

Neither fast, nor easy: the prospect of Reducing Emissions from Deforestation and Degradation (REDD) in Ghana

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SUMMARY

On the basis of a detailed case study of the High Forest Zone of Ghana, the paper challenges the common narrative of REDD as being fast and easy. The paper analyses proximate and underlying causes of deforestation and degradation and finds that these processes are driven by multiple underlying causes. The paper goes on to argue that the causes of deforestation and degradation that are found within the realm of the forestry sector, to which REDD measures will be largely confined, have emerged as a result of a political economy that gives priority to economic development over forest conservation, while at the same time allowing powerful interest groups, in particular the political and administrative elite, to financially benefit from resource depletion. The analysis suggests that forest conserving policy reforms are unlikely to come fast and easy, and that the prospect of future REDD payments may not accelerate them. It is argued that the case of Ghana is not unique and that REDD implementation may face similar constraints in many developing countries.

Keywords: causes of deforestation and forest degradation, forest governance, political economy, REDD policies and measures, readiness

Ni rapide, ni facile: les perspectives de la réduction des émissions provenant de la déforestation et de la dégradation (REDD) au Ghana

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Basé sur une étude-cas détaillée de la zone de haute forêt au Ghana, l'article remet en question le point de vue répandu que la REDD est rapide et aisée. Il analyse les causes proches et sous-jacentes de la dégradation et de la déforestation, et trouve que ces processus sont activés par des causes sous-jacentes multiples. L'article se poursuit en essayant de démontrer que les causes de la déforestation et de la dégradation se trouvant dans les limites du secteur de la foresterie, dans laquelle sont largement confinées les mesures de la REDD, semblent avoir été le résultat d'une économie politique qui a donné au développement économique priorité sur la conservation forestière, tout en permettant en même temps à de puissants groupes d'intérêt, en particulier l'élite politique et administrative, de bénéficier financièrement de la pénurie des ressources. L'analyse suggère qu'il est improbable que les réformes de politique de conservation surviennent facilement et rapidement, et que l'attente des paiements futurs de la REDD ne soit probablement pas à même de les accélérer. L'article démontre que le cas du Ghana n'est pas unique, et que la mise en pratique de la REDD risque de connaître des contraintes similaires dans de nombreux pays en voie de développement.

Ni rápido, ni fácil: en busca de una Reducción de Emisiones por Deforestación y Degradación (REDD) en Ghana

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Basándose en un estudio detallado de la Zona Forestal de Altura de Ghana, este artículo cuestiona la imagen típica de que la Reducción de Emisiones por Deforestación y Degradación (REDD) sea rápida y fácil de lograr. El estudio analiza las causas primordiales y secundarias de la deforestación y degradación y descubre que estos procesos tienen como raíz un gran número de causas subyacentes. Se sugiere que las causas de la deforestación y degradación dentro del ámbito del sector forestal, al cual las medidas de REDD serán limitadas en gran parte, son el resultado de una economía política que da prioridad al desarrollo económico y no a la conservación forestal, y que al mismo tiempo permite a los grandes grupos de interés, sobre todo a la élite política y administrativa, beneficiarse en términos financieros del agotamiento de los recursos. Según el análisis, resulta poco probable que las reformas políticas en cuanto a la conservación forestal sean rápidas y fáciles de lograr, y puede que la posibilidad de pagos futuros de REDD no acelere este proceso. Se afirma que el caso de Ghana no es único, y que en muchos países en vías de desarrollo la implementación de la REDD puede verse afectada por restricciones parecidas.

INTRODUCTION

Deforestation and forest degradation, primarily in developing countries, accounts for some 18% of global carbon dioxide emissions (IPCC 2007). Reducing these has been identified as a potential strategy for achieving global emission reduction targets in a fast and cost-effective manner (Stern 2007). This has triggered an intensive debate on Reducing Emissions from Deforestation and forest Degradation (REDD), which is proposed as a win-win strategy that, in addition to emission reductions, holds potentials for co-benefits such as poverty alleviation, biodiversity conservation, forest services provision and “good governance” (Kanninen *et al.* 2007). For these reasons, and the urgency of addressing the global climate change challenge, REDD is likely to become a component of a post Kyoto climate agreement (Angelsen and Atmadja 2008).

This paper focuses on national implementation of REDD. Generally this is considered to imply “readiness” activities, which are implemented prior to REDD, and “recurrent” activities once the regime has been put in place (Eliasch 2008). Subject to specific national context, readiness activities are typically envisaged to encompass reforms of forest policies and legislation, tax and land tenure reforms, organisational reforms to clarify roles and responsibilities of actors at different levels, setting up systems to monitor, report and validate emission reductions, capacity building and awareness raising campaigns (Eliasch 2008, Hoare *et al.* 2008). Readiness costs have been roughly estimated at USD 14 to 92 millions per country over a 5-year period (Hoare *et al.* 2008). Recurrent REDD implementation activities are envisaged to include administrating a transfer payment regime that compensates agents for keeping land under forest cover, enhanced efforts in forest protection/law enforcement as well as monitoring, reporting and validating emission reductions (Eliasch 2008, Börner and Wunder 2008). Estimates of the recurrent costs vary greatly with socio-economic context and assumptions about future demands for forest and agricultural products (Eliasch 2008, Grieg-Gran 2008, Boucher 2008).

This paper argues that the narrative of REDD as quick, cost-effective and straightforward is likely to underestimate the challenges ahead in many countries. We argue that the narrative tends to ignore the political economy of deforestation and forest degradation. It appears to assume the presence of “sufficient political will to guarantee the success of the project” (Hoare *et al.* 2008, p. 3). Yet, it seems to ignore *why* the identified policy failures that are the object of REDD readiness reform processes have prevailed, usually in spite of decades of reform attempts. Moreover, the current REDD narrative relies strongly on within country transfer payment regimes being feasible, but this presupposes clear and enforceable tenure to forests and trees, which hardly exists in most developing countries. Finally, the implementation debate has focused largely on deforestation. Yet, in many tropical developing countries,

forest degradation contributes more to carbon stock reduction than deforestation, e.g. countries in drier zones and countries that have moved beyond the forest frontier stage (Chomitz *et al.* 2007). A focus on forest degradation creates additional challenges for national REDD implementation.

Based on a case study of Ghana’s High Forest Zone, this paper forwards the argument that REDD is neither fast nor easy. First, we describe the proximate and underlying causes of deforestation and degradation in line with the typology and approach suggested by Geist and Lambin (2002) and Kanninen *et al.* (2007). Then, we outline suitable reform measures that, if implemented, would alleviate the identified underlying causes. Subsequently, we investigate the prospects of legislating and implementing the outlined reforms by analysing how the underlying causes have emerged in the first place and whose interests they serve. Our approach to this analysis is inspired by the literature on political economy, notably Bates (1981), Blaikie (1985) and Ascher (1999). We conclude by discussing the implications of our analysis for the prospect of REDD in Ghana, as well as the wider implications for REDD.

CAUSES OF DEFORESTATION AND DEGRADATION IN THE HIGH FOREST ZONE OF GHANA

This section commences with a brief presentation of Ghana’s High Forest Zone (HFZ) and available statistics on deforestation and degradation. It is followed by sub-sections on proximate and underlying causes of deforestation and degradation.

