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REAL LOSS IN STUMPAGE VALUES IN GHANA'S FOREST SECTOR, 2003-2012



Courtesy: F.Akurgu/HRC

PREFACE

The FGLG is convened by Civic Response in Ghana. Civic Response is also the secretariat for Forest Watch Ghana; a coalition of Forest sector NGOs and individuals.

Page | i

FWG is interested in forest governance reforms that advance the resource rights of marginalized groups and resource communities. FWG has been a long campaigner for reforms in the forest fiscal regime and benefit sharing arrangements to give greater value to resource owners and to ensure equity. It has also campaigned for a rationalization of current economic model of forestry which seems unable to promote resource sustainability or economic development. We have recommended the need for greater transparency by the FC in the framework of further policy reforms backed by a strict adherence to forest sector laws particularly those that govern the timber industry. FWG is still interested in strict adherence to the law as required by the FLEGT-VPA to ensure greater recovery of revenue from forest resources which are exploited. As part of the advocacy plan for 2013 intended to increase the campaign momentum for fair benefit sharing by examining the revenue loss to the state and to resource owners due to the non-enforcement of the stumpage arrangements.

Forest Governance Learning Group (FGLG) is a forum of policy discussants operating across seven African countries and three Asian countries¹ coordinated by the International Institute for Environment and Development (IIED)². Its focus is social justice in forestry. Its objective is to study and catalyse national and sub-national forest governance reform processes by improving tactical responses. Participants include administrators, analysts and activists interested in the agenda of the forest-marginalized. FGLG activities include participatory learning and analysis, capacity building, network support, governance tool development and where appropriate direct intervention. It also engages with international forest policy processes such as the Voluntary Partnership Agreement (VPA), on forest governance and trade between Ghana and the EU, and Reduced Emissions from Deforestation and Forest Degradation (REDD).

¹ Cameroon, Ghana, Malawi, Mozambique, South Africa, Uganda, Tanzania, India, Indonesia and Vietnam. A platform for opinion-formers addressing issues of forest policy related to China and India in Africa is also being explored.

² See: <http://www.iied.org/natural-resources/key-issues/forestry/forest-governance-learning-group>

DEFINITIONS

FOB	This is the contract price for timber or wood product export, and is represented by the value of the product when laden on the shipping vessel or any other carrier of the consignment.
Inflation indexing	This is a macro-economic procedure for adjusting the current value of a commodity or service by the extent of price increase over a previous period, such as to maintain the purchasing value of that commodity or service. This ensures that the quantum of commodity or service purchased in the current period is the same as that purchased in the previous period.
Stumpage fees	This is the amount of tax imposed on the value the standing tree.
Stumpage Rate	This is the indicator of the portion of the value of timber or timber price set aside as a forest tax or as stumpage fee. It is assumed to have taken into consideration all costs of producing the timber, loading, transport and handling costs, as well as profit of the operator.
Timber price	In the general fiscal context, it is the value of the standing tree; in the context of the LI 1649 stumpage formula, it is the gross value of timber at the processing point.
Trigger	This is the prior policy action that is expected to be in place by a dateline as a condition for release of donor support under Multi Donor Budget Support Programmes.

ACRONYMS

ADL	Air-Dried Lumber
CSO	Civil Society Organization
CvR	Civic Response
EU	European Union
FAO	Food and Agriculture organization of the United Nations
FC	Forestry Commission
FGLG	Forest Governance learning Group
FLEGT	Forest Law enforcement, Governance and Trade
FOB	Free-On-Board
FPIB	Forest products Inspection Bureau
FSD	Forest Services Division of the Forestry Commission
FWG	Forest Watch Ghana
HRC	Hamilton Resources and Consulting
L.I.	Legislative Instrument
MLNR	Ministry of Lands and Natural Resources
MOFEP	Ministry of Finance and Economic Planning
MTEF	Medium Term Expenditure Framework
NREG	Natural Resource and Environmental Governance
PSCLF	Parliamentary Select Committee on Lands and Forestry
REDD	Reduced Emissions from Deforestation and Forest Degradation
RMSC	Resource Management Support Centre
SRA	Social Responsibility Agreement
TEDB	Timber Export Development Board
TIDD	Timber Industry development Division of the Forestry Commission
TIF	Timber Information Form
TUC	Timber Utilization Contract
VLC	Verification of Legal Compliance
VLO	Verification of Legal Origin
VPA	Voluntary Partnership Agreement

TABLE OF CONTENTS

PREFACE i

DEFINITIONS..... ii

ACRONYMS iii

ABSTRACT..... A

1.0 INTRODUCTION
..... 1

 1.1 Background 1

 1.2 Immediate objective of research 1

 1.3 Organization of report 1

2.0 APPROACH AND METHODOLOGY
..... 1

3.0 FINDINGS
..... 2

 Provisions under L.I. 1649 and implied FC mandate:- 2

 FOB value of air-dried lumber (ADL):-..... 3

 Timber price..... 3

 Stumpage rate:- 3

 Timber harvest volume and structure and their impact on Stumpage fee levels 4

 FC's stumpage policy management, 2003-2012..... 4

4.0 DISCUSSION OF ISSUES AND WAY FORWARD
..... 7

 4.1 Policy issues 7

 4.2 Risk of revenue objective running counter to the environmental 9

 4.3 Risk of revenue loss through timber laundering..... 9

 4.4 Current wood Industry performance and development indicators: Gap in TIDD's empirical knowledge..... 10

5.0 RECOMMENDATIONS
..... 11

 5.1 General recommendation: Managing a fiscal transition under VPA 11

 5.2-Specific recommendations 12

TABLES

Table 1: Potential species movements in market categories 5

Table 2: Summary of Period Analysis of Stumpage loss, GH¢, 000 6

FIGURES

Figure 1: Timber harvest volume and corresponding stumpage value trends, 2003-2012 4

Figure 2: Real loss in stumpage value 6

Figure 3A: Shares of categories of species in average of 2003-12 harvest volume..... 9

Figure 3B: Shares of categories of species in average of 2003-12 stumpage value 9

ANNEXES

ANNEX 1: TERMS OF REFERENCE i

ANNEX 2: L.I. 1649, SCHEDULE 2: STUMPAGE RATES (MARKET CLASSIFICATIONS)
..... i

ANNEX 2A: Annual Stumpage fee levels by Timber Species a

ANNEX 3: Formula for Calculation of Stumpage Fee
..... A

ABSTRACT

Forestry Commission is mandated to charge stumpage fees. According to legislation, stumpage fee represents royalties to the landowner and charges for the cost of felled timber which provide a basic return to the landowner and contributes to the cost of forest management and timber regulation. Forest revenue from this has between 2003 and 2012 lost real value to the tune of US\$16million, which is equivalent to 4 times the potential contribution of the timber industry to forest communities' welfare under Social Responsibility Agreements (SRAs).

