

**LAW COMPLIANCE,
AND PREVENTION AND
CONTROL OF ILLEGAL
ACTIVITIES IN THE
FOREST SECTOR
IN SURINAME**

*Country Assessment
Preliminary Version*

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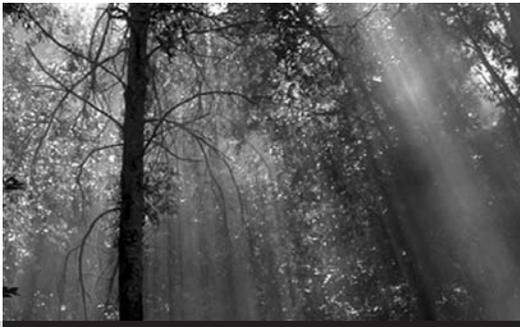


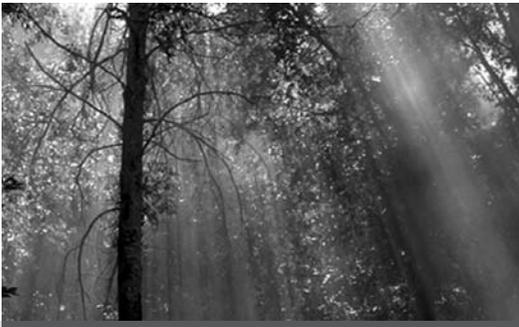
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CHAPTER ONE

Introduction

Suriname is situated on the northeast coast of South America, and with a land area of just 16.4 million hectares, is one of the smallest countries on the continent. The population totals 480,000, with nearly 70 percent living in the capital city. Paramaribo, and the surrounding district. Meanwhile, a quarter of the population lives in smaller settlements along the coast and about 70,000 people from tribal maroon¹ and indigenous communities live in relatively small- to medium-size settlements and villages in the hinterlands.

More than 90 percent of the country is covered with natural vegetation, 80 percent of which is forested. Vegetation types are related to the various land zones, and the most important vegetation types are:

- Various types of hydrophilic vegetation in the coastal plain, such as mangroves along the coasts and various types of swamp forest—some of which contains valuable tree species like virola sp. and possum.
- The high and low savanna forests
- The high dryland interior forest, which varies in species distribution, height, and diversity

Logging in Suriname is concentrated in the more accessible northern part of the country. Over the past few decades, the 2.5 million hectare “forest

belt” (a 40- to 100-kilometer wide strip that stretches from east to west) has been the most important timber production area. Timber extraction also occurs in a few swamp and savanna forest areas along the coastal plain. In recent years, timber harvests have expanded further to the south, into hilly and mountainous areas. Rapids along the principal rivers frustrate water transport of timber. About 7,000 hectares of pine plantations and smaller experimental broadleaf plantations complement the natural forest, producing a small amount of timber.

The country’s productive forest area was estimated to cover about 4.8 million hectares in 2005. Experts doubt that the forests in the southern part of the country will be used for commercial wood production any time soon because of the area’s irregular topography and lack of infrastructure (National Forest Policy 2003). However, the people in the hinterlands use these areas to meet their subsistence needs for forest products.

Unlike most South American countries, Suriname is not losing its forest cover, and no regular statistics on deforestation are published. In the past, forest clearings occurred during very specific periods. About 405,000 hectares of forestland has been converted to other uses. Of this, shifting cultivation accounts for close to 250,000 hectares. More recently, the development of bauxite and gold mining has led to forest clearing. About 200,000 hectares of forestland is reserved for future conver-

1. Traditional black communities.

sion for mining, hydropower, agricultural development, and settlements.

Protected forests cover over 2 million hectares (approximately 13 percent) of the land surface. These protected areas includes nearly all mangrove forests and other unique ecosystems along the coastal plain, with the greatest stretch of protected forests found in the interior to the south, including the 1.6 million-hectare Central Suriname Nature Reserve. Despite the high percentage of protected forests, some relevant forest types are not yet included in nature reserves.

Under the 1987 Constitution, all forests in the country belong to the state, with the exception of those on privately owned land or covered by long-term leases. Land tenure rights for agriculture can be granted for up to 40 years. In total, this represents only about 70,000 hectares. The state grants user rights on public forestland for timber harvesting and mining, and licenses for fishing, harvesting of non-timber forest products, and conducting nature research.