Context and statistics

Although forests are found also outside the HFZ, this paper only concerns this zone, a limitation that is consistent with the scope of the ongoing REDD discussion in Ghana (Bamfo 2008). The HFZ constitutes the southern one-third of the country and covers an area of approximately 8.5 million ha (Planning Branch 1999), ref. Figure 1. Around 1.6 million ha is gazetted as forest reserves (Affum Baffoe 2002). Some 1.4 million ha is used for infrastructure, while the remaining 5.5 million ha is commonly termed the “off-reserves”, and encompass a mosaic of land uses, c.f. Table 1.

The process of gazetting forest reserves took place under colonial rule and was largely completed by the end of the 1940s (Kotey *et al.* 1998). Formal ownership of land in the HFZ is customary, i.e. remains with the Stools, the traditional and officially recognised land-owning communities (Aryeetey *et al.* 2007). Yet, the rights to manage and utilize forests and trees found on these lands have been heavily regulated by colonial and post-colonial governments; an issue we will return to in more detail.

Official forest statistics for Ghana, which by virtue equal statistics for the HFZ, set the 2005 forest area at 5.5 million ha, and the annual deforestation rate at approximately

FIGURE 1 Satellite image of Ghana. The national border is shown in black, the border of the HFZ in white. The contours of the forest reserves can be easily identified. Image source: Google Earth Pro



TABLE 1 *Off-reserve area from 1996 inventory. Table compiled from data presented by Planning Branch (1999)*

Classification	Area (ha)	Relative share of area (%)	No. of trees > 10 cm DBH (millions)	Average density (trees/ha)
Natural forest	664 104	12	168	253
Secondary forest	183 906	3	30	163
Fallow	1 440 594	26	161	112
Newly cleared farms	439 330	8	40	91
Cocoa farms	1 001 264	18	162	162
Food crops	1 236 255	22	120	97
Grass lands	439 330	8	16	36
Other	102 170	2	6	59
<i>Total area</i>	<i>5 506 953</i>	<i>100</i>	<i>703</i>	<i>128</i>

2.0 %¹ (FAO 2006). Globally, this puts Ghana among the countries with the highest net deforestation rates (FAO 2006). Consequently, Ghana has been portrayed in the REDD literature as a typical “stage 2” country, i.e. with a large forest area and high deforestation rate (Murdiyarsa *et al.* 2008, Grieg-Gran 2008).

These statistics and classification may be misleading. We argue that the FAO Forest Resources Assessment’s definitions have not been applied consistently. Approximately 3.9 million hectares outside the reserves are portrayed as “forest”, although the majority of these areas do not qualify as “forest” because they are predominantly under agricultural use, c.f. Table 1, and would thus more appropriately be classified as “other land with tree cover”. As a result, the HFZ forest area is significantly overestimated. The same appears to be the case for the deforestation rate. It is brought about by a large apparent reduction in the off-reserve forest area which, however, is not based on inventory data and in any case may be problematic from a definitional point of view². While consistent inventory data is wanting, it seems likely that the deforestation rate is significantly lower than what has been reported, a claim supported by Leach and Fairhead (2000) and Botchie *et al.* (2007), and further, that forest degradation probably contributes more to carbon stock reductions in Ghana than outright deforestation. This underlines the urgent need of improving forest and carbon stock statistics and enhancing skills in monitoring, reporting

and validation of carbon stock changes³.

Proximate causes of deforestation and degradation in the HFZ

We adopt the typology of proximate causes of Geist and Lambin (2002), encompassing agricultural expansion, wood extraction and infrastructure extension, and discuss these in turn.

Agricultural expansion and intensification

Up to the 1880s, the population density in the HFZ was low and people were mainly occupied with mining, hunting and a limited production of food crops (Amanor 1999). From the 1880s, commencing in the eastern part and quickly spreading westward, cocoa was introduced (Hill 1963, Amanor 1999). The expansion of cocoa generally involved removal of most canopy trees although some were left to provide shade for cocoa seedlings or simply because they were too large to remove. Large tracts of forests were cleared by subjects of the Stools. Hired labour, typically migrants from Northern Ghana, assisted in the process, and also gained cultivation rights from Stool chiefs through renting or outright buying of land, or through sharecropping (Boni 2005). The agricultural expansion that swept across the HFZ largely respected the borders of the forest reserves,

¹ The forest area is predominantly natural forest; the plantation estate is estimated at 160 000 ha. The actual deforestation rate is estimated at 135 000 ha for the period 1990-2000 and 115 000 ha for 2000-2005 (FAO 2006, Affum Baffoe and Amponsah-Doku 2005).

² The FAO (2006) statistics are based on national data with reference years 1989 and 1996, interpolated and extrapolated to arrive at estimates for 1990, 2000 and 2005, respectively. Only the 1996 data refers to a national forest inventory, while the 1989 data are “guesstimates” based on secondary sources (Affum Baffoe and Amponsah-Doku 2005). Neither the 1989 data, nor the 1996 data refer specifically to the FAO forest definition. An additional problem with the current national statistics is that they only consider the HFZ, notwithstanding that significant areas within the Savanna zone north of the HFZ are likely to qualify as either “forest”, “other wooded land” or “other land with tree cover”, as actually has been the case in earlier statistics, e.g. FAO (1981).

³ The discussion also points to the importance of the forest definition to be applied under REDD. The prospect of REDD in Ghana will be highly dependent on the canopy cover threshold, and whether areas which are influenced by agriculture will qualify under REDD, or fall under a more comprehensive agriculture, forestry and other land uses (AFOLU) terrestrial carbon accounting system that may only materialize at a later stage than REDD (Angelsen and Wertz-Kanounnikoff 2008, Dutschke and Pistorius 2008). Moreover, it underscores the challenges ahead in setting an appropriate baseline. The application of current yet questionable statistics as baseline would allow for significant amounts of “hot air”, i.e. apparent but not real reductions in CO₂ emissions.

established for that very purpose. By the late 1970s, the expansion of cocoa into virgin forest lands was largely completed (Amanor 1996, Boni 2005). It has been replaced by agricultural intensification, which is believed to have reduced the number of off-reserve trees further. Today, shade-trees in cocoa farms, trees on fallow lands, and small patches of forest along water courses and “sacred groves” make up the main off-reserve tree resources, c.f. Table 1.

Wood extraction

In the initial phase of agricultural expansion timber had little commercial value and valuable trees were simply destroyed to make way for farm expansions. Domestic timber demand was limited and satisfied by pit-sawing (Amanor 1996). In the period 1890-1940, the annual extraction of timber for export did not exceed 100 000 m³ (Amanor 1999). The post-war harvest quickly rose to 1.5-2.0 million m³ annually of which 95% initially originated from off-reserve areas but with a sharp increase in the on-reserve share during the 1960s⁴ (IIED 1993, Amanor 1999). The harvest dropped in the late 1970s and early 1980s because of national economic crisis, but quickly recovered in the second half of the 1980s to its pre-crisis level⁵. Since 1995, the harvest has gradually dropped to reach 0.9 million m³ in 2005 (Hansen and Treue 2008). These figures stem from official records, but an additional unrecorded harvest has always taken place. Currently, the actual harvest is conservatively estimated at approximately 3.3 million m³ annually, i.e. more than three times the officially recorded harvest and significantly above the annual allowable cut (Hansen and Treue 2008)⁶.

