Toward a West African Forests Strategy

Working draft

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Executive Summary

This report presents analysis geared toward developing a forests strategy in West Africa. It draws on five country studies focused on Côte d'Ivoire, Ghana, Guinea (Conakry), Liberia and Sierra Leone and a sector synthesis. The report is structured in two parts: the first part (Part A, Sections 1-5) presents some key themes in forest policy in the sub-region. The second part (Part B, Sections 6-8) presents elements for an effective development assistance strategy for forests in the West Africa sub-region.

The five countries of the sub-region differ in a number of important respects with regard to their forested areas, though they also show some similarities. In the three more easterly countries (Côte d'Ivoire, Ghana and Liberia) the timber industry has historically been much more important than in the other two. In all five cases, rural energy is an important aspect of the forest economy and depends largely on wood fuels (fuel wood and charcoal), though except for Liberia, most of these are sourced from outside the Humid Forest Zone.

In all five cases, forest sector policy has failed to shake off its colonial inheritance, and has ill-served the interests of the society, particularly as demographic pressures have grown. Forest industry has had an excessive influence over forest policy, but has not made a commensurate contribution to growth and poverty alleviation, while most domestic needs (whether for timber, wood fuels or other products) have been consigned to structural illegality. The condition of the forests is deteriorating in all five cases, and in two hitherto important timber producers, industry supply is nearing crisis. Among the causes of this deterioration are preferential terms for the timber industry, which encourage value-detraction rather than value addition; neglect of the legitimate needs of domestic consumers; and a lack of incentives to landowners and farmers to conserve and regenerate the stock. Where timber has high value, farmers have been better advised to keep it off their land. And where revenues from the industry are shared, these fail to reach the immediate land managers and incentivise them appropriately. Plantations are an important aspect of current policy in most instances, though implementation of plantation policy generally leaves much to be desired.

There is an urgent need to increase public buy-in to forest conservation and commitment to sound management. The means by which this might be brought about are generally agreed – they would be likely to involve promotion of responsible management and risk mitigation in the small and medium sub-sector, including community forestry. By and large, policy development has been in the reverse direction, consolidating the interests of capital-intensive export industry, and marginalising the SMFEs. Low public buy-in is also evident in relation to the role of forests in the preservation of public goods, and in countries like Ghana, recent agricultural policy has further weakened the commitment of rural communities to the forest reservation policy.

There have been some successes at the policy level, but these are generally few and far between. The EU's FLEGT initiative has done much to improve the governance of the export industry, but has limited traction over the overall balance of forest enterprise. There have been some interesting initiatives in the plantations sub-sector (in Côte d'Ivoire, Ghana and Guinea), and in forest co-management (in Guinea, for example), and growing interest in regional

coordination (through initiatives like EITI, the West Africa Forests Dialogue and PROFOR-supported governance work).

The situation is likely to change in the coming years, however, with increased recognition of the extra-sectoral influences on forests, and of the need to foster policies which harmonize the interests of the various sectors which have an impact on the condition of the resource. Climate change policies, particularly REDD+, are likely to reemphasize these links, and to the extent that financial transfers under REDD are performance-based, they could lead to a shift in power to the benefit of the immediate forest managers. (This is far from guaranteed, however, and the risks to the poor are high in a situation of widespread tenurial insecurity). Movements such as FLEGT also encourage a more inclusive approach to forestry, both thematically and geographically and, as with climate change, will only be effective if leakage is controlled. National interest in these policy initiatives is growing, and in some cases this is encouraging radical thinking in fields such as timber supply and tree and land tenure. In all five countries, agriculture and mining are central pillars of current national growth strategies, and the forest sector will have to accommodate the implications of this if its own needs are to be recognised in public policy. New areas of investment in energy security, including biofuels, petroleum and hydropower, all have implications for the forest sector, both positive and negative.

A number of opportunities exist for development partners to generalize good practice and build regional capacity to confront the coming challenges.

Some of the primarily *country-level issues* are: restructuring of forest industry to promote value addition and foster economic growth; improving forest governance and public finance management; balancing supply and demand issues in export and domestic markets and addressing the issue of 'illegal' chainsaw logging; support for small and medium forest enterprises and community forestry; reforming tree and land tenure so as to favour forest conservation and regeneration; reforming revenue sharing arrangements and channelling these so that these provide incentives to farmers and land owners; integrating REDD+ and other climate actions into forest policy; and improving the sustainability of rural energy (wood fuel & charcoal).

Some of the primarily *sub-regional issues* include: improving the governance of cross border trade in a context of FLEGT, and helping to harmonize sub-regional trade policies; enhancing the geographical information and forest inventory data available for sub-regional policy making and trade controls; institutional capacity building to support sub-regional policy coherence; investing in the cross-border dimensions of protected area management; and developing awareness of the extra-sectoral implications of forest policies across the sub-region.

The Strategy concludes with key recommendations for short and longer term action by development partners, for both the sub-region and the five countries.

List of Acronyms

ASEAN	Association of Southeast Asian Nations
ATO	African Timber Organisation
CDM	Clean Development Mechanism (flexibility mechanism of Kyoto Protocol)
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora (UN)
COMIFAC	Central Africa Forestry Commission
CFDC	Community Forest Development Committee (Liberia)
ECOWAS	Economic Community Of West African States [Fr: CEDEAO]
EITI	Extractive Industries Transparency Initiative
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
FCPF	Forest Carbon Partnership Facility (World Bank)
FDA	Forest Development Authority (Liberian government agency)
FLEGT	Forest Law Enforcement, Governance and Trade (EU)
FMC	Forest Management Contract (Liberia)
FSD	Forest Services Division (of the Ghana Forestry Commission)
GDP	Gross Domestic Product
GFC	Ghana Forestry Commission
GNI	Gross National Income
HDI	Human Development Index
HFZ	Humid forest zone
HIPC	Highly indebted Poor Countries Initiative (World Bank)
HRC	Hamilton Resource Consulting (Ghanaian consultancy firm)
ITTO	International Timber Trade Organisation
IUCN	World Conservation Union
LAP	Land Administration Project (Ghana)
MEEF	Ministry of Environment and Forests (Côte d'Ivoire)
NREG	Natural Resources and Environmental Governance Program (Ghana)
NTFP	Non-timber forest product
PAF	Progress Assessment Framework (NREG)
PES	Payments for environmental services
PROFOR	Program on Forests
REDD	Reduced Emissions from Deforestation and Forest Degradation (UNFCCC)
REDD+	Extended REDD program (includes conservation, sustainable management of forests and enhancement of forest carbon stocks)
SBS	Sector budget support
SMFE	Small and medium forest enterprise
SODEFOR	*Société de Développement des Forêts* – state-owned forest company (Côte d'Ivoire) responsible for all aspects of forest management.
TIDD	Timber Industry Development Division (of the Ghana Forestry Commission)
TSC	Timber Sales Contract (Liberia)
UEMOA	*L'Union économique et monétaire ouest Africaine* [Eng: West African Economic and Monetary Union]
UNEP	United Nations Environment Programme
UNFCCC	UN Framework Convention on Climate Change
UN REDD	United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
VPA	Voluntary Partnership Agreement (under EU FLEGT)

PART A: THE FOREST CONTEXT IN WEST AFRICA

1. Introduction

Forestry and rural development are on the cusp of major changes in West Africa, as throughout the tropics. Forest law enforcement and trade measures are already affecting the international timber trade, with knock-on effects for wider patterns of forest exploitation. New opportunities for carbon conservation and bioenergy 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. Global climate change could have a major effect on forest ecology. 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 twin pressures of population growth and agricultural change.

The industrial concession model that has dominated tropical forestry in the sub-region for well over half a century is under threat, even as a medium-term proposition, and its status as the optimal use of the HFZ is increasingly in doubt. The impending crisis in the forest industry in those countries where it is still significant presents many challenges but also some opportunities. New approaches are needed to secure the future of the resource and exploit it sustainably, in ways that are compatible with internationally-supported poverty reduction, energy security and carbon conservation strategies, as well as more in line with the limited enforcement capacities of the governments. 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 incentivising farmers at all levels.

In all five countries covered in this report (Côte d'Ivoire, Ghana, Guinea, Liberia and Sierra Leone), inadequate tree and land tenure regimes can be counted among the policy failures that need urgently to be addressed if the forest sector is to be revived as an instrument of pro-poor and sustainable economic growth. Local governance needs also to be reformed if effective institutional linkages are to be made between democratic planning and farmer-level decision making. The implications of these changes vary from case to case. The challenges are primarily national ones, though they impinge upon the region nevertheless, in that such is the level of integration of land and labour markets that any attempts to modify systems of forest exploitation in one environment could impact significantly on others.

At the same time, the sub-regional integration which has always been apparent in these economies, as regards agricultural land and labour markets, needs to advance greatly in relation to forest governance – if leakage is to be avoided across national boundaries, and forest and social policy initiatives in one jurisdiction are not to be undermined by policy and regulatory weaknesses in another.

Policy makers and other stakeholders throughout the sub-region are well aware of past failures and current problems, but are divided on the solutions and tested by the size and complexity of the challenges. Space is needed for partners to think through the implications of the changes in forest use.

Countries of the sub-region need to adopt a more radical and inclusive approach ('total forestry' as it has been described) if the forest sector in the sub-region is to engage adequately at the inter-sectoral level, and respond to all the environmental, social and economic demands that are being placed upon it. An effective West Africa strategy should help the countries of the sub-region shift from a narrow sectoral approach to one that embraces the important inter-sectoral linkages and the multiple extra-sectoral influences that affect the condition of the forest resource. This has implications for the way in which development partners interact with national partners and structure their own portfolios.

2. Background: the five countries in comparative perspective

This Strategy paper covers the five countries located in the Upper Guinea sub-region of the West Africa Guinean Forest zone (Côte d'Ivoire, Ghana, Guinea Conakry [hereafter, 'Guinea'], Liberia and Sierra Leone). The Guinean forests of West Africa comprise one of eight biodiversity hotspots in Africa, with all five countries being located in one of two constituent sub-regions, Upper Guinea (the other being the Nigeria-Cameroon sub-region). The Guinean hotspot ranks fourth on the list of world hotspots in terms of intact area, being first in rank in terms of animal biodiversity and eighth in plant biodiversity. The Guinean sub-region is of immense significance both in terms of animal and plant diversity and carbon storage. One country, Liberia, alone contains the largest carbon sink in Africa outside of the Congo Basin, and accounts for 43% of the remaining Upper Guinean forest ecosystem. Another, Guinea, harbours 1160 water courses, and is the source of many of West Africa's major river systems, including the Niger, the Senegal and the Gambia rivers.

There are wide disparities between the countries in terms of the extent and quality of forest cover, the place of forests in the national economy, the tenurial systems and social dynamics in the forested areas, and the relative importance of the main drivers of deforestation and forest degradation. There are significant differences between the five countries in terms of such indicators as: overall population density (Liberia and Guinea are fairly low, Côte d'Ivoire is medium and Sierra Leone and Ghana are higher): economic development (one of the five countries is classed as a lower middle income economy [Côte d'Ivoire], the other four are low income economies, though with a significant gulf between Ghana and the other three). Four are classed as 'low human development' on the UN's 'Human Development Index', and one (Ghana) as 'medium development'.

Historically, there has been an important cultural division between the countries of the West African rice zone (southern Senegal to western Côte d'Ivoire) and those of the tuber zone (Côte d'Ivoire east of the Bandama River, Ghana and beyond). This boundary broadly coincides with

important contrasts in land and labour markets, which have long historical antecedents. In the case of Ghana, five centuries of profitable exploitation of gold drew large populations southwards into the forest areas, with major effects on social structure and inheritance systems[1]. The cocoa boom in Ghana and Côte d'Ivoire, which commenced in the late nineteenth century, further complicates the picture, leading to the socially highly-complex and ethnically very heterogeneous societies typical of their forest zones today. By contrast, the populations of the other three countries are markedly less heterogeneous, at the sub-national level, as well as generally less densely populated.

These differences warn against too ready an assumption that the countries are on a single continuum of forest loss, and are therefore directly comparable in all their institutional dynamics. At the same time, all five countries face some similar constraints in terms of rising urban and rural populations, heavy dependence of national economies on activities that drive deforestation (chiefly, agriculture and mining), and future growth scenarios (biofuels development etc.) which could well increase the stress on their forest areas. Lessons can be learnt by comparing experience in fields that transcend national specificities, albeit with some important differences of social and political context. Account needs also to be taken of the forces that link the divergent national contexts, and these concern the elements of political economy (external investment patterns, labour prices and movements, exchange rate differentials and their effects on cross-border trade, etc.) that integrate the markets of the sub-region.

The countries are compared on basic economic and forest sector indicators in Table 1.

[1] The matrilineal system of the Akan can be related to this influence (Wilks, 1977).

Table 1: Summary Forest Data for the selected countries

	Cote d'Ivoire	*Ghana*	*Guinea Conakry*	*Liberia*	*Sierra Leone*
Population [millions] (1)	20.59	23.35	9.83	3.79	5.56
GDP ($ Mill.) (1)	23,414	16,653	3,798	842	1,954
GNI per capita ($) (1)	980	630	350	170	320
Land area [1000 Ha] (1)	32,250	23,850	24,590	11,140	7,170
Forest cover 1000 Ha / [%] (2)	10,403 / 32.2% 12 420 / 38.33%(3)	4,940 / 20.7%	6,544 / 26.6 %	4,329 / 38.8%	2,726 / 38,0%
Deforestation 2005-2010 [1000 Ha/year] (2)	- 0.4	115.4	36.0 28.0 (average 1975 – 2000) (4)	30.0	19.6
Specific management [1000 Ha] (5)	4,000 concessions (PEF) 4,000 SODEFOR 168 plantations	1,200 forest reserves and additional forest	260 protected forests in *Guinée forestière*		400 Forest reserves & protected forests
Industrial roundwood production [1 000 m^3] (2)	2,175 (in 2005)	1,508 (in 2005)	651 (in 2007)	370 (in 2005)	142 (in 2005)
Firewood production [1 000 m^3] (2)	10,004 (in 2005)	23,779 (in 2005)	11,791 (in 2007)	6,677 (in 2005)	6,242 (in 2005)
Production by types [1 000 m^3] (5)	1,400 official from forest reserves 120 from protected forests 100 from teak plantation Est. 1,500 illegal	935 officially harvested (2005) Est. 2,300 illegal	46 officially harvested (*Forêt Forte*)	?	?
Processing capacity of Industries [1 000 m^3] (5)	2,400	7,000	50 (or less)	No major industries in operation	No major industries in operation
Formal forest sector employment	50,000 direct or indirect (6)	50,000 (1999) 10,000 (2007) (7)	4,700 (est.) (8)		
Informal sector employment		260,000 (7)			
Contribution of sector to GDP [%]	1,6 % GDP (6)	6% (2005) (7)	2% (2000) (9)		
Gov revenue from forest [US $ mn]	13.7 (2007) (6)	16 (2005) (7)	2.3 (2005) (8)	13 [target for 2009]	
Value of forest products export [US $ mn]	333 (2007) 341 (2005) (6)	202 (2007) (7)	8.9 (2007) (9)	100 (2002)	

	Cote d'Ivoire	*Ghana*	*Guinea Conakry*	*Liberia*	*Sierra Leone*
Firewood estimate value **[US $ mn] [5] (10)**	30	71	40	20	19
Timber trade [1 000 m^3] (5)	350 exported to EU 245 to China and India 170 to other destinations 100 in the region 200 illegal teak to Ghana	407 official export (including Teak : 127) 122 regional exports 300 unofficial regional exports	8.74 (in tons) officially export to EU 60 (2,500 containers) illegal exports	626 (in 2000) 200 (2001 & 2002, preceding UN ban on exports)	1 (in tons) export to EU
Main international markets (by country) (5)	EU, China, India Teak logs to Ghana	EU Regional exports	EU Unknown overland export by containers	EU prior to UN ban Allegations of illegal exports to Cote d'Ivoire & Guinea	EU,
Certification process **(5)**	SODEFOR, funded by OAB developed principles & criteria for sustainable forest management Inprobois is aiming to become FSC	FSC Regional Office in Ghana Samaratex, Ghana Primewood, John Bitar & Co., Logs & Lumber & Scanstyle Mim are members of GFTN & aiming for FSC Certification Total area : 330,000ha	Forêt Forte in compliance with 80% of FSC criteria	No activity	No activity
Control of timber Movements **(5)**	Many checkpoints are operated by customs, forest officials, police and army. But bribes paid at these checkpoints can allow movement of timber without inspection	Control on felling is by law done by The Forestry Commission's FSD, but not implemented systematically. Timber in transit is inspected at TIDD checkpoints, but corruption is reported at these checkpoints. No efficient control of illegal timber harvested by chainsaw gangs	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 economical analysis)	No control has been exercised over harvesting Timber movement is made quasi-legal by payment of fees for issue of an official waybill SGS are contracted to establish COC procedures & manage movement & export of timber, but only official logging under TSCs & FMCs	MAFFS Forestry Division issues licences for transport of timber & operates checkpoints, but even during the logging ban there was no control of timber movement & bribes are routinely paid Cooperation between forest authority, police & customs is poor
TI Corruption Perception Index (2009) (0 to 10, 0=high corrupt.) (11)	2.1	3.9	1.8	3.1	2.2

	Cote d'Ivoire	Ghana	Guinea Conakry	Liberia	Sierra Leone
HDI (0=low (2007) (12)	0.484	0.526	0.435	0.442	0.365
Trends (5)	Many factory consolidations & increasing development of secondary processing Europe exports are declining, but increasing exports to other African nations & China & India	Exports to Europe declining Shortage of timber has resulted in factory closures & consolidation, with sources abroad attracting increasing interest Regional market, (particularly Nigeria), growing Sahel remains an important market, largely for illegal timber	Increasing illegal exports to China of false-teak & other species	Issue of TSCs & FMCs will allow legal export, but industry not well developed & likely to be mainly logs. Local demand is likely to continue to be met from uncontrolled chainsaw logging	Very limited exporting industries & supply is mainly for local market Illegal exports to China have been increasing & this trend is likely to continue without improved enforcement

1. : World Bank website : http://data.worldbank.org/country for 2008
2. FAO "Forest Resources Assessment" country reports 2010
3. MEEF, MAGRA, in World Bank, 2010
4. Agrhymet « West Africa Land Use and Land Cover Trends » 2009
5. Blackett H. & Gardette E., 2008
6. WASF Country report Cote d'Ivoire (Kouakou G.) 2010
7. WASF Country report Ghana (Birikorang G.) 2010
8. WASF Country report Guinea (Camara L.) 2010
9. Ministry of economy and finances, quoted in "Stratégie Nationale de Sécurité alimentaire", 2003
10. Rough estimate value, from FAO stat volumes with an average price of 3 US$ / m3
11. Transparency international website : http://www.transparency.org/policy_research/surveys_indices/cpi/2009
12. Human Development index website http://hdr.undp.org/en/countries/

2.1: Forest cover & classification

The five countries differ significantly in their ecology (see Figure 1).[2] Two (Guinea and Sierra Leone) lie almost entirely outside the Guinea-Congolian rainforest, one (Liberia) lies entirely within it, while in the two other cases (Ghana and Côte d'Ivoire), the rainforest zone is complemented by substantial areas of Sudanian transition zone, involving a mosaic of forest and grassland, and Guinean savannah, dominated by grasslands and orchard bush.

The five countries differ in terms of their location on the forest transition curve. Accepting the warnings of researchers as to the danger of over-dramatising the extent of recent forest loss in West Africa and underestimating the population densities that the region supported in previous centuries[3], the current profile is nevertheless of a progressive loss of forest cover across the range, from Sierra Leone (where the effects of forest loss were largely felt in the nineteenth century), through Ghana and Côte d'Ivoire (where forest loss was heavy in the twentieth century, and still continues, leading to high levels of forest fragmentation) to Liberia (which still

[2] This is the latest comparative data from this single source (1992-3).
[3] For example, Fairhead and Leach (1998)

relatively well-forested, particularly in the south-eastern segment of the country). Guinea is something of an outlier to this pattern, with the HFZ having long been marginal. The transformation of Côte d'Ivoire is the most extreme (Figure 2), but indicative of the broader situation. The extent of forest fragmentation varies from case to case, though this is a problem in all of them. The trend continues. FAO rates West Africa as the part of Africa most impacted by deforestation (1.17 % per year between 1990 and 2005, compared with the rate for Central Africa of about 0.3 % over the same period).

The forests of all five countries of the sub-region have long been subject to systems of zoning, implying demarcation of planning areas subject to various national management standards, and the establishment of regulations to govern land use and harvesting practices within each zone. Typically, this involves division into 'on-reserve' and 'off-reserve' areas. The former (sometimes also called 'national forests', as in the case of Liberia) are intended for permanent use as forests (whether for full preservation as protected areas, or sustainable use as production forests). Off-reserve areas are often earmarked for progressive liquidation (i.e. conversion to non-forest uses). In Ghana since 1994, however, the guiding principle has been also one of sustainable use of off-reserve areas as well as on-reserve (production) forests, though a supportive policy framework is not yet in place.

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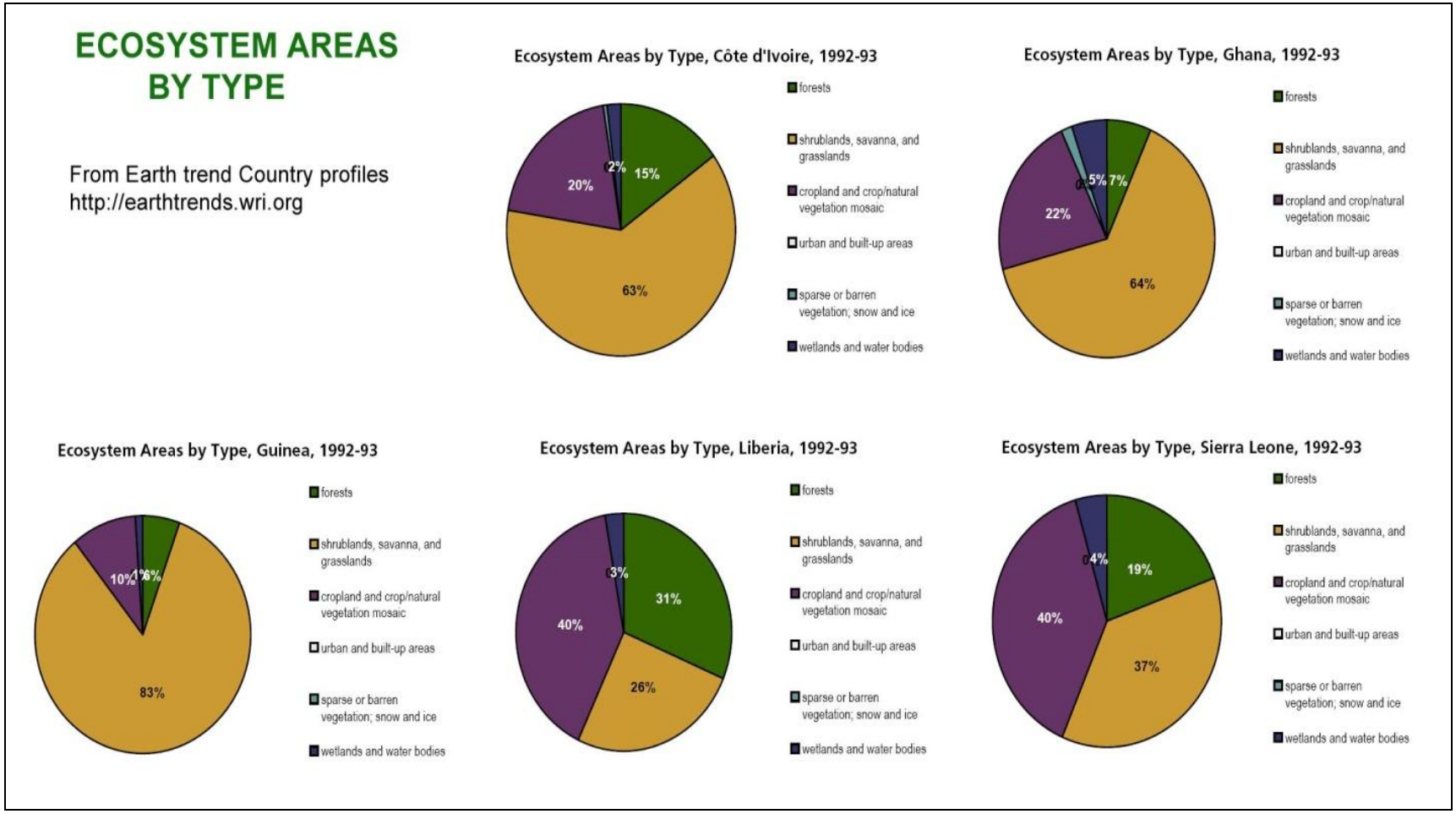

Figure 1: Ecosystem Areas by type

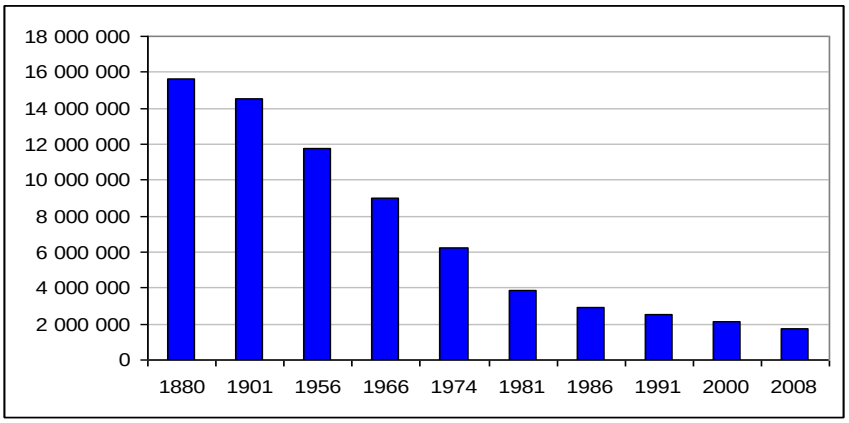

Figure 2: Trend in area of HFZ, Côte d'Ivoire, 1880 to 2008 (in ha.)

