



# **Exportation of Timber in Ghana: The Menace of Illegal Logging Operations**

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# **Exportation of Timber in Ghana: The Menace of Illegal Logging Operations**

## **Summary**

This paper presents an empirical analysis of the linkage between external timber trade in Ghana and the increased incidence of illegal chainsaw operations which do not only threaten the country's forests and other natural resources but also the erosion of the basis for sustainable agriculture which is the main-stay of the country's economy. It uses ethnographic data from case studies of a recent research in selected forest reserves fringe communities in High Forest Zone of the country to explain the frustrations of local people with government policies that favour export to the neglect of local demand for timber and wood products. Although government pronouncements suggest that it is gaining an upper hand in the battle against illegal logging operations, evidence on the ground suggests that the greater part of the lumber on the local markets is supplied through illegal means predominated by itinerant chainsaw operators and their urban financiers .

The paper concludes that the country's forest and tree resources face massive degradation and overexploitation if the government does not take a bold decision on illegal logging, especially the activities of chainsaw operators. An option, though unpalatable and politically sensitive, may be the mainstreaming of chainsaw operations through the re-introduction of limited permits to registered local groups of timber traders and their chainsaw operators to supply the domestic market. This should be under a system which enjoins such groups to be collectively responsible for the activities of their members. And, the government should also strengthen the Forestry Services Division (FSD) to design and operationalize an enhanced monitoring and surveillance system of logging activities.

**Keywords:** Economic recovery program (ERP), Timber exportation, Illegal chainsaw operation, Timber traders, High forest zone, Forestry services division (FSD)

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## ***INTRODUCTION***

The Economic Recovery Program (ERP) embarked upon by Ghana in 1983 induced strong recovery in the exploitation of natural resources especially those that have comparatively favourable export potential. Precious minerals and forest resources have particularly come under tremendous exploitation.

In the timber industry, export earnings increased from US\$44.1 million in 1986 to US\$118.0 million in 1990 representing a percentage increase of 167.6% within the period of 4 years from the base year (1986). Its contribution to the total export earnings also correspondingly increased from 5.9% in 1986 to 13.2% in 1990 recording a significant performance from a hitherto consistently declining growth and to dormancy in the period close up to the pre ERP era (ISSER, 1993). Recent figures suggest an upward increase in export earnings from the timber industry, ranking it amongst the top five foreign exchange earners for the country.

Increased earnings from the timber exports correspondingly accelerated deforestation. For example, the closed forest zone of Ghana occupies 8.2 million hectares of which 1.2 million hectares has been reserved. The remaining 6.5 million hectares is being deforested at a rate of 25,000 hectares per annum which represents 0.4% annually (ISSER, 1993) primarily for timber and wood fuel requirements.

This unsustainable exploitation of forest resources especially for timber has had tremendous adverse impact on the country's economy. An estimated environmental degradation cost of c10.8 billion or US\$33.4 million was imposed on the economy of Ghana as a result of the exploitation of the forest resources (ISSER, 1993).

Ironically, the massive exploitation of forest resources did not meet the local demand for timber products. In fact, over the years, the over-concentration on the external trade of timber has led to the emergence of itinerant chainsaw operations in the country which meet the local demand for timber and wood products. Several policy measures targeted at illegal logging activities, especially itinerant chainsaw operations, have not yielded the expected results. The menace of chainsaw and illegal logging activities has become a 'password' for policy makers to explain the degradation of the country's forest and other natural resources. It is also used to justify shifts in policies which may not have necessarily benefited the local people or government objective of achieving sustainable management of the country's forests and improving the performance of the timber industry.

Although government pronouncements suggest that it is gaining an upper hand in the battle against illegal logging operations, evidence on the ground suggest the contrary. In fact, in the majority of the local timber markets greater part of the lumber is supplied through illegal means predominated by itinerant chainsaw operators and their urban collaborators and financiers. They are blamed for the destruction of the forest, and since 1997 official government position has been a total ban of their activities. However, an in-

depth assessment of the situation on the ground indicates that there is more to it than just blaming the chainsaw operators and their urban collaborators. In a more comprehensive way, this paper explores the combination of factors that have led to the survival of the chainsaw operators and a thriving illegal timber trade and why successive governments have found it difficult to rid the timber industry of these ‘undesirables’.

The rest of the discussion is organised into five sections. The first section is the methodology employed in the study. The context of the external timber trade in Ghana is presented in section two. The local timber market and the activities of illegal chainsaw operations are analysed in section three. In this section an empirical analysis of the linkage between external timber trade in Ghana and the increased incidence of illegal chain saw operations which does not only threaten the country’s forests and other natural resources but also the erosion of the basis for sustainable agriculture which is the mainstay of the country’s economy has been done. Section four explains the frustrations of the local people with government policies that favour export to the neglect of local demand for timber and wood products. Conclusions and policy implications are presented in section five.

### ***METHODOLOGY***

This paper is based on analysis of data gathered by the author at three levels. The first is an ethnographic data gathered through participant observation between October 2003 and June 2004 from field studies in two communities which fringe Globally Significant Biodiversity Areas (GSBAs) in the Atewa Range and the Boin Tano Forest Reserves in the High Forest zone of Ghana (GEF and World Bank 2004). The GSBAs in Ghana include 29 forest reserves zoned on the merit of their high significance as biodiversity-rich areas. Five of these forest reserves are wholly protected (no logging, mining and industrial activity as well as the collection of NTFPs are permitted) while 24 including six (6) in Southern Dry Forests (SDFs) are partially covered (MES 2002). The fieldwork which was carried out in two of the partially covered reserves, examined the local effects and benefits on the creation of the GSBAs. It also studied factors that underlie the differences in the protection of the reserves i.e. their relative remoteness or closeness to major trunk roads and how this was directly related to the level of illegal activities in the reserves.