Fuel wood constitutes two-thirds of the total energy consumption in Ghana and is estimated to 25-28 million m³ of raw wood annually (Grados and Janssen 2008). Approximately 84% of households use firewood as their main source of fuel, primarily in the form of dead wood collected on farm and fallow land, while 13% of households, primarily in urban areas, rely on charcoal (Wiafe 2005,

Amanor 1996, Ardayfio-Schandorf 1993). Charcoal is mainly produced in the transition zone between the HFZ and the Savannah zone, where the most suitable species are found (Amanor 1996), but due to resource depletion, production increasingly takes place in the HFZ, especially the northern part, and increasingly inside forest reserves (Mason undated). Accordingly, fuel wood extraction contributes to forest degradation, but data to qualify its specific importance is wanting.

Infrastructure extension

Approximately 16% of the HFZ is occupied by infrastructure, i.e. cities, towns and villages, mines, factories, roads and other physical structures (Planning Branch 1999).

Artisanal and small-scale mining, primarily for gold, has taken place for over 500 years in the form of pit mining, in Ghana known as Galamsey mining (Botchie *et al.* 2007). This has contributed mainly to forest degradation and some limited deforestation (Mathrani 2003). Industrial gold mining was introduced in the late 19th century, and peaked in the early 1960s at about one million ounces per year (Mathrani 2003). The mining sector collapsed in the late 1970s, but was assisted by the Structural Adjustment Programme (SAP/ERP), which liberalised legislation and introduced favourable financial incentives (Kraus 1991). As a result, the 2001 production increased to 8 times that of 1985 (Mathrani 2003). Botchie *et al.* (2007) estimate that approximately 15% of the HFZ falls under various types of mineral concessions. Even reserved forests must generally give way to mining (Marfo 2006, UNEP 2008)⁷. Moreover, technological developments have resulted in a shift from underground to surface mining, which may have further accelerated the deforestation caused by mining, but specific figures on the impact of mining on deforestation and forest degradation are not available.

In addition, bush fires have also acted as a proximate cause of deforestation and degradation (Amanor 1996).

⁴ The timber extraction focused on a limited number of preferred species (“creaming”). When these became scarce in the off-reserves, the timber firms turned their attention to the reserves for the same species.

⁵ The lowest post-war harvest level was recorded in 1982 at only 420 000 m³ (Treue 2001). Currency overestimation reduced the incentive for export and currency restrictions led to a shortage of spare parts in transport and processing (Kraus 1991). Devaluations and removal of currency restrictions, coupled with favourable credit schemes for expansion of logging and processing facilities under the 1983 Structural Adjustment/Economic Recovery Programme, however, quickly re-vitalised the sector (Owusu 2001, Amanor 1999).

⁶ There is no “sustainable harvest” threshold to which actual harvest may be compared. This is because the off-reserve harvest is basically “extraction without replacement” in accordance with the 1948 Forest Policy. In principle, the 1994 Forest and Wildlife Policy altered this by aiming at sustainable off-reserve production, but the actual practice is still extractive. Based on inventory data, assumptions about the productive capacity of forest reserves and a controlled, gradual depletion of off-reserve timber resources over a 55 year period, an annual allowable cut (AAC) was in 1996 set to 1.0 million m³, equally divided between on- and off-reserves (Planning Branch 1999). In 2002, the AAC was raised to 2.0 million m³ by increasing the off-reserve AAC to 1.5 million m³ (Bamfo 2005). Recent official harvest figures depict an off-reserve harvest which is below the 0.5 million m³ threshold, while the actual off-reserve harvest is likely to be above the 1.5 million m³ threshold. However, the majority of this harvest never enters mills but is rather turned into chainsaw lumber for the domestic market (Hansen and Treue 2008). The actual on-reserve harvest is significantly exceeding the 0.5 million m³ threshold, and because of the long period of overexploitation, particularly of the commercially most valuable species, this threshold no longer represents a sustainable harvest level (Wong 1998).

⁷ Significant debate has occurred on the issue of mining within forest reserves, see e.g. World Bank (2006). A ban was placed on mining in forest reserves in 1996, but lifted again in 1997. The extent of mining in forest reserves is unknown. Botchie *et al.* (2007) list 15 companies with mining rights in forest reserves, while the World Bank (2006) reports that following the revoke of the ban in 1997, 27 mining companies were granted rights to continue operations within forest reserves.

Underlying causes of deforestation and degradation in the HFZ

Following Kanninen *et al.* (2007), we group the underlying causes of deforestation and forest degradation into four classes: macro-economic, demographic, technological and governance factors.

Macro-economic factors

High international demand for cocoa, timber and minerals, which constitute the backbone of Ghana's economy and accounted for 76% of export revenues in 2007 (ISSER 2008), has triggered deforestation and forest degradation. Likewise, high economic growth over the past two decades, e.g. 5.6% p.a. for 2002-2007 (ISSER 2008), in combination with rapid population growth and urbanization, has resulted in deforestation and forest degradation through agricultural intensification and wood extraction. A 20% import duty on all wood products except logs raises the demand for and prices on domestic wood products (GoG 2000).

Various macro-economic policies have favoured capacity expansion and improved profitability of the export-oriented timber and mining industry. The 1983 SAP/ERP introduced favourable donor-supported credit schemes for investments in the timber and mining sectors (Owusu 2001, World Bank 2006). This expanded the timber industry's extraction and processing capacity to above 5 million m³ annually (Birikorang *et al.* 2001), which is way above the annual allowable cut, c.f. footnote 6. In relation to increased profitability, selected mining and timber export companies are exempted from corporate tax for 10 years and pay a reduced rate of 8% hereafter (GoG 1995). Other corporate tax rebates are available for timber firms located in rural areas (GoG 1994), while those producing "non-traditional" timber products (veneer, plywood and boules) pay the reduced rate of 8% (Agyeman *et al.* 2004).

The SAP/ERP also included a gradual increase of the government regulated cocoa farm-gate price, a phasing out of subsidized agricultural inputs, and devaluation of the Ghanaian currency. The overall effect of these measures on deforestation and forest degradation are difficult to ascertain, because they work in different directions and may influence the profitability of other land uses as well⁸. More recently, subsidized petrol products may have contributed to deforestation and degradation by raising the profitability of agricultural production, mining and logging. Yet, from 2005, petrol subsidies have gradually been phased out (Bacon and Kojima 2006).

Demographic factors

Ghana has experienced fast population growth and urbanization. Currently, the population growth is approximately 2% p.a. (CIA 2008), but has in past decades

exceeded 3% p.a. (NDPC 2005). From 1960 to 2000, the urban population increased from 23% to 44%, mainly due to rural-urban migration (Yirimea 2008). This has created a sharp increase in domestic demand for agricultural products and wood. The increasing wood demand has been met by an emerging chainsaw lumbering sector with operators converting logs to boards at the felling site (Odoom 2004), while conventional timber firms have focused largely on the export market (Birikorang *et al.* 2001). Commercial chainsaw lumbering was banned in 1998, but this has not reduced the trade, and the two sub-sectors are at present believed to be about equal in size, each processing approximately 1.7 million m³ of raw wood annually (Hansen and Treue 2008).