2.2 : Drivers of deforestation

The drivers of deforestation are diverse, and include both intra- and extra-sectoral influences (Table 2). The sub-region is typical of the tropics in the range and polarisation of the interests which converge on forest areas, particularly in the three most forest-rich countries (Côte d'Ivoire, Ghana and Liberia). The extra-sectoral factors are often major components of the national economies, and identified as the motors of future growth. This warns against the assumption that the forest sector is a sovereign entity, and subject to independent management.

Over-logging in the sub-region is a major contributor, having opened up the forests to uncontrolled multiple uses. The downstream impacts have mainly come from agriculture, and have been most clearly felt in those areas (southern Ghana and eastern Côte d'Ivoire) where population pressures are highest. In the 1980s, it was estimated in Ghana that for every cubic meter of timber destroyed by logging, agriculture destroyed 5.8 times as much.[4] Recent studies estimate the cost of environmental degradation in the major natural resource sectors at 5-10% of GDP. At about US$500 million, the forest sector accounts for 63% of this cost (World Bank *et al*, 2006: 22). These threats to forests have their roots in the policies that have led to a systematic under-valuation of forests. While in no instance in the sub-region does the forest industry receive any significant direct subsidy from government, 'subsidy' is conferred on the industry indirectly through the under-pricing of the resource and the failure to fully cost its replenishment. These costs are borne by the forest owners and ultimately the public at large, not by the industry.

A combination of industry indiscipline, agricultural encroachment and competing economic interests has combined to ensure that degradation rates are high in both on- and off-reserve areas. Small scale agriculture for cash and tree crops is generally the main driver of agricultural deforestation, but large scale plantation agriculture could be a major cause in the forthcoming

[4] World Bank, "Ghana Forestry Review;" November 1986

years, following the pattern first established in Liberia in the 1920s. Liberia is unusual in the extent to which large-scale plantations of economic trees (chiefly rubber) have contributed to deforestation through clear felling, and generated significant social conflict thereby, although Ghana and Côte d'Ivoire are under rising pressure from plantations development. Agriculture is still the leading sector of all five economies, and critical to future growth. In the case of Ghana, for example, agriculture accounts for 38% of GDP (34% without the contribution of forestry and logging), and 60% of all employment. Developing an agro-based industrial economy is one of the central pillars of the country's Poverty Reduction Strategy.

Mining activities (bauxite [aluminium], iron, rutile [titanium], gold, diamonds) are likewise important components of all five economies, though with differing combinations of industrial and artisanal exploitation. Guinea, for example, is a major industrial producer of bauxite, harbouring nine-tenths of Africa's and almost a third of global reserves, and is also a prominent source of gold and diamonds. Ghana is a major producer of gold, as well as of bauxite and construction minerals such as iron; its mining sector accounts for almost 80% of foreign exchange earnings and 5% of GDP (cf. 4% for forestry and timber). It is the second employer after government, providing 22,000 jobs. Liberia produces both industrial iron ore (currently under rehabilitation and re-development) and artisanal diamonds and gold. Sierra Leone's mining sector was once the lead sector of the economy though is currently in process of being rebuilt; it has significant potential in diamonds, gold, rutile, bauxite and platinum. Côte d'Ivoire likewise has broad minerals potential, with gold presently the main focus of production, and artisanal workings are widespread.

Urban growth is important in all five cases. Ghana's urban population has increased from 15% in 1950 to 46% in 2005, and is anticipated to reach 58% by 2030. The rate of urban population increase is currently 4.2%, significantly in excess of overall growth. Liberia's population has almost trebled in the last forty years; Monrovia, with 1.5 million inhabitants, now accounts for almost a third of total population, more than the population of the whole country in 1970. The knock-on effects that urbanisation can have on deforestation are well illustrated by the experience of Côte d'Ivoire. The small coastal village of San Pedro, with a population of less than 100, was identified as the site of a future port development in 1968, and is now the country's second port city, with a population of 420,000. The construction of transport links in the vicinity (especially the Soubré Bridge over the Sassandra River, completed in 1970) opened up access to the hitherto isolated south-western part of the country, and led to extensive cocoa plantation development. This sole project is reported to have led to a six-fold reduction in the natural humid forest cover of the region, which declined from 9 million ha in 1965 to 1.5 million ha. in 1990.

Three of the five countries (Côte d'Ivoire, Liberia and Sierra Leone) are in process of emerging from prolonged periods of civil conflict, in which timber figured as an important conflict resource. The deforestation rate in Côte d'Ivoire is estimated to have increased by 25% over the last decade, under the twin influences of the conflict itself and the lack of the administration in rebel zones. The fourth country (Guinea) is presently in a period of profound instability, while the fifth (Ghana) has recovered well from economic and political crises in the third quarter of the 20th century, and is now relatively stable and prosperous.

Table 2: Main drivers of deforestation and forest degradation

	Main immediate (proximate) drivers							Migration	
	Industrial/ commml. timber harvesting	Chainsaw logging	Non-mechanised agriculture and agricultural practices	Land conversion for agri-business & commercial Plantations	Energy (firewood and charcoal)	Population growth & urban expansion	Mining sector	Ordinary migration (ecological and economic refugees)	Population displacement relating to civil war
Cote d'Ivoire[1]	6	7	3	1	4	9	8	2	5
Ghana[2]	[X]	[X]	1	[P]	2	3	4		
Guinea[3]		3	1	[P]	4	6	5		
Liberia[4]	5	2	1	[X]			3		4
S' Leone[5]	1=	1=	7	5	3	6	4		8

[X] : An important cause, though not mentioned in the reference document (the R-PIN, below); [P] : Prospectively, a major cause, as investors are moving in currently.

Sources*:*

This table is based on the country sources indicated below, and should be treated as indicative.

[1] Cote d'Ivoire: consultant assessment based partly on the document: *'Bilan-diagnostic de la politique forestière ivoirienne et propositions de nouvelles orientations : Tome I – Bilan-diagnostic'* (Tidjane Thiam, Juin 1999)

[2] Ghana R-PIN : notably industrial timber harvesting and chainsaw logging were not mentioned as such, except in relation to 'illegal logging'; these causes are recognised by the GoG as important and are registered here (if not in the R-PIN) as [X]

[3] Guinea **:** consultant assessment

[4] Liberia : R-Pin; notably, plantation development is not mentioned in the Liberia R-PIN, although this has undoubtedly been a major cause of deforestation (clear felling) in the country.

[5] Sierra Leone : consultant assessment based on the Stakeholder consultation and the 'National Action Program to Combat desertification/Land Degradation (NAP/LD) of Sierra Leone, United Nations Convention to Combat Desertification (UNCCD), 2010 p. 9. (Other drivers identified in these processes include: poverty, land fragmentation, population pressure, land tenure relationships, local market conditions, local institutions, farmer's attitudes and the inadequate knowledge of improved technologies by farmers in the context of land degradation.)

2.3: Forests and poverty in the HFZ

The *incidence of poverty* in the sub-region is high (routinely 40-70% or more in some areas, in all five countries). By and large, in this sub-region, poverty is more acute in rural areas than in urban (Table 3).

Table 3: Incidence of Rural and Urban Poverty in the Five Countries

	% in poverty – national	*% in poverty – urban*	*% in poverty -rural*
Côte d'Ivoire [2008]	49	29	62
Ghana [2003]	29	9	30
Guinea [2006]	54	23	60
Liberia [2007]	64	55	68
Sierra Leone [2003/4]	68	47	78

Source: PRSPs

Poverty maps for the five countries are provided in Figure 3 (a-e).

Poverty levels are generally lower in the HFZ than they are in drylands areas. There are some apparent exceptions, though these can largely be attributed to population movements in the 'humanitarian corridors' along the national borders, linked to the recent civil wars. Thus, western Côte d'Ivoire is the second poorest region in the country (after the North), and there are pockets of poverty in the HFZ areas of Guinea, close to the Sierra Leone and Liberian borders. *Guinée forestière* registered a poverty rate of 54 percent in 2006, having been the least poor region in 1994. This situation was in large measure the direct result of the influx of refugees received as a result of hostilities in Liberia and in Sierra Leone, and the rebel attacks on Guinean territory in 2001

Poverty levels have increased dramatically in some instances. For example, in the case of Côte d'Ivoire, in the period 2002-8 there was a c.50% increase in poverty in the capital, Abidjan, as well as in 8 of ten of the country's 'development poles'(i.e. regions). By contrast, poverty in Ghana has almost halved since 1991 (29% in 2005, cf. 52% in 1991).[5]

[5] Latest figures for Ghana are for 2003, from the Ghana Statistical Service, *Core Welfare Indicators Questionnaire (CWIQ) 2004*, Accra. These show a significant decrease in incidence of poverty relative to the 1999 figures, reproduced in Figure 1.

Figure 3: Poverty Maps ~ Incidences of poverty in relation to forest areas

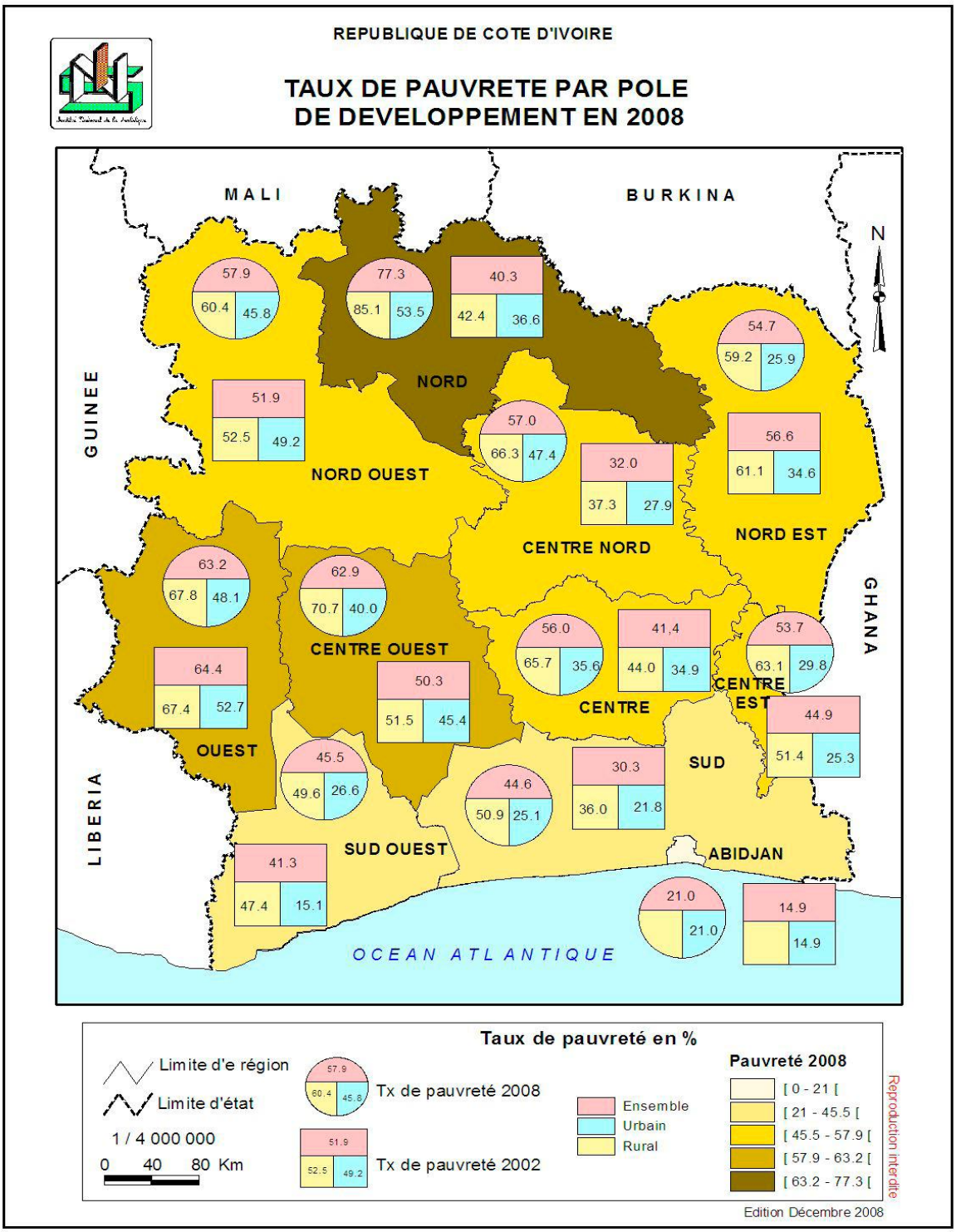

Figure 3 (a) Côte d'Ivoire

Source: Poverty Reduction Strategy Paper, 2009:18

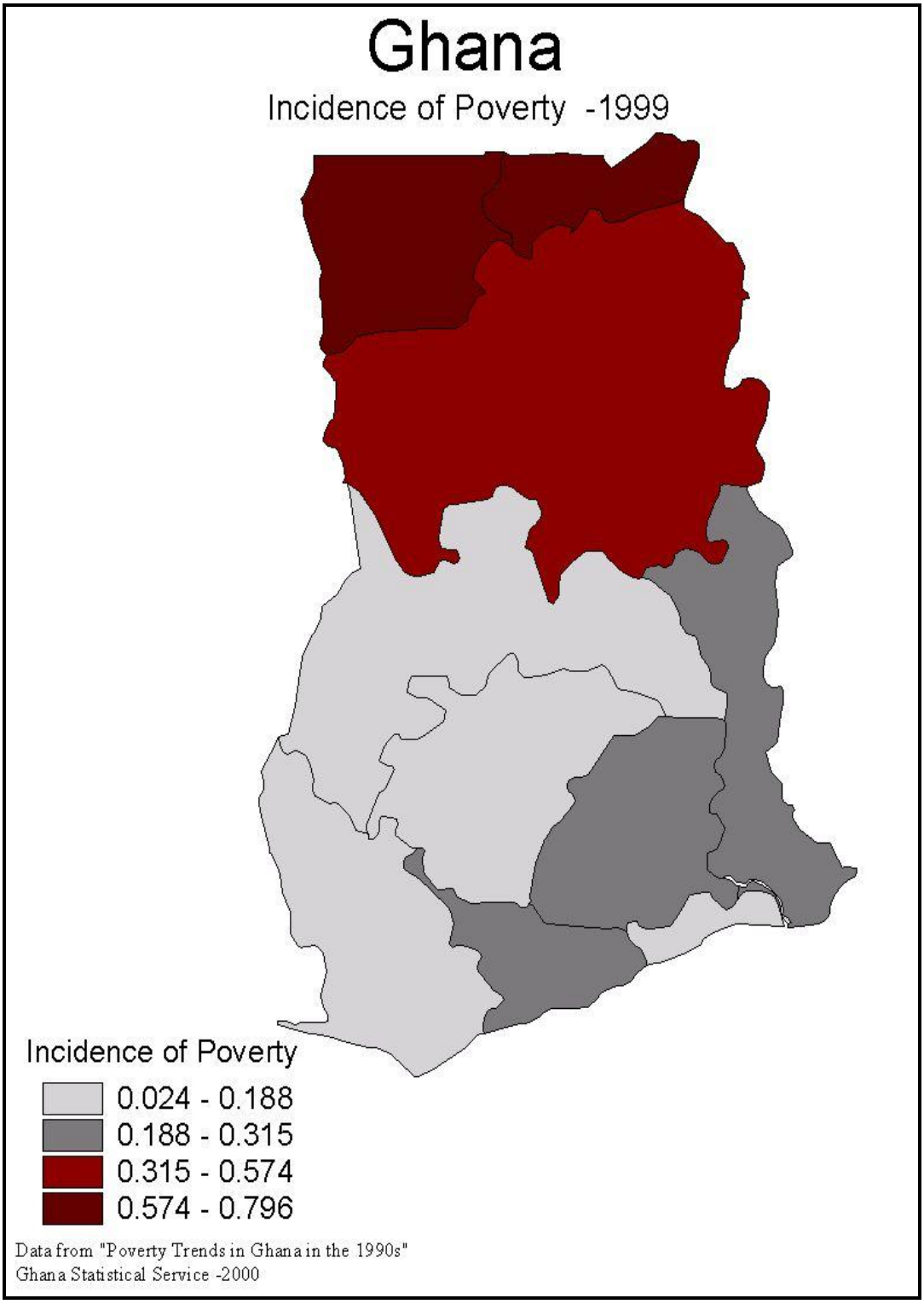

Figure 3 (b): Ghana

Source: WRI, http://earthtrends.wri.org/povlinks/country/ghana.php

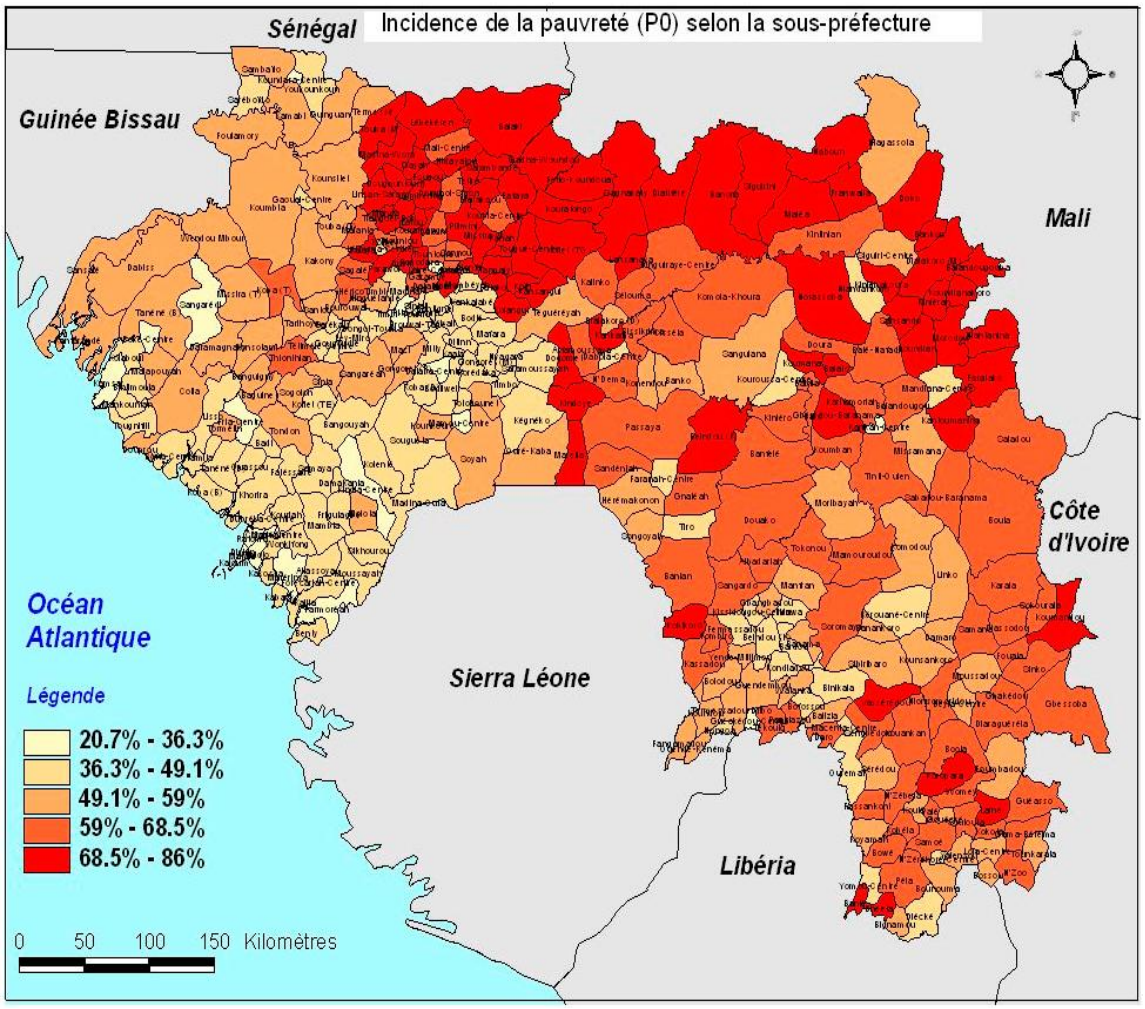

Figure 3 (c): Guinea

Source: PRSP Guinea 2007 (from poverty mapping DNS / WB, 2005)

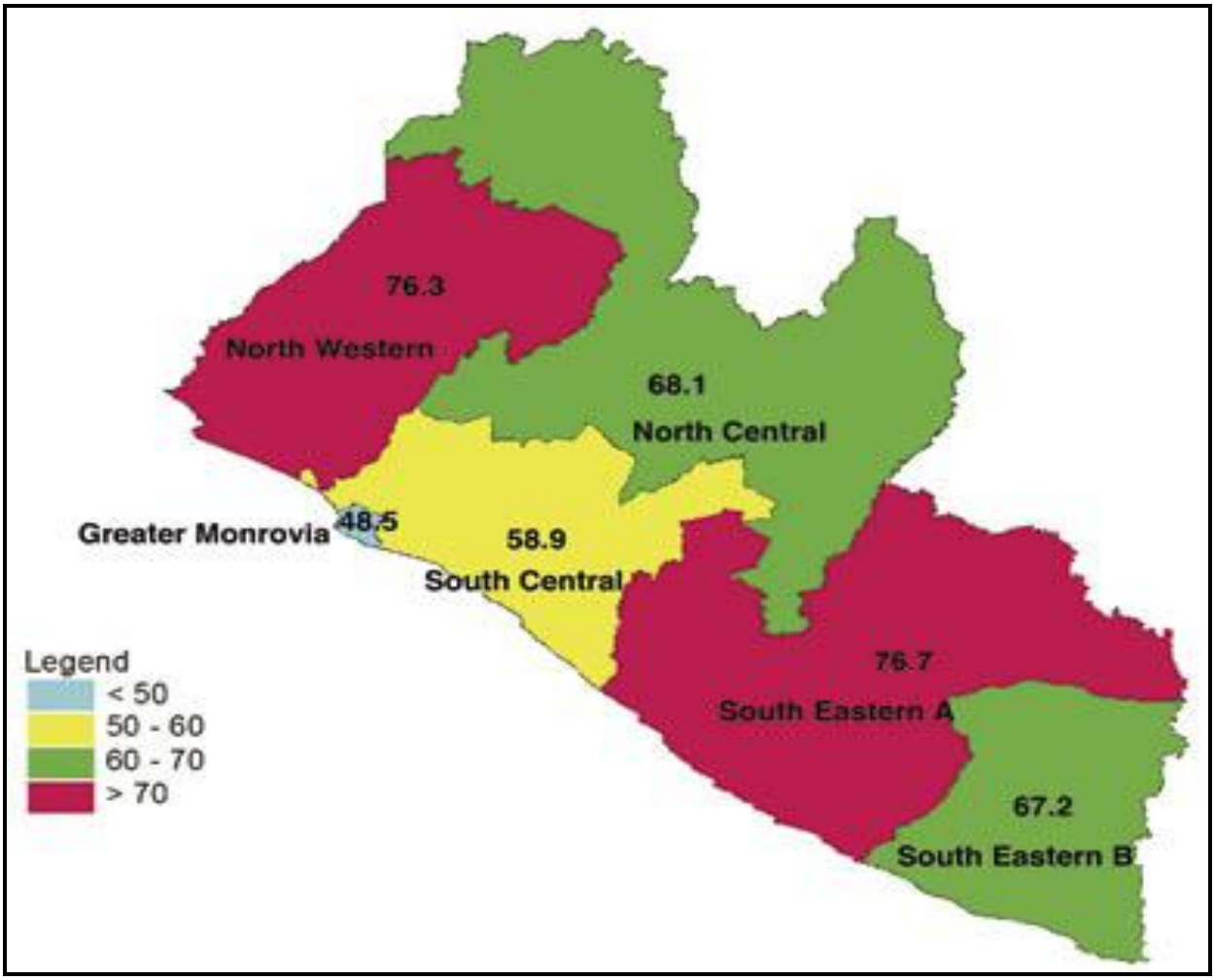

Figure 3 (d): Liberia

Source: LISGIS 2007 (Liberia PRSP p.27)

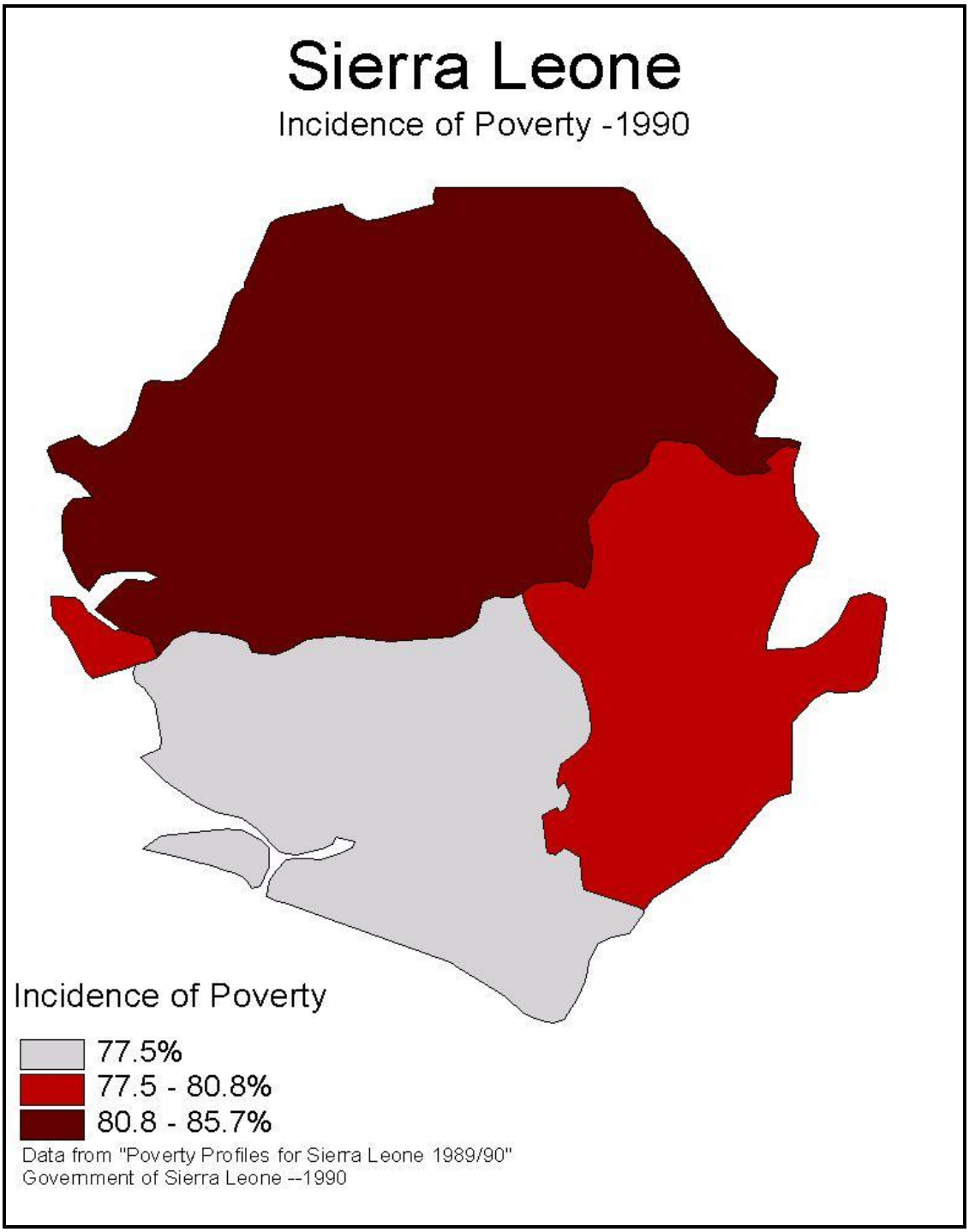

Figure 3 (e): Sierra Leone

Source: http://earthtrends.wri.org/povlinks/country/sierra-leone

2.4 Elements of the Strategy

The discussion that follows is structured around the three thematic areas ('pillars') of the World Bank's 2002 Forest Strategy which looks at forests' contribution to poverty reduction and livelihoods, integrating forests into sustainable economic development, and protecting the essential environmental public goods they provide.