The second comprise qualitative and quantitative data gathered from policy makers and focal persons in the sector ministry (i.e. Ministry of Lands and Forestry), departments and agencies on the institutional and policy environment that relate to the development of the timber industry in Ghana. Key personnel in the formal and informal wood processing firms as well as traders of lumber and wood products were also interviewed on the changes in government policies that relate to the timber industry. This was done in Kumasi, the second largest city in Ghana, which is home to the largest concentration of sawmills and the biggest conglomeration of informal wood processors and lumber traders in the country. As encountered by similar studies (Owusu 2001), access to primary data from the formal and informal operatives in the timber industry was difficult and limited. In the formal processing sector, this emanated principally from fear amongst the

operatives of exposing themselves to government investigation by divulging company data, an approach which was used by a previous government in the late 1980s to crack down on the industry for 'irregular activities' such as smuggling, evasion of taxes and non payment of royalties and fraudulent invoicing (Abdulla 1993; quoted by Owusu 2001). With the informal wood and lumber traders and processors many were tight lipped and reluctant to talk about their sources of supply. As intimated by one respondent who wanted to remain anonymous, "our business has now become very risky and entails daily gambling with our capital and hence we keep our operations very confidential". However, in both situations the author adopted an approach which involved the combination of formal introduction by intermediaries who the respondents trusted as well as the avoidance of asking or demanding sensitive information. Also, the triangulation of information which was in the public domain such as government policies on banning of chainsaw operations and open tendering of concessions as well as general opportunities, problems and constraints in the timber industry, facilitated discussions and encouraged respondents to open up.

The third comprise secondary data obtained from relevant government institutions including the Timber Industry Development Division (TIDD) and the Resource Support Management Centre (RSMC), both of the Forestry Commission (FC) and the Statistical Services of Ghana. It involved the collection of statistical information as well as review of technical reports and published articles.

### ***THE CONTEXT OF THE EXTERNAL TIMBER TRADE IN GHANA***

The free fall that came to characterise the Ghana economy before the adoption of adjustment in 1983 is often seen as classic policy-decline (Hutchful 2002) and affected all sectors of the economy including the timber industry (Owusu 2001). The pre ERP era (especially the years from 1970 to 1982), was characterised by sharp decline in GDP. For example, between 1970 and 1980, per capita GDP declined by a total of 19.7%; from 1980 to 1983 it dropped by a further 21.2%. The period was characterised by sharp decline in both domestic and export production.

To arrest the situation, the then military government embarked upon the World Bank and IMF sponsored Economic Recovery Programme which was, among others, to halt the economic decline and stabilise the situation, promote economic growth and export recovery through a realignment of incentives towards productive activity and the rehabilitation of economic and social infrastructure (Hutchful 2002). The programme, as indicated earlier, rekindled the export sector and consequently natural resources, particularly minerals and timber came under intensive exploitation.

It is within the above background that the timber export in Ghana has been discussed. The timber industry which comprise of three categories of operation: primary (logging), secondary (sawmilling, ply milling and veneer milling) and tertiary (furniture, doors, flooring, profile/moulding and toys) (Inkoom 1999) constitute an important component of the economy. The forestry sector and its constituent formal wood processing industry

exports raw materials (such as lumber) to, and import non-wood inputs from the developed world. With a resource base of 109,000 km<sup>2</sup> as at 1980, the sector contributes some 6 percent of the country's total GDP and 11 per cent of the total commodity export annually (Owusu 2001). The industry has over the years ranked as the third most important component, after cocoa and minerals and is considered to have immense potential for expansion in terms of employment and output.

Figure 1 shows export from the industry between 1972 and 1997. The export figures show two distinct scenarios: a steady decline before 1983 and a consistent rise in exports thereafter. The period of decline coincides with the general fall in the Ghanaian economy to its lowest before 1983. Four factors have been assigned for the decline (Owusu 2001):

- ❖ generally poor state of the economy during the period
- ❖ obsolescence, break down of equipment and shortage of spare parts to maintain machinery and equipment
- ❖ an over-valued exchange rate, which was disincentive for exports and hence production
- ❖ poor infrastructure like roads, railways and ports

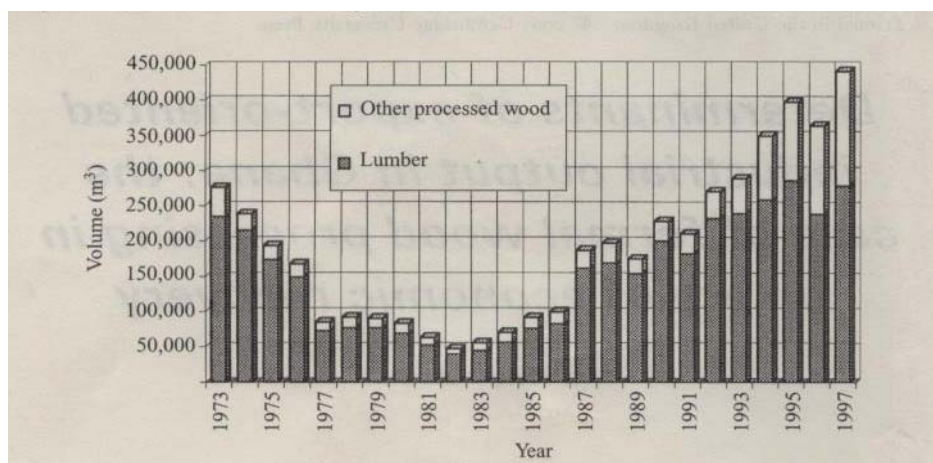


Figure 1: Export of Processed Wood, 1973-1997  
 Source: Forest Products Inspection Bureau FPIB 1990,1991; Owusu 2001

The decline affected the formal processing industry which had until then employed specialised skill labour and was compelled to lay off most of this labour. The government also lost export revenue as well as internally generated income from fees and taxes. But the sector's potential was not lost to the country's development partners. And, at the outset of the ERP, the World Bank encouraged the government that the timber industry offers the greatest immediate potential for growth and foreign exchange earning (World Bank 1984; quoted in Owusu 2001).