Technological factors

Three major technological developments have acted as driving forces of deforestation and degradation. New cocoa varieties that require less shade than the traditional ones have been promoted over the past two decades (Cocoa Board 1998; Osei-Bonsu *et al.* 2003). It appears that many farmers, especially migrant farmers in the Western part of the HFZ, have exaggerated the reduced shade prescriptions, and completely removed tree cover when introducing the new varieties (Osei-Bonsu *et al.* 2003). Moreover, new mining technologies have shifted extraction from underground to surface mining (Mathrani 2003), which may have increased deforestation. Finally, new rotary-veneer techniques, introduced in the 1980s, have resulted in a steep rise in the extraction of *Ceiba pentandra* (Birikorang *et al.* 2001).

Governance factors

By governance we here mean "the setting, application and enforcement or non-enforcement of regime rules" (Hyden 1999, here cited after Kjaer 2004, p. 10). Hence, we emphasise the *actual* effect of formal and customary rules because this is what determines the incentive structures that actors are subjected to. Historically, much deforestation in Ghana has been driven by customary rules according to which usufruct land rights could be secured by clearing virgin forest (Boni 2005). Today, it is primarily formal rules including the degree to which they are applied and enforced that lead to deforestation and degradation. At the heart of matters is the 1962 Concessions Act section 16, which vests all natural forests and trees, on- and off-reserves, in the President in trust for the Stools. Around this clause a framework of regulations has subsequently established a highly centralized and rather complex forest governance regime. In the following, we describe key governance factors and the incentives they create for felling agents.

Low enforcement of harvesting rules. There are rules defining where, when, how and how much timber may be

⁸ Benhin and Barbier (2001, 2004) document a reduced deforestation rate in the years following the introduction of the SAP/ERP and attribute the reduced rate to the SAP/ERP. With reference to our discussion of Ghana's forest cover statistics, we however question the reliability of statistics applied in their studies.

extracted⁹, but they are generally not enforced effectively. As demonstrated by Hansen and Treue (2008) official harvest and export statistics show that particularly the commercially most valuable species have been grossly over-harvested over the past decade and possibly much longer. Research based post felling inspections and re-measurement of logs at road check points have consistently documented the puzzling fact of undersized trees being felled but apparently in full conformity with harvest regulations as all documents were in order (FORIG 1994, Treue 2001). This official allocation of undersized trees for harvest, however, stems from manipulation of inventory reports such that individual trees' diameters are promoted into a diameter-class above the felling limit (Krakrada and Maginnis 1992, Treue 2001). In addition, the harvesting rules are significantly violated by chainsaw operators while the ban of chainsaw lumbering (see below) has not been enforced to any significant effect (Hansen and Treue 2008). Low enforcement of felling rules immediately leads to forest degradation and ultimately deforestation.

Low enforcement of rules protecting farmers' rights. Various rules protect farmers' rights in relation to off-reserve timber harvesting. These include requirements for timber operators to obtain consent from farmers prior to on-farm timber extraction and payment of compensation for damage to crops caused by felling and hauling. Generally, the consultation of farmers prior to felling is ignored (Marfo *et al.* 2006), and when compensation is paid, which is far from always the case, it does not fully compensate for the damage caused (Hansen 2009). There is low enforcement of rules by the FC, and FC or other law enforcing agencies are seldom involved in solving farmer-operator conflicts (Hansen 2009). Forest degradation (and ultimately deforestation) results when concession holders fell trees that should not have been felled and when farmers take preventive measures and remove timber trees on land they cultivate to prevent crop damage caused by timber concessionaires (Amanor 1996, Treue 2001).

Low forest fees. The legislation institutes a number of fees that concessionaires must pay to maintain felling rights and when extracting, processing and exporting timber. Fee

sizes and their revision are also stipulated in this legislation. However, research has consistently demonstrated that the sum of official fees is only a fraction of the resource rent¹⁰ (Richards 1995, Birikorang *et al.* 2001, Treue 2001, Birikorang and Rhein 2005, Birikorang *et al.* 2007). Moreover, in violation of the law (TRMR 1998), the FC accepts delays and has never charged default interests on late payments thus decreasing their real value (Birikorang *et al.* 2001). The forest taxation regime therefore results in subsidized log prices, which in combination with the log export ban (see below), increases the profitability of the log processing industry and encourages the industry to expand extraction and increase its log processing capacity. Moreover, subsidized log prices do not provide appropriate financial incentives for industries to increase efficiency (Birikorang *et al.* 2007). For forest communities, low forest fees result in modest revenues flowing to farmers and forest fringe communities which reduce their incentive to manage and conserve timber trees, both on- and off-reserves. In effect, low forest fees therefore lead to deforestation and degradation.

A biased timber rights allocation. The 1998 ban on chainsaw lumbering has resulted in a concentration of timber rights with conventional timber firms, especially log processing industries. Unofficially, the log processing industries have also acquired timber rights on concessions belonging to logging companies whose profitability collapsed with the log export ban¹¹ (Treue 2001). Meanwhile, these firms have gradually reduced their supply to the domestic market because they have successfully increased their export ratio (Birikorang *et al.* 2007). A 2001 ministerial decree required holders of official long-term timber rights to supply 20% of their output to the domestic market, but this has never been enforced (TIDD 2004, 2005), and in any case 20% would not satisfy the domestic demand. The ban on chainsaw lumbering has not been effective and today the domestic market is dominated by chainsaw lumber, which is openly sold in town and city marketplaces (Obiri *et al.* 2009). Accordingly, the allocation of timber rights has in combination with ineffective enforcement of harvesting and market regulations created a "double pressure" on the resource through the official harvest by the formal sector for export and the unofficial chainsaw lumber harvest for the domestic market.

⁹ These rules are specified in the Manual of Procedures of the Forestry Commission, Section D (on-reserve) and F (off-reserve) (FC 1998). Off-reserves, minimum felling diameters and district felling quotas constitute the main official harvest regulation whereas on-reserves, objectives of resource conservation and maintenance of ecological as well as environmental functions of forests justify harvest regulations that include minimum felling diameters, restrictions on areas where harvesting is allowed (excluding swamps, steep slopes, etc.), how long a logging compartment may be operated, how long a compartment must be left to recover before next round of logging (felling cycle), and a yield calculation formula intended to secure that, within a compartment, a sufficient number of seed trees above the minimum felling diameter are left behind and that a sufficient number of trees above the minimum felling diameter will be available for the next felling cycle.

¹⁰ In theory, forest fees should equal the value of standing timber when converted to products (logs or further processed) in the most profitable way. This is known as the stumpage value, which is calculated by deducting from log or forest product prices the costs of felling, hauling, transport and processing while also allowing for reasonable profit margins in the production chain (Gray 1983).

¹¹ Treue (2001, p. 107-114) has documented the illegal trade in rights to standing timber where active timber operators pay official concession holders 50% of the domestic log price for extracting timber on their concessions. It illustrates that the *de facto* willingness to pay for access to standing timber is considerably higher than the official forest fees. The trade of timber rights also suggests the existence of a patron-sub-patron-client system where timber rights are allocated discretionarily to actors who are in fact not timber operators but merely re-sell their timber rights to actual timber companies. In this way timber rights that appear held by many actors are, *de facto*, concentrated on a lower number of export-oriented firms.

Log export ban. Log export bans have, since 1979, included more and more species until it became complete in 1995, officially as a resource conserving measure (Treue 2001). Contrary to many other official rules, the log export ban has been effectively enforced. In terms of reducing the timber harvest, it has, however, been ineffective except in the very short-term (Treue 2001, Hansen and Treue 2008).

A biased benefit sharing. The benefit sharing arrangement channels some of the forest fees back to traditional authorities and local governments¹². Farmers and forest fringe communities are not directly included in the benefit sharing and they get few direct benefits from the constitutional beneficiaries. Their shares are also low due to the low fees and the portion taken by the Forestry Commission and the Office of the Administrator of Stool Lands. The scarce funds that do reach the constitutional beneficiaries are primarily used in recurrent expenditures (District Assemblies and Traditional Councils) and for semi-private purposes (Stools) because there are no official rules on how they should be spent (Hansen and Treue 2009). Thus, the benefit sharing does not provide farmers and forest fringe communities with direct incentives to engage in forest/tree management and conservation. Rather, in combination with the low enforcement of rules on farmers' rights, the benefit sharing provides perverse incentives for farmers and communities to engage in illegal activities (chainsaw lumbering) or kill or burn valuable timber trees, i.e. contributing to deforestation and forest degradation.

POLICIES AND MEASURES FOR REDD

The previous section has illustrated that the causes of deforestation and degradation are multiple; a finding in line with results of research in other sub-national, national and regional settings (Geist and Lambin 2002). Some of the identified underlying causes are within the forestry sector (e.g. low level of rule enforcement, low level of fees), while others relate to broader changes at national level (e.g. urbanization, population growth) or internationally (e.g. high demand for cocoa, timber and minerals). We argue that, in Ghana, measures in favour of reduced deforestation and forest degradation, e.g. implemented in a national REDD readiness programme, are likely to be largely confined to addressing the causes identified within the forestry sector (or even only a subset of these), because many of the other identified causes relate to complex social and economic

patterns as well as national and international priorities that, realistically, cannot be addressed to any significant degree under REDD measures. Thus, using the terminology of Kanninen *et al.* (2007) they are generally not considered "targetable" under REDD measures. Consequently, based on our analysis of underlying causes, this section briefly outlines key measures which could be considered to address deforestation and forest degradation in the HFZ. For purpose of structure, we discuss measures under two headings, legislative reforms and use of economic and financial instruments, although obviously they are intimately related.

Legislative reform measures

This refers to the abolishment of perverse regulation and the introduction of regulation in favour of forest conservation, and, not least, a strengthened focus on enforcement of new and existent regulation (command and control measures). Legislative reforms could be envisaged in at least four areas: (i) new legislation that "privatises" on-farm trees, (ii) relaxation of the ban on chain-saw lumbering, (iii) relaxation of log export ban, and (iv) complementary legislation on benefit sharing.

New legislation that "privatises" on-farm trees

Low enforcement of off-reserve timber harvest regulations and farmers' rights combined with farmers' low share of financial benefits have been identified as key causes of deforestation and degradation. The scattered nature of off-reserve timber resources renders enforcement of centralised and detailed regulation illusory and in any case prohibitively costly. Moreover, the associated benefit sharing arrangement is outdated, because it assumes timber trees to be a static, "nature-given" resource, while in reality they should increasingly be considered the result of farmers' active management (Amanor 1996, Boateng 2009). Inevitably, Ghana must consider reforming tenure of on-farm trees. We would point towards the need for legislation that grants the farmer rights to trees they manage on-farm, including the right to sell them, as standing timber or wood products. It would require revoking of the Concessions Act (section 16) and, consequently, discontinuation of granting on-farm concessions. Such "privatisation" of on-farm trees may initially accelerate the rate of depletion, as farmers "rush" to utilize this new opportunity. However, enhancing farmers' rights to trees and the financial value they represent should in the long run increase the number of integrated on-farm trees¹³. New legislation does not suffice; it will have to be

¹² Currently, revenues from stumpage fees and concession rents are considered stool land revenue. The 1992 Constitution of Ghana, section 267 (6) stipulates that 10% of stool land revenue is due to the Administrator of Stool Lands. The remaining share is to be divided between the District Assemblies (55%), Traditional Councils (20%) and Stools (25%). Before this sharing, the FC deducts 60% on-reserve and 40% off-reserve of the gross revenues for its management services. The legal backing of the management fee is disputed. Land-owning communities' share of timber revenues has declined over time from a stipulated 2/3 of the gross revenue under the 1927 Forestry Ordinance (Cap.157). See Hansen and Treue (2009) for a further account of the historical development of the benefit sharing arrangement.

¹³ We are fully aware that reforming tree tenure rights is challenging. There is a potential risk of illegally felled on-reserve timber being marketed as timber from farmland. This can only be tackled through improved enforcement of on-reserve felling rules. Moreover, there is the question of revenues to constitutional beneficiaries which could be solved through a tax on on-farm timber. Finally, but not least, it is noted that a very significant number of farmers in Ghana are, in full or partly, farming on leased land or as sharecroppers (Amanor 1996). This obviously adds to the complexity, and new legislation as suggested here may not translate into enhanced rights for this group unless bilateral agreements can be reached with the "landowner".

accompanied with strengthened efforts by the FC and other law enforcing agencies to assist farmers in protecting their rights and resource claims.

More radical reform measures could include new legislation that devolves the decision-making and management of forest reserves to locally elected committees, in line with policies of decentralised forest management pursued in other African nations where public participation is considered a means towards higher efficiency, effectiveness and equity in resource management (FAO 2008).

Relaxation of the ban on chain-saw lumbering

Our analysis has shown that the ban on chainsaw lumbering is not enforceable and results in a double pressure on the resource. If the ban is not attended to, chainsaw operations will continue at an uncontrollable rate and undermine other measures. The ban should therefore be revoked through legislation that ensures cheap and easily accessible formal registration of chainsaw operators. The discontinuation of on-farm concession granting would provide a level playing field for chainsaw operators off-reserves, which could also be further pursued by legislation that allows for small and short-duration timber rights in the on-reserves (e.g. at compartment level). Moreover, chainsaw operators could be allowed to fell species that are not commercially interesting for formal concession holders. It is important to stress that the potential positive effect on deforestation and degradation is largely associated with the creation of fair competition for timber rights and enhanced law enforcement. If relaxing the ban merely implies issuing of more timber rights to chainsaw operators in addition to those held already by conventional firms, then it will obviously have no effect on deforestation and degradation.

