LAW COMPLIANCE
AND PREVENTION
AND CONTROL OF
ILLEGAL ACTIVITIES
IN THE FOREST
SECTOR IN GUYANA

Preliminary Report Prepared for the World Bank

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Acronyms and Abbreviations

COP        Code of Practice for Timber Harvesting
FPA        Forest Products Association of Guyana
GFC        Guyana Forestry Commission
SFEP       State Forest Exploratory Permit
SFP        State Forest Permission
TSA        Timber Sales Agreement
WCL        Wood Cutting Lease

Scientific Names
Common (vernacular) species names have been used in the text. The following are the equivalent scientific names:

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baromalli</td>
<td><em>Catostemma commune</em></td>
</tr>
<tr>
<td>Crabwood</td>
<td><em>Carapa guianensis</em></td>
</tr>
<tr>
<td>Greenheart</td>
<td><em>Chlorocardium rodiei</em></td>
</tr>
<tr>
<td>Locust</td>
<td><em>Hymenaea courbaril</em></td>
</tr>
<tr>
<td>Purpleheart</td>
<td><em>Peltogyne venosa</em></td>
</tr>
<tr>
<td>Tauroniro</td>
<td><em>Humiria balsamifera</em></td>
</tr>
</tbody>
</table>
1.1 COUNTRY SITUATION

Guyana is the only English speaking country in South America, is located on the Atlantic seaboard of north-eastern South America. It extends 800 km south from latitude 88° N on the Atlantic coast to latitude 1° N and some 480 km east to west between longitudes 57° and 61° W. It has an area of about 215,000 km². The total population is some 750,000 made of 45 percent Indian descent, 37 percent Afro-Caribbean, 7 percent Amerindian and 11 percent of Chinese, European and mixed descent. Population and commercial agriculture is concentrated along the coastal strip. In 2004 Guyana had a Gross National Income per capita of US$990 (globally ranked 146th) according to World Bank data.

Tropical high forests cover some 16.4 million ha or about 76 percent of the total land area, making it one of the most forested nations worldwide. The breakdown by forest type is given in Table 1.

1.2 FOREST ADMINISTRATION

State forests administered by the Guyana Forestry Commission (GFC) account for about 13.6 million ha (63 percent of the land area). By 2004, 52 percent of state forest had been allocated for timber harvesting. Within the State Forest Area there are some areas nationally identified for total or partial conservation activities including Iwokrama Forest (360,000 ha), Conservation International’s Conservation Concession (80,000 ha), Morabali Reserve and some small reserve/research sites (totaling approximately 3.5 percent of forest area).

In addition to state forests, a portion of the national forests are under titled Amerindian lands. Land titles were issued to Amerindians in 1976 onwards. Approximately 13 percent of the total land area of the country is under titled Amerindian land; the proportion of this area with commercial forest potential has not been documented (though is estimated at 1.4m million ha). However, within the commercial forestry belt, there has been significant commercial timber production on Amerindian lands which is subject to the same log-tracking system.

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TABLE 1
Forest Types by Area in Guyana

<table>
<thead>
<tr>
<th>Forest type</th>
<th>Area (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rainforest</td>
<td>36</td>
</tr>
<tr>
<td>Montane</td>
<td>35</td>
</tr>
<tr>
<td>Swamp &amp; Marsh</td>
<td>15</td>
</tr>
<tr>
<td>Dry Evergreen</td>
<td>7</td>
</tr>
<tr>
<td>Seasonal</td>
<td>6</td>
</tr>
<tr>
<td>Mangrove</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Source: GFC.*
system operated on State Lands (though timber produced on Amerindian lands is not subject to state royalty fees—village councils may set small royalty fees for timber produced on their territory but this system is not standardized).2

Under Guyanese laws, forest on private lands including those titled to Amerindian communities are not subject to the control of the GFC with no special laws existing to regulate felling though the draft Forest Act of 1997 tries to address this through the provision of regulatory mechanisms for interaction, including those with timber companies. Also, the new Amerindian Act (2006) gives GFC greater powers to regulate forestry practice on Amerindian lands.

Access for commercial timber removal on State Forests is controlled by the GFC through the allocation of temporary concessions and permits as follows:

- Timber Sales Agreement (TSA) covers concessions of more than 24,000 ha and is allocated for a period of more than 20 years.
- Wood Cutting License (WCL) is issued for 3 to 10 years, and covers forests of between 8,000 and 24,000 ha.
- State Forest Permissions (SFP) are given for two years and cover areas of less than 8,000 ha. SFPs are generally issued to individual small-scale operators and community-based associations.
- State Forest Exploratory Permits (SFEPs), which are issued for survey and feasibility purposes only and do not include cutting rights.

Since 1991 the number of TSAs has almost doubled from 163 in 1999 to 31 in 2005 (see Table 2). During the same period in the room for the middle of an infinite the number of SFPs has declined from 571 to 263. Compared with 1999, the area allocated to TSAs has increased by 22 percent, as well as the proportion of all allocated State Forest (by area from 64.5 percent to 71 percent). Meanwhile, the area allocated to SFPs has fallen by 37 percent in real terms and also proportionally (23–13 percent).

Though no data were available to corroborate, one contributing factor to the decline in the number of SFPs over recent years is thought to be the initiative of the GFC to assess the productive capacity of current SFPs. This has resulted in some being classed as available for certain forest products only (such as walaba poles) or as ‘worked-out’ in which case they are not reallocated.

### 1.3 PRODUCTION

According to the FAO’s global forest assessment survey results4 deforestation rates in Guyana are low (less than 0.1 percent land area per annum), largely since logging practice is selective and relatively low

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intensity. Guyana’s forests are therefore largely intact, though in terms of remaining commercial productive capacity there are some marked geographical differences with the most accessible near-interior forests less productive for high value species of marketable dimensions and quality. In several Amerindian reservations there is a localized shortage of prime timber species.

Guyana’s commercial forests are characterized by high species diversity but the main commercial species have a low standing volume per unit area which results in low volume extraction per unit area. It has been estimated that in 2000, the total annual wood production of 400,000 m³ came from a forest area of some 6 million ha, equating to less than 0.1 m³/ha. However, since a significant portion of the allocated area is not active in any given year, actual average increment is probably closer to the 0.33 m³/ha/yr recognized by the GFC. In practice, removal of commercial timber from unlogged forest rarely exceeds 8 m³/ha. The reasons for the low productivity can be found in the relatively poor forest soils typical in the country; the highly selective nature of logging (targeting less than 5 percent of the tree species occurring) and the relatively high occurrence of defective trees (estimated at more than 20 percent overall).

Selection of species for commercial harvesting is influenced by a number of considerations, which include availability or abundance and market recognition and/or acceptance, particularly in export markets. Greenheart and purpleheart are still the most commercially favored species though mora, kabukali, tatabu and shibadan especially can find export markets (as logs or sawn lumber) and several other species are marketed locally as mixed hardwoods or, for less dense species, formboards. Baromali and several other species are harvested as peeler logs for plywood manufacture. Locust wood is used extensively and almost exclusively by one company for the manufacture of garden furniture primarily for the United Kingdom market.

Log production has shown considerable fluctuations over the past decade, peaking in 1997 at 521,529 m³ and falling to 288,534 m³ by 2000. The latest figures (2005) indicate a slight resurgence to 312,688 m³.

Data for the production of sawn lumber from static (and now including mobile) sawmills are not officially available post-1997. At that time, production was 56,604 m³/yr. Statistics have been collected for chainsawn lumber since 1994 when annual production was recorded at 29,832 m³. Since then production has remained relatively steady and after a slight decline in 1998–99 is was up to 36,085 m³ in 2004 and 36,176 m³ in 2005.

Roundwood (piles, poles, posts and spars) and split wood (staves and shingles) production is also significant though latest figures are given in linear meters or pieces. The most recent figures available in cubic meters are from 2000 when 32,100 m³ was produced.

Approximately one half of total timber volume production is currently exported from Guyana; the most common destinations are Asia (in particular for logs), Europe (especially sawnwood to the United Kingdom), the Caribbean, and North America. The average annual volume of logs exported between 1995 and 2000 was 42,935 m³ and average sawnwood exports between the same periods were 19,716 m³. In 2004 export volumes for logs and sawnwood, respectively, were 61,255 m³ and 39,046 m³. Export volume breakdown for 2005 is given in Table 3. There are no figures specifically for chainsaw lumber.

GFC records indicate that there were 88 sawmills registered in 2005. The majority of these

7. GFC data. Unless otherwise stated production and other background data are from GFC.
are economically and technically inefficient and would benefit from heavy recapitalization. Many sawmill operators obtain their raw materials from their own concessions, though in recent years there has been an increasing trend for saw millers to purchase logs and sawn timber from other suppliers to supplement their own raw material supplies. This is especially so from chainsaw operators who in many cases are able to provide rough sawn lumber relatively cheaply.

The majority of sawmill operators are Guyanese family-owned businesses, ranging in size from small to medium (defined as producing up to 16,000 m³/yr), and employing on average between 5 and 50 people. Most sawmill operators produce for the domestic market, with only a few exporting to overseas markets mainly, but not exclusively, in the Caribbean region countries. The average annual capacity of sawmills is estimated at between 5,600 and 8,500 m³.

A total of 188 lumberyards were registered with GFC in 2005. Many of these establishments have resaws, cross-cut saws, planers, and molding machines. Lumberyards source their material from static mills, mobile mills and chainsaw operators. In some cases, lumberyard owners also have SFPs which form the main source of their material. The majority retail to the local market though increasingly lumberyard owners are finding export markets for high-value species such as purpleheart and greenheart.

There are estimated to be about 190 joinery or woodworking establishments in Guyana—mainly producing certain furniture components or domestic fixtures and fittings. The manufacturing sector comprises mainly furniture manufacturers involving around 5 large manufacturers (employing more than 100 employees), 25–30 medium size operators, and many small ‘backyard’ or ‘bottom-house’ operators employing a few persons only. The medium to large manufacturers typically produce to supply departmental stores and factory outlets in the cities and towns, while the small enterprises supply local, often community-based markets.

### 1.4 SOCIOECONOMIC SITUATION

Guyana is a heavily indebted country that is dependent on external aid. Since 1989 the country has been in transition from a centrally planned to a market economy. The World Bank and International Monetary Fund are very powerful actors in the country’s economic restructuring and Poverty Reduction Strategy. Poverty as a percentage of population was estimated at 35 percent on the coast in 1999 and is much higher in rural areas. Even in Georgetown, the capital, 20 percent of the population live in squatter settlements. Eighty-five percent of the indigenous peoples are estimated to be living in poverty.9 The country has suffered a steady brain drain and there are social tensions and political and ethnic divisions that lead to a climate of defensive professional relations.10 The legal minimum wage is G$24,828 per month (US$124).