A major government programme that facilitated the rise in export of timber under the ERP was the Ghana investment Code of 1985 which provided general incentives, benefits and concessions to entrepreneurs and investors, and special packages for specific sectors such as manufacturing. These included granting firms and investors full exemption for custom duties on plant, machinery, equipment and accessories required for the enterprises. Wood processing firms could enjoy the retention of 20 per cent and 25 per cent export earnings for lumber and value added products, respectively in external accounts (Owusu 2001).

To further enhance exports during the period, the wood processing firms were given incentive packages under an investment code which stipulated that the more a firm exported the greater the benefits it enjoyed. Therefore, the provisions discouraged the sale of lumber on the domestic market in preference to exports. This phenomenon led to the rise in the operations of informal sector to meet the local demand for lumber and wood products. This has since become a major problem for sustainable forest management in the country and a subject which will underlie discussions in the next sections.

A point that ought to be emphasised here is that the timber exports were tied to meeting the needs (accommodation) of international capital because the country badly needed these foreign exchange to meet its numerous import obligations. This accommodation was clearly demonstrable by the fact that the bulk of the increase processed wood was exported to the then European Community (EC), now European Union (EU). For example, according to Owusu (2001), from 1983 to 1991, a minimum of 81 per cent of the volume of processed wood exported went to donor countries, mostly in the European Union. Within the period the industry earned US\$44.1 million in 1986 and US\$118.0 million in 1990 in foreign exchange for the country (ISSER 1993). In addition, thousands of jobs were created in the formal processing mills and the industry operated at an average of 70 per cent of installed capacity relative to figures below 46 per cent for all manufacturing sector as a whole over the period, which was a significant improvement over the pre ERP era. But of course this did not come at any cost. As indicated above, increased earnings from the timber exports correspondingly accelerated deforestation and imposed tremendous environmental cost on the economy of the country.

To make the industry sustainable, there have been some policy shifts since the introduction of the ERP. Ghana's wood has traditionally been exported in the form of unprocessed logs. In order to generate more income from the forestry sector, the government instituted measures to augment the export of higher-value processed wood, and phase out log exports by 1997. The policy has been given further impetus by the present government under its Sustainable Forest Management for poverty reduction in the Ghana Poverty Reduction Strategy (GPRS), the main government development policy document. Under the programme the government, among others, has made it a condition for timber processing firms to establish plantations in order to be awarded concessions. Also, firms which add value to wood which otherwise would have gone waste into exportable commodities such as finger joints and mouldings are given incentives including a tax relief of one percent upon application. The government aims at achieving

low volume but high value timber exports and thereby slow down the massive exploitation of the country's forest resources which occurred during the period of ERP. Timber exports appear to be responding to this policy initiative as exemplified by the figures of timber exports between 2001 and 2004 (Figure 2).

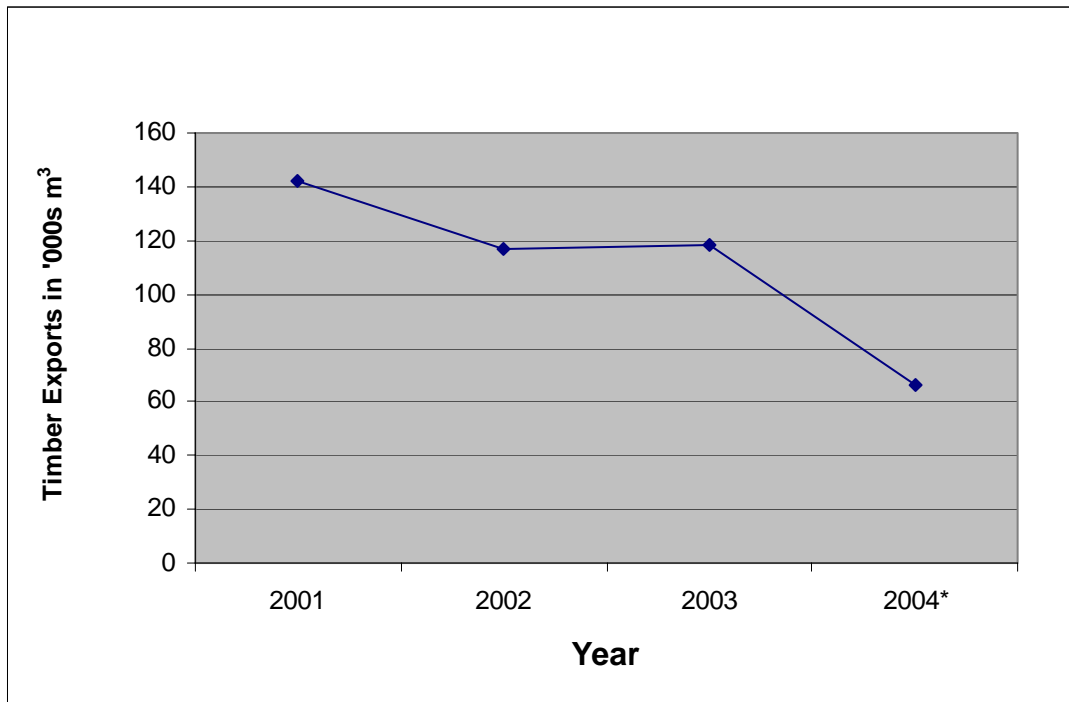


Figure 2. Export performance of Mills (National)