Relaxation of the log export ban

Our analysis suggests that the log export ban, in combination with low fees, leads to depressed domestic log prices which, in combination with the tree tenure regime, reduce the financial incentive to grow trees and encourage inefficient log extraction and processing. Legislative reforms should therefore include a relaxation of the ban, which could be implemented through a log export tax or log export quota. Birikorang *et al.* (2001) discuss various options in this regard.

Complementary legislation on benefit sharing

The current benefit sharing arrangement provides insufficient financial incentives for engaging in conservation of forests and trees. While a change of the Constitutional formula is probably unrealistic, new regulations could; (i) specify the term “revenues accruing from Stool Lands”, (ii) provide for further documentation of the management costs at forest management unit level, and (iii) specify for what purposes the constitutional beneficiaries are to use their shares of timber revenues and requirements for accountability.

Use of economic and financial instruments

Eliminating subsidies

Low forest fees result in subsidized log prices, which lead to high profitability in wood processing, excess capacity and inefficiency. Readiness activities should therefore include measures that raise forest fees. There is a need for reform of the fiscal regime to concentrate on upstream fees (e.g. stumpage fees) relative to downstream fees (e.g. export levies) in order to provide financial incentives for more efficient use of the raw material (Birikorang *et al.* 2007). The introduction of competitive bidding for timber rights will require long time, because the majority of timber rights are not up for renewal any time soon (FC 2006), implying that there will be a need for administratively set stumpage and/or area-based fees. Moreover, REDD measures could include efforts to eliminate the corporate tax rebates offered to wood processing industries.

Transfer payment schemes for forest protection

At the global level, the prospect of REDD has been intimately related to the establishment of transfer payment schemes that compensate felling agents for profits foregone by not converting or degrading the forest. Yet, a fundamental requirement for such schemes is that rights to forests and trees are enforceable (Engel and Palmer 2009, Wunder 2007). Under the current forest and tree tenure in Ghana, rights are divided between Stools, farmers, the FC and concessionaires, and none of these actor groups have the capacity to affect what happens to the forest and trees. Furthermore their potential collective action is constrained by conflicts of interest. Implementation of a transfer payment scheme would therefore be contingent on legislative forest and tree tenure reforms, c.f. above, and strengthened efforts in enforcing such rights. The prospect for implementing transfer payment schemes in Ghana therefore lies in the medium to long term.

ARE REDD REFORMS LIKELY? ANALYSING THE POLITICAL ECONOMY OF DEFORESTATION AND FOREST DEGRADATION IN THE HFZ

This section discusses whether reforms are likely to materialise under the prospect of an international REDD regime that will reward Ghana for reduced forest related emissions. The discussion is framed by political economy theory, notably Bates (1981), Blaikie (1985) and Ascher (1999), and departs from the assumption that the underlying causes (policy failures) within the forestry sector have not appeared “out of the blue”, but reflect objectives, interests and preferences of the Ghanaian society, and particular groups within it, that prioritise deforestation and forest degradation over conservation, often in conflict with official policies. First, we address each policy failure by summarising historical reform efforts and attempting to explain why they have largely failed through analysing which objectives and particular groups’ interests are favoured by *status quo*.

Second, we discuss why this political economy has persisted by briefly discussing the perceptions of the deforestation problem and powers held by various groups of actors in society. Lastly, we explain why we think REDD is unlikely to dismantle the political timber economy of the HFZ any time soon.

The political economy of deforestation and degradation in the HFZ

Low forest fees and biased timber rights allocations

Low forest fees and a biased allocation of timber rights have prevailed in spite of the 1994 Forest and Wildlife Policy, which calls for competitive bidding and pricing of the resource. Actual implementation of this policy has, however, been cumbersome and slow.

In 1997, 40 year Timber Utilization Contracts (TUCs) were introduced as the prime form of timber right, but without strong safeguards against discretionary allocations¹⁴. In 2000, when a new government took office, the existing TUCs were cancelled as they had allegedly been discretionarily allocated. Ironically, this was soon followed by widespread allocation of 5 year timber rights in the form of Timber Utilization Permits and Salvage Felling Permits, again without any safeguards against patronage. It was only in 2003, after persistent donor pressure, that legislation for competitive bidding was implemented. Yet, only a handful of timber rights have actually been granted competitively and non-competitive allocation of timber rights has prevailed¹⁵ (Birikorang and Rhein 2005, Bird *et al.* 2006).

Attempts to raise forest fees (stumpage fees/royalties) have also failed. Until 1999, they could only be raised through Ministerial decrees, which were irregular and quickly eroded by inflation (Treue 2001). Effective from 1999, the TRMR (1998) prompted a significant increase in stumpage fees, and introduced an, in principle, automatic revision by pegging them to recorded lumber export prices. Yet, since 1999, rates have only been revised once (in 2003) and inflation has once again eroded the real value (Birikorang *et al.* 2007). Efforts to mob up additional willingness to pay through competitive

bidding have also failed, c.f. above. Moreover, a national reconstruction export levy introduced in 2001 on exports of lumber (7%), plywood and veneer (3%) was abolished in 2005 on the grounds that it caused company closures and labour lay-offs in the industry (MOFEP 2005).

The persistence of low fees and discretionary allocation results in subsidised domestic log prices, which serve the broader and, in principle, laudable policy objective of economic development through industrial development, jobs and foreign exchange earnings. Yet, it also suggests patron-client relations between the political and administrative elite (patrons) and actors in the formal timber sector (clients)¹⁶. Accordingly, timber rights appear to be allocated in exchange of payments (bribes) and/or political support, e.g. in connection with election campaigns. The large number of short-term timber rights allocated to firms with no earlier track record in the forestry sector may be explained as rewards for political support in the form of official timber rights that may subsequently be re-sold to active timber companies.

The introduction of the national reconstruction export levy demonstrates, in line with research findings, that extra rents can in fact be extracted from the log processing firms, and that the political and administrative elite is aware of it. Its short life can, however, hardly be fully explained by the timber lobby's claim that it was killing the industry.

Chainsaw lumbering was banned as a resource conservation measure on grounds of the practise being wasteful and because the decentralised allocation of permits to a large number of chainsaw operators was difficult to control. Yet, this measure further centralised formal control over timber resources thus enhancing the patron position of the central political and administrative elite. However, the sharp rise in domestic lumber demand, combined with the formal sector's continued focus on the export market, soon rendered effective enforcement of the ban impossible, because denying Ghanaian voters access to cheap lumber (to which they are accustomed), while maintaining a sizable export, would be politically suicidal.

¹⁴ The 1997 Timber Resources Management Act did not introduce competitive bidding, but instead a Timber Rights Evaluation Committee, tasked with the evaluation of applications for timber rights based on technical criteria established in the 1998 Timber Resources Management Regulations.

¹⁵ A 2006 database on extant concessions prepared by the Forestry Commission lists 254 timber contracts covering an area of 1.8 million hectares divided among 106 different firms. 78 contracts are Timber Utilisation Contracts. Of these, only six have been allocated through competitive bidding. 44 Timber Utilisation Contracts have been allocated administratively at dates after 23 April 2003 when the Timber Resources Management (Amendment) Regulations came into force. The remaining 38 contracts have been granted between 1998 and 2003, i.e. prior to the legal requirement of competitive bidding. In addition, timber rights have over the past decade been granted to at least 1.4 million hectares (the exact extent not known) of off-reserve land in the form of Timber Utilization Permits and Salvage Felling Permits with reference to the 1998 Timber Resources Management Regulations, sections 35 and 38 (Danso and Opoku 2004). Timber Utilization Permits were officially justified as short-term timber rights of a few trees for community projects while Salvage Felling Permits were for salvage of timber trees in relation with infrastructure development and farm expansion. These official intensions appear to have been grossly violated in the actual granting of permits.

