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A Political, Legal and Economic Framework for Sustainable Forest Management in Cameroon. Concerted Initiatives to Save the Rainforests.

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Abstract

Currently there exist no examples of sustainable forest management (SFM) in Cameroon, despite the fact that in 1994 the national forestry law was changed considerably with the aim of creating a framework for sustainable resource management. Annual deforestation rates are high and population growth, poverty, fuelwood collection, agricultural encroachment, and unsustainable logging are generally considered as the underlying driving forces. This direct causal relationship, however, is an oversimplification because it is rather the current framework, in which the above-mentioned factors are embedded, that causes deforestation. Thus, three main problem areas have been identified as the *real* driving forces for unsustainable resource use: governance failure, a weak legal framework and misdirected economic incentives. At the forefront, however, is the lack of government commitment to sustainable forestry management and corruption. These problem areas and interrelations are analysed in detail and consequently possible pathways towards more sustainable management practices are identified. It will be shown that the international community must take responsibility for putting pressure on the Cameroonian government to enforce the legislation and should offer financial and technical support to local authorities. Ultimately, national government commitment to sustainable resource management will be crucial if the sustainable use of the forest resources is to be achieved. Forestry, however, is not an isolated issue; it is influenced by different factors such as agriculture, economic development and social issues. It will be argued that changes will require the cooperation of all stakeholders involved in the process. Only a holistic strategy combining different sectors and including various stakeholders will eventually bring about the necessary changes and will lead to sustainable forestry management in Cameroon.

List of abbreviations

ATIBT	Association Technique des Bois Tropicaux (International Technical Tropical Timber Association)
CAR	Central African Republic
CEB	Compagnie Équatoriale des Bois (Equatorial Timber Company)
CED	Centre pour l'Environnement et le Développement (Centre for Environment and Development)
CFM	Community forest management
CIB	Congolaise Industrielle du Bois (Congolese Industrial Timber Company)
CIFOR	Centre for International Forestry Research
CIRAD	Centre de coopération internationale en recherche agronomique pour le Développement (International Research Centre for Agronomy and Development)
CLD	Causal loop diagram
EU	European Union
FAO	Food and Agricultural Organisation
FCFA	Franc Communauté financière africaine (Franc of the African Monetary Union)
FMU	Forestry Management Unit (Concession)
FSC	Forest Stewardship Council
GDP/GNP	Gross Domestic Product/Gross National Product
HIPC	Highly Indebted Poor Country Initiative
IMF	International Monetary Fund
ISO	International Organisation for Standardisation
ITTO	International Tropical Timber Organisation
IUCN	International Union for the Conservation of Nature
MINEF	Ministère de l'Environnement et des Forêts (Ministry for Environment and Forests)
MP	Member of Parliament
NGO	Nongovernmental Organisation

NTFP	Non-timber forest products
ODI	Overseas Development Institute
OECD	Organisation for Economic Cooperation and Development
ONADEF	Office National de Developpement des Forêts (National Forestry Development Agency)
p.a.	per year
RIL	Reduced Impact Logging
SAP	Structural Adjustment Programme
SFH	Société Forestière de Hazim (Hazim Forest Group)
SFM	Sustainable Forest Management
UNEP	United Nations Environment Programme
USD	US Dollar
VC	Ventes de Coupe (Sale of Standing Volume)
WBCSD	World Business Council for Sustainable Development
WTO	World Trade Organisation
WWF	Worldwide Fund for Nature

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1. Introduction

“Of all manifestations of life which evolution has produced, the tree is the most complete. Trees possess this peace of mind, this distinct repose which they gained ages ago, winning the struggle for height and light. Clearer than anything else, the tree displays the place of all living things between Earth and Cosmos.”

Rolf Edberg (1974) *By Foot of the Tree*. quoted in [130, p.1]

In the second half of the 20th century, large-scale exploitation of African tropical forests started in the easily accessible areas of West Africa. In the beginning, foreign timber companies arrived and opened up huge areas of previously closed primary forests to satisfy their highly selective logging operations. The logging companies were often followed by settlers, who used the newly established road network to start up settlements, to exploit non-timber forest products (NTFP) such as bushmeat, medicinal plants and palm wine, but also to clear land in order to plant food crops. Only thirty years after the tropical timber boom started in Côte d’Ivoire, the country’s primary forests have been fully exploited and only scattered areas of secondary forests remain [96]. After the depletion of West Africa’s rainforests, logging companies turned their focus to the largely intact, high-value primary forest areas of Central Africa and the Congo Basin [27]. In only a few years, however, Cameroon’s forests could be as depleted as those in Western Africa, since today the country follows similar paths of deforestation as Ghana, Nigeria and Côte d’Ivoire in the 1970s and 1980s [83].

The aim of this thesis is to identify the main driving forces behind deforestation in Cameroon and to show possible pathways towards a more sustainable forest management. Rather than presenting one simple solution, as has often been done in the past, the goal is to show the linkages between the stakeholders at various levels and to identify their possible contributions towards sustainable forest management. If substantial changes should be achieved, a concerted approach of all stakeholders will be required, without constantly accusing their counterparts of being the “real” driving force behind deforestation. It will be argued throughout the paper that it is too simplistic to draw direct relationships between deforestation and population growth, poverty, agriculture, fuelwood-gathering, or the forest exploitation of logging companies since these factors do not necessarily lead to deforestation. It is much more important to look at the current political, legal and economic frameworks, which largely determine the rate of forest destruction, and in which the above-mentioned factors are embedded. In order to achieve sustainable development in the forestry sector these frameworks have to be changed.

The paper will analyse the possibilities and constraints for sustainable forest management (SFM) in Cameroon, but will not discuss the tradeoffs between conservation and forest exploitation. When it comes to the various pathways towards sustainability the different tasks of the stakeholders who are involved in the process will be analysed in detail, but the thesis will not investigate how pressure groups could lobby the international community to take action. The thesis will outline certain issues of international forest policy and tropical timber markets, but will otherwise focus on national forestry issues. Thus, the various agendas of international stakeholders will only be mentioned briefly, but reasons for their involvement in forestry issues will not be considered.

Cameroon has been chosen as the focus area because the country is Africa’s leading exporter of tropical timber [46]. Its moist forests are considered to be some of the most diverse tropical rainforests, making them one of the most species-rich in the whole Congo Basin [13]. Conserving this biodiversity will be crucial for “keeping alive alternative forms of production for the biotechnology industry, and more important for future biological evolution on earth [116, p.675].” Furthermore, it will be necessary for Cameroon’s long-term economic development to sustain the economic benefits related to timber exports and not to sacrifice long-term goals for short-term ‘boom and bust’ benefits. The World Council on Environment and Development pointed out that environment and development are not separate challenges, but are inexorably linked, thus

development cannot subsist upon a deteriorating resource base [122]. It will, however, be shown that to date ‘development’ in Cameroon has been mainly based on the destruction of the country’s forests, a strategy which is clearly not sustainable. Therefore, “the whole notion of ‘development’ is open to serious question as humanity seems to move inexorably towards its own demise through ecocide [120, p.222].” A management strategy has to be found, which is based on sustainable resource use.

Saving Cameroon’s rainforests from destruction will also be crucial for sustainable forest management in the whole area of Central Africa as it will set a precedent for the region. Today many primary forest areas of this world have already been depleted, but humankind has apparently not yet learned from past failures. This paper will show that sustainable forest management is possible and it will also explore a possible path for achieving this. Special emphasis will be given to issues related to commercial logging with a detailed analysis of the framework in which the industry is operating, how that contributes to unsustainable forest management and what changes will be necessary to achieve SFM.

In 1994 a new forest code was passed in Cameroon and the country was said to have one of the most advanced forestry laws in the Congo Basin,¹ but recently the Cameroonian government has been criticized for not fully implementing the legislation [29]. In order to promote SFM in the country certain changes of the law will be necessary, such as the logging concession policy or tax laws. A very important change, however, lies outside the forestry sector and concerns current power structures in Cameroon. Therefore, this thesis is also a plea in favour of decentralisation and policy reform, which considers a leadership that is wholly accountable to its people. The African Association for Political Science [120] points out that new economic programmes should be based on the people’s own aspirations and needs and on the people’s right to self-determination and independence. In order to bring these changes about a multistakeholder approach should be applied. The underlying assumption is that cooperation at an international, national and local level is possible and will eventually, when SFM is put in place, lead to a clear win-win situation for all stakeholders involved in the process.

2. Method and analytical framework

This thesis is based on a profound literature review, which was conducted at the beginning of the research. Consequently, gaps in the literature were identified and the missing information was acquired by means of interviews. Nineteen semi-structured interviews² were conducted with key-stakeholders involved in Cameroonian forestry: representatives of nongovernmental organisations (NGOs), the commission of the European Union (EU), timber companies and international organisations such as the World Bank, the World Trade Organisation (WTO) and the World Business Council for Sustainable Development (WBCSD). The questions were tailored to the interviewees and were organised in the form of a discussion about issues on tropical forestry in Cameroon. This information has been used to carry out a detailed qualitative analysis, aiming to find the interdependences between the underlying causes of deforestation and attempting to show the linkages between the stakeholders. To complement the analysis causal-loop diagrams (CLDs) have been made in order to show cause-and-effect-relationships and feedback loops.

¹ The International Tropical Timber Organisation (ITTO) [74] concludes that Cameroon is part of the “super six,” namely those countries which have done the most to achieve the original ITTO goal for the year 2000, of having all tropical timber being exploited in a sustainable way. The ITTO research team, however, points out that the country still has “some problems” in implementing the legislation, but “the will to implement is there, [only] the means are lacking [74, p.6].” This is again a clear example of simplifying a complex issue and the paper will prove that the ITTO conclusion is incorrect. In fact, to date there is no single forest area in Cameroon being managed in a sustainable way [149].

² The interviews are listed at the end of the references.

3. Underlying causes behind deforestation

3.1. *The tenuous link between population growth and deforestation*

The debate around population growth and deforestation³ is very lively and there are many scientists such as Laurance who view “human population pressure [as] the most crucial underlying cause of deforestation [89, p. 111].” This is an opinion, which is shared by well-known researchers such as Myers [101] and Palo [108; 131], the World Bank [28] and the World Wide Fund for Nature (WWF) [109]. It is not surprising that the logging industry [87; 140] is also an advocate of this theory since it detracts from the attention given to the forest degradation caused by timber exploitation. However, it seems to be an oversimplification to directly link population growth to deforestation [2; 115], especially given that “overall, the rural population densities in the forest provinces are quite low [46, p. 10].”⁴ This fact should not, however, lead one astray to the conclusion that overall population growth on a country level cannot lead to deforestation, since that is related to a higher demand for agricultural products and fuelwood [122]. Lambin, however, points out that “simplistic views that establish a direct causal relationship between increasing population density and the degradation of land should be subjected to critical scrutiny [86, p. 61].” Contreras-Hermosilla argues that population growth is “not simply an independent variable that acts alone in influencing the fate of forests [35, p. 19].” At the local level population density is the result of other factors such as the availability of infrastructure or economic opportunities elsewhere in the economy and colonisation policies [35]. A view which is also supported by Tiffen *et al* [119] who argue that degradation depends much more on management and societal organisation than on an increasing population. Having analysed the results of more than 140 economic models which explain the causes of tropical deforestation, Angelsen *et al* [4] point out that current models only offer weak support for the explanation that population growth is the driving force of deforestation and the correlations are largely based on flawed data or incorrectly specified models.

3.2. *The poverty trap and deforestation*

Some authors such as Palo [90] draw not only a direct link between population growth and deforestation, but go further by pointing out that population growth and low income levels are further increasing degradation. Thus, they blame environmental degradation directly on the poor who cause deforestation out of necessity in applying high discount rates⁵ [46]. Furthermore, poverty makes it difficult for people to invest in ventures for land use development [8]. This view is challenged by Angelsen *et al* [4] who point out that there is little empirical evidence for links between deforestation and poverty. Therefore, poverty and discount rates should rather be considered exogenous variables for the analysis. This opinion is also supported by Contreras-Hermosilla who carries the argument further when he states that “analysts who travel a short distance back in the causation chain that leads to deforestation may argue that poverty is an underlying cause. Others, looking further back in the linkages will argue that the real underlying

³ Tropical deforestation according to the Food and Agricultural Organisation (FAO) is the “depletion of tree crown cover to less than 10% [FAO quoted in 130, p.10].” All other types of tree removal are called forest degradation and are therefore not included in deforestation estimates. Forest degradation and deforestation are usually intertwined phenomena. [130]

⁴ In eastern Cameroon with the most extensive rain forests the average population density is 6 – 7 inhabitants per km² and further East, in the Boumba-et-Ngoko region, there are on average 2 inhabitants per km² [79].

⁵ Discount rates are used to calculate the net present value of an investment, and to find out the appropriate duration of investments. Investors apply different discount rates depending on the availability of funds and the risk of the investment.

cause is in fact the unequal political and economical power structures, which in turn are rooted in the foundations of society and that, instead, poverty is nothing but the effect of such power structures. [35, pp.5-6]"⁶

The issue of poverty and deforestation is again related to management practices, because "in certain circumstances the rural poor used resources in a sustainable manner for long periods of time, even for centuries [35, p.9]." Local institutions, including social norms, are crucial as they guide the use of resources [2]. Consequently, poor communities are not only able to manage rain forests in a sustainable way, but it also has been shown that forests can contribute significantly to poverty alleviation, if community forestry is applied [1; 55; 114]. Forest industry development, however, has to date not shown a significant contribution to increasing the living standards of rural poor [5]. In fact industrial timber production in Cameroon only "tends to benefit a small minority (often foreign investors) and its contribution to poverty alleviation is minimal [56, p.6]." Instead of blaming the poor people for causing deforestation, the argument should focus on the contribution of forests in poverty alleviation. This step, however, will not only require a profound change in the political framework of the state, allowing for power decentralisation, but also in the World Bank policy, which to date is mainly oriented towards economic growth.

3.3. The contribution of agriculture to deforestation and ways to promote sustainable farming techniques

According to the World Resources Institute "agricultural encroachment spurred in part by the expansion of cacao and coffee export markets, along with production of food crops, has been the primary driver behind outright forest conversion [88, p.11]." This view is shared by a number of scientists [22; 36; 46; 101] and the logging industry [87; 146]. Even though there can be no doubt that the expansion of agricultural activity is a serious threat to Cameroon's rain forests, this argument is again problematic as it collectively blames all farmers and agriculture is identified as the principal problem.

Generally, it can be said that shifting cultivation in areas with low population density, for example, in eastern Cameroon, is no threat to the forest and has also been practised in a sustainable way for centuries [27; 115; 128]. "The ecological footprint of an individual farmer in Cameroon is comparable to that of a traditional forest-dweller and farmers hardly use chainsaws or large-scale burning for clearing land [29, p. 157]." This argument, however, should not obscure the fact, that under certain conditions farming can lead to deforestation. Logging roads, for instance, open up previously inaccessible areas to human settlements and agricultural encroachment [13], thereby serving as a catalyst for deforestation [109]. Consequently, local farmers convert extensive areas along logging tracks into agricultural land [46]. In the past, this agricultural encroachment was further promoted by several factors. First, the economic crisis after 1987 led to a significant stream of return migration from the city to the countryside [102] and second, under the 1981 forestry law the government encouraged settlement in forest areas by giving people the opportunity to establish title to the land by transforming the forest into a useful farm [59]. Moreover, the economic crisis, which lasted until the mid-1990s, resulted in the collapse of cacao and coffee prices forcing farmers to diversify and expand the cultivation of food crops. These were established largely outside of existing farmlands, thereby increasing forest clearing. [12; 29]

Agricultural productivity in Cameroon is very low [105] and was further reduced by the Structural Adjustment Programs (SAP) put in place since the late 1990s [12]. One reason for this

⁶ This distinction in the hierarchical structure of causes and effects will have profound implications on the policy measures being applied. In the first case, if poverty is identified as the root cause, policy prescriptions will be issued to accelerate income growth and to combat poverty (e.g. World Bank policy on poverty reduction). If, however, deforestation and poverty are seen as the result of unequal power structures the policy measures will instead address the issue of power decentralisation and the participation of the civil society. [35]

low productivity is the failure of the agricultural policy, which was not able to provide efficient consulting for farmers and could not promote the introduction of modern agricultural techniques. Instead of supporting small-scale agriculture, money was mainly invested in inefficient large-scale plantations which further accelerated deforestation. Today Cameroonian farmers are poor and cannot afford the necessary investments to increase productivity. [93] In conclusion, it is a fact that under the current framework agriculture represents a serious threat to rain forests.