Source: Timber Industry Development Divisions (TIDD). \* The 2004 figure is for the months Jan-July

The sector ministry in implementing this policy has sought to change the image of the industry which is characterised as:

- heavily subsidized (low stumpage rates and under-pricing of the resource) and protected.
- over capacity in the wood processing industry. Industry efficiency in converting harvested timber remains low deteriorating from 68% in 1990 to 37% in 1999.
- Low product recovery rates which led to unsustainable levels of timber exploitation. Total harvest for 1999 estimated at about 3.7million cubic metres which was almost four times the allowable cut.
- Log export suspension has depressed log prices resulting in a disparity between domestic and external market prices. Real values for forest resources are not being realised



The government has achieved some significant successes in the area of sustainable management of forest and tree resources of the country. Under the Ghana Poverty Reduction Strategy, sustainable forest management has received attention. Several policy initiatives, including the President's Special Initiative (PSI) on Afforestation and open bidding of timber concessions, have begun yielding good results both in terms of forest conservation and better management of the timber industry in terms of transparency in the award of concessions.

In spite of the seemingly improved policy environment in the timber industry, the present government has also not adequately addressed issues relating to local demand and supply of timber and wood products. The subsequent sections of the paper put this dilemma and its ramification for environmental degradation into perspective.

### ***LOCAL MARKET AND ILLEGAL TIMBER OPERATIONS***

Whilst export trade in timber and wood products has been encouraged over the years little or no attention has been paid to the supply of local market which is dominated by illegal operators (Gayfer *et al.* 2002). It could be argued that perhaps in the period immediately before and after the ERP, the construction sector (especially road and housing) which needed timber and wood products had sunk, like the other sectors of the economy, below the threshold of minimal capacity utilisation. Therefore, there was no urge for government to even consider policy on meeting demand for local market. Of course at that time government might have been pre-occupied with its huge balance of payment deficit and therefore concentrated on the potential of the forestry sector in generating international capital (Owusu 1998). Therefore, there was no coherent policy of meeting local demand which in the main were ad hoc.

However, there was a recognisably well defined local demand at the time and which has expanded tremendously over the years that should have encouraged the formulation of consistent policies to address this need. The construction sector constitutes the major domestic timber market and it is predominantly found in the Accra-Tema Cosmopolitan areas, which encompass the capital city, Accra, and Tema, the main sea port and industrial city. The regional capitals, especially Kumasi, also form a big market. The expanding local market is attested by the springing up of new industries, construction of major highways, the rehabilitation of hospitals and educational institutions. Other domestic demand is derived from furniture making, truck body building, boat building, pallets and crates, rail way sleepers and carvers. It has been emphasised that the domestic consumption of timber for industrial application is on the increase (Inkoom 1999). For instance, the processing sectors, primarily the furniture and joinery units, also provide ample market.

It has been estimated that national per capita consumption of wood products of 0.029 cubic metres (excluding plywood) is expected to rise (TEDB 1995). And, there are signs that the construction industry particularly private estate development will make enormous demand from the timber industry, especially for sawn timber due to growing interest of individuals owning their own houses.

## **Meeting local demand for sawn timber**

In the late 1980s and throughout the 1990s, government's attempt to supply the local market was mainly through the imposition of levies on sawn timber for export aimed at reducing its export and hence making it more available for the domestic market (Inkoom 1999). In practice, this approach did not work because the exporters could still make more at the international market and also because of their need for foreign exchange to meet their requirement of capital equipment.

There was also the allocation of permits by the Forestry Department to registered chainsaw operators and traders of wood products to fell and saw timber off reserves for sale to the local market. The operations of these groups, which are subject for detail discussions later, were considered to be cheaper and could meet the needs of the local market. However, abuse by the groups through indiscriminate felling of timber in and off reserves with the connivance of some forestry officials and local people, prompted the government to terminate this arrangement. A total ban was slammed on the activities of chainsaw operations by the government in 1997. A recent interview conducted by the author indicated that the decision by Forestry Services Division to stop the permit system to informal sector to fell and process timber for the local market is doing more harm than good as most of these operators have gone underground and are wreaking havoc to the forest and timber resources of the country (see below).

In recent times, the sector ministry, through its main agent, the Forestry Commission, has designated some formal timber processing firms to supply the local market. In the Kumasi Area which is the centre of the sawmilling industry in Ghana, 25 of such firms exist (TIDD 2004). In addition, there is a general policy which enjoins all timber processing firms (designated as non selected firms) to supply 20 percent of their total output to the local market. In the Kumasi Area alone there are about 88 of such firms. Interviews conducted at the Kumasi area showed that supply from these sources are either too expensive and out of reach of ordinary individuals who are building their homes or are just not available as it takes too long a time to get orders supplied by such mills. For example, provisional figures for the period between January and July, 2004 showed that a total of 4738.8m<sup>3</sup> and 4374m<sup>3</sup> were supplied by the non selected and selected firms respectively to the Kumasi area (TIDD 2004). These figures (the total) are estimated to represent about 10 per cent of the lumber and other wood products sold on the local market in the Kumasi area. The rest were met from illegal suppliers. This confirms the findings by Gayfer *et al.* (2002) that over two-thirds of the wood harvested (in 1999) in the country was done illegally and this is focused in off-reserve areas and is dominated by the activities of illegal small scale chainsaw operators.