3. Pillar One: Forests in Sustainable Economic Development

The main influence on the place of forests in government decision making is the importance and structure of the timber industry. The centrality of the industry in public policy belies its diminishing role in national economies. Of the three cases where the forest industry still of major national importance, it is already in serious decline in two (Côte d'Ivoire and Ghana). The third, Liberia, is only now coming out of the effects of the UN Embargo on timber sales, and seeking to re-establish its industry. Even there, however, there are questions as to its long-term sustainability. In the other two countries (Sierra Leone and Guinea), timber is of lesser importance than wood fuel, and the timber industry is of minor importance when compared to energy. Wood fuel is important in all five countries, and the offtake is estimated to be substantially greater than that of industrial roundwood in every case. The contrast between the three timber producers and the others, as well as the relative importance of industrial roundwood and fuelwood is apparent from Figure 4.[6]

Exports of timber and products from the three main producers are indicated in Figures 5 and 6, and more detailed analysis for Côte d'Ivoire is provided in Figure 7. Cross-border trade in timber is significant, though largely unregulated and not well-documented (Figure 8).

3.1 Forest industry structure and the issue of price distortions

Industry structure in the sub-region is characterized by a concentration of primary processing, an emphasis induced in Ghana and Côte d'Ivoire by log export ban policies that were not matched by other measures to promote value addition. 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 Ghana and Cote d'Ivoire, under influence of past donor policies[7], capacity has disproportionately increased without regard to the capacity of the natural forest to sustain the industry. In these two countries, the rapid reduction in timber supply, which is approaching crisis point, is reflected in the increasing levels of dependence of export processors on timber sourced from off-reserve areas that are also under pressure.

Ghana provides the best documented case of the ways in which poor forest policy decisions have tended to worsen the supply. A partial reform in pricing has intensified the rate of industry

[6] The information in this graph is of value more for the trends and contrasts which it suggests than for the specific quantities. The fact that annual figures provided by the relevant governments to the FAO are often the same from year to year warns of the limitations of the data.

[7] In the case of Ghana, for example, the World Bank-led Country Environmental Assessment notes: 'The shape and structure of today's industry is, in part, a consequence of liberal credit availability under the Economic Recovery Program (ERP) of the 1980s. Initial ERP investments mainly went into logging and processing capacity. In the post-ERP era, timber processing capacity increased dramatically, and timber exports peaked in 2000 at around 500,000 m^3 of finished product (equivalent to around 1.3 million m^3 of logs). In 2001, installed sawmilling capacity in the wood industry was estimated at 3.4 million m^3—around 10 times the level of probable sustainable yield level from forest reserves of about 350-400,000 m^3/year (Birikorang 2001; GFC, internal data). The subsequent introduction of a log export ban, low and falling stumpage rates, and weaknesses in regulation resulted in the dramatic increase in timber-processing capacity. However, the milling machinery imported was often old and inefficient. This has left a legacy of overcapacity in the industry of 4-6 times sustainable yield and very low conversion rates in sawmills—just 36 percent on average, although the best firms achieve rates of around 70 percent (Birikorang, 2001; Bureau of Integrated Rural Development, 2005).' (World Bank, 2006: 27).

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 (Box 1).

3.1.1 Balancing international and domestic needs

Where the export industry is significant, it is poorly integrated with the national economies, with negative effects on both patterns of economic growth and the satisfaction of domestic market 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 demand unaddressed. In a rapidly urbanising economy such as Ghana, 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 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.

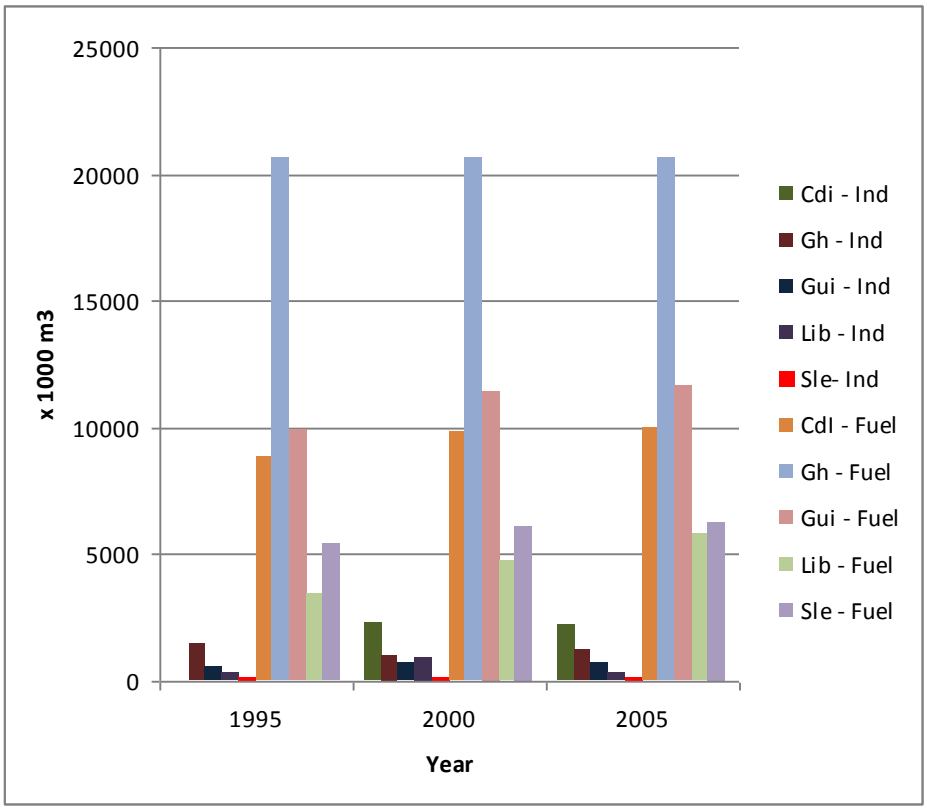

Figure 4: Industrial and Fuel Wood Removal for the 5 countries, 1995-2005

Source: FAO Global Forest Resource Assessment country data, 2010

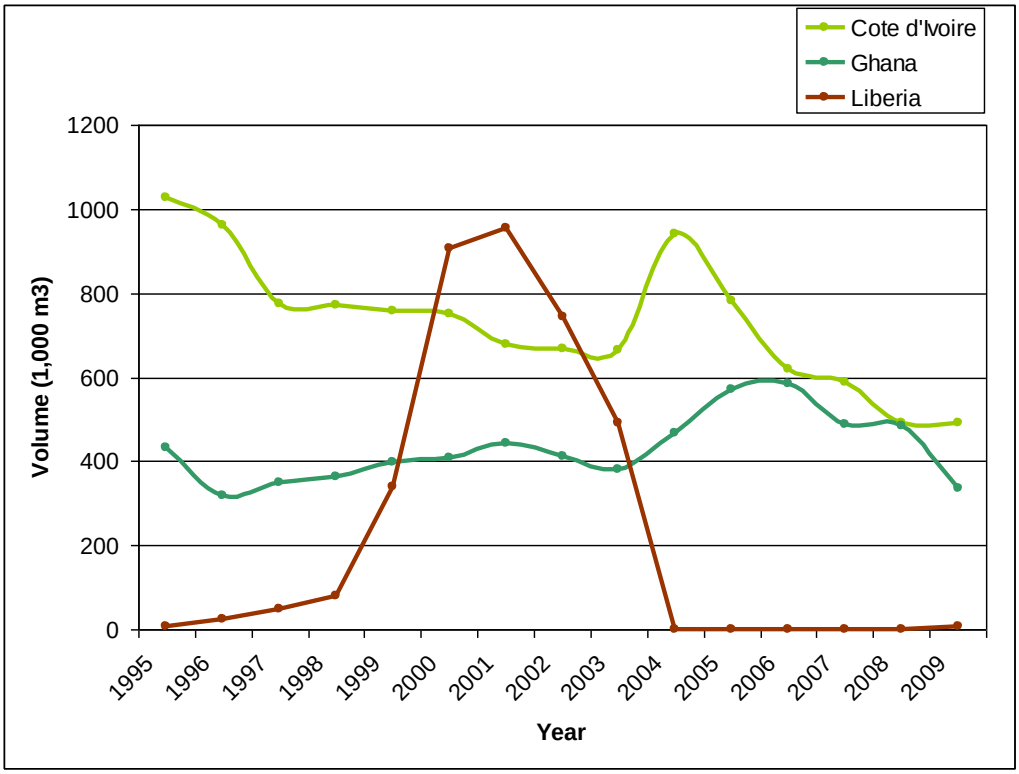

Figure 5: Exports of timber, Côte d'Ivoire, Ghana & Liberia

(Source ITTO)

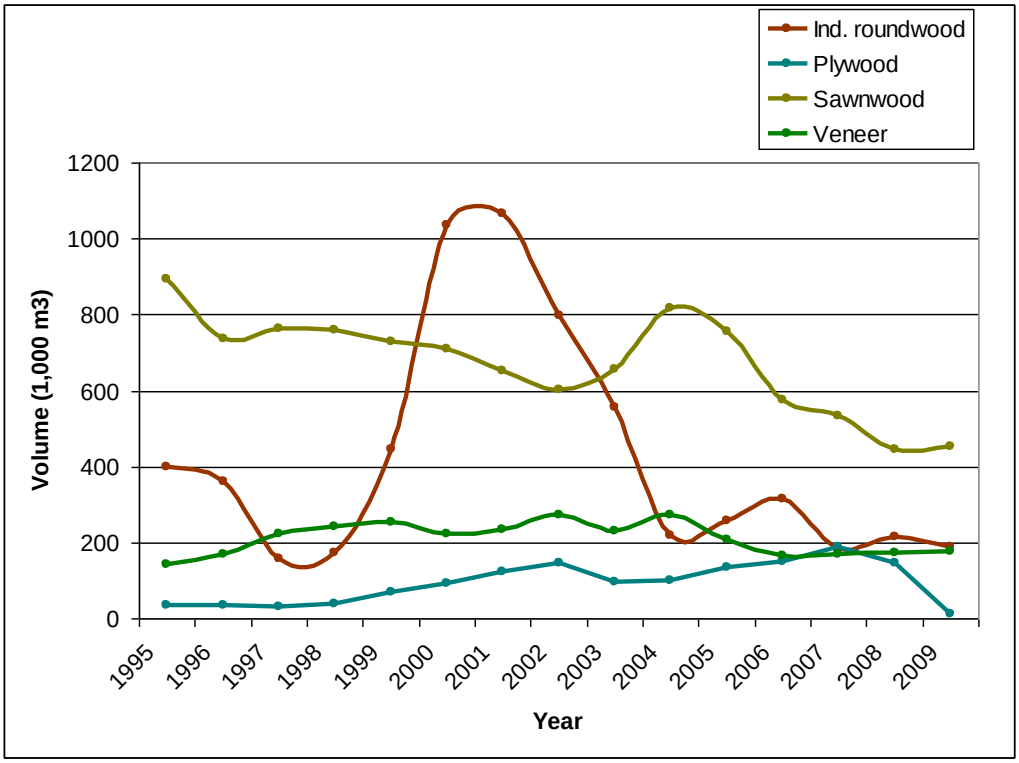

Figure 6: Combined Exports of Timber Products from Cote d'Ivoire, Ghana & Liberia

(Source: ITTO)

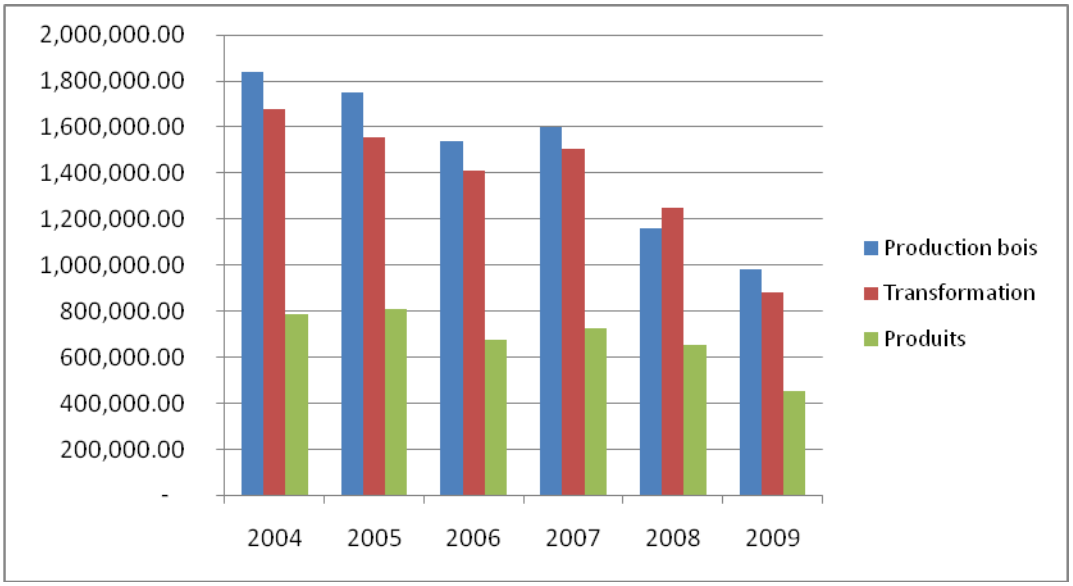

Figure 7: Côte D'Ivoire: Trends in Wood Production and Processing (m^3), 2004-9

Source: Nguesson, 2010.

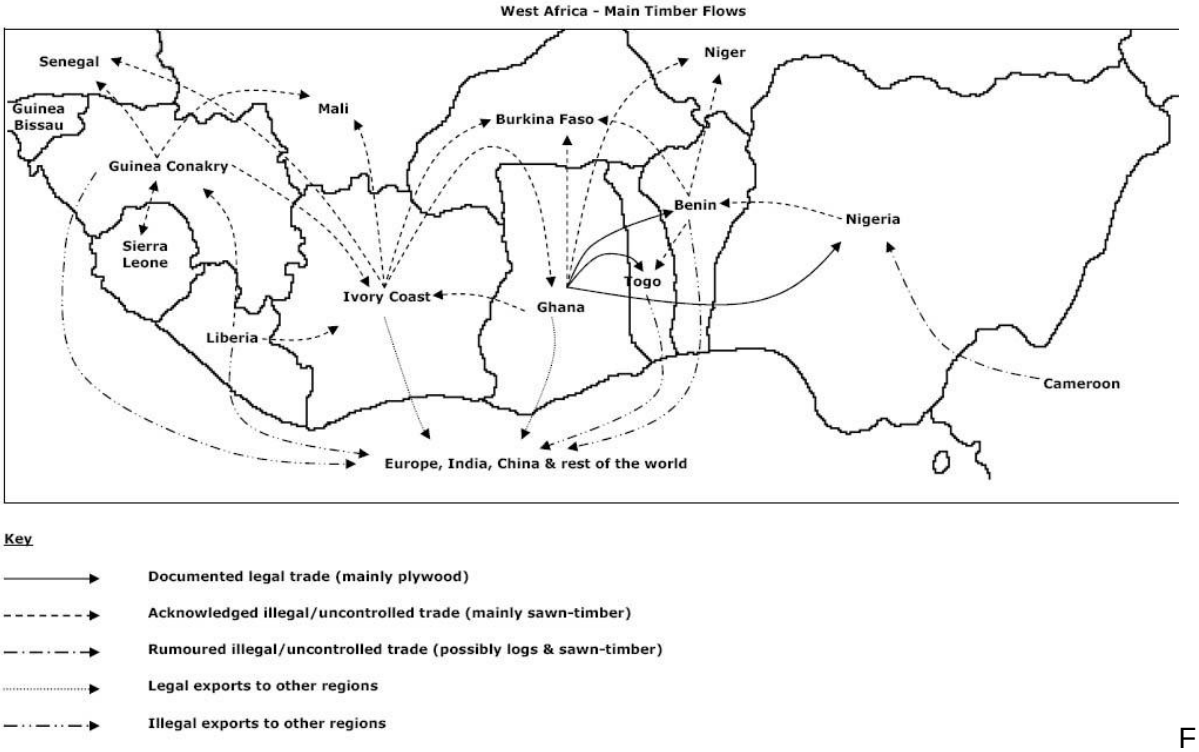

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Figure 8: West Africa ~ Main Cross-border Timber Flows

Source: Blackett & Gardette, 2008

Box 1: Primary Timber Processing in Ghana: A Value-Subtracting Industry

Sawmilling of lumber is the most basic processing which is undertaken in Ghana. However, increases in industry capacity since the late 1990s are also due to expanded capacity in veneer production. Unfortunately both sawmilling and veneer production in Ghana are value-subtracting, and only make money for the operators of the log export ban and because they pay substantially less than world market prices for timber. By contrast, Ghana could have earned net value of US$465 or US$360 from export of the log equivalent ($3m^3$) for the veneer and lumber grade logs respectively.

	At Domestic Log Prices		**At International Log Prices**	
	Sliced Veneer	**Lumber Milling**	**Sliced Veneer**	**Lumber Milling**
Log price per m^3	50	40	155	120
Cost of processing / m^3	260	50	259	50
(Subtotal) total log processing cost	*310*	*90*	*414*	*170*
Recovery percentage (30%)				
Overheads cost	12.4	2.7	12.4	2.7
Transport cost	1.6	1.6	1.6	1.6
Port handling, bank	9.1	3.6	9.1	3.6
Total economic cost	***332.3***	***97.4***	***437.0***	***177.38***
Export value (FOB) $/ m^3 of product	***302.50***	***97.38***	***302.50***	***119.11***
Net Gain / Loss (%)	-29.8	- 21.7	-134.5	-58.25

[The data above is based on 2003 mill operating estimates; local and international prices have not altered substantially since then.]
Source: Birikorang, 2001 in World Bank/DFID/RNE, 2007

Much of the domestic demand is being met by 'illegal' chainsaw logging. In the sub-region, domestic interests tend to figure 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 exported them unprocessed. The tertiary sector interests and operators receive little attention in this situation. In Côte d'Ivoire, 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 Côte d'Ivoire has increased constantly. In 2006, 1,078,175 m^3 of timber were processed, an increase of 5% on the previous year. This is the result of an increase in capacity of the remaining the industries (often unauthorized).

3.1.2 Fiscal reforms to ensure increased revenues capture for society and sustained economic development

Wood processing in the African Region retains an extremely high proportion of forest rent, but largely wastes it. In Cote d'Ivoire, the forest industry turns over CFA 200 billion and pays the State CFA 20 billion (10%). In Ghana, the State captured under 30% of the forest rent through stumpage fees and export levies in 2005 (Birikorang, et al., 2007). More than 50% of the resource rent was wasted by the wood industry through low recovery rates from obsolete equipment. Policies in the sub-region continue to 'forgive' inefficiency, contrary to the Millennium Development Goals that call for the manufacturing sector to be used as a motor of growth. A common characteristic of forest policy on concession allocations is the failure to set the right price for timber, as the Ghanaian example shows (above, Box 1).

Substantial reforms need to be pursued to improve industry efficiency and ensure maximum value added in wood processing in the sub-region. Wood processors across both the West and Central African sub-regions are known to respond to signals that do not necessarily support economic growth. A faulted forest fiscal regime has encouraged the sub-regions' industry structure to fixate mainly at the primary processing stage, with relatively advanced secondary processing observed in only Ghana and Côte d'Ivoire. Very little higher value added processing is undertaken. Responding to depressed domestic prices of timber, primary processing capacity has expanded, but is incapable of breaking even at export parity prices. In Ghana's case, industry has made a strong case for guaranteed minimum through-put to break-even and sustain employment. This would allow timber to be exported in roundwood form at international prices, leaving enough surpluses to pay for labour with a margin for operators, a contrast with the current situation where wood processors use the same amount of timber but incur losses in transformation if timber is priced at international rates. Under-pricing of logs distorts policy decisions and is perpetuated by an 'illusion' that growth is occurring through investment in primary processing. In reality, this pattern of investment perpetuates current timber pricing policies, protects inefficient industries and discourages downward integration. The anomoly needs to be addressed by reform of the fiscal regimes governing forests in the sub-region.

Workable options must first address the domestic price distortion issue, which is particularly constraining in Côte d'Ivoire and Ghana. This calls for a revised forest fiscal regime which would incorporate the following policies:

1. Access to the forest resource by a regulated informal wood industry employing more appropriate processing technology
2. Payment of economic stumpage over the felling area, including payments by 'reformed chain-sawyers' of economic stumpage
3. A gradual phasing out of export levies where these figure as mere revenue objectives; application of graduated export taxes on levels of processing to encourage increased value added; these may be combined with a managed quota system to encourage sales to the domestic market.
4. Importation of timber and wood products at zero-rated tariff, consistent with policies to address domestic price distortions
5. Identification of lead tertiary processors possessing combined advantages for combined export and domestic processing (example, capabilities to export mouldings and supply joinery material to the domestic market. This could form nucleus beneficiaries of fiscal

adjustment comprising export taxes on selected lumber species in combination with domestic supply quota systems that represent an ultimate condition for the issue of export licenses

Policy must meet the challenge of managing the competition between the domestic and export markets by means of adjustments to the relative fiscal levels. In the absence of this, there will be a general risk of repeating distortions introduced by log export bans through taxing primary product exports and ending up with a blanket protection for the entire tertiary sub-sector.

3.1.3 Small and Medium Forest Enterprises (SMFEs)

The informal sub-sector includes most SMFEs and is an important element in the national economy, providing employment and supporting rural livelihoods. Its characteristics largely derive from ability to sustain low fixed costs on a wide range of the forest products traded, where large-scale operations with their lumpy fixed costs may not be able to take advantage of scale.[8]

The informal sector is important in wood processing across the 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.[9] Generally, with low rates of conversion, the informal sector is a bigger consumer of the wood fibre than the formal sector. However, there is potential for broadening opportunities for improved efficiency across the sector. In 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. The informal tertiary sector may have a higher potential to contribute value added than does the formal sector. An essential component of fiscal adjustment is thus encouragement to SMFEs to overcome financial distress and improve efficiency (a common problem with the informal tertiary sector throughout the Africa region).

The relative contributions in the Ghana case are indicated in Box 2.

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[8] NTFPs are one major area where extraction and primary processing can offer competitive advantage to SMFEs. Data are provided to substantiate this view in the Sector Review (see Section 4.4, Box 8).

[9] The Nigerian forest sector is a particularly prominent example, where Ibadan in Oyo State has over 40,000 such enterprises, almost equal to the size of the whole Ghanaian informal tertiary sector.

Box 2: Comparison of potential informal & formal sector turnover in Ghana (2007, US $)

1	***Integrated Informal processing turnover US$***	*Unit*	*Total*
	Primary processing (beams)		
	Unit value, US$	150	
	Volume (output), m^3	460,000	
	Estimated turnover value, US$		69,000,000
	Primary processing (Dimensioned lumber)		
	Unit value, US$	252	
	Volume (output), m^3	230,000	57,960,000
	Estimated turnover value, US$		
	Integrated turnover		126,960,000
2	***Formal sector lumber export turnover***		110,000,000
	Tertiary processing		
3	Informal sector/SMFEs		
	Output, m^3	138,000	
	Unit value, US$*	360	
	Estimated turnover value, US$		49,680,000
4	Formal sector (Secondary & tertiary exports)		20,000,000
	Note: * - Average domestic price facing SMFEs		

Source: Birikorang, 2008

3.2 Forest governance

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. Governments have failed to take action to correct these market distortions leading to disincentives for good management. 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 bribery rather than comply with rules and procedures. Though the legal frameworks may suggest that effective controls exist, rent-seeking behaviour often undermines them (Table 4). The result has been unconstrained access to the resource, as well as an indirect conferring of a significant 'subsidy on industry'. Illegality is a key issue among formal and informal enterprises. In the formal sector, illegality is fuelled by the lack of political commitment and

collusion between state and industry, while in the informal, failure to reconcile domestic demand with demands emanating from lucrative international markets has led to the effective criminalization of most of the production for domestic needs.