Timber production has been approved on 2.3 million hectares. To date, timber concessions account for 1.2 million hectares, while an additional 70,000 hectares are assigned under incidental timber-cutting licenses. Timber concessions are authorized for areas up to 150,000 hectares, and are assigned for as long as 20 years. Tribal villages in accessible areas of the interior have rights over 500,000 hectares for communal use. Prior to the approval of the Forest Management Act (FMA), villages were assigned wood-cutting licenses to manage public forests. These areas are now classified as community forests and considered part of the timber production area. Villages in the far interior have not received similar rights.

After two decades of decline, commercial logging is on the increase in Suriname. The registered annual national roundwood production in 2005 was about 180,000 cubic meters, up from less than 110,000 cubic meters in 1995. Some 47,500 cubic meters of roundwood comes from the communal forests. Estimates of sustainable production by various authors range from 500,000 cubic meters to 1.5 million cubic meters of roundwood per year. Local companies apply selective logging systems, with a low harvesting intensity of 8 to 12 cubic meters per hectare. For larger, foreign-owned companies, the harvesting intensity averages 15 cubic meters per

hectare. More than 100 different timber species are harvested and processed.

The data on fuelwood and charcoal production is incomplete. No official records exist for subsistence use of fuelwood and charcoal by rural populations. Documented fuelwood and charcoal production in urban areas varies from 2,500 cubic meters in 2003, to 1,700 cubic meters in 2005. Fuelwood production consists almost completely of *Eperua falcata* (walaba) posts used for cremation purposes.

Both the volume and value of wood exports have dropped from 1998 to the present, with the exception of 2002, when a large volume of round logs (22,800 cubic meters) was exported to Cuba and China. In 2005, about 12 percent of the total roundwood production was exported, with a value of about US\$3 million. Roundwood makes up 50 percent of the volume exported. As in prior years, most of the exported volume during 2005 (about 50 percent) went to Asian markets, with about one-third exported to Europe, and the remainder to the United States and other countries in the region.

There are no figures available for domestic utilization of timber. Imported wood products consist of wood panels, with an approximate value of US\$3 million, and end products such as furniture, with a value of US\$4.4 million.

Forestry contributes less than 3 percent to GNP. About 4,000 workers are employed in the logging and timber-processing sector, with an additional 500 working in forest management and research. This figure is about 5 percent of the country's total workforce. About 200 individual companies or license holders are active in the logging sector, and there are more than 70 sawmills in the log processing industry. Chain saw or mobile sawmill operators process a considerable number of logs in the forest and then transport and sell the planks for further processing.

A new Forest Management Act approved in 1992 outlined the parameters for sustainable and rational use of forest resources, taking into account the interests of the forest dwellers, as well as nature and biodiversity conservation. An FAO technical assistance project (1997–2000), with funding provided by the Netherlands, developed the implementing regulations.

The issue of illegal logging is addressed only briefly in the 2003 National Forest Policy, stating

that illegal logging undermines the efforts for sustainable forest management and is harmful to bona fide companies and the national economy. One of the strategic goals was redressing the proliferation of illegal practices, such as illegal gold mining activities, illegal timber harvesting, and theft of plants and animals.

CITES regulations affect the export of wood and wood products from *Cedrela odorata* (a native species) and mahogany (an introduced species). The forest authority approves certificates of origin, which allow exporters to legally export wood from these species.

Suriname's rating on the Transparency International Corruption Perception Index has improved. The country is currently ranked 82nd with a score of 3.2. With regard to the Index of Economic Freedom (2006), Suriname was ranked 126th, with a score of 3.6, and is categorized as mostly undemocratic. The score on the regulatory system is 4. The study suggests that excessive government controls in pricing and licensing create many opportunities for favoritism and corruption.

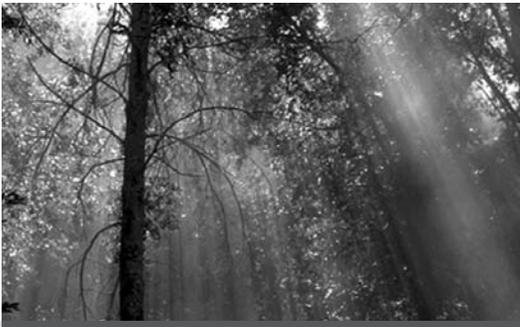
The Forest Service (LBB) was established by law in 1948. The LBB had gradually lost its operational capacity in core areas during the 1980s, and most timber production went unrecorded. Its current legal mandate to regulate forest management comes from the Forest Management Act of 1992. The LBB now has the legal responsibility for the management of all forests, including nature reserves, and

the specific goal of: "sustainable forest management for the benefit of the (national) community."