Explaining the gaps in the policy of over concentration on timber exports, a management staff of a big timber firm in the Kumasi area indicated that supplies by the formal firms to the local market may not necessarily be the products that are needed. The 20 per cent supplied by the non selected firms, for instance, are mainly Tongue and Grove (T&G), plywood and block wood which are very expensive. Lumber which is the product in great demand is not cut by these firms for the local market but for export.

Responses from some formal operators in the Kumasi area also indicated that the government policy of quota system under which concessionaires are given a limited number of trees to fell within a reserve compartment i.e. allowable yield, is also affecting the supply of raw materials to the formal processing mills to meet demand of the local and international markets. They explained further that the situation is compounded by 'concession contractors' who constitute individuals who do not have sawmills but have managed to have access to concessions which they sell to mill owners at exorbitant prices. A triangulation with a forestry official indicated that the open bidding of timber concessions introduced recently by the Forestry Commission has removed shady deals in the awarding of concessions and therefore there are no such contractors. Rather, it is concessionaires who had long term leases but lack capacity for utilisation who resell logs to mill owners who have excess installed capacity.

### **The role of the informal timber and wood products sector**

Given the apparent lack of the formal sector to meet the local demand of lumber, the informal sector has become dominant in meeting the needs of the local market. The informal timber and wood products traders and allied operators i.e. saw millers, carpenters and illegal chainsaw operators became pronounced in the parallel economy that emerged in Ghana in the early seventies due to the crisis which hit the economy. The timber and wood products have a big informal sector which is still growing and may be found throughout the country with defined physical markets in the regional capitals, especially Accra and Kumasi, the capital and the second largest city respectively. The latter is in the centre of the forests.

The informal sector in the Ghanaian economy has been described variously (Inkoom 1999; Owusu 2001; Hutchful 2002). The following description by Hutchful (2002) fits the operators in the timber and wood industry, especially the lumber traders and the illegal chainsaw operators who are the subject of interest in this paper because of the emphasis past and the present governments have placed on their role in deforestation and its implications for sustainable agriculture:

“By informalization it is meant diversion of economic transaction beyond the reach of the state and the formal economic sector. This sector spans an extremely diverse range of products and activities and involves unrecorded though open transaction, which are unregulated and non legal rather than legal. Structurally, the main characteristics of the sector are: it's predominantly artisanal in nature; its ease of entry and often (though not necessary) marginal operators; the prevalence of non contractual (and often highly exploitative) relationships; and the coexistence of waged and partially waged, and family forms of labour”. (Hutchful 2002). It has been observed that the crisis in the Ghana economy generated a process of informalization which had profound implications for the state, civil society and politics (Hutchful 2002).

The above description of Hutchful (2002) of the informal sector is an exact representation of the informal timber industry. But the following key words are worth noting because they emphasize the structure and dynamics of the informal timber and wood products

market and the *modus operandi* of the operators in the market: diversion of economic transaction beyond the reach of the state and the formal economic sector; artisanal in nature; illegal rather legal and have profound implications for the state, civil society and politics. In the next few paragraphs an analysis of the informal timber and wood products market is presented to underscore these key words.

A typical local timber market comprise mainly of traders (or merchants) of sawn lumber and other wood products, master craftsmen or artisans (mainly carpenters and other wood fabricators) and their apprentices as well as small and medium scale sawn millers. Service providers in the market include porters, delivery vans and truck operators, cooked food sellers and traders in hardware (nails, industrial glue, etc) required by the artisans for their work.



Figure 3: A section of the Anloga Timber market in Kumasi

The market is male dominated but in recent times women have shown interest and have a reasonably representation. Most businesses of the main operators in the market i.e. the wood traders, millers and carpenters, are not registered and the operators do not keep proper records which could be used for income assessment and taxation. Therefore, majority of the key operators and their assistants/employees are outside the tax net.

As indicated earlier, lumber, which is the main ‘raw material’ and tradable commodity at the market, is supplied by itinerant chainsaw operators in the countryside. It must, however, be emphasised that the supply chain emanates from the lumber and wood products merchants in the markets in the cities. This is summarised by a merchant in the Kumasi Anloga Market:

“We have our boys (chainsaw operators) who supply us on order but we have to pre-finance them. The risky nature of the business due to frequent impounding and subsequent confiscation of our wares by the forestry people

and the police makes any pre-financing more of a gamble than a proper investment. But we do not have any option.”

The bulk of the lumber and wood products consumed locally are obtained from these markets. This testifies the importance of these traders and their suppliers. In the supply chain, the chainsaw operators are very crucial. Perhaps, this may explain why it has been very difficult for the authorities to curb their operations.

Much as the timber merchants recognise that their activities and that of their associates are not favoured by the authorities, the traders argue that they are performing useful services to society, and government must therefore give them recognition. For instance, they argue that they supply lumber at affordable prices. Majority of them consider that the country will be better off if their activities were mainstreamed.

The traders and their operatives could obtain permits in the recent past from the Forestry Services Division to fell trees which they purchased at pre-determined prices. These trees were sawn for sale on the local markets. Their trees were sawn in situ thus reducing their operational cost which made their lumber cheaper than the formal sawmills. They were also given waybills to transport their lumber to the markets. However, as mentioned earlier, this arrangement was terminated about 10 years ago by the Forestry Commission on the basis that they had abused the system and were doing indiscriminate felling both in and off reserves. It is important to note the traders and their associates argue that the government's decision was influenced by sawn millers in the formal sector who could not compete with them because processed wood from the formal firms were very expensive. This argument may be flawed on the grounds that most of the formal timber firms are interested in the export market.