Table 4: Law Enforcement in the Forest Marketing Chain

Cote d'Ivoire	Ghana	Guinea Conakry	Liberia	Sierra Leone
Many checkpoints are operated by customs, forest officials, police and army, but provide almost no control. Bribes paid at checkpoints allow routine movement of timber without inspection	The Forestry Commission's FSD is meant to check official harvesting at stump, but apparently not often done Timber in transit is inspected at TIDD checkpoints, but corruption is reported & controls are easily circumvented Controls do not hinder movement of illegal timber harvested by chainsaw gangs	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 economical analysis)	No control has been exercised over harvesting & timber movement is made quasi-legal by payment of fees for issue of an official waybill SGS are contracted to establish COC procedures & manage movement & export of timber, but will only cover official logging under TSCs & FMCs	MAFFS's Forestry Division issues licences for transport of timber & operates checkpoints, but even during the logging ban there was no control of timber movement & bribes are routinely paid Cooperation between forest authority, police & customs is poor

Source: Blackett & Gardette (2008)

3.2.1 Voluntary Partnership Agreements and Illegality

Illegal logging in tropical rainforest regions is a clear reflection of poor governance. Illegal logging is estimated to cost a sum equivalent to about 1% of EU development aid to developing countries (EU FLEGT Briefing Notes, 2005). 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 harvest. 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 policies.

The most prominent and arguably, most successful donor instrument to encourage forest governance reform in the last decade, has been the 'forest law enforcement, governance and trade' initiative of the European Union (FLEGT), and cognate programs such as the World Bank's FLEG initiative. Signing of a VPA agreement with the EU is a voluntary decision by a producer government (though once signed up, the agreement then becomes binding), and commits it to the export only of verified legal timber to the European market. The intention is to guarantee the producer country its European markets, although this will only be fully realised

when, through a combination of consumer preferences and EU legislation, non-verified timber from non-VPA signatory countries is actively excluded from entering the European territory.

In the West Africa sub-region, 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 are expected to be shipped to Europe in 2011. Liberia is currently in early stages of VPA negotiation, and Côte d'Ivoire and Sierra Leone have expressed interest in setting the process in train, and are at the information stage. Sierra Leone is accessing FAO support to initiate the legality process, and an EU VPA sensitizing mission to the country took place in June 2010.[10] 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 to account 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; see also Beeko, 2007a/b). 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.

Notwithstanding progress in reforms, there are challenges ahead for Ghana, as for the other four countries, given their common constraint of low institutional capacity to regulate the forest, both internally and at the national frontier. There is growing demand for timber and products in neighbouring markets which have hitherto not been known for their 'green credentials' (particularly rapidly urbanising countries such as Nigeria).

An overview of this issue is given in the report 'Cross border flows of timber and wood products in West Africa' (Blackett H. & Gardette E., 2008; see also Marfo, 2009). The main routes are indicated in Figure 8. These routes are poorly documented as most of the cross border trade relies on illegally cut wood, and is therefore not captured by official statistics. A prominent case is Ghana, which is believed to import quantities of teak from Côte d'Ivoire, via Burkina Faso. Logs and sawn timber are also said to go to Côte d'Ivoire from Ghana (estimated to some 260,000 m^3 in 2007 [Marfo, 2009]), as well as from Liberia and Sierra Leone to Guinea and from Liberia and Guinea to Côte d'Ivoire. Leakage across borders not only erodes the revenues available to the originating state but could also undermine the governance improvements brought about by FLEGT, and negate the value of the investments made by timber companies in clarifying chains of custody.

Low institutional capacity also draws into question the credibility of forest inventory. Data management remains a big problem, and forest inventory data is universally inadequate. The institutional challenges are likely to be severe in cases like Liberia and Sierra Leone, countries

[10] Should Sierra Leone proceed with its interest in a VPA, this will presumably have a different character from the others, as it has no significant timber trade with the EU.

where lack of capacity has always been a constraint but never more so than now, as they emerge from a decade or more of civil strife.

3.2.2 The place of SMFEs in strengthening forest governance

While the FLEGT movement is having a positive impact on the performance of the industrial sector, particularly under the incentive effect of the VPAs, the trade bias inevitably engages mainly with the larger operators that are well-integrated into international markets. Indeed, it can be hypothesised that the VPA route to FLEGT reform will be most successful where the export industry is large in scale and well-organised, as well (self-evidently) as most strongly oriented to European demand. The VPA exerts its influence ultimately through the threat of loss of European markets but is likely to be most influential where political pressure towards compliance is exerted indirectly on the producer government through its own industry, rather than more directly by donor pressure on the formal negotiating front. The VPAs are outside of the broader development assistance program of the European Union and have no major financial resources to encourage compliance with EU interests, and for this and other reasons, internal pressure from industry is likely to be more effective in bringing about change of practices than conventional donor pressure. Arguably, the more concentrated the industry, the more successful it is likely to be in this regard.

Thus, the main VPA engagement is with the larger export-oriented operators, rather than with the more domestically-oriented small and medium forest enterprises (SMFEs). The big exporters are already under pressure to consolidate. In Ghana, for example, about two-thirds of the industry has shut down since 2005, and 20 leading large scale integrated processors now account for at least 70% of total export volume and value. The SMFEs which dominate the informal sector and play an important role in supplying wood to low purchasing markets are being squeezed the most, but are unlikely to see many benefits. Indeed the prospect of better control of the small operators is one reason for the interest of the larger enterprises in the VPAs.

In the case of Liberia, it is still, as yet, early days. The country is yet to conclude a VPA agreement. However, early signs are highly suggestive of a trend towards industry consolidation, as the sector reconstitutes (see Figure 9).

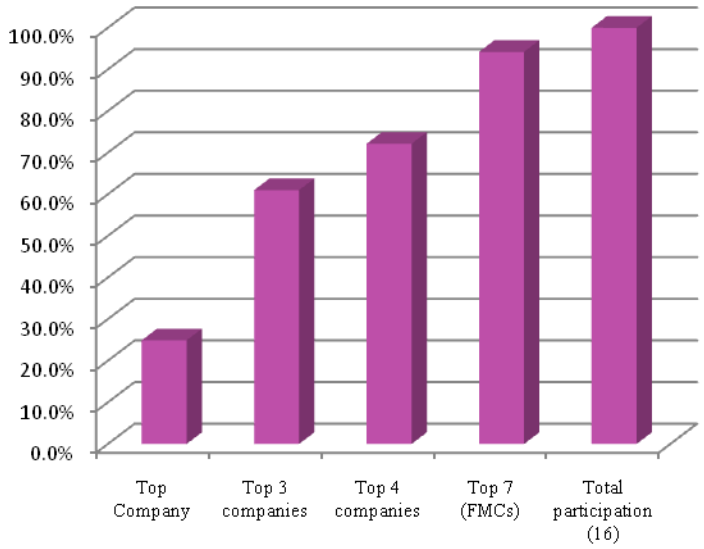


Figure 9: Distribution of Liberia' Concessions by percentage of Total Area

There is thus a risk that VPA engagement will further encourage the trend to consolidation in the export industry, as a risk-reduction strategy, leaving the SMFEs increasingly fragmented and marginalised.[11] The danger of marginalisation of the SMFEs has been signalled for some years by the ATO as an issue of particular concern (2004). This is also a concern in other regions, such as the Congo Basin, as noted by Karsenty:

> 'Concentration (of the export-oriented) on the one hand, fragmentation (of the domestic) on the other, seem to be the current trend in logging industry of the Congo Basin…. The concession forest sector in Africa is more and more 'externally driven' in terms of ecological and social norms, because of the concern of western consumers and public opinion about the fate of tropical forests, connected to global climate change issues. This creates incentives to raise the environmental standards of the global forest industry, and favours large scale concessions that can cope with the stringent requirements embodied in legal certification and log tracking, sustainable forest management certification, social care of local populations, and significant fiscal contribution. This has the effect of squeezing out small-scale operators who often resort to becoming, or remain, 'informal' to avoid overregulation and associated corruption. In countries where the potential for domestic markets is low, producers face strong competition from other countries, corporations and business models.' (2007:3-4)

[11] This remains to be seen, however, There is evidence that new smaller mills have emerged in Ghana, integrating production with harvesting under Timber Utilization Permits (see Ghana country study p.8)

The concentration of efforts on the better capitalised industrial companies has implications for governance in at least two areas:

1. Firstly, economic centralisation may clarify the timber supply and put pressure on the industry to perform, but it does not necessarily deliver the more deep-seated transformations of political relationships which are required in states emerging out of crisis, such as Côte d'Ivoire, Liberia and Sierra Leone (see World Bank 2005). The factors that are tending to squeeze the SMFEs out of the legitimate market are not necessarily pro-poor or equitable, and they could make long-term governance reform ever more difficult. Liberia, for example, was a state that failed despite the fact that its industrial sector was fairly well organised prior to the economic downturn of the late 1970s; in this instance, the concentration of its wealth creation in an enclave was arguably a factor that accelerated the speed of its political decline.
2. Secondly, strengthening the major industry does little, of itself, to increase local support for sustainable forest management (which is all too often sadly lacking under the current management regimes). Community involvement '*pro bono publico'* but with no remuneration may go some way to help regulate the industry, but is more likely to do if complemented by revenue-generating activities, including community-based timber enterprise. The latter is also likely to be much more socially transformative.

If forest governance reform is to progress in a balanced way, efforts will be needed to broaden participation in the industry, and avoid the risk of over-subordinating it to the economic cycles of its northern trading partners. Promotion of SMFEs appears an important dimension of this restructuring. Discrimination against SMFEs, particularly with respect to access to the resource, is a major obstacle to realizing the SMFE potential and with it, poverty reduction (HRC, 2008a). There is also a lack of integration between rural-based enterprises and their urban counterparts that inhibits business promotion. Safeguarding the interests of SMFEs would require considerable care, however, because - though operating on a large scale which belies their alleged 'informality' – they have hitherto tended to operate at the margins of regulatory systems, and have often contributed to poor forest governance. Championing SMFE is not, therefore, coterminous with acceptance of the *status quo*.

If SMFEs are to be brought within a regime that ensures equitable wealth creation and also good governance, this would require changes in local governance as well as in central policy. Helping communities to engage with and participate in the SMFE sub-sector could be an important factor in such governance reform. There is also evidence that it would make a significant impact on rural livelihoods and thus on poverty. Community involvement in forest management is considered below, under Pillar Two: 'livelihoods and poverty alleviation' (Para 4).

3.3 Sustaining the timber supply

The argument up to this point has focussed on two aspects of forest management: forestry's role in economic growth and the governance of the forest sector. Connections have been made between the growth and poverty alleviation pillars of the Bank' strategy by linking governance reforms to SMFEs and community involvement in forest management.

It would be mistaken, however, to view the major challenges to the sector in the countries of the sub-region as only involving the management of the existing forest estate. There is a common and underlying predicament, which is that the resource is not being replenished fast enough to sustain the level of offtake. Indeed, as regards native timbers, in most instances the resource is not being replenished at all. The outcome in all five cases is the rapid decline in the overall timber supply. In two cases, local production is no longer adequate to cover exports as well as local needs, and export trade has become a marginal activity (Guinea, Sierra Leone). In the case of Liberia, the industry is currently being revived, post the UN embargo, though there is evidence that the remaining stock is much less than had been assumed, and insufficient to guarantee the industry's long-term future (Shearman, 2009). Thus:

> 'The low number of potential crop trees (in Liberia) indicates that, after the next felling cycle in 25 years, the stock will not be sufficient to guarantee a sustained yield for these species' (Parren & de Graaf, 1995 quoted by Shearman, 2009:16).

In the two other cases (Côte d'Ivoire and Ghana), a crisis in the export industry is recognised to be imminent. The current situation in Ghana is summed up in a 2006 report as follows:

> 'Long-held assumptions about Ghana's forest wealth are no longer valid. The off-reserve forest has largely gone; future timber supply will increasingly come from plantations; and constrained supply and changing international markets will encourage industry restructuring.' (World Bank *et al*, 2006: 3)

The prospects for Ghana are not encouraging (Table 5).

Table 5: Future resource availability prospects for Ghana

(Normative AAC); m^3		
	Pessimistic Scenario	Optimistic Scenario
Forest Reserves	450,000	585,000
Off-Reserve forests	150,000	250,000
Total	600,000	835,000

Source: Birikorang et al., 2007

Where the timber supply enters a phase of serious decline, multiple forces tend to combine to worsen the overall trend. For example, when under-production from reserve areas requires a switch in industry sourcing to non-reserve areas, one consequence is that production cannot be certified under reputable sustainability schemes because of the lack of environmental integrity of

the source area.[12] This decreases the likelihood of industry making the investments needed to ensure sustainable management, and intensifies pressures on the forest reserves.[13] In Côte d'Ivoire, off-reserve sourcing now stands at 90%, while in Ghana the proportion of off-reserve sourcing is more variable, inter-annually, depending on the level of competing domestic demand, lying between 25-88% over the last 15 years (Figure 9).

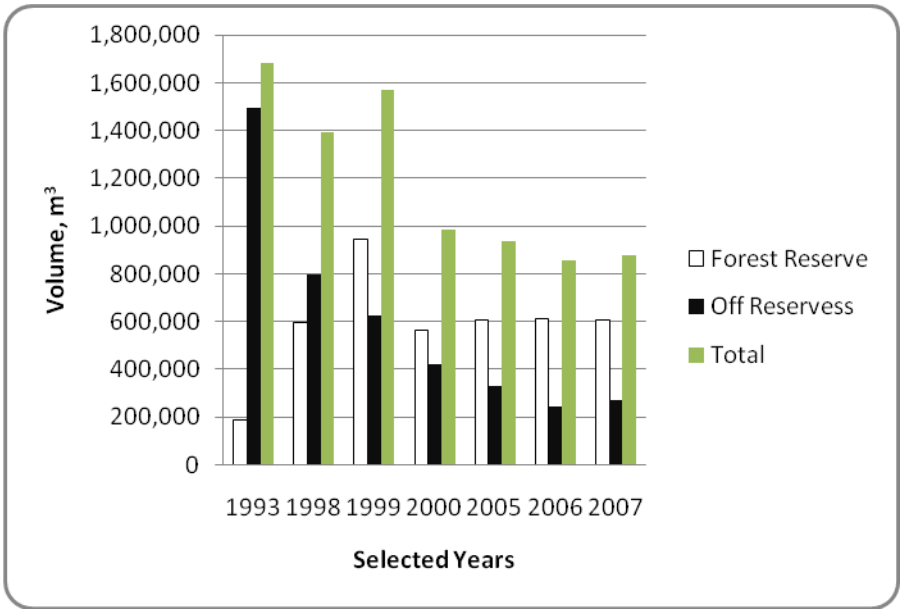


Figure 10: Total volumes of annual legal timber harvest and sources

Source: Birikorang, 2010

A conclusion to be drawn from all five cases, therefore, is that forest policy needs to focus not only on the transformation but also the regeneration of the stock. Excessive concentration on the former is likely to increase the policy focus on rationalising the industry as it is currently structured, defending the interests of the *status quo* but failing to address the equally pressing issue of the means to ensure its long-term supply.

[12] This was noted in a 1997 review: <A key issue for the delivery of forest management is the need to clearly distinguish between the on-reserve and off-reserve forest resources. These resources are significantly different in a physical sense, and also the property rights to these resources are not the same. A key consequence is the impossibility for the Forestry Department as a forest manager to deliver sustainable forestry for the off-reserve resource. Recognition of the differences needs to be at all levels, including the national forest policy, the legislation, and the operational tools developed to deliver management services and to control forest related activities> (Everts, 1997:25).

[13] It may help to account for the early success of the VPA in Ghana, as verified legal timber provides an alternative to certified sustainable timber for public procurement in some European countries, at least in the short term. However, in the case of UK public procurement (and possibly others), this will no longer be the case after 2015, where only timber from accepted certified sustainable sources will be permitted.

On-reserve enrichment tends already to be covered by government replanting programs, not always very successfully, though recent governance reforms may improve their delivery. Off-reserve, there are two main means by which the reconstitution might come about – first, incentives for enrichment on-farm, and second, plantations development.

3.3.1 Incentives at the farm level

Much of the emphasis in policy discourse in recent years has been on the causes of the decline in timber stocks, particularly the part played by small farmer 'slash and burn' agriculture (*culture sur brûlis*). In a country like Liberia (where upland rice is the national staple, and produced by swidden methods) small farmers are often accused of being the main cause of deforestation, although the evidence basis for the accusation is not always clear. Further, given that, in most instances, small farmers are presented with no real alternatives to their existing practices, the net effect is to increase repressive thinking in law enforcement agencies, but without delivering any concomitant benefits for the condition of the resource.

At the same time, very little attention has been given to date to the positive roles that small farmers might play in the regeneration and enrichment of forests provided that an incentive structure is in place. Where conservation of trees on-farm is viewed as a desirable aim (and, in local conditions in the sub-region, this also implies conservation of trees on farm fallows), then the incentive structure must be supportive of the policy. Farmers need to see greater benefit in conserving timber trees on their farms and fallows than in cutting them down. Almost universally, the reality is the reverse. Farmers receive no or negative benefit from preserving trees on-farm (depending on the level of compensation offered by the industry for damage caused by encroachment onto agricultural land), and thus (except in the case of leguminous trees) have much more to gain by cutting manageable trees down, so that their residues can contribute to farm fertility, than by leaving them standing and risking damage from encroachment. By the same reasoning, the offer of a payment from a chainsaw logger for a tree of commercial value is likely to be accepted, however 'illegal' that activity might ostensibly be. Neither is there any incentive at community level to apply social pressures on members in favour of conservation for the global good, as almost no one is seeing the benefit.

These disincentives relate both to the lack of tenurial rights over trees and the fate of revenues that are derived from industrial harvest and processing. The former is usually usurped by the state, the latter is rarely conceded, and even where it is (as under the new Forest Law in Liberia), the manner and destination of the payment are most unlikely to incentivise the land manager. Two examples illustrate the problem: Liberia (Box 3) and Ghana (Box 4). Both are revisited in the discussion of Strategy, below (Para 7.1).

Box 3: Revenue sharing arrangements under the 2006 Liberia Forest Law[14]

The 2006 Liberia Forest Law makes provision for revenue sharing with both counties and communities, each being entitled to 30% of the gross revenues of the land rental fees, the remaining 40% being paid to the Ministry of Finance for use as part of the general revenues of the Republic. While at first sight, these two allocations may seem like significant sums, their effects on forest sector decision making are likely to be rather limited.

The Land Rental Fee
The county component of the fee is to be paid into a 'County Forestry Development Fund' and expended on general services and activities in the public interest that benefit residents of the county in question. The community component is to be paid into a 'National Community Benefit Sharing Trust' which is to be managed by a philanthropic board, for the sole benefit of affected communities, and dispensed on a projectised basis. Communities will make proposals to the national trust, which will allocate project grants competitively.

Other Logging Fees
The two other major revenue streams provided for in the legislation are the S*tumpage Fee* and the *Forest Product Fee*. In each case, an initial 10% contribution is made to a national *Protected Area Fund* (to allow the Government to repair any damage done by industrial logging), and the remaining 90% then accrues entirely to central coffers. The stumpage fee is likely to be more lucrative than the land rental fee. In addition, the ways in which the stumpage is allocated are much more likely to influence forest conservation behaviour than is the fate of the land rental fee (see below, Para 4.3.1).

Source: Brown, 2008b; Chapter 2.

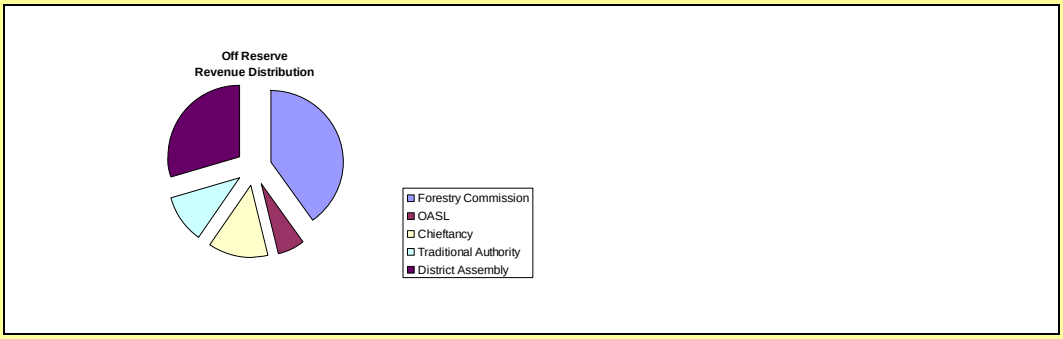
Box 4: Tree tenure and timber revenues in Ghana

In Ghana, successive post-independence governments have followed and consolidated the colonial policy that favoured centralisation of control over timber, as a major strategic resource, ignoring the issue of incentives to farmers and landowners to plant and conserve trees on their land. Trees in Ghana are in principle the property of land-owners (in the HFZ, this usually means the 'stool' chieftaincies and other traditional owners), though in practice tenure of indigenous timber trees is vested in the President in trust for the land-owning communities. This was formerly a Constitutional provision, until removed from the Constitution in 1992, but has since been reinstated as a provision of the Timber Resources Management Act. Thus, trees continue to be managed by the state on behalf of the landowners. (In Ghana, the 'landowners' are not necessarily coterminous with the 'farmers', as land and labour markets are historically

[14] These issues are covered in more detail in the Sector Review Paper (see Box 1).

well-developed, and there is a wide variety of institutions - ranging from outright land sale through long-term tenancies to share-cropping arrangements - whereby those who have not inherited agricultural land can gain access to it.)

Revenues from timber production (net of Forestry Commission charges) are distributed according to a formula which is underwritten by a Constitutional provision (1992, Art. 267). After payment of management fees to the Forestry Commission (currently 60% on forest reserves and 40% on off-reserve lands), and an administrative charge to the Administrator of Stool Lands (10% of the remainder), the residual revenues are shared according to the formula: 25% to the chieftaincy 'for the maintenance of the stool in keeping with its status'; 20% to the traditional authority; 55% to the District Assembly (the local government authority). Additional payments (currently 5% of stumpage) are also required to be made by timber operators to local communities as 'social responsibility agreements'. Overall distribution of revenues on/off-reserve is thus as follows:



These payments fail to provide adequate incentives to conserve the stock. The Forestry Commission has a history of poor revenue capture, and this has led to low and irregular transfers 'down the line'. The right of the stool to use its share merely to maintain itself 'in keeping with its status', rather than for community benefit, is also questioned by many. For their part, the traditional authorities would challenge the large share claimed by the District Assemblies (which they see as lacking any historical legitimacy), while the latter would cite their democratic authority as justifying an even bigger share of the revenue (chieftaincy titles are inherited, albeit through a selective mechanism with some public accountability).

In any event, the main beneficiaries of the revenue transfers are the chieftaincies and District Assemblies (institutions which operate at a level quite far removed from the individual farm owner) and not the immediate managers of the land. The land owners receive little by way of benefit from tree harvest operations, and the immediate managers (if they are tenants or share-croppers) may well receive nothing at all. Either or both may profit from the proceeds of chainsaw logging, though this is officially illegal and thus unconducive to good governance. All this has many negative effects on public commitment to forest conservation and to tree-planting and regeneration. The outcome is a landscape in which timber tree loss is not matched by any significant tendency for tree regrowth.

3.3.2 Tree Plantations

Present scenarios for deforestation and degradation of natural forests encourage an interest in tree plantations, and an effective timber tree plantations policy is likely to be an essential short-term requirement for the survival of the timber industry in all countries of the sub-region except, perhaps, Liberia.[15]. Increasing the area under tree plantations has long been a policy aim in countries such as Côte d'Ivoire, Ghana and Guinea, both for timber and fuel. A variety of actors (SMEs and industry, national and local governments, communities and private investors) are involved. Plantations are mainly being promoted at two levels - large scale commercial (both state and private) and community plantations – and production is usually destined for processing as poles and/or lumber, or alternatively for wood fuels. Both on and off-reserve areas are being developed.

Establishing tenurial security has frequently been problematic, particularly in Ghana, and this has encouraged a preference for relatively short-cycle exotics such as teak (*Tectona grandis*), Gmelina (*Gmelina arborea*) and Cedrela (*Cedrela odorata*), where tenurial claims can be relatively easily established, unlike native species. This is despite doubts as to the appropriateness of such exotics in terms of biodiversity values and compatibility with indigenous agricultural systems.[16] The Government of Ghana has been heavily criticised for its plantations policy (a 2006 World Bank-led study stated that: 'over the last 15 years, the Government of Ghana's policy on plantations has been in disarray' [2006: 3]). However, the Government has reported some recent progress in plantation development, with a modified *taungya* system in reserve areas which allows for revenue sharing (see Para 7.1.4), although acreage is as yet quite low. It is developing a program for off-reserve plantations, although again, acreage is also modest to date, in terms both of total areas planted and plantings per capita. Côte d'Ivoire has had rather greater success, thanks both to plantings by the state forestry authority, SODEFOR, and by private sector and community interests. Timber production from the classified forests is currently estimated at 200,000 m^3 per year and more than half of this volume comes from tree plantations.

Despite these local successes, overall progress on plantation development is much lower than might be anticipated, given the high demand for timber and favourable past experience with economic beverage tree crops. One indication of this is the lack of any registered CDM afforestation/reforestation projects in the sub-region[17], despite the professed interest of the host

[15] Liberia is well-known for its tree plantations (particularly rubber), but these have figured largely to replace natural timber, not to complement its production.

[16] Tree crops such as teak tend to impoverish the soil, and render it unsuitable for other crops. In addition, teak produces pyrogenic leaf litter (though the trees themselves are fire-resistant), which can act as a fire accelerant and increase the dangers of bush firing getting out of hand. In the Ghana case, the response of government has been to hold communities and their leaders responsible for fire damage, rather than to re-examine the preferences for plantation species.

[17] One reforestation project in Ghana is at the validation stage (http://www.cdmpipeline.org/).

governments.[18] Aside for the issue of tenurial insecurity, the barriers would appear to be typical of those for CDM development in Africa (where all forms of CDM still stand at less than 2%, as opposed to China [39%] and India [23%]). These barriers include such factors as: overall country-level risks (poor governance, poor policy frameworks and undeveloped financial markets); low domestic and regional investment potential; and poor infrastructure (particularly transport).

Linking plantation development for timber production to wood fuel needs may be one solution, given the burgeoning demand for fuel wood and charcoal (for example, in Ghana, FC estimates a potential annual wood deficit at 14 million m^3 against sustainable production, about 50% of current consumption). However, past experience warns against confusion of these two aims, and also advises caution before communities are asked to make heavy investments in long-cycle productive activities where tenure is unclear and/or where, through poverty, they are unable to defer consumption sufficiently.