Page | A

This Research Paper examines the fiscal performance of the Forestry Commission in the context of legislative provision and other reform criteria for safeguarding the real value of stumpage fees due from the timber industry. It further examines the undercurrents of FC's management of the forest fiscal system, these including the focus of political decisions in addressing forest fiscal policy, sector management of the fiscal regime and limitation of institutional regulation at both the key levels of institutional regulation, precisely at Resource Management Support Centre (RMSC) and Timber Industry Development Division of FC (TIDD).

Key issues are drawn from observations made and discussed to inform the way forward. These include lack of support for a rational forest fiscal policy that addresses both forest community interests and the need to invest in the Forestry Commission; potential risks for conflicting revenue and environmental objectives; risk of revenue loss through timber laundering and implications of an empirical industry knowledge gap confronting TIDD as a challenge.

Recommendations are made to address the shortcomings at two broad levels. At the first level, the Paper recognizes that many of the issues it addresses border on the Ghana-EU Voluntary Partnership Agreement Protocols. At the second level, the Paper recognizes that there is need to address other issues that relate to policy and governance reforms that are not provided under legislation and therefore lie outside the VPA. In the short term, it is envisaged that policy makers will address the need to restore real value to stumpage and in the medium to long-term manage a fiscal transition to bring on board the long term development of the VPA implementation a neutral (incentive-based) forest fiscal regime.

The small-scale gold and diamonds mining industry is of great importance to Ghana. Since its regularization in 1989 the sector has produced and sold over 1.5 million troy ounces of gold and 8.0 million carats of diamonds. During the same period the sector also provided direct employment to over 100,000 people and improved the socioeconomic life of many individuals and communities. However,

these were largely achieved at a cost to the environment in areas where mining is carried out and there is the need to develop the industry in a sustainable manner. This paper looks at the developments in the small-scale gold and diamonds mining industry in Ghana and proposes some strategies on how the concepts of sustainable development could be applied to the industry.

Keywords: Timber price; Stumpage rate; Stumpage fees; Inflation indexing

1.0 INTRODUCTION

1.1 Background

Forest Watch Ghana (FWG) has observed that Forestry Commission (FC) does not comply with provisions of L.I. 1649 which require the Commission to update stumpage fees quarterly. According to LI 1649 21 (2), stumpage fee represents royalties to the landowner and charges for the cost of felled timber which provide a basic return to the landowner and contributes to the cost of forest management and timber regulation. Thus, as a result of the non-compliance of FC, the interest of the State and forest owners in forest tax imposition and appropriation is not protected. According to Schedule 3 of the Timber Resources Management Regulation, LI 1649, "Timber price is 35% of the free-on-board (FOB) value of air-dried lumber of the species (i.e. estimated round wood equivalent), based on the previous quarter's average of such exports as published from time to time by the Forest Products Inspection Bureau". The FC has not, by implication of a mandatory quarterly review, complied with regulations since 2004. This implies a loss of revenue to the State and resource owners.

1.2 Immediate objective of research

Civil Society is interested in assessing the impacts of value loss through non-review of stumpage and the long term effects of resource depletion piled on top of each other, and seeks to conduct a 2-Phase study into these impacts. The immediate objective of this research is to assess the extent of real revenue loss to the State and forest owners and the underlying causes for the failure of FC to review stumpage fees. The scope of work is more described in specific Terms of Reference for the research (**Annex 1**)

1.3 Organization of report

This report is organized under 4 sections, including this one. Section 2 briefly sets out the approach to the research and its methodology. Section 3 presents findings of the research. Section 4 brings up for discussion important issues emerging from the research's findings and makes specific recommendations to address concerns of FWG as interpreted from the scope of work included in the Terms of Reference.

2.0 APPROACH AND METHODOLOGY

Approach to research:-

The approach to this research consisted of regarding stumpage fee payment as a fiscal "policy" rather than in the context of its actual levels or rates of collection. This permitted a logical treatment of issues relating to the current mandate of FC and the legitimacy of possible future policy actions. From these

considerations, it has been more convenient to draw conclusions on their implications for forest resources management and the Voluntary Partnership Agreement with the EU.

Methodology:-

The following methodologies accompanied the execution of tasks specified in the scope of work:"

- a) Collection of annual Timber Information Form (TIF) reports from RMSC and their analysis
- b) Review of stumpage fee rates for the period 2003-12 with FC;
- c) Determination of stumpage rates and fees due from harvested timber species;
- d) Analyses of the trend in ADL FOB prices over the period 2003-12 and the real (hidden) effect of the impact of inflation on the purchasing power of stumpage value as primarily determined by FOB prices over the same period;
- e) Examination and analysis of species volume and values according to their market classifications
- f) Drawing of implications from research results and recommendations
- g) Production of Report containing findings of the research, a discussion of important issues emerging and recommendations on the way forward

3.0 FINDINGS

Provisions under L.I. 1649 and implied FC mandate:-

Regulations 22 (2) of L.I. 1649 provides the basis for calculating the “stumpage fee payable in respect of any timber,” Schedule 3 to the Regulations sets out the formula for calculation (reproduced in Box 1).

Box 1: Formula for Calculation of Stumpage Fee

Stumpage fee = Tree volume x Timber price x Stumpage rate,

where, Tree volume is computed in cubic metres according to the measurements taken of each tree felled

Timber price is 35% of the free-on-board (**FOB**) value of air-dried lumber of the species, based on the previous quarter's average of such exports as published from time to time by the Forest Products Inspection Bureau.

Stumpage rate for each timber species is the percentage specified in Schedule 3 of these Regulations (Reference: **Annex 2** of report).