It is important to stress here that an assessment that the author did with some Forest Range Officers on the performance of these 'trader concessionaires' indicated that they were less destructive of the environment (especially water bodies, farms and fallow lands) and wasteful of tree resources in comparison with formal concessionaires. The 'trader concessionaires' do not use heavy equipment such as tractors and timber trucks which destroy the local environment during logging. Local farmers are noted to have a preference for the 'trader concessionaires' due to the environmentally benign nature of their harvesting processes. They normally, as indicated above, would fell tree and saw it in situ and use porters to head load the lumber to trucks which do not go in the bush or the forest.

Some traders suggested that the authorities should consider re-integrating their activities into the mainstream because most of them are willing to form groups which could be registered to negotiate for concessions in off reserves; this would give them relief and happiness to work. They claimed that benefits that could be derived from mainstreaming their activities will include increased government taxes, the weeding of undesirable elements in the informal sector, especially those who cause wanton destruction to the forest. For example, it was mentioned that traders who would obtain concessions will organise the youth in the villages who predominate the illegal logging into identifiable working groups and this will reduce the high incidence of itinerant chainsaw operators.

There are also wood associations in the markets which have majority of the traders as members. The associations are said to operate mainly as welfare groups which offer financial assistance to bereaved members. Members are also helped when they have to fight legal cases in the courts which involve their trade. The associations have become very powerful mouth piece for the traders and it was suggested that the associations could be used as the entry point for discussion with the traders. It was suggested that these associations can be given concessions for the benefit of its individual members.

### **Illegal chainsaw operations**

Studies carried out by the author in several forest fringe communities showed that illegal chainsaw operators are mainly outsiders. However, they are often assisted by local young men who act as operator's assistants and porters. The people involved in the illegal chainsaw operation have been classified by local people as the following:

- Operators – fell and saw timber
- Operator boys – assist operators; carry chainsaw to the site and help in felling and sawing of timber
- Owners – chainsaw machine owners; they rent the machines to operators for fees or employ operators to work for them.
- “Shakers” or Porters – carry sawn timber from the bush to loading points
- Loading boys – those who load the timber onto trucks bound for the timber markets in the urban centres
- Buyers – mainly located in the cities and other urban centres

Some local young men are also engaged by traders outside to fell timber for them. They are provided with chainsaws and paid for their services. Syndicates of some local elders and young men who collaborate with outsiders to harvest timber or give assistance to chainsaw operators and their financiers were in the past a common occurrence. There have also been cases where forest guards have been arrested as accomplices of illegal chainsaw operators. It has been mentioned also that some security men who impound lumber from chainsaw operators divert these for sale at the local markets. The collaboration of some local people with chainsaw operators has made the monitoring of these activities a difficult conservation task. This is a major problem throughout the country (Gayfer *et al.* 2002; FAO and FC 2003).

This collaboration has been fostered in several local communities due to the lack of alternative livelihoods. Farming which is the major means of livelihood in these communities is viewed by young men as not lucrative. In addition, illegal chainsaw operations are considered to be much quicker way of getting rich. Until recently, illegal chainsaw operations sustained the economies of several forest fringe communities. For example, in a recent study at Sagyimase, a community which fringes a Globally Biodiversity Significant Area known as the Atewa Range (see section on Methodology above), it was mentioned by some local people that chainsaw operations in the area was what sustained the local economy. Some young men and women in the community emphasised that the improved protection of the range in recent times due to the formation of Community Biodiversity Advisory Groups (CBAGs) in the fringe communities of the

range has adversely affected business and other socio-economic activities in the community.

Chainsaw operators, who ply their business mostly in the night, admit that the job has become very risky due to increased patrol by the Forest Guards and local people and the occasional swoops undertaken by military and police task forces. The porters (i.e. those who carry lumber from the bush to waiting trucks) are the ones prone to arrest by the forest guards or security agencies. Reported casualties of deaths are usually the porters; they are killed when they fall with the heavy sawn timber (known as 'beams' or 'bush cut') they carry. They also suffer from severe neck and waist pains, cuts and bruises, coughs and headaches. Within the last 6 years, there have been 12 reported deaths of "Shakers" in the Sagyimase community. The study revealed that most local young people would like to stop the business but are unable to do so due to the lack of alternative livelihoods. What they do is that when they realise that a particular operational area has become intensively patrolled they relocate to more remote areas. Therefore, majority of them are itinerant. This makes tracking them down very difficult.

Chainsaw operators have also become sophisticated in response to increased collaboration between the Forestry Services and local people to protect the forest resources of the country. Due to extensive environmental awareness creation by the FC and NGOs in forest fringe communities, local people have responded favourably to calls to give voluntary services to the Commission to protect the country's forest resources and fight the menace of the illegal chainsaw operators and other encroachers. The chainsaw operators have, therefore, resorted to the use of fire arms during their operations, and there have been several media reports of forest guards and local people being violently attacked by armed chainsaw operators. In some instances these have resulted in fatalities. The quote below is from the caption, "Timber firms worried over chainsaw operations" which appeared in a local newspaper demonstrates the menace of the chainsaw operators:

Four timber firms operating in the Twifo Hemang-Lower Denkyira District in the Central Region have appealed to the police and forestry officials to help stem the activities of illegal chainsaw operations. The chainsaw operators, who are believed to have come from the Eastern Region to operate in the area, are alleged to be armed with guns and cutlasses, have illegally occupied concessions of the firms and are vandalising their tractors and trucks. They urged the police to intervene to avert a clash between their workers and the operators who carry out their operations in the night (*Daily Graphic, Tuesday August 31, 2004*).