Between 1988 and 1993 forestry contributed just over 2 percent to Guyana’s Gross Domestic Product (GDP) but between 1997 and 2004 it averaged 3.73 percent with an al-time high of 4.93 percent in 1997. In 2004 (the latest available) the contribution was 3.29 percent. Note that these figures are for production and primary processing only and do not include secondary processing, plywood or furniture manufacture, for which national-level financial data are not readily available.

Data on the contribution of royalties, acreage fees, and export commission to the public purse were not available for 2005. Most recent published data by Product Class is from 2003 (Table 4). These

<table>
<thead>
<tr>
<th>Table 4: Royalty from Forest Products (2003)</th>
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<tbody>
<tr>
<td><strong>Product Class</strong></td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>Logs</td>
</tr>
<tr>
<td>Chainsaw Lumber</td>
</tr>
<tr>
<td>Roundwood</td>
</tr>
<tr>
<td>Splitwood</td>
</tr>
<tr>
<td>Fuelwood</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
</tbody>
</table>


data indicate that the greatest contribution to the exchequer in the form of royalty was from chainsaw lumber (43.3 percent). These data do not include chain sawn lumber produced on Amerindian forests. The total value of exports of all logs sawnwood, roundwood, splitwood, and plywood between 1997 and 2004 was US$251 million with an annual average of US$31.5 million, peaking in 2004 at US$41.6 million. Figures for 2005 are given in Table 5.

Domestic consumption of sawnwood was estimated at 35,000 m$^3$ in 1997, the last year for which official figures exist. Domestic consumption of chainsaw lumber was estimated at a little less than 30,000 m$^3$ in 2000.11

The latest official figures, from 1997, indicate that 13,979 persons are directly employed in the timber and forest products production sector (Table 6). Unofficial figures from 2000 suggest that this number had fallen to under 11,000 persons with around 58 percent in the logging subsector, 38 percent in sawmilling, and 4 percent in plywood manufacture. There are no figures for the numbers employed in chainsaw lumber subsector though anecdotal evidence suggests that each SFP can employ between 10–50 persons throughout the year.12

Most of the country’s infrastructure—roads, power supplies, telecommunications, mains water, and so forth—as well as the population are found along the settled Atlantic Coast. The Hinterland is characterized by low population density. Only some 50,000 people live outside the coastal strip and the few main inland towns. These people include, but are not exclusively, descendants of the indigenous people of Guyana (also referred to as Amerindians).

Except in coastal regions, most Amerindians live in well-established villages 83 of which currently have designated Amerindian land by the Amerindian Act.13 It is estimated that at least 26 Amerindian communities in Guyana do not have legally titled lands but still enjoy ancestral/traditional user’s rights on these lands.14

Many communities are currently asking for the extension of their lands, in part because of population increases, which can put stress on the available community natural resources and in part because their original land claims in the immediate post colonial period have not been fully addressed. However, in many cases, land claimed has already been identified or allocated for resource use under State authority and oversight. Consequently, Amerindians have sometimes found themselves in the midst of land use conflicts, where the land they reside upon has been granted as, for example, and a forestry concession. There are several cases; however, where issues have been resolved by GFC excising recognized Indigenous lands from forestry concessions.15

In recent years there has been a marked increase in the use of chainsaws for the production of lumber in Guyana. They represent a relatively small capital investment, can be easily moved around the forest as demand dictates and, since lumber is produced at stump, do not require heavy machinery to extract logs from the forest. Most crews operate

15. From Clarke, G & Mangal, S. 2006. op. cit.
under a contractor who provides the majority of equipment and arranges sales. Contractors may also own their own SFP, though many operate freelance or within a community logging association.

Chainsaw lumber production is also common on private lands especially Amerindian reservations. In all cases an annual sawpit license is required to cover all chainsaws operating within the private land boundaries. In 2005 there were 121 sawpit licenses covering state and private forest land.

The majority of legal chainsaw lumber production on state forest occurs on the relatively small-area and two-year leased SFPs. This section of subsector is thus quite well regulated. However, since a license is not required to purchase or own a chainsaw, there is also a section that is largely informal and difficult to regulate. This group consists of persons who are often quite mobile and may operate only on a part time basis.

There are no figures for chainsaw ownership but the vast majority of chainsaws are purchased through one dealer in Guyana. Figures provided by the dealer indicate that from 2003–05 inclusive there were over 5,000 chainsaws sold. If one assumes a practical life of a chainsaw as 3 years, this figure gives a good estimate of the number of chainsaws currently functional in Guyana. It is further estimated that 80 percent of these (by nature of the model—the Stihl 051) are used in chainsaw lumber production.

The GFC indicate that the chainsaw lumber producing subsector contributes around 45 percent of the total revenue earned by the public purse in royalties and fees from forest producers – from just 13 percent of the allocated state forest land. It has been estimated that around 70 percent of persons working in productive forestry are employed on SFPs.

1.5 POLICIES AND INITIATIVE TO CONTROL ILLEGAL LOGGING

1.5.1 Log tracking system

The log tracking system developed for Guyana by the GFC is the mechanism used to perform legal verification and tracking of the chain of custody in Guyana. The system was introduced in 2000 to mainly verify the origin of forest produce and control the levels of harvesting within state forests. The log tracking system currently applies to all operations including those on state forests, Amerindian reservations, and private properties and is linked to the state forest permit quota system—an initiative to control the volume of produce harvested. The system is regulated by a system of bar coded log tags which are assigned to legal operators at the renewal of an operator’s annual license.

An operator’s quota (forest produce volume) is calculated by the GFC using a formula to estimate the sustained yield which considers the size of the forest area and captures the minimum log harvesting variables of felling cycle, felling distance, minimum girth, and inventory information. The quota is equated to the number of trees which will yield this volume; and it is the number of trees computed that will dictate the number of tags to be issued with one tag being equivalent to one standing tree. Each operator is allocated a number of tags in accordance to his sustained yield and is recognized by a unique sequence of numbers assigned to that operation.

Log tagging is done at the stump where one half of the tag is fixed to the stump at the time of felling and the other part, bearing the same sequence of numbers recorded on the stump tag, is affixed to the produce being conveyed. It is the unique numbers of each tag assigned that indicates who the operator is and therefore is able to indicate the geographic origin of the forest produce within the forest estate. All forest produce including logs, lumber, piles, poles, and posts are tagged.

GFC administrative control and monitoring of the log tracking system is facilitated by a simple database and its monitoring outposts (forest stations) and forest officers who are supplied with a register of log tag allocation by district. These forest officers are more effective in verifying the origin and capturing royalties due on any forest produce being conveyed. The system is supplemented by the use of operators’ production registers, which are the property of GFC and are reviewed to ensure specifications of forest produce recorded on the removal permit are authentic.

1.5.2 Regularization of chainsaw logging and community associations

In recent years the GFC has pursued a strategy of legitimatizing forestry operations of nonindigenous communities in close proximity to forest resources. The GFC actively pursues an extension program where communities which were previously dependent on other industries (mainly mining) which have become defunct and have turned to the forest exploitation as their livelihood activity. These communities are being issued concessions as cooperative logging associations. This will tend to reduce the level of illegal logging that occurs in these areas since, in part, it is in the cooperative’s best interests to self-regulate and monitor its resource to ensure sustainability.

1.5.3 Compliance with international agreements

Guyana is a signatory to CITES and therefore safeguards its listed flora and fauna from over-exploitation. This is accomplished through the local scientific authority and the management authority of the Wildlife Division of the EPA. Export quotas are published each year by the scientific authorities in accordance with CITES regulations. In fact, currently there are no CITES Appendix I or II listed tree species logged in Guyana.

1.6 CURRENT STATUS AND TRENDS IN SELECTED GOVERNANCE INDICATORS

1.6.1 Transparency International Corruption Index

The index defines corruption as the abuse of public office for private gain, and measures the degree to which corruption is perceived to exist among a country’s public officials and politicians. It is a composite index, drawing on 16 surveys from 10 independent institutions, which gathered the perceptions of businesspeople and country analysts. In 2005 Guyana was ranked 117 with a Corruption Perception Index (CPI) score of 2.5 out a maximum of 10 (High Clean) and a minimum of 0 (High Corrupt).17

1.6.2 Sustainable Forest Management Indicators

GFC reports that Guyana was recently ranked 6th worldwide for its sustainable forest management practices by the ITTO. In addition, in 2005 Guyana ranked eighth worldwide on the Environmental Sustainability Index.18 Neither of these assessments, however, included specific indicators of legal compliance within the forestry sector.

1.6.3 UN Convention against Corruption

Guyana is not a signatory

1.6.4 Inter-American Convention against Corruption (Organization of American States)

Guyana signed the treaty on March 29, 1996, and ratified it on December 11, 2000. Safeguards that would reduce illegal practices in forestry include:

- The establishment of standards of conduct for the correct, honorable, and proper fulfillment of public functions to prevent conflicts of interest.
- System for registering the income assets and liabilities of persons who perform public functions in certain posts as specified by law.
- Systems of hiring and procurement of goods and services that are open, equitable and efficient.
- Government Revenue collection and control systems that deter corruption.
- Laws that deny favorable tax treatment for any individual or corporation for expenditures made in violation of the anticorruption laws of the state parties.
- Systems for protecting public servants and private citizens who report acts of corruption

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Oversight and modern mechanisms for preventing, detecting, and punishing corrupt acts.

Deterrents to the bribery of domestic and foreign government officials, such as mechanisms to ensure that publicly held companies and other types of associations maintain books and records that reflect the acquisition and disposition of assets and enable officers to detect corrupt acts.

Participation by civilians and nongovernment organizations in efforts to prevent corruption

The study of further preventive measures that take into account the relationship between equitable compensation and probity in public service.

1.7 ONGOING MAJOR PROGRAMS TO ADDRESS GOVERNANCE IN SECTORS RELEVANT TO FORESTRY, INCLUDING THOSE SPONSORED BY GOVERNMENT AND OTHER STAKEHOLDERS

Over the past decade the GFC has been the recipient of technical and institutional support from a number of international donors and agencies including DFID, FAO, ITTO, and WWF. Some of the major achievements during the period of this support, relevant to legal infrastructure and compliance, have been the development of the logging tracking system the development of a new draft Forests Act, the development of the national forest policy, training and capacity building in participatory and community forestry, development of the Code of Practice for Timber Harvesting, the national initiative for forest certification and the up-coming development of a legal verification system.

Other sectors involved in the custody of the land and natural resources have also received considerable support during the same period. The key sector agencies involved in natural resource management—the GFC, the Guyana Geology and Mines Commission and the Guyana Lands and Surveys Commission—are working on a long-term collaboration to develop a national land use plan for Guyana. In the short-term, the agencies are reaching an understanding and accord on land management particularly where resources overlap and exploitation can cause intersectoral conflicts (such as gold-mining and forestry).
2.1 DEFINITIONS OF ILLEGAL LOGGING

2.1.1 Preamble

Many definitions of illegal logging have been proposed over recent years by organizations (for example, World Bank, ITTO, FAO, CIFOR, WWF, FERN, Confederation of European Paper Industries) and individuals (for example, Brack & Hayman, Smith). While there are variations in content and detail, most contain two common elements: (i) a statement that illegal logging is that which is done in violation of (relevant) national laws and (ii) that illegal logging is just one sub-set of illegal activities within the sector that include illegality in acquisition of permits, transport, processing, trade and payment of taxes, royalties and so forth.

2.1.2 Guyana Forestry Commission

Guyana does not have a clearly defined definition or policy identifying what is illegal logging. However, being a signatory to the International Tropical Timber Agreement, it has de facto adopted ITTO’s definition. The International Tropical Timber Organization defines Illegal Logging “as the removal, transportation, processing, buying or selling of wood in a manner that is against the provision of relevant laws of the particular country,” in this case Guyana.

Since Sustainable Forest Management is at the core of Guyana’s forest policies and plans, the supporting rules, regulations, procedures, and laws must be applied to ensure conformity and compliance with norms for the proper conduct of the forest sector. Once logging activities are undertaken in accordance with these national forest laws, the activities are considered legal.

2.2 COMPATIBILITY OF THE NATIONAL DEFINITION WITH THE WORLD BANK INDICATIVE LIST OF ILLEGAL LOGGING PRACTICES

The de facto definition of legality adopted by GFC includes those elements in the World Bank indicative list as follows:

- Outside a concession area—is considered illegal without authorization from the responsible agency (GFC) or Minister responsible—Forest Act.

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1. See Annex 2 for some detailed examples.
In excess of quota—based on the issuance of a quotas system for all concessionaires annually through log tags (log tracking system) to ensure sustainability of the resource.

In a protected area—Once the area is fully protected and designated and gazette, it would be illegal.

In indigenous territories—only if the harvesting and removal of forest produce was done with the community’s (usually a council) full approval.

Without appropriate permits—removal permits are required listing the species and volume of forest produce. Failure to comply will lead to impounding of produce.

Without complying with bidding regulations—applications for forest concessions must follow the proper transparent procedures.

Without submission of required management plans—GFC has the right to refuse renewal of a license with out the submission of management plan for TSA and WCL. SFPs are exempt from this requirement.

In prohibited areas such as steep slopes, river banks, and water catchments—Guidelines for harvesting which includes these regulations as stated above are included in the code of Practice for Timber Harvesting which is a mandatory document for concessionaires to follow.

Protected species (as defined by CITES or other international law)—must be adhered to, though no tree species are currently protected by CITES.

With duplicate felling licenses—falsification of documents.

Using girdling or ring-barking to kill trees so they can be logged legally—not applicable since final volume would be restricted by quota issued.

That contracts with local entrepreneurs to buy logs from protected areas.

That removes under/over sized trees from public forests—restrictions within Code of Practice.

That reports high volumes extracted from forest concessions to mask that part of the volume is from nonauthorized areas outside of the concession boundaries—this would be in violation of the tagging system and licensees’ quotas.

That uses bribes to obtain logging concessions—addressed in the Forest Act.

That uses deceptive transfer pricing and other illegal accounting practices to distort prices, volumes, cash flows, and debt service levels—this would be covered by Finance Act.

That engages in the illegal transport and trade of timber or the smuggling of timber that is processed without the required licenses and that is not in compliance with environmental, social and labor laws—covered by quotas and management plans and the Code of Practice.

2.3 TYPES OF ILLEGAL LOGGING

To expand on definitions of illegal logging many authors have sought to provide examples of the types of activity that are being undertaken in any given context. A useful synopsis is given by Brack who categories the various aspects of illegal timber trade activities as:

- illegal logging
- timber smuggling
- misclassification
- transfer pricing
- illegal processing
- grand corruption
- petty corruption

In Guyana the nature of illegal activities that occur in the forestry sector can be surmised from detection of such activities and from the anecdotal evidence of those involved in the sector (in production, processing, trade, and regulation). From such evidence typical illegal activities occurring in Guyana in contravention of laws, regulations, and procedures are:

- Poaching from other concessions, nonallocated state forest, private property or reserves upon which the persons do not have logging rights
- Encroachment and logging on neighboring concessions—either knowingly or not
- Smuggling produce past forest stations (thereby avoiding declaration and royalty payments)
- False declarations—for example, passing off (“also known as laundering” or “legalizing”)

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produce as originating from private lands with falsely obtained removal permits

- Misuse of tags (for example, purchasing tags from another concession holder; wrongly locating stump tags)
- Under-declaring volume of loads and falsely declaring species
- Logging restricted species
- Operating or processing without appropriate licenses (for example, chainsaw license, sawmill license)
- Logging in contravention of the Code of Practice

Unofficial records of detection of illegal activities indicate that, across the gamut of illegal activities, noncompliance is perpetrated by both small and large operators and by operators along the whole supply chain. Unfortunately, these records are not presently kept in such a way that meaningful analysis is possible, though the regulatory agency is making efforts to improve his situation.

Anecdotal evidence suggest that there is not large-scale commercial illegal logging in Guyana and that, while clear generalization is difficult, the larger concessionaires are not knowingly and systematically engaged in illegal logging activities. On the other hand, there are reports of small-scale commercial illegal logging which in certain areas may be quite widespread.

The export of logs in Guyana is allowed though there are export restrictions on certain species (currently crabwood, and locust). The larger concession holders (TSAs) have the capacity to extract and transport logs though the majority of smaller operators (mainly SFP holders) do not have that option and their modus operandi is to fell and rip at stump thereafter removing the boards by tractor or even by hand. Such is the value of certain species that for some chainsaw loggers the financial incentive exists, coupled in many cases with few or no options for alternative sources of income, to log high value species on land to which they have no legal logging rights. In some cases, illegal loggers do not have legal access to forest land; in some others the land on which they have permission to log has been depleted of high value species.

Illegally logged chainsaw wood is converted at stump and an attempt is made to either smuggle the boards past forest monitoring stations or to declare the produce as legal with false tags and permits. There are no hard data, but it seems likely that a certain proportion of the national production of high-value species in particular is from illegal logging.

Chainsaw logging also has a wider significance and one which is recently being recognized in Guyana by international and national agencies and a broad range of stakeholders. There appears to have been a steady rise in the number of chainsaw operators involved in logging and ripping in recent years (which is supported by unpublished chainsaw sales figures).

In part because of the challenges involved in regulating this disparate and relatively mobile subsector, it is often expressed in certain quarters that chainsaw loggers are largely responsible for any illegal activities that occur, or that the majority of chainsaw loggers are operating at least part of the time illegally. As the recent discussions indicate, however, these general statements are probably not justified and are certainly an oversimplification. The issues of the chainsaw-logging subsector are closely tied with questions of logging economics, with land and resource accessibility, with appropriate processing technologies and with rural livelihoods.

Lately, Guyana has witnessed an increase in the phenomenon of targeted species-specific logging. As is common for certain species such as mahogany in many ACTO countries, the high price on the world market of one or two species, coupled with a strong local demand, is driving increased logging of particular species. In Guyana purpleheart is currently the most valuable species (US$600/m$^3$ + sawn lumber delivered Georgetown), though greenheart and locust also fetch high prices. For example, DFID-funded chainsaw logging study: Guyana. 2006. DFID/FAO workshop on chainsaw logging held in Georgetown in May 2006.

### 2.4 VOLUME OF ILLEGAL LOGGING

Illegal logging can go recorded or unrecorded. Unrecorded logging encompasses wood that passes...
through the entire system without being detected at al or wood that starts as illegal but then becomes “legalized” (strictly following Richards et al.)7 by, for example, carrying false tags in which case it appears on production records as legal. It is widely recognized that unrecorded illegal wood is very difficult to quantify since under normal circumstances it is unknown. Several attempts have been made in other countries to try and estimate the volume of otherwise unrecorded illegal wood. These methods encompass combinations of targeted case studies, aerial estimates of illegal logging, comparison of consumption data with production data and comparison of production data with expected forest yields.8

Unfortunately at this time none of these methods is truly appropriate for the situation in Guyana due to an absence of primary research, lack of collateral data and relatively unproductive forests. Specifically: there are no reliable domestic wood consumption figures available (note that those appearing in the ITTO’s annual reports are simply declared production minus export volumes); harvesting is highly selective and cannot be meaningfully estimated by an area proxy, even if there were records of the geographical extent of illegal logging; average volume production across the largest concession types is estimated to be as low as one-quarter9 of the allowable cut of 20 m³/ha (over 60 years)—and even at this conservative level Guyana’s forests actually yield less than a half their productive capacity; the few PSPs that exist in Guyana do offer a future potential means for estimating illegal logging as was done in Slovenia, but they are currently not numerous enough and are not regularly re-measured or maintained.

Recorded illegal logging is in theory easier to quantify though there are currently in Guyana no official long-term records maintained of illegal logging or legal noncompliance within the forestry sector.10 Nevertheless, a rough calculation11 based on GFC reports of detection of noncompliance during the first 6 months of 2006 indicates that during that period there were around 100 detentions of unlicensed and unpermitted lumber (that is, with improper or no tags and/or an invalid removal permit). An estimate of the lumber volume those detentions represented revealed a figure representing around 3.5 percent of estimated total legal chainsaw lumber production for those 6 months (based on equivalent figures from 2005).

ITTO in their annual review and assessment of the world timber situation of 2004 reported that during the first half of 2003 GFC had cause to seize 86 loads of timber. Violations ranged from traveling without (or with expired) documents to cutting under-sized logs, sourcing logs from outside concessions, harvesting protected species and false declaration of harvest volume. It was reported that in the previous year 130 shipments were detained. Unfortunately the report in the next year’s ITTO report was minimal for Guyana and did not include detention figures. Nevertheless, in terms of numbers of detentions, from 2003–06, there appears to be an upward trend.

Data are available for certain individual species and if the example of purple heart is taken there appears to be some discrepancy between declared production and declared export volumes. According to official GFC figures, for the period January to June 2006 the total production of purpleheart logs was 14,682 m³, whereas the records for export of logs during the same period indicate 16,105 m³. This could suggest that there was some export of illegal logs though it is possible that some logs recorded as exported in 2006 were produced in 2005 or that the discrepancy is due to different means of recording log volume (according to the

10. The Forest Monitoring Division of the GFC has recently started developing a database of detection of illegal activities including seizures, nature of noncompliance and legal action. The GFC has indicated its receptivity to reporting of nationally available data in an eventual international format.
11. Accurate calculations are not currently possible during the developmental stage of the database. By the end of 2006 more accurate and reliable figures should be available.
GFC, production is recorded by Hoppus volume but export logs are recorded as true volume—which is approximately 27 percent more).

If the data for lumber are scrutinized the discrepancy is larger. The production of purple heart chainsaw lumber recorded during the period January to June 2006 was 1,277 m³ whereas the records for purpleheart lumber exported during the same period indicate that 5,015 m³ left the country. In the apparent absence of any logs contributing to purpleheart lumber exports (the data indicate more were exported than remained to be processed in Guyana) all of the lumber exported would be expected to have come from chainsaw lumber. While again there may be a time-lag factor, and some unrecorded production from Amerindian reservations, the figures do tend to support the anecdotal reports of illegal logging (in this case at least by nondeclaration of production) of the relatively high value purpleheart in particular.

In the absence of hard data on the total volume of illegal logging occurring in Guyana, or a satisfactory method of calculating reliable estimates, the informed opinion of a sample of those working in various aspects of the sector was sought. The majority of those questioned opined that compared to many other countries the volume of illegal wood being sourced, transported and/or sold illegally in Guyana is rather low. Most persons put the figure at less than 15 percent though there were a couple of higher estimates. The regulatory agency put at less than 5 percent the volume of illegal wood that goes undetected.

It is not possible to provide a quantitative assessment of other illegal activities that may be occurring in the forest sector which are not covered under illegal logging (for example, corruption, evasion of taxes and fees, noncompliance with labor laws etc). The level of corruption in the sector depends on who is asked, though the general opinion is that some petty corruption does exist within the sector but that it is not widespread or endemic. The level of compliance with payments of taxes and fees that are due is generally high and has improved markedly over the past few years with the efforts of the GFC to enforce payment of outstanding acreage fees and royalties. Compliance with labor laws is felt to be rather good especially as workers tend to be well represented by unions. However, it is likely that for smaller operations compliance may be poorer particularly for payment of necessary national insurance by employers.

2.5 BORDER AND TRADE ISSUES

There have been occasional rumors in the forestry sector that from time to time logs and lumber have come into Guyana illegally, particularly from neighboring Suriname. This is thought to be due to the rather porous (river) border between the two countries and the relatively high rates of royalty and export tax imposed by the Suriname authorities.

However, the GFC have recently been in dialogue with the customs officials at the border and it was concluded that the import of contraband timber was not at any significant level and did not warrant any special initiatives or efforts, though GFC does work with its counterpart in Suriname (the SBB) in monitoring the situation.

In the absence of hard data, an assessment based on expert opinion suggests that the amount of logs or roundwood exported illegally is minimal. This is due in part to the strict licensing requirements in place and monitoring by both the customs authority and the GFC. However, though there is no hard evidence in support, it is felt by some that a quantity of illegal lumber is exported from the country.

2.6 IMPACT ON GOVERNMENT FINANCES

In 2005 approximately US$1 million was transferred to the government budget directly from the forestry sector from acreage fees, royalties, export levy and other permits. It is estimated by the GFC that if all revenues due were paid the timber sales (public and private) and compare this to the amount that should have been transferred, the difference would only be a few percentage points.

2.7 IMPACT ON INDIGENOUS COMMUNITIES, RURAL POOR, AND THE ENVIRONMENT

2.7.1 Amerindians and logging

It has been reported that the Amerindian communities as a whole are the most economically disad-
vantaged among the ethnic groups in Guyana. The majority of them rely on subsistence fishing, farming, and hunting for their living. Amerindian involvement in the forestry sector is limited largely to their participation as contract loggers or work on their own reservations. A few Amerindian individuals, however, own chainsaw timber business.

Their participation in the cash economy sometimes involves full but general intermittent employment in the mining and forestry sector which can from time to time include poverty-driven illegal logging. It has been reported that the majority of Amerindian people who participate in the sector do so intermittently particularly during the farming off-season.

Work accommodation in the field is usually basic with temporary tarpaulin tents erected. Serious diseases such as malaria can be common in certain areas. In some cases, the subcontractor provides food and other goods which are supplied on credit to other workers with a high marked up price. Without formal or written contracts, it is easier for Amerindian workers in remote locations to be underpaid, while being overcharged for services provided to them by the subcontractor in these logging camps.

There are usually no written or formal contracts covering the terms and conditions of their employment. This is compounded by the high unemployment and literacy levels, which make them more susceptible to exploitation. The national insurance scheme provides industrial benefits, maternity benefits, and sickness benefits. Contributions are usually not paid for Amerindian workers. In some instances it has been reported instances the contractor deducts this money but does not submit to NIS; as a result employees will be unable to claim for these benefits.

As custodians of large areas of forest land indigenous communities are inevitably affected by illegal practices in the forestry sector. Lacking appropriate resources, many communities are unable to utilize their own forest timber products or monitor them for encroachment and poaching by third parties. Even where arrangements have apparently been made with outsiders to log on their lands these agreements may not have been reached with the prior, free, and informed consent of the whole village. Furthermore, there are reports of inequitable distribution among community members of the royalties arising from logging agreements. In some cases it is reported that tags and removal permits issued to communities have been used by others to disguise the origin of illegally logged wood.

Communities without legal title to land are in a particularly parlous condition as both legal (in the strict sense) and illegal activities can be occurring on lands traditionally or customarily used by them.

Many remote communities suffer from a lack of knowledge about the correct procedures and regulations and it is difficult for them to come to the regulatory agency’s head office to acquire appropriate information.

2.7.2 Other rural communities

Apart from Amerindian communities there are several other substantial settlements within Guyana’s hinterland. Many of these mixed communities were established around mining enterprises (bauxite, manganese, gold, and diamonds) and for periods when the mines were productive the communities flourished. However, at various times and for various reasons many of the core mining activities have disappeared leaving a significant number of persons without access to livelihoods. In many cases, these communities resorted to chainsaw logging as a means of basic income-generation, though without formal access to state forest land, through the permitting process this logging activity was illegal.

In a simplistic sense illegal logging was beneficial to these communities. However, as illegal activities became more widespread the regulatory agency under its mandate sought to address the issue. Recognizing the key social and economic role that logging was playing it followed an approach of regularization through the formation of community based forestry groups which were issues legal permits to operate on state forest land.

Though these initiatives have met with some success many of the community logging groups are faced with a situation in which the lands allocated to them tend to be relatively poorly stocked in the more valuable species and of insufficient size to sustain the number of livelihoods that are needed.
2.7.3 Conflicts resulting from forest resources theft or encroachment within Amerindian reservations

Amerindian lands in Guyana can be divided for convenience into those that have legal title and those that are claimed by communities based on tradition occupation and/or use. In the first case, no logging activities can legally take place without the consent of the village council. Some communities are actively involved in logging themselves and produce chainsaw lumber for the local market and dealers who have export markets for dressed and/or profiles chainsaw lumber.

Other communities who have forest resources have entered into contracts with individuals or even large companies to log their reservation areas. My of the arrangements have ended up not favoring the communities for a variety of reasons and often include nonpayment or partial payment, over-exploitation of the resource, restricted opportunities for community members to benefit directly (for example, from employment). It is not possible to generalize but it also possible that a number of these contracts are not proper legal documents.

Lands that are claimed by communities but over which they have no legal title can produce different conflicts. Such lands may be held by bona fide concessionaires who have a right to log them despite the land being recognized by the community as part of its traditional area. On the other hand, individuals may resort to logging in such areas if they feel that they have a right to do so, even though it is illegal. This is especially the case where the community’s titled lands have been depleted of valuable tree species either by their own activities or historic encroachment and poaching.

2.7.4 Potential environmental impacts

Illegal logging, at least the unregulated logging outside legally permitted areas, is mainly focused on a few high value species only. Of these only red cedar (which is not widespread) and greenheart are IUCN red-listed species. Purpleheart is probably most affected by poaching though it has no internationally recognized conservation status. There have been no studies done in Guyana specifically on this species, though it is possible that in certain localities it may be becoming rare and possibly threatened.

Illegal logging in the few gazetted protected areas in Guyana is not generally considered a major threat due to their relative remoteness (though distance becomes less important for high value species that are removed as lumber). Iwokrama is potentially under threat as it has reasonably good river and road access, though it does have its own rangers who patrol accessible areas along its boundaries. An exception is the forest reserve area known as Morabali which is very accessible to some hinterland communities and has over the past years especially—coinciding with the decline in the mining industry in the area—suffered quite severely from illegal logging.

It has been reported elsewhere that illegal logging can destroy the habitats of endangered species and impair the ability of the land to absorb carbon dioxide emissions.12 In addition, destruction of forest cover can have knock-on effects that may result in flash floods and landslides for example. The situation Guyana, however, mitigates against such destructive effects since even where illegal logging is occurring it is usually highly selective and relatively undamaging to the forest ecosystem.

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The impacts of illegal logging on the legal operations are reported to be minimal. There are no reports of marked difference in price to the retailer or consumer between legal and illegal lumber (there is no record, for example, of a lumberyard having two price levels: one for lumber with the permit and another for lumber without). It is likely that most illegal lumber bought by retailers and consumers is done so unwittingly (though it is probable that proper checks are not always made). Chainsawn lumber, legal and illegal, is certainly cheaper on the local market than conventionally sawn lumber.

Large operators are not greatly affected directly by illegal lumber production—though in accessible areas away from their active logging areas poaching reportedly does occur, particularly close to roads and rivers, from both large and small operators (either intentionally or otherwise).
4.1 POLICY FRAMEWORK

The relevant policy framework for the forestry sector includes the National Forest Policy, the New Draft Forest Act, the National Forest Plan, and the relevant chapter(s) of the National Development Strategy.

4.1.1 National Forest Policy

A new National Forest Policy was approved by the Government in 1997. This is the first official policy statement since 1953 and was developed over a period of two years through a process that involved extensive consultation with interest groups. The new policy responds to significant changes in Guyana’s economic, social, and political environment over the last fifty years and addresses the country’s national and global responsibility for the sustainable management of the forests. The policy recognizes the vital role of the forests in maintaining the earth’s climate and ecosystems and that they are an increasingly important source of income and wealth for national development. Forest laws are being reviewed and updated to support the implementation of the new policy.

Its objectives are to:

- Promote the sustainable and efficient forest activities which utilize the broad range of forest resources and contribute to national development while allowing fair returns to local and foreign entrepreneurs and investors.
- Achieve improved sustainable forest resources yield while ensuring the conservation of ecosystems, biodiversity, and the environment.
- Ensure water protection and rehabilitation: prevent and arrest the erosion of soils and the degradation of forests, grazing lands, soil, and water; promote natural regeneration and reforestation and protect the forest against fire, pest, and other hazards.

A subsection of the national forest policy addresses the forest industry:

- The fundamental objective shall be to develop a financially and economically viable forest industry.
- The number and types of forest based industries established shall be consistent with the capacity of the nation’s forest for sustainable management.

4.1.2 The National Forest Plan

The National Forest Plan was produced in 2001 by the GFC after a period of consultation with stakeholders in the sector. The Plan provides a framework, and identifies programs and activities that must be accomplished, to ensure implementation.
of the policy and compliance with the law. Recognizing the broad purview of modern forestry, it stated clear objectives, with associated activities, for national planning, forest resource management, forest industry, research and information, education and training and social development.

### 4.1.3 National Development Strategy

The National Development Strategy speaks to many aspects of the forestry sector that have relevance to its environmental performance. On land-use, it states that the nation’s forest policy will be an integral part of a comprehensive series of land use plans. These plans will recognize the conflicting but legitimate interests of different stakeholders and promote a process of developing a consensus on land use. Amerindian Councils and private owners with more than 100 ha of forest land will be encouraged to develop and implement sustainable management plans for forests on their lands, with the assistance of the GFC. All resources of the forests will be managed in a sustainable manner for the optimization of their social, economic, and environmental benefits. The ecological and economic impact of utilizing timber or nontimber forest products will assessed by the GFC in conjunction with the EPA and their extraction regulated as appropriate. Management or operational plans will be required for the harvesting of all nontimber resources of the forests before a license or permit is issued.

### 4.2 POLICIES RELATED TO ILLEGAL LOGGING ACTIVITIES AND THEIR IMPLEMENTATION

#### 4.2.1 Log tracking system

The main explicit policy relating to illegal logging is the log tracking system. The system has been functional since 2000 and is the means by which GFC controls the level of harvesting and verifies the geographical origin of logs. The system also includes the use of a production register which is issued to all concessionaires but remains the property of GFC. The production register is one means by which GFC verifies the actual logging volume that is allocated to the concessionaires and transcribed on the removal permits.

However, the log tracking system has historically never undergone a third party audit and is still plagued by inaccurate documentation on the production register and the removal permits. As a result forest products are not easily tracked, especially when there is deliberate falsification of information by individuals trying to escape payment of royalties to the state. The tags are also inappropriately utilized since they are not being applied at the point of extraction, but rather at a later point during processing.

The GFC has been holding meetings with concessionaires to improve on the documentation aspect and correct use of the log tags to correct short comings of the system. Third party verification of the tracking system is also currently being undertaken by Proforest of the UK.

#### 4.2.2 Other policies

Other policies and instruments that address illegal logging are the requirements for management plans; the Code of Practice for Forest Harvesting; the regularization of chainsaw loggers and development of community forest groups; the facilitation of Amerindian groups to access SFPs; new draft forest law (currently with the Attorney General’s chambers); audit of the log-tracking system and the development of a legal verification scheme; support for FSC certification; outreach and training in the sector; development of a Code of Practice for lumberyards.

#### 4.2.3 Internal armed or significant social conflicts

There are no internal armed conflicts in Guyana though violent gun crime has for recent years been a common occurrence. Social conflicts between the two main ethnic groups tend to worsen around the national election period.

### 4.3 LEGAL FRAMEWORK

#### 4.3.1 Forests Act

Until repealed by passage of the “new” Forest Act which is in draft, current law relating to forests comprises of the following Acts namely: Forests
The main piece of legislation dealing with forestry is the Forests Act which was enacted in 1953 (Chapter 67.01 of the Laws of Guyana). This Act provided essentially for the following:

- Substantive powers for designating State forests
- The award of forestry concessions
- The protection of State forests
- The enforcement of law relating to State forests
- Making of regulations concerning State forests

In keeping with its main objectives listed above, the Forests Act also sought to determine questions relating to:

- Sale of forest produce
- Suspension and cancellation of leases
- Ownership of forest produce
- Offenses, including:
  - Trespass
  - Unlawful possession of forest produce
  - Counterfeiting and similar Offenses

The Act also clarifies the position on:

- Power of the court to confiscate forest produce
- Penalties for erection of unauthorized building and so forth
- Power to search for forest produce
- Power to seize and detain
- Powers of forest officers
- Protection of rights of Amerindian Communities

Forest regulations made under the Act deal mainly with:

- Concessions granted, such as SFPs, WCLs, and TSAs
- Royalties and fees
- Measurement of logs for royalties
- Felling limits
- Protected species
- Conveyance of forest produce
- Submission of information to support application for concessions
- The regulation of activities of sawmillers and timber dealers

In 1979, the Guyana Forestry Commission Act was enacted to place responsibility for implementation and enforcement in the Guyana Forestry Commission. The powers of the Minister responsible for forests (except the power to make regulations and hear appeals) were turned over to the Guyana Natural Resources Agency. This Agency was subsequently abolished. The power of the President to award land grants and leases of state land within state forests, subject to certain regulations, remains in the Land Development Act.

There was, however, some confusion as to whether this entity (GFC) was autonomous, or not, of the Government. Issues abounded as to the parameters of the Minister, the Board members of the Commission, and the Management. These issues are being resolved in favor of the autonomy of the Commission, which arguably was the whole intent and purpose of the statute which created it. The powers of the Minister responsible for forests have, thus, largely been transferred to the Commission, except where specifically it is stated in the Act or any other related Act that the Minister is so empowered.

Additionally, under the Mining Act of 1989, the Guyana Geology and Mines Commission has the power to grant prospecting permits and licenses on private, Government and State lands in Guyana and to issue mining permits and licenses for the extraction of minerals. There can thus be a concurrent jurisdiction on the part of the GFC and the GGMC for the same piece of land when the land has forest on it and minerals beneath.

Further, Guyana has undertaken several obligations in keeping with International agreements to which it is a party. These treaties are concerned with forest management and include the following:

- Convention for the Protection of the World Cultural and National Heritage 1972
The new Forests Act has its origin in the draft Act of 1998 which was born out of a report on Forestry Law and Policy prepared in 1995 and supported by British Aid. After an eight year period of gestation, the draft law is scheduled to soon become law and will constitute the principal legislation dealing with forests.

The new Forests Act proclaims that its purpose is to: “consolidate and amend the law relating to forests, to provide for the protection and rational use of the forest resources of Guyana, the regulation of forest industries, the marketing and export of forest produce and matters incidental to or connected therewith.” This expands the purpose of the “old” Act by recognizing the need for protection and rational use while restating the regulatory role and function of the State.

The purpose of the new Act are further described and set out in more details as follows:

- Conservation of forests including:
  - Conservation of biological diversity, soil, and water resources
  - Protection of specific trees and forest plant.
  - Protection against degradation, fires, pests and diseases
- Participation of Amerindians, local communities, NGOs, commercial users and others in developing and implementing forest policy;
- Sustainable use of forest resources in keeping with national policy and developmental objectives;
- Comprehensive regulation of the multiple and complementary functions and uses including traditional uses;
- Promotion, regulation of primary conversion activities, and quality control of value added forest product; and,
- Discharge Guyana’s responsibility in ensuring that its forest activities do not damage the environment of other states or extended areas.

4.3.2 Regulatory disincentives and incentives to legalize forestry operations

The policy and regulatory frameworks for the forest sector in Guyana are generally considered to be relatively good, though there is an opportunity to revisit the National Forest Policy Statement 10 years after its approval by government. The current legal framework is operational but clearly outdated, being based primarily on an Act of 1953. The draft new forest act needs to be enacted as soon as possible.

While the frameworks are in place, implementation of the monitoring and control systems in particular are often not fully adequate and effective in eliminating illegal practices. The main reasons for this are the human, physical and financial resource constraints though the current review and audit of the system being undertaken by a third party will no doubt identify some weaknesses in the system which will require attention.

Incentives and disincentives pertain at the level of the individual operators. The primary incentive to undertake illegal logging is undoubtedly one of financial gain, put into sharp contrast against the backdrop of the rural poverty prevalent in Guyana. The greater the returns from logging high values species, at relatively low cost by chainsaw ripping, the greater the incentive. The bigger picture is one of legal access to the resource. Adequate legal and long-term access to the resource, including higher value species, would act as a disincentive to illegal operation.

Notwithstanding the driving force of poverty, the disincentive of getting detected and arrested seems to be too weak. In the absence of official figures it is not possible to say with certainty, but it is likely that the chances of actually getting caught in the act of logging illegally are rather small. There is a greater chance of getting apprehended removing lumber—but in that case the fines seem to in effect remove only the profit for the load and not more (at least for first time Offenses). It seems to be the case that repeat offenders are common.

A disincentive that could perhaps be developed, though it would be quite remote from many of those engaged in illegal logging, is that of the image of Guyana’s forest sector in this age of international scrutiny of legality and verification of timber origins.
4.4 SUMMARY OF THE MAIN ISSUES AND CHALLENGES FROM OTHER SECTORS THAT AFFECT LOGGING COMPANY OPERATIONS

The institutional framework for forestry in Guyana is made complex by the existence of other bodies whose functions overlap with those of GFC. Particular issues relate to wildlife under the control of the department of wildlife, especially as wildlife trade is an important activity often carried out within the state forest and which many lead to conflict with concession holders. The environmental protection agency also has a broad mandate on environmental issues, including the approval of environmental management plans and environmental impact assessment (EIAs) for forest concession holders. This has lead to dissatisfaction as the industry has to provide plans to satisfy two agencies for what is a single set of activities.

Mining is controlled by the Guyana Geology and Mines Commission, with mining being a major cause of forest damage in Guyana and is also responsible for social problems. There is usually dual issuance on state forest for both the extraction of forest produce and sub-surface rights to different individuals.

There is no coordinated land-use policy in Guyana. Although over the years, several attempts have been made to devise comprehensive land capacity classifications for the country, and to utilize these as the basis for land zoning and land allocation, the process is far from complete. As a result, land-use throughout the country is haphazard, unplanned, and wasteful.

The problems that are inherent in the absence of a land-use policy and land-use plans are compounded by the complexity of the land tenure system. Publicly owned lands that comprise State Lands and Government Lands. State Lands, formerly called Crown Lands, are controlled by the Commissioner of Lands and Surveys. However, the Guyana Forestry Commission, the Guyana Geology and Mines Commission, and the Lands and Surveys Department administer land that is utilized for forestry, mining, and agriculture, respectively. Each of these three Government agencies may issue titles for different purposes over the same land space.

Government lands are those purchased by, or granted to, the Government to be developed for general revenues, such as hospitals, schools, government administrative buildings, and land development schemes. State and Government Lands are approved by the Ministry of Agriculture, while under the existing legislative framework Cabinet must approve the sale of State and Government Lands.

The large number of agencies and sub-agencies that are concerned with the allocation of land and the collection of rents and fees from the plethora of land types has led to accusations of unfairness, bribery, and corruption. What is certain is that this high number of government organizations lead to inefficiencies.2

4.5 ACTIVITIES FOR LOGGING OPERATIONS, ESTIMATED COSTS, OR PRODUCTION AND COMPLIANCE, AND PROCEDURES RELATED TO TIMBER SALES AND CONCESSION ALLOCATION

A flow chart of material through a typical large-scale TSA operation is given in Figure 1. Costs, of course vary, but variable costs of producing and delivering 1 m$^3$ of dressed lumber at Port Georgetown from a concession 300km away are in the region of US$225.

The cash flow through the logging, extraction, and retail system for a community logging association operating on its own SFP is given in Figure 2. Variable costs of producing and delivering 1 m$^3$ of rough sawn lumber at a Georgetown lumberyard from a concession 80km away total about US$135.

The cost of full compliance with the law and regulations is estimated at less than 5 percent of total costs of logging.

It was generally reported that the procedures related to the sale of timber were adequate and transparent, though it was conceded that once illegal rough sawn lumber is dressed and in the system it is difficult to detect.

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FIGURE 1
Flowchart of Material through a Typical Large-Scale TSA Operation
FIGURE 2
The Cash Flow through the Logging, Extraction, and Retail System for a Community Logging Association Operating on Its Own SFP
Allocation of new concessions is effected after standard procedures that are enshrined in the law (for State Forest Exploratory Permits) or adopted as best practice by GFC (for SFPs). In both cases it is a competitive process following public advertisement of available areas. Applications are screened by a GFC technical committee and, for SFPs, by a subcommittee of the GFC Board of Directors. The GFC Board gives final approval for allocation of SFPs while the Cabinet of the incumbent Government needs to approve allocation of SFEPs.

4.6 MONITORING AND CONTROL SYSTEM

4.6.1 Concessions, permits, and tags

Logging on State Forest land should only occur where a forestry concession has been issued. All associated operations associated with logging—including felling, log removal, road construction, and so forth—should be carried out in accordance with the GFC’s Code of Practice for Timber Harvesting. In addition TSAs and WCLs should have an approved 5-year forest management plan and an annual plan of operations.

SFP concessions are not subject to management plans by the owners. Logging is regulated by the identification of an annual volume quota determined by the size and integrity of the concession and the forest type.

Logging on private lands—such as agricultural land and Amerindian reservations—until recently has not come under the regulation of the GFC, though the recently passed Amerindian Act (April 2006) does give the GFC greater authority to regulate logging activities on reservations.

All trees felled—including those on private lands—should be identified with a GFC tag and the corresponding tag affixed to the stump. Tags are issued to SFP concessions based on the quota identified. Once used up further tags can be requested once a case is made that the quota was insufficient or the mean log size is less than that used to determine the original number of tags (3 m³/tree). Tags are issued to TSAs and WCLs based on the Annual Allowable Cut determined in the forest plans. Tags, marked private and distinguished from State Forest tags by a different color are issued on request to land owners and Amerindian councils. Tags are not transferable once issued.

All log tag numbers are when reported on the removal permits are linked in a timely manner with the name of the operator to whom these were issued. Whenever a tag issued to Concession X and is utilized by Concession Y, the GFC’s system points out the GFC’s keeps record of all tags issued, to whom and when. Upon utilization of tag as indicated by the removal permit, these are entered as utilized in the system and cannot be reused. GFC’s tags have specific issued dates integrated into the records. Upon expiry of the valid dates, the system detects these and the concessionaire is contacted.

All timber produce leaving the stump which is destined for sale, whether from State or private land, must be accompanied by a removal permit stating the tag numbers, species, sizes and so forth. This permit should accompany the vehicle at all times which in transit and be surrendered on request to a GFC officer.

Royalties are payable, within a specified period after removal, on the volume of logs (for TSAs) or lumber (SFPs) that is transported according to the removal permits. Acreage fees are fixed rate annual fees based on the area of individual concessions.

In addition to concession permits, all those operating a chainsaw on their concession are required to obtain an annual “saw-pit” license; sawmills (including portable sawmills) are required also to be licensed as are all lumberyards engaged in retailing of timber products. In addition, lumberyards should keep records of receipts and sales of lumber and are subject to regular monitoring by the GFC.

4.6.2 Law enforcement

The GFC is solely responsible agency for forest law enforcement (though from time to time the assistance of the Guyana Police Force may be enlisted for particular incidences or operations). The Environmental Protection Act of 1996 empowers the Environmental Protection Agency with requiring ESIAs for any new large-scale forest developments and with monitoring compliance with conditions laid out in environmental permits (which in practice is does in close collaboration with the GFC). Ministries of Labor and Finance are directly responsible for enforcing compliance with labor/OHS and financial laws respectively.
The GFC employs around 70 persons in its Forest Monitoring Division located across a network on 22 forest stations located around the country.

Methods of law enforcement include routine checks of permits as any produce passes a forest station, specific field visits based on tip-offs (normally from neighboring concessionaires reporting encroachment); regular night/day patrols along main road arteries and in-forest; bi-annual on-site legal compliance and environmental monitoring of all concessions; weekly monitoring of lumberyards. In addition, GFC carries out ad hoc stump inspections in cases where the source of logs or lumber is in doubt.

The GFC believes that its tracking, monitoring and control systems are largely effective in deterring illegal logging and detecting it when it occurs. However, no matter how good a system there will be loopholes and transgressions which are not easy to eradicate especially given the size and remoteness of the forest area. In particular, there have been reports of illegal use of tags (for example, re-using or transferring) in the sector to facilitate the “laundering” of illegally sourced logs through the system.

Detection rates of all noncompliance within the forest sector are considered quite high and a figure of 95 percent has been quoted. It is likely that this figure is an average and that for certain illegalities the actual rates will be higher or lower. For example, detection of irregularities with permits or transgressions of the Code of practice may be quite high whereas detection rates of unlicensed logging may be lower.

Operational funds and resources are provided by the GFC annual budget which is financed primarily by collection of royalties and acreage fees. In general, the relative provision of monitoring staff and resources is considered sufficient by the GFC, though more resources would undoubtedly result in more effective law enforcement.

The most common penalties associated with noncompliance are detention of any equipment involved (such as chainsaws), impounding of illegal produce and a monetary fine (strictly it is a “compensatory fee” agreed by the Auditor General in lieu of court action as the later is a lengthy process and the fines stipulated in the Act of 1953 are ridiculously low in today’s economy). The compensation is based on estimated market value of the produce and ranges between 17 percent and 100 percent, depending on number of previous Offenses, in addition to outstanding royalties. After payment the produce is released; detained equipment is also released on payment of between US$250 and US$500. In rare cases, where there is dispute, the matter can be taken to the courts.

Complete records of detection by the GFC of illegality have only recently been collated and the database is still in development. However, initial internal records indicate that approximately 285 cases of noncompliance across the range were detected and monetary penalties imposed during the first 6 months of 2006. An estimated 30 percent of these may have been incidences of timber theft (i.e. unlicensed logging and un-permitted removal).

Corruption in the forest sector in Guyana is widely considered to exist but to be at a “petty” level, strictly following Brack.3

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3. Brack, D. et al. 2003. Controlling the international trade in illegally logged timber and wood products. The Royal Institute of International Affairs. Petty corruption tends to be short-term and tactical. Typically it consists of graft given to or solicited by junior officials to falsify harvest declarations, overlook petty infringements, ignore logging or laundering of logs from outside prescribed boundaries and avoid reporting restrictions.
In common with many institutions in Guyana the GFC suffers from a high turnover of staff due mainly to emigration of persons to the US and Canada (in particular). However, formal knowledge management in the GFC is currently relatively good in terms of record keeping, data management and training. GFC has a social program that involves elements of participatory forestry. However, more could be done in this regard especially in terms of outreach programs informing communities and individuals of the legal requirements and regulations. At the same time, issues surrounding illegal logging could be addressed and importance of law compliance promulgated. GFC has an excellent GIS department that also provides an efficient service to the sector. A key area where improvement is needed, and this is recognized by GFC, is in maintaining a user-friendly database of occurrence of illegal logging and noncompliance. Once set up this can be queried and results used to assist future planning. Where data are being collected by different sections of the regulatory agency, in particular, some overview follow-up work could be done to assess accuracy of data and to flag any obvious discrepancies and nonreconciliations in data.
6.1 ECONOMIC TRENDS

6.1.1 Background

The agriculture and mining sectors remain the bedrock of the Guyanese economy. About 40 percent of Guyana’s merchandise exports are made up of rice and sugar, 8 percent of unprocessed forest products, 26 percent of gold, while rum, fish products and nontraditional exports including pineapples, water melon and exotic fruits, make up the remainder.

Guyana is a net exporter of timber and timber products. Forest industry development is encouraged by the Government of Guyana in order to improve the technologies, increase employment and improve the forestry sector’s contribution to the Gross Domestic Product (GDP). Markets for timber can be found traditionally in Europe, North America and, more recently, in the Far East.

6.1.2 Sector performance

Between 1972–92, 90 percent of lumber produced was sold locally. However, timber production has increased radically since then with the proliferation of small chainsaw operators and a major increase in foreign investment since 1995 resulting in exports of timber increasing from 34,000 m$^3$ worth US$8 million in 1995 to 145,000 m$^3$ worth US$51 million in 1996. Current value of exports looks to top US$60 million in 2006.

In spite of the rise in timber harvesting, the local privately owned saw milling sector has not fared well with competition coming from chainsaw operators undercutting them on the local market, high operating costs and inadequate quality owing to old and obsolescent equipment and a lack of kiln facilities which are a constraint on the export market.

Government policy has also changed as it sees the forest as a valuable asset and aims to ensure sustainable use of these resources and to this end has strengthened the regulatory framework for example, the Environmental Protection Act and the revised Forestry Act.

Some of the key issues to be faced by the sector are summarized as follows:

- Production Issues: Locally owned companies are undercapitalized and poor state of equipment hinders production of export quality product; Recovery of lumber from logs is low (35–45 percent) and there is a high degree of wastage; Lack of skilled management and technical operators; Wide range of species grown but not available in large stands, resulting in species being widely

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1. This section draws in particular on an unpublished working paper on timber markets produced by the GFC in 2003.
spread out thereby increasing the cost of harvesting; Short leases reduce the ability to raise capital.

- Policy Issues: Lack of forest inventory to facilitate planned harvesting; Chainsaw operators not well regulated; Cutting cycle increase from 25 to 60 years; Intense competition from concessions with apparent preference for foreign owned companies.
- Economic Issues: Timber always sold at below cost locally, subsidized by exports; Selling solely on local market not viable; Low levels of added value; Timber being replaced by concrete and steel.
- Ecological Issues: Soils of Guyana are essentially alluvial soils, are acid (pH 3.6 and needs 3.5 tons of lime per acre) and quickly degenerate once trees are removed.

6.1.3 Sector development

Foreign owned companies engaged in the production of plywood are dominating the industry. However, their costs of operations are increasing and this as well as the economic crisis in South East Asia where demand has fallen will affect their profitability. Also some of the locally owned sawmills are in danger of going out of business and there appears to be few new buyers.

6.2 SECTOR COMPETITIVENESS

6.2.1 Human resource development

HRD is a priority identified by the sector and encompasses al areas of technical skills training covering saw milling techniques and maintenance of machinery and equipment. Several HRD opportunities to increase competitiveness of the forestry and wood products sector have been identified.

Although the HRD needs for the sector are numerous, with the vast resources of raw materials, improved competitiveness could provide maximum benefits to the industry and the economy by improving the quality of products, increasing productivity which in turn could make wood products competitive on the local market and save foreign exchange by reducing imports of cement and steel. On the export side, sales of wood products could increase to the regional Caribbean markets, where over the years there has been a high level of unsatisfied demand for hardwoods other than greenheart and the development of subsidiary products, for example, parquet flooring.

HRD opportunities in forestry and wood products exist in such areas as strengthening the capacity of the Forest Producers’ Association of Guyana and the Wood Products sector of the Guyana Manufacturers’ Association on improving sawmilling techniques including welding, brazing, metallurgy, sawmill types, saw sharpening and tensioning, edgers, planers/molders; training in application and maintenance of value-added machinery such as kilns; chain-saw lumber operation/directional felling, sawing techniques, recovery and safety, care and maintenance of chain saws; low impact logging techniques—directional felling, skid trail layout, machine operation, safety and environmental aspects; logging practices—scaling, grading, log preparation, chemical control of insects and fungi; and forest inventory/forest sampling, enumeration methods, data recording, mapping, data processing, reporting.

6.2.2 Competition

Many of Guyana’s forestry products face competition on the export market because of cost of production and transportation issues. It is generally believed that the cost of production is too high and this eroded both the export as well as the domestic markets. When one considers the high cost of shipping from Guyana (currently estimated at as much as US$25/m3 more than from neighboring Brazil) to North America, Europe, China, and India, this only serves to exacerbate the competitive disadvantages. It should be noted that in many cases, the shipping of relative small volumes precludes operators from enjoying the benefits of volume shipping. In addition, lesser-known species are at a marketing disadvantage since little is known about their application.

On the local market, there is an increasing trend to move away from the use of wood products in the construction industry in preference for cement and other imported building materials. The explanations for this is that it is more cost effective to use concrete, given its durability, and also the relative high cost of the local building products. The local
materials also lack quality consistency of dimensions and are prone to early deterioration if used incorrectly. Nevertheless, local producers feel that the domestic prices for wood products are still too low.

In addition, the chainsaw loggers and mobile sawmills to a lesser extent have provided intense competition to the larger establishments, since consumers are more price sensitive. This has in man instances forced the large milers to sell higher quality lumber at chainsaw lumber prices, thus reducing their profitability.

6.2.3 Imperfect competition

The Government’s program of attracting foreign investment saw the commencement of operations by two foreign owned firms in the forestry sector between 1990–92.

In an effort to attract these investors, generous incentives were provided including 5 years tax holidays, duty free concessions and other incentives. As a result, the country benefited only through the collection of royalties, acreage fees and employee income taxes, estimated at less than 2.2 percent of the export value of the logs

As a result of these incentives, many operators are of the view that they do not compete on a level playing field. There are great concerns about foreign firms competing with local producers.

6.2.4 Investment possibilities

Though a significant part of the forest resources land area has already been granted for concessions there are possibilities for State Forest Exploratory Permits which once the conditions are met can be converted to TSAs. Investors are also encouraged to participate with existing operators in activities to produce furniture, plywood and veneers, parquet, floor tiles and kiln drying and wood preservation activities. The investors may wish to enter into joint ventures or special arrangements with holders/operators of concessions in the industry.

Among the conditions set out for investors (based on the policy of the Guyana Government that the natural resources must be utilized in a sustainable manner while making a significantly greater contribution to the national economy) are:

- Limitation on log exports and emphasis on value added downstream production
- Agreement to allow effective multiple use of forested areas by different users
- Special efforts to promote income from nontimber uses including ecotourism.
- Provision to allow for portions of allocated lands to be recalled to facilitate national priorities such as protected areas
- Provision to allow for adjustments to recognize Amerindian settlements
- Undertaking to maintain strict observance of environmental norms, good forest practices, and utilization of environmentally friendly technology
- Respect for the rights of the Guyanese people and more especially the indigenous people and workers employed by the investor

6.2.5 Forestry and the WTO

It should be noted that, like fisheries, forestry is not one of the sectors covered by the WTO Agreement on Agriculture (AoA). Whether Guyana has an objective interest in having forestry included in a revised AoA is not clear but it would seem better to have multilateral disciplines that would ensure that some degree of harmonization and mutual recognition of certification schemes if only to rule out the possibility of their arbitrary use. Bringing forest certification into the WTO framework may also help to address the concerns of some environmental lobbies on the possible negative impacts of greater liberalization of trade in forest products, but there are legal difficulties in protecting particular forms of production under WTO rules (which normally look only at the product traded, not how it is produced).

6.2.6 Recent developments

The forestry sector’s importance is seen to lie in its export capacity, its quantitative role as an employer, especially in the hinterland, and its largely unseen effect on infrastructure such as roading and even upon conservation, since logged forest is largely intact, in contradistinction to the effects of other forest uses like mining and agriculture. Of course it is easy to point to flaws: there are high rates of labor turnover on concessions owing to working condi-
tions and logged forest lacks the classic diameter distribution of virgin forest with the old upper canopy dominants. Nevertheless, the sector’s status is high, and at the present moment it takes on a new role as the GFC becomes a profitable State-owned enterprise, able to fund its own operations and to pay a surplus into the Consolidated Fund.2

However, the commercial part has not, until very recently, been doing so well. Guyana has only one plywood producer, Malaysian-owned, and prices in this market have been driven very low by the effect of illegal logging in Indonesia following the lifting of the log export ban on IMF urging. Malaysian plywood exporters have been hard hit by China’s reversion from plywood to logs. Guyana now faces a situation where a certain amount of the commercial resource is locked into a subsector, plywood, whose short- and medium-term prospects are unfavorable.

There is considerable scope in the domestic market for renewing the housing stock, and sawn timber and plywood should benefit from this, but income levels and hard mortgage conditions restrain the ability of the population to acquire or improve their homes.

Guyana has an independent organization, GO-INVEST, which is designed to provide a one-stop service for potential foreign investors, and also to assist exporters, although other Government agencies also participate in the decision to allow any proposal. GO-INVEST produces a useful summary publication describing Guyana’s infrastructure and outlining potential investment opportunities. It is also equipped to assist Guyanese exporters.

The forestry sector has received some support in recent years to develop its competitiveness, notable from the Caribbean Competitiveness Program of the Canadian aid agency, the UK Department for International Development and the EU. A recent initiative that will increase competitiveness is the establishment of the Guyana Forest Products Marketing Council. Already this provides a useful service to the sector through an informative website, training, market information, and serving as a clearing-house for enquiries from overseas prospects.

A recent draft guidelines document, developed in collaboration with World Bank ENA FLEG Secretariat, has summarized common types of illegal logging worldwide and suggested potential drivers for the typical contexts. For the types of illegal logging of significance in Guyana many of the potential drivers proposed would apply including the inability of people to meet their basic needs, poverty, disputes over land tenure, inefficient legal procedures, inadequate monitoring data on timber flows and origin of timber and strong export demand for certain species.

Perhaps atypically, compared with other countries, underlying causes reside more in individual circumstances (economics, perceptions, knowledge) than in governance and legal framework as the later are widely considered to be rather well-developed in Guyana in the forest sector (though there are questions about the efficiency of implementation and monitoring).

If the widely reported view is accepted, that the illegal logging that is taking place is mainly of trees being logged and converted to lumber at stump, then the underlying cause, or driving force, is primarily one of poverty and the need for a livelihood for persons living in economically denuded circumstances. However, it has been voiced that if poverty is the initial cause it may not remain so over time. In other words, certain individuals, through logging activities may begin to rise above poverty thresholds and begin to pursue activities for more commercial reasons. Typically, this is evidenced in the ground by persons buying more chainsaws and becoming a contractor subsequently perhaps purchasing a tractor to rent out to contractors and so on. The line between poverty-driven and commercially-drive illegal logging is therefore unclear.

It needs pointing out that persons engaged in illegal logging for reasons of gaining a livelihood, or for more commercial reasons, may not be operating illegally habitually. Often logging is transient, part time, and opportunistic and any illegal activities may be supported by legal forestry activities and other small-scale income-earning pursuits such as farming.

The issue of land allocation and access to resources is often raised by community associations and indigenous communities. In some, though not all, cases the arguments for access to the more valuable resources make sense when the number of persons involved in the associations and living in some Amerindian communities are compared with the size and productivity of the resources that are currently legally available.

The high value of certain species and therefore the potential rewards of logging those species (legal-
ly or illegally) have been suggested as a powerful driving force, especially when linked to poverty and the earning potential of the few options typically available.

Lack of knowledge may be a cause of a certain amount of noncompliance and illegal activities in the broadest sense—and this transcends all sizes of operations. Ignorance of procedures, of regulations and the Code of practice, of where legal concession boundaries actually are (a typical excuse for encroachment), of the actual costs of compliance. Lack of information about who actually owns neighboring concessions, or that anyone has the legal right to log them, can result in unwitting trespass especially for communities who tend to view natural resources as common and not legally owned.

On the regulatory side, though the legislation and systems in place are considered broadly adequate, the lack of capacity to fully enforce them and monitor activities provides a loophole for illegal activities whatever the driving force might be. Punitive measures when noncompliance is detected and arrested do not seem, at least superficially, to be acting as a sufficient deterrent.
The findings of this rapid assessment suggest that illegal logging and noncompliance does occur in Guyana though probably at a far lower rate in comparison with other countries.\(^1\) relatively minor noncompliance is common and spans the sector from small to large operators. Logging in areas where there is no legal right seems to be occurring and apparently is mainly perpetrated by some chainsaw operators from rural communities in response to poverty, limited livelihood choices and restricted legal access to land and/or better quality resources. The current high price of purpleheart, in particular, is an additional driving force for illegal logging.

The legislative, policy, governance and regulatory framework is considered to be generally well-developed and largely effective in encouraging legality and best practices in the forestry sector. There are two obvious caveats to that in the policy area of land allocation/land-use planning and in the capacity, due to limited resources, of the regulatory agency to fully enforce the law and associated regulations. There is a definite need for a greater collective will to address these two issues in particular.

Land allocation is of course a politically-charged and emotive issue. However, given the nature of the apparent driving forces behind much of outright illegal logging, it is doubtful whether more rigorous enforcement or stronger punitive measures would be broadly very effective or even politically desirable. Therefore, the issue of land and resource access is one that should be on the table for discussion at appropriate fora in search of a longer term solution to the problem.

On the ground monitoring of all types of noncompliance could be improved by a greater presence in hinterland areas by GFC inspectors, rangers and guards (a policy that the GFC is apparently pursuing). On several occasions it was suggested by informed persons that aerial survey and monitoring would be a useful tool to employ.

The importance and value of on-going training and awareness-building for all parts of the sector, including the regulatory agency, should not be overlooked.

The whole chainsaw lumber subsector requires further investigation from socioeconomic, legal, and environmental perspectives. The steep rise in chainsaw sales in recent years needs to be looked at and data on who is making the purchases, why and where the chainsaws are being utilized should be collected. Studies would inform the regulatory

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1. Guertin, C-E. 2003. Illegal logging and illegal activities in the forestry sector: overview and possible issues for the UNECE Timber Committee and FAO European Forestry Commission. Discussion Paper. This paper presents estimates of the proportion of wood illegally harvested in 2002 ranging from 20 percent to as high as 90 percent in 9 countries from 4 continents.
agency on whether there is a requirement for a change in policy or approach to chainsaw lumber production and the monitoring of chainsaw ownership and use.

It is suggested that technical assistance, monetary support and other interventions should be directed towards:

- Development of more effective means of monitoring and enforcement
- Continuous review and improvement of the log tracking system and development of chain of custody systems along the supply chain
- Development of efficient data collection, storage, retrieval and reconciliation systems pertaining to illegal logging and noncompliance
- Support for development and implementation of legal verification and assurance systems
- Investigation into chainsaw lumber production and chainsaw ownership and use
- Training and awareness outreach program in legality and noncompliance
- Studies on the issues of land allocation and resource access
- Inventory and forest management planning support for rural/indigenous communities
- Review of the National Forest Policy Statement
9.1 ANNEX I—KEY STAKEHOLDERS AND ACTORS FOR LAW ENFORCEMENT IN THE FORESTRY SECTOR

- Guyana Forestry Commission
- Guyana Forest Products Marketing Council
- Environmental Protection Agency
- Guyana Police Force
- Guyana Defense Force
- Guyana Revenue Authority (Customs)
- Amerindian NGOs (4)
- Community Logging Associations (7+)
- Iwokrama International Centre
- Forest Products Association of Guyana
- Guyana Manufacturers and Services Association
- Guyana Geology and Mines Commission
- Guyana Lands and Surveys Commission
- Ministry of Amerindian Affairs
- Ministry of Labor
- Ministry of Finance
- Ministry of Legal Affairs
- Ministry of Agriculture

9.2 ANNEX 2—DEFINITIONS OF ILLEGAL LOGGING

9.2.1 World Bank

Based on the World Bank indicative definition, illegal logging is defined as logging:

- Outside a concession area
- In excess of quota
- In protected areas or prohibited areas such as steep slopes, river banks, and water catchments
- Without appropriate permits
- Without complying with bidding regulations
- Without submission of required management plans
- Protected species (as defined by CITES or other international law)
- With duplicate felling licenses
- Using girdling or ring-barking to kill trees so they can be logged legally
- That contracts with local entrepreneurs to buy logs from protected areas
- Removing of under/over sized trees from public forests
- Reporting high volumes extracted from forest concessions to mask that part of the volume is from nonauthorized areas outside of the concession boundaries
- Using bribes to obtain logging concessions
Using deceptive transfer pricing and other illegal accounting practices to distort prices, volumes, cash flows and debt service levels
- That engages in the illegal transport and trade of timber or the smuggling of timber
- That is processed without the required licenses and that is not in compliance with environmental, social and labor laws

9.2.2 Center for International Forestry Research (CIFOR)

According to CIFOR’s definition, illegal logging includes:

- **Violations of indigenous people’s rights**
  - Illegal appropriation of indigenous land
- **Violations of public trust**
  - Forestlands allocated unlawfully to other uses
  - Issuing and implementing regulations conflicting with other/higher regulations to legalize illegal timber products and activities
  - Issuing logging concessions, permits and authorizations in exchange for bribes and other private economic and political benefits
  - Using bribes, threats and violence to avoid prosecution/penalties or to obtain complacency
  - Using funds from illegal forest activities for political purposes
- **Violations of public or private ownership rights**
  - Illegal expropriation of private or community forests
  - Illegal occupation of public forestlands, including slash and burn agriculture
  - Illegal harvest on public lands (outside concession areas)
  - Illegal harvest on indigenous lands
- **Violations of forest management regulations and other contractual agreements in either public or private forestlands**
  - Logging without authorizations and/or required plans
  - Logging in excess of permitted cut
  - Logging unauthorized volumes, sizes, species (including protected ones)
  - Logging in prohibited areas such as steep slopes, riverbanks and water catchments
  - Girdling or ring-barking to kill trees so that they can be legally logged
  - Logging in protected areas
  - Arson to force conversion to other land use

9.2.3 WWF and the World Business Council for Sustainable Development (WBCSD)

WWF (through its Global Forest and Trade Network, an initiative to eliminate illegal logging and improve the management of valuable and threatened forests) and WBCSD have in 2005 developed the following definitions pertaining to legality in the forest sector:

- **Illegal logging takes place when timber is harvested in violation of relevant forestry and environmental laws and regulations**
- **Sourcing of illegal wood takes place when unprocessed wood is procured in the absence of the seller’s legal right to sell or harvest**
- **Illegal forest product trade involves the procurement, processing, distribution and marketing of products made from wood that has been obtained by illegal sourcing or illegal harvesting and/or are not in compliance with relevant national and international trade laws.**
9.3 ANNEX 3—FOREST AND GFC ACTS

Relevant laws are from the Forests Act of 1953, Section 18–34: Offenses and Legal Proceeding:

- Trespassers on state forest land will be liable to a fine of seventy five dollars or to imprisonment for two months if they can't provide a just cause for being on state forest.
- Any person who in any state forest (except in accordance with the terms of contract or lease granted by any other land use agency) cuts, feels, damages or removes forest produce; grazes or pastures cattle; cleans, cultivates, cuts or digs the soil will be liable on conviction to a fine of two hundred dollars.
- Any person who contravenes any regulations made under this act or the terms or condition of a contract or lease granted under this act or knowingly receives any forest produce which has been cut, felled, lopped, damaged, or removed in contravention of this Act will be liable on summary conviction to a fine of two hundred dollars.
- Unlawful possession of forest Produce: Anyone who removes or receives or is found in possession of any forest produce with respect to which a forest offense has been committed shall be liable on summary conviction of a fine of two hundred dollars and to imprisonment for six months and the forest produce shall be liable to forfeiture.
- Counterfeiting and similar Offenses: Any person who fraudulently uses upon forest produce any registered mark or any mark used by forest officers; counterfeits, alters, obliterates, defaces or removes any stamp, mark, sign, license, permit or forest fee receipt used or issued under this act; without due authority alter, moves, destroys or defaces any boundary mark of a state forest shall be liable on conviction to a fine of one thousand dollars or imprisonment for six months.
- Confiscate produce and order restitution: When any person is convicted of an offense under this Act, all forest produce in respect to of which such an offense has been committed and machinery and other implements used in such an offense shall be liable to be forfeited by order of the court in addition to any other punishment.
- The penalty for the erection of unauthorized buildings and enclosures will be liable to a fine of two hundred dollars on conviction and order the removal of such structures and restore land to its previous condition.
- A forest officer, district commissioner, justice of the peace or constable may arrest without warrant any person whom he reasonably suspects has committed an offense under this Act.
- Power to search for forest produce: A forest officer, district commissioner, justice of the peace or constable suspects that any person is guilty of an offense under this Act or in possession of any forest produce unlawfully obtained may search such a person.
- Power to Seize and detain: A forest officer, district commissioner, justice of the peace or constable may seize or detain any forest produce which he reasonably suspects are liable to be forfeited under this Act.
- Collusive seizure or nonseizure or abandonment of seizure: Any officer authorized under the Act to seize an article makes a collusive seizure or delivers up or makes any agreement to deliver up or not to seize an article liable to forfeiture or takes a bribe, gratuity or recompense or reward for neglect or nonperformance of duty shall for each offense be liable on summary conviction to a fine of one thousand dollars and be rendered incapable of serving the state in any office whatever.
- Any one who offers or procures to be given any bribe, recompense or reward to or make any collusive agreement with any officer to induce him in any way to neglect his duty shall be guilty of an offense and be liable on summary conviction to a fine of one thousand dollars.
- Protection of Rights of Amerindians: Nothing in the act shall be construed to prejudice, alter or affect any right or privilege legally possessed, exercised or enjoyed by any Amerindian in Guyana.
9.3.1 **Guyana Forestry Commission Act 1979**

The Guyana Forestry Commission is the statutory body with responsibility for the management of Guyana’s national forest resources. This act addresses illegal logging indirectly through the functions of the Commission:

- To formulate, advise the government on and implement the forest policy of the Government as determined by the Government. This can include a policy on illegal activities relating to the forest sector.
- To be responsible for the management and control of the exploitation of the forest of Guyana so as to ensure an optimum yield of forest produce and the maintenance or improvement of the environment. The agency responsible for maintaining the integrity of the forest resource against illegal activities is identified as the Commission.
- To undertake economic studies and prepare plans for the development of the forestry and forest industries. Research to identify the level and types of illegal activities in the sector and the development of incentive and disincentive plans to reduce illegal activities.
- To identify, establish and manage forests including national parks, wildlife areas and nature reserves for the purposes of production, protection of the environment, education, recreation, and the provision of amenities and matters of scientific, historical or special value: Ensure the integrity of such declared are maintained and protected from illegal activities.
- To provide goods and services in order to promote economic social and technological development and to impose collect and recover all rents, fees, levies, royalties, stumpage, tolls and other charges therefore. To ensure all forest produce fees are recovered to ensure the legality of the transaction.
- To undertake research and investigations in all aspects of forestry. Including illegal activities. To assist in the prevention and control of forest fires, pollution of the environment, erosion of soil, disease and destruction of the flora and fauna. Forest Protection
- To grant permissions and permits relating to the felling and removal of timber and the occupation of forest lands. Felling and removal of any timber without such permits will be termed illegal
- To enforce conditions and agreements for the sale of timber, timber concessions, forest permission licenses and permits. Ensure that all conditions are met on agreed contracts with companies/entrepreneur including management plans

### 9.4 **ANNEX 4—GUYANA’S PROTECTED AREAS**

Guyana has only two gazetted protected areas namely Kaieteur National Park (62,700 ha or 0.3 percent of Guyana’s total land area) and Iwokrama (360,000 ha—1.7 percent of total land area—though approximately one half of is designated for sustainable resource use). For many years Guyana had been awaiting international support to develop its National Protected Area System further.

There are two pilot areas designated as priorities for protected area status: Shell Beach in the northwest of the country and the Kanuku Mountains in the south-west. However, there is no publicly stated timeframe for their designation. In addition, the government has recognized several other areas as having high biological importance though they do not have any legal protection or conservation status.