P. biglobosa</i>
6		<i>Ceiba pentandra</i>	<i>C. pentandra</i>	<i>Irvingia gabonensis</i>	<i>Borassus aethiopicum</i>	<i>I. gabonensis</i>
7		<i>Milicia excelsa</i>	<i>M. excelsa</i>			<i>Sclerocarya birrea</i>
8		<i>Dioppyros mespiliformis</i>	<i>Prosopis africana</i>			<i>Dioppyros mespiliformis</i>
9		<i>Prosopis africana</i>	<i>Triplochiton scleroxylon</i>			<i>Chrysophilum albidum</i>
10						<i>Borassus aethiopicum</i>

BURKINA FASO

In Burkina Faso, forest exploitation to supply cities with wood products (firewood particularly) could be described as anarchic. Neither the number of exploiters, nor the zones of exploitation, nor the quantities collected are known or regulated in a satisfactory manner. This uncontrolled exploitation is most often based on an economic logic, sole objective of which is short-term profit maximisation. This results in degradation of the forests that are near the cities and are easier to access. This degradation is rapid, especially since the forest populations have little motivation to protect the resources of their land, given that, according to regulation, they are not the legal owners.

This situation results from an obsolete forest regulation and tax system, which is not based on the characteristics of the resource. Anyone with a wood cutting license or any other authorisation legally obtained can go anywhere and collect wood or non-wood forest products. The amount of the paid tax, which is a lump sum, does not reflect at all the economic value of the trees. Almost the whole quantity of firewood consumed in towns is uncontrolled, due essentially to lack of human and material resources in the forest administration. The effectiveness of forest control, i.e. the relation between quantities submitted to forest control at the entrance of cities and the total quantities smuggled in, is very low.

There is no specific regulation in Burkina Faso for NWFP trade (for export) or for the importation of products from other West African countries or elsewhere. Therefore, the strong pressure on forest resources has consequences for NWFPs. Producer-collectors are obliged to cover increasingly greater distances to find some NWFPs. The main causes of the depletion of NWFPs are not only natural, but above all, man-made, particularly the anarchic exploitation allowed by legislation gaps. The focus on commercial gain and the poverty that prevails in rural areas exacerbate the situation. The competition for access to forest resources, including access to NWFPs, is increasingly tougher with the growth in human population and livestock in Burkina Faso.

CAPE VERDE

The contribution of forests to the Cape Verde national economy is negligible. Forests play an important role in energy consumption on a household level, in soil and water management and in providing forage for the animals. The methodology of calculating the GDP does not consider forests, or forest products trade as a unique component. However, the quantification of the contribution of the forest to the GDP is aggregated with other sectors, such as fisheries and agriculture, and this aggregate figure represents 9.4% of the

share of GDP. Cape Verde imports a great majority of the wood it consumes from the surrounding countries (Lopes and Santos, 2010).

THE GAMBIA

The rapidly growing population has led to an increased demand of forest products in Gambia, especially fuel-wood, construction poles, timber and fence posts. Besides, the natural forests provide for both the rural and urban population a variety of non-wood products, such as honey, fruits and nuts, palm oil and wine, meat, fibres, leaves, grass, and medicine. Fuel-wood, both firewood and charcoal, is still cheap and no other energy source is as economical under present conditions. It is estimated to provide more than 80% of the country's energy and more than 95% of the household energy. The fuel-wood consumption of the country was estimated to be 0.45m³ per capita, or an annual fuel-wood consumption of some 615 000m³, which is more than the estimated annual increment of the country's forest cover of about 523 000m³ (Thoma and Camara, 2005). Sustainable wood supply becomes much more critical when taking into account that an essential quantity is also consumed annually by bush fires and used for other domestic and commercial purposes such as fencing, construction, fish smoking, carpentry, and lime and salt production.

By nature, Gambia's forests do not provide much valuable timber since the wood of only a few species is worth sawing (the most prominent are *Khaya senegalensis* and *Pterocarpus erinaceus*) and logs are often crooked, twisted or otherwise damaged, resulting in low conversion rates. Most sawmills and re-saw machines are found in Serekunda and Brikama, only a few exist in the provinces. They convert round logs of small sizes and canted timber, i.e. canted planks of big logs cut at the felling site. In areas where no sawmill operates, pit-sawyers process the logs into canted timber, which is further processed in the village by using hand saws. The Central River Division Forestry Project introduced two mobile sawmills, which operate in community and state forests in the Central River Division and the Upper River Division. The produced timber is easily absorbed by the local markets.

The construction boom in the greater Banjul area and along the coast swallows a vast amount of construction timber. Most of it is imported by sea from Ivory Coast, Liberia, Benin and Europe (timber) but also over land from neighbouring countries like Senegal, Guinea-Bissau and Guinea Conakry (canted timber, timber, Rhun palm splits). Gambia's export of forest products is greatly limited to wood used for carvings and drums, which are sold at the tourist markets.

GHANA

Forestry and timber industries are of major importance to Ghana's economy. In recent years, timber products have consistently been the third highest valued export commodity after cocoa and gold. In the period from 2001 to 2005, official exports accounted for between 7 and 10% of export earnings. The average annual value was about USD 180 million from 2005 to 2007. During this period, exports to the EU were decreasing in value and volume, but this was offset by sales to other regions (Popoola, 2011). The timber processing industries supply domestic, regional and international markets. The principal export products are sawn-timber, veneer and plywood. Local demand is mainly for cheap rough-sawn lumber, which sells at two-thirds of the average export sawn-timber price. The annual consumption of processed timber in Ghana is about 300 000 m³ of sawn-timber supplied by the informal sector and a further 100 000 m³ largely consisting of plywood, being supplied by the formal sector. The important timber and non-timber species traded in Ghana are presented in Table 10. The quantities (volumes) of timber exports from Ghana between 2003 and 2012 are presented in Table 11, while Table 12 presents the countries of exports for timber and non-timber forest products.

Table 10. Important timber and non-timber species traded in Ghana.

No	Timber			Non-timber		
	Internationally traded	Nationally traded	Locally traded	Internationally traded	Nationally traded	Locally traded
1	<i>Milicia excelsa</i>			Bamboo	Bamboo	Bamboo
2	<i>Tectona grandis</i>	<i>T. grandis</i>	<i>T. grandis</i>	Rattan	Rattan	Rattan
3	<i>Khaya ivorensis</i>	<i>K. ivorensis</i>		Honey	Honey	Honey
4	<i>Terminalia ivorensis</i>	<i>T. ivorensis</i>			Mushroom	Mushroom
5	<i>Terminalia superba</i>	<i>T. superba</i>			Gum	Gum
6	<i>Nauclea diderrichii</i>					Dyes
7	<i>Albizia zygia</i>				Snails	Snails
8	<i>Pycnanthus angolensis</i>	<i>P. angolensis</i>	<i>P. angolensis</i>		Fruits	Fruits
9	<i>Celtis zenkeri</i>	<i>C. zenkeri</i>	<i>C. zenkeri</i>	Spices	Spices	Spices
10	<i>Ceiba pentandra</i>	<i>C. pentandra</i>	<i>C. pentandra</i>		Medicinal plants	Medicinal plants

Table 11. Timber estimate and exported between 2003 and 2012.

Year	Exported (1000 m ³)	Year	Exported (1000 m ³)
2012*	180*	2007	529
2011	320	2006	452
2010	403	2005	466
2009	426	2004	455
2008	546	2003	444

* For 2012, only January-September data were available at the time of compiling this report.