The menace the illegal chainsaw operators pose to the country's forest resources and lives of those who protect these resources is also manifested in recent suggestion by the Forestry Commission (FC) that the staff should be given paramilitary training to enable them to combat the threat posed by the illegal operators. And, the Commission has called on all Ghanaians, especially those living in the fringe communities to see the fight against chainsaw operators as a national affair and not only for the Forestry Commission (*Daily Graphic Thursday, August 6, 2004*). The formation of the Community Forest Committee (CFCs) and CBAGs in forest fringe communities by the FC is a major step in this

direction. These are being formed and trained to primarily serve as link between their communities and the Forestry Services Division, to educate the communities on forestry issues, assist in social responsibility agreement negotiations and forest boundary cleaning and monitoring of permits (FAO and FC 2003; GEF and World Bank 2004).

It is important to mention here that the sector ministry has recently emphasised that the chainsaw operators have failed to take advantage of the government's policy to get them organised and find alternative sources of employment through the national plantation development programme. Under the programme announced by the Ministry of Lands and Forestry two years ago, the chainsaw operators were tasked to organise themselves into recognisable groups in the various communities where they operate so that they could avail themselves of the various job opportunities under the plantation programme and the competitive bidding programme. However, a ministry official in the Ashanti Region claimed that not a single chainsaw operator in the Ashanti region for example, had availed himself of the opportunity. He emphasised that the chainsaw operators rather preferred to continue with cheaper means of making money through their illegal activities. It was mentioned that the Forestry Commission had had to solicit the assistance of the military in stemming the plundering of the forest resources of the region. Hostile attacks have been reported on the staff of the Commission by chainsaw operators and it was emphasised that the operators were now becoming sophisticated. Reports indicated that some chainsaw operators use guns and cutlasses in their operations and there are reports that some have shot some villagers and amputated the hands of others. The courts have been called upon to assist in stemming the illegal activities in line with the laws of the country.

To reinforce the position of the sector ministry on the illegal activities of the chainsaw operators, the sector Minister is quoted to have said the following at recent forum at the launch of a Community Forestry Management Project:

‘The Minister strongly condemned the unpatriotic and selfish individual Ghanaians whose activities undermine the government's determination to replenish the stock of timber, wood fuel and protect the water bodies. The Ministry is particularly concerned with chainsaw operators who are supported by some big time financiers and in some cases collude with some forestry official to plunder the forests with impunity. The Ministry is seriously working out plans to wean the young chainsaw operators from the clutches of the financiers who mostly cheat them. These financiers will soon be chased out of business once the competitive bidding process firmly gained root and successful bidders of the forest resources started mounting security surveillance over their leases or concessions’ (*Daily Graphic, Monday August 23, 2004*).

From the ongoing it clear that the activities of the illegal chainsaw operators have been very difficult for the sector ministry and other stakeholders in the timber industry to curb. Although the government is doing its best to stem the activities of chainsaw operators, the demand-driven nature of illegal logging operations makes it more complex than the sector ministry considers.



## **Environmental implications and sustainable agriculture**

The indiscriminate logging activities of the chainsaw operators certainly have environmental implications. Ethnographic data gathered by the author from two Globally Significant Biodiversity Areas in the High Forest Zone in Southern and Eastern Ghana showed that local people detested the activities of indiscriminate felling of trees in the forest landscape, especially along water bodies and on their farms. It is believed that activities of chainsaw operators undermine local environmental values. Areas such as watershed protection, erosion control, bio-diversity or genetic reserves and of course forests for carbon sequestration which have global implications (Hyde *et al.* 1996) were emphasised.

Local people attribute improved rainfall patterns and other microclimate improvements (reduced intensity of sunshine, rainstorms, etc) to forest cover. The maintenance of the forest and reduced illegal logging in off reserve forests lands were cited as major contributory factors that could lead to the improvement in the local weather conditions. The forest cover is also believed to 'trap' diseases from entering the community and they perceive that forest serves as a filter of certain diseases.

In the studied communities due to the activities of chainsaw operators in the catchments of rivers, streams and ponds several water bodies have either dried up or have become semi-perennial (i.e. flow only in the rainy season). In some instances, the washing and cleaning of their equipment have also polluted drinking water sources. These water bodies serve as the main sources of drinking water for humans, watering of livestock and other economic activities. Although there are some boreholes, these are not adequate and reliable due to their frequent break down. Therefore, the health and other social implications for the local people, especially women and children, who are compelled to use these water sources for both domestic and economic activities, have been tremendous.

It was also mentioned that chainsaw operators sometimes undertake other parallel activities during their operations which are equally inimical to the local environment. Hunting for game by setting fire to fallow lands and thickets is a common practice of these illegal loggers. Wild land and bush fires which have resulted from these hunting activities devastate the local vegetation, crops and wildlife. And, because these operators are usually armed, local people can do very little to stop them, especially in small and remote communities where they are common.

The setting up of fires to fallow lands and thickets has serious implications for sustainable agriculture. In these communities the common approach to improving soil fertility and agricultural productivity is by leaving land which has been cropped for a maximum of three years to fallow for a period not less than five years. The setting up of fires to such lands does not only inhibit the process of regeneration but expose the lands to severe erosion. However, the implementation of Ghana Natural Resources Management Project (NRMP), part of which covers the GSBAs, has led to significant

improvement in the curtailment of the activities of illegal logging operations due mainly to formation of the CBAGs mentioned earlier on (GEF and World Bank 2004).

### ***FRUSTRATIONS OF LOCAL PEOPLE WITH THE TIMBER INDUSTRY***

The increasing scarcity and the higher prices of lumber for building private homes and to undertake community projects are major sources of worry to most rural communities, especially those that live close to forest reserves. Wood products for construction are not only expensive but difficult to get in these communities. They are usually purchased from the district or regional capitals and transported at great cost. In a study undertaken for the World Bank and GEF on the GSBAs (see methodology), the author was confronted with this intriguing question by an elderly man:

“Why do we need permits to enter the forest reserves to fell trees for the construction of homes? And why does the government not do the same to our brothers who live by the sea? We do not understand this” (*Opanin Dwomo, Sagyimase, personal comm.*).