The arrival of Asian timber companies in 1994 raised awareness of the need to strengthen governmental effectiveness, particularly in regard to the management and supervision of the logging sector. The Foundation for Forest Management and Control (Stichting voor Bosbeheer en Bostoezicht—SBB) was established in 1998 for this purpose.

The SBB has no direct legal authority, but works under the mandate of the LBB. The LBB is still engaged in nature conservation. A new authority, the Forest and Nature Management Authority; (Bos en Natuurbeheers Autoriteit Suriname—BOSNAS) is expected to be established by law and will assume the functions of the SBB and LBB. When BOSNAS becomes operational, the management of both forestry and nature conservation will be integrated within the same organization, providing the possibility for more effective and efficient control and monitoring.

Other sectoral plans financed by the Netherlands are also relevant to forestry. The Plan for the Non-Urban Environment in Suriname includes funding for BOSNAS during its initial four years. The Plan for the Department of Justice will also benefit the forest sector through the rehabilitation and staffing of police stations in the country, thereby ensuring their governmental presence in the hinterlands.



CHAPTER TWO

Status of Illegal Logging and Forest Sector Law Enforcement

DEFINING ILLEGAL LOGGING

Illegal logging is defined in the regulations of the Forest Management Act of 1992 “as the harvesting of wood on state land without a proper license.” Furthermore, the harvesting of undersized trees or protected tree species is forbidden under the FMA.

Typical illegal activities in Suriname include:

- Harvesting of wood outside concession boundaries
- Harvesting of wood before the harvesting plan is approved
- Harvesting of wood outside the assigned cutting compartment
- Felling of trees that are not designated for harvest in the harvesting plan
- Transporting of forest products without the appropriate log tags and transport bills
- Inaccurate log measurements and diversion of underreported volumes to secondary users
- Manipulation of logs tags and transport bills to hide the origin of roundwood and underreport the volume harvested
- Felling of trees on privately owned land without written permission of the owners
- Commercial felling of trees in the communal forests without written permission of the village authorities
- Felling trees in nature and forest reserves
- Late or nonpayment of fees
- Violation of the 150,000-hectare limit on concessions via the establishment of subsidiary companies and control of multiple concessions
- Fraudulent acquisition of control of concessions greater than 5,000 hectares through the purchase of mobile processing equipment to satisfy the conditions of the FMA.

Not all of the standards mentioned in the forest regulations are currently feasible or applicable. The sustainable timber production system in Suriname is evolving, and a number of regulations to ensure sustainability in the public production forest are not mandatory for all producers. Some exceptions include:

- Lack of a quota system. Producers working under the prescriptions of a harvesting plan—a key component of the concession management plan—are not allowed to surpass the maximum allowable cut.
- Concession bidding is allowable under the law, but has not (yet) been applied in the Surinamese logging sector.
- Protective forests, as defined in the provisional forest classification of the FMA, are forests on slopes and adjacent to rivers and other bodies of water. Logging is not permitted in these areas. However, because these areas are not delineated on the map or on the ground, this regulation is not enforced.

TABLE I
Illegally Produced Timber Documented by the SBB (Cubic Meters)

Year	Roundwood production	Seized timber and/or timber charged with fines	Tolerated timber production	Percentage of illegal and tolerated timber production
2000	177,000	14,200	31,000	26
2001	163,000	3,300	21,000	15
2002	154,000	3,100	23,000	17
2003	158,000	1,300	9,000	7
2004	160,000	600	24,000	15
2005	182,000	3,600	14,000	10

Source: Foundation for Forest management and Production Control.

- Only a few orchid species receive full CITES protection. Harvesting of the CITES listed tree species (*Cedrela odorata* and mahogany spp) is allowed under the current regulations.
- Logging licenses are given on an area basis. Duplicate felling licenses are not possible.
- Girdling or poisoning trees to allow their subsequent harvest is not an issue.
- Harvesting of undersized or protected species can occur in areas designated for clear-cutting when conversion to other uses has been approved.
- The harvesting of poles and other amenity wood products from public forest may lead to the removal of undersized trees.
- Illegal accounting practices are only possible to a limited extent. Export credits are based on the fiscal value for timber exports. However, actual market value could be higher than the reported fiscal value.
- The Ministry of Trade and Industry licenses processing facilities. Noncompliance with regulations concerning environmental protection and labor laws that come under the jurisdiction of other ministries is common.