Production from concessions goes largely to export-oriented industries. Although there is an obligation to sell 20% of products on the local markets, this either does not happen or is inadequate to meet local demands. Local scarcity of timber has been overcome by the advent of logging by chainsaw gangs. This logging is uncontrolled, wasteful and illegal, but supplies the bulk of local requirements and regional exports from Ghana, and is also believed to be supplying mainline export processors. Timber products are supplied from Ghana to neighbouring countries, mainly sawn-timber to the Sahel region, and plywood to Nigeria. Much of the trade to the Sahel is based on illegal chainsaw logging and export is reported by the FC to be conducted with little formality and limited control.

Control on felling is by law, but not implemented systematically. Timber in-transit is inspected at TIDD check-points, but corruption is reported at these checkpoints. There is no effective control of illegal timber harvested by chainsaw gangs. Export to Europe is declining. Shortage of timber has resulted in factory closures and industry consolidation, with sources abroad attracting increasing interest. Regional markets, particularly Nigeria, are growing. Sahel remains an important market, largely for illegal timber from Ghana.

Most of the challenges confronting cross-border trade of forest products from Ghana are institutional, which include: i) poor linkage between the institutions involved in the trading of forest products; ii) bribery and corruption among officials of institutions and trading parties; and, iii) non-issuance of permits and waybills covering forest products.

There are also trade conflicts among stakeholders in Ghana. Among the major of such conflicts are those between communities fringing the forest estates and the government

agency (forestry commission). This is due to the fact that local people tend to think that the forest belongs to them, and that they can have full access to its resources. Other problems include illegal logging of timber and collection of non-timber forest products, lack of understanding of the national forest policy and traditional rules, and lack of enforcement of the laws regarding the protection and conservation of the forest estate.

However, Ghana has instituted a multi-stakeholder dialogue process to resolve the conflicts between local communities and government agencies, put in place forest guards and taskforces to monitor the extraction of forest products, and reviewed the jurisdiction within which such products are extracted. Ghana provides the best documented case of the ways in which poor forest policy decisions have tended to worsen the forest products supply. A partial reform in pricing has intensified the rate of industry consolidation triggered by resource scarcity. A perverse situation has arisen in which value may actually be detracted by local production for the export market, rather than augmented.

Table 12. Countries of export of timber and non-timber products from Ghana.

Forest products	West African countries	Other African countries	Countries outside Africa
Timber	Nigeria, Niger, Togo, Gambia, Senegal, Mali, Benin, Liberia, Burkina Faso	South Africa, Egypt, Mauritania	USA, UK, Italy, Spain, Germany, Belgium, Holland, Ireland, United Arab Emirates, Israel, Saudi Arabia, Australia, Thailand, France, India, Malaysia, China, Singapore, New Zealand
Non-timber	Nigeria, Niger, Togo, Gambia, Senegal, Mali, Benin, Liberia, Burkina Faso		USA, UK, Italy, Spain, Germany, Belgium, Holland

GUINEA

Timber resources have not previously been intensively exploited in Guinea, and timber industries are a recent development. There are no long-term operators. Many are mining companies, which, before exploitation of mineral resources, opportunistically log the forest and export the logs without any processing. They are not licensed for timber production but are authorised to excavate below ground level. In Guinea, the World Bank has supported

PROGERFOR (*Projet de Gestion des Ressources Forestières*) for the management of the *Diéké* and *Ziama* forests in *Guinée Forestière*, with the aim of sustainable management for the benefit of local populations, but there is no industrial or export component.

Although chainsaw permits are issued by prefectures and counties, the forestry administration exercises no control of harvesting by villagers, with or without chainsaw permits, and logging occurs either in former logging concessions or on the periphery of protected forests. The Forest Forte mill is harvesting logs from community forest areas and is processing and exporting sawn-timber, mouldings, veneer and plywood to the Sahel countries, either over-land or by sea. Senegal, Mali, Burkina Faso and Mauritania are growing markets for sawn-timber and plywood. Processed timber is also exported to the North African countries of Morocco, Tunisia and Libya, and to Spain, Portugal and France. There is an increasing illegal export of false-teak and other species to China.

Timber is mainly exported illegally, either by maritime or over-land routes and this informal trade may represent 80 to 90% of total trade. There is considerable trade to Senegal, Mauritania and Mali in sawn-timber and plywood produced from indigenous species such as *lingue*, mahogany and *samba*. The informal furniture industry based in Conakry, and many unofficial timber traders, are supplying both local markets and neighbouring countries. Firewood and charcoal are also exported from Guinea Conakry to other countries in the region. Chainsaw permits are issued, but no control is exercised over harvesting by villagers. Timber exports were banned in early 2008 (more linked to political events than to technical or economic analysis).

IVORY COAST

A large timber processing industry developed in Ivory Coast because of the extensive forest resources, good road infrastructure and energy supplies. The industry is made up mainly of sawmills and produce rotary veneer and sliced veneer. Most companies have either logging concessions or manage protected forest. Domestic wood comes from chainsaw logging in teak plantations, protected forests and conservation forests (Tai National Park). The local market is supplied with rough-sawn planks, with whitewood used for construction and redwoods for the furniture industry. Indian and Chinese nationals are increasingly active in the raw material trade, especially of teak to India and false-teak to China. The period of political crises in the country witnessed massive extraction of natural resources, of which timber and non-timber forest products were recklessly exploited. The list of prevalent timber and non-timber species traded in Ivory Coast are shown in Table 13.

Table 13. List of ten prevalent timber and non-timber species traded in Ivory Coast.

Timber species	Product/uses	Non-timber	Product/uses
<i>Ceiba pentandra</i>	Déroulage	<i>Thaumatococcus danielli</i>	Fruits and leaves (emballage,
<i>Triplochiton scleroxylon</i>	Sciage déroulage	Bambou	Tiges
<i>Antiaris toxicaria</i>	Sciage, déroulage	Rotins	Tiges
<i>Terminalia superba</i>	Sciage	Garcinia cola	Fruits et tiges (cure dents)
<i>Piptadeniastrum africanum</i>	Sciage	Miel	Consommation
<i>Terminalia ivorensis</i>	Sciage	Lianes	Santé, construction, emballage
<i>Milicia</i> sp.	Sciage tranchage	Plantes medicinales	Soins Santé
<i>Khaya</i> sp.	Sciage tranchage	Fruits sauvages	Consommation
<i>Pycnanthus angolensis</i>	Déroulage	Thé des savanes	Consommation
<i>Lophira alata</i>	Sciage	Champignons et animaux sauvages	Consommation

The emergency phase (PSF1) of the Forest Master plan (1988-2015) ended in 1996, but the following phase went unfunded as donors followed the World Bank in withdrawing from the sector. The main drawback of past funding strategies is that they encouraged the main actors such as SODEFOR (a state-owned forest company) to build huge, revenue-consuming institutions, which have proven difficult to run and even maintain, particularly in the stop-go environment of post-crisis government. In order to generate funds to maintain the structures and avoid social crisis (e.g. unemployment), the tendency has been to turn to whatever resources are available – and these tend to be the forest resources themselves.