There are, however, many ways to make agriculture more sustainable, but in order to reduce the impact of agriculture government commitment will be crucial [148]. As long as there is still open access to land farmers have few incentives to increase the productivity of their farms [28]. Therefore, a well-elaborated zoning plan in participation with the civil society has to be put in place which clearly distinguishes between forest and farm land and is based on a thorough social and environmental impact assessment.⁷ Furthermore, the authorities ought to reduce infrastructure investments in forest areas or strictly control the access to land once the logging roads are in place [77; 148].

Sustainable agriculture support programs should be established to promote the ecologically sound intensification of small-scale farms [98; 107].⁸ Many environmentally benign agricultural technologies have already been developed for Sub-Saharan Africa [28]. Agroforestry for example has a great potential for sustainable farming [117; 123] and is a viable alternative to slash-and-burn cultivation. Trees planted together with agricultural crops provide the farmer with fuelwood, building poles, fodder and fruits and also enrich the soil [134]. Cacao agroforests conserve 50% of the plants, 60% of the birds and 100% of the forests' larger animals and could thus be used as belts between extensively cultivated areas and forests. [1] Agroforestry is not only suitable for cacao plantations, but can also be applied to rural hardwood production in conjunction with other cash crop plantations such as coffee, palm oil, or rubber. It is currently successfully applied for food crops such as sorghum, corn and cassava [83]. In conclusion, sustainable agriculture in symbiosis with rain forests is possible if the right framework is in place.

3.4. Fuelwood collection, a major threat to forests?

A number of scientists [36; 92; 105] point out that the fuelwood collection is a major cause for deforestation. Dahms [36] for instance shows that 80% of the harvested timber is used for fuelwood while logging companies cut only 10%. The obvious conclusion is therefore: industrial logging is no problem, only the local population is to blame. This is again an example of an oversimplified analysis which does not correspond with reality. The counterargument of the Food and Agricultural Organisation (FAO), however, which “does not consider fuelwood collection an important cause of deforestation [129, p. 90],” is also highly simplistic. It is true that in rural areas fuelwood collection does not represent a threat to forests, because there is enough dead wood to cover the demand [9; 98], but urban fuelwood demand is causing severe degradation of forests near densely populated areas [27; 98].

It is again the framework and management principles which make fuelwood gathering unsustainable, and the poor are not directly to blame. In Cameroon fuelwood is considered a free good, and in spite of its severe scarcity in certain areas, the stumpage price remains low, due to open access [131]. Another problem is the use of inefficient stoves and the current production process for charcoal, which leads to a 50% decrease in the caloric value of fuelwood [98].

⁷ The current zoning plan does not show these characteristics: see Chapter 5.2.1.

⁸ Micro-finance programs are very effective solutions. These could be combined with conservation activities, as has been successfully achieved by the Nicaraguan program “Los arboles valen” (Trees have a value). This program provides access to low-interest and long-term credit in proportion to the number of trees planted, offers technical information and advises farmers on the appropriate management system. [112]

Fuelwood collection can be sustainable even around urban areas, but this would require changes to the present fuelwood policy. Open access to forestland has to be restricted. “As long as farmers can obtain their fuelwood from local forests without being charged for the replacement costs of the trees they cut, these farmers have little incentive for private plantings [76, p.31].” Therefore, a differential taxation system should be applied. Farmers would not be restricted, licensed or taxed in marketing the fuelwood of their farms, but fuelwood coming from open access areas will be taxed. A similar system has been successfully implemented in the Niger Savannah woodland, guiding collectors to woodlands where fuelwood is available at a lower extraction cost and capable of being produced more sustainably [112]. With the current problems of law enforcement in Cameroon it might, however, be difficult to administer this system immediately, but nevertheless it should be put in place, even if its implementation might take some years. Once the open access is restricted, it will encourage agroforestry around urban areas and allow farmers to sell their fuelwood at competitive prices [76]. Apart from supply-side policies authorities should also reduce the demand for fuelwood by increasing energy efficiency through the introduction of more efficient stoves⁹. In summary, these findings suggest very clearly that fuelwood collection does not have to be a threat to rain forests, if a suitable framework is in place.

3.5. Logging, the beginning of the end of the forests?

According to Michelsen *et al* [98] commercial logging can be considered the most important cause for forest destruction. Not necessarily because of forest degradation¹⁰ caused by logging, but due to the fact that the logged over forest generally remains unprotected. Thus, logging opens up large areas of formerly inaccessible frontier forests [76]. Consequently, settlers often follow logging companies and cause deforestation of large areas. “Commercial logging can [therefore] be considered the beginning of the end of tropical rainforests [98, p.217].” Logging also has negative effects on indigenous people living in the forest areas; it removes many trees and plants upon which they depend for food and medicine. Moreover, logging facilitates commercial hunting of bushmeat, which increases the food insecurity for locals and threatens the survival of endangered species such as primates and elephants. [56]

“Logging itself, [however], need not necessarily destroy the forests, if properly managed [28, p.71].” There are several examples for commercial logging operators carrying out SFM in the tropics such as Precious Woods in Costa Rica and the Amazon or Compagnie Équatoriale des Bois (CEB) Thanry in Gabon. In Cameroon, however, no logging operator practices SFM, because the framework is inadequate. Thus, it is not necessarily the presence of logging companies which poses a direct threat to rain forests, but there are further underlying causes such as corruption or weak monitoring, which lead to deforestation. As logging companies will continue to exploit Cameroon’s rain forests because to date nobody is willing to pay for the conservation of the country’s forest ecosystems [139], therefore it will be crucial to find ways to encourage SFM.

⁹ The potential benefits of efficient stoves are considerable. Reduced operating costs lead to a very short payback period of only a few months. Cheap metal stoves can double the efficiency of traditional three-stone fire and locally produced ceramic stoves can even quadruple the efficiency, thereby reducing the demand for fuelwood and leading to lower indoor air pollution. [76; 92]

¹⁰ Due to very selective logging practices on average just 7 m³ of timber are cut per hectare [46]. Thus, the effect on the forest cover is minor, except for the mining of a few species. For a given volume of timber, however, a comparatively large area has to be logged over.

4. Forestry issues in Cameroon

This chapter will give a short overview of the economic development in the second half of the 20th century and will provide some key data on forest exploitation in Cameroon. Eventually, the 1994 forestry law and its implementation will be analysed.

4.1. Key data on the forestry sector in Cameroon

Land area (in 1,000 ha) [129]	Original forests as % of land area [129]	Current forests as % of original forests [129]	Current forest area (1995) in 1,000 ha [129]	Annual deforestation rate in the 1990s [12]
46,540	80.4	42.4	19,598	0.5 – 1.2%

Table 1: Forest area in Cameroon and rate of deforestation

Protected areas: Officially 14% of Cameroon's territory is set aside as protected areas [45]. In December 2000 the Tri-National Accord was signed between Cameroon, the Republic of Congo and the Central African Republic, which resulted in plans to conserve an area of 28,000 km². If this agreement is implemented it will be the first transnational park in Central Africa, which is completely sealed off from logging [29]. The agreement, however, has not been implemented, because of the lack of donor money [137] and an unwillingness to raise the money on a national level [143]. Greenpeace [63] points out that protected areas in Cameroon are mostly ignored due to rampant corruption and the lack of political will, money and personnel for monitoring.

Logging operators in Cameroon:

Total concession area in 1998/99 [13]	Total concession area in 2002 [69]	Concession area logged annually [46]	% of logging in East Cameroon [41]	Sustainable annual cut [81; 82]	Current level of annual cut [81; 82] ¹¹
4.05 mio. ha	> 6 mio. ha	350,000 ha	57%	3.5 mio. m ³	4.5-5 mio. m ³

Table 2: General data on industrial logging

In 1998 there were 479 logging companies registered in Cameroon, an increase from 100 in 1988 [13; 41]. This increase was accelerated by the 50% devaluation of the local currency FCFA (Franc Communauté financière africaine) in 1994.¹² In the year following the devaluation the number of logging companies increased by 80% to 351 [13]. In 1999, however, only 84 individuals and companies had valid logging rights, but practices of subcontracting these rights to various subsidiary companies were widespread. Of these 84 registered concession holders, a mere 25 held 75% of the concession area. The three biggest were Thanry, Bolloré and Coron, all French companies, holding almost a third of Cameroon's logging concession area through their various subsidiaries. [13; 14]

The economic importance of the timber sector: Between 1960 and 1978 agriculture was the engine of the Cameroonian economy and annual gross domestic product (GDP) growth in real terms averaged 4.8%. In 1978 petroleum was discovered and during the oil boom GDP grew at a record rate of 8.2% p.a. [12]. Until the mid-1980s timber did not play an important role in the economy. The country received its hard currency mainly from exports of oil and cash crops such as cacao,

¹¹ With the current pace of logging in production forests it will take only 15 years to log the entire forest area in Cameroon. The current extent of forest area opened annually for logging may constitute a threat to SFM. [41]

¹² Since the dollar market price of timber remained unchanged, profit margins for logging companies rose sharply because inflation increased the extraction costs only by a third [125].

coffee and cotton [41], but in 1986 Cameroon entered a severe economic crisis. Falling international oil, cacao and later coffee prices, poor economic policies and the depreciation of the US-Dollar (USD) [44] caused the GDP to fall by 25% by 1994 [36]. With declining revenues from oil exports the government had to look for a new source of income and, therefore, turned its interest to the country's vast timber resources. This policy was further promoted by the first SAP introduced in 1988 [41]. One major goal of the SAP was to generate foreign exchange through a positive trade balance, thereby encouraging natural resource extraction [57; 121]. Consequently, the percentage contribution of timber harvest to GDP has increased steadily from 3.5% in 1989 [41] to 6.7% in 1995 [43] and has finally reached 12% of GDP in the year 2000 [18].¹³ During the same period, the relative share of timber increased from 14% of total exports in 1996/97 [31] to 25% in the year 2000 [18].¹⁴ Government revenues from the forestry sector also increased five-fold from 1986 to 1995 [46]. Logging was especially promoted by the 1994 currency devaluation and during the fiscal year of 1994/95 timber production rose by 34% while exports increased by 80% [125]. The timber exploitation was further encouraged by the emergence of new markets in Asia, which promoted investments by South East Asian logging companies in the Cameroonian timber sector [109]. In addition to this sharp increases in timber exploitation the 1996 Country Assistance Strategy of World Bank aimed to further increase the timber sales of the country: the goal was to raise the forest product exports by another 80% by 2004 [46]; a strategy which is harshly criticized by Forest Monitor. The NGO points out that the current policy framework is inadequate to prevent unsustainable timber exploitation and, therefore, the increased use of the country's timber resources might lead to the rapid depletion of the forest resources [56].

Another important driving force behind the short-term aims to increase government revenues from timber exports is the necessity to repay the country's foreign debt.¹⁵ Lomborg points out that "the lumber problem frequently arises, because countries are caught in a debt trap and are forced to think short-term [92, p.114]." The country's payments for debt service are in fact very high and depending on the fiscal year the share of the budget used for debt repayment ranges from 25 to 44% [22; 93]. Forest Monitor argues that these "crippling debt repayments inhibit the emergence and implementation of policies that would facilitate ecologically sustainable and socially just development [56, p.8]." Therefore "by far the most important step towards assisting long-term sustainable development would be debt cancellation [56, p.9]." This has been partially achieved when Cameroon finally qualified for the Highly Indebted Poor Country Initiative (HIPC) in October 2000 [61]. HIPC, however, does not necessarily promote sustainable development because it is conditional on a number of factors, for example, the country must spend at least six years engaged in strict economic reforms under International Monetary Fund (IMF) supervision [61], which are often at odds with the sustainable exploitation of forests. Environmental considerations have yet not been incorporated to structural adjustment policy lending. The IMF promotes export-led development that has major environmental impacts, but these implications are hardly assessed. [57]

Besides the outside pressure of debtors to increase revenues from timber exploitation authorities also have an interest in promoting logging activities. The government's aim is to continue the country's development and job creation programmes [139]. Currently there are around 55,000 people directly or indirectly employed in the logging industry [13]. At the local level, however, the employment opportunities are rather limited because usually highly skilled outsiders are employed. The few unskilled jobs for rural people are often temporary in nature, and frequently disruptive of existing, more sustainable agricultural activities. [5]

¹³ The real impact on the national economy is probably much higher due to unregistered trade and the informal character of many activities [29].

¹⁴ Cameroon ranks among the world's top five tropical timber exporters [13] and in 1998 most of the lumber was exported to the EU: Italy 22%, Spain 18%, France 13%, rest of the EU 30%, China 10%, others 7% [56].

¹⁵ Cameroon's foreign debt increased from USD 420 million (15.3% of GDP) in 1975 to USD 2.9 billion (35.3% of GDP) in 1985 and to USD 9.2 billion (100% of GDP) in 1995 [95].

Cameroon's political system: After the country's independence in 1960 Ahmadou Ahidjo ruled Cameroon under a highly centralised one-party system. In the beginning of the 1980s Paul Biya took over and continued the one-party rule until 1990, when national and foreign pressure forced him to introduce a multi-party system. His power, however, was reassured twice in 1992 and 1997 in grossly manipulated presidential elections. According to the NGO Transparency International Cameroon was the world's most corrupt country in 1998 and 1999, a record which has only slightly improved in recent years. Despite a highly untransparent leadership the French government is still the country's closest ally. [22; 43]

4.2. The negotiation process for the 1994 forestry law

Before widespread reforms of the Cameroonian forestry law were initiated in 1994 the country's forestry legislation, dating back to 1981, was characterised by inefficiencies and unsustainable forestry management practices. "Cameroon's forest revenue and concession systems were complex and produced little government revenue. Timber fees and taxes were very low, set administratively and thus were considerably below the real value of the resource or what the concessionaries were able to pay. [50, p.1]" Despite low tax rates less than half of the tax was actually collected [125]. Forestry concessions were allocated in an arbitrary way, by mutual agreement (*gré à gré*) between the timber companies and government authorities. There was no requirement for the companies receiving concessions to practice SFM and since licences were only awarded for five years (renewable once) "cut-and-run" logging methods were encouraged [46]. The government required 70% of the production to be processed locally, but the short life of concessions did not allow for depreciation of the high capital costs. Therefore, only old and inexpensive machinery tended to be used, causing up to 75% wastage [50]. In conclusion, the 1981 forestry law led to an enormous waste of forest resources, did not consider sustainable management practices and financial irregularities together with low tax rates resulted in very low fiscal income, but high profits for timber companies.

If Cameroonian rainforests were to be prevented from suffering the same fate as the completely depleted forest areas in West Africa, the national forest legislation had to be changed. This was mainly an initiative of the World Bank, which sought to improve forest management in the region by using Cameroon as a model country for developing a forestry reform process [13]. The basic idea was to develop national legislation, which would allow for the sustainable exploitation of forests and would help to achieve the ecological, economic and social goals of SFM. Bank officials, however, found out that national government authorities were not necessarily in favour of introducing a reform process, because many officials wanted to safeguard their own private business interests in logging.¹⁶ The negotiation process, therefore, had to unite and reconcile the often conflicting interests of the national Members of Parliament (MPs), the executive branch of the elite in power, the World Bank and the donor agencies [29].