Accelerating the pace of plantation development – and doing so in ways that are both efficient and equitable – presents major challenges in all countries of the sub-region. The most urgent requirement would appear to be tenurial reforms that both safeguard the land holdings of the poor against external encroachment and also stimulate communities to invest in cultivation of trees (both plantations and other trees on farm). These issues are revisited in Section 7 (below).

[18] http://cdm.unfccc.int(c) 28.06.2010 15:53

4. Pillar Two: Livelihoods and poverty alleviation

Forests figure strongly in local livelihoods in all five countries, and provide important safety nets for the poor. Five dimensions will be reviewed in the paragraphs that follow: the roles of communities in forest management; agroforestry and its implications in the sub-region; wood fuels as sources of energy; the importance of other non-timber forest products (NTFPs); and growing interest in biofuels.

4.1 Community forestry

Experience of community forestry in the West-Central Africa region is limited, and most of the successes have been outside the HFZ. The case of Niger is prominent, but only covers fuelwood (see Section 4.3). Likewise The Gambia, particularly in relation to the establishment of community rights over forest areas which do not form part of agricultural fallows, and are not coveted for agricultural purposes (see Brown 2002). The main experience of community forestry in the HFZ is in Cameroon, where a program has been developing since 1995.

In the sub-region, community forestry in natural forests has a modest record to date and has been largely restricted to community involvement in the forest operations that were formerly undertaken by extension services, on a firmly non-commercial basis. Some new institutions for community participation have been created, though often of a restricted, consultative, type. Community forestry in its fuller sense – as a full transfer of management responsibility, and as a way to secure community access to the commercial resource and allow investment and sustainable management – has yet to make much headway in the sub-region, at least with regard to natural forest areas (the record on plantations is perhaps more encouraging). Several countries have set up a legal framework to allow for community forestry but the process is often not fully supported by the forestry services, which tend to regard it as a major threat to their own power base and authority. Central governments for their part have also tended to back-peddle strongly when community initiatives appear to promise a real transfer of rights. Only in a few instances have communities been offered the chance to involve themselves in commercial operations with the prospect of taking a substantial share of future revenues. Ghana's modified taungya scheme may be one such example, although this stops short of a full transfer of control (see Para 7.1.4).

There is a strongly held view in some quarters that, for reasons relating both to poverty targeting and governance, the best way forward for forest-rich countries is to promote community forestry as the sole or major branch of the timber sub-sector, to the exclusion of capital-intensive industrial production. This has long been promoted in NGO circles, though the evidence base for such views has not always been evident, particularly in areas dominated by a high timber-value industry. However, recent work on both Ghana and Liberia is starting to enrich the information base, and provide the kinds of economic data on which such decisions might be justified. In Ghana, the informal sector demonstrates a potential to add real value in processing compared to the formal wood industry where value is rather subtracted in processing (Birikorang et al, 2001; World Bank *et al*, 2006).

Existing World Bank strategy does recognise this as an option in some circumstances, though the point on the forest transition curve at which national interest switches from supporting state-controlled industrial production to community-based production is unspecified:

> 'In the longer term, a logical solution in some situations will be to phase out state production in markets in which smallholder production has a comparative advantage. This shift also would contribute to meet a more fundamental concern that has been raised: the potential for the rural poor too benefit will continue to be limited so long as they are unable to participate in the more profitable and dynamic production activities.' (2004:27)

This threshold has arguably already been reached (or is very close to it) in most countries of the sub-region, and smallholder production could take over as the major source of timber supply. This could well prove more transformative, in developmental terms, than an industrial sector prone to poor governance and fiscal indiscipline, and with low multipliers for both income and employment. Environmental and regulatory challenges would still need to be confronted. A smallholder sub-sector may be more prone to high-grading than an industrial one, and less well-equipped to handle the wide range of secondary species that a modern industry can employ. Steps would also need to be taken to satisfy the high quality and traceability standards which consumer markets increasingly require (though the absence of competition from large-scale industry would reduce the dangers here). And, although less prone to large-scale corruption than capital-intensive industry, regulation of a plethora of highly decentralised and atomised enterprises does pose its own demands.

Experience is accumulating on which a successful community forestry program might be built, and a body of community forestry 'case law' is being developed. A combination of political space and government commitment is required, and these cannot easily be substituted for. Such programs have often been launched prematurely, triggered by enabling legislative reforms in a manner that is untested and speculative, representing an uneasy compromise between conflicting interest groups, national and expatriate. Claims of government buy-in and ownership of community forestry in contexts where the politico-industrial complex is still powerful need to be treated sceptically, and significant investments may have to be made in testing and demonstrating the rationality of the switch in emphasis if it is to become genuinely 'nationally owned'.

Such initiatives are particularly indicated in countries like Ghana and Côte d'Ivoire because of the impending crisis in their industries and the urgent imperative to downsize. As a fundamental condition for the promotion of community forestry, the power of the industry needs to be held in check in areas demarcated as suitable for community action. The scenario to avoid at all costs is to encourage the development of community forestry in parallel and in competition with capital-intensive industry, under conditions which encourage leakage across the boundary between the two, as was most clearly the case in Cameroon[19]. Where forests are in demand for both community and industrial purposes, and competition is unrestricted, there is only a small chance that the community interest will prevail in anything other than co-opted and attenuated

[19] See 'Sector Review' paper, Para 4.1.

form. Implementation of innovative legislation is particularly problematic where 'learning by doing' must confront powerful entrenched interests, as well as cope with severe imbalances of information and resources. In the Cameroon case, this competition was worsened by the fact that the industry and communities were both able to operate in the non-permanent forest, while only the industry was permitted access to the permanent forest estate. Donor interests were largely focussed on establishing sustainable management in the high-profile permanent forest, which significantly increased the regulatory pressures and external scrutiny in this zone. Heavily capitalised, and with big investments to amortise, the industry tended to turn to the less regulated non-permanent forest to maintain their operations. Communities were put under intense pressure by the competition in such areas, and were very vulnerable to cooptation by the industry. This was despite good evidence that community enterprise could be lucrative (Fometé & Vermaat, 2001).

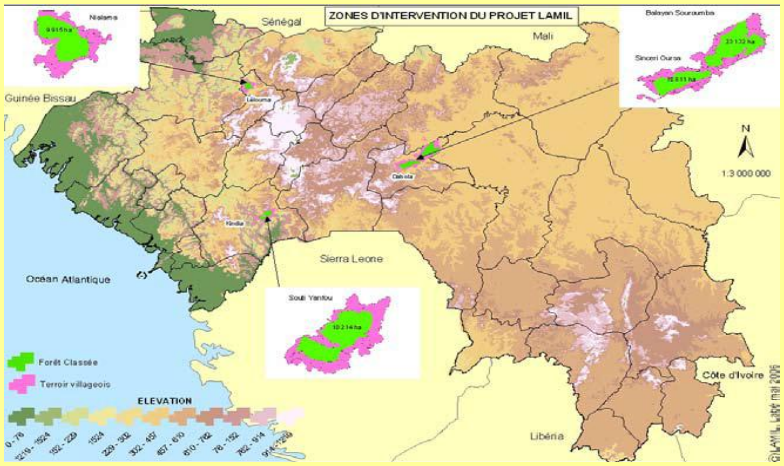
'Community forestry' in the sense of community involvement in timber operations may thus prove an increasingly feasible option, albeit one with risks that would have to be carefully managed. It is a knowledge-intensive area which benefits from high upstream research investments, strong political commitment, very detailed and iterative policy development and participatory implementation. If successful, however, it is likely to have significant benefits for public governance and welfare, both in the forest sector and beyond, and a positive impact on the MDGs.

Community enterprise could be a logical way forward for forestry in the West Africa sub-region, as an industry surrogate. However, 'community involvement' need not necessarily be approached only in this way, and indeed, considerations of governance would point to the need for a rather wider engagement for communities in forestry activities. In areas where timber interests are not dominant, then there is potential for co-management. The LAMIL Project in Guinea is one such case (Box 5).

Where industrial production still has significant potential to generate much-needed revenue (or is otherwise legitimately favoured in public policy), there is also a case for involving communities in the management of the logging industry, linked strongly to democratic local government. This would apply particularly to areas permanently reserved for timber production and subjected to a long-term management regime, though it would also have value in off-reserve areas. Community involvement in off-reserve areas would help to create public buy-in to the fate of the sector, and might also help induce changes in farmer behaviour, encouraging them to retain trees in their fallows, in the knowledge that they and their communities would be the beneficiaries. Public accountability is likely to be greatest where a revenue stream is guaranteed at the community level which is both transparent and tangible, and the implications for poverty alleviation could be considerable. In a country like Liberia, in which rural social structure is relatively uncomplicated and homogeneous, there is real potential for democratic local government to figure in forest governance and wealth creation without generating increased conflict over the resource (see, for example, Brown, 2008b). In countries like Ghana and Côte d'Ivoire, the institutional landscape is more complicated, though not entirely intractable. These issues are considered further in the section on Strategy development (Para 7).

Box 5: The LAMIL project in Guinea

Among the various experiences on forest management implemented in Guinea, LAMIL ('Landscape Management for Improved Livelihoods') appears to be the most promising. This project was outside the humid forest zone as such (see map), though in areas of *forêts classées*, with ecological characteristics close to the HFZ. Launched in 2005, the main aim of this 4 year project was to protect and enhance biodiversity by creating incentives that encourage local communities to respect the forests and share responsibility for their management. Support to natural resources management in these zones had already been implemented between 1993 and 2005 by USAID, but had failed to fully consider the needs of the people living in and around the forests. CIFOR and the World Agroforestry Centre were then invited to take over, starting with a period of evaluation of the passed activities, and surveys in socio-economic and environment fields. They helped to set up forest committees and negotiate management plans with villagers and forest officers. Activities supported included improved agriculture techniques and agroforestry, nurseries set up, monitoring of wildlife with villagers (who were often former hunters).



The new committees were legally recognized in 2007, when they signed co-management agreements with DNFF (*Direction Nationale des Forêts et de la Faune*). These co-management agreements clearly prohibited certain activities, as setting fire to the forest (outside of farm operations), cutting timber near rivers and using toxic products to kill fish. But they allowed controlled shifting cultivation within the limits of the *forêts classées*, on specific zones (selected after slope measurement, assessment of biodiversity, etc.), and with a strict protocol (remaining quantity of natural trees, number of years for agricultural use, control of fire, etc.).

Recorded impacts of the project regarding environment conservation include extension of forest cover, reduction of area affected by fires and illegal encroachment, recovery of several springs (flowing regularly), recovery of wildlife (included buffaloes, leopards and lions)

Communities have benefited from new incomes (timber sales) and have been able to build several schools. Many individuals have improved their livelihoods with secured agricultural lands, improved techniques and agroforestry products (fruits, cooking oil, fodder and medicinal plants).

The main characteristics of the project are the following :

1. Co-management, meaning that the forest administration doesn't completely abandon its power on this area
2. Elaboration and signature of a contract between the different parties, setting up clear rules, rights and responsibilities for each.
3. Important external input, in research first, with studies in different fields : sociology, ecology, …, then in helping organization of the local communities (avoiding 'hijacking' of the project by local power)
4. Direct involvement of water and forests officers in the project
5. Wide scope for the activities: not restricted to forests, but responding to the people's needs, especially for agriculture
6. Real negotiation on the use of forest areas; controlled access and clearly defined "no go" zones, and strict protocols for exploitation of other areas.

4.2 Agroforestry

'Agroforestry' refers to the positive linkages between forestry and agriculture, as well as, more colloquially, the positive roles woody perennials can play in agricultural production systems. The term has a number of senses in the sub-region, including:

a) Beverage crops (cocoa, coffee) and other tree crops (rubber, oil palm, cashew, etc.) figuring as agricultural commodities on-farm.
b) Trees on-farm as a means of enriching soil fertility (for example, nitrogen fixers such as *Faidherbia [Acacia] albida*, much favoured by upland grain farmers in the savanna belt).
c) Temporary or permanent arrangements of associating agriculture with forestry, such as Ghana's 'modified *taungya* system', where agricultural crops are inter-planted with tree seedlings until canopy closure.
d) Other wood-based and harvested forest products and crops, including fuel wood.

Agroforestry in all these senses is very well established in the sub-region and critical to the national economies. However, recent changes in tree varieties and land availability are threatening the synergies between agriculture and forestry.

In the HFZ areas of the sub-region, beverage crops such as cocoa and coffee are of major economic significance, and have historically provided an important rationale for forest conservation. Maintenance of high crown cover has traditionally been a means of sustaining the shade and moisture levels needed for their growth, particularly in the case of cocoa. However, in recent years, new hybrid cocoa varieties have been extended in the sub-region which are must less shade tolerant and dependent, and this has had impacted negatively on public attitudes to forest conservation.

Ghana provides an instructive case study of the links between cocoa and deforestation, and a salutary lesson on both the need to reconcile forest and agricultural policy and the consequences of failing to do so (Box 6).

Box 6: Cocoa production in Ghana and implications for forest conservation

Agricultural expansion has been the main factor in shaping the forest landscape in a number of countries, particularly cocoa which spread rapidly in southern Ghana and Côte d'Ivoire, starting at the end of the nineteenth century. These areas now support quite high rural populations, and land shortages are quite widespread.

The rise of cocoa production led to considerable forest conversion in the early-mid twentieth century though this was relatively benign in its wider environmental impacts. This was because the early 'Tetteh Quarshie' varieties were shade and humidity dependent, and the extensive gazetting of forest reserves under the colonial regime helped to maintain the conditions needed for production. The reservation policy was largely supported by the rising class of cocoa entrepreneurs. In recent years, the forest landscape has changed significantly in the HFZ, due largely to the progressive replacement of these traditional cocoa varieties with new open-field hybrid varieties. Traditional varieties need about 30-40% average crown cover, while the hybrid varieties are able to grow in full sun conditions. Cultivation of the new varieties has 'double implications' for forest conservation, including REDD+ and timber policy, in that it not only encourages removal of standing trees from the farm, but also undermines the support of farmers for the forest reserve policy, as the full-sun varieties did not require such high humidity.

Recent research on the carbon profiles of the new and traditional varieties shows that carbon stores in traditional cocoa farming systems are somewhat lower than in comparable forest areas, though still very significant, while intensive full-sun cocoa production reduces the carbon stores in cocoa farming systems by about 50% (Norris, 2008). Given the large area under cocoa, and the often degraded condition of the forest reserves, the total stores of carbon in cocoa farming systems and humid forests are roughly equivalent (*Ibid*). In addition, maintaining high productivity in the new varieties is heavily dependent on fertiliser applications, and the low level of fertiliser use on exposed soils is much more damaging to them than it is to the traditional varieties. Expanding the area under the traditional cocoa varieties would thus offer multiple benefits. Farmers nevertheless express a strong preference for the new varieties, and this is related to their higher short-term profitability (Darko Obiri *et al*, 2007), itself linked to the much shorter growing cycle (typically 3-5 years to full bearing, as opposed to 10-15 years with the traditional varieties) and also the greater potential offered for inter-cropping with food crops. The dwarf character of the hybrid cocoa not only shortens the period to maturity, but also allows for extensive inter-cropping. Given the growing shortages of land for food crop production and the decline in availability and length of fallows, these are major benefits. The already degraded condition of the forest landscape makes full clearance much more feasible in southern Ghana than it would be in still biomass-rich areas such as southern Cameroon, and helps to account for the earlier uptake of the new varieties in the Ghana case (Gowkoski and Sonwa, 2008).

Guinea also provides an interesting case of the ways in which risk-averse farmers adopt quite complex agroforestry systems (Box 7). While these might appear to the outsider to imply 'degradation of forests', there are grounds to regard such systems as a 'win-win' option on a number of fronts. Forest conservation strategies would do well, therefore, to recognise the value

of such multiple cropping systems, and the positive compromises they offer between livelihoods and conservation needs.

Box 7: Agroforestry in Guinea

In the southern part of *Guinée forestière* (Guinea's hfz), village territories are typically shaped in concentric rings, with the village in the middle. Around the village are the vegetable gardens, then stands of permanent agro-forests, and further afield, agricultural lands for shifting cultivation, with fallows, rice fields and cassava fields.

The main crops from the agro-forest stands are coffee, palm oil and kola trees, and natural forest trees of high value are also conserved (for example, *Albizia zygia*, *Chlorophora excelsa*, *Terminalia ivorensis*, *Terminalia superba*, *Ceiba pentandra*, *Piptadeniastrun africanus,…)*..
According to Correia (2008), agro-forests cover about 5% of *Guinée forestière* territory (200,000 Ha) and are expanding in area. This study compared the structure and diversity of agro-forests and neighbouring natural forests (in *forêts classées* zones). Agro-forests differ significantly from natural forests in terms of their (lower) species diversity and density of cover. Nevertheless, as noted above, several natural trees of economic interest can be found in the agro-forests, and the seedlings show an important richness. These agro-forests play a key role in the conservation of regional forest tree diversity. The level of cover of the remaining forest trees determines the level of intensification of the coffee crop. High forest cover implies a low level of intensification; this gives low yields but is labour saving, as upkeep of the plantation (mainly weeding) is less demanding because of the high levels of shade. Conversely, low forest cover allows for better crop yields, but is much more time consuming, as weeds proliferate, and this demands high labour inputs. In terms of local development, coffee land units with an intermediate tree cover offer the best compromise between conservation of tree diversity, coffee yield, effort for the farmer and other associated production. The diversity of products is also an important element of food security.

Agroforestry therefore represents the optimal local strategy in that it ensures permanence of forest cover and relatively good conservation of biodiversity, but also secures wood production and local livelihoods. Externally imposed strategies to modernise agricultural production through specialization and intensification risk losing the multiple benefits of this land use option.

4.3 Rural energy: fuel wood and charcoal

Timber production dominates public policy on forests in three countries of the sub-region, but wood fuels are the foundation of energy security in all five.

By and large, wood fuel sourcing is not from the HFZ in this region, except within urban catchments and more generally in Liberia. The source areas tend more often to be in the transition and savannah zones, and wood fuels are prominent in the savannah economy. Wood fuels are also a major component of the cross-border trade. At the political level, they provide a powerful integrative force between southern forests and northern savannahs in otherwise rather divided and polarised societies.

Almost three-quarters (73%) of the primary energy consumption in the seven UEMOA countries comes from wood fuels. In Côte d'Ivoire, the sub-sector employs thousands of workers and account for 70% of the total energy supply of the population. More than two thirds of households rely on charcoal and wood fuel for their energy needs (*Banque mondiale*, 2010:7). Fuel wood and charcoal production is an important part of the forest sector, with production levels of 8.3 millions m^3 of fuelwood and 1 million m^3 of charcoal recorded in 1990. The majority of the wood (90%) comes from natural forests. Likewise, the bulk of Ghana's energy consumption is from firewood and charcoal, which account for about 60% of total energy consumption. The rural population depends on wood fuels for about 80% of its energy needs. In Ghana's transitional zone, the fuel wood trade provides much of the revenues supporting local government (in Kintampo District, for example, 60-75% of the revenues of local government areas routinely come from these sources, a fact which is difficult to reconcile with the hostility that many of them show to the very existence of the trade.) In Guinea, they provide more than 90% of national energy needs, with proportions of fuel wood to charcoal being inverted in urban and rural areas (thus, 20:80 in Conakry, as against 92:8 in rural areas), reflecting relative transport costs.[20] It was said to provide employment for almost 300,000 persons in 1988. National commercial consumption of charcoal alone was 24,546 tonnes in 2009 for value of over US$ 2 million. In Sierra Leone, woodfuel removals are estimated to be 44x the level of roundwood removals nationally (6,242,000 m^3 vs. 142,000m^3). Energy offtake is increasing, while timber offtake is decreasing (respectively by 15% and 7% over the last 15 years [Allieu, 2001]). Liberia's wood fuel consumption has been estimated as over 6 million m^3 (FAO, 2005).

Offtake of fuel wood for energy consumption is widely identified as a major cause of deforestation and forest degradation, and with burgeoning urbanisation demand is likely to rise significantly. Overproduction is reported as significant. According to FAO historical data, for example, Ghana's woodfuel consumption increased from 9million m3 in 1984 to approximately 15 million m3 in 1995. Assuming the underlying annual compound rate of growth of 5% was to hold, woodfuel consumption would have reached 28million m3 by 2008 and 30million m3 by end of 2010. Plantation Department of FC estimates a potential annual wood deficit at 14 million m^3. This has led to calls for community woodlot development, as well as commercial plantations.

[20] These figures are for 1988, the latest available. Consumption may well have increased considerably since then, though the relative proportions may not have changed.

There is clearly a policy agenda concerning rural energy production and its implications for both energy security and the environment. This issue is revisited in Part B of the Strategy.

4.4 Non-timber forest products (NTFPs)

NTFPs are of considerable significance in the economies of the sub-region, and underpin the livelihoods and coping strategies of the poor. They provide income opportunities for otherwise marginal categories (women and young adult males, for example), and safety nets in times of food insecurity. While NTFPs of both plant and animal origin 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 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 (Guariguata et al., 2010), including the need for integrated inventories.

4.4.1 Plant NTFPs

The scale of NTFP consumption is immense. In Ghana, for example, if the levels of the 8 plant NTFPs covered in Townson's 1995 survey were to be sustainable, they would have generated US$50million in 2007, or 20% of total wood export earnings in that year (HRC, 2008a). Most of them were concentrated in the moist semi-deciduous forest zone.

By virtue of their low fixed costs and flexibility, small-scale NTFP enterprise may have comparative advantage over industrial production in the forest sector, and there is evidence for this in cases such as rattan weaving (HRC, 2008b). Promoting commercialization 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 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). The accent needs, therefore, to be on appropriate support measures to institute better regulation, either through communal management of the resource or domestication and improvement of the resource on private land (Marshall et al., 2006). In sub-regional conditions, tenure of both land and the specific NTFP resource are key issues to be clarified.

4.4.2 Animal NTFPs, particularly 'bushmeat'

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 Côte d'Ivoire, for example, bushmeat has been estimated to provide three-quarters of all animal protein

consumed. In Liberia, Hoyt (2002) estimated that commercial value of bushmeat in 1989 was $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 $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. With the relatively high value/weight ratio of bushmeat, and its portability, it can be assumed that cross-border bushmeat sales will occur wherever exchange rates are favourable, adding to the difficulties of regulating the trade. All too often, however, conservation strategies have focused on attempts at suppression (which are unlikely to be workable in many cases, given the wide dispersal of human settlements and the impossibility of effectively policing the trade), and this has increased the opportunities for rent-seeking by officials, compounding the problems of poor public governance but without improving the management of the resource. In other cases, faith is being placed in alternative livelihood strategies (for example, captive breeding of game animals), without any assurance as to their economic rationality or guarantees of 'linkage' between the new activity and the old. To be effective, bushmeat policy needs to be integrated with other reforms of governance, and seen as part of a wider pattern of land use management. In some areas, indeed, wildlife hunting may well represent the most rational land use strategy, and regulatory reforms would do well to proceed from this recognition (Bennett et al, 2007). 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 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.

4.5 Biofuels

The sub-region is becoming a major focus for biofuel development. The biofuels in question include crops that would compete directly with natural forests in the HFZ (oil palm, for example) and also others that would be grown chiefly outside the HFZ (for example, *Jatropha* and sugar cane). In all the countries of the sub-region, biofuels are likely to prove highly attractive options, given the plethora of lucrative alternatives, though the risks and dangers should not be underestimated, especially for those with weak tenurial rights. Ghana, in particular, is attracting substantial inward investment. In Sierra Leone, a private company has contracted large tract of land from communities and received an environmental licence for sugar cane-based biofuel production in the Northern Region, and oil palm is being investigated elsewhere. Significant interest is also reported in Guinea and Liberia.

Among the benefits of biofuels could be:

- ⇨ At the national level, *energy security*
  - improved security of energy supply

- diversification of energy sources

⇨ At the national level, *climate change mitigation*
- reduced green house gas emissions

⇨ At the farmer level, *new and potentially lucrative agricultural opportunities*
- opportunities to expand cultivation into hitherto marginal lands,
- diversification of production,
- increased incomes
- employment opportunities, particularly for the young.

However, there are hazards on a number of fronts, particularly as regards welfare of poor farmers at the local level:

⇨ *Marginalization of the poor, in conditions of tenure insecurity*.
Given the insecurity of land tenure in all the countries of the sub-region, there is a significant risk that the poor will be gradually pushed out of all but the most marginal lands. (There is also a danger of collusion between external investors and agents of the state, to deprive the populations of their natural assets on a long-term basis.[21])

⇨ *Concentration of land holdings,* exacerbating social conflicts with neighbouring communities. In some instances, large-scale land acquisition for agro-industrial purposes is already a major source of social conflict, and in the current environment, further concentration could be very de-stabilising. Liberia exemplifies this danger, given its track record on rubber and other agro-industrial development.

⇨ *Indirect effects on agricultural production and forest cover*
Expansion in the areas of crops such as *Jatropha* raises issues relating to indirect land use change (ILUC) - the indirect effects of biofuels production which could increase food prices, endanger food security and displace other activities into forest areas.

⇨ *Land price rises*
Under a variety of interlocking influences, including biofuels and REDD+, land prices are set to rise significantly in tropical forest areas. This may have some beneficial effects (for example, it could reduce the profitability and relative attractiveness of industrial timber production in areas where this not been socially and economically positive), but it could also be damaging to the welfare of tenure-insecure and forest-dependent poor.

⇨ *Loss of biodiversity*
This is most likely where, for example, complex old-growth forests are replaced by oil palm plantations.

Countries such as Liberia already have a track record in relevant fields and such experiences underline the risks associated with commercial developments which compete with, rather than support, local interests. Forest communities have been the losers from large-scale industrial investment in Liberia, and have effectively traded their ancestral lands for unskilled and insecure

[21] See, for example, with reference to Liberia: 'Probe as carbon deal hit by bribe accusations'*, Financial Times*, 4 June 2010.

employment opportunities. Once again, one of the keys to sustainable and equitable development is likely to lie in tenurial reform and security. Investment models need also to be reviewed, to balance commercial profitability with poverty alleviation and livelihood interests, with a view to creating synergies between the two.