Timber flows from Ghana, Guinea Conakry and Liberia to Ivory Coast, and from Ivory Coast to the Sahel countries, either as logs or sawn-timber of indigenous species, but much of this trade is informal or illegal. Containerised teak from *Bouaké* and *Abengourou* has transited through Burkina Faso during the partition of north and south for onward export through Tema in Ghana or Lomé in Togo. Now it appears that increasing volumes of teak from Ivory Coast are being processed in Ghana. Many checkpoints are operated by customs, forest officials, police and army, but bribes paid at these checkpoints allow movement of timber without inspection. Species traded locally and internationally are presented in Table 14 while Table 15 shows that estimate of timber traded in the past 10 years.

Table 14. Timber and non-timber species traded in Ivory Coast and beyond

No	Timber			Non-timber		
	Internationally traded	Nationally traded	Locally traded	Internationally traded	Nationally traded	Locally traded
1	Iroko	Samba	Samba		Plantes médicinales	
2	Acajou	Fraké	Fraké		Champignons et animaux sauvages	
3	Fromager	Framiré	Framiré		Rotins	
4	Azobé	Iroko	Iroko		<i>T. danielli</i>	
5	Ilomba	Acajou	Acajou		<i>G. cola</i>	
6	Ako	Dabema	Dabema		Miel	
7	Samba	Fromager	Fromager		Bambou	
8	Dabema	Ako	Ako		Fruits sauvages	
9	Fraké	Ilomba	Ilomba		Thé des savanes	
10	Framiré	Azobé	Azobé		Lianes	

Table 15. Timber estimates and trade in the last ten years (1000 m3)

Year	Timber estimate	Exported	Year	Timber estimate	Exported
2012	1 258	335	2007	1 440	684
2011	733	311	2006	1 262	658
2010	952	463	2005	1 345	638
2009	837	397	2004	1 346	638
2008	1 137	664	2003	1 326	659

Table 16. Countries of export of the timber products from Ivory Coast

West African countries	Other African countries	Countries outside Africa
Burkina Faso, Mali, Mauritania, Senegal, Gambia, Liberia, Guinea, Niger, Benin	South Africa, Egypt, Cape Verde, Mauritius, Libya, Tunisia, Morocco	<p>Europe: France, Germany, Italy, Belgium, Netherlands, Romania, Portugal, Lithuania, Ireland, Denmark</p> <p>The Americas: Argentina, Canada, USA, Mexico, Uruguay</p> <p>Asia and the Middle East: Saudi Arabia, Israel, Jordan, China, India, UAE, Syria, Turkey</p> <p>Oceania: Australia</p>

Factory consolidations and increasing development of secondary processing are occurring in the country. Exports to Europe are declining, but there are increasing exports to other African countries and China as well as India. The main countries of exports for timber products in Ivory Coast are shown in Table 16 above.

LIBERIA

Until the timber export ban in 2003, Liberian exports to Europe were second only to the Ivory Coast in volume, but, given that there was very limited added value processing, only third in value. In 2000 and 2001, the export trade to Europe was valued at just over €64 million (Popoola, 2011). The domestic market consumes large volumes of low-grade, rough-sawn lumber derived from chainsaw logging operations. Large volumes of timber and charcoal are transported from the hinterland to Monrovia. Regionally, illegal timber is supplied to industries located in Ivory Coast and Guinea Conakry. Increasingly, local demand is likely to continue to be met from uncontrolled chainsaw logging.

Liberia is currently in the process of reconstituting its forest industry as part of its 3Cs (commercial, conservation and community) strategy. It remains to be seen whether this classification will allow for successful implementation in ways that reconcile, rather than compartmentalise, competing interests in the forest areas. The imbalance between the three components (in area terms, 70% for commercial, 29% for conservation, and 1% for community) does give cause for concern. The issue of satisfying local demand with export trade is certainly on the policy agenda though challenging to address, given the demands of post-war reconstruction and the depressed economy. The latest figures available (from 2000) indicate sizeable domestic demand, which may be difficult to satisfy with an excessively export-oriented strategy. The most important and prevalent timber and non-timber species traded in Liberia are presented in Table 17.

The principal forestry activity in Liberia has always been logging with minimal development of timber processing industries. Exports were negligible during the mid-1990s, but began to expand sharply towards the end of the decade. In 2000, the forestry sector contributed about USD 100 million to the total gross domestic product of USD 450 million (Greenpeace, 2002). Timber export revenues for 2002 were at least USD 146 million and possibly as much as USD 180-200 million (United Nations Security Council, 2003). In 2003, in response to protracted civil wars between 1989 and 1996, and again from 1999 to 2003, the UN imposed a timber export ban because of the lack of any effective forest authority and in an effort to curtail financing of illegal arms trafficking linked to continuing instability in Liberia and in neighbouring Ivory Coast and Sierra Leone. The ban was repealed in 2006 when Liberia was adjudged to have met UN conditions requiring forest sector reform. Still, no control has been exercised over forest products (timber and non-timber) harvesting, and timber movement is made quasi-legal by payment of fees for issuance of an official waybill.

Table 17. The most important and prevalent timber and non-timber species in Liberia

No	Timber species	Non-timber species
1	<i>Heritiera utilis</i>	<i>Adansonia digitata</i>
2	<i>Tetraberlina tubmaniana</i>	<i>Parkia bicolor</i>
3	<i>Mitragyna stipulosa</i>	<i>Eucalyptus citriodora</i>
4	<i>Lovoa trichiodes</i>	<i>Artocarpus altilis</i>
5	<i>Khaya anthotheca</i>	<i>Cola nitida</i>
6	<i>Entandrophragm acylindricum</i>	<i>Xylopia aethiopica</i>
7	<i>Triplochiton scleroxylon</i>	<i>Chrysophyllum albidum</i>
8	<i>Entandrophragma angolense</i>	<i>Garcinia kola</i>
9	<i>Lophira alata</i>	<i>Pentaclethra macrophylla</i>
10	<i>Terminalia ivorensis</i>	<i>Irvingia gabonensis</i>

MALI

In Mali, working with timber is more of an artisanal activity. Exploitation takes place in the forests in the south of the country. Products include baulks and boards, used primarily in construction. Operators are very poorly equipped and the wood is transformed using saws and chainsaws. The work involved in the production of plantation timber dates back to colonial times. When independence was gained, this work continued but did not produce the desired results and most of the few successful plots on these plantations were exploited (Kanouté, 2010).

Currently, most of the timber cut comes from natural forests and is transformed into boards, baulks and rafters by *Vente de Coupe* (chainsaw operators) or those with felling permits (permission granted by the Forest Administration). Locally sawn wood products found on the market are produced by lumber-jacks, who are trained in the use of saws and chainsaws for cutting and sawing wood and who either own their own equipment or work for specific operators. The two or three sawmills, which used to supply the local market with wood, are no longer in operation due to lack of appropriate equipment and the very high cost of purchasing wood. The exploitation of timber (as well as fire-wood and charcoal) by operators and their principals is subject to the payment of a charge. This is normally done at

rural wood markets, which are points of sale managed by authorised organisations of producers.

As the production of wood from its forests does not cover its national needs, Mali imports a large part of such needs from neighbouring coastal countries with relatively more forest resources. Imported products include rafters, boards and plywood used in construction and public works, cabinet-making and interior decorations, though customs statistics do not distinguish between such products. Value of imported wood and import duty and other taxes for the ten years 2000-2009 are presented in Table 18.

Table 18. Mali wood imports between 2000 and 2009 (Kanouté, 2010).

Year	Wood import (tonnes)	Value (USD 1 000)	Import duty and taxes (USD 1 000)
2000	20 984	5 452	898
2001	23 314	5 846	1 012
2002	16 303	4 774	808
2003	16 572	4 902	962
2004	17 339	5 424	918
2005	16 528	3 870	818
2006	17 642	4 268	1 020
2007	20 870	5 066	1 150
2008	21 677	5 638	1 626
2009	25 026	6 760	1 462

Although Mali has had to resort to importing products to satisfy its timber, plywood and board consumption needs, intensive national production of fire-wood, charcoal and construction wood largely covers the country's needs in these areas, with the exception of the northern parts of the country. Mali's wood production is domestically consumed, and this puts further pressure on the fragile ecosystem.

NIGERIA

Log exports from Nigeria were high in the 1960's, with a peak between 773 000 m³ and 781 200 m³ in 1964, with a value of about USD 18 million. By 1970, the forestry sector generated about 2.5% of Nigeria's Gross Domestic Product (GDP), with wood and wood product exports accounting for about 1% of total foreign exchange earnings, but by 1976 this had dropped to 26 900 m³. Adeyoku (1975) reported that Nigeria ranked second amongst the seven largest tropical wood producing countries in Africa in 1966, in terms of total quantity of logs produced and exported and the proportion of processed wood to log production. However, the advent of trade in petroleum led to a decline in timber exports over the following years. Although production of industrial roundwood had doubled from 1962 to 1971, the value of logs, lumber and plywood exports had fallen from N13.8 million to N6.8 million. The value of forest product imports over the same period increased from N12.4 million to N31.8 million, implying that Nigeria became a net importer of forest products.

In 1976, the Government banned the export of unprocessed logs and rough-sawn lumber of indigenous species to protect supplies of round wood to the local market, which was expanding fast because of increase in local purchasing power and an expansion in the construction industry. This led to some reduction in exports. In 1985, there was a further ban on all wood product exports (whether processed or not), excluding only furniture components and *Gmelina* wood. However, from the early 1990's to the end of that decade, there was an upsurge in the extraction and export of Teak. Much of this trade was not properly controlled, so it is difficult to assess the volumes that were extracted and exported with any accuracy. It was fraught with a lot of irregularities that did not make accounting easy.

Timber processing industries are permitted to export semi-finished or finished products, which are principally flooring planks and parquet produced from *Iroko* and *Azizelia*. Export of teak and *Gmelina* logs is also permitted. Nigeria is a very convenient market for Ghana, with high prices paid and no concern about the legality of raw materials. Cameroon has banned the export of certain log species and struggles to halt export of illegally produced timber to Nigeria. A high proportion of timber sourced from Cameroon has been brought illegally into Nigeria to avoid tariff and is being laundered in the Nigerian domestic market. Export duty on timber is collected by the Customs Department for the Federal Government of Nigeria at the port of shipment. The duty varies according to the species and the Federal Government usually remits half of all such collections to the state where the timber came from. Only the former Western and Mid-Western regions benefited from this revenue source.

Cameroon is also reported to be the main source of logs and sawn-timber for Nigeria's central and eastern states. Timber exports to Europe from 2001 to 2006 were reasonably constant with an average annual value of just under €29 million, but in 2007 it dropped to

less than €10 million. Unknown quantities of teak are shipped to India from Nigeria. The business is very rudimentary. Teak logs are brought into Lagos, squared in small road-side sawmills and manually loaded into containers for export. Harvesting is by uncontrolled chainsaw loggers and therefore has, at best, only the quasi-legal status conferred by issuing of official waybills. The teak plantations are apparently being devastated as a consequence of this trade. The Nigerian forest sector is a particularly prominent example, where extraction and primary processing of NTFPs offer competitive advantage to small-scale forest enterprises. For example, in Ibadan, Oyo State there are over 40 000 of such enterprises, which is almost equal to the size of the whole Ghanaian informal tertiary sector.

Forestry and timber industries were formerly extensive and of major importance in Nigeria. Lumber and plywood were produced for both domestic and export markets. For over 30 years, as a result of resource depletion, the sector has been in decline. Traditionally, management was by allocation of concessions granted to timber industries, but the concession system is no longer operational and much of the logging is undertaken by uncontrolled chainsaw gangs, with felled trees wastefully processed *in-situ* to produce rough-sawn planks for manual extraction to road side, or rafted as logs to points of sales. This trade is illegal or is given quasi-legal status through issuing of waybills by forestry officials. Some revenue is collected by this means, but much is lost through corruption that is reported to be rampant. Forestry officials used to conduct monitoring from stump, but then moved monitoring to the forest-gate, and abandoned virtually all attempt at control. Management focuses now almost entirely on revenue collection. Table 19 presents the most traded timber and non-timber species in Nigeria.

The over-exploitation of wood resources, coupled with several other factors, has impacted negatively on the development of the country's forest industry (Ogunwusi, 2012). More recently, however, there have been changes in the structure of the forestry sector. The forest resource survey in 1996-1998 revealed that the forest cover had decreased by 20% over the preceding 18 years. According to Adeyoju (2001), the total forest estate, which stood at 10% of the country's land area in 1996, was less than 6% in 2001. It was estimated that about 26 000 ha of forest land is destroyed annually in the rainforest zone during the conversion of natural forests to plantation forests and other forms of land-use. Over 90% of the natural vegetation had been cleared and over 350 000 ha of forest and natural vegetation are lost annually (WWF, 1989). These occurrences have significant impact on the operations of the forest industries leading to a decline in the contribution of the industries to national industrial development. The Raw Material Research and Development Council (2009) indicated that the total volume of usable wood down to 30 cm cutting diameter in the forest reserves is c. 240 million m³. This is almost just half of the 438 million m³ reported by Akindele *et al.* (2001). Various studies (Aribisala, 1993; Popoola, 1999; RMRDC, 2003; and Oriola, 2009) have reported a decline in the performance of the forest industries in Nigeria due mainly to illegal operations. Charcoal production has reached an

all-time high with little or no control. Producers utilise all wood in the vicinity, thereby completely destroying surrounding forests. The extent and volume of this business is unknown, but thought to be substantial. The energy crises and non-forest policies, such as those in the energy sector have exacerbated the situation (Popoola, 1992 and 2013). Already, there is enormous internal demand for fuel-wood and charcoal exports to Europe.

Table 19. List of important timber and non-timber species most traded in Nigeria.