¹⁶ This has been confirmed to one of the authors by a former forestry minister who had experienced "enquiries" from the Office of the President about the possibility of allocating timber rights to certain companies. Moreover, we are certainly not the first pointing towards patron-client relations in the Ghanaian society, c.f. e.g. Killick (2008), who characterises Ghana as a "neo-patrimonial state", i.e. "... effectively an apparatus serving the interests of particular groups and individuals that control it" (Killick 2008, p. 26).

Low enforcement of timber harvesting rules and rules protecting farmers' rights

The timber harvesting rules were reformed in the late 1980s and early 1990s in line with "scientific" principles of sustainable forest management, and with significant support from the donor community (Hansen and Treue 2008). These harvesting rules have been used by the political and administrative elite to legitimize the centralized forest management in Ghana (deGrassi 2003). Yet, along with rules protecting farmers' rights, they are not effectively enforced.

Accordingly, and along lines discussed above, the political and administrative elite has landed itself in a catch-22 situation where objectives of development through industrialisation, personal rent seeking and satisfaction of the domestic timber demand can only be achieved through low law enforcement and, as a result, depletion of the country's timber resources. This is exploited by members of the lower level bureaucracy (forest officers, police officers, staff of the judiciary and the military) who extract informal payments from formal and informal agents in the timber sector while allowing breach of regulations (Adam *et al.* 2006, Marfo *et al.* 2009). This state of affairs is no secret in Ghanaian forestry circles and it appears that a "race to finish the resource" is accelerating under the increasingly realistic assumption that if a formal contractor follows the rules and leaves behind a valuable tree, it will surely be felled and converted to chainsaw lumber by informal operators.

A biased benefit sharing

The 1994 Forest and Wildlife Policy calls for the "perpetual flow of optimum benefits from forests and wildlife resources to all segments of society" (MLF 1994, section 4.1). Yet, the central forestry administration captures the lion's share of official revenues. Two legal manoeuvres account for this outcome. The first is the deduction, by administrative decision, of the FC's management costs prior to sharing in accordance with the constitutional formula. Second, the timber taxation regime relies on downstream fees (export levies), which are not considered Stool land revenue and therefore not shared with the constitutional beneficiaries, but appropriated in full by the FC (Hansen and Treue 2009, Birikorang *et al.* 2007).

The resulting low revenues transferred to constitutional beneficiaries suggests a deliberate political decision to keep forest fees low, for reasons discussed above, while channelling the main share of revenues into the financing the central forestry administration. Accordingly, official forest and timber revenues are administered such that payments to constitutional beneficiaries are minimised, presumably in order to pacify these, without getting into obvious conflicts with the Constitution, allowing for critical voices from e.g. NGOs, academia or donors to be managed.

Corporate tax rebates

The rebates are officially justified as measures to promote export-oriented industries located in specific "free zones", industries based in rural areas and those involved in further

(tertiary) wood processing (GoG 1994, GoG 1995). While the rebates supposedly were to provide financial incentives for new investments, they have in reality granted tax holidays to all major, already established wood processing firms (Birikorang *et al.* 2007). There are no specific eligibility criteria; the decision to grant a tax rebate rests with the Free Zone Board and Ghana Investment Promotion Centre Board, respectively, with board members appointed directly by the President. This suggests that tax rebates form part of the political economy and strengthen patron-client relations between the political and administrative elite and prospective wood processing firms.

Log export ban

The log export ban was officially justified as a resource conserving measure. Yet, the ban has had little impact on the harvest level. Rather, the ban should be interpreted as a measure to promote industrialisation, job creation and export earnings¹⁷.

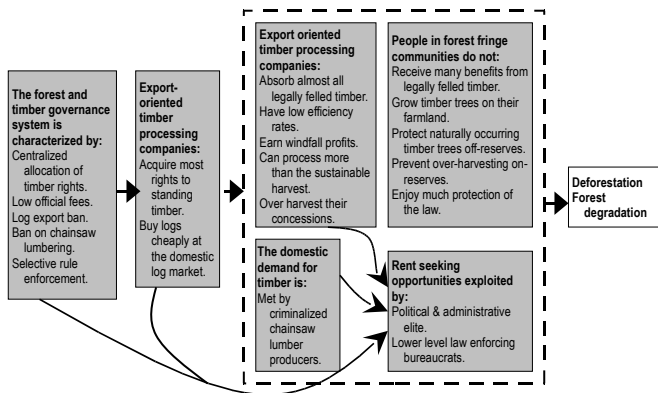
By effectively controlling access to the export market, the government has favoured the domestic log processing industry. The ban has curbed competition on the domestic market where prices are significantly lower than international log prices (ITTO 2006). This has eroded the profitability of firms without log processing facilities and consequently many of them have collapsed (Birikorang *et al.* 2007). Thus, the log export ban has resulted in a concentration of timber rights and profits within the log processing firms, and as such reinforced the alliance between this group and the political and administrative elite.

Sum-up

Our analysis of the political timber economy is summarised in Figure 2. Its central elements are political control over access to, and price of, standing timber as well as access to the world market through discretionary allocation of formal timber rights, low official forest fees and the banning of log exports. The system involves a transfer of timber rents to urban centres with minimum payoff to rural communities and, at the expense of the resource, it serves official objectives of economic growth through a subsidised domestic wood processing industry, which generates jobs and export revenues. Meanwhile, it also serves political and economic interests of the political and administrative elite, who are in control of the timber right allocation, price setting and access to export markets. The system has nourished an oversized and technically inefficient, but politically effective, wood processing industry that has successfully lobbied its interests in getting exclusive rights to standing timber at low official costs. This interpretation of Ghana's political timber economy features many similarities with the general theory on how African governments extract revenues from rural areas to promote industrialization, generate export revenues and consolidate political as well as administrative powers, c.f. Bates (1981, 1983).

¹⁷ It is noted that due to inefficient processing, export revenues would have been larger if the domestically processed wood had been exported directly as logs (Treue 2001). The jobs created in the wood processing industries thus come at a price.

FIGURE 2 The political timber economy in Ghana. Horizontal straight arrows signify the sequence of governance effects that lead to deforestation and forest degradation while curved arrows signify associated, unofficial cash flows.



A detrimental, yet die-hard regime

Why has the political timber economy survived reform attempts and pertained under an increasingly functional democracy? We attempt an explanation drawing on Blaikie (1985, p. 89-95), who emphasises the perception of the problem and its importance for affected groups, and the powers that they have in the state apparatus. Our discussion is limited to key affected groups, notably farmers, chiefs and the “average” Ghanaian citizen.