In the beginning the World Bank had the strongest bargaining position, because it threatened to suspend its financial assistance in the form of a third SAP agreement with Cameroon if the forestry law was not passed [46], but eventually the Bank was powerless against the opposition of the National Assembly. "MPs and other powerful people earning money from the logging industry were not impressed by the World Bank's threats to cancel credit lines and pushed through their own will on crucial issues [29, p. 143]." Furthermore, they benefited from the divided interests of the

¹⁶ The discretionary practices of allocating concession rights under the 1981 law served the interests of some powerful individuals, government officials and many parliamentarians. They were either directly or indirectly involved in logging as shareholders in timber companies or as owners of licences leased to foreign logging operators. They also benefited from the discretionary allocation of "Ventes de Coupe" (Sale of Standing Volume: a permit allocating logging rights up to 2,500 ha), which allowed them to participate in the lucrative business with limited capital. [22]

international community, especially from the conflicting goals between the World Bank and the French government. At crucial moments France provided financial and political support to the regime in order to promote the interests of French logging companies¹⁷ which operated in the country [22; 38]. By providing more support to the regime in Cameroon than the World Bank, France interacted better with the national authorities [43]. Another reason why the bargaining position of the World Bank was greatly weakened was the fact that Bank officials did not involve partnerships outside the central government into the negotiation process [46]. Civil society was not only completely excluded from the drafting of the 1994 forestry law, but the views of the locals were not even taken into consideration [146]. The Bank also did not put any information policy in place. Some MPs, however, waged a successful media campaign against the forest bill, in order to discredit the World Bank's policy by highlighting the Bank's emphasis on fiscal reform, to boost the ability of the government to repay the foreign debts [38].¹⁸ Furthermore, it was argued in the media campaign that once in place the new forestry law would lead to the selling out of Cameroonian forests to international logging companies. The campaign was very successful in building up virulent public opposition towards the law, which further strengthened the National Assembly's position [43]. Consequently, a significantly watered-down forestry law was eventually passed in 1994. The new legislation showed some improvements compared to the 1981 law, but when it came to implementation, hardly any progress was made during the first three years.¹⁹ The situation was very confusing, because contrary to the spirit of the new law, old licences have been renewed for several companies and concessions continued to be granted *gré à gré* [109]. Finally, World Bank officials gave in to government pressure and the implementation of the forestry law was no longer considered a prerequisite for new loans. When the 1997 auction of logging concessions was marked by widespread irregularities, World Bank officials did not hold the government officials accountable in order not to jeopardize its dialogue over key economic reforms. "According to World Bank technical staff, it missed a golden opportunity to reinvigorate the forest policy reforms [22, p. 76]." By wavering at a critical moment the World Bank gave a clear sign to the Cameroonian government that the implementation of the new forestry law was not a top priority for the World Bank: the Cameroonian government had won!

Nevertheless the World Bank succeeded in at least initiating a process of discussion about a more sustainable forestry legislation and several issues of the new legislation certainly have the potential to promote SFM. Debroux [134] points out that it is very difficult to change the behaviour of public forestry institutions in Cameroon and that it takes a long time to promote the issue of SFM among the country's authorities.

¹⁷ France was opposed to several policy measures, notably a log export ban (the World Bank was also against a log export ban) and concession auctions, which threatened the interests of politically influential French logging companies [22]. In contrast to the direct involvement of the French government in the negotiating process of the forestry act, the foreign companies kept a low profile during the formulation of the policy, but when it came to implementing the new legislation they fought every aspect of the reform perceived as eroding the protection they have enjoyed in the last 50 years [46].

¹⁸ This argument is certainly an oversimplification of the World Bank agenda. By aiming to reform the forestry sector in Cameroon the World Bank wanted to achieve a broader set of goals than merely trying to boost the country's ability to repay its debts. In the light of the Rio conference the international organisation tried to improve its image with regards to environmental issues. Karsenty [139] points out that the Bank had a set of different goals. First the policy of pricing: natural resources need to have a price in order to reduce its wasteful exploitation. Second, the fiscal input for the state was too low. In order to develop the country and to offer public services tax income plays a crucial role. Third, the Bank wanted to make the process of allocating concessions more transparent.

¹⁹ The passing of the act into law was only the beginning of the process, because the legal system, which Cameroon inherited from France, depends heavily on enacted law. This means that the content of the various decrees of application and *arêtes* (implementing orders) proved to be at least as important as the act itself. [18]

4.3. Characteristics of the 1994 forestry law and its implementation

Despite the difficulties in drawing up the new forestry law, the legislation finally succeeded in introducing some basic elements into the forest policy framework:

1., The land-use plan: distinguishes clearly between a permanent and a non-permanent forest domain. The former must cover at least 30% of the national territory and includes protected areas and concessions. The later may be converted into non-forest land [13].

2., Different logging permits: A new type of logging permit, the *concession* or *Forestry Management Unit (FMU)* was introduced to replace the licences. Concessions are granted in the permanent forest estate for 15 years, with the possibility of being renewed once [97].²⁰ They are allocated through a competitive bidding process [13] and cover up to 200,000 ha of forestland. It is mandatory to draw up a management plan within the first three years of the contract. During this time the logging operator can only exploit a small area of 2,500 ha (*assiette de coupe*) within his FMU. The logging firm is also required to set up a processing plant within each concession. To date no operator has finished a management plan despite the fact that the first FMUs were already allocated in 1997. [139]

Sales of standing volume (Ventes de Coupe) are logging permits for small areas of up to 2,500 ha within the permanent and non-permanent forest estate. They are also awarded through competitive bidding for one year, with the possibility of renewing the permit twice [56]. Management plans are not required and in the allocation process priority is given to Cameroonians, but foreigners can also apply [50]. *Ventes de coupe (VC)* can be subcontracted²¹ which greatly reduces the responsibility and accountability for forest exploitation [56]. There is virtually no oversight and illegal cutting is predominant [29].²² Despite the fact that VCs promote unsustainable forest exploitation, these permits were allocated on a large scale after the 1994 law was passed. In the year 2000, 55% of the total area allocated for cutting was managed through VCs [13]. There have been aims to reduce their use, but in the period 2001/02 a further 146 VCs were allocated [31].

Wood Recovery Permits (Autorization de récupération) are another loophole in the forestry law which promote unsustainable logging. These are not “normal” logging permits, but are used as such. *Récupérations* are issued only when a forest is going to be cleared for industrial purposes, such as the establishment of a palm plantation, where the trees would be destroyed anyway. Therefore, wood recovery permits neither require trees of a minimum diameter to be left nor forestry inventories. These permits can even be applied in permanent forest estates [37] and are thus open to wide abuse, since they are used clandestinely to allocate logging rights. [19; 56] In the period 2001/02 there were still 116 wood recovery permits used even though they were forbidden [31].

Exploitation permits are for the extraction of not more than 500 m³ and are allocated to licensed timber operators within community forests. No management plan is required for this permit. [37; 56]

Individual felling authorisations are for the extraction of not more than 30 m³ of timber for non-commercial use [56].

Community forests can be considered as a landmark change in the new forestry legislation. This concept was brought forward by the British donor community and was established against the will of national authorities. This is also the reason why the government was very reluctant in the beginning to implement this legislation and it was not until 1997 that the first two community forests were accepted. Despite the fact that the central government tried hard to discourage communities from applying for this logging permit and despite strong competition from commercial

²⁰ Originally the World Bank proposed a minimum duration period of 40 years in order to allow for SFM, but MPs changed that to 15 years [50].

²¹ The leasing of VC (affermage) has become a lucrative way for nationals without capital to cash in on privileged access to the forest resources [29].

²² According to an observer, for every VC that is logged legally, four are logged illegally [22].

logging operators, which often apply for the same area to be exploited, community forest management (CFM) has gained increasing popularity in recent years. The legislation stipulates that the community must be registered as a legal entity and must also present a five-year management plan *prior* to the allocation of the forest. The permit is issued for an area of up to 5,000 ha in the non-permanent forest estate and is valid for a renewable period of 25 years [37].

Licences should have been abolished with the 1994 forestry law, but during the implementation period of the new legislation these permits were still awarded *gré à gré*. In 2001/02 there were still five licences in use, eight years after the new legislation had been passed [31].

3., The auction process: A very innovative approach for the allocation of concessions and VCs was the introduction of a transparent auction mechanism [50]. This system allows market mechanisms to set the price by allowing the market to determine the appropriate level of area tax [80]. The Cameroonian National Assembly was against the auction process; officially because they feared a selling out of the rain forests to foreign companies, but the real reason was probably that they did not want to give up the lucrative possibility of collecting bribes from the allocation of logging permits. The original draft of the law was changed and an independent commission was introduced to make the final decision regarding the award of the permit. In the August 1997 auction the commission decided that 16 of 26 concessions were not awarded to the highest bidder and some concessions were awarded to individuals, who did not even appear on the list reviewed by the commission. Thus, the auction was a failure and subsequently the World Bank pressured the government to issue two decisions (*arrêtés*) in order to make the allocation process more transparent. From then on bids were only assessed on a series of yes and no questions and criteria other than the price would only represent 20% of the total score. Furthermore, a deposit of the area tax was required. [13] The subsequent June 2000 auction was more transparent and the allocation of FMUs generated on average three times more revenue per hectare and year than in 1997, but some illegal operators were still not sanctioned for their past illegal logging activities. [14] Another problem was the collusion of logging companies in the bidding process [149]. Cleuren [29] argues that the allocation of logging permits is still largely based on clientelist relationships.

4., The taxation system: A key issue of the forest reform was to increase fiscal revenues, thus the area tax was increased from 98 FCFA/year/ha to 1,500 FCFA/year/ha for FMUs and to 2,500 FCFA/year/ha for VCs (as the minimum tax rate to be offered at the above mentioned auction process). At the same time the stumpage fee, which in Cameroon is a tax calculated according to the amount of timber being cut, was reduced from 7 to 2.5% of the timber value. Moreover, the government introduced different export taxes for processed timber and for roundwood, with the former being significantly lower to promote local wood processing [31]. In 1996 the Ministry for Environment (MINEF) issued a decree, which required that within each VC a royalty of 1,000 FCFA per cubic metre of logged timber had to be paid to the local community [124]. The finance law of 1997/98 introduced a decree that the area tax had to be shared between the state (50%), the communes (40%) and the local communities living in the area under logging exploitation (10%)[50].

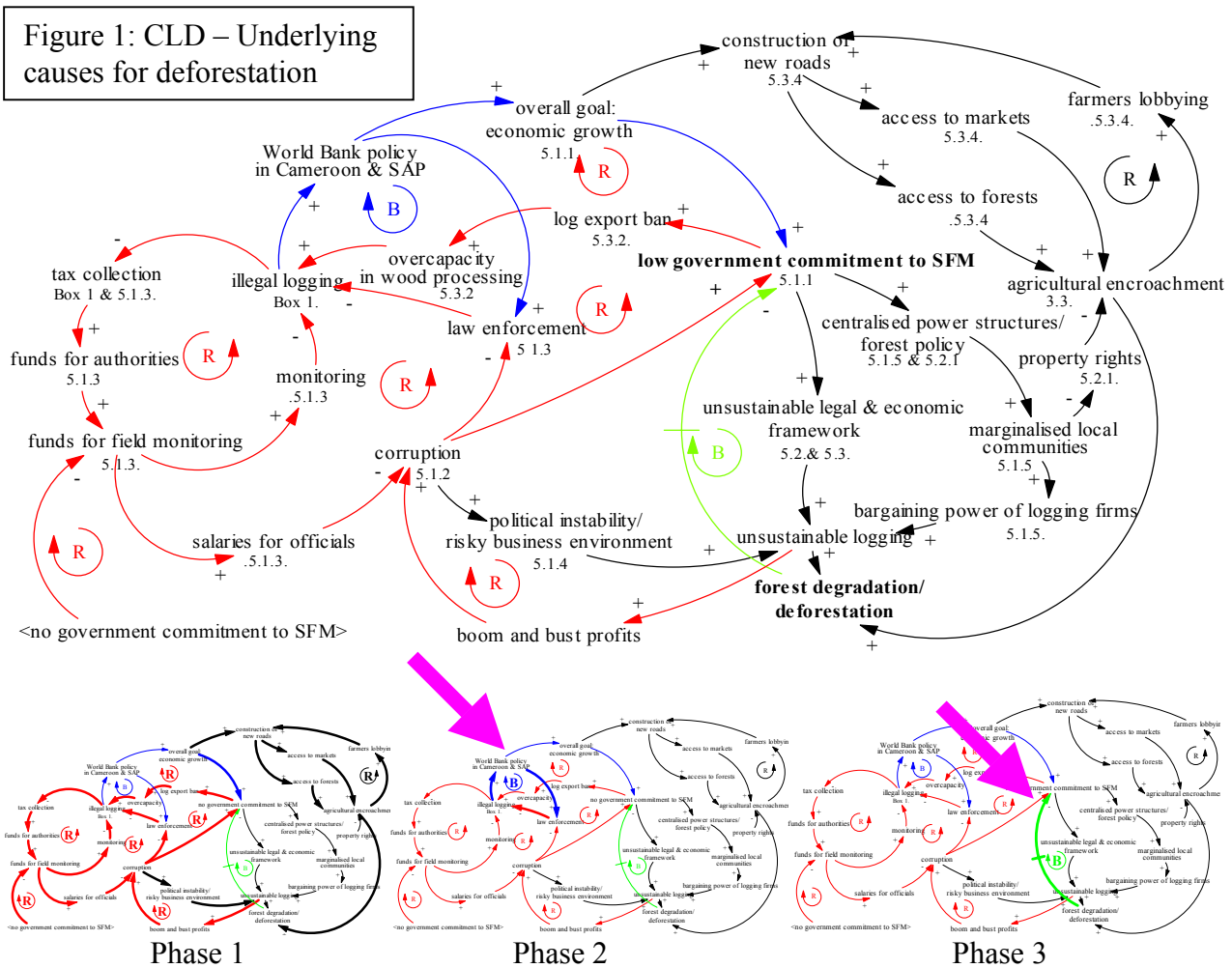
5., Log export ban: In 1994 the parliamentarians called for the introduction of a log export ban to promote local wood processing after the transition period of five years. Despite the opposition of World Bank and the French government, the ban was finally applied, but includes several loopholes.[50]

In conclusion, the new forestry law certainly introduced several positive features such as the auction system, increased taxes to show that timber resources have a price and CFM. It has also initiated a discussion process about SFM practices in Cameroon. There is, however, no clear political commitment towards the sustainable exploitation of forests, as illegal logging and corruption are rampant.

5. Critical review of factors leading to deforestation

The following causal loop diagram (CLD) indicates different underlying factors of deforestation and forest degradation, which will be further explored in the forthcoming chapters. The CLD shows that deforestation in Cameroon is mainly caused by governance failure. Authorities are not committed to SFM because of corruption, but also due to the predominant goal of economic growth, which is clearly promoted by the government and further reinforced by World Bank. Consequently, the balancing feedback loop between deforestation and increased government commitment towards SFM is delayed. Usually a declining resource base should induce authorities to employ long-term strategies, but currently the government only pursues short-term economic goals.²³

Below the CLD three different time periods are outlined. In phase one the highlighted feedback loops (arrows in bold) around illegal logging and road construction are dominant. In the medium term the balancing loop of outside pressure on the Cameroonian government is reducing illegal logging. It will, however, take until phase three that large-scale forest destruction will be balanced by increased government commitment to SFM. This stage may, however, already be too late to save the Cameroonian rainforests from widespread deforestation. Therefore, another CLD will be presented in chapter 6 indicating possible strategies to make government authorities change their forest policy earlier while it is still possible to introduce SFM on a countrywide scale.



²³ The numbers of the different chapters are shown in the CLD. Please refer to these for detailed explanations of the various links.

5.1. Governance failure

“Governance relates to the system and processes, the legal framework and institutions through which decisions are made in a society, the way in which these interrelate, and their relevance and relationship to various constituent parts of the nation”

World Commission on Forests and Sustainable Development [114, p.44]

5.1.1. Lacking government commitment to SFM

Jelle Maas [142] from Tropenbos argues that the Cameroonian government is not committed to SFM. There is simply a widespread belief among policy makers that timber resources are abundant, therefore, currently nobody has to worry about their protection. Furthermore, the overall goals are economic development and profits for the ruling elite; a strategy which is further promoted by World Bank. According to its lead official for forestry issues in Africa, Guiseppe Topa, the Bank’s agenda in Cameroon is “the development of the client country, thus to allow for its economic growth [147].” Industrialized countries have exploited their forests to become ‘developed;’ Cameroon also wants to achieve development, therefore, there is not much room for conservation of its natural resources at present [29]. Ondoa, the MINEF minister reiterates this point by stating that “conservation has to serve development [29, p.161].” Consequently, the government’s policy is primarily concerned with the expansion of the logging sector and the maximization of earnings from timber exploitation [31]. Currently, there is not much room for SFM; economic development and profits clearly come first!