No	Timber species	Non-timber species
1	<i>Terminalia superba</i> (Afara)	<i>Achatina achatina</i> (African giant snail)
2	<i>Triplochiton scleroxylon</i> (Obeche)	<i>Vernonia amygdalina</i> (Bitter leaves)
3	<i>Khaya</i> spp (Mahogany)	<i>Raphia</i> spp.
4	<i>Mansonia altissima</i> (Masonia)	<i>Thaumatococcus danielli</i> (Eweran)
5	<i>Entandrophragma cylindricum</i>	<i>Vitellaria paradoxa</i> (Shear butter)
6	<i>Mitragyna ciliata</i> (Abura)	<i>Massularia acuminata</i> (Chew sticks)
7	<i>Lophira alata</i> (Ekki)	<i>Irvingia gabonensis</i> (Ogbono, Apon)
8	<i>Azelia africana</i>	<i>Luffa aegyptiaca</i> (Sponge)
9	<i>Lovoa trichiliodes</i> (African walnut)	<i>Agaricus bosporium</i> (Mushroom)
10	<i>Gmelina arborea</i>	<i>Apis mellifera</i> (Bees for honey production)

SENEGAL

Until 1998, the system of forest management in Senegal remained highly centralised, orbiting around the system of licenses, permits and quotas allocated by the National Forest Service. Prior to the new decentralised forestry laws, the nationally set quota was divided among some 120–170 enterprises – cooperatives, economic interest groups and corporations - holding professional forest producer licenses delivered by the Forest Service. Allocation of quotas among these entities was based on their previous year's quota with adjustments based on whether or not the enterprise had fully exploited its quota and had engaged in positive forest management activities, such as reforestation. Some patrons did plant trees by the side of the road to demonstrate such efforts - they called these plantations their “*chogogo*” or bribes - since these helped them get larger quota allocations

from the Forest Service. During this period, new professional licenses were also allocated most years (enabling new cooperatives to enter the market).

In 2002, Senegal's industrial roundwood production was 794 000 m³ with about 23 000 m³ imported from other West African countries. Being less endowed with forests and with burgeoning population, most of which has migrated to urban centres, all the roundwood produced in the country was consumed locally. In the same year, 23 000 m³ of sawnwood was produced and traded locally while another 86 000 m³ were imported from other West African countries. Senegal relies solely on import for wood-based panels and other wood products.

SIERRA LEONE

Forestry and timber industries are not a major component of Sierra Leone's economy. The domestic market is heavily reliant on rough-sawn planks used for construction and joinery, all of which is illegal because of the total ban in force. Exports to Europe, legal or otherwise, are not thought to be occurring on any substantial scale. Nevertheless, exports have been increasing in recent years. There are very limited exporting industries and supply is mainly for local markets. Illegal exports to China have been increasing, and this trend is likely to continue if enforcement of laws is not improved. Illegal charges by law enforcement officers along major routes have affected local movement of logs. Transportation is done at night, but this is because of driver preference for operating when it is cooler and not to avoid scrutiny. Night operations apparently have no impact on the level of illegalities along the routes.

TOGO

Togo has never been an important country for trade in forest products and has often suffered shortages of timber for construction and furniture manufacture. Ghana was one of the main suppliers to Togo. Trade in new species, such as teak or false teak, in recent years with Indian and Chinese buyers has fostered the export of raw materials and reduced the size of local processing industries. The Lomé Port is a free-port and, with limited controls exercised, has facilitated the transit or export of many products from the West African sub-region during conflicts (e.g. containerised teak from rebel held areas in Ivory Coast). *Afzelia*, *iroko*, *lingue* and *samba* timber is entering Togo at the Badou border post from Ghana and some is exported to Burkina Faso. *Lingue*, rose-wood, teak and false teak enter Togo at Kara border post from Benin. Teak from northeast Ivory Coast is transiting through Burkina Faso for export from the port of Lomé. The major problem is the unprofessional attitude of some Asian merchants involved in the timber trade whose main

intention maximisation of returns. Teak plantation development and reforestation in protected forests is inadequate and there is no capacity to evaluate and monitor remaining timber resources in either planted or natural forests. Forest permits are allocated without strict control by the Ministry of Forestry.

FOREST PRODUCTS TRADE IN THE WEST AFRICAN SUB-REGION AND ASSOCIATED TRADE IMPACTS

Comparative analysis of the export and customs procedures throughout West Africa shows a strong similarity among systems and the roles of the government forestry and customs authorities. The former is responsible for verification of exports and contract conformity and issuing of certificates of origin, and the latter for final inspection against export and loading statements. However, in many West African countries, implementation demonstrates weaknesses and widespread opportunity to circumvent requirements and best practices. The trends show booming local demand for low-grade and low-cost timber and plywood (Plate 1), due mainly to increased demands for housing arising from relatively significant growths in the economies of the sub-region, which ironically have not translated into significant increases in GDP per capita. Much of this demand is for the construction industries within West Africa, and also for the Sahel countries, which are deficient in timber and processing industries. The EU, which for a long time has been a strategic market for timber from the sub-region, is becoming less important, perhaps due to strict governance issues, while the Indian and Chinese markets are expanding, particularly for teak and false teak woods. Migration and settlement of refugees within the West Africa sub-region and the expanding presence of Lebanese, Indian and Chinese buyers are increasing the pressure on resources. Problems of exercising control and prevalent perceptions that illegal activities are encouraged are facilitating deregulation of timber harvesting, transport, trade and industry.

The informal sector is important in wood processing across the sub-region, supplying significant quantities of sawnwood, furniture and joinery to urban and rural markets. Together, these markets (particularly furniture and joinery) are much larger in volume than the exports leaving the formal sector. Generally, with low rates of conversion, the informal sector is a bigger consumer of wood fibre than the formal sector.



Plate 1. Low grade/low cost timber from chainsaw operations (common in timber markets in Ghana/Nigeria)

It includes most small and medium forest enterprises (SMFEs) and is an important element in the national economy, providing employment and supporting rural livelihoods. Its characteristics largely derive from an ability to sustain low fixed costs on a wide range of forest products traded, where large-scale operations with their lumpy fixed costs may not be able to take advantage of scale. However, there is potential for broadening opportunities for improved efficiency across the sector. In some countries, such as Ghana, this potential has been assessed, and the conclusion drawn that, overall, SMFEs, with their low capital base, do contribute significantly to the economy and sometimes add real value, whereas the formal sector detracts from value. An essential component of fiscal adjustment is thus an encouragement to SMFEs to overcome financial distress and improve efficiency.

SUB-REGIONAL NEEDS AND INTERNATIONAL TRADES IN FOREST PRODUCTS

Timber product trade

Although the forest products export industry is significant, it is poorly integrated with the national economies, with negative effects on both the patterns of economic growth and the satisfaction of domestic market as well as regional needs. An imbalance in purchasing power between international and domestic markets, and the resulting over-concentration of effort on profiting from the potential of the export trade has left legitimate domestic demands unaddressed. In rapidly urbanising economies, such as Ghana, Gambia, Nigeria and post-conflict Sierra Leone and Liberia, the result is a domestic market that is sourced almost entirely illegally. In Liberia, reconciling lucrative opportunities in the international market and domestic demand in an economy with low population and low purchasing power remains a significant challenge. In Guinea, the attempts by government to stem the flow of timber to urban markets without addressing legitimate public demand has likewise just increased the level of illegality. Much of the domestic demand is being met by illegal chainsaw logging. In the sub-region, domestic interests tend to feature in public discourse as secondary to those of the export industry and as inherently less legitimate. Legal requirements for the export industry to satisfy domestic demand are ignored as not cost-effective, and dismissed out of hand as unworkable due to the ways in which cheap and unregulated chainsaw lumber undercuts the industry's own supply. Such is the marginalisation of domestic needs that, in Ghana, *Teak* and *Cedrella* plantation timbers have been auctioned to export-oriented companies, who then export them unprocessed.

The tertiary sector interests and operators receive little attention in this situation. In Ivory Coast, the domestic market is served by the limited volumes of traditional species, while plantation timber species that form the far greater proportion of national timber volumes are likewise exported. Since the log export ban of 1994, the volume of processed timber in Ivory Coast has increased constantly. In 2006, c.1.1 million m³ of timber were processed, an increase of 5% on the previous year. This is the result of an increase in capacity of the remaining industries (often unauthorised).