Source: L.I. 1649, Schedule 3 Regulation 22 (2)

FOB value of air-dried lumber (ADL):-

The free-on-board price (FOB) is the most flexible component of the stumpage formula, because it is based in publicized export prices of ADL. According to Schedule 3 of L.I. 1649 (Box 1), the stumpage value must for any specific period, depend on the previous quarterly export prices as advised by the TIDD's Export Permit Report. This implies that, at least, in consideration of this factor, stumpage fees are to be published by FC in every quarter, whether FOB price changes or not; and in order that current stumpage fee levels, assuming there were no changes in the other factors determining their levels ((a) *percentage of timber price (35%)* and (b) *stumpage rate*), may bear an unchanged relationship to the cedi value of exports.

Timber price:-

In the stumpage formula, the price of timber is related to the FOB value of ADL. It is not directly referenced from external market prices for timber, which could transparently be published as is done with ADL in TIDD's Export Permit Reports. Thus while global evidence could lend support to a validation of the FOB value, as published, "timber price," as derived, depends more on domestic empirical evidence or some validated research results. Determining timber price was an issue prior to the coming into force of L.I. 1649. Under-pricing of timber in the 1990s had caused over-harvesting, as the wood industry did not have the incentive to improve its efficiency of timber recovery (Birikorang et al., 2001). In contrast to this observation, the industry considered their current high cost of production did not warrant an increase in stumpage fees, as timber price. Thus, any adjustment in the timber price factor (percentage of FOB value of ADL) required, at the time, some level of consensus before it could be admitted into legislation. Historically, the Parliamentary Select Committee on Lands and Forestry (PSCLF) had insisted on this prior to the passing of L.I. 1649. FC subsequently complied with the PSCLF suggestion and reached consensus with the timber industry to set the percentage of FOB price at 35%. This set a precedent for this procedure as may be applied in the future.

Stumpage rate:-

FC classifies species according to their market strength and status of inventory. The rates vary between 5% and 20%, depending on the classifications: "High" (20%), "Moderate" (10%) and "Low" (5%) demand. The classification of species is based on FC's informed decision, which appears as Schedule (2) (1) to L.I. 1649 (**Annex 2** to report). Depending on their market status, species could be placed under the appropriate point on the graduated scale. Similarly to quarterly reviews of FOB price, but not necessarily in the same frequency of publication, FC would be required to publish changes and accordingly reflect them in the graduated scale, as a matter of policy

The timber Price of 35%, FOB of ADL and stumpage rate together determine the value of raw timber in a unit of ADL.. Decisions on the se indicators are a matter primarily for policy, and not legislation. timber. The stumpage rate in the formula is an indicator that suggests what proportion of the value of timber after cost of production, transport and profit remains as the residual value, which should be the target of taxation. It is the responsibility of policy, still, to prevent a depreciation of the value of stumpage.

Timber harvest volume and structure and their impact on Stumpage fee levels

Over the 10 year period studied (2003-2012), both official (legal) timber harvest and stumpage fees revealed declining trends (Figure 1). The declining trend was more drastic in stumpage value of harvests than with legal harvest volume. This suggests that the average cedi value of stumpage has been on the decline. Particularly after 2005, an increasing and higher proportions of “Moderate” and “Low” demand species in the total national have been harvested, conforming to expectations from earlier studies (Birikorang et al, 2007; Mayers et al., 2009). This is largely due to the depletion of primary species caused by over-exploitation by industry. Thus, towards the second half of the period a stabilization trend in the volume of timber was accompanied by a generally declining trend in stumpage revenue. In 2012, Stumpage fees expected stood at GH¢5.7 million, compared to GH¢8.5 million in 2003 (Figure 1)

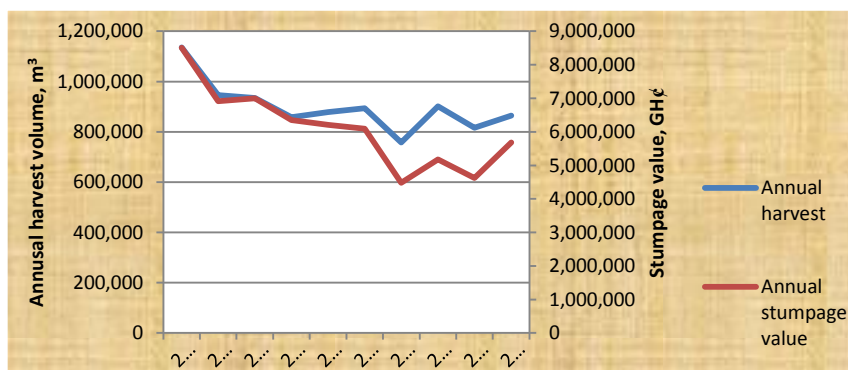


Figure 1: Timber harvest volume and corresponding stumpage value trends, 2003-2012

(Based on Annex Table __)

FC’s stumpage policy management, 2003-2012:-

In 2003, FC Board approved stumpage fee rates to be increased progressively in the year to avoid shocks to the industry. As at October 1st, 2013, and according to FC’s Corporate Division, the stumpage fee levels represented 75% of the 2003 target. The 75% adjustment was also achieved at the end of 2003. Thus from 2004 to 2012, stumpage fees have remained unchanged (Annex 2A).

A comparison of FC's applied structure of stumpage rates and the schedule of stumpage rates as provided under Regulation 22 (1) indicate that there has been no change in the structured ratings for timber species (Annex 2A).

The industry has over the last two decades introduced more than 30 species to the export market. However, at present, there are a number of species that could be counted among moving species in the export market and to a lesser extent on the domestic that have remained in their old market classifications. 13 species could potentially be upgraded (Table 1). This deficiency can be linked to the observation of the contrasting trend in timber harvest volumes and their corresponding values.

Table 1: Potential species movements in market categories

<i>Low Demand Species</i>		<i>Moderate Demand Species</i>	
Current list	Potential species for categorization under "Moderate" demand	Current list	Potential species for categorization under "High" demand
Essa, Danta, Otie, Potrodom, Denya, Wawabima, Wonton, Chenchen, Dahoma, Others	Danta Chenchen Dahoma (3 species)	Papao, Awiemfosamina, Aprozuma, Bediwenua/Canarium, Onyina, Akasa, Shedua Ayan/Bonsamdua, Edinam, Guarea, Nyiangon, Kaku, Mansonia, Koto/Kyere, Onyinakoben/Bombax, Emire, Ofram, Wawa, Rosewood/Kpatro, Avodire	Papao Awiemfosamina, Bediwenua/Canarium Akasa Edinam Nyangon Mansonia Koto/Kyere Wawa Avodire (10 Species)

TIDD's periodic market intelligence should have brought a progressive shift of these moving species up through the various market categories, as the relative strengths of market demand would have suggested.

The impact of fob pricing and its adjustment for inflation have also been studied for the research period.. Theoretically, trends in the Cedi equivalent of fob prices for ADL analyzed indicate, generally, a steady increase in value even though sometimes FOB (Euro) price dropped (Annex 5). This is the effect of the official exchange rate adjustment. Where inflation is not taken into account over the trend period, stumpage would lose value. In practice, over the period, none of the adjustments – FOB adjustment by legislation and inflation indexing by governance reforms - took place. In the research methodology, the history of assumed FOB-

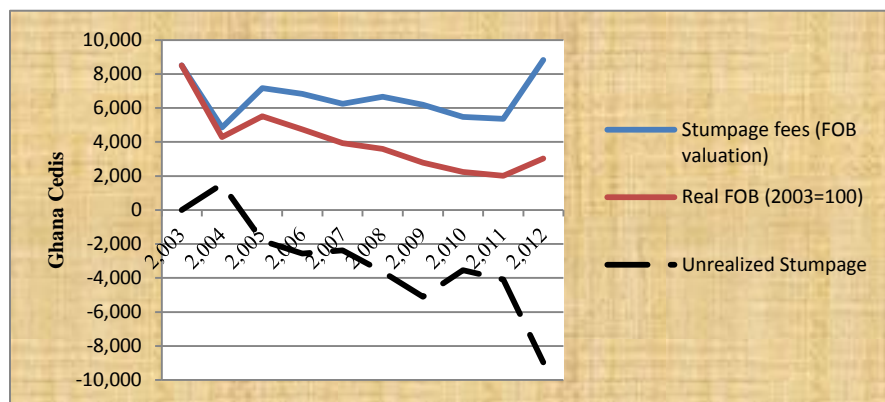
linked values of stumpage have been used as a base and the corresponding rates of annual inflation used to estimate the real value of stumpage in the particular year (Annex 5). On the basis of this methodology, two kinds of drivers of stumpage loss and their financial impacts were estimated. The first driver is failure by FC to comply with legislation on the use of FOB as a reference price, and the second, driver the absence of a sector policy to adopt indexing of FOB-linked stumpage fees to inflation. Over the period, resource owners lost on the average about GH₵ 560,000 (US\$300,000) on the basis of non-legal compliance (FOB adjustment) and about GH₵ 2.8 million (US\$1.5 million) annually – 5 times the “current fob” scenario - for not pursuing simultaneously legal compliance and further governance reforms. The overall impact is an annual average stumpage loss of about GH₵ 3.4 million or close to US\$2 million over the period (Table 2).

Table 2: Summary of Period Analysis of Stumpage loss, GH₵, 000
(Based on Annex 5)

	Period	Annual
Nominal stumpage fees	61,044	6,104
Stumpage fees (FOB related), current	66,115	6,611
Stumpage fees (FOB related), Real 2003 pricing	40,651	4,065
Loss due to non-application of FOB pricing	5,071	507
Loss due to unadjusted FOB for inflation	25,464	2,546
Total loss	30,535	3,053

Thus, over the period, forest owners lost the opportunity to collect from the timber industry about GH₵ 30 million (US\$16 million), or close to 4 times its potential industry contribution to Social Responsibility Agreements (SRAs). This significant amount resulted at least because the annual potential loss was allowed to increase progressively over the period (Figure 2).

Figure 2: Real loss in stumpage value
(Based on Annex 5)



(Based on Annex 5)

4.0 DISCUSSION OF ISSUES AND WAY FORWARD

4.1 Policy issues

It is immediately observed from the stumpage loss analysis that FOB adjustment alone is not enough to protect the real value of stumpage. Further, it is relatively the least effective approach to maintain stumpage value when compared to inflation indexing

In attempting to answer why FC has not adjusted stumpage fees for close to a decade, one should look for answers outside the period of research. It had been established in 2001 that the sector suffered from policy failure. Failure to adjust stumpage fees in the period 1990-99 produced similar results as the current. Commitment of the FC Board in the 2000s did not include adjusting stumpage fees to their real levels. Strong industry sentiments on the Board perhaps made it to confuse symptoms with real underlying or root causes. There was the persistent argument that industry was not making profit because of high costs and needed high volumes of timber to break even. So increasing stumpage fees was out of the question. But in the forest fiscal context that pushed for appropriate timber pricing to create incentives for sustainable forest use practices, the industry argument rather propagated the “problem” and not the “solution.” A person sick from malaria needs to take the bitter quinine to be cured, and not to expect to be able to do so after getting better.

In respect of stumpage rate, the FC, generally, has not taken the advantage of exercising its mandate to promote industry by using its market intelligence and RMSC's management of species inventory data to move species up the graduated scale of stumpage rates, in consultation with the Administrator of Stool Lands, as implied under L.I. 1649.

To understand the implications of non-renewal of stumpage fees – not just that but how advocacy can address these implications- it is necessary to put the current policy of stumpage depreciation in the context of political decision-making. Historically, stumpage fees have been the orthodox approach to taxing commercial forest exploitation. Leakage in stumpage fees had been observed in the early 1980s and recommendations, including a shift from unit volume-based to fixed tree volume-based calculation (World Bank, 1986) made to plug the leakage. These recommendations did not work. Preparation of the Forest Management Project proposed competitive bidding to be adopted in allocating timber resources. The follow up-legislation, Timber Resources Management Act, Act 547, 1997, fell short of specifying competitive “bidding,” by providing for competitive “procedures.”

Political decisions have always been influenced by the consideration that price reforms will cause unemployment in the wood industry. But there was enough evidence to suggest that the level of employment generated by the industry was based on unsustainable use of the forest resource (Birikorang et al., 2001). Failure to reform timber pricing has resulted in continued over-harvesting and creation of timber scarcity, a massive “crunch” of unplanned industry capacity and unemployment in the mid 2000s. An important adverse economic impact of political decision has been the compulsion of the State to rely on its budgetary resources to create employment and provide social livelihoods, not to mention the cost of social instability among Ghanaian society. Under the option of price reform, the same unemployment would still have occurred. The difference between this option and the political decision in favour of a “Business As Usual” is that the reform option would have generated opportunities to finance the cost of social adjustment from the industry’s own pocket – and not the state budget. So option of reforming pricing policy is always a less costly one.

Stumpage fees contribute significantly to FC’s budget. MoFEP’s Medium Term Expenditure Framework, allocates budget to sector ministries which in turn re-allocates funds in accordance with its priorities and overall political direction. So, to a large extent, the FC becomes vulnerable to circumstances of unrealized or depreciating stumpage values. Studies in the mid 1990s emphasized that sustainable forest management required varied forms of incentive systems to be real. In addition to a forest fee system that resourced the State and adequately rewarded timber operators, it was necessary also to equitably reward and actively engage forest communities to participate in forest protection and improvement systems (IIED, 1994). The FAO also acknowledged in the late 1990s the strategic importance of the Forest Service that had in the mid-1990s embarked upon a number of approaches including programmes such as Collaborative Forestry, Social Responsibility Systems, etc to accomplish forest community engagement, and concluded that “without bringing in the rural people on whose land the forest grows, any effort to significantly improve the forest will not succeed” (FAO, 1997). This notwithstanding, FSD’s budget releases between 2005 and 2011 was less than 25% of its financial plan. In 2005, FSD’s Administration and Services Expenditure amounted to US\$3.1 million (Birikorang et al., 2007). In 2006, it planned but realized far less than a budget of US\$8.5million (Courtesy, FSD). In comparison with this budget, it received a total of US\$2.3 million in 2010 and for the first three quarters of 2011 a total budget of US\$667,000 (Courtesy, FSD). Thus, the Forest Service has not been adequately resourced to do achieve results in line with the global appreciation of its strategic importance. While this has affected quality forest management services and environmental protection, depreciating stumpage has led to a rendering of forest communities frustrated by under-payment.

It is also observed that the NREG, the Ghana Government- multi-donor dialogue platform that governed the Performance Assessment Framework (PAF) of the forest sector also failed to encourage policy-making affecting stumpage fees. The FC relied in the 2000s on stumpage fees (and in later years on

competitive bidding resources) for more than 60% of its budget. But policy triggers, defining specific policy actions to be completed by targeted periods, were progressively waived annually to enable Ministry of Finance and Economic Planning access budget support funds. At the same time, a lack of understanding of how FC's finances worked caused MoFEP to restrict budget releases to FC. Thus while the political commitment to maintaining an appropriate timber pricing has been lacking, NREG has also failed to push for forest fiscal reforms in this respect.

4.2 Risk of revenue objective running counter to the environmental

In line with expectations of an assessment of the impact of VPA, the harvest volumes of traditional species recorded annually have considerably reduced (Mayers et al., 2009), thus contributing significantly to the decline in annual stumpage values. High demand species, comprising the traditional (primary) species accounted for less than 10% of annual harvest, but 29% of stumpage value over the research period (Figures 3A and 3B). The high proportion of moderate and low demand species is very conspicuous.

Since September 2006, TIDD's export levies have been reduced from 3% to 1.5%, with one-third of the levies collected (0.5%) committed to an escrow account for the financing of forest plantations. Thus TIDD's revenue, consolidated in FC's corporate receipts, has been reduced from about GH¢6,000 annually to GH¢3,000, while Stumpage fees linger around GH¢9,000. Given the increased reliance on stumpage fees, there is the risk that FC's financial distress might be translated into using forest planning to increase its revenue by allocating to the yields of TUC holders more of high stumpage-rated traditional species than "allowable." There is, therefore, the risk that a persistent loss of real stumpage value could compel FC to put more of expensive and scarce timber species in the Annual Allowable Cut (AAC), given FC's trial role of forest planner, revenue manager and monitor of forest performance.

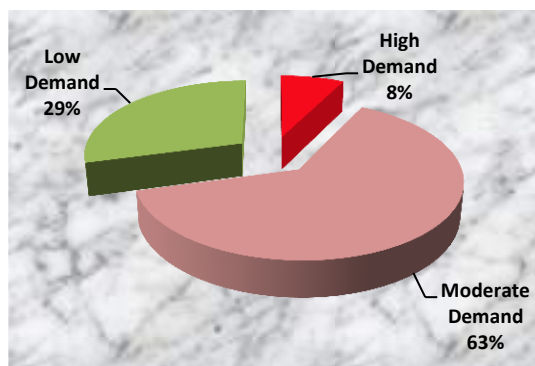


Figure 3A: Shares of categories of species in average of 2003-12 harvest volume

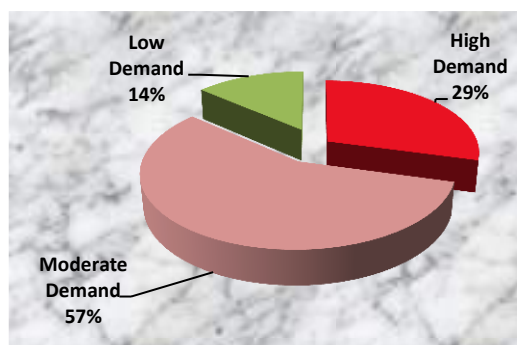


Figure 3B: Shares of categories of species in average of 2003-12 stumpage value

4.3 Risk of revenue loss through timber laundering

Studies in timber regulations in the 2000s established a significant discrepancy between the species recorded at the harvest level and those captured at the export end (Hansen et al, 2007). Laundering of timber species to avoid paying the appropriate stumpage fees is risk to securing future stumpage revenues, as

well as compliance with environmental and ecological prescriptions of the FC. RMSC manages and controls forest inventory data to support forest planning at the Forest Management Unit level and to regulate annual harvest plans of TUC holders. The inventory data management is largely based on *analogue* rather than *digital* (electronic) data. This is a weakness, as in their form, analogue data are tamper-prone. There is therefore, a pressing need to build RMSC's capacity to develop and manage digitized forest inventory data in order to overcome the challenges posed by potential timber laundering. This is important to the Legality Assurance System (LAS). Until this is achieved, both the State, FC and forest owners remain exposed to the risk of timber laundering.

4.4 Current wood Industry performance and development indicators: Gap in TIDD's empirical knowledge

No comprehensive research into the financial and economic aspects of industry and their related policy diagnosis since the Wood Industry and Log Export Ban Study in 2001. The wood industry is observed to have undergone a greater degree of consolidation. Some structural changes are also suggested by changes in the current composition of exports, namely relatively less ADL and more of plywood and other wood products. The absence of an updated technical and financial audit of the industry has created technical data and knowledge gaps on industry characteristics and behavior, thus, posing a challenge to TIDD that must advise on a future review of the structure of timber pricing as provided in Regulation 22 (2) (see Box 1). Presently, TIDD is a step behind, instead of being a step ahead of industry. It should be able to assume leadership in diagnosing changes in industry development and behavior, draw technical and economic implications from them and cause policy to direct industry development and integration, particularly in development of the domestic market. The possible exercise of Executive power to change stumpage fees faces a potential constraint in the form of an abandoned strategic role of TIDD necessary to build blocks of alliance with inter-related public institutions and the PSCLF. Changing the rate of FOB values assigned as timber price is the only factor that can be excluded from the use of an Executive Instrument (EI) by MLNR. As explained earlier, adjustment in the rate of FOB values will require Parliamentary approval. In the long term, this may not be necessary, but will largely depend on how TIDD takes control of the management of industry's development path.

Generally, the use of an E.I. must be subjected to the existence of a regularly informed forest stakeholders. It is observed that not much of TIDD's market intelligence is disseminated, and none is also undertaken in the case of economic intelligence, to inform the Executive and Legislature. One of the key strategies of establishing a Timber Export Development Board (TEDB) and Forest Products Inspection Bureau (FPIB) out of one organization, the erstwhile Ghana Timber Marketing Board in 1985 was to create a separate institution, TEDB to provide, among its functions, economic intelligence to the MoFEP, while the FPIB was allocated the function of approving export prices. These separate institutions now comprise the TIDD. Resumption of the economic intelligence and dissemination of its

current market intelligence reports could facilitate a smooth adoption of EIs in making current stumpage values responsive

5.0 RECOMMENDATIONS

5.1 General recommendation: Managing a fiscal transition under VPA

On a number of occasions, policy decisions have been conducted in a rush without adequate consultation and backing from an analytical framework that best informs policy. A case in point is the institution of Social Responsibility Agreements, which evolved simply by the attractive convenience of industry being directed to pay an additional 5% of stumpage. SRAs in the view of the current research has been a failure, as communities in districts with depleted forests receive insignificant sums of money while the key issue of debating transparency in the use of District Assemblies' dominant share of stumpage fees remain, or from the experience of competitive bidding for plantation timber resources, some landowners hijacked the concept of SRA and claimed its control.

It is observed in this research that provisions under regulations alone are not enough to fully recover real loss in stumpage value. The reader will appreciate at this point that even if you have a bad policy it is still circumscribed by law. So any discussion of policy gaps beyond what is achievable under legislation must happen outside the VPA, unless the policy specifics are defined under Ghana Government's commitment to governance as provided under Section 5 of Annex II of the VPA. For these reasons, recommendations under Policy Issues (Section 4.1) are structured to permit exploration of short-to medium term opportunities for MLNR and the NREG to work out and implement a timber price reform outside the VPA Agreement that restores the real stumpage level. In the medium to long term, MLNR will concern itself with a fiscal transition to long-term implementation of the VPA. It is expected that this approach will influence a clear definition of Ghana Government's commitment to governance under Section 5 of Annex II of the VPA.

Specific recommendations are also made on key issues that need to be wrapped into a consultative process for managing the fiscal transition under the VPA.

5.2-Specific recommendations

In the short term,

- (a) The FC should begin to implement quarterly reviews of stumpage fees indexed to both the FOB value of ADL and the quarterly average rate of inflation;
- (b) MLNR and FC should together develop a short to medium term forest fiscal strategy and through the dialogue platform with the Technical Committee of NREG seek to have this strategy and its financial plan incorporated in MoFEP's Medium Term Expenditure Framework. While the short term reforms will improve forest communities' incentives to protect trees, incorporating the forest fiscal and financial plan in MoFEP's MTEF will improve dialogue over MoFEP providing adequate funding for FC to meet its forest environmental management goals. ; and
- (c) MLNR should recognize CSO as FC's partner in policy implementation and provide support for building its capacity. This should strengthen CSO's responsiveness to VPA Protocols relating to the Verification of Legal Compliance (VLC) and Verification of Legal Origin (VLO) under Ghana's VPA with the EU.

Page | 12

In the medium term:

- (a) FC should actively engage CSO to participate in monitoring the supply chain of timber as will be regulated under the Legality Assurance Scheme.
- (b) FC should pursue a priority agenda for RMSC capacity building to ensure a credible traceability of timber volume and value.

In the long term:

MLNR should take the lead in pursuing a long term vision of reaching an MLNR/MoFEP/FC Tripartite Memorandum of Understanding on managing a long term forest fiscal strategy under which MLNR manages forest fiscal policy through Executive rather than Legislative Instruments. This MoU must be endorsed by cabinet.

Managing the strategy will require TIDD to be adequately resourced to update knowledge on industry performance and development. It must also institutionalize industry consultation to support MLNR's application of Executive Instruments. Review through time of the 35% timber price and both the current stumpage rates and the market ratings of species that will support industry growth and employment generation are long-term challenges facing TIDD.

ANNEXES

ANNEX 1: TERMS OF REFERENCE

Terms of Reference to determine the financial loss to land owners and the state due to non-review of stumpage fees quarterly since 2005

Background

According to Schedule 3 of the Timber Resources Management Regulation , LI 1649, “Timber price is 35% of the free-on-board (FOB) value of air-dried lumber of the species (i.e. estimated round wood equivalent), based on the previous quarter’s average of such exports as published from time to time by the Forest Products Inspection Bureau”. The FC has not, by implication of a mandatory quarterly review, complied with regulations since 2004. This implies a loss of revenue to the State

There are widespread controversies surrounding the girth limits of felled trees for individual tree species and by implications the legitimacy of the conduct of inspection by the regulatory institution. Resource scarcity poses a risk of extraction of trees below their minimum girth. This is a challenge for timber legality under the VPA. Furthermore, Civil Society is interested in how sustainability of various endemic species can be guaranteed. A long term policy that links markets to silvicultural practices and determination of the Annual Allowable Cut needs to be born alongside the VPA, and the implications for future revenues, and how they extend the trajectory on future stumpage levels appreciated.

Civil Society is interested in assessing the impacts of value loss through non-review of stumpage and the long term effects of resource depletion piled on top of each other, and seeks to conduct a 2-Phase study into these impacts.

The broad objective of this 1st phase consultancy is to seek to protect the interest of the State and forest owners in forest tax imposition and appropriation. According to LI 1649 21 (2), stumpage fee represents royalties to the landowner and charges for the cost of felled timber which provide a basic return to the landowner and contributes to the cost of forest management and timber regulation. The immediate objective of the consultancy is therefore to discover what has been lost in potential revenue to the state and resource owners from the non-review of stumpage.

Scope of work:

The Consultant will conduct a study to;

- i. Project the extent of lost revenue to the state from 2003 to 2012;
- ii. Examine the underlying reasons for the failure to review stumpage
- iii. Examine the legal, political and policy implications for this non review on the forest resources management and the Voluntary Partnership Agreement.
- iv. Make recommendations for VPA verification protocol to ensure that the law is being enforced

Deliverables

The consultant will produce the following documents for Civic Response.

- a. A report detailing out the loss of revenue, broken down year by year, due to non-review of stumpage fees policy, and its implications.
- b. A PowerPoint presentation of findings to be made to forest stakeholders
- c. A 4 page policy brief for dissemination to
 - i. State institutions and agencies - Parliament, Ministry of Lands and Natural Resources, Forestry commission
 - ii. Civil Society, Communities and resource owners,

ANNEX 2: L.I. 1649, SCHEDULE 2: STUMPAGE RATES (MARKET CLASSIFICATIONS)

TIMBER RESOURCES MANAGEMENT REGULATIONS, 1998

SCHEDULE 2
(Regulation 2 (1))

STUMPAGE RATES

TRADE NAME	LOCAL NAME	SCIENTIFIC NAME	STUMPAGE RATE
High Demand	Depleted Species	Class 1	20%
African Walnut	Dubini-Biri	Lovoa trichiloides	
Afromosia	Kokrodua	Pericopsis elata	
Aningeria	Asanfina	Aningeria altissima/robusta	
Black Hyedua	Hyeduanini	Guibourtia ehie	
Candollei	Omu	Entandophragma candollei	
Iroko	Odum	Milicia excelsa/regia	
Mahogany	Krumben/Odupon/Dubin	Khaya spp.	
Makore	Baku/Makore	Tieghemella heckelii	
Opepe	Kusia	Nauclea diderrichii	
Sapele	Penkwa	Entandophragma cylindricum	
Utile	Efuobrodedwo	Entandophragma utile	
Moderate Demand	Available Species	Class 2	10%
Afara	Ofram	Terminalia superba	
Afzelia	Papao	Afzelia africana/bella	
Albizzia	Awiemfo Samina/Okoro	Albizzia ferruginea	
Ayan	Bonsandua	Distemonanthus benthamianus	
Avodire	Apapaye	Turreanthus africanus	
Bombax	Onyina-Koben	Rhodognaphalon brevicuspe	
Canarium	Bediwonua	Canarium schweinfurthii	
Ceiba	Onyina	Ceiba pentandra	
Ekki	Kaku	Lophira alata	
Gedu-Nohor	Edinam	Entandophragma angolense	

REAL LOSS IN STUMPAGE VALUES IN GHANA'S FOREST SECTOR, 2003-2012

Idigbo	Emeri	Terminalia ivorensis	
Mansonia	Oprono	Mansonia altissima	
Obeche	Wawa	Triplochiton scleroxylon	
Ogea/Daniella	Shyedua	Daniella ogea/thurifera	
Pterygota	Kyere/Koto	Pterygota macrocarpa	
Antrocaryon	Aprokuma	Antrocaryon micraster	
Guarea	Kwabohoro/Kwadwuma	Guarea spp.	
Longhi (Blanc)	Akasa	Chrysophyllum albidum	
Niangon	Nyankom	Heritiera utilis	
Low Demand	Abundant Species	Class 3	5%
Celtis	Esa	Celtis mildraedii/zenkeri	
Danta	Danta	Neosogordonia papaverifa	
Homba	Otie	Pycnanthus angolensi	
Missanda	Potrodum	Erythronphleum guineense	
Okan	Denya	Cylicodiscus gabonensis	
Sterculia	Wawabim	Sterculia rhinopetala	
Wonton	Wonton	Morus mesozygia	
Antiaris	Chenchen	Antiaris Africana	
Dahoma	Dahoma	Piptadeniastrum africanum	
Other species			

ANNEX 2A: Annual Stumpage fee levels by Timber Species

SPECIES	CURRENT STUMPAGE RATES								
	¢/m ³ Q1/2011	¢/m ³ 2010	¢/m ³ 2009	¢/m ³ 2008	¢/m ³ 2007	¢/m ³ 2006	¢/m ³ 2005	¢/m ³ 2004	¢/m ³ 2003
High Demand									
Asanfena	25.20	25.20	25.20	25.20	25.20	25.20	25.20	25.20	25.20
Utile	31.60	31.60	31.60	31.60	31.60	31.60	31.60	31.60	31.60
Candollei	21.69	21.69	21.69	21.69	21.69	21.69	21.69	21.69	21.69
Hyeduanini	33.03	33.03	33.03	33.03	33.03	33.03	33.03	33.03	33.03
Mahogany	24.28	24.28	24.28	24.28	24.28	24.28	24.28	24.28	24.28
Odum	25.17	25.17	25.17	25.17	25.17	25.17	25.17	25.17	25.17
Kusia	18.03	18.03	18.03	18.03	18.03	18.03	18.03	18.03	18.03
Makore	26.72	26.72	26.72	26.72	26.72	26.72	26.72	26.72	26.72
Sapele	27.37	27.37	27.37	27.37	27.37	27.37	27.37	27.37	27.37
Walnut	22.61	22.61	22.61	22.61	22.61	22.61	22.61	22.61	22.61
Afromosia	50.87	50.87	50.87	50.87	50.87	50.87	50.87	50.87	50.87
Moderate Demand									
Papao	11.96	11.96	11.96	11.96	11.96	11.96	11.96	11.96	11.96
Awiemfosamina	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38
Aprokuma	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38
Bediwenua/Canarium	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38	6.38
Onyina	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78
Akasa	10.36	10.36	10.36	10.36	10.36	10.36	10.36	10.36	10.36
Shedua	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54
Ayan/Bonsamdua	10.32	10.32	10.32	10.32	10.32	10.32	10.32	10.32	10.32
Edinam	8.24	8.24	8.24	8.24	8.24	8.24	8.24	8.24	8.24
Guarea	9.57	9.57	9.57	9.57	9.57	9.57	9.57	9.57	9.57
Nyiangon	12.44	12.44	12.44	12.44	12.44	12.44	12.44	12.44	12.44
Kaku	8.77	8.77	8.77	8.77	8.77	8.77	8.77	8.77	8.77
Mansonia	11.96	11.96	11.96	11.96	11.96	11.96	11.96	11.96	11.96
Koto/Kyere	12.64	12.64	12.64	12.64	12.64	12.64	12.64	12.64	12.64
Onyinakoben/Bombax	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78
Emire	10.68	10.68	10.68	10.68	10.68	10.68	10.68	10.68	10.68
Ofram	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95
Wawa	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18
Rosewood/Kpatro									

REAL LOSS IN STUMPAGE VALUES IN GHANA'S FOREST SECTOR, 2003-2012

Avodire	10.65	10.65	10.65	10.65	10.65	10.65	10.65	10.65	10.65
Low Demand									
Essa	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19	3.19
Danta	4.62	4.62	4.62	4.62	4.62	4.62	4.62	4.62	4.62
Otie	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42	3.42
Potrodom	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59
Denya	4.39	4.39	4.39	4.39	4.39	4.39	4.39	4.39	4.39
Wawabima	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59
Wonton	2.39	2.39	2.39	2.39	2.39	2.39	2.39	2.39	2.39
Chenchen	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15
Dahoma	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59
Others	2.39	2.39	2.39	2.39	2.39	2.39	2.39	2.39	2.39

Source: Forestry Commission

ANNEX 3: Formula for Calculation of Stumpage Fee

SCHEDULE 3 (Regulation 22 (2))

Formula for Calculation of Stumpage Fee

Stumpage fee = Tree volume x Timber price x Stumpage rate,

where, Tree volume is computed in cubic metres according to the measurements taken of each tree felled, using Smalian's Formula as follows—

$$V = kL [(db1 + db2)^2 + (dt1 + dt2)^2]$$

where V = the volume of the log

K = the constant 0.098,

L = the length of the log,

db1,db2 = the first and second diameters at the base end, measured at right-angles to each other,

dt1,dt2 = the first and second diameters at the top end, measured at right-angles to each other.

Timber price is 35% of the free-on-board (FOB) value of air-dried lumber of the species (i.e. estimated roundwood equivalent), based on the previous quarter's average of such exports as published from time to time by the Forest Products Inspection Bureau.

Stumpage rate for each timber species is the percentage specified in Schedule 3 of these Regulations.

ANNEX 4: Restricted Species

SCHEDULE 6
(Regulation 40(1))

Restricted Timber Species

LOCAL NAME	TRADE NAME	BOTANICAL NAME
Edinam	Gedu-Nohor	Entandophragma angolense
Penkwa	Sapele	E. cylindricum
Efobrodedwo	Utile	E. utile
Penkwa-Akoa	Candollei	E. candollei
Krumben	Mahogany	Khaya anthotheca/grandifolia
Dubini	Mahogany	K. ivorensis
Odum	Iroko	Milicia excelsa/regia
Kusia	Opepe	Nauclea diderrichii
Baku	Makore	Tieghmella heckelii
Hyedua	Black Hyedua	Guibourtia ehie
Kokrodua	Afromosia	Pericopsis elata

CLETUS A. AVOKA
Minister for Lands and Forestry

Date of Gazette notification: 10th November, 1998.

Entry into force: 16th December, 1998.

REAL LOSS IN STUMPAGE VALUES IN GHANA'S FOREST SECTOR, 2003-2012

ANNEX 5: Economic analysis of stumpage loss, 2003-12 Results of FOB-Inflation Indexing of Stumpage fees, GH¢;
2003-12

A. ANALYSIS

	2,003	2,004	2,005	2006	2007	2008	2009	2010	2011	2012	
1 ADL, FOB Value, US\$/m ³	410	399	396	410	418	400	427	440	485	628	
2 Foreign exchange rate (GH¢/US\$)	1.24	0.89	0.92	0.96	0.95	1.08	1.40	1.43	1.51	1.81	
3 ADL, FOB Value, GH¢/m ³	509	356	364	392	395	432	596	630	730	1136	
B. RESULTS (GH¢,000)											TOTAL
A Stumpage fees nominal	8,510	6,918	7,003	6,352	6,208	6,096	4,476	5,178	4,623	5,680	61,044
B Stumpage fees analyzed, FOB only	8,510	4,846	7,161	6,830	6,256	6,664	6,183	5,474	5,355	8,835	66,115
C Real FOB, in 2003 domestic prices (2003=base year)	8,510	4,298	5,519	4,744	3,925	3,590	2,792	2,231	2,007	3,034	40,651
D Loss on FOB (B-C)	0	548	1,642	2,086	2,331	3,074	3,391	3,243	3,348	5,801	25,464
E Loss on nominal stumpage (unadjusted FOB)	0	-2,072	158	478	48	568	1,707	296	732	3,156	5,071
Unrealized stumpage (D+E)	0	1,524	1,800	2,564	2,380	3,642	5,098	3,539	4,079	8,956	30,535

Summary

	Period	Annual
Loss due to non-application of FOB pricing	5,071	563
Loss due to unadjusted FOB for inflation	25,464	2,829
Total loss	30,535	3,393