5. Pillar Three: Public Goods

5.1 Forests and the conservation of biodiversity

Low local support and public buy-in for forest sector initiatives is nowhere more evident than in relation to biodiversity conservation, and few protected areas in the sub-region can be regarded as anywhere close to fully secured. They are often only 'paper reserves'. The enforcement means applied in the field are usually inadequate for the purpose, as well as inappropriate, creating an atmosphere of public culpability and encouraging rent-seeking behaviour but delivering few conservation benefits. Except for those specific projects which have received substantial international funds to support conservation on a long-term basis, these reserves are generally almost as heavily impacted by deforestation as the unclassified forests. In those countries most affected by civil conflict, protected areas are said to have taken a particularly heavy toll.

As noted in the 2002 World Bank Forests Strategy:

1. Fines and fences approaches have had little success; in the absence of systems of payments for environmental services, rural communities have been unwilling to forgo local benefits for the sake of global values, in a context where cyclical forest management is the main way of developing soil fertility, and wild harvest an important component of livelihoods strategies.
2. Attempts to relieve pressure on the forest have tended to involve the promise of 'alternative income-generating activities', though these have rarely been successfully delivered. Even the few that have been technically feasible have not necessarily proven economically viable. Without a major change of factor combinations, it is unlikely that hypothetical 'designer' alternatives will prove more viable than existing livelihood strategies.

As was discussed in the 2002 Strategy, there is increasing debate as to whether gazetting of formal protected areas is the best way to conserve biodiversity, and this debate is pertinent to the West Africa sub-region. The issues relate partly to the substantive relationship between biodiversity and protected areas (i.e. protected areas may not capture all the critical elements of biodiversity, which may be better conserved through a more extensive landscape-based approach [2004:32]). They also relate to the practicalities of forest management. In most cases, state agencies are not in a position to adequately police the designated protected areas, and current approaches often alienate the riparian communities whose support will ultimately be most needed if they are to be adequately secured. In such a context, it may be self-defeating to rely excessively on protected areas which enrich wildlife populations and lower the opportunity costs of their exploitation, while diminishing local ownership.

The argument against over-concentration on formal protection as a means to conserve biodiversity is given added weight by the fact that, in the sub-region, the main drivers of deforestation and forest degradation are often located outside of the forest sector. In practice,

extra-sectoral actions have often undermined attempts to conserve forest cover, particularly in non-reserve areas, though the effect has been to add to the pressure on the forest reserves. A case in point is the development of hybrid cocoa varieties in Ghana, which was earlier considered (Section 4.2).

The need for inter-sectoral coordination and 'joined-up public policy' is made all the more urgent by the new agenda of energy security, and the growing importance of biofuels.

5.2 Payments for Environmental Services, including REDD

There are no reported cases in the sub-region of formalized 'payments for environmental services' (PES) schemes, outside of small-scale biodiversity conservation support projects.[22] Water catchment programs are mainly confined to the drylands areas, despite the important links between high forest cover and water availability. Attempts to introduce PES schemes are likely to suffer from the challenges noted by FAO (2009), all of which apply across the sub-region: *viz.* users' inability to pay for environmental services (such as watershed management) as well as high transaction costs and institutional deficiencies (see also MacQueen, 2008). Past experience with PES programs also points to the centrality of clear tenure rights, a requirement that is likely to affect any sort of performance-based payment system (Wunder, 2009).

The poor record of past conservation strategies needs to be very carefully appraised if new opportunities are to be successfully exploited in fields such as reduced emissions from deforestation and forest degradation (REDD/REDD+). Given the dearth of successful PES schemes, there is little by way of successful previous experience on which to base a system of payments for avoided deforestation, and adaptable institutions are also lacking. Potential sectors to engage in a process of dialogue to establish markets for environmental services include energy, water resources and transport. These services generate externalities that benefit a number of sectors: tourism, water resources, energy and river/lake transport. Establishing the link between forest and quality water delivery represents the first challenge.

With declining revenue as a result of forest resource scarcity, PES will in future be a significant potential source of revenue for the countries of the sub-region. However, new institutions will be needed before the environmental assets harboured by forest can be brought to markets. The lack of such management and financial institutions looks to be particularly problematic in relation to REDD+ strategies, where Ghana and Liberia are leading candidate countries. Ghana is the first African country to complete the R-PP process under the FCPF (and is also a member of the second Participants Committee, 2009-2010). Liberia is also a participant, and has signed a grant agreement with the FCPF. The other three countries are yet to engage.

Climate change and REDD+ negotiations could have a very positive impact on forest policies in the sub-region, in a number of respects:

1. Increased awareness of the threat to forests as well as their potential role in mitigation and adaptation, and commitment to forest conservation

[22] At national level, the need is felt particularly in Guinea, which sees itself (thanks to its unique topography) as West Africa's *'château d'eau*'. Guinea boasts '1,161 cours d'eau, réunis en 23 bassins versants dont 14 internationaux, 4 fleuves internationaux…' (L. Camara, *pers.com*)

2. Recognition that the performance basis on which financial transfers will, in the main, be made, will require radical changes of approach to the ways in which forests are managed, encouraging governments to seriously address critical issues (tenure reform, democratic local government and wider governance reforms) that they have tended to sideline in the past
3. New potential for financial flows to the forest sector and to areas and populations with a high incidence of poverty
4. Added impetus for investment in agricultural research on means to lessen forest dependence (irrigated agriculture, etc.).

On the debit side, even where the needed institutional reforms are fully acknowledged in theory (including tenurial revisions and the strengthening of local government), national governments could well be dissuaded from proceeding with them, because of the implied loss to central revenue. Past experiences with revenue sharing arrangement in the forest sector are not always encouraging, and give little evidence of governments being willing to use revenue to create financial incentives to front-line farmers and forest managers.

PART B: TOWARD AN EFFECTIVE FORESTS STRATEGY

6. National and International Policies

The picture which emerges of forestry in the West African sub-region is thus one of almost universal poor forest governance. Through a combination of short-sighted decision making by successive governments and some questionable donor support, governments have presided over massive over-exploitation of timber resources, way beyond sustainable levels, with little to show by way of concomitant benefits, whether at the level of economic growth, poverty eradication or conservation of public goods. Where export markets have had significant potential, public policy has tended to favour international trade on terms that are lucrative to the industry but not value-enhancing, and which marginalise production for domestic markets. Periods of political instability and crisis have only discouraged governments from addressing longstanding challenges, including those which derive from the unhelpful legacies of colonial regimes. By and large, ruling elites have chosen to profit from their colonial inheritance rather than seek to transcend it. The result is a context in which forests continue to provide multiple if declining benefits for disparate groups in society but forest policy is serving the interests of only a very few.

As climate action is now underlining, high levels of deforestation and forest degradation are universal in the Africa region (at least when considered against a baseline of the early twentieth century), and are subject to numerous drivers, many of them extrasectoral. Rapid rates of deforestation are, in significant measure, the result of the spill-over of poor policies in other sectors, which include macroeconomic and trade policies and public governance. The impacts on forests of policies and investments in these other sectors are generally not well understood, and the institutions to anticipate and manage them are lacking.

There is, however, growing national and international commitment to addressing the forestry challenges, and a willingness to take on some of the more demanding areas of change.

6.1 National interests and positions

Priorities of the governments of the sub-region are set out in their respective Poverty Reduction Strategy Papers, which are currently either in their first or second phases, or have recently completed them. These provide important indicators of national priorities. Further understandings were gained through the national stakeholder meetings that were convened for the study, and from reviewing the early deliberations of the ‘West Africa Forests Dialogue’ to which all five countries have contributed.

6.1.1 Poverty reduction strategy papers

A summary comparison of PRSP themes, as they pertain to the forest sector, is given in Table 6. All the PRSPs view degradation of the natural environment as a key policy challenge for the country, likewise governance of the natural environment. At the same time, they also include an acknowledgement (borne largely out of necessity) that agriculture is likely to be a leading component of future development strategy. None of them explores the implications of this for forest conservation in any depth. Part of the governance reform agenda is seen as involving some level of tenure reform and/or community involvement in forest management, although there is a degree of ambiguity in the ways in which 'tenure reform' is presented, and a full commitment to pro-poor reform cannot necessarily be read into these policy statements. It is noted, for example, that only in two cases (Ghana and Liberia) is local government reform central to the PRSP aims[23].

6.1.2 Stakeholder consultations

Several of the themes that are central to the PRSPs were also emphasised in the stakeholder consultations held in connection with the present study (Table 7). Again, land tenure issues were identified as central in all five cases, though this did not always imply adoption of a pro-poor stance. In the case of Sierra Leone, for example, the central problem was seen by participants as 'investment inhibiting land tenure' rather than tenure security as such. 'Shifting cultivation' was often seen as a problem to be overcome, rather than the foundation of food security for the poor. Governance was viewed as a central concern in Cote d'Ivoire and Guinea, with a mistrust of national authorities and acknowledgement of weak capacity for implementing the legal framework.

National preoccupations tend to outweigh the regional. Climate change concerns were more strongly represented in these discussions than in the PRSPs (reflecting the difference in timing). Ghana (the country that has advanced furthest in the 'Carbon Finance' framework) aims for a low carbon strategy, with the forest sector being targeted to generate reductions emissions reductions. Key issues include: carbon property rights, benefit sharing for carbon revenues, tree tenure and land rights, and credible monitoring and verification systems.

The main recommendations of the country consultations are compared in Table 7, and priority issues on country-by-country basis are described in Box 8.

6.1.4 West Africa Forest Dialogue supported by ECOWAS

Widespread concern across the region about the high levels of forest depletion led to launch of the 'Forest Dialogue for West Africa' in 2006, with the support of United Nations organizations (FAO, UNEP), international NGOs (IUCN, WWF, FFI), sub-regional organizations (ECOWAS, CILSS, UEMOA) and CGIAR research centres (CIFOR, ICRAF). The initiative was approved by Ministers of Environment on April 24, 2007 and ECOWAS and UEMOA were mandated, in cooperation with IUCN, FAO, ICRAF and CIRAD, to prepare a proposal on forest dialogue.

[23] Individual PRSPs are summarised in the Sector Review Paper, Section 7.1.1

A series of steps has been proposed in a consultancy paper, ‘Study report on the Forest Dialogue for West Africa’, in April 2009, which included a draft “Convergence Plan’ which has yet to be implemented. Most of the planned activities are generic, though with a particular focus on the Sahelian zone (for example, a focus on pastoral resources and transhumance). Proposals cover both national level and regional activities. As regards the former, the emphasis would appear to be mainly on pilot activities with a strong field-level orientation. The importance of involving local communities in natural resources management is stressed, with support to be given to local structuring, communication and management tools, and participation of local populations in the formulation and implementation of protected areas activities. Support to loggers and producer organizations is also advocated. Trans-boundary populations are to be sensitized to the need to preserve and develop forests. At the regional level, the focus is on shared analysis and harmonization of forest policies, as well as adaptation and harmonization of institutional, legal and fiscal frameworks, and promotion of regional planning activities. Practical management of shared forest resources (transboundary forests, protected areas, wetlands, etc.) is seen as an important area to be developed. Several activities concern the production of information (through inventories or research activities about production and productivity of forests, and surveillance systems for transboundary areas).

Table 6: Comparison of Poverty Reduction Strategy Papers

	PRSP version	*Governance reform*	*Degradation of natural environment a key policy concern*	*Forest industry ~ supply/demand & value addition*	*Institutions for public finance management (forests)*	*Community involvement in SFM*	*Tenure reform*	*Strengthen local government*	*Plantations /rural energy*	*PES incl. REDD*	*NR/Agric sector growth*
Cote d'Ivoire	*PRSP 2009-15*	✓	✓	✓			✓		✓		✓
Ghana	*GPRS2, 2006-9*	✓	✓	✓			✓	✓	✓		✓
Guinea	*PRSP 2 2007-10*	✓	✓			✓			✓		✓
Liberia	*PRSP1 2008-11*	✓	✓	✓		✓	✓	✓	✓		✓
Sierra Leone	*PRSP2 2008-12*	✓	✓			✓				✓	✓

Table 7: Main recommendations made during the stakeholders meetings

	Cote d'Ivoire	Ghana	Guinea	Liberia	Sierra Leone
Tree tenure				Need to clarify tree tenure arrangements. Need to revisit (excessive) focus on felling in 2006 Forest Law.	Insecure tenure arrangements to bush fire-land degradation problems. Payment of fees to the communities for state managed forests
Land tenure	Full Implementation of the reform, especially the lease of the perimeters for more than 10 years can lead to good management practices Secure individual and village land according to The law on rural land	Extend customary systems of tenure and crop sharing in the HFZ area Clarify benefit sharing (communities, persons planting, etc.) Clarification on land affectation (agriculture or not) who gets rights to trees is an issue to deal with in forest development initiatives now and in the future	Land tenure securization according to the related law Set up *land tenure commissions* at the community level	Need to clarify land tenure. Also to clarify division of responsibilities between FDA and Ministry of Lands, Mines and Energy. [A call for prioritisation of commercial farming to minimise losses from shifting cultivation]	Outmoded and dysfunctional tenure regime for forest industry, and insecure rural tenure linked to DD (bushfires, etc.). The land tenure system described as 'investment inhibiting', particularly within rural communities.
Fiscal reform	Need to reinvest an important part of the resources generated into the forest sector. Free forests plantation activities from taxes			Fiscal provisions of 2006 Forest Law need to be revisited and strengthened.	
Decentralised local government	Promote the community and municipality forests			Forest-rich communities need to be empowered to	

				take ownership of decisions regarding community resources	
Data on forest	Need to undertake a clear inventory of the forest perimeter (rural area) to better know the stock and what can be allowed to be cut by timber operators no knowledge of the availability because of lack of inventory	Data on forest carbon stocks	Necessary improvement of data capacity of the forest	Relevant information largely lacking; need for significant capacity building. 'Logistical constraints' noted.	Lack of data (inventory,…) Evaluation of forest value
Research / techniques	Few timber species are exploited and the large numbers of useable timber species are unknown in their physical characteristics			'	
Gender			Importance of women for NTFP development.	Need for empowerment of women on several fronts: capacity development on value chain approaches, and NTFP production; need to guarantee information to women in CFDCs, etc.	Acknowledge importance of women in forest management
PES		shift emphasis from commercial timber to "total" forestry where forest title holders and managers pursued the production of environmental services		Need for better awareness and understanding.	Involve private sector and industry in PSE
Alternative				Biofuels of	Develop

energy				growing commercial interest in RL. Need to clarify decision making, and avoid conflicts of interest in FDA.	technologies to save fuelwood and forests
Involvement in REDD+		Training for GHG emission calculation, to help Ghana toward low carbon strategy Necessary link with land tenure		Need to integrate REDD into forest planning	Importance of involvement in REDD+
Coordination among donor agencies		Reduce cost of studies, avoid duplication			
Fuelwood				Country heavily dependent on wood fuels (charcoal and rubber chips). Need for better inventory and controls.	Sustainable production
NTFPs	Identification and utilization of some ethno-botanical species (medicines, foods)	Development of opportunities for rattan and bamboo	Regulate transboundary trade of NTFPs. Creation of transformation units for increased added value	NTFPs seen as an important sub-sector; need to support development of NTFPs and strengthen links to markets	Development as an industry for employment and wealth creation
Wood industry policy	Need to renew and downsize timber industries' equipment and capacity to adapt them to the current products and the diminishing potential of the resource	for industry to grow its own raw material or leave harvesting develop standards to reduce wastage promote certification necessary support to small and medium forest enterprises		The '3 Cs' policy questioned, as gives excessive emphasis to commercial, to the detriment of conservation and (particularly) communities. Concern of FDA that allocation procedure is	

				too long and complicated (32 steps).	
Regional approach	Include Burkina Faso and Mali in the regional approach (given that many forest dwellers are from these countries in CI and there are also important wood trade links)			[Sapo National Park being integrated within a 3 country approach.]	
General policy	Increase agricultural production and reduce the pressure on forests	Coordination with agriculture and link with intensification of agriculture			Mainstreaming forest in general policy

Box 8: Priority Issues identified in the Stakeholder consultants

A. Cote d'Ivoire

1. Restoration and sustainable management of forest resources
2. Re-launch forest research
3. Forest governance improvement
4. Sustainable wildlife management
5. Timber industry Improvement
6. Capacity building in the forest sector

B. Ghana

1. Plantation development
2. Industry restructuring
3. REDD and Certification
4. Value chain development
5. Carbon payments
6. Innovative financing (PES-focus) for wider forestry-agricultural strategy to support sustainable land management
7. Poverty alleviation
8. Tenure rights
9. Forest policy linkage with agriculture
10. Capacity building to enhance environmental governance (including promotion of carbon markets)
11. Above all clarity of vision is important in mobilizing resources to finance a new forest strategy.

C. Guinea

Production of updated data

1. Forest governance improvement

2. Promotion of participatory forest management
3. Development and structuring of NTFP sub-sector, and creation of transformation units
4. Payments for ecosystem services and capacity building on this topic
5. Securing tenure rights of communities and rural individuals

D. Liberia

1. Undertake intensive capacity-building
2. Commission a study on alternative livelihood for communities in protected areas
3. Support for the development of NTFPs in Liberia including linkages to markets
4. Empower forest-rich communities to take ownership of decision-making over community-based resource
5. Maximize benefits Liberians from the extraction of their vast resources
6. Address competing attention and conflict over lands between the FDA and the Ministry of Lands, Mines and Energy
7. Addressing the overlapping of the three “Cs” by producing an overlapping map
8. Prioritize commercial farming to minimize forest loss due to shifting cultivation
9. Reduce current dependency on beach mining by introducing alternative construction materials as seen in other places such as Ghana
10. Create loan opportunities for the private sector including training
11. Extend training opportunities for forest institutions including civil society, the private sector and relevant Government Agencies
12. Support to the FDA in planning processes to live up to the huge expectations from stakeholders
13. Support the establishment of protected areas
14. Ensure a balance of the three “Cs” through equal investment
15. Prioritize empowerment women to effectively participate in the forestry sector
16. Invest in the construction of durable bridges on a loan basis for forest-rich communities

E. Sierra Leone

1. Actions focused on three areas:
    a. ‘Software issues’ of high priority – poverty mentality (life-long learning and education, etc.)
    b. Unemployment (job creation, life-long learning and education)
    c. Energy (sustainable production of wood fuels; alternative technologies)
2. On-going biodiversity conservation programs
3. Mainstream forestry activities into local government planning
4. REDD and carbon payments
5. Development of NTFP sub-sector as an industry for employment and wealth creation
6. Payments for ecosystem services
7. Research and research institutions

6.2 Donor initiatives

A number of donors are seeking to help countries improve their forest governance. Among them, the EU's forest law enforcement, governance and trade program (FLEGT) is prominent. Working in association with local governments and partners, the program is making good progress in the countries where VPAs are actively being negotiated (in the sub-region, the countries in question are Ghana and Liberia). The World Bank has supported FLEG work through various initiatives, including capacity building supported by a FLEG trust fund (now merged with PROFOR). The Extractive Industries Transparency Initiative (EITI) also seeks to strengthen governance by improving transparency and accountability in the extractive sectors. Liberia is the first country to include forestry in its extended EITI+ initiative. FAO and the ECOWAS Secretariat (among others) are supporting the governments of the region through the West Africa Forests Dialogue. The World Bank is supporting natural resource and environmental policy development at national level in countries such as Ghana (where an environmental sector loan was extended in June 2010), and is also providing finance to help develop climate change policy, particularly REDD+. In the case of REDD, for example, Ghana has already received funding for its 'REDD readiness preparation project' (R-PP), and is initiating exploratory actions on a number of fronts.

The Forest Investment Program (FIP), a program within the World Bank's Strategic Climate Fund (a multi-donor Trust Fund for the World Bank's Climate Investment Funds) is also concerned with climate change. The FIP seeks to initiate transformational change by piloting and scaling up effective forest and forest landscape management efforts that complement REDD+ strategies. . In March 2010 [24], the FIP Sub-Committee approved the inclusion of Ghana as a FIP pilot country.FIP investments in Ghana are expected to be almost three times as large as the current sector support operations (external funding of just under US$26 million over three years, 2008-10 inclusive).

The Global Environment Facility (GEF) is a major funding mechanism for the environment, and has set up specific funding mechanism for the time period 2010-14 on Sustainable Forest Management (SFM). This will support programs and projects seeking multiple benefits (as biodiversity, climate change and land degradation) that can be accrued from the implementation of sustainable forest management. The SFM funding need is estimated at US$19 billion per year[25], though this is notional. Total GEF funding to Africa over the last 18 years stands at $2.3 billion for 750 projects (almost 30% of all GEF funding to date). $600 million of this has been spent on climate change, for 230 projects. Guinea, Liberia and Sierra Leone are all eligible under the 'least developed countries fund' for Africa. (Touré, 2009)

Summarising current donor initiatives, there appears to be no shortage of actions on the ground, and a forward-looking strategy for West Africa needs to be cognisant of these preexisting initiatives and selective in the ways that it seeks to add value to them. The starting point for development of the Strategy must be recognition of the significant differences as well as similarities between the five countries of the sub-region, and the need for clarity on the areas where joint action can usefully be taken, where country experiences can be usefully compared, or alternatively, where action should be focused on the individual country level.

[24] http://www.climateinvestmentfunds.org/cif/sites/climateinvestmentfunds.org/files/Summary%20of%20Co-Chairs%20FIP%20SC%20March%202010%20FINAL.pdf
[25] http://www.thegef.org/gef/node/3189

There are three types of scenario which need to be considered:

1. *Country level:* Cases where national specificities severely restrict (though they may not entirely deny) the learning opportunities at sub-regional level, and where the main focus has therefore to be at individual country level (for example, tenurial reforms, decentralised revenue capture mechanisms)

2. *Sub-regional level:*
   a) Cases where sub-regional action is either essential or where it offers clear benefits and economies to scale; this class include cross-border controls of trade, particularly in contexts where there are known exchange rate differentials; capacity building and use of geoinformation, to compensate for lack of national capacity or lack of congruence between ecological and political boundaries, or to respond to other imperatives where information needs to be shared; also, cross-border 'peace parks' and protected areas.
   b) Cases where, due to the similarities in the external stimuli, there are likely to be commonalities of experience – for example, aspects of public finance management, FLEGT & the impact of traceability standards imposed by external markets, global climate change instruments such as REDD+; etc.

Within this framework, a number of areas can be identified which could form the basis of the Strategy (Table 8). Several of these are already of interest to the Bank, and figure in aspects of its regional portfolio. Priority areas of concern and current involvement of other key policy processes are as indicated in Table 10.

Table 8: Summary of Potential Themes for Sub-regional Strategy

Theme:	*Country-level*	*Sub-regional level*
Forest Industry structure	Primarily country-level, within established country assistance programs	Some mutual learning potential
FLEG	(EU program strong with VPA partners) some FLEG potential ref. the 'broader picture'	Mainly sub-regional dimensions
SMFEs	Priority area re. supply/demand and promotion of good governance	Some mutual learning
Community forestry	Priority area re. supply/demand; poverty eradication and promotion of good governance	Some mutual learning
Tree and land tenure	Likely to be a priority area	
Revenue sharing arrangements/ incentive structure	Particularly important where industry generates major revenues/impacts heavily on farm communities	
Climate actions	Potential ref. 'broader picture'/ addressing cross-sectoral dimensions	Strong focus re. leakage issues; links to wider capacity building ref. geographical information, etc.
Rural energy	Research agendas ref. sustainability and wider economic and sectoral integration/policy	With regard to cross-border flows
Cross border trade		Strong focus ref. timber and woodfuels; leakage issues ref. FLEG
Geoinformation	Capacity building at national level	Capacity building at sub-regional level/economies to scale
Public goods		Cross-border protected areas as part of wider forest policy integration
Capacity building		Harmonisation of policy implications of all of above

These themes are considered in turn below, commencing with actions that are likely to be primarily at the country level, and then considering those that are likely to be primarily sub-regional.

7. Strategy Options

7.1 Country-level Actions

Political commitment and broad public ownership of forest development programs are essential for development partners to achieve success in the sub-region. Public ownership is seen as the over-arching catalyst for attracting multi-donor support. A common strategic framework is needed to generate meaningful public ownership of forest sector programs. Historically, the World Bank has played a leading role in the Africa region, in bringing national and international partners together to agree on strategic objectives. The experience of Cameroon is illustrative. Policy reform initiatives pursued under this approach led to the bringing together of key donors, including IDA, DFID and GEF to support the 2005 Cameroon forest reform program.

7.1.1 Forest industry

The ability to reconcile supply and demand, both domestic and international, is of central concern to sound forest governance, but particularly problematic in the three countries with substantial external trade.

In Ghana, these issues are already being addressed by the World Bank, as they are in line with the objectives of the current Natural Resources and Environmental Governance Third Development Policy Operation (DPO) Program.[26] The DPO aims to support the Government's plans to invest in demand and supply-side approaches, with the objectives of improving natural resource governance, revenue management, financial flows and livelihoods. The approach is participatory, and outcomes include improved public finance management, reduction in illegal logging and integration of environmental considerations into policy formulation and implementation across government (including risks associated with climate change). The broad inter-sectoral aims of this program acknowledge the extra-sectoral origin of many of the drivers of deforestation and degradation in a country such as Ghana.

Côte d'Ivoire has been badly affected by the recent civil unrest. 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 have encouraged the main actors such as SODEFOR 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 (unemployment, etc.), the tendency has been to turn to whatever resources are available – and these tend to be the forest resources themselves. There needs to be a reorientation of strategy towards approaches that are more in line with the capacity of the sector.

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26 http://web.worldbank.org/external/projects/main?Projectid=P118188&theSitePK=40941&pagePK=64283627&menuPK=228424&piPK=73230

Liberia is currently in process of reconstituting its forest industry, as part of its '3Cs Strategy'. It remains to be seen whether this classification – commercial, conservation and community – 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 it may be difficult to satisfy with an excessively export-oriented strategy (Figure 11).