Forest governance has thus remained a thorny issue in the West Africa sub-region, and many of the negative trade impacts are traceable to it. FLEGT has been recognised as an important instrument to combat this; however, not all countries in the sub-region have bought into this scheme. Ghana has taken the lead on FLEGT with the signing and ratification of its EU voluntary partnership agreement in 2009. The first consignments of verified legal timber were shipped to Europe in 2011. Liberia is currently in early stages of VPA negotiation, and Ivory Coast and Sierra Leone have expressed interest in setting the

process in motion and are at the information stage. Sierra Leone is accessing FAO support to initiate the legality process, and an EU voluntary partnership agreement sensitising mission to the country took place in June 2010. Partly under the impetus of its VPA negotiations, Ghana has made good progress on the forest governance front, including increased national ownership of forest policy development (through a consultative process involving government, industry and the civil society forum Forest Watch-Ghana). Transparency of the industry has increased and the capacity of civil society to hold the industry and the government accountable is strengthening. The government has been committed from the start to an inclusive process, covering both export and domestic markets, seeking to avoid the risk of bifurcated markets in which regulatory pressures are applied excessively to the high-value export trade (Beeko, 2008). Other countries may have much to learn from Ghana's experience, as regards both mechanisms to generate wide national ownership and the value of a broad approach, bringing domestic as well as international trade within the purview of the legality regime.

Non-timber forest products trade

Non-timber forest products (NTFPs) are of considerable significance in the economies of the sub-region, and contribute to the livelihoods and coping strategies of the poor. They provide income opportunities for otherwise marginal and fragile categories of society (women and young adult males, for example), and safety nets in times of food insecurity. While NTFPs of both plant and animal origins are consumed and used very widely, they suffer from lack of recognition within national statistics, as well as from the general subordination of sector policies to timber interests. Their use and management is frequently constrained by forest laws developed to promote conservation and sustainable management of timber species, but inappropriate for the rational management of the resources in question. This underscores the need to move from the old sustained timber yield view of forest management towards a multiple-use approach (Guariguata *et al.*, 2010), including the need for integrated inventories.

Promoting commercialisation of NTFPs has much appeal to donors and support agencies, but is made more difficult by the increasingly high standards of national and international markets and the niche nature (and hence inherent risk) of many NTFPs. The preferred strategy for NTFP commercialisation is likely to be through general support to local marketing rather than niche crop promotion - for example, transport and market infrastructure, access to credit for natural resource product enterprises, access to market information, availability of business expertise.

Intensified commercialisation can lead, and have indeed led, to over-exploitation, and there is evidence of this happening in some instances, and sometimes on a major scale. In the

case of Ghana, for example, a preliminary inventory of NTFPs in 1997 indicated that all regions of the HFZ showed a marked decrease in NTFP resources (Wong, 1997). In Cameroon, Nkwatoh *et al.* (2010) reported that the quantity of *Gnetum africanum* and *Gnetum bucholzianum* harvested and traded from 2002–2008 was characterised by a steady decrease from year to year due to poor harvesting methods, which are gradually degrading the resource base. The progressive conversion of primary forest into farm land, encroachment into forest reserves by surrounding and ever-increasing population for logging, and settlement, are equally presenting themselves as major challenges to the sustainability of NTFPs. The sharp drop in quantity between 2003 and 2004 was attributed to poor road infrastructure, which made transportation of harvested stock to the markets very difficult in those particular years. Similarly, *Masularia acuminata* was reported by Nkwatoh *et al.* (2011) to be on a steady decline from 2003 to 2010 in Nigeria as a result of unsustainable harvesting methods that have turned out to impede natural regeneration of the species. Slash and burn farming practices and timber exploitation, which have emerged in recent years as the main degraders of the primary forest ecosystem have also affected availability of NTFPs (Ewane, 2010; Ndoeye *et al.*, 1997; Nkwatoh, 1995, 2000; Nkwatoh and Yinda, 2007; Besong, 1997; Adekunle, 1971). A general observation in the sub-region is that harvesters of NTFPs have experienced lower profit margins while buyers enjoyed a higher margin along the trade chains. The case of *M. acuminata* was attributed to the fact that its market remained a monopoly among the contractors/dealers and bulk buyers (Nkwatoh *et al.*, 2010; 2011). As Vabi (1995) states, this is very common with the buying and selling of NTFPs whose market structure and organisation is characterised by cartels (Ndumbe, 2010; Ndoeye *et al.*, 1997).

Wildlife is very widely hunted throughout the sub-region, and is a major source of dietary protein, particularly (though not only) for the poor. In countries like Liberia and Ivory Coast, for example, bushmeat has been estimated to provide three-quarters of all animal protein consumed. In Liberia, Hoyt (2002) estimated that the commercial value of bushmeat in 1989 was USD 24 million (more than timber trade at that time), with about 150 000 tonnes harvested per year. This represents 75% of Liberia's meat production, and would have a replacement value of about USD 100 million (Anstey, 1991). Cross-border trade to Ivory Coast occurs due to much higher prices there. The intensification of the bushmeat trade is a matter of conservation concern and particularly challenging for public authorities, given both their low administrative capacity and the lack of alternative protein sources coupled with high poverty levels in many of the countries in the sub-region. Too often, however, conservation strategies have tended to suppress rather than reform, in spite of the fact that punitive approaches have not worked in many circumstances given the nature of the bushmeat trade. To be effective, bushmeat policy needs to be integrated with other reforms of forest governance, and seen as part of a wider pattern of land-use management. New opportunities in the area of payments for environmental services (particularly climate change mitigation and REDD) may offer promising avenues for change, and opportunities

for sustainable management. Improved sub-regional coordination may also be required, though again ensuring that conservation interests are in line with public attitudes and welfare, and balancing preservation aims with principles of sustainable use.

The role of small and medium forest enterprises

According to Kozak (2007), information on the contribution of SMFEs to the economies of developing countries is limited at best. It is, however, known that SMFEs make significant contributions to the livelihoods and well-being of innumerable people around the world, especially the rural poor living in or near forests. He listed a number of reasons why SMFEs are effective poverty reduction tools in developing regions, many of which are fairly self-evident:

- ▶ they tend to be labour-intensive and consequently are able to make positive and long-term contributions to employment and economic development;
- ▶ they are able to thrive and grow given an enabling environment, favourable market conditions, and the appropriate business structures;
- ▶ they cater to local and domestic markets, which are growing in importance; and,
- ▶ they rely on the empowerment of local entrepreneurs who have vested interests in making their businesses successful.

In Nigeria, Ghana, Benin Republic and Ivory Coast, furniture making is a key SMFE. Gradually, NTFP processing is becoming a prominent enterprise. Employing between two and 40 staff, many of these SMFEs are becoming potent instruments against poverty. They engage in forest-based production, services and marketing, and involving products such as black pepper, shea butter, wood carving, community-based ecotourism, bamboo and rattan, honey, charcoal, bushmeat, mortar and pestle, mushrooms, chainsaw lumber production and trade, tertiary wood processing, chewsticks, cola, essential oils and *Allanblackia* oil, medicinal products with export value, herbal medicine (drugs), ginger and other spices and condiments.