5.1.2 Corruption: the root cause of forest destruction

“Unless you have a brother at the top of the tree, you won’t eat black plums”

Cameroonian saying [29, p.145]

Médard indicates that a dialectic exists between wealth and power when pointing out that “searching for power is to search for wealth, and searching for wealth is to search for power, because one leads to the other and vice versa [Médard quoted in 56, p.14].” In Cameroon the Presidency, including some important ministers, exerts real power [29]. At the same time officials employed by the national authorities also have substantial discretionary power [35]. Each official appropriates and manages their power for their own benefit, as indicated by the Cameroonian saying “The goat grazes where it is tied [56, p.14].” Consequently, a large number of the elite try to benefit personally from the exploitation of highly valuable timber.

The fact that there are a number of different institutions involved in the administration of forest policy, ranging from the prime minister and president to various ministries, a forestry department and the National Assembly [43] leads to a completely chaotic execution of the forest policy, arbitrary decision making, and the necessity of paying bribes at all levels to keep business going [29]. Cleuren [29] gives the example of a foreign logging company operating in the East of Cameroon, which made monthly payments of USD 1,700 to the préfet, sous-préfet, the local police commander and the divisional chief of MINEF. Furthermore, the MINEF official in charge of marking the legally-sourced logs received a monthly bribe to “lend” his marker to the company, who then mark the logs themselves. Another foreign logging company “had things under control” by paying all the officials at key positions a shadow salary alongside their official wage, in order to turn a blind eye at the logging site and to keep the logging operation going. It is, however, not only at the local level that bribes are being paid. Officials of the central administration also have to be well disposed towards logging companies. This in turn leads to proceedings against illegal logging activities often being stopped by the intervention of “someone from high-up” and firms can continue their destructive business [56]. At the same time leading policy makers of Cameroon

assure the support of “loyal friends” by awarding them logging rights. In the July 2000 round of concession allocation, which was considered the most transparent auction in Cameroon, three concessions were awarded to the president’s son. The Secretary General for Defence also received the right to exploit one FMU, which he then subcontracted to Société Forestière de Hazim, a Lebanese company known by the government for its large-scale illegal logging activities. Additionally, three generals of the Cameroonian army retained their logging concessions despite widespread irregularities occurring in their FMUs [56]. With corruption being the rule rather than the exception the parties which profit from the forestry sector have an interest in as little control as possible and a weak administration.

5.1.3. Deficiencies in field monitoring and law enforcement

Monitoring and law enforcement are generally considered to be very weak in Cameroon, especially in the remote eastern province, where most of the logging occurs and huge areas of pristine frontier forest exist.²⁴ There are several explanations for this policy failure and to a certain extent the underlying causes are all interlinked. One crucial factor, which already became apparent in the previous chapter, is the unwillingness of authorities to enforce the law and to monitor the activities of logging firms.²⁵ Since many officials benefit from bribes paid to them by timber companies there is not much motivation among MINEF officials, who are in charge of monitoring, to supervise the activities of logging operators [31, 149]. Consequently, illegal logging activities are rarely penalized [14]. Tax losses are huge, generally in the range of several billions FCFA per year [125], and Ngoufo [Ngoufo quoted in 125] points out that efficient field monitoring could increase the level of tax collection two- or threefold. Therefore, the argument of insufficient resources for monitoring seems to be a weak excuse. If millions are lost every year due to illegal logging and irregularities in tax collection it would only require a certain effort of monitoring to increase the tax income, which then could be used for improved monitoring facilities.

There have always been inadequate resources for monitoring [11], and this is owing to several reasons:

- ❖ Missing funds according to the interpretation of the Cameroonian authorities [56].
- ❖ The effect of SAPs which required drastic cuts in government spending [46]. The salaries of MINEF officials for instance were cut by 60 – 70%, because of the austerity measures required by SAPs [29].²⁶
- ❖ There is no willingness among authorities to put efficient monitoring in place, therefore, there are no funds allocated [29].

It is difficult to judge which of the three factors is the main driving force behind insufficient monitoring, but probably it is an interplay of all three issues. Whether through lack of funding or lack of will, resources are scarce. In the eastern province on average one poorly resourced

²⁴ Sporadic monitoring activities exist and some companies are even fined for illegal activities, but this is mainly due to pressure from the World Bank to increase fiscal revenues from the forestry sector. [29]

²⁵ Cameroonian logging companies, which are owned by influential members of the society, like army generals or MPs are never monitored or checked for SFM – it would simply be too dangerous for monitoring agents to control these forest areas. Therefore, these logging operators usually practise very destructive “cut-and-run” logging techniques. [undisclosed interviewee] (for security reasons the interviewee’s name is not made public, but is part of the interviews indicated at the end of the reference list)

²⁶ Generally, the overall capacity of the public sector was significantly weakened by the fiscal compression implemented by the government due to the Structural Adjustment Programme (SAP). According to the Operations Evaluation Department of World Bank the inefficient civil service remains a major obstacle to the strengthening of institutions, which is required of sustainable development of forest resources. Thus, “without support for institutional development, the significant gains achieved in environmental and forest policies will remain only paper policies [46, p.61].”

government official is responsible for monitoring 21,000 ha of concession area, but given the level of logging activities, oversight appears to be inadequate. Apart from a shortage of staff, the MINEF officials also have to rely on insufficient transportation facilities. In the East 116 monitoring agents share one single four-wheel-drive car and four motorbikes for their inspection trips to logging concessions. [13] Fuel or any kind of other support is usually not provided [56] and in order to carry out on-sight inspections the MINEF officials have to rely mainly on transport provided by the same logging company which they are supposed to control and sanction. One monitoring agent from the east points out “Sanction a logging company at its site – you only do that once! If you dare to fine them they refuse to bring you back with their vehicles and just abandon you in the late afternoon at the logging site. Then you must walk the whole distance sometimes fifty kilometres or more to the nearest village. [29, p. 146]” Even if infractions are reported to central authorities, many of these reports “disappear” within MINEF, usually in exchange for bribes paid to officials. Local monitoring agents see no return for doing their job and they also do not receive any support from their colleagues. “This leaves those who are keen to see improvement in forestry practices exposed in towns where the logging company may be the major employer, vulnerable to threats of violence or open to bribes given the absence of other sources of income [56, p.16].” Every time the government is allowed to get away with breaking the law, the prospects for real change diminish, because the hopes for younger foresters in Cameroon who seem concerned about greater efficiency and transparency fall. If they are not supported and encouraged by outside pressure, they could well be subverted by the corrupting influence of their seniors. [22] There is, however, some hope that monitoring practices in Cameroon are changing. Since the year 2000 an independent monitor called Global Witness has been overseeing concession management and the chains of custody for timber in order to counter losses in tax revenue due to illegal logging and corruption in the allocation of logging titles [16]. Global Witness has been conducting field control operations, installed a computerised case tracking system and has been strengthening the control capacities of local MINEF officials through training activities [61]. This can be considered an important step towards more transparency, but much work remains to tackle the problem of illegal logging and corruption.

Box 1. Illegal logging

There is a close link between illegal logging and corruption on the one hand and forest decline on the other [35]. It is no wonder that in Cameroon, which is considered to be one of the most corrupt countries in the world, illegal logging activities are widespread. Karsenty [81] points out that in the east of the country more than fifty percent of the logging is illegal. There are, however, different levels of infractions: illegal practices can include tax evasion,²⁷ logging after permits have expired or in unallocated concession areas, cutting undersized trees or protected species, and operating in an FMU without the required management plan [31; 78]. After the 1994 forestry law was passed illegal activities increased significantly, which can be attributed to a number of factors:

- ❖ Legislation has become stricter [139];
- ❖ Area taxes have been increased substantially, making it profitable to cut illegally [22];
- ❖ The local wood processing industry has built up an overcapacity due to the log export ban and a favourable export tax policy. In order to get enough timber for processing, the facilities often have to rely on illegally harvested logs. [78; 81]
- ❖ Widespread corruption and weak monitoring [13].

While illegal logging is certainly a major driving force behind forest destruction, it also makes it more difficult for those companies, which try to follow the rules, pay the taxes and aim at introducing sustainable management practices, to stay in business. At the moment there is simply

²⁷ An example is the widespread export tax evasion scheme for timber. Logs are declared as being in transit from Northern Congo, but are in fact of Cameroonian origin. Conflicting export/import statistics suggest that this practice is very common. In 1998 Cameroon declared exports of logs to Portugal in the amount of 57,038 m³, but Portugal declared in the same period imports from Cameroon of almost twice as much, namely 91,115 m³. [56]

no level playing field in the logging sector [138]: logging operators that follow the regulations have to bear higher costs than illegal operators who evade taxes and practise a “cut-and-run” strategy. In the market, however, the latter are in direct dumping competition with the former [144].

There are several European logging operators in Cameroon, which have been fined in the year 2000 for disregarding the forestry legislation. The reported infractions are, however, likely to be only the tip of the iceberg, given the institutional weaknesses in Cameroon. One example is Thanry, a French logging company, which was the biggest logging operator in Cameroon until the year 2000, when the company finally sold its logging rights to a Chinese timber company, Vicwood [56]. In July 2000 the group, which operated through several subsidiaries held almost 800,000 ha.²⁸ In March 2000 Société d’Exploitation des Bois du Cameroun, a Thanry subsidiary was fined and its operation suspended for three months, because of anarchic exploitation of the FMU and its exploitation in areas beyond the concession limit [56; 64; 66]. Furthermore, undersized logs have been felled and MINEF monitoring agents stated that “the logging practiced by the company undermined the entire forest policy and sustainable forest management promoted by the Cameroonian government [56, p.63].” Another foreign operator, who acquired fame for their illegal activities is the Lebanese company Société Forestière de Hazim (SFH). In June 2000, Global Witness discovered that SFH was operating illegally in a concession, which was not allocated at this time. More than 20,000 ha had been logged illegally, leading to economic losses for the Cameroonian government of around USD 10 million. In another concession, which borders the Dja Reserve, SFH has logged 15,000 ha illegally. Hazim has been fined more than USD 200,000 for repeated involvement in illegal forest practices, but these fines only represent a tiny fraction of the economic losses caused by SFH’s logging operation. No further action had been taken and European timber importers continue to buy Hazim’s timber. [65]

5.1.4. Political instability encourages short term strategies

Despite the widespread bribery practices of logging operators the situation for timber companies remains unstable and risky. “Ties, factions and interests inside the administration can change over time and the loyalty and smooth running of the companies’ operation is never guaranteed for long [29, p.147].” Since the political power structure can change quickly and allies might be forced out of office companies mostly employ a short-term “cut-and-run” strategy. Local operators depend very much on the loyalty of their ministerial allies, but also foreign logging operators point out that they are constantly uncertain about the duration of their stay. Thus, they claim to be ready to leave the country at any time.²⁹ [29; 98] According to Landrot [140], president of the International Technical Tropical Timber Association (ATIBT), political and economic stability is a prerequisite for long-term corporate investment in sustainable timber production, because “political instability makes any serious business impossible and simply attracts “cowboy entrepreneurs” who aim for quick profits [140].”

²⁸ If Thanry is considered as one company, despite being split up in various subsidiaries, the firm has clearly violated the legislation stating that the maximum area for exploitation must not exceed 200,000 ha. Irrespective of this fact two of Thanry’s subsidiaries have broken the law, because each of them operate in concessions larger than 200,000 ha. None, however, have been penalized for this infraction. [56]

²⁹ This encourages for instance the use of obsolete machinery in most sawmills, because major investments would only pay off in the long term [29].

Box 2. Logging and bushmeat hunting

Logging is closely linked to the commercialisation of bushmeat hunting and is, therefore, a clear driving force for the decimation of wildlife. It has a devastating impact on the fauna, especially on large mammals such as gorillas and elephants, because logging roads make formerly isolated forest areas accessible for commercial poaching, which leads to intensified hunting. [13] Furthermore, timber companies often provide weapons and ammunition for local hunters, so they can hunt bushmeat for the logging staff [125]³⁰ and logging trucks also transport the meat from the hunting zones to the markets. Truck drivers routinely carry loads of up to 200 kg of bushmeat, including gorillas and chimpanzees, in return for cash payment [13]. Particularly since the economic crisis the demand for bushmeat has been growing steadily in urban areas. [29]

In theory the rather strict hunting legislation requires a permit granted by the wildlife administration to carry out commercial hunting activities. Additionally, certain hunting methods are forbidden and several species are protected [13], but monitoring and enforcement is lacking and especially in remote forest areas there is little oversight. The controls of bushmeat trade on the entrance roads near urban areas are inefficient and serve to a large extent the private pockets of forest officials [124].

5.1.5. Centralised power structures

Cameroon's forest policy is highly centralised [42] and local populations are to a large extent excluded from forestry management. Forest dwellers, thus, have a marginal position in the debate about the development of the logging industry and the management of timber resources [29]. State agencies negotiate with logging companies and other international actors and local communities seem to be crushed between these forces [27]. Forest dependent people in Cameroon are widely dispersed, not well organised, they have a negligible public voice, and tend not to generate revenues for the state. Their long-term survival, however, depends on the sustainable management of forests, but with highly centralised power structures they do not have any say and their bargaining power with logging operators and government authorities is very weak. This is aggravated by the problem that locals have little or no knowledge of the regulations and procedures affecting the forestry sector. These are decided in the ministry departments in the capital. The day a logging company arrives in the area with an official permit, the local village community is usually confronted with irreversible effects [29].

Jean-Claude Nguingiri [103], coordinator of the International Union for the Conservation of Nature (IUCN) conservation project in the Congo Basin argues that the centralised forest management, which dates back to the colonial era and was shaped by the European forestry system, is inappropriate for Central Africa. Decisions of the central government are often in conflict with the rural population and marginalize their concerns. Therefore, the centralised power structure, which excludes locals from any decision-making, is certainly a major hindrance if SFM is to be achieved.

5.2. The legal framework behind deforestation

Governance failure is directly linked to the problem of inadequate legislation for SFM. In many cases there is simply no willingness among authorities to put an efficient legal framework into place, because this might counter their private interests. Therefore, this legal system encourages unsustainable forest management practices as will be further outlined in this chapter.

³⁰ Very few European logging operators restrict hunting inside their concessions [29].

5.2.1. Centralised land tenure system and inadequate property rights

Land use in Cameroon is governed by the Land Tenure Act of 1974 which abolished customary land tenure and nationalised all land. The daily life of forest-dwelling people was not changed directly, but nevertheless this policy measure had far reaching consequences. From then onwards people living in the forests have been enjoying only as much security of tenure as the state was willing to allow. This has become especially important since the start of the logging boom. [29] The national lands are administered by the state and local people are only granted user rights to meet their domestic needs such as firewood collection, the use of non-timber forest products (NTFP), wildlife hunting and farming. These user rights, however, can be overruled by the state at any time. Furthermore, naturally grown trees belong to the state, which does not represent any incentive for the local population to preserve trees and also disregards customary rights. [124]

These weak, local user rights were further reduced under the new forestry legislation when a new zoning plan was completed. A Canadian consulting firm, which was in charge of this project, applied a rather technical top-down approach with almost no consultation of the local population [124]. The principal aim of the zoning plan was to delineate FMUs and was solely based on economic criteria. Agriculture, hunting and gathering is, however, occurring in areas which were designed for logging activities, thereby generating conflicts between forest-dwellers and logging operators [29].

The problem is not only that locals do not have any legal status when they want to defend their rights against logging firms, but the government also does not recognise property rights. Weak property rights simply reduce the incentive to manage forests in a sustainable way [35].³¹ Moreover, land markets will not develop efficiently, nor will efficient levels of forest investment be achieved, if property rights are not recognised [62]. In conclusion, Lomberg argues, “if the rainforest is everybody’s property, it will be nobody’s responsibility [92, p.113].”