The above statement underlies the frustration of the local people with the sector ministry and the timber industry in particular. They contend that concessionaires and millers in the timber industry are allowed to fell trees from local forests and process them mainly for export to the neglect of the local market. One of the major expectations of the local people from the NRMP is for them to have easy access to lumber at the local level. It is important to note that the Forestry Commission (FC) is piloting mobile sawmills in the district to meet the local demand for timber and wood products. The millers have been given concessions in the forests outside the forest reserves (i.e. off reserve forests). The objective is to encourage local people not to resort to illegal chain saw operators to meet their requirements for timber and thereby reduce the pressure on the forest reserves.

Another important area that local people associate with the timber industry is the destruction of cocoa farms. In this context, as indicated earlier, the formal timber firms have been noted to be much more notorious than the illegal chainsaw operators. In a recent article in a national daily, farmers at Sefwi in the Western Region, one of the major cocoa producing areas in the country, have petitioned the government to assist them to protect their cocoa farms which are being destroyed by timber companies. The farmers complained that even though some of the cocoa trees had a lot of fruit for harvesting, the timber firms entered their farms without their consent and destroyed cocoa farms. The farmers also explained that the timber trees on the cocoa farms were nurtured by the farmers to serve as shades for the cocoa farms against the dry season. Besides the feeling of the trees, the timber firms were not only destroying the affected cocoa trees which were crushed by the logs, but their farms were at risk, especially during the harmattan season when the cocoa trees would not have sufficient shade to protect them from the hot weather.

It is important to note that in the areas where cocoa farmers predominate, it is rather the formal timber firms which have been mentioned as constituting a threat to farms, the

local environment as well as infrastructure (artery roads, bridges and culverts). In a triangulation with a Ranger of a forest reserve in the region, it was confirmed that in terms of real destruction of the environment, it is the formal timber firms which are causing the havoc because of their use of heavy equipment. He however emphasised that unlike the chainsaw operators, the operations of these firms are comparatively easier to monitor, and corrective measures can easily be taken.



Figure 4: A loaded timber truck

Some local people are also frustrated with the non compliance of some of the timber firms operating in their localities in fulfilling their social responsibility obligations which include the maintenance of local roads, assistance to local communities to meet basic socio-economic infrastructural needs (schools, health post and potable water) and offering local people job opportunities.

The perception of the most local communities which fringe forest reserves is that these forest resources belong to them and are being held in trust for them by the government. Thus they should derive maximum benefit from these resources. And they should be adequately compensated for the sacrifices they are making in the interest of the country and the global community. In this context, some people even argue that the royalties that are paid to the land owning stools are inadequate and cannot be used to bring any meaningful development to local people (Gayfer et al. 2002).

## ***CONCLUSIONS AND POLICY IMPLICATIONS***

The analysis in this paper has shown that illegal chainsaw operations threaten the environment and agricultural production of Ghana. This has been occasioned indirectly by policy which gives preference to exportation of timber to the neglect of meeting the ever growing demand for lumber and other wood products at the local market. The linkage between the export trade and escalation of illegal chainsaw operations is therefore not far fetched.

The inability of past and present governments to curb the activities of chainsaw operations in the country's forest reserves and outside reserve areas also indicates the complexity of the situation. Whilst chainsaw operators have become sophisticated and use arms in their operations, the capacity of the Forestry Services Division (FSD) to deal with the situation has dwindled due to inadequate personnel and equipment.

The decision by the FSD to stop the permit system which enabled local traders to fell trees in off reserve areas to process appears to have worsened the supply situation on the local market. This suggests that not much appraisal was done about the timber export business and its ramification on the local market.

The menace of illegal chainsaw operations to the environment and sustainable agriculture is real and can no longer be taken for granted. And until the government takes a bold and pragmatic decision on illegal chain saw operations, the country's forest and tree resources face massive degradation and overexploitation.

An option, though unpalatable and politically sensitive, may be the mainstreaming of chainsaw operations through the re-introduction of limited permits to registered local groups of timber traders and their chainsaw operators to supply the domestic market. This should be under a system which enjoins such groups to be collectively responsible for the activities of their members. This will make monitoring of their activities, unlike previously, much easier for the FSD to do. Recent overtures to the illegal chainsaw operators suggest that government intends to register them and bring them into the mainstream. A carefully thought out procedure which will build the confidence of the chainsaw operators and their urban financiers in the government would enhance the success of such an exercise. It will also be important for the government to strengthen the FSD to design and operationalize an enhanced monitoring and surveillance system of logging activities, which will take care of any integration arrangement for the illegal chainsaw operators.

Government must also re-examine the timber export and its related policies. Of particular importance is the policy which compels formal mills to supply 20 percent of their products to the local market. The policy is ambiguous on what products the firms must supply and the regulatory mechanism on the supply has also been found to be weak. Under the circumstance, the firms have supplied to the local market products which are of less export value and what the local market does not actually need. These gaps in the policy must be addressed to enhance supply of lumber, the most needed product at the local market.

Finally, the paper has demonstrated a classic case of north-south trade and its implications for the economy and the environment of the country in the south. It has brought to the fore the dilemma of governments in the south, especially in Africa, where the exportation of some primary commodities have had tremendous adverse social, economic and environmental consequences for the people. Governments in the south should be encouraged and supported to develop and implement policies which will genuinely lead to sustainable development with express urgency of alleviating local poverty whilst emphasising the global concerns for environmental integrity.

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