However, the growing focus on governance and economic growth in forest policy debates has led to calls for increased attention to be given not just to the regulation but also the structure of the forest industry. There is a particular concern that the creation of a viable national industry might be stifled by such regulatory reforms, which, by excessively favouring large-scale, export-oriented enterprise, could be detrimental to both growth and governance. Governance issues need to be addressed, as SMFEs have often been accused of undermining rather than supporting good governance. This may be partly a problem of under-capitalisation, though the regulatory regime has been heavily oriented to the needs of large-scale industry (not necessarily on grounds of proven cost-effectiveness)

and this has inevitably pushed SMFEs to work at its margins, unable to compete on costs in the sub-region. The World Bank's concern with the motors of economic growth, and its mandate to address policy issues on an inter-sectoral basis, makes it particularly well placed to support this endeavour. By contrast, the EU's approach to FLEGT issues gives it little leverage in this area, being by definition largely focused on the large-scale export industry. However, it is possible to strike a balance, and that is indeed the direction to go.

Efficiency in value chain

The global nature of illegal logging and deforestation remains a great concern because of its negative environmental, social and economic impacts. Though accurate figures are difficult to come by, it is believed that up to 50% of logs from some tropical forest areas are illegally harvested. This makes the case of due diligence in forest trade an economic, social and environmental imperative, requiring national, regional and global cooperation. Value chain analysis is recognised as a concept that can enhance transparency in the forestry sector. Forest trade value chain analysis in West Africa should ordinarily be simple, but yet presents a complex scenario. The complexity arises from administrative processes to technical aspects of the trade. As stated earlier in this report, forest governance remains a huge challenge in most West African countries. This is as a result of inadequate capacities and institutional weaknesses which encourage illegal exploitation. Other problems include:

- ▶ absence of detailed resource inventory;
- ▶ inadequate knowledge and skills about modern technology and product quality parameters;
- ▶ local resource management policy and sustainable resource harvesting;
- ▶ insufficient finance for local processors;
- ▶ lack of sufficient information about market; and,
- ▶ poor infrastructure development.

These have created scenarios for inadequate, weak and inaccurate data for thorough analyses of value chains. Worse still, the technical capabilities of the operators are mostly sub-optimal, with obsolete technologies (Plate 2) that do not make for conversion efficiencies. In Ghana, Nigeria, Benin, Togo, Liberia, Ivory Coast and Sierra Leone, the impact of the Structural Adjustment Programme (SAP) of the late 1980s through the 1990s resulted in the near collapse of the forest industries. Of course, this has encouraged the ascendancy of chainsaw milling (Plate 3), which is a major source of sawnwood in many West African countries. According to Popoola (2010), it also provides employment for both families and hired labour, thereby improving household and social well-being. Furthermore,

the daily wages earned compare favourably with those of the average skilled worker, and are far higher than the less than USD 1 on which more than 60% of Nigerians and other West Africans subsist. These are clear indications of the social and economic importance of the chainsaw business in the sub-region. There is a need to address policy and governance issues that may make CSM sustainable in terms of social acceptance, economic viability, environmental impact and contribution to efficiency along the forest products trade value chain.



Plate 2. A band saw in Ijebu Ode, Nigeria

Government forest estates still dominate supply of timber products in most West African countries. With unsustainable harvesting regimes and methods, the timber products value chain is still largely fraught with inefficiencies. Increasingly, however, timber supplies from community forests and plantations are finding their ways into the market (Figure 2). Because of the improved level of governance in community and private forests, the efficiency of the value chain appears higher in those domains. The potentials for value addition, particularly with such plantation grown species as Teak, *Gmelina arborea*, Eucalyptus and *Terminalia* spp. from private holdings, are becoming even more obvious, and thus strengthens the case for private participation.



Plate 3. Chainsaw milling in action along Nigeria-Cameroun border.

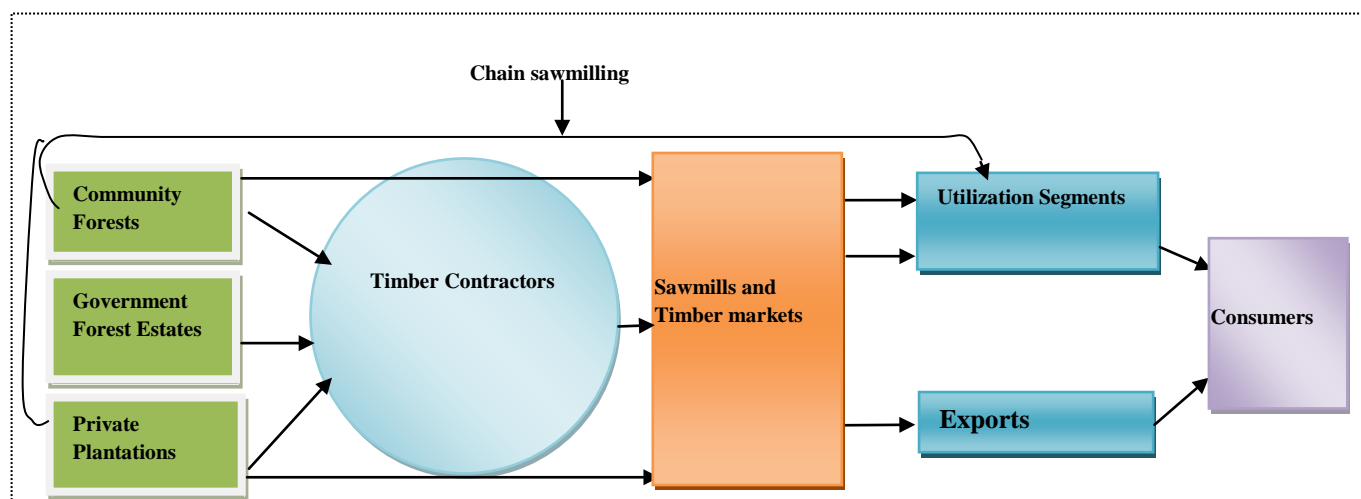


Figure 2. Generalised value chain for timber trade in West Africa

In the NTFPs segment of forest trade, the main challenge is in the area of measurement and processing. According to Mbile (2012), contrary to conventional wisdom, improving NTFPs technology *per se* will not address local capture and distribution of benefits. The NTFP user groups are the custodians of the knowledge required for conservational use of forests: the closer the relationship with the resource the higher the quality of that knowledge. The village is not the beginning of the value chain for studying NTFPs - the

combined ethnic/social/local group and the resource tenure rights contexts are by far more important. Factoring these groups in the value chain continuum will enhance its efficiency. Increasingly however, players at different nodes of the chain (*Figure 3*) appear to be improving their modes of operation, particularly in the areas of sustainable harvesting, measurements and processing (Plates 4-7). Many NTFPs, e.g. *Irvingia gabonensis*, *Baillonella toxisperma*, *Moringa oleofera*, *Riccinodendron heudelotii*, *Dacryodis edulis*, *Parkia biglobosa*, *Achatina achatinata*, are now being processed for national and international markets, thereby, improving the value along the chain.