5.2.2. A regulatory framework for forest destruction

Apart from the problem that the 1994 forestry law is barely enforced, the law itself also does not necessarily promote SFM – something which can be observed during the whole logging cycle. First, mapping is insufficient. Only a few logging companies produce contour maps of the logging area in order to plan road construction which can be ecologically damaging, because it might lead to soil erosion and the pollution of waterways [59]. Furthermore, Cameroon’s forest management suffers from the lack of inventories [11], because the law forbids companies to conduct forest inventories or draft the management plans themselves. Forest inventories can only be done through accredited companies such as the National Forestry Development Agency (ONADEF), which is highly inefficient.³² This mainly leads to rent seeking for a few civil servants [143] and can be considered one of the principal reasons why competent inventory and management planning has not yet emerged in Cameroon [56]. Management plans also do not have to be elaborated in collaboration with local people, thus, local communities have no influence on the logging activities being carried out in their areas. Therefore, trees of local value for fruit, medicine, or for social reasons are cut [56; 59]. One example is the Moabi tree. Moabi is very important in economic, cultural and medical terms because its fruits are edible and medicine is extracted from the bark. Additionally, the fruit

³¹ “The open access nature of land abundant frontier areas is due to the lack of clear rights to property [94, p.162].” Thus, “land in remote forest areas can usually be obtained at little or no financial costs to the settler. In a market economy when land is cheap, abundant, and access is not controlled it is in the economic best interest to “mine” the land and to move to new land when the first parcel has become depleted. In private financial terms this approach makes more sense than managing the land sustainably. [94, p.162]”

³² ONADEF has carried out socio-economic studies of 30 villages in the Lomié region in eastern Cameroon in a mere three days, including two days travelling time from the capital and back [76].

produces Karité oil, which is an important source of income.³³ Due to the fact that Moabi is very fragile in terms of its regeneration, indiscriminate logging can easily lead to its extinction. Logging operators, however, hardly care as a manager of Société Forestière et Industrielle de la Doumé³⁴ puts it: “if we see a Moabi, we’ll log it, no matter if the trees are felled in the neighbourhood of settlements or below the minimum diameter [56, p.61].” Therefore, in the area where this logging firm operated, Moabi has now become locally extinct [56].

When it comes to logging, there is little legislative concern about logging methods or incentives for ecologically friendly logging techniques such as Reduced Impact Logging (RIL).³⁵ A clear hindrance for SFM is also the logging permit policy, which is currently applied in Cameroon. *Ventes de Coupe*, for instance, make rational timber extraction hardly possible. The short-term non-renewable licence period of one to three years, the very small permit area of 2,500 ha together with inferior legal technical requirements for logging operators and traffic in licences are often considered as a main driving force fuelling forest destruction [124]. Forest management units also do not promote sustainable resource use. The short average life of a concession of 15 years does not encourage ecologically sound management practices [31]. If companies have no guarantee that they will be able to harvest the fruits of SFM, there are no incentives to apply ecologically friendly logging techniques aimed at securing long-term management of the concession [59]. These companies will naturally rather practise short-term strategies, aimed at optimising their profit scenario as long as their access to the site is guaranteed [148]. Moreover, a short life span of the concession does not allow for an adequate amortization of the logging and wood processing equipment, thus obsolete machinery will be used causing high levels of wastage. In Cameroon, currently for every cubic metre of sawn wood, three cubic metres are felled [29]. Finally, there is also no legal protection of the logging site on national land after the logging operation has ended, thereby, often encouraging the settlement of farmers, who then continue the deforestation process [59].

5.3. Economic root causes for forest destruction

Economic failure is generally subdivided into three areas:

- ❖ *Local market failure* causes an economically incorrect balance of land conversion and land conservation. Simply put, those who convert the land do not have to compensate those who suffer the consequences, such as sedimentation of water, reduced availability of wildlife or NTFP. [20]
- ❖ *Intervention failure* or *government failure*³⁶ is “the deliberate intervention by governments in the working of market forces [20, p.14].” That is the failure to tax logging companies sufficiently or to encourage inefficient wood processing. [20]
- ❖ *Global appropriate failure* depicts the problem of missing global markets for public goods such as biodiversity or carbon storage of rainforests. [20]

The following chapters will mainly focus on intervention failure because in the short-term this form of economic failure will be easier to change. It is also related to the national framework in which logging companies operate. This should not obscure the fact that the issue of global public goods is not relevant for the protection of rainforests. Negotiating this type of global framework will,

³³ Estimates suggest that revenues from the oil for a ten year period surpass timber revenues for a tree of 100 cm diameter; the minimum size trees must be when logged legally. Furthermore, the oil is also valued by the French cosmetics industry. [56]

³⁴ This timber operator is mainly owned by Rougier, a large French logging company [56].

³⁵ RIL is defined as a practice that “comprises new techniques and new concepts of organising and planning timber harvesting with the primordial objective of damage reduction, and with a proximate goal of improving the efficiency of the operation [Van der Hout (1998) quoted in 52, p.77p].” That is, trees should be felled in the direction of existing gaps to minimize felling damage to potential crop trees, roads and skid trails should be well planned, etc. [53].

³⁶ This term should not be confused with governance failure or bad governance outlined in chapter 5.1.

however, take a long time, thus, it might be too late if the Cameroonian rainforests should be saved from destruction. Furthermore, it is also beyond the scope of this thesis to analyse this complex issue.

5.3.1. Economic instability and constantly changing tax laws

Awong argues that the “main cause of the rapid rate of deforestation [in Cameroon] is the macroeconomic policy of the government [8, p.6].” The problem in Cameroon is that the macroeconomic environment for investment is highly unstable, thereby, leading to high discount rates which encourage forest mining [112]. The risky environment is reinforced by constantly changing tax laws. Instead of negotiating with all stakeholders who are involved in the forestry sector to develop a reasonable tax policy usually unilateral decisions are made. The minimum level for the area tax was raised, industry protested and it was lowered again. Later MINEF officials introduced a local tax of 1,000 FCFA per cubic metre of timber cut – basically without consulting other stakeholders. This changing tax policy makes it difficult for logging firms to come up with a serious business plan and again encourages short-term strategies instead of long-term investments.

5.3.2. The log export ban and inefficient local processing

The log export ban, which was introduced in 1999 together with a preferential tax rate for processed timber has caused considerable economic inefficiencies, needless waste of forest resources and huge fiscal losses [50]. Since the local processing industry has been protected from market forces and competition through the export ban, highly inefficient processing capacities have been developed. On average, a Cameroonian sawmill is only 25 – 35% efficient³⁷ which means that 65 - 75% of the raw timber is wasted [125]. The effect of these inefficient processing techniques is a clear net loss! Export prices of processed timber are on average twice as high as for raw logs [82], but during processing up to 75% of the timber is lost and at the same time operating and investment costs of the sawmill widen the gap. The Cameroonian society also has to pay a high price for the jobs being created through local employment. The value added by local processing amounts to 4.5 billion FCFA, mainly in the form of salaries for the employees, but at the same time the government suffers tax losses of around 11.6 billion FCFA p.a. [31], due to much lower tax rates for processed timber.

Another big problem of the log export ban is, that it creates processing overcapacities, by forcing logging companies to set up sawmills. The growing capacity of the processing industry leads to a higher demand for logs and thus to increased pressure on the forests. This fuels unsustainable and illegal timber harvesting, but also the use of secondary species, because of their lower price. Therefore, timber extraction is intensified, resulting in the clearcutting of large forest areas. A similar development also happened in Ghana and the Ivory Coast where land deforested in this way has become degraded bush. [29]

It also has to be pointed out that the log export ban does not prohibit the export of all raw timber. It is rather a complex system of taxes and permits that still allows the log exports of certain species such as Ayous or Azobé³⁸ in order to promote their utilisation. In this case a surtax is levied on the timber, but exports of raw logs are still possible. “Given the weak institutional environment prevailing in Cameroon, it is easy to imagine cases of mislabelling or other fraudulent activities to subvert the ban [46, p.28].” Apart from the complex permit system, another large loophole remains to bypass the export ban: transit logs from the Central African Republic (CAR) and Congo can still be exported in their raw form. Customs documents can be easily falsified and it is almost

³⁷ Compared to 65 – 70% efficiency in Europe [50].

³⁸ In 1999 these two species amounted together for 41% of the country’s raw timber exports [81].

impossible to find out if the logs have been extracted in Cameroon or in a neighbouring country. A Cameroonian logger admitted before the export ban was introduced: “I have very good contacts at MINEF and there is no problem. They will maintain exceptions for less-valuable species to promote their export and for the logs from CAR and Congo. From June onwards, all my logs will have one of these characteristics [29, p.144].” Smuggling timber seems to be a common practice and government authorities are also involved in this highly lucrative business. Cameroonian customs officials visited the office of United Transport Cameroon, one of the country’s leading road transport companies and they uncovered an export tax evasion scheme for wood supposedly in transit from Northern Congo, but in fact of Cameroonian origin. Some employees were arrested, but soon released again due to the intervention of higher authorities. [56]

In conclusion, the log export ban helps promote illegal activities, the creation of a highly inefficient processing industry and overcapacities in the local processing sector. Thus, it is a clear hindrance to SFM.

5.3.3. Tax law and unsustainable logging

The tax law plays a crucial role in setting an appropriate framework for SFM. Currently there are few tax regulations in place, which clearly reinforce unsustainable logging practices. At the moment the prevailing tax system is mainly based on the area tax, thus, the logging firm pays an annual tax per logging area, irrespective of how much timber is cut. This tax policy penalizes large logging concessions, because the bigger the concession area, the more taxes have to be paid [140]. Bigger concessions are, however, required for sustainable rotation periods, because if the area is too small logging operators re-enter the site too early after the first cut. A current practice in Cameroon is to come back for the second cut only two or three years after the first wave of selective logging took place in order to extract the trees that in the meantime have reached sufficient diameter or species that have become more valuable on the international market [29]. This is certainly too early for logging re-entries (repasses). Another problem of the area tax is that it promotes the maximum exploitation in the shortest period of time, in order to reduce the tax burden.³⁹ Landrot [140] points out that this is one of the reasons why trees under the minimum diameter are cut and logging operators simply claim that it is the top part of the trunk and not its lower end. Since there is no significant levy for the number of trees that are cut (only 2.5% of the reference price; valeur mercuriale) logging operators use only the perfect logs after trees have been felled and abandon the rest. Thereby, they can maximize the profit by volume and also save on transport costs. [31] This logging policy leads to the fact that on average 30% of the felled timber is left behind in forests and wasted [31]. The current tax law also encourages logging in remote frontier forests in the east of the country by reducing the taxes on timber logged in that area – therefore, a constantly increasing number of forests are opened up by logging activities [29].

Another critical issue of the current tax system is the way the decentralised tax schemes are administered. Generally, it can be seen as a positive development to decentralise the tax system and to give local authorities the chance to receive tax incomes generated by logging activities in their area. Fomété, however, argues that “the impact of the decentralised taxation system is on the whole negative, and very far removed from its original aims [54, p.24].” There are two different decentralised taxation schemes. The first tool distributes 40% of the area tax to the regional council and 10% to the communities neighbouring the forest concerned. The second decentralised tax is charged on ventes de coupe permits and amounts to 1,000 FCFA/m³ of timber logged, which is given directly to local communities. The aim of these two tax schemes is to share the tax income with the communities where the logging takes place in order to promote the development of

³⁹ The concessions are awarded for 15 years according to the official regulation, but in reality companies calculate with an average life of only 10 years [29].

neighbouring village communities and to provide money for social projects. [54] The efficiency of the decentralised taxation system is low and due to a de facto absence of any controls the misappropriation of the funds is the dominant practice at a nationwide level. Less than 20% of the revenue is actually used to fund social projects or collective services to benefit rural populations. The 10% reserved for the forest-adjacent communities is frequently withheld in the council accounts and there is also a lack of transparency in the council's use of the funds. [31] Furthermore, the sudden influx of money is new for the forest communities and, thus, the allocation of the funds causes tensions and conflicts. Village leaders have received the money and used it for their own purpose or the funds were mainly spent to buy alcohol [81]. In addition to this the decentralised taxation increases forest exploitation and discourages CFM. Local communities are keen to receive the 1,000 FCFA tax and even support the illegal logging activities of timber companies. The tax also undermines CFM, because local elites often prefer the short-term gains of the logging tax, which they then use for their own purposes. [54]

5.3.4. The road to development

Cameroonian politicians want to promote economic development of the country. Further reinforced by the World Bank and IMF, this strategy became a paramount goal in the last decade. Economic growth and rapid profits have been considered the key interests, and the exploitation of rainforests was regarded as crucial in achieving these economic goals. The World Bank and the Cameroonian government, together with the international community such as the EU, which also had an interest in earning a share of the profit from the logging activities, tried to make the forests more accessible. International development projects of the EU supported primarily the improvement of the existing infrastructure and the construction of new roads [145].⁴⁰ The French government has also sponsored development projects to support its national logging companies. Timber expansion has been funded at all levels, despite a completely inadequate framework for sustainable forest exploitation, making deforestation an increasing concern. Development projects have been carried out without any social and environmental impact assessments [29; 125] and through the construction of new roads formerly inaccessible areas of the forest have been opened up for logging activities. Several scientists argue that the construction of roads is one of the most important driving forces behind deforestation [4; 23; 90; 112]. Logging roads facilitate the creation of new farmlands and the transport of harvest, thus stimulating agricultural encroachment [60].⁴¹ Contreras Hermosilla [35] points out that this trend is self-reinforcing, because after some time farmers may be able to successfully lobby politicians to improve these roads and to build new ones, making it easier for new settlers to move into forest areas. Consequently, roads lead to forest occupation and land occupation causes the construction of new roads.

5.3.5. Eco-certification, no viable tool under the current framework

“Forest management certification is an independent, third-party verification that forest management meets specific standards. These usually include good environmental, social and economic practice, and may also address sustainability.”

Commission of the European Communities [34, p.114]

⁴⁰ This trend remains still largely unchanged. The new regional programme for Central Africa earmarked up to 40% of the funds for road building and another 20% for regional integration. Less than 25% is allocated for projects for the conservation and sustainable use of forests. [49]

⁴¹ In Central African forests most of the deforestation takes place in logged areas, whereas there is little if any deforestation of previously unlogged forestland [23]. According to FAO “the deforestation rate due to the conversion of agricultural land is eight times higher in forests which have undergone forest activities than in untouched forests [47, p.1].”

Eco-certification has been praised as a very powerful tool to promote SFM [114], but after its introduction in the early 1990s a paradoxical situation emerged. Forests that most needed certification such as the tropical rainforests were those where the certification process was most difficult, whereas forests in the North, such as industrial plantations under little threat, were certified.⁴² Consequently, this drives timber from the South away from the ecologically sensitive markets. Therefore, “eco-certification of the world’s tropical forest is everything except a panacea [24, p.18].” Griffith also points out that “certification by itself is no solution [136],” because it is often mal-adapted to developing countries and above all national laws have to be enforced before it can be applied [136]. Thus, “certification is secondary, unless the structural problems in the country’s legislation and monitoring process are resolved [139].” This analysis coincides well with the fact that to date there is no company operating in Cameroon which is eco-certified [91], despite the fact that the WWF, in cooperation with the EU, has chosen Cameroon as a pilot country in Central Africa to promote certification. Since the project started in 1994, no real progress has been made. [69] According to a WWF study, eco-certification could be a viable tool to promote SFM in Cameroon, but under the current framework eco-certification will not be introduced on a large scale [WWF quoted in 125].

Box 3. Different schemes for eco-certification in Cameroon

There are two different kinds of standards which are currently in place: process and performance standards. The former, also known as environmental management system standards, defines how to carry out the process to ensure that consistent performance is achieved, but it does not require a minimum standard except compliance with legislation. The most widely used process standard is the ISO 14001 forestry initiative of the International Standard Organisation (ISO). It is a voluntary standard, which ensures that management systems are in place to continually improve environmental performance. [10] Thus, it is rather the environmental management system, which is certified and not the forest. There is a strong preference among industry for the ISO certification process, because it encourages the development of an internal management capacity, the standards are set by the company and not by outsiders, companies are used to ISO standards in other operations like processing and it is cheaper than the Forest Stewardship Certification. [112] Considerable work also has been undertaken in developing a “bridging concept” between process and performance standards aimed at combining the two concepts [10]. The ISO standards for forestry could serve as a very useful tool to promote SFM, because they introduce a system of continued improvements in the company and also require strict controls from the certification body. Griffiths [136] argues that SFM is a gradual approach and cannot be achieved overnight; the same holds for the ISO 14001 process. Therefore, ISO 14001 could help to introduce SFM practices into the operations of a logging firm. Especially when a company finally aims to implement a performance standard such as the one promoted by the Forest Stewardship Council (FSC), it certainly would help to make logging operations in Cameroon more sustainable.