Farmers experience direct losses in the form of crop damages as a result of timber extraction, and are not officially rewarded for their nurture of timber trees. Accordingly, farmers may well perceive their problems as temporary and to disappear when the trees are gone. They may, or may not, perceive the problem along ecological lines. They undercut the political and administrative elite’s control over the timber resource by engaging with illegal chainsaw operators or by deliberately destroying timber trees from farm land. Their livelihoods are largely dependent on food and cash crops, not timber trees, and the potential benefits from a share of revenue and further tree rights may be perceived by the individual to be fairly marginal. In combination with low political power at the national arena, this may explain why farmers have not organised common responses or actions.

The average (urban) Ghanaian citizen may not perceive the situation as a problem. He still has easy access to affordable chainsaw lumber and other wood products. He may, or may not, experience or perceive environmental problems, but even if he does, he may not necessarily associate them with deforestation and forest degradation. Moreover, in his capacity of taxpayer and voter, he is unlikely to be aware of the loss of natural capital associated with the political timber economy. In relation to the latter, the complexity of forestry issues, e.g. harvesting rules, taxation regime and benefit sharing, may help explaining why NGOs and other advocacy groups face difficulties in bringing forestry issues to the attention of the general public, e.g. in the media, except as isolated cases. The complexity may also function

as a constraint for NGOs and advocacy groups, who may not possess sufficient analytical and technical skills to analyse the situation and present a clear case.

Chiefs clearly have had their traditional role as custodian of the resource eroded, and may therefore also be considered to be at the loser’s end. Yet, they are recipients of some timber revenues which they can use largely at their own discretion, and further they can derive informal payments from timber operators for approving timber rights and social responsibility agreements. Accordingly, they may not even perceive themselves as being at the loser’s end. Moreover, their political power at national level is limited, and their interests do not coincide with those of farmers. This may explain the lack of large-scale coordinated efforts of chiefs, or alliances between chiefs and their subjects, to change *status quo*.

Finally, logging companies and utterly inefficient processing industries have been adversely affected, but their numbers, economic power and political influence are negligible.

The prospect of REDD accelerating reforms

We then arrive at the question of whether the prospect of payments under an international REDD scheme provide opportunities for accelerating reforms in favour of forest conservation. As mentioned, we are sceptical.

Reforms would inevitably reduce the control of the political and administrative elite over forest resources, and thus their discretionary power. This would run counter to national growth objectives, as legal reforms and strengthened enforcement would take away employment opportunities in the wood processing sector and reduce foreign exchange earnings. REDD payments could potentially soften such negative effects, but the large uncertainty about the future level of payments that REDD in Ghana may generate, caused by uncertainty about the baseline and state of the resource, the precise outcome of reforms, and future carbon prices, just to mention a few, is likely to make politicians reluctant to implement reforms. The flip side of this coin is that reforms would also curb the personal and party-political interests of the political and administrative elite. Again, there will be REDD payments, but all other things equal, such payments are likely to be subject to fairly close national and international scrutiny, and hence in our judgement less attractive to the political and administrative elite. Although specific inventory data is wanting, we suggest that the resource, though degraded, has not yet reached the point where the political economy loses steam entirely, and where the negative impacts of deforestation and forest degradation are severely felt by the average Ghanaian, e.g. in the form of declining lumber supply or sharply increasing prices. This point reached, there will be mounting demands for reforms, and few reasons for policy makers not to implement them; REDD in place or not. While REDD may influence the tipping point where reforms and REDD payments are considered favourably, we argue that Ghana is yet to

reach that point. In our analysis, a more likely scenario is preference for *status quo* (no or limited reforms) while counting on a favourable baseline that will allow REDD payments for what is essentially “hot air”.

Our pessimism about the immediate prospect of REDD should not be interpreted as an argument for doing nothing. In relation to donor assistance, we suggest continued support to a broad based policy debate, especially the participation and voice of segments of civil society (e.g. NGOs, advocacy groups, farmers’ associations, chiefs) in the debate¹⁸. Moreover, as this paper has demonstrated, there is a strong need for better data on the state of the forest and change rates, including changes in carbon stocks, and to increase capacities in relation to monitoring, reporting and validating. Such information and skills will be needed, regardless of the limited prospect of REDD in the short run. Reliable technical data should also serve to qualify the policy debate which may enhance the likelihood of speeding up reforms. What we warn against, though, are (legislative) reforms pushed and financed by donors with their usual eagerness to show quick results. Such attempts are doomed to fail just as has been the fate of previous donor driven initiatives to reform forest fees, timber rights allocation and harvesting regulations. In essence, REDD will be neither fast, nor easy.

CONCLUSIONS

The paper challenges the common narrative of REDD as being a fast and comparatively easy way to reduce CO₂ emissions. It demonstrates that deforestation and forest degradation in Ghana is driven by a complex set of underlying causes, some of which are within the forestry sector, while others lie outside. The paper argues that, realistically, REDD measures will address primarily those within the forestry sector. Our further analysis of these causes, through the lens of political economy, suggests that they reflect a *de facto* prioritisation of economic growth over forest conservation, while at the same time serving interests of particular groups, notably the political and administrative elite. We argue that the prospect of future REDD payments is unlikely to drive reforms in the short run, primarily because reforms would inevitably reduce the discretionary power of elite groups over forest resources, and hence run against their interests.

The key features of the political timber economy in the HFZ are politically controlled allocation of timber rights and administratively set forest fees, which subsequently trigger a set of “policy failures” resulting in deforestation and forest degradation. Many developing countries with tropical natural high forest display these key features. This fact, combined with the rich empirical evidence of how political and administrative elite interests have influenced developing agrarian economies, notably Bates (1981) and Blaikie (1985), make us to suggest that the Ghana case is not

unique, meaning REDD is likely to be neither fast, nor easy in many developing countries.

Methodologically, we emphasize the need to expand an analysis of underlying causes of deforestation and forest degradation with further analysis of why these causes have emerged and whose interests they serve, i.e. in essence an analysis of the political economy of deforestation and forest degradation. We recommend that such analyses be carried out at the initial stage of national REDD programmes, e.g. those carried out under UN-REDD or the World Bank’ Forest Carbon Partnership Facility. We would argue that such analysis carries the potential of qualifying the policy dialogue on REDD by shifting “...primary attention away from the preoccupation of conservation policy-makers, academics and consultants with institution-building, training government officers in environmental awareness, tightening up and rationalisation of administrative and legislative procedures. All these reforms may be necessary, but alas, so far from being sufficient that a reassessment of future conservation needs to be made” (Blaikie 1985, p. 87).

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ABBREVIATIONS

EU: European Union; FAO: Food and Agriculture Organization of the United Nations; FC: Forestry Commission; HFZ: High Forest Zone; REDD: Reducing Emissions from Deforestation and forest Degradation; SAP/ERP: Structural Adjustment Programme/Economic Recovery Programme.

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¹⁸ Such debate should capitalize on the momentum established through the negotiations of the Voluntary Partnership Agreement between Ghana and the EU within the framework of the EU Action Plan on Forest Law Enforcement, Governance and Trade (FLEGT). REDD and FLEGT are in fact closely related because both processes deal with the same underlying causes. Not least donors need to acknowledge this.

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