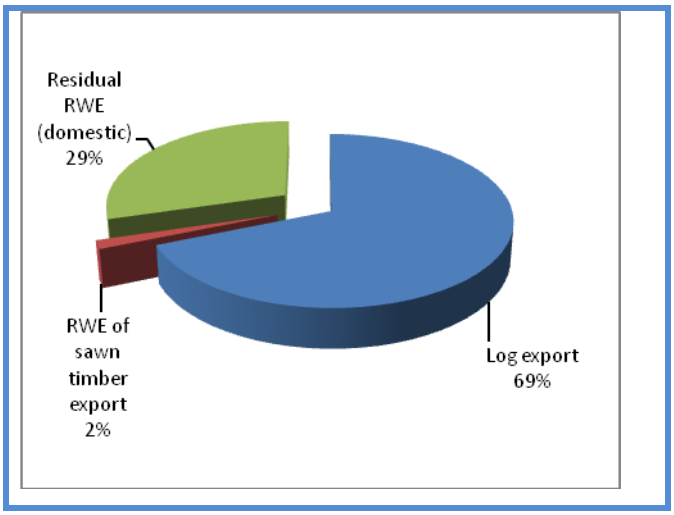

Figure 11: Market distribution of 2000 timber harvest in Liberia

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.

In Sierra Leone, an Agency with autonomous authority, the Sierra Leone Environment Protection Agency (SLEPA) was created in 2008.with mandate of coordinating and monitoring of the implementation of national environment policies, programs and projects, and producing a harmonized national environment and natural resources management policy and legislative framework. SLEPA is currently supported by EU.

All of these areas offer opportunities for inter-country lesson learning, and *the Forest Dialogue for West Africa* would provide the logical forum in which they could be addressed.

7.1.2 Industry Structure and the role of SMFEs

Growing prominence of 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 the regulatory reforms which, by excessively favouring large-scale, export-oriented enterprise, could be detrimental to both growth and governance. Evidence is

growing that SMFEs may add greater value through timber transformation, and offer greater multipliers, than capital-intensive industry, particularly where forests are fragmented and the resource is in short supply. Governance issues would need to be addressed, however, 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.

NGOs have long argued that community forestry provides a win-win in such a situation, in that it capitalises on the benefits of SMFEs without the potential costs (chiefly poor governance). This argument has tended to be more normative than evidence-based to date, particularly in relation to the HFZ. The time may now be right to test its evidence basis, with a view to increasing the pilot investments in community based small forest enterprise should the assessment prove encouraging.

The World Bank's concern with the motors of economic growth, and its mandate to address policy issues on an inter-sectoral basis, make 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.

7.1.3 'Illegal Chainsaw Logging'

There are a number of initiatives in the sub-region which seek to regularise the problem of illegal chainsaw logging. This is the subject of an experimental initiative of the Ghana Forestry Commission, aimed at testing the feasibility of regulating chainsaw logging in pilot districts, and it is also being researched by the Tropenbos-International *'Illegal or Incompatible?'* Project (which works in Ghana and Guyana). The EU is also providing financial assistance to Tropenbos-International Ghana to undertake a cost-benefit analysis of policy options identified by the Ministry of Lands and Natural Resources. This project is expected to be completed by September this year. In Liberia, chainsaw logging has been the topic of a study undertaken for the European Union (Blackett et al, 2009). Notwithstanding the emerging evidence of these studies, there would appear to be limited opportunities for regularisation of the practices at a level that would have significant impact on the sustainability of the resource unless there is major action at the policy level to rectify the structural imbalances in the sector. The main challenge is therefore one of policy not of policing.

7.1.4 Tree and Land Tenure Reform

Under any feasible scenario, it is difficult to imagine that much progress can be made in key areas such as forest regeneration, plantations development, biofuels and REDD+, as well as general governance, without a radical attack on the tenurial deficiencies that have been the region's colonial inheritance. An accumulation of evidence from across the sub-region and beyond points unequivocally to the urgency of reforms to tree and land tenure if farmers and land owners are to be encouraged both to better husband the stock of natural timber and to invest in its regeneration and enhancement. Without reforms to tree and land tenure, heavy donor investments in support to forest industry are unlikely to prove cost-effective. Land owners and farmers are unlikely to make the investments needed to intensify cultivation and relieve pressure on the forest, nor to conserve trees on farm and in fallows, unless they are assured of the future benefits of their labours. There is also the prospect of increased

conflicts with communities if industrial investments are allowed to ride rough-shod over community interests.

The centrality of tenure reform was evident in the five national stakeholder consultations undertaken for this strategy development. In all five cases, tenurial reform was identified as a major issue that needed to be addressed.[27]

What this might mean would vary situationally. The tenure situation and challenges in, say, southern Ghana differ significantly from those in, say, Liberia.

In Ghana, the main challenge is to encourage a culture of tree regeneration and tree planting on-farm, which can arguably only come about if tenurial rights in off-reserve trees are fully transferred back to the land owners. There is also a case for re-assignment of revenues from on-reserve sales, with the similar aim of motivating a more conservation-oriented attitude among the land-holding and affected communities, and (re) creating a public sentiment that favours retention of forest reserves. However, any fundamental change in revenue shares for on-reserve harvest, so as to better target the immediate land owners and farmers, would have the disadvantage of requiring an amendment to the Constitution.

In Côte d'Ivoire, the land tenure issue is a key to forest conservation and management. Landlords have not been involved in management decisions (for example, they have no say in the exploitation authorisation process) and have just had to let the farmers act as they wish, once they have their agreement from the central government. So they have little interest in whether these agreements are properly implemented. However, the new land tenure law of 1998 (Law n° 98-750 of 23rd. December 1998) is a radical innovation in that it focuses on the creation and conservation of forests as means to manage land. This contrasts with the former situation where through only agricultural exploitation was land brought under management.

Tenure reform is challenging, particularly in socially complex countries such as Côte d'Ivoire and Ghana (the complexity of which is not necessarily acknowledged in public policy). There is no guarantee that reform will be inherently pro-poor without strong and long-term commitment on the part of governments (cf. Hobley, 2008). In the Akan areas of Ghana, 'land owners' and 'farmers' may not be the same individuals, due to long-established systems of tenancy and share-cropping, although the boundary between tenancy and full transfer of ownership rights is disputed, and many of the alleged 'tenants' (particularly pre-1970s) would claim to have bought their land outright. In Côte d'Ivoire (a country where at least one eighth of the population is immigrant), attempts to reform tenure without granting rights to immigrant owners have now been corrected through the changes in Article 26 of the Forest Law which now permits the descendents of migrants to inherit the land rights acquired by their parents before the land law change. Allowing for leases of up to 99 years (*le bail emphytéotique*) further adds to their security. However, there is still a problem of limited public awareness about these new procedures. The challenges in achieving tenurial reforms in such socially complex areas are as much political as technical.[28]

In Liberia, where rural social structure is generally much less complicated (particularly in the forest-rich South east) there is a case for a full transfer of tree tenure rights to the historical

[27] See: *Sector Review*, Annex 1
[28] See Sector Review, Section 2.2

land owning communities, outside of the national forests, supported by revenue sharing arrangements on harvests within the national forests. The main challenge for tree conservation in Liberia is seen by policy makers as slash and burn agriculture, but this issue can arguably only be addressed by either radical technological innovation or by providing incentives to farmers to reap the benefits of timber tree conservation themselves. The former is much favoured in some conservation circles but is likely to be costly and high-risk; research has not had a strong record in delivering technological innovation to Africa's capital-poor and risk-averse small farmers. Even were it to be feasible, tenurial reform could well prove a necessary co-condition. The most promising such option is cultivation of irrigated swamp rice, to replace the upland rice culture on which Liberia's farmers have long depended for their subsistence. Interesting past experiments under the EU's South East Liberia Rural Development Project (1987-90), which pioneered approaches to agricultural intensification in forest areas, are currently being revived with new EU funding, and these would merit critical scrutiny over the coming years; they appear technically feasible though their economic and ecological feasibility is yet to be tested.

Liberia's early experience of revenue sharing in relation to timber production does not look encouraging, as judged by the experience of community forestry, and seems unlikely to generate a true sense of ownership (Box 10). The share of the land rental fee that has been conceded to communities has the advantage of stability and predictability, but is not offered in a way that would incentivise conservation-oriented attitudes. Arguably, a substantial share of the stumpage would need to be offered to generate such attitudes; it would give a financial value to tree conservation on-farm, and offer farmers an alternative to tree cutting as a source of livelihood. Nor do past agro-plantation strategies (rubber, oil palm, etc.) offer much comfort in the Liberian case, and the prospect of rampant industrial development of biofuels gives considerable cause for concern, unless adequate safeguards can be put in place at the community level.

Box 9: Community Forestry in Liberia

Within a framework based on managing natural resources based on principles of Conservation, Community, and Commercial Forestry, the 2006 Forest Law of Liberia paved the way for community involvement in forest management, and Chapter 10 ('Community Rights and Forest Management') sought to ensure that 'local communities are fully engaged in the sustainable management of the forests of Liberia' under which the Forest Development Authority (FDA) 'shall by Regulation grant to local communities user and management rights, transfer to them control of forest use, and build their capacity for sustainable forest management. It was specified that the Regulations should, 'at a minimum:

1. Specify rights and responsibilities of communities with respect to
2. ownership and uses of Forest Resources;
3. Establish mechanisms to promote informed community participation in forest-related decisions.
4. Create a framework that allows communities fair access to Forest Resources; and
5. Establish social, economic, and technical procedures for capacity building to ensure that communities can equitably participate in and equitably benefit from sustainable management of the forests.

Community involvement in forest management in Liberia was given a major impetus by an additional requirement that the FDA should, 'within one year of the effective date of this Law, present to the Legislature for consideration and passage a comprehensive law governing community rights with respect to Forest Lands' (Chapter 10.1.c).

The new Community Rights Act was eventually passed into law in 2009. As of end June, 2010, 14 Community Forest Development Committees (CFDCs) are reported to have been established and are actively involved in implementing the community component of the reform law.

Despite some initial resistance from within the bureaucracy, steps have been taken to implement the law. However, in the absence of a legal regulation (and seemingly in disregard of the Law's intentions and some of its provisions, initial attempts at implementation have involved contracting out community forestry lands to logging companies by the local CFDCs, acting in association with well-placed urban elites. The fact that the Law allows for communities to negotiate contracts through 'sole sourcing' (i.e. without the competitive process required in the commercial sector) has facilitated this transfer. This may bring some benefits to the communities involved, but is likely to put pressure on the community sector in general for community forests to become a 'soft route' for commercial loggers, and this could well deny communities access to most of the potential revenues, as well as undermine any attempts by communities to manage such enterprises themselves.

Inter alia, this case illustrates the hazards of a two-track fiscal and regulatory regime, ostensibly to community benefit but without sufficient 'firewalls' between this and commercial interests.

In Guinea, receipts from stumpage are divided by law in the proportions 10% for the local community (*sous préfectures*), 40% for the local forest service, and 50% for the National Forest Fund. Forest revenues can then contribute to local development (set up and management of public services: schools, clinics, etc.). But poor governance at the local level often undermines the intention.

By and large, governments have been reluctant to envisage any tenurial reforms which would cede their rights over strategic tree resources on a long-term basis. But without such transfers, even well-intentioned initiatives seem destined to have only limited impact. A case in point is the modified *taungya* program in Ghana. Revenue sharing arrangements provide for 40% of proceeds from such timber to be received by the 'farmer' (i.e. the planter), 40% by the Forestry Commission, 15% by the land owner (the stool) and 5% by the community or communities that are closest to the reserve. All non-timber agricultural products are also the property of the farmer until canopy closure, after a maximum of 4 years (Government of Ghana, 2005). The main benefits of this program are likely to be from the access to the agricultural land for inter-cropping which it offers (especially attractive to the land hungry) and income from thinnings and other tree management operations. The long growth cycles of indigenous timber trees (a minimum of 40-50 years) make it unlikely that the prospect of the final harvest shares will seriously motivate either the planter or the community (particularly as the latter is guaranteed only a 5% return). The limited coverage to date under the modified taungya scheme needs also to be acknowledged.

Sierra Leone potentially provides another model in that proposals have been made to increase tenure security and enhance financial incentives to land owners, while also opening up land markets to leaseholds and tenancies (Box 11).

Box 0: Proposed benefit sharing from land lease and forest payments, Sierra Leone

In Sierra Leone, Unruh and Turay's (2006) review of the post-war land tenure and investment situation recommended that customary landowning families should have greater tenure security so as to have the confidence to lease land, enter into partnerships, rent to tenants, and pursue loaning arrangements, etc. Such ambitions would be backed by the new Land Policy of 2005, together with the Land Commission Act (as well as the, as yet un-adopted, Commercial Use of Land Act). This would require capacity building of customary legal officers and land surveyors, as well as increased transparency and accountability of land registration associated with banking reforms and regulations to facilitate the use of land holdings (including rural land holdings) as collateral for loans) Other suggestions to improve incentives included the use of benefits from land leases for community development, building knowledge on the intricacies of dealing with investors, eradicating official bottlenecks in accessing land for mechanization, promoting sectoral development free from intricate land issues, and clear identification and registration of land owners as challenges worth eliminating to promote community management of resources. The proposed distribution of revenues for, respectively, land lease payments and benefit sharing from forest exploitation are as indicated below:

Proposed distribution of land lease payment for community/private and national forests

Land owners	50%
Local Government	10%
Paramount Chief	10%
Chiefdom Administration	10%
National Government (Afforestation Account)	20%

Proposed benefit sharing from forest exploitation

Paramount Chief	10%
Chiefdom Administration (for development)	30%
Local Council	20%
Land owners	40%
[National government (other stipulated fees)	100%]

Sources: *Anon, n.d*. (accessed June 2010)

In summary, serious attention merits being given to reforms of tree and land tenure across the sub-region, which are well enough focused to induce real changes in farmer behaviour. Donor investments in this field would be justified at national and international levels: environmental, economic and poverty-alleviation considerations nationally, and preservation of global public goods internationally. The EU's FLEGT initiative has flagged up the centrality of such reforms, and drawn attention to their importance not just for forest governance but also REDD+ (see, for example, Saunders & Nussbaum, 2008). However, the EU VPA

program may have limited potential to advance this agenda. Pursuing governance reform through trade agreements with sovereign states biases the process more towards the performance of large-scale timber operators than the obligations of governments to their citizens, and this may also limit the impact in contentious areas of governance such as tree tenure and other property rights, which, while formally within the scope of VPA negotiations, are outside the influence of inter-regional trade.

Other donor-supported pilot projects may provide useful evidence of the way forward, and these include Ghana's Land Administration Project (LAP), where the World Bank is the lead donor. This has a component working with Customary Land Secretariats (Government of Ghana, 2009; Toulmin *et al*, 2004). The EU is also supporting land reform pilots in three districts of Côte d'Ivoire.

The World Bank's comparative advantage in this area lies in the range and breadth of coverage of its financing instruments (and hence, its ability to address the complex inter-sectoral dimensions and interplay), as well as the size of its portfolio and focus on the links between welfare and economic growth. The Africa Department is well-placed to liaise with other Bank-funded programs (FCPF, EITI) as well as other international and intergovernmental partners (EU-FLEGT, ECOWAS and FAO).

7.1.5 Country-level Actions on Climate Change

Tenure is also likely to be central to most actions relating to REDD+ that are being promoted through UN-REDD, the Forest Carbon Partnership Facility and Forest Investment Program. Ghana is a case in point. Tenure issues are being covered by a number of consultations and working groups set up under the Ghana Readiness Proposal Plan (R-PP, part of the FCPF process), particularly the *National Expert Consultations* on '*Timber Supply'* and on the *'Allocation of Terrestrial Carbon Rights'*, as well as by the *'Local Market Timber Supply Working Group'*, and there is a strong case for these processes to deliver a radical reform of land and forest tenure.

Aside from the issue of tenurial reform, the other area where climate change action is likely to require close liaison with other policy initiatives is agriculture. In all five countries of the sub-region, agriculture is at the heart of the economic growth strategy, and integral to poverty alleviation through the PRSP. However, developments in agriculture pose a potential threat to sustainability of forestry. In addition, the cost curve of saving a hectare of forest is now increasing with the emergence of biofuel opportunities. This is a challenge to REDD due to the inherent high opportunity cost of compensation.

The potential of REDD payments is being explored in Ghana in relation to cocoa varieties, though experience here points to the inter-sectoral complexities and the difficulty of simultaneously addressing both conservation and livelihoods (see Box 6). Preliminary research suggests that the opportunity costs are likely to be very high, due to the need to compensate not only for high-value beverage crops but also food crop production and NTFPs. Should this lead to very high carbon payments, the effects could be socially very divisive. There is a danger that land owners will prefer to set aside their forested lands rather than encourage reversion to traditional cocoa varieties, and tenant farmers could be adversely affected. In areas such as the Western region, migrant farmers may comprise 45% or more of the resident population. The Ghana economy is unlikely to be able to absorb such a large exodus of farm families in other sectors.

Other REDD-related work supported by the Bank is of interest in the same inter-sectoral framework. For example, PROFOR is supporting the Global Partnership on Forest Landscape Restoration (GPFLR) which, *inter alia*, is working in Ghana to asses the restoration potential of degraded forest landscapes in relation to REDD+ (PROFOR, 2010).

The massive potential for investment in climate change through the FIP, FCPF and other instruments requires a high degree of inter-sectoral coordination at country level, between separate operations within donor agencies, as well as coordination of country programs with other national and international initiatives.

7.1.6 Rural Energy

The projection of wood fuel onto the policy stage has been almost universally negative in tone in the Africa region. Like other NTFPs (particularly bushmeat), fuel wood management tend to be marginalised and stigmatized in public policy, and treated repressively. The international discourse on climate change is providing a very powerful narrative of community-based destruction of the resource, which strongly engages with urban constituencies and is made all the more compelling by its wider resonances with REDD+ and the threat to global public goods. This narrative needs to be treated with caution, and its validity tested situationally. Recent research in Ghana suggests that by no means all of the charcoal supply is sourced unsustainably (though some of it is), and the former may represent a managed land use (Amanor *et al,* 2006). In some areas, indeed, charcoal production is well-integrated with agriculture, in a mutually self-sustaining manner. These experiences complement other findings from elsewhere in the West Africa region (see, for example, Ribot, 2002), which likewise point to the viability of charcoal production systems using rapidly coppicing and pyrogenic tree species on otherwise marginal lands. As with agroforestry in Guinea (Box 7), therefore, systems which appear to outsiders to degrade forest cover may in fact represent an acceptable compromise between livelihood and biodiversity interests. The policy messages may thus be firstly, to seek to corroborate the doomsday narrative with solid evidence, and secondly, to focus support on positive incentives for sustainable systems and negative incentives for the unsustainable. All too often, public policy has delivered only the negative.

Some scepticism is therefore in order regarding the received wisdom about the management and prospects of fuel wood production, and its effects on the forest landscape. However, the information base is still inadequate, and there are research issues to be addressed. There is a need to fully analyse the opportunity costs of land use in the areas of supply, and the relative carbon footprints of fuel wood conversion as against alternative livelihoods, and alternative means of providing for urban as well as rural energy needs. The state of the energy sub-sector needs to be unpacked – and separated analytically - from the issue of plantations and woodlots promotion. Wood fuels are likely to figure prominently in REDD preparations at national level, though there may also be economies to scale at sub-regional level, particularly as regards scientific research.

A final area for consideration in relation to rural energy relates to the impact of non-wood based energy development for the future of the forest sector. Innovative areas of investment such as hydro-power (particularly in Guinea), biofuels (all five countries) and petroleum (particularly in Côte d'Ivoire and Ghana) all stand to impact heavily on the forest sector, both positively (by relieving pressure on the forest resource) and negatively (by increasing competition for productive land). All are of established interest for the World Bank, and

would merit close monitoring and inter-departmental liaison from the perspective of forest policy.

7.2 Sub-regional Level Actions

The above discussion has focused on the issues that are primarily country-level in their remit. There may be some value in inter-country information sharing and comparison over such maters, though the main emphasis, and the main funding and non-funding needs, are likely to be national.

Some issues are inherently cross-national, however.

7.2.1 Cross-border Trade

Increasing investments in forest law enforcement and governance, particularly in VPA countries (but also more generally) substantially increases national interest in uncontrolled cross-border timber movements, in relation both to unverified imports and untaxed exports. Should REDD take off in the sub-region, then these national concerns are likely to be endorsed by those of international donors and other investors for whom such leakage will also represent a major cost. The evidence presented in the recent EU report on cross-border timber flows underlines the potential for both FLEGT and REDD to be substantially undermined. There is a strong case, therefore, for an international governance initiative in the sub-region, much along the lines of COMIFAC in Central Africa (Wencélius, 2009a), aimed both at harmonising forest regulations in areas which encourage illegal trade, and improving cross-border controls. VPA signatory countries would be likely to take the lead, given the heavy investments that VPAs require, and the risks involved in opening up trade flows to international scrutiny.

This is an issue which is already of interest to the EU, in relation to its legal timber program. However, the VPA program is essentially focused on the national level (due to WTO and other trade considerations), and may have limited potential to act at a higher level. This could be a constraint, given the evidence that is emerging (only suggestive, at this stage) of a possible pattern of trade diversion by timber producers away from high-risk European markets towards lower-risk overland alternatives (see Table 9).[29]

This points to a need for actions at sub-regional and regional levels, aimed at raising awareness of these issues and promoting better regulation of them. Such issues also fall within the remit of the West Africa Forest Dialogue *'Plan de Convergence'*, with its emphasis on reducing conflicts over the use of shared and transboundary resources; conservation of transboundary forests, harmonisation of policies, and decentralised management of resources.

Leakage is an issue not only in relation to trade, but also patterns of resource exploitation. Individual country forest policies can pose risks of leakage to more vulnerable neighbours in other areas - for example, policies aimed at discouraging illegal small-scale miners from causing forest degradation.

Table 9: Comparative Export Statistics for Selected Timber & Wood Products

[29] This issue is considered in more detail in the Sector Review, Para 3.2 (Box 2).

Ghana: 2008/2009	*2008 Volume m^3*	*2009 Volume m^3*	*% Change*		*2008 Value (€1000)*	*2009 Value (€1000)*	*% Change*
Lumber (KD/AD - exports)	187,539	119,282	-36		67,031	38,945	-42
Lumber (Overland)	3,843	36,171	+841		330	3029	+819
Plywood (Exports)	14,035	7,241	-48		4301	2235	-48
Plywood (Overland)	124,237	140,539	+13		36729	39010	+6
Veneers (all types)	69,247	39,463	-43		40317	22927	-43

Source: Birikorang, 2010

7.2.2 Geographical information & Forest Inventory

Actions on FLEGT and REDD also create a demand for more and better information on the forest condition, and geographical information more generally. All the countries of the sub-region suffer from capacity constraints in this area, in some cases very severely.

A regional approach to forest inventory management and related long-term forest policy implementation could bring special advantages to the sub-region. First, a focus on relative institutional absorptive capacities for technical assistance combined with lessons sharing across the sub-region could generate substantial economies. Second, improving forest cover through plantations development that identifies specific country-level ecological advantages could, at the regional forest landscape level, help reduce the problem of level of complementarity in trade among the sub-regional countries. Diversification in species types would help limit competition between producers (who would otherwise be competing to sell the same products) and thereby improve future long-term terms of trade at the ECOWAS regional level. Third, the regional approach could help the sub-region to reposition itself to meet the challenges of the transfer of technical knowledge for measuring and accounting for carbon, ensuring adequate governance and benefit sharing framework to secure new investor confidence and deal with possible concerns for cross border leakage.

The performance basis on which the success of REDD/REDD+ largely depends requires particularly high levels of geographical information, if it is to satisfy 'international compliance grade' reporting standards. This implies a results-based payment approach, in which payments are only to be released under proof of 'non-emission' (of greenhouse gas). A complex set of estimations has to be made (of emissions in the 'business as usual' scenario, and solid monitoring of the actual situation in the field) based on a variety of specific data (forest cover, types of forests, biomass by forest types, recorded land use change, etc.) Such information and analytical skills are largely lacking in the sub-region, but will be crucial to the proof of the effectiveness of the mechanism as a means to avoid deforestation, and so as to convince a largely sceptical NGO community as to the commitment to rigorous science. Again, a regional approach is called for, so that countries with low national capacity and few prospects of developing and retaining it can benefit from the economies to scale which sub-regional and regional level actions would allow.

In addition, REDD strategies are inherently cross-sectoral, acknowledging the extra-sectoral nature of many of the drivers of deforestation, and thus require wide-ranging information, including in fields such as mining policy and urban development. This increases the

demands for quality information based on close governmental liaison, at both national and sub-regional level.

7.2.3 Institutional capacity building to support sub-regional harmonization

By and large, institutional capacity is very low throughout the sub-region, particularly in the countries emerging from civil war (Liberia, for instance). Thus, capacity building will be required. Presently, all the countries tend to be oriented to resource mobilization for individual programs 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. The disincentive effects of competition between five often competing economies needs also to be taken into account.

There may also be potential for further capacity building in areas such as forest certification, which has made only limited progress to date in the sub-region. Three countries are very much involved with the International Timber Trade Council and Organization (ITTC/ITTO) on forest certification (Guinea and Sierra Leone are not ITTO members).

7.2.4 Protected Areas

The West Africa Forest Dialogue program has a strong focus on cross-border management of public goods, and the objectives of the draft *Plan de Convergence* include establishment and maintenance of transboundary protected areas, and simultaneous securing of conservation and livelihoods benefits.

These are laudable objectives though firmly located within a discourse of conservation which has, with very few exceptions, not yet delivered in West Africa, and the long-term viability of which must be seriously in doubt. There are some inter-country variations. For example, ecotourism development is a more promising short/medium-term objective in some countries (probably only Ghana, perhaps also Sierra Leone) than in the others (on grounds of security and/or infrastructure, among other constraints). Provided benefit-sharing mechanisms can be established, therefore, withholding fairly large protected areas from production may have some economic rationality in the former situations. Likewise, in some cases, forests are more threatened by opening up (through timber extraction and road building, etc.) than others. Population density in Liberia is still fairly low (particularly in the South-east) so that forests are more likely to naturally reconstitute themselves before they become targets for agricultural conversion, and there is less need to retain large pristine forest areas as a ‘defence against the productive economy’.

However, the new and potentially very significant financial flows that may come into the region through climate actions may warrant more imaginative approaches to biodiversity management, which might include, but go beyond, traditional PA management. Some of these creative options may emerge from the REDD readiness process at national level, but there is a risk that, through a combination of funding and time constraints, national policy makers will fall back on familiar solutions, even where the track record of these in both biodiversity and economic terms is poor, and their potential in carbon conservation terms is doubtful. Significant investments may be called for at sub-regional level and above, to more thoroughly test the carbon and biodiversity footprints of existing farming systems, including swidden cycles, and their comparative merits as against putative alternative livelihood opportunities. Investments at sub-regional level are also needed to test payments for environmental services, and to link these to local government reforms aimed at delivering

finance securely to the level of farm decision making, and incentivising conservation thereby. Pilot activities might concern strategies to encourage farmers to revert to shade dependent cocoa varieties in Ghana, and to avoid their replacement by hybrid varieties elsewhere in the sub-region. Forest-water linkages are also critical.

7.2.5 The interdependence of sub-regional economies

Finally, there is a case for maintaining a sub-regional overview of the impact of future financial flows into the forest sector on the broader regional economy. The need to adopt a perspective which goes beyond the five countries covered in the present Strategy was strongly signalled in the Côte d'Ivoire national consultation. The *de facto* high levels of integration of the regional economies over a long historical time span, in terms of agricultural labour and land markets, has implications for forest sector policies, and could also be impacted heavily by developments in the sector in the coming decades.

8. Conclusion

The preceding discussion has identified a number of areas where development partners might engage at country and sub-regional levels. Given the varying strengths and capacities of the national administrations of the five countries, as well as their differences in terms of forest ecology and the importance of the timber industry in their economies, some of the sub-regional activities may resolve into the facilitation of lesson learning between countries which are already supported by Bank country offices and lending instruments, and by existing regional programs (such as EITI+). In other cases, a distinctive sub-regional approach may be called for, developing themes (such as cross-border trade) which by their nature require coordinated action. The time is now right to adopt a more consolidated and regionally consistent strategy in that, on the one hand, some countries have made investments in the sector which risk being undermined by leakage and free-rider behaviour outside their boundaries (FLEGT, for example), and on the other by the fact that global investments in areas such as climate change mitigation will be similarly undermined in the future by inconsistent practice across the region. At the same time, new areas of policy development, such as REDD+, are extremely knowledge-intensive, and merit investment on a supra-national basis, either to diminish transaction costs and improve cost-effectiveness, or to compensate for a lack of professional capacity. Geographical information is an area which commends itself most readily on this ground, and this links directly to areas where knowledge and capacity have been eroded in recent years, such as forest inventory.

The record of the five countries warns against an over-standardized approach for supporting forest sector at the country level. ‘Fragile states’ with a weak planning and implementation capacity need to be supported in order to build robust foundations for strategy planning, consistent and applicable legal framework, and meaningful implementation and monitoring. Proclaimed national priorities are too often confined to international meetings, and not applied in the field. Improved governance is likely to be a key prerequisite, with special focus on capacity building of the administration (cf. 7.2.3). A consistent legal framework needs to be in place, and one which translates effectively into appropriate implementation texts (decrees of application, etc.). A reliable data production system is also required, to build relevant and realistic policies, and to monitor them effectively. Without these key elements, it seems unrealistic to launch new national strategies and policies.

Real national-level ownership has long been recognised as a necessary condition for success in development policy, although this is a quality which has all too often been lacking in the West African forest arena. The wide range and polarisation of interests which converge in the forest sector have increased the gulf between rhetoric and reality. For its part, central government has usually been too close to the timber industry or to commercial interests more generally, to act independently on the public’s behalf. Civil society has usually lacked the means to stand up to powerful commercial forces, and has depended on representation by NGOs for its voice to be heard. NGOs have often proved strong and articulate champions of the poor, though arguably less often – and more ambiguously - in areas with revenue and redistributive implications such as forestry than in areas where the divergence of interests between the middle and rural classes is less immediately felt. However, new fields of activity such as REDD+ could well induce a major change in public attitudes, to the extent that

revenue streams will be performance based, validated by compliance grade monitoring and verification, and will thus ultimately be dependent on the behaviour of the immediate forest managers (i.e. the rural 'peasantry' as well as the timber industry and government agencies). In some senses this will be empowering to the land managers. Ensuring that capacity is adequately developed, and at a high enough professional level, to deliver internationally plausible compliance grade monitoring of changes in the forest condition – which then feeds into sound public policy - is thus an essential pre-condition, not only at the technical level but also in terms of equity.

These new streams of activity are ones that are inherently inter-sectoral, and which require champions who are able to transcend sectoral preoccupations if policy innovation is to be successfully delivered. This has important implications in the context of the economies of the West African region, where high levels of economic integration in sectors such as agriculture are both of long historical standing (over many centuries) and exerted in such a way as to impact directly on the condition of the forest.

A range players currently active in the forest sector, share this commitment to cross-sectoral action and harmonisation of assistance. Table 10 draws out some of these shared interests.

Table 10: Main foci of key initiatives in sub-region

['+' = Area of concern for the initiative]

	MAIN THEMES	EU FLEGT	EITI + (including forestry)	Forest Dialogue	FCPF
Geographical focus		Mainly VPA partners (presently Ghana, Liberia)	Presently Ghana, Liberia	Pan West-African, with strong participation of Sahelian countries	FCPF partners (presently Ghana, Liberia)
Forest Industry structure	- Tackling supply and demand; (country level actions)	+			
	- Public finance management	+	Main focus : sector revenues should be published and debated		
	- Sub-regional lesson learning on the above		+	+	
FLEGT	- Verification system	++	+	+	+
	- Transparency / traceability	++	++	+	+
	- Capacity building	++	+	+	
	- Trade				

	MAIN THEMES	EU FLEGT	EITI + (including forestry)	Forest Dialogue	FCPF
	agreements (EU)	++			
SMFEs	- Balance Industrial / SMFE - Illegal chainsaw logging	- (Focuses on large-scale export industry; these issues mainly in relation to impacts on industry) + (improve law implementation)	- (recognised difficult compliance with certification) +		
Community forestry				+ improve living conditions of populations	+ should be raised during stakeholder' consultations
Tree and land tenure		Requires clarity of tenure (incl. for better traceability), but limited influence	(better traceability)	+ improve living conditions of populations	+ all stakeholders involved
Revenue sharing arrange-ments and incentives to farmers and land owners		+ if provided by law	+ if provided by law/ fosters debate on	+ improve living conditions of populations	+ fair revenue sharing for best results is a major issue: aims to 'facilitate taking up by local actors of their responsibilities in area of decentralized management of forest'
Climate actions	- REDD+ - Other mitigation - Adaptation	(Common requirements recognised – e.g. secure tenure)	+ +	+ + +	++ +
Rural energy				+ Should be tackled through livelihood improvement	+ Has to be accounted for in carbon stocks management
Cross border trade		++ VPA for EU countries, but law enforcement for all, to avoid	+ transparency is to refrain illegal trade	+ Harmonization of legal frameworks	+ Close monitoring of forest stocks

	MAIN THEMES	EU FLEGT	EITI + (including forestry)	Forest Dialogue	FCPF
		leakage etc.			
Geoinformation	- GIS - Forest inventory	+ Part of traceability process		+ + Convergence plan: monitoring & control of shared resources	+ ++ Monitoring tools is a key feature
Capacity building		Mainly government & civil society ref. traceability systems, contracts, awareness, etc.	Within governments, private companies, civil society – ref. reporting standards, transparency, awareness, etc.	Strengthening capacities in forest management is a strategic theme	
Public goods	Cross border protected areas				+
Extra-sectoral dimensions of forest policy	- Extrasectoral drivers (agriculture, mining) - Implications for regional integration (labour markets) - Landscape restoration			+ ++ +	+ +

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Annex 1: International agreements / organizations of the selected countries

	Cote d'Ivoire	Ghana	Guinea	Liberia	Sierra Leone
ECOWAS member	Member	Member	Member	Member	Member
UEMOA member	Member				
IUCN member				Member	
ITTO	Member	Member		Member	
Climate change Convention and Kyoto Protocol	CC (National Communication in 2001 & 2010) Ky	CC (National Communication in 2001) Ky	CC (National Communication in 2002) Ky	CC Ky	CC (National Communication in 2007) Ky
Registered CDM (type)	2 (Biomass energy and landfill gas)	1 (Reforestation)		1 (Landfill gas)	
Biodiversity Convention	Party (Biodiversity strategy and action plan, fourth national report in 2009)	Party (Biodiversity strategy and action plan, fourth national report in 2009)	Party (Biodiversity strategy and action plan, fourth national report in 2009)	Party (Biodiversity strategy and action plan, fourth national report in 2010)	Access (Biodiversity strategy and action plan, third national report in 2009)
CITES	Party	Party	Party	Party	Party
FCPF		RPP produced (01/2010)		RPP formulation (200.000 $ grant)	
UN REDD	No	No	No	No	No
EITI	Candidate	Candidate	Candidate (suspended)	Compliant	Candidate
FLEGT		X			

ECOWAS :	Economic Community of West African States
UEMOA	Union Economique et Monétaire Ouest Africaine
IUCN :	International Union for Conservation of Nature
CDM :	Clean Development Mechanism
CITES :	Convention on International Trade in Endangered Species of wild Fauna and Flora
ITTO :	International Tropical Timber Organization
FCPF :	Forest Carbon Partnership Facility
EITI :	Extractive Industries Transparency Initiative
FLEGT :	Forest Law Enforcement on Governance and Trade

Annex 2: Organization of forest administration in the five countries

The way in which a forest administration is structured gives one indication of the priorities of the government. The level of staffing is an indicator of the implementation capacity of the service, and the different bodies in charge of managing financial flows can also give an idea of the possible efficiency of these flows.

In this regard, the five countries show some important differences:

- Côte d'Ivoire with a General Direction of Water and Forests in the Ministry of Environment, Water and Forests seems mostly focussed on regulatory missions (specifically, the Direction of 'Forest Law Enforcement and Legal Affairs'). The administration liaises with forest industries through a Direction directly attached to the Cabinet of the Minister ('Direction of Production and Forest Industries'). SODEFOR, also plays in important roles as an autonomous body in charge of classified forests management. A National Forest Fund is in process of planning.

- In the case of Ghana, the legislative reform of 1999 – the Forestry Commission Act, Act 571 – established the Forestry Commission as the forest authority of the Ministry of Lands and Forests. The four previously separate public bodies and civil service departments involved in the regulation of Ghana's forestry and wildlife were grouped as divisions under the Commission. There is still something of a tension in the forestry authority, in that the Forestry Commission is charged with regulating the sector and managing its revenues, as well as developing the industry. It tends to focus on the economic role of the forests and has close links with the forest industry. Revenues from forest exploitation (stumpage, etc.) are directly collected by the FC, and are part of its budget (Bird et al, 2006). Under the NREG program, however, more than half its budget now comes from donor sources, which holds this conflict somewhat in check.

- Guinea, like Côte d'Ivoire, has a General Direction of Forests and Fauna in the Ministry of Environment and Sustainable Development. Rural and community forestry seems an important issue (one Division of Rural Forestry, one Centre for the Promotion of Community Forestry, several centres for rural and community forestry…) and an autonomous body is in charge of the remaining wet forests management (N'Zérékoré Forest Centre). Taxes are collected by the *Office Guinéen du Bois*, OGUIB, which is under the Minister's Cabinet, and part is reserved for the National Forest Fund for forest enhancement. The recorded number of administration staff in charge of forests is 1,765.

- In Liberia, the Forest Development authority operates under the Ministry of Agriculture , the primary objectives which are to:

    - Establish a permanent forest estate made up of reserved areas upon which scientific forestry will be practiced;

    - Devote all publicly owned forest lands to their most productive use for the permanent good of the whole people considering both direct and indirect values;

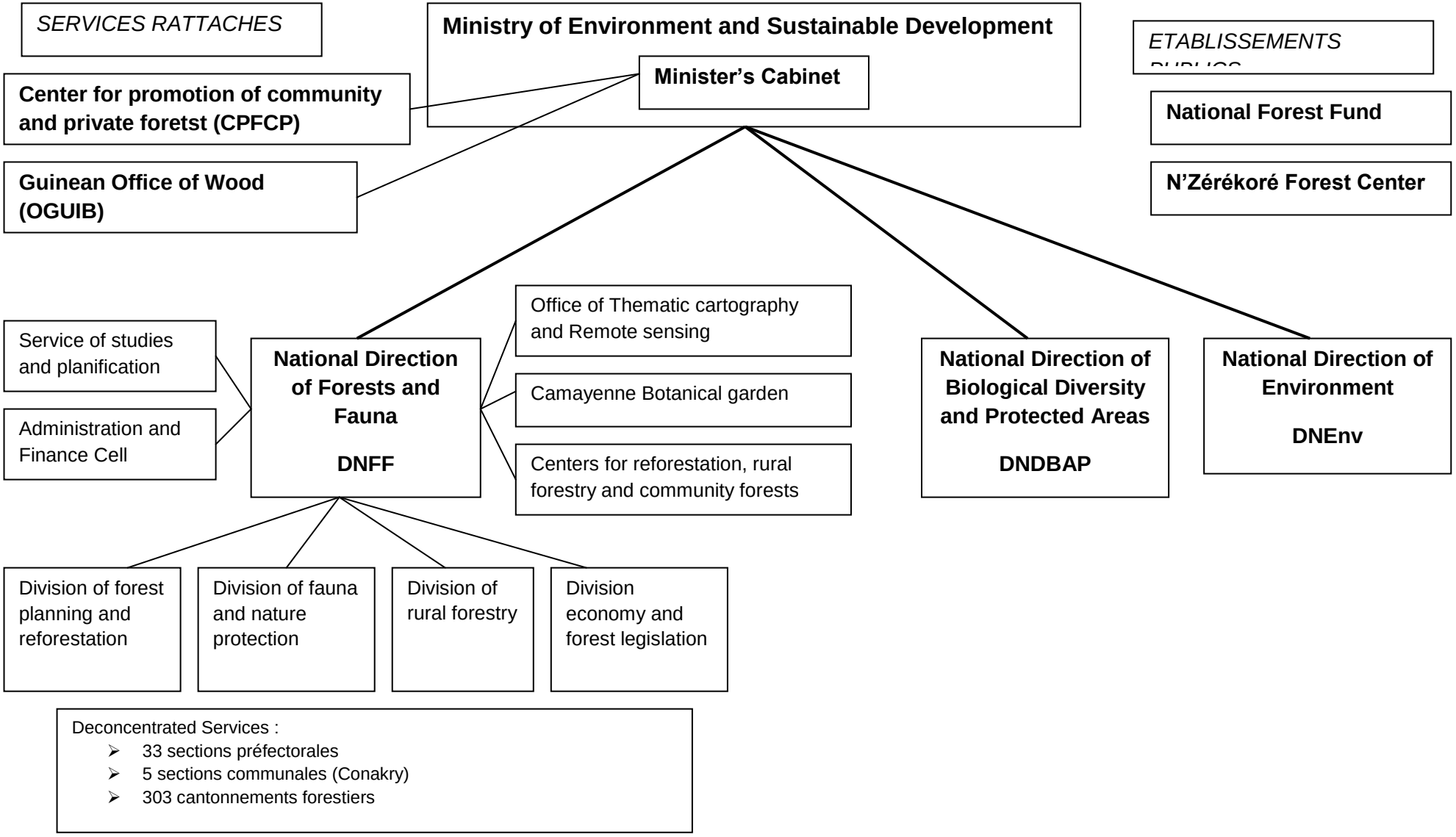
- Stop needless waste and destruction of the forest and associated natural resources and bring about the profitable harvesting of all forest products while assuring that supplies of these products are perpetuated;
- Correlate forestry to all other land use and adjust the forest economy to the overall national economy;
- Conduct essential research in conservation of forest and pattern action programs upon the results of such research;
- Give training in the practice of forestry; offer technical assistance to all those engaged in forestry activities; and spread knowledge of forestry and the acceptance of conservation of natural resources throughout;
- Conserve recreational and wildlife resources of the country concurrently with the development of forestry program.

The FDA operates under a Board of Directors, with the Minister of Agriculture as chairman. Other members are the Minister of Finance, the Minister of Local Government,. The Minister of planning and Economic Affairs, the Minister of Commerce Industry and Transportation, the President of the Liberian Bank of development and Investment, and two Liberian nationals, one with experience in the field of law, and the other with experience in the field of business. Along with the the Managing Director of the Authority, these individuals are appointed by the President.

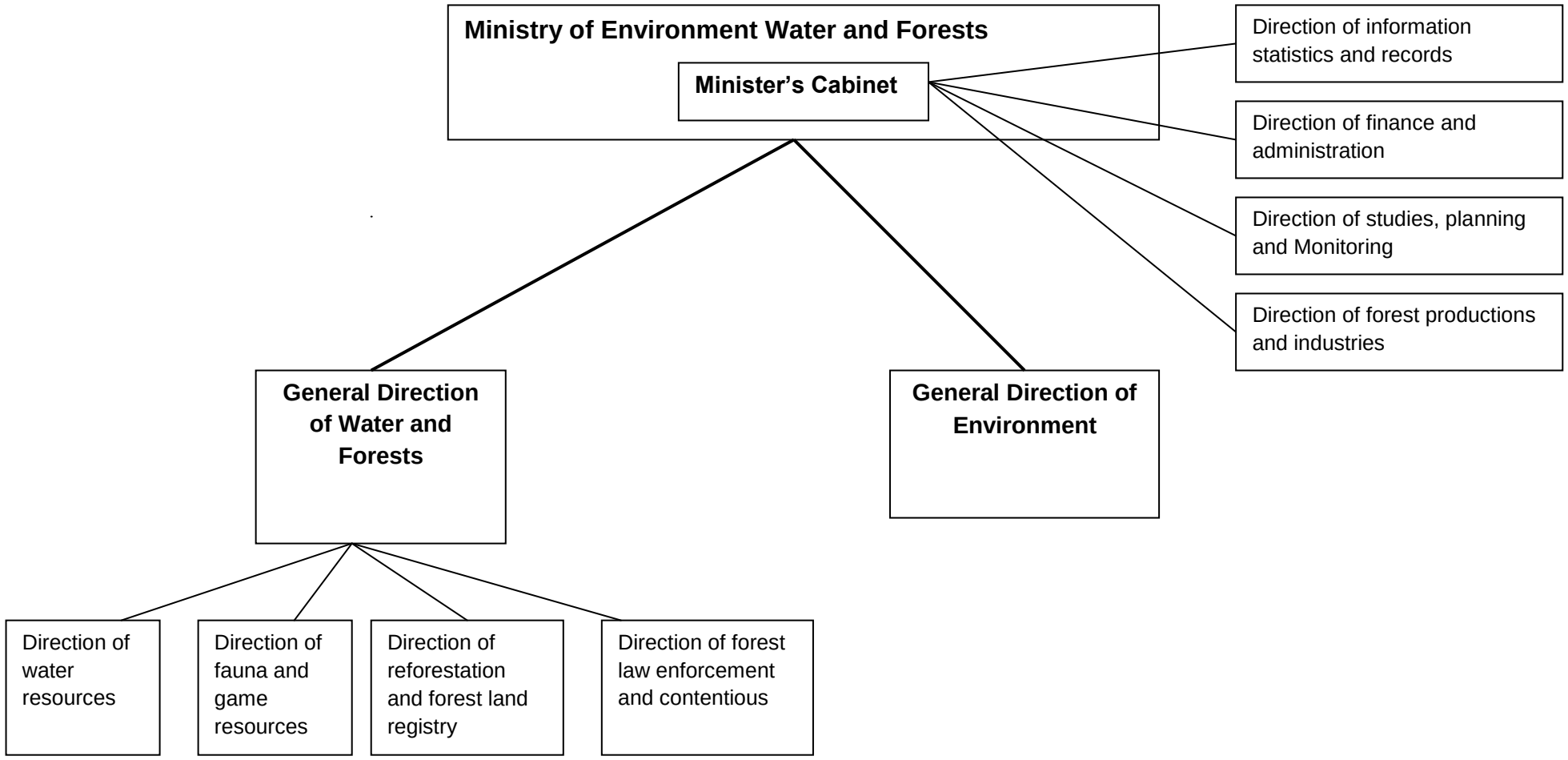
- Sierra Leone : The main forest authority in the country is the Forestry Division of MAFFS (*Minister of Agriculture, Food Security & Forestry)*. The Chief Conservator of forest heads the Authority. Three Deputies head the newly established but informally recognized units for Conservation, Commercial and Community A newly set up Environmental Agency (cf. Environment Protection Agency Act, 2008) has now responsibilities for all political matters regarding environment.

Political and management responsibilities seem relatively clear, with Ministries in charge of policy drawing, and specialized Directions (or autonomous bodies) for forest management. The operational capacity of forest services is nevertheless insufficient in the present configuration where the State claims the responsibility for management of huge forest areas. Except for Ghana, financial flows remain complicated and not clearly “forest management” oriented.

Annex 2.1 Organization of the forest service in Guinea

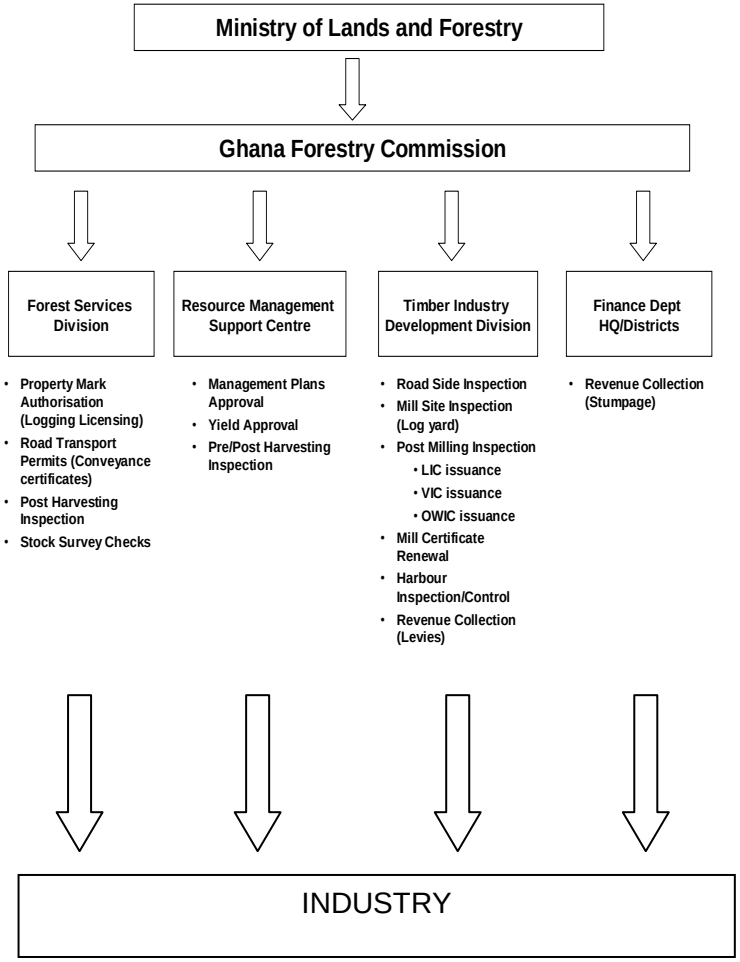


Annex 2.2 Organization of forest service in Côte d'Ivoire



Annex 2.3 Existing forest control system in Ghana

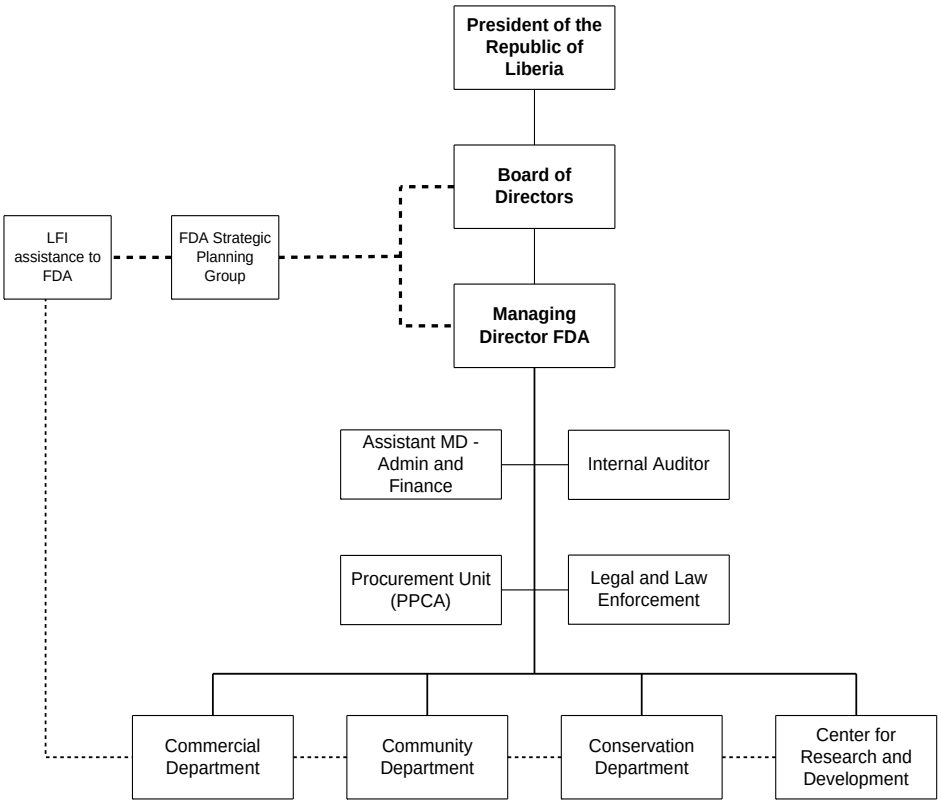
(*Source:* Beeko, 2005, slightly modified)



Annex 2.4: Liberia - FDA Organisational Structure

FDA Organisational Structure

(Source: Business Plan, NPAN, 2006)



The FDA engages a total staff strength of 301, 27%of which are in administration and finance.

Source: FDA, Annual Report (2007).

ANNEX 2.5: Sierra Leone organisational structure