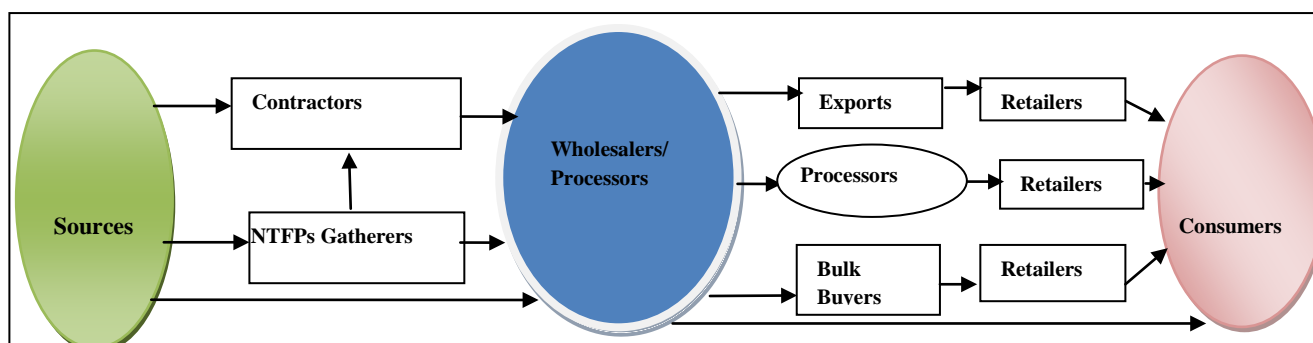


Figure 3. Generalised value chain for NTFPs trade in West Africa.



Plate 4: Weighing de-pulped seeds of *Baillonella toxi-perma* in CODEVIR, and, right, kernels of *Irvingia gabonensis* in an 11 liters measuring bucket. Photo credits: Mbile (2012).

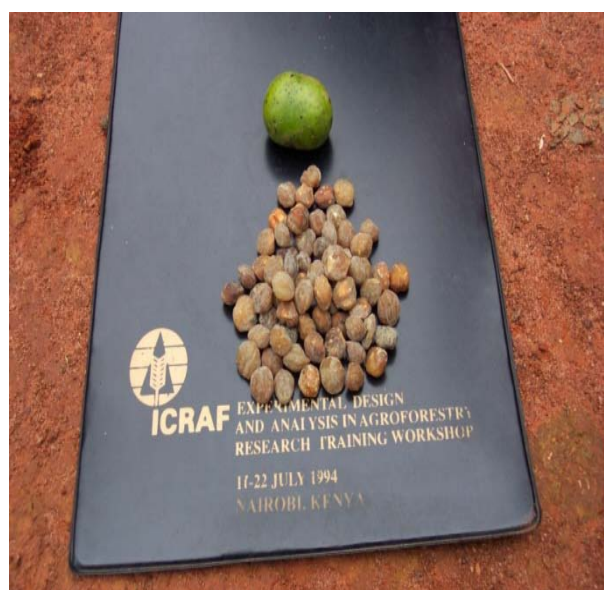


Plate 5: Left: *Ricinodendron heudelotii* grains (foreground) and fruit (background); Right: *Gnetum africanum* (weighed for the market)

CHAPTER 5 Conclusions and recommendations

Fighting illegal logging and illegal timber trade requires specific investments by governments, NGOs, international organisations and the private sector. Equally important is the creation of an enabling environment for the financing of forestry activities. This should extend to exploring alternative sources of funding, such as carbon credits and endowment funds, and increasing the value-addition of forest products (both timber and NTFPs). A crucial element is the establishment of mechanisms to empower local communities in the management of forest resources and provide them with the information they need to manage their forests with convincing incentives.

Countries of the sub-region need to adopt a more radical and inclusive approach if the forest sector is to engage adequately at the inter-sectorial level, and respond to all the environmental, social and economic demands prevalent in the sector. An effective strategy should help the sub-region shift from a narrow-sectorial approach to one that embraces important inter-sectorial linkages and the multiple and extra-sectorial influences that affect the condition of the forest resources and, invariably, the trade.

Political commitments are required for forest development programmes. A common strategic framework is needed to generate meaningful data on local, national and trans-boundary trade and their impact. This will make for proper valuation and accountability in the forestry sector.

Enforcement, negotiation and knowledge generation and sharing capacities of the governments' forestry agencies in the sub-region need to be overhauled in line with contemporary requirements. Tight controls exercised by the state over the forest, justified by its status as a strategic national resource, need to give way to incentives-based strategies aimed at stimulating the sustainable supply of timber, forest products and services, while shifting authority from state to communities and land owners and providing incentives to farmers at all levels.

The contributions of small and medium forest enterprises need to be quantified and harnessed for efficiency. Policy that will enhance their growth and development are germane to enable them contribute further to employment generation, poverty reduction and sustainable livelihoods.

The value chains in the forest products trade in the sub-region are still largely inefficient arising from obsolete technologies and weak governance in the timber segment. However, in the non-timber segment, cultural/social/local group interest in the trade is gradually yielding some measures of improvement along the chains. This will require further research for improvement, and governments and NGOs will need to leverage on this.

Policy and market failures underpin the poor forest governance in the sub-region and are evident in badly functioning and distorted markets with poor and perverse incentives to manage and conserve the resource. The impacts of the scenarios on climate change are far-reaching and need to be frontally addressed. Forest administrations in the West African countries have failed to take actions to correct these market distortions leading to disincentives for sustainable forest management. Many of the countries have good forest policies. However, the implementation and enforcement are very poor. The impacts of policy and market failures in the sub-region have also been accentuated by weak institutional capacities and a lack of political will to fully enforce the payment of fees. Institutional transaction costs and the nature of the state bureaucracy also create strong incentives for both formal and informal operators to resort to breaches rather than subscribing to, and complying with, extant rules and procedures. Though the legal frameworks may suggest that effective controls exist, rent-seeking behaviours often undermine them. Governments' aggressive drives for forest revenues have not helped matters either.

The result has been unconstrained access to forest resources, as well as an indirect conferring of a significant subsidy on the industry. Illegality is a key issue among formal and informal forest enterprises. In the formal sector, illegality is fuelled by the lack of political commitment and collusion between state and industry, while in the informal sector, failure to reconcile domestic demand with demands emanating from lucrative international markets has led to the effective criminalisation of most of the production for domestic needs. Illegal logging in the sub-region is therefore a clear reflection of poor governance. In the last decade, various international fora have addressed this issue as it affects the sub-region, and have estimated illegal logging to be between 60-80% of the national harvests. While some of this is criminality within the industry-political complex, a significant part is structural, reflecting the obstacles to satisfying domestic demand under current forest policies.

Industry structure in the sub-region is characterised by a concentration of primary processing. A consequential under-pricing of timber has left the industry over-protected, inefficient and with little incentive to innovate. Over-harvesting has been the norm in an environment of political protection and patronage. In some countries in the sub-region, under the influence of past donor policies, capacity has disproportionately increased without regard to the capacity of the natural forest to sustain the industry.

In general, institutional capacity is very low throughout the sub-region, particularly in the countries emerging from civil war (Liberia and Sierra Leone, for instance). Thus, capacity

building will be required. At present, all the countries tend to be oriented to resource mobilisation for individual programmes and projects, despite the high costs that this approach entails. The West Africa Forests Dialogue has the objective of harmonising forest and extra-forestry policies, though again, considerable institutional capacity building will be needed to achieve this. Countries like Ghana, Ivory Coast and Liberia that are involved with the International Timber Trade Council and Organization (ITTC/ITTO) in forest certification need to demonstrate commitment. Similarly, countries like Nigeria, being the only prominent one having a climate change section, should demonstrate commitment and leadership in tackling the negative impact of trade in forest products.

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