Performance standards differ from process standards in the way that they define a minimum level which has to be achieved, but do not say how that needs to be done. Thus, the forest management of the company is evaluated on a pass or a fail basis [10]. There are several different performance standards, which are all voluntary and are therefore not in conflict with the current WTO regulations [150]. The Forest Stewardship Council is probably the most prominent, but when it comes to Central African rainforests, the Dutch government is also promoting the development of a Dutch certification scheme (Keurhout). The logging industry itself is currently working to establish a Pan African Certification system.

⁴² This is because in the North there is a low level of competition for land, ecosystems are simplified, information systems are efficient and SFM techniques are not disputed. [80]

The Forest Stewardship Council is an NGO primarily supported by the WWF and Greenpeace which are concerned about good forest management. Thus, FSC tries to pursue environmental, social, and economical goals [10]. Logging companies operating in the Central African rainforests are, however, very sceptical about the FSC certification. They regard it as “unrealistic, too demanding and out of touch with reality [70, p.4].” This devastating analysis of FSC is mainly due to the bad experiences the logging companies have had with FSC. In 1996, Leroy-Gabon was granted a FSC certificate, but some NGOs were not satisfied with the management standards applied by the company. Therefore, a virulent media campaign was carried out which finally resulted in the withdrawal of the certificate [80]. Since this incidence occurred no single logging operator in the Congo Basin became FSC certified despite the big efforts of WWF-Belgium to promote the concept in the region [69].

Consequently, the Dutch development agency started to set up its own certification scheme. It is purely an initiative of the private sector with only weak NGO support. Being financed by the timber industry makes the scheme vulnerable to critique from environmental NGOs. Nevertheless, it is based on a very transparent certification process, it cooperates with an independent board of experts and scientists and guarantees the ecological and social integrity of the firm’s management process. [135] Several logging firms got already certified according to this scheme, eg. CEB Thanry in Gabon.

The International Technical Tropical Timber Association (ATIBT) in cooperation with the Centre for International Forestry Research (CIFOR), which develops the principle criteria and indicators for SFM are currently developing the Pan-African Certification Scheme, which should be both adapted to the regional specifications and be internationally credible [140]. If independent monitoring will be guaranteed, this certification system could become a viable alternative to FSC in Central Africa.

One of the main problems with certification in Cameroon, however, seems to be that several environmental NGOs insist on the high standards of FSC applied to certify SFM practices, despite the fact that these might not be sufficiently adapted to the Central African context with weak law enforcement and high levels of corruption [136]. The outcome is that no logging operator is certified in Cameroon instead encouraging a few firms to seriously engage in SFM. In the beginning they might not meet all the standards, but at least they would be engaging in a process of continued improvement of their environmental management practices and could thereby serve as a role model for other companies.

Thus, in conclusion chapter 5 has proved that deforestation is mainly caused by the current political, legal and economic framework. This framework can be changed and these changes will be outlined in the upcoming chapter.

6. A path towards SFM

In 1995 the resolution H1 of the Helsinki Conference came up with the following definition of SFM: “Sustainable management signifies the managing and utilisation of forests and wooded areas, in such a manner that they retain their biological diversity, productivity, capacity to regenerate, and the vitality and capacity to satisfy pertinent ecological, economic and social functions both today and in the future [6, p.13].” The principal question, however, is if SFM is actually possible in the tropics. Verbelen [149] points out that when it comes to logging activities in rainforests, the present knowledge is still limited, because tropical forestry has only been practised since the 1950s and it has been largely characterised by failure. Burgess [23] carries this argument further by indicating that only a very limited number of tropical forests are actually managed sustainably. Thus, “the notion that rainforest logging is “sustainable” is a chimera – predatory logging often depletes valuable timbers, and because many rainforest trees are ancient, unrealistically long intervals are

needed for timber stands to recover from the harvests [89, p.114].”⁴³ Cleaver [28] even calls for a complete ban of logging in tropical moist forests. There are certainly particularly biodiversity rich areas, which require protection [46], but a complete ban is counterproductive, because “logging has the potential to help conserve tropical forests [89, p.114].” Even though in practice logging has often fallen short of this goal, precisely because the framework has been inadequate [34],⁴⁴ but logging need not be the end. (cf. Chapter 3.5) The Tropenbos Cameroon Program shows that an integrated management of the rainforest ecosystem, which aims at combining the interactions of all actors using the forest, is feasible. In order to achieve a real ecosystem approach, the management of tropical forests has to go beyond sustained timber production. Two basic concepts can be distinguished, the first is “aménagement forestier,” which is the kind of forest management that considers timber production as the main objective and thus only involves public authorities and logging companies as the principal stakeholders in forest management. The second concept of “gestion forestière,” however, goes beyond that restrictive definition and tries to work with the total set of forest resources and users. The aim is to establish an economic, ecologically and socially sustainable management of the ecosystem. Thus, ultimately integrated management of the forest has to move from a restrictive *gestion* to a broader *aménagement* of the forest resources by applying both a multistakeholder and a multisector approach. [51] The former includes all principal stakeholders from local forest dwellers to logging operators and central authorities in the management process. The latter recognizes the links between different sectoral policies such as agriculture, forestry or social issues and aims at managing them with a holistic approach [28].

It is often argued that SFM practices are economically unattractive, because they imply a number of additional costs such as the preparation of a management plan, proper road construction, and social services for the local forest dwellers etc., whereas, the revenues only occur later [58]. If SFM is combined with long-term secured ownership of the concession and sufficient funds for investment at the beginning of the operation, SFM can work. This argument is supported by the case of Precious Woods, a Swiss corporation, which operates in Costa Rica and Brazil. The company was founded in 1990 and started with a reforestation project in Costa Rica. Later Precious Woods expanded its activities into natural forest management in Brazil to enhance the medium-term cash flow. The forest is managed in a sustainable way⁴⁵ and economic viability of the business is assured by utilizing as great a variety of tree species as possible. This practice avoids over-harvesting of certain commercially-known species and helps to generate sufficient harvest volumes. The sales and marketing strategy is based on a rather unusual approach. Precious Woods does not only market sawnwood to higher paying international markets in Europe, the USA and Asia, but also sells semi-finished products in order to pre-package lesser-known tropical wood to end-users and to reduce waste. Semi-finished goods can be produced from scrap and odd-size pieces that result from the production of standard-size sawnwood, which because of its dimensions would otherwise be thrown away. The company had serious financial problems in the beginning of its operations due to high initial costs and weak sales. [111] These problems, however, could be solved and since the year 2000 Precious Woods is making profits. From the financial year 2000 to 2001 net profits increased by 163% to USD 1.45 million [110] and recently the company was also listed on

⁴³ Laurance bases this view on two articles: Fearnside, P.M. (1997) Protection of Mahogany: a Catalytic Species in the Destruction of Rain Forests in the American Tropics. In: Environmental Conservation. New York, Cambridge, Vol. 24, Issue 4, pp.303-306. And: Chambers, J.Q., Higuchi, N., Schimel, J. (1998) Ancient Trees in Amazonia. In: Nature. London, Washington, Munich, Paris, Tokyo. Vol. 391, pp.135-136.

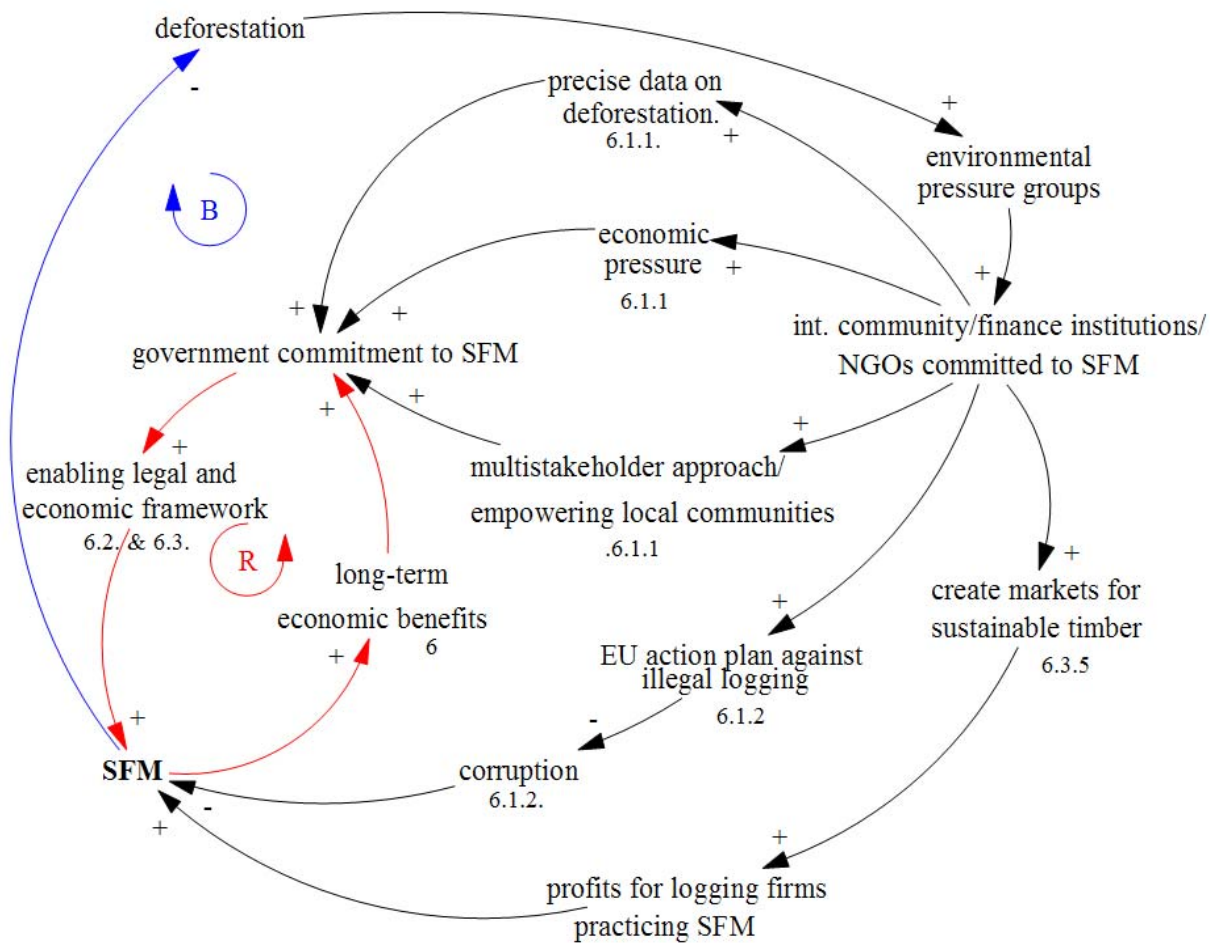
⁴⁴ “A general framework of land-use planning, legislation and regulations targeted towards both forestry and related sectors is necessary [...] to create the legal incentives for implementing sustainable-management practices [58, p.168].”

⁴⁵ Forest management is based on the Celos management system, which was developed in Surinam by Reize de Graaf of Wageningen Agricultural University in the Netherlands. It combines both a harvesting and silvicultural system, is based on RIL techniques and its emphasis is on forest inventory as a key planning tool. Careful silvicultural practices are employed to enhance regeneration between the cutting cycles. [111]

the Swiss Stock Exchange [118]. This case shows clearly that SFM is not only technically possible, but can also be economically viable [68].

The following CLD indicates possible pathways towards SFM in the Cameroonian rainforests, which will be mainly initiated by the international community. NGOs and international organisations have to take action,⁴⁶ because of the delay function between deforestation and national government commitment to SFM (Phase 3), which was shown in the previous CLD. (cf. Figure 1: CLD: Underlying causes for deforestation)

Figure 2: CLD – A path towards SFM



6.1. Good governance

“Good governance lies at the heart of sound environmental management in particular the public management of natural resources.”

David Brown *et al* (Overseas Development Institute/ODI) [16, p.1]

“A country that is under good governance installs confidence and attracts investors of quality for durable developments.”

Jean Jacques Landrot (President of ATIBT) [87, p.1]

⁴⁶ Reasons why the international community should tackle the problem are not provided by this paper, because these issues are beyond the scope of this thesis. Possible leverage points, however, could be the lobbying activities of environmental pressure groups, or also the framework of the 1992 Rio conference in which these international organisations have been operating recent years.

Table 3: Governance failure and pathways towards good governance⁴⁷		
Driving forces	Solutions	Leverage Points
The government is not committed to SFM	Government commitment to SFM	<ul style="list-style-type: none"> - Outside pressure from the donor community, finance institutions and NGOs - Support for environmentally conscious officials - Show with precise data the effects of unsustainable logging to raise awareness - Create one single international timber organisation
Corruption, illegal logging	Monitoring, supervision, law enforcement	<ul style="list-style-type: none"> - EU-action plan against illegal logging and anti-bribery directive - Direct NGO action against illegal logging (e.g. Friends of the Earth suing Rougier) - Better payment for government officials and better monitoring equipment - Support local NGOs
Political Instability	Stable political environment	<ul style="list-style-type: none"> - Fight against corruption - Multistakeholder negotiations of the forestry law instead of confronting stakeholders with a fait accompli.
Centralised power structures	Decentralised power structures, participation, multistakeholder approach	<ul style="list-style-type: none"> - Strengthen local civil society (involve them in negotiations, support local NGOs) - Empower local communities (educate and provide them with the necessary information on the forestry law, support CFM-projects)

6.1.1. Creating a political will

Government commitment to SFM is crucial if the current deforestation pattern is to be changed. Brown [132] points out that political will is not a static concept and, therefore, can be changed over time, but the question is how this could be achieved. “Direct economic pressure is perhaps the most potent weapon for changing the views of today’s decision makers [67, p.280].” Consequently, the international donor community, including government agencies, multilateral donors such as the EU and financial institutions like the World Bank, have to coordinate their forest policy and work together in promoting good governance in Cameroon’s forest sector. Especially “Europe, represented by governments, multilateral institutions and the private sector, shares an enormous responsibility in the management of forest resources in Central Africa [56, p.12].” The EU also has the economic and political power to promote real changes in the Cameroonian forestry policy.

Involvement can either be direct financial pressure, by means of conditional loans or the withdrawal of donor money [142],⁴⁸ but also providing direct support to the local civil society. NGOs and other organisations, which work for the empowerment of local communities, e.g. indigenous forest-dwellers, should receive both technical and financial support [127] and their ties to international NGOs have to be strengthened. Multilateral donors can also promote the

⁴⁷ The table gives a short overview of driving forces behind governance failure and possible leverage points to overcome them. Detailed descriptions will follow in the forthcoming chapters.

⁴⁸ It could be argued that these policies have already been tried and they eventually failed to achieve the goal. It, however, has to be pointed out that this failure was mainly due to the fact that the international community did not have a common goal (for example, rivalry between the World Bank and France) and all too often sustainable forestry was not the ultimate goal, but rather economic growth. Brunner *et al* [21] argue that structural adjustment lending presents an important opportunity for mainstreaming social, environmental and governance objectives into the World Banks work [21, p.148].”

participation of local stakeholders and the local democratic process by including these communities in the negotiation process thereby empowering the civil society and encouraging good governance.[141] Furthermore, direct support should be given to government officials who want to promote SFM; the international community could play a decisive role in strengthening their power [133]. Another tool to create the political will among Cameroonian decision makers to promote SFM is to provide them with precise data on how fast deforestation is advancing, to show them that forests are not an endless resource. Therefore, economic development as well as their private benefits could only be sustained for a very short period, if the forests are not managed in a sustainable way [114].

Poul Nielson [104], the EU commissioner for development pointed out that the EU must lead by example and promote sustainable development through improving global governance. This could be achieved by a reform of the G8⁴⁹ into a more representative body or the creation of a World Environment Organization. This argument is also supported by Griffiths [136], who points out that the international timber organisations are too fragmented (FAO, ITTO, United Nations Environmental Programme (UNEP), World Bank, etc.), as each of them pursues their own agendas⁵⁰ and there exists no single voice. A medium term goal should be the establishment of such an institution or the empowerment of one of the existing institutions, like ITTO. In the long-term, five to ten years, however, an International Forestry Convention ought to be put in place which establishes standards for SFM, sets clear targets and enforces them, but also provides development funds and regulates markets for sustainably sourced tropical timber.

6.1.2. Fight against corruption and illegal logging

“If SFM should be achieved in Cameroon, stop illegal logging and establish a level playing field.”

Jean Jacques Landrot (President of ATIBT) [134]

In order to fight corruption and illegal logging it will again be crucial that the international community takes a leadership role in cooperation with the Cameroonian government. Consequently, decisive international action against illegal logging will encourage the Cameroonian government to apply more stringent measures against companies involved in illegal production and trading practices. In the late 1990s industrialized nations took the first step in passing the “OECD Convention on Combating Bribery of Public Officials in International Business Transactions.”⁵¹ The convention criminalizes “active bribery” of foreign public officials⁵² and is not limited to members of the Organisation for Economic Cooperation and Development (OECD). It can also be signed and ratified by non-members which makes it possible to initiate legal proceedings against the company involved in bribery. Forestry products from an improperly obtained concession could be subject to sanction, establishing a potential mandate for a member state’s authority to act against timber shipments if bribery is involved. Furthermore, the company that engaged in bribery could be excluded from the participation in public procurement. [15] Thus, the OECD anti bribery convention could become a tool to fight corruption in Cameroon, but to date it cannot be enforced because it is only voluntary and not legally binding [145]. The convention might, however, be

⁴⁹ The G8 includes the leading national economic players: the USA, the EU, France, Great Britain, Italy, Germany, Canada, Japan and Russia.

⁵⁰ It is highly problematic that in the Cameroonian forestry sector World Bank is the key driving force for SFM reforms because the Bank’s overall goal is economic growth and not a set of equally important goals including the economy, the environment and social issues.

⁵¹ There also have been other initiatives to combat bribery, such as the Oversight Committee on Fraud and Corruption which has been instituted by the World Bank or the Rules of Conduct to Combat Extortion and Bribery by the International Chamber of Commerce [15].

⁵² Member of political parties are not considered foreign public officials and are therefore not included in the convention [15].

incorporated into the new EU-action plan against illegal logging, which is currently being discussed by EU member states [133]. Only if a binding legislation⁵³ (e.g. in the form of a directive) will be passed, the law can help to sanction illegal activities, otherwise it will just be another toothless document which will hardly be able to change current practices.⁵⁴

To date, however, there have only been lengthy and complex negotiations, and an international agreement on illegal logging has not yet been reached [141], something which made the French office of Friends of the Earth resort to a remarkable measure. They are currently in the process of suing Rougier, a French logging operator, for illegal logging in the Cameroonian forests for: bribery, the destruction of plantations of local villagers, and a number of other legal infractions [26]. It is, however, not certain if the accusation will be successful because the French legislation requires that the company is first convicted in Cameroon. Friends of the Earth on the other hand argue that this is not possible due to high levels of corruption [133]. Even if the legal action will not be successful, the accusation has already helped to bring the case to the people's attention, showing that leading European companies are involved in illegal logging and it will hopefully also encourage European decision-makers to finally take action.

6.1.3. Strict law enforcement and field monitoring

“What really matters is an efficient monitoring system, clear competences and efficiently managed forestry institutions. A well-trained monitoring personnel with sufficient salaries and adequate technical support is also crucial.”

Jean-Jacques Landrot (President of ATIBT) [140]

As a starting point it will be necessary to have less complex and clearer regulations which promote SFM because corruption and weak law enforcement thrive from complexity [88]. These regulations, however, also have to be implemented and enforced, because the improvement of a legal text without looking at its implementation is not sufficient [147].

When it comes to monitoring, the country has two options. The first is to strengthen the national forestry service by providing adequate funds, transport and monitoring equipment. Furthermore, the salaries of the officials have to be increased, in order to make them less susceptible to corruption. [125] The second possibility is to completely outsource the monitoring duties to a supervisory agency, which could set up a high-tech monitoring system to control the whole timber supply chain [29]. Ecuador, for example pursues a new approach in forest law enforcement. The country established an outsourced forestry supervision system. “Green Surveillance,” which recruits its staff from the armed forces, the police and cooperates with five environmental NGOs, is responsible for supervising the entire supply chain. The agency is funded by a trust that receives 50% of the value of all timber that is detected, seized and auctioned. Furthermore, Forest Stewards have been employed to ensure that timber-harvesting activities abide fully by the standards and management plans. The new system is very successful. In the first year of operation Green Surveillance has already seized five times the volume of timber confiscated by the government in the previous year. [73] In conclusion, efficient monitoring is possible; it will, however, require government commitment to SFM.

⁵³ Too often legal action against illegally sourced timber has been postponed because it was considered to be at odds with WTO regulations, but this is not necessarily the case. Article 20 of the WTO rules allows the consideration of environmental issues, when international trade laws are tightened [150]. Thus, if the EU seeks consensus with timber-producing countries and its aim is to proceed against illegal logging, because the practice is harmful to the environment, conflicts with WTO regulations are unlikely, particularly as other nations, such as Japan, also want to act against illegal timber harvesting [32; 150].

⁵⁴ Apart from direct action against illegally sourced timber, the international community could also promote cooperation and data exchange among customs authorities, which would help to identify illegal trade [32].

6.1.4. Decentralised power structures

“Sustainable forest resource management can be achieved only where all stakeholders – including indigenous forest communities and forest users – are involved as active participants and beneficiaries in all stages of the forest management process.”

Commission of the European Communities [34, p.82]

Mobilization of communities and individual participation is crucial to achieve SFM [28]. Locals have to be equally represented in decision-making and policy development [48], because they have the expertise in managing forests sustainably [54] and they are also the most directly concerned by the outcome of the decisions [56]. Forest-dwellers, therefore, ought to have a say in how the forest resources are managed. This approach will also empower local communities, when entering in direct negotiations with logging operators and thus will help them to defend their interests. Moreover, local and international NGOs⁵⁵ have to carry out an information and awareness campaign for local communities [55] by educating them about SFM [112] and their rights and privileges. Additionally, workshops might be organised to inform the local population about the new forestry law and the different external agents such as logging operators or state departments. Locals also have to be educated about CFM and the legal limitations of state power and authority. [60] By knowing their rights and privileges local communities will be empowered and, consequently, will take the initiative to manage the forest in a sustainable way.⁵⁶

Box 4. Community Forest Management (CFM)

Community forestry contributes to SFM through poverty alleviation and food security, to fuelwood and fodder, to soil and water conservation, to conserving biodiversity and to sustaining incomes and livelihoods.

World Commission on Forests and Sustainable Development [114]

CFM is a powerful tool to encourage local management of forest resources. After it was introduced by the 1994-forestry law, CFM has become increasingly popular. The first two projects were awarded in 1997 and in November 2001, there were already 138 applications and 64 community forests reserved [17]. Nevertheless, it has to be pointed out that the process is slower than it could be; mainly because the authorities are largely opposed to CFM, and many administrative hurdles have been created. First, community-based management is only allowed in the non-permanent forest estate, in an area within 5 km on each side of the roads [29]. Therefore, indigenous forest-dwellers such as the Pygmies, who live in the permanent forest zones, cannot apply for CFM [125]. Furthermore, the application process is lengthy and complicated. Thus, in the past, timber operators that tried to exploit the same area, were often allocated a VC before the local population could claim the area for CFM. Consequently, the timber resources were already exhausted by the time the locals got the right to exploit them. [124] This problem was finally solved in 2001, when the government agreed to pass the pre-emption right decree, which allows communities to pre-empt the allocation of logging permits in nearby forests by indicating their

⁵⁵ The current legislation, however, does not necessarily support local NGOs. In 1999, the National Assembly passed a new law which makes it difficult to establish NGOs in Cameroon. First, the NGO has to operate during the first three years without any external funding or it can be taken to court. Second, the president has the right to create unipersonal NGOs (e.g. for former ministers or their relatives to get a tax relief) and finally, the minister for internal affairs has the right to dissolve an NGO in operation. [99; 132] It will be necessary to change this legislation in order to reduce the government's pressure on NGOs.

⁵⁶ The local populations are the immediate custodians of the forest, and they depend on it in a wide variety of ways. Therefore, they are best placed to ensure its effective management. [19]

intention to establish a community forest. [55] A further problem area is the detailed management plan which has to be submitted before the community receives the right to exploit the forest. This constitutes a major constraint, because communities face great difficulties in raising the funds to elaborate a management plan [37]. Another obstacle to CFM is the complexity and the diffuse nature of local forms of organisation. The community is not the same as the village, therefore village authorities usually do not have sufficient power to make commitments in the name of villagers. A more complex model of “co-management” by different units and levels has to be applied in the decision-making process, again aiming at the multistakeholder approach. [60] It is especially important that the whole community supports the plan to establish a community forest. All too often after the management agreements have been signed local elites who have not been involved in the process return to the village and try to cash in on the financial benefits or sell the logging rights to a timber operator which leads to social tensions within the community.[85] Finally, there is another important restriction to CFM. There is no village ownership to the forest and the state remains the exclusive owner, thus, authorities can revoke the communities’ usufruct right at any moment [29]. The law, however, remains unclear about the legal conditions of supervision and also does not make any provision for legal appeal [124]. Therefore, van den Berg [124] concludes that the concept of community forest is nothing more than an empty nutshell. This is a harsh critique and probably exaggerated, given the fact that in the last two years local communities have become increasingly aware of the possibility to establish community forests [132]. International donor agencies, especially the Dutch Development Agency and also the British Department for International Development have been very active in promoting the concept and in giving both financial and technical support to the local communities. Much still remains to be done, like providing the local population with support and training because CFM is very knowledge intensive. It would also be helpful to develop a more encouraging framework, which is enforced and fully implemented [7]. The first step, however, has been made and CFM certainly has the potential of making forestry in Cameroon more sustainable.

6.2. A legal framework for SFM

“Incentive structures can make the conservation of resources and the long-term use of forests attractive. Of basic importance is the introduction of effective fiscal as well as other promotional and regulatory systems, within and outside the forestry sector, which provide landmarks for needed long-term changes in behaviour at individual and commercial levels.”

Vollmer [126, p.1683]

Driving Forces	Solutions	Leverage Points
Inadequate property rights and land-use plan	Secure Property rights and renegotiated land-use plan	<ul style="list-style-type: none"> - Secure property rights for farmers - Recognise customary rights of forest-dwelling indigenous people to empower them - A clear zoning plan elaborated together with the civil society - Prohibit agricultural encroachment in permanent forest areas.
Regulatory framework	Change regulations	<ul style="list-style-type: none"> - Big and long-term concessions and abolish VC. - Mandatory management plans (incentive structure for management plans)
No controls of bushmeat hunting	Change and enforce law	<ul style="list-style-type: none"> - Strict legislation for logging firms to control bushmeat hunting (road controls, farmed animals for logging camps, etc.) - Community hunting management

⁵⁷ The table indicates aspects of the legal framework which lead to deforestation and shows possible leverage points to improve the current legislation. Detailed descriptions will follow in the forthcoming chapters.

6.2.1. The importance of a land-use plan and secure property rights

Cameroon has elaborated a land-use plan together with the 1994-forestry law, but it was drawn up without consulting local stakeholders. Given the crucial importance of a well-elaborated land-use plan for SFM it might be necessary to partially renegotiate this issue. A zoning plan has to be designed in cooperation with the different stakeholders involved [47] and it also has to respect the territorial rights of indigenous people [77]. Planning land use has to bring together the various conflicting natural resource management objectives, like agriculture, fuelwood use and forestry and take migration patterns into account. Several issues have to be considered: agriculture is only appropriate in certain areas, depending mostly on soil conditions; fuelwood supply and demand varies from place to place and certain forest areas are especially crucial from a conservation perspective [28]. Once this planning task is finished, it will be crucial to enforce the zoning plan, in order to prevent logging in conservation areas or to stop agriculture encroachment in forestland, which is reserved for logging activities.

The land-use plan must be combined with secure property rights. In areas which are set aside for agricultural purposes farmers have to be given title to the land or they will be encouraged to overexploit the land [131]. Moreover, secure and clear property rights will encourage long-term investment [112] and can also be used as a capital security for loans [108]. Additionally, secure property rights could be applied to forest areas. Cleaver goes even further by stating that “local community and private control of natural resources appears to be the only workable formula in Sub-Saharan Africa. Governments alone are not able to protect and conserve forest, soil and pasture resources. [28, p.75]” Currently the Pygmies living in the forest zones do not have a voice, they cannot claim any right when it comes to negotiating with powerful logging operators about the use of “their” land [29], thus they can only surrender and cannot prevent logging firms from destroying their livelihoods. The forest-dwellers, however, have customary land rights which have to be recognised by authorities [126]. Locals must have a say when it comes to exploiting their forest areas.

6.2.2. A regulatory framework for sustainable logging

“Regulation is absolutely essential, but experience shows when it comes to national resource management, there are no regulations that stakeholders will not try to circumvent. In the contexts of Central Africa, where typically weak governments are confronted by multinational companies of considerable financial strength, the limits of relying on regulations are clear. Incentive devices need to be carefully designed so that companies have a greater interest in complying with them than in floating them.”

Alain Karsenty (CIRAD-Forêts) [80, p.75]

Management plans are a prerequisite for sustainable logging activities, but currently there is no single logging firm operating in Cameroon which has submitted a management plan [137]. This is a clear indicator that both legislation and its enforcement have failed. “In principle logging operations should not start before the forest management plan, inclusive of an operational plan for the first year and a five-year plan, is approved [53, p.159].” For the logging industry, however, a management plan seems to pose two main problems. First, it is difficult to draw it up, because there is not much knowledge about SFM and second, the planning process is expensive [140]. The first issue is a rather weak excuse, because in recent years many research organisations (e.g. Tropenbos) have provided up to date information on sustainable logging practices and there are also master management plans, which have been developed. When it comes to the second point, the answer is not that clear. On the one hand Verbelen [149] points out that international logging operators have sufficient funds to draw up a management plan, but on the other hand there is no level playing field in the logging sector; thus, illegal operators have lower operating costs and are therefore in direct

competition with legitimate logging firms trying to prepare a costly management plan [138]. As long as illegal logging exists, legitimate companies must be supported in order to establish a management plan [138].⁵⁸ The local tax system could take the costs of a forest development plan into account by granting a tax relief for the logging firms [6]. Furthermore, a change in the area tax should be taken into consideration. Currently the tax has to be paid from the moment a concession is awarded, but at the same time the logging operator has to develop a management plan. If the government wants companies to draw up a management plan, the logging firms ought to be exempt from paying taxes during this time and the international donor community should provide financial support for logging firms to stabilise their short-term cash flow.⁵⁹ At the same time, however, logging activities have to be restricted, carefully supervised, or even forbidden until the management plan is submitted.

Apart from the management plan, the concession allocation policy should also be reformed, because companies are not likely to invest in a costly management plan if their logging permits are only valid for 15 years. It will be impossible to recover the higher initial investments associated with management planning development which is a necessary element of SFM. [148] Consequently, SFM requires a long-term concession allocation of a minimum of 30 years, with the possibility for future renewal [140; 146; 148], because the company will not invest in SFM, if it is not guaranteed to receive the benefits of sustainable forest exploitation. A longer concession time will, however, also require careful monitoring to ensure that the logging operators actually invest in SFM, otherwise the permit has to be withdrawn [126].

Another area for reform concerns the concession size because the limit of 200,000 ha appears to be too small. It is, however, difficult to give a precise figure for the minimum concession size because the production capabilities of the forest area vary substantially from site to site according to the local micro situation [148]. A big sawmill may require a concession area of around 500,000 ha [140, 146], if the highly selective logging practices are not changed to a more diversified cut. Large concession areas are necessary, because the rotation should be not less than 30 years [40]. Furthermore, certain areas of the concession have to be set aside because they are especially rich in biodiversity, they might also have a high cultural value for indigenous forest-dwellers or they could simply be crucial for their livelihoods.

Ventes de Coupe, which do not require management plans and encourage short-term exploitation, should be completely abolished because they lead to unsustainable logging. Instead, these areas could be reserved for community-based management which would have a number of advantages. First, communities would not have to compete with powerful logging companies for the same area [132]. Second, CFM promotes SFM and thus helps to conserve the forests. Finally, it would also empower local communities and could lead to poverty alleviation.

Box 5. Regulations and sustainable logging: two case studies from the Congo Basin

Congolaise Industrielle du Bois (CIB) is a logging company operating in the Republic of Congo and is jointly owned by Feldmeyer and tt-Timber International Group. CIB holds three concessions totalling 1.15 million hectares in primary rainforest at the Cameroonian border [56]. The large concession area allows the company to achieve a sustainable cut with a rotation period of 40 years. According to an evaluation project carried out by international forestry consultants [39], the company is increasingly moving towards SFM. There are aims to utilise a

⁵⁸ Currently the French Development Agency offers low interest rate credits to cover the costs of the management plan [91].

⁵⁹ It is true that this policy leads to the support of private companies and the money could also be used for other projects such as CFM, but what would be the alternative? Logging firms operating without a management plan, possibly practising a cut-and run strategy. There will be no SFM in Cameroon as long as logging firms do not submit a management plan, thus, these plans are crucial, if logging practices are to be changed.

greater variety of timber species, in order to reduce the pressure on the main species, Sapelli and Sipo. Logging is done by company crews rather than by contractors, which ensures increased control and supervision and allows better staff training especially with regards to RIL practices. Secondary access roads are closed when logging has been completed to prevent commercial hunters from entering the area. In a partnership with the Wildlife Conservation Society, bushmeat hunting is strictly controlled.⁶⁰ The company also encourages local development for the production of alternative protein sources to reduce the need for hunting. Some issues, however, still need to be improved such as low impact road construction or the training of logging crews [39], but generally the “company is considered to be one of the more economically sustainable and well-managed operations in the Central African region [56, p.58].” CIB is also currently developing a management plan and has opted to pursue eco-certification [138]. The Dutch Foundation Kerhout has already accepted the certificate for sustainable timber harvesting which was issued by the Swiss company Société Générale de Surveillance, but Greenpeace appealed; Kerhout did not follow their internal operating standards and, therefore, the certificate was withdrawn again. [135] This was a big setback for the company, because as Robert Hunink [138], the senior executive manager of tt-Timber International Ltd., points out, “the certificate did play a role in motivating all employees of the company to embrace the philosophy of continuous improvement with regards to CIB’s forest management techniques.”

Compagnie Équatoriale des Bois (CEB) is a logging firm operated by Thanry in Gabon. It is one of the few large companies in Central Africa, which has already submitted a management plan [140] and which is also Kerhout eco-certified [146]. SFM is possible because the concession area of more than 500,000 ha is large enough to allow for long-term rotations. Furthermore, the permit has been awarded for 60 years in order to recover the initial investments for a management plan, log inventory, and the training of the personnel in RIL [146]. The company also received financial support from the French Development Agency and the African Timber Organisation to draw up this management plan. CIFOR provided its technical expertise in SFM. [56]

These two cases illustrate, that SFM is possible in Central African rainforests, if there is an adequate regulatory framework, a government commitment towards SFM and a willingness among company officials to promote SFM.

6.2.3. Legislation to control commercial bushmeat hunting

SFM requires not only the control of logging practices, but also taking care of the wildlife in the forests. Cameroon’s hunting legislation is outdated and poorly enforced and therefore reforms are needed. First, certain hunting equipment and techniques, which are currently used (e.g. steelwire cables or dane guns) should be legalised, whereas, destructive practices, such as fish- and animal poisoning ought to be forbidden. In order to regulate hunting, permits might be issued upon payment of an affordable fee and these permits should be managed by the wildlife service. Small permit holders could associate into self-governing hunting communities, who establish and enforce rules in cooperation with the local wildlife service. These local hunting associations would help to report outside poachers to the wildlife service. Furthermore, community-hunting zones could be promoted in non-permanent forest areas. [42] These zones would, however, have to exceed the actual limit of 5,000 ha, because this area is too small to practise sustainable hunting [135]. In the permanent forest estate logging companies have to control bushmeat hunting by closing secondary access roads after the logging activities in the area have been finished. To control the access of hunters, checkpoints with eco-guards have to be established and the transport of bushmeat in

⁶⁰ These controls are further encouraged by an enabling legislative framework, which aims at strictly supervising commercial bushmeat hunting [39].

logging trucks must be forbidden and strictly monitored. Failure by the logging companies to enforce this legislation could lead to high fines or even the withdrawal of the concession. In order to reduce the demand for bushmeat, logging firms have to be required by law to offer farmed poultry or rabbits meat, or to set up fish farms for their employees. The forest monitoring personnel could also control the enforcement of this legislation.

6.3. Economic policies to encourage SFM

“Economic instruments only have value and acquire potential effectiveness when institutional conditions are favourable to their use.”

Alain Karsenty (CIRAD Forêts) [80, p.24]

Table 5: Economic root causes of deforestation and possible leverage points ⁶¹		
Driving Forces	Solutions	Leverage Points
Economic instability	Stable economic environment	- Stable tax policy to allow for business planning - Stable macroeconomic policy, social & environmental impact assessment for SAPs, cut foreign debt
Inefficient processing	Increase efficiency	- Tradable export quotas; slowly increase competitiveness for processing plants - Tax timber inputs into the sawmill
Tax law structure	Change taxes	- Stumpage fee instead of area tax - Reform decentralised tax system
Economic development dominates SFM	Balance economic development	- road building: better planning, restrict access after logging operations have been finished
Financial difficulties for logging firms practising SFM	Create markets for sustainably managed forest products	- EU green procurement directive - Create consumer awareness, organise “Buyers groups”

6.3.1. The importance of a stable economic environment

An appropriate framework for SFM requires a stable macroeconomic horizon which is conducive to investors [100]. This “may have a greater positive effect on the effect on the forestry sector and on the amount of residual land that remains in forest than do all preferential forestry sector policies [3, p.239].” SAPs are generally considered to promote economic stability, but the problem is that usually no social and environmental impact assessment is carried out before these economic policies are applied. Friends of the Earth argue that “environmental protection and sustainable resources use must be considered a core component of any strategy aimed at economic policy reform and poverty alleviation [57, p.4].” At the same time, it will be crucial to significantly cut Cameroon’s foreign debt in order to prevent a myopic use of forest resources [126]. This could be combined with a policy reform, encouraging government commitment to SFM.

When it comes to tax policy, no abrupt changes in the forest tax system should occur. Once a tax policy, which encourages SFM, is put in place the government might offer a stability pact, of at least five years, during which tax rates remain unchanged in order to allow for serious business planning by logging operators [31].

⁶¹The table gives a short overview of economic driving forces behind deforestation and possible leverage points to balance them. Detailed descriptions will follow in the forthcoming chapters.

6.3.2. Efficient timber processing and reduced waste

An efficient sawmill does not require more timber to be cut, but rather helps to increase the recovery ratio from cut timber. Thus for the same amount of timber for export or local use, less forest area has to be exploited. Currently the efficiency of the timber processing industry is very low, therefore, it will be crucial to reduce waste and install efficient processing capacities. In order to use the wasted timber, which does not meet the standardized export requirements, a local industry has to be developed to produce semifinished products for export or the local market. This industry could be encouraged by tax incentives or by financial support from the donor community.

When it comes to efficient processing equipment, it will be crucial to slowly reduce the protectionist measures, which have been put in place during the last years: the log export ban and substantial tax relief for the export of processed timber. Karsenty [82] proposes replacing the export ban with transferable export quotas. These quotas could be auctioned⁶² and would then allow the logging operators to export a certain quantity of roundwood. If a company does not use all the quotas it can sell them to another logging operator, who wants to export more raw timber.

Instead of taxing the processed wood, the government could change to a system of taxing the timber input into the sawmill.⁶³ This input tax would help to solve two problems at the same time. First, illegal logging could be controlled more effectively and secondly by raising the timber input prices, efficient processing would be encouraged because a high level of waste will result in greater economic losses for the sawmill operator. [82] Finally, efficient processing capacities would also help to reduce timber waste at the logging site because it would allow the processing of lower quality logs [39].

6.3.3. Structural changes of the current tax system

Taxation plays a crucial role for SFM, but in order to have a significant impact on how the forest resources are managed, it is not only necessary to change the tax regulation, but also to enforce and monitor tax laws [31]. A medium-term goal would be to change the current area tax system and apply a stumpage fee, which is payable per cubic metre of logged timber. This tax would, however, require highly efficient field monitoring or otherwise it would only lead to increased illegal logging [31]. Once put in place and monitored, Landrot [140] argues that the stumpage fee would help to promote SFM. First, it would encourage the diversification of the cut by applying progressive tax rates as lesser-known species could be taxed lower. Second, it would encourage logging firms to cut only large trees and leave the small ones untouched, because the tax has to be paid per cubic metre, irrespective of how broad the trees are. The profits, however, are much higher if the trunk of the tree is broader, thereby causing bigger trees to bear a proportionally lower tax burden. Third, the tax would also help to reduce timber waste at the logging site, because the logging companies would have to pay for the timber they cut, irrespective of if they use the tree or leave it in the forest. Another advantage of the stumpage fee is that it is supported by the logging industry.

The system of the decentralised tax should also be changed. Either it will require extensive monitoring, so that local authorities are held accountable for the way they spend the tax benefits, or if this monitoring system is too expensive it might be better to provide the local communities directly with improved social services [31]. The concept of encouraging decentralisation, however, should not be changed because it is crucial for poverty alleviation and empowering local communities.

⁶² The auction system would allow the state to capture part of the economic rent, which logging firms gain from the export of raw timber [31].

⁶³ This tax system would require efficient field monitoring [31].

6.3.4. Balance economic development and forest management; the example of forest roads

Rapid depletion of a country's forest resources without consideration of sustainable development only marginally benefits the national economy. Boom and bust cycles encourage wasteful resource use and lead to the destruction of the forests. [106] This issue becomes especially apparent when logging companies enter formerly inaccessible forest areas and practice a cut-and-run strategy aimed at fast profits. They will employ a few locals, but when the timber resources are depleted they will move on to other areas, thus failing to provide social benefits in the long-term [109]. It is the open road network, however, which most often contributes to the fast destruction of the forests, allowing hunters and settlers to move into formerly inaccessible forest areas, thereby causing the long-term destruction of the ecosystem. Great importance should therefore be attached to the construction of roads in forest areas. This starts with a detailed planning process. Uneconomic road building should be avoided in biodiversity rich forest areas, which are poorly suited for agriculture because of isolation and poor soils [30]. Road investments should be rather focused on areas that already have substantial population densities or higher quality soils [77]. When it comes to the construction of logging roads, these have to be carefully planned. The following direction should be considered:

- ❖ Use contour mapping of the concession area in order to avoid road construction on steep slopes, which causes soil erosion [119];
- ❖ Avoid passing too close to ecological sites [6];
- ❖ Build bridges in order to not obstruct water flows [6];
- ❖ Roads should be constructed at least 6 months before logging operations start in order to allow for soil stabilisation of the road. In this way the width on both sides of the road can be reduced from 20 metres, which is generally the case, to 8-10 metres, because sunlight exposure of the road is not required [119].

As a general rule the “opening of tracks should primarily be seen as something artificial, an “illusion of development”, which will disappear just a few years after the logging activities end [7, p.4].” Thus, after logging is completed main access should either be completely disabled [30] or as the ITTO guidelines for SFM suggest, access roads that are not part of the national infrastructure (i.e. through-roads) should be strictly controlled [75]. Thus, with adequate planning and controls after logging activities are finished the negative effects of roads can be largely mitigated, thereby allowing for economic development and SFM at the same time.

6.3.5. Eco-certification and green consumer markets

Eco-certification certainly has the potential to promote SFM by stimulating a continual process towards improved management practices within the logging company. Studies show that around 20% of the European consumers and 10% of the North American consumers would be sensitive to a certification initiative [80]. The problem, however, is that currently the major tropical timber import countries, such as Southern Europe or Asia have not yet developed large green consumer markets [69, 80]. Therefore, WWF is trying to create awareness and incentives among European timber importers and industrialists by organising “Buyers Groups.” These are leading importers or users of tropical hardwood which openly favour timber imports from sustainable sources, thereby becoming a significant driving force for SFM in the tropics. [69] The market for sustainably harvested timber can also be increased substantially through green procurement policies. Several local municipalities and city councils in the EU already demand certified timber in their public procurement policies [144]. Friends of the Earth France launched in cooperation with other NGOs the programme “Bâtir sans détruire” (Construct without destroying), which tries to get French municipalities to only utilize sustainably harvested tropical timber. More than 30 municipalities including Paris and Lyon have already joined the campaign [25]. Currently the German government

is also discussing a similar green procurement policy for the whole country [144] and the EU is developing a new procurement act. It is still being discussed if social and environmental criteria can be included when it comes to public procurement [133], but it would be absolutely essential to include this paragraph into the new directive. This would be a historic possibility for the EU to promote SFM in the tropics and would certainly encourage many logging operators to practise more sustainable logging techniques. It would of course be necessary that the EU directive be compatible with WTO rules. If the procurement scheme does not require a specific certification scheme, for example, FSC for the competitive bidding process, but accepts any timber from sustainably managed sources, the directive will not violate existing WTO laws [150]. New Zealand has already applied a much more far reaching approach in 1991, ensuring that all tropical timber imported to the country is sourced from forests certified as sustainably managed. The New Zealand Imported Tropical Timber Group, which comprises representatives of tropical timber importers and retailers, environmental NGOs and members of the government authorities, supervises the process. [71]

Even though certain large markets for tropical timber such as southern Europe and Asia are yet not demanding a large amount of sustainably sourced timber, eco-certification can still be very beneficial for logging operators:

- ❖ It helps to obtain substantial financial and technical support from international organisations, development agencies and NGOs [91];
- ❖ It facilitates negotiation with local government authorities when it comes to renewing existing concessions or enlarging the permit area [91];
- ❖ Companies benefit from price premiums in certain markets, product differentiation and greatly enhanced market access [84]. An example is the use of FSC-certified tropical timber for stakes on the German coastline of the Baltic Sea. Legislation in the province of Mecklenburg-Western Pomerania forbids the use of tropical timber for public construction projects, but exceptions were granted for certified timber. Thus, the province council decided to buy certified logs from Precious Woods, thereby, allowing the company to access markets which otherwise would have been closed. [68]
- ❖ It helps to develop strong buyer relationships [111].

The market for certified tropical timber is growing steadily, due to rising consumer awareness and retailers, who try to enhance sales through environmental marketing arguments [84]. Therefore, SFM is “an investment for the future for a logging operator [146],” because it allows for the long-term exploitation of the forest and the recovery of investment costs. It also guarantees a steady demand for the company’s timber products in a highly volatile international timber market. [146]

7. Conclusion

If sustainable forestry management in Cameroon is to be achieved, the framework has to be changed; laws have to be enforced and monitored and a stable environment has to be created. Unless this can be guaranteed, it is highly *irresponsible* to push for timber exploitation in Cameroon or to even promote the expansion of logging activities as the World Bank currently advises to Cameroon. The paradigm of economic growth at any price is not a viable policy option and thus has to be replaced by a policy, which is based on a broad framework allowing for economic and social development, combined with a sustainable use of environmental resources. Without an adequate framework in place, logging will be highly unsustainable and “cut-and-run” strategies will prevail, thus rainforests will be destroyed rather than used in a sustainable way. Eventually logging companies will move on, leave behind a degraded landscape, which will only lead to further poverty and cause economic misery. Instead, the government has to promote the sustainable exploitation of the country’s resources, to decentralise power structures and to give forest-dwelling communities the right to protect and to use their local resources. Only this will lead to poverty alleviation and the well-being of the whole economy and country.

SFM requires the effort and commitment of all stakeholders such as the international community, financial institutions, the national government, NGOs, but also logging companies and local communities. These groups have to cooperate and take responsible actions. Once SFM in Cameroon is achieved, it will be a win-win situation for all stakeholders. The state will have a long-term sustained, stable income from the forest sector and can thus offer better payment for the officials and good social services for its population. Communities will receive more income from the forests, they will learn to value them and through the participation in the decision making process they will gain more rights. Logging firms will be working in a stable environment with clear regulations allowing for serious business planning. The sustainably harvested timber will give them better access to markets and help to create strong buyer relationships. The international community will also benefit because a stable political and economic environment will guarantee the efficient investment of their funds, the problem of illegal logging will be solved and they can also claim clear responsibility for having brought the necessary changes about. In conclusion, SFM in Cameroon is possible if all stakeholders involved in the process cooperate and make an effort towards achieving this goal.

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