1. Timber seized or assessed a fine due to infractions and
2. "Tolerated" timber produced on expired concessions.¹ It represents a substantial percentage of the timber harvested.

In addition to this documented illegally produced timber, the SBB estimates that in the past five years, an additional 20 percent has been produced illegally, but not detected (SBB, personal communication). This figure is based on the information derived from a survey conducted by the SBB in 2004 on the installed capacity. The total installed logging capacity is estimated at 200,000 cubic meters of roundwood.

The sector was believed to be working at close to full capacity in 2004, with registered production of approximately 150,000 cubic meters. Based on these figures, the SBB estimates the additional, illegal and undocumented volume to be no more than 50,000 cubic meters (+33%). As a conservative estimate, the SBB assumes that illegal production is 20 percent more than what is legally produced. Illegally produced timber enters the market undetected and unregistered by the authorities. Table 1 reports the amounts of illegally produced timber detected by the SBB.

VOLUME OF ILLEGAL LOGGING AND OTHER ILLEGAL ACTIVITIES

Volume of illegally produced wood

The SBB maintains some statistics on illegally produced wood. Illegally produced wood includes:

1. Timber production on expired concessions is illegal, but tolerated by the authorities in order to avoid stagnation of production. It is common for concession renewals to be delayed excessively by the lack of effective administrative procedures.

TABLE 2
Production and Destination of Roundwood from 1990–2005 (Cubic Meters)

Year	Total log production	Log exports	Locally processed industrial roundwood
1990	114,784	0	114,784
1991	105,177	0	105,177
1992	118,765	1,700	117,065
1993	93,122	1,200	91,922
1994	96,213	6,890	89,323
1995	104,668	13,000	91,668
1996	202,703	24,000	178,703
1997	179,228	29,000	150,228
1998	141,031	21,000	120,031
1999	89,930	16,000	73,930
2000	171,265	9,200	162,065
2001	155,135	5,600	149,535
2002	145,353	22,800	122,553
2003	147,053	1,130	145,923
2004	153,279	4,800	148,479
2005	170,391	7,200	163,191

Source: SBB annual statistics.

Estimating the volume of undetected and unrecorded illegal wood

There is no statistical information available on the actual level of wood consumption for the domestic market. Illegal timber can end up on the domestic market or be smuggled outside the country. This section attempts to indirectly identify any abnormal trends in the domestic consumption of wood by the analysis of production and export statistics produced by the SBB.

Production statistics are derived from log tags, which are filled in by timber producers and verified by the SBB. Export volumes are calculated at the point of export, where logs and other wood components are graded, and the volume precisely determined. An assessment of the saw log production for domestic consumption is made, based on production and export statistics from 1990 to 2005. Trends are identified and exceptions noted. Imports (mainly wood-based panels and semi-finished and end products) are not included. Table 2 provides information on the volumes produced and their destinations.

The construction and furniture sectors are the main consumers of industrial roundwood in the

national market, but no figures on the actual consumption are available. Similarly, the Ministry of Public Works is unable to provide exact statistics on the number of buildings constructed per year. About 10,000 houses have been built² since 1980. There is no information on the volume of wood used for housing, but there is a noticeable shift toward increased use of steel, concrete, and various types of vinyl sheets and tiles.

With regard to the furniture sector, the Ministry of Trade and Industry provides licenses for the establishment of such industries. Many small furniture producers work without licenses. The Chamber of Commerce currently has 106 companies registered. The volume of wood used by the furniture industry is unknown.

Both the construction and the furniture sectors purchase wood from local timber markets located throughout the urban centers. At present, 52 timber markets are registered with the Chamber of Commerce. Timber is also purchased directly from the small producers who operate with mobile sawmills or chain saws in the forest areas. The SBB

2. Sectoral study by the Min PLOS on Housing.

estimates that unreported production could account for as much as 20 percent of the documented production. On this basis, the estimate of undocumented illegal timber is approximately 34,000 cubic meters.

It is far from clear that the variations from the general trend are in all cases the result of underreporting. In 1996, the Suriname Forest Service was not operational and could not exercise its production monitoring duties. The lower production in 1999 and 2002 might have been caused by the poor economic situation in the country, which limited activity in the construction sector. A second reason for the lower production in 1999 is the fact that the forest service transferred its duties in that year to the SBB. In 2002, log exports were extraordinarily high and caused a deficit in the national market.

Consumption of non-industrial wood

Production and consumption data for non-industrial wood is not very reliable. In 2001, the SBB developed estimates of domestic consumption (Matai 2001). Production of important commercial products is partially monitored by the SBB. Most production comes from small-scale, informal producers. Squarely hewn poles are the most significant non-industrial wood products in Suriname. Total production in 2002 was about 4,000 cubic meters, while in 2005 this figure dropped to 600

cubic meters. Most poles are exported, and the remainder is used locally as telephone and electrical poles. Fence posts and other poles of various types and sizes are used in the construction, fishery and agricultural sectors. These items come from more than 130 small producers in irregular, mostly very small, quantities. The total production in 2005 was 2,400 cubic meters.

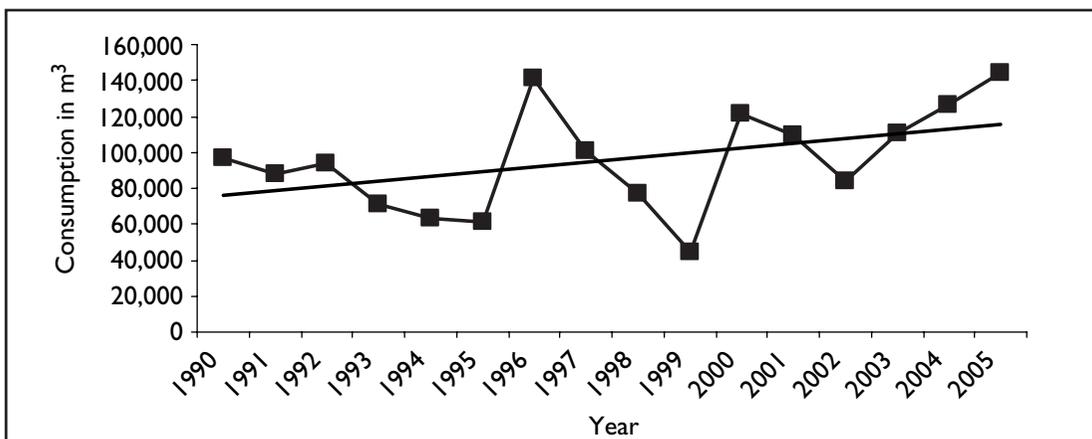
Small operators also produce firewood and charcoal, but only that production destined for commercial use is monitored. It is estimated that the subsistence use of fuelwood affects about 40,000 people (IPCC 2002). The use of fuelwood in urban areas is insignificant, and what is consumed is obtained from sawmill waste. In the interior, fuelwood generally comes from land clearing and shifting cultivation plots. Fuelwood (mostly mangrove) from the coastal areas is used in the fishery sector for fish drying.

Other illegal activities

The violation of the access rights of tribal peoples is a significant problem in the forest sector. Tribal peoples find travel limited across concessions, and to traditional sites within concessions. This is a constraint for the security of the food supply of forest-based communities, since the gathering of non-timber forest products, fishing, hunting, and even access to shifting cultivation fields, is hampered.

FIGURE 1

Trend in the Consumption of Saw Logs for the Domestic Market (Cubic Meters)



Source: SBB.

Violations of the Labor Act are common. Forest workers' rights are not respected with regard to safety, working, and living conditions, or in regard to the number of working hours. In a scoping session for Forest Stewardship Council certification, it was found that timber companies in Suriname score low on social indicators for compliance with labor regulations and tribal people's rights (SBB, personal communication). The situation of foreign workers employed by East Asian companies is reportedly even more unsatisfactory. Problems have arisen concerning the issuance of working permits and their immigration status.

More recently, unauthorized plant collection for research purposes has been reported. Collection of wild species is only permitted under license from the Nature Conservation Department of the Forest Service. Foreign researchers and graduate students are said to be the principal offenders.

Illegal gold mining

Gold mining is concentrated in the Greenstone Belt of the southeastern, eastern and central parts of the country. Illegal and informal gold mining in the interior of Suriname is causing the loss of forest cover and environmental damage. Informal gold mining has increased rapidly since the 1990s, when gold mining became an important source of income for the population in the interior. Brazilian miners (*garimpeiros*) with expertise in hydraulic and small-scale mining operations migrated to Suriname at the same time.

The government has virtually no control over these informal gold mining activities, and even most of the gold mining companies are working without the proper licenses. In 2005, the Ministry of Labor, Technological Development, and Environment reported that only 10 small-scale gold mining concessions were legally registered, while the World Wide Fund for Nature (WWF) estimated that there were over 10,000 small-scale gold miners in the interior. Brazilian *garimpeiros* make up the majority (65 percent), followed by and maroons (17 percent) from the interior (Healy 2005).

The miners use heavy equipment or powerful hydraulic jets to remove the forest cover and overburden to expose sediments where gold is found. Deforestation and soil movement cause significant erosion in the sloping landscapes of the gold mining

areas. There are no precise statistics on the total extent of forest lost, but the Environmental Department of the University of Suriname estimates that 20,000 hectares of forest have been lost through small-scale gold mining (Carrilho, personal communication). Mercury pollution is another threat to the environment associated with gold mining.

TYPES OF ILLEGAL LOGGING

Introduction

The forest industry in Suriname consist of three main types of companies

- Multinationals
- Medium-size domestic companies
- Small-scale producers

All three types may be engaged in the complete chain of production, including logging, transport, processing, and local or export sales. In addition, there are a number of contractors working as independent loggers for the established companies and independent chain saw operators. Mobile and portable mill operators may work under contract to the larger producers with fixed sawmills in the interior, or as independent operators. Both round logs and sawn timber are produced by these operators. Round logs go to the sawmill industry or to the log exporters. Sawn wood is trucked to the independent wood markets, the furniture industry, and the construction sector.

In 2005, 70 percent the sector was made up of small operators with a production of less than 2,000 cubic meters. The number of larger operators in 2005 represents an increase since the 1990s, although there are no really large companies present. For the small operators, including the producers of minor wood products³ (94 people in 2005), there is probably little difference between poverty and commercially driven activities. Table.3 gives an indication of the structure of the sector.

Violations by small operators with production under 1,000 cubic meters per year and non-registered (illegal) operators is often related to their

3. Minor wood products include small poles, shingles, stakes, and so forth.

TABLE 3
Production Level of Logging Enterprises in
Suriname (Cubic Meters)

Roundwood production	1998	1999	2005
< 100	30	101	21
101–500	51	75	21
501–1,000	13	18	11
1,001–2,000	25	10	25
2,001–10,000	7	2	29
> 10,000	2	1	—
Total	128	207	107

Source: SBB statistics.

inability to meet the administrative and technical requirements for sustainable timber production. Chain saw operators and operators of mobile and portable mills are part of this group. For most of these enterprises, neither the workers nor the management have much education or understanding of the legal requirements of the Forest Management Act. More than 40 percent of these producers are the descendants of the tribal populations in the hinterlands. Another substantial group (20 percent) in the timber production sector is comprised of private forestland owners (in most cases the land is in collective ownership), who permit the timber to be harvested from their forests. Illegal activities are very much driven by poverty. Common violations include:

- Non-existent or void licenses
- Harvesting of protected species or undersized trees in public forests
- Lack of access to required management and harvesting plans
- Transport of timber or logs without tags or other documentation
- Harvesting outside assigned area, due to lack of clear demarcations
- Delayed or nonpayment of forest fees and royalties
- Harvesting in protected areas

This type of logging takes place in communal forests, near tribal villages, and in privately owned forestland.

Illegal activities at the commercial level occur among the larger producers (multinationals and the medium-size domestic companies) with concession operations. Common violations include:

- Harvesting outside assigned concession area
- Delayed payment of forest fees and royalties
- Harvesting of protected species
- Smuggling of timber across borders
- Felling unmarked trees and excessive harvesting
- Incorrect log measurement

Forestry production by tribal peoples

The illegal activities of the tribal communities in the forest sector are often poverty related. The main driver behind the illegal activities is the lack of employment opportunities for people living in the interior. These areas are less developed, and have a higher poverty rate than coastal areas. Even when employed, workers from indigenous and maroon communities usually receive the lowest-paid jobs. Low wages and high unemployment (9.4 percent) have pushed many to seek self-employment in the informal sector. Low educational levels hinder navigation of the bureaucratic system and further limit the legalization of these businesses. Many believe that they already have legal rights over the areas occupied and used for centuries, and that it is not necessary to formalize these rights and obtain official documents. Overall, there is a generalized lack of understanding of the legal requirements for forest management and production.

Mobile, portable mill, and chain saw wood production

A number of small-scale operators process logs in the forest and produce sawn wood. They use both chain saws and mobile sawmills. In 2005, they reported the production of 7,400 cubic meters of sawn wood. Closed containers on flatbed trucks and vehicles designed for passengers are used to transport rough planks to secondary processors. If not detected by the authorities, this production goes unrecorded.

Chain saw operators are usually residents of the forest-based communities. In the past, these communities practiced pit sawing, mostly for subsistence use. Now operators work individually or in

small family groups. In the 1990s, Guyanese operators introduced techniques for onsite log processing, with greater productivity and better-quality wood. The Guyanese operators are no longer visible, but the techniques have remained.

Chain saw wood producers fell trees with larger diameters and limit their selection to highly valuable species used by the furniture manufacturers. Manual labor is used to transport the sawn timber to roads, where it is loaded for transport. These operators produce good quality wood, and cause less environmental damage than mechanized logging operations where improper skidding causes considerable damage to the remaining trees. Chain saw wood production is often seen as a temporary activity when other income-generation activities are absent. The work is physically hard, production volumes are low, and business skills are poor, which contribute to poor economic returns. Chain saw operators work less than mobile mill operators.

Because of the limited scale of chain saw wood production, it is not considered a major threat to the forests. No specific policies have been formulated to deal with this issue, nor are there any concise declarations concerning chain saw wood production in the legislation. Onsite processing of timber is allowed under all types of timber harvesting licenses. There are even specific provisions in the fee structure for onsite timber processing. The informal (illegal) character of the chain saw operators, as well as the mobile and portable mills operators, is an issue that concerns the authorities.

Reliable information concerning the number of mobile and portable mills operating in Suriname, and the number of chain saw operators, is lacking. The picture of mobile mills is incomplete, since most units operating in the remote parts of the interior have not even been registered. A spokesman for the Association for Loggers (ABE) estimates that about 300 mobile mills currently operate in Suriname. The SBB reported that one mobile mill dealer sold about 80 sawmills last year. Other dealers also sell this type of equipment (Matai 2004). Some of the mobile mills are operated in fixed locations, while others are repositioned as needed to supplement stationary sawmills. With an annual production capacity per mobile mill of 200 cubic meters, this sub-sector has the potential to produce at least 60,000 cubic meters of wood per year (ABE, personal information). In 2004, the SBB registered

a total of 104 processing units, of which 50 were stationary sawmills.

Development NGOs are encouraging the use of mobile mills and are providing training and funding to interested communities. The job creation and income generation associated with mobile sawmills make them a more profitable alternative for communities that otherwise might sell timber rights to outside entrepreneurs.

BORDER AND TRADE ISSUES

Exports accounted for 30,000 cubic meters (17 percent) of all timber production in 2005. The main export item is round logs, followed by sawn timber. The largest buyer is China. Regional exports are limited, with small quantities of sawn wood and plywood exported to French Guiana. No exports to Guyana were registered in the period of 2002–05. Table 4 provides more details on the products and destinations of wood exports.

Suriname borders Guyana in the west, French Guiana in the east and Brazil in the south. The boundaries with Guyana and French Guiana follow rivers, which are semi-navigable for wood transportation. The border with Brazil is mountainous and has no road access.

Only a small number of logs in eastern Suriname are felled, and they are used for subsistence purposes or in the gold mines. There is no movement of logs on the river with French Guiana, but customs officers report that Snakewood (*Brosimum guianensis*) is exported, probably for use in the craft industry in French Guiana.

There is a great deal of log transport along the Corantijn River between Suriname and Guyana. Important production forests are found in the area around the middle and upper stretches of the river in Suriname, and to a lesser extent in Guyana. A number of sawmills are located along the northern Corantijn River in both countries. The area of the interior at the Suriname border is scarcely populated, with only one small population center in Apoera, and two indigenous villages. Apoera houses offices of the government administration, including a guard post of the SBB and the police. However, they lack the proper means to patrol the river.

Transport of logs on the river is complicated. The river belongs to the territory of Suriname, but

TABLE 4

Export Volume of Wood per Region and Country in 2005 (Cubic Meters)

Land	Round logs	Squarely hewn poles	Snake wood	Sawn wood	Total
The Caribbean area		1		425	426
Cuba				194	194
Dutch Antilles				163	163
St. Vincent		1		59	60
Trinidad and Tobago				9	9
South America				36	36
French Guiana				36	36
North & Central America	92	134	8	899	1,133
United States	92	134	8	899	1,133
Canada			0.02		0.02
Europe	865	2,104	21	1,163	4,153
Belgium	41			90	131
Germany	205	76		10	291
France	28		21		49
United Kingdom				20	20
Netherlands	591	2,028		971	3,590
Turkey			0.2	32	32.2
Switzerland				40	40
Asia	6,228	54	36	2,179	8,497
China	4,736	54	35	2,057	6,882
Hong Kong (China)	87				87
Japan				17	17
United Arab Emirates	690			105	795
Vietnam	715				715
Total	7,185	2,293	65	4,702	14,245

Source: SBB.

the Guyanese also are free to travel along it. All log transport on the river needs to be covered by the usual transport bill or Forest Transportation permit issued by the SBB. All timber found on the river is assumed to be of Surinamese origin, unless the transporter can produce a harvesting permit issued by the Guyanese forest authority. The Guyanese permits are countersigned by the SBB and considered valid for further transport on the Corantijn River.

Economic incentives and the weak presence of law enforcement institutions (police, customs, and forest guards) in these remote areas of the interior

facilitate illegal logging, which is done by loggers from both countries. The wood is harvested in the Surinamese forests and transported to sawmills along the riverbanks in Guyana. Logs are also transported to ocean vessels for shipment overseas.

Experts say that a substantial amount of timber crosses the river into Guyana. They believe that the 17 sawmills on the Corantijn River bank could process at least 50,000 cubic meters annually (SBB, personal communication). There is no information about timber entering Suriname from Guyana in this area. The SBB has tried to discuss timber smug-

gling with Guyanese officials, but to date no follow-up actions have been taken.

IMPACT ON GOVERNMENT FINANCES

The government revenues from the forest sector include an area fee of less than US\$0.05 per hectare, paid for the logging rights in concessions, and a volume fee of US\$5 to \$6 per cubic meter for commercially produced timber on state lands. Other fees are charged for the purchase of log labels, waybills, and other administrative procedures. The SBB estimates that undetected and unrecorded timber production represents an additional 20 percent of the total volume of the registered production in round logs (see section 2, “Volume of Illegal Logging and Other Illegal Activities”). If accurate, the fees on that timber would come to US\$210,000.

With the established fee structure, total government revenues for 2005 should have reached US \$1 million for the volume cut, and a minimum of US \$30,000 in area fees. The actual income in 2005 for volume fees totaled US\$800,000 and the area fees were US\$43,000.

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

Impact of illegal logging on the tribal populations

Land rights and forest use issues: The indigenous communities of Suriname belong to maroon and indigenous tribes living in the hinterland of the country. Land rights remain the most important unresolved issue between them and the government. The national government has been criticized for not granting formal rights to the tribal groups for the lands they occupy and have used for centuries. In accordance with the Constitution of the Republic of Suriname (1987), all forests, except for those on privately owned land, belong to the state.

In 1992, after the period of social unrest and jungle war in the interior, a peace accord was negotiated and the national government agreed to issue

formal land rights in so-called “economic zones” to the tribal communities. To date, no structured dialogue has been held with the communities on the issue of land rights.

When discussing the issue of forest use and logging by the tribal populations, a distinction can be made between communities living in the accessible areas of the hinterland and those in the far interior. In the far interior, logging is done for subsistence, and regulations for the felling of trees are administered by the traditional authorities (community leaders). The national government does not mark the boundaries of forestland or issue use rights. Tribes and individual communities use their own traditional land divisions.

In the more accessible part of the interior, the situation is different. Communities received communal rights over forests (“houtkap vergunning,” or hkv’s) with the objective of providing opportunities for subsistence forest production and land for agricultural development under the 1947 Timber Act. The 1992 Forest Management Act explicitly adds commercial logging as an appropriate use for communal lands.

The earlier hkv’s were issued personally to the village chiefs. In many cases, control of the communal rights remains with the individual licensee, while the villagers get an inequitable share of the benefits of their community forests (National Forest Policy 2003). This is said to be more frequent in maroon societies. The indigenous organizations claim that they have raised awareness with their traditional authorities concerning the need for communal forests to provide benefits for the whole community, notwithstanding the fact that the license is issued in the name of the village chief (Vreedzaam, personal communication).

Village chiefs have been approached by private logging companies offering to purchase harvesting rights in the communal forest. They promise in return a (small) fee and other benefits for the community. This situation became more prevalent in the early 1990s, when it was more difficult for loggers to obtain concession rights under the regulations of the FMA. Between 20 and 40 percent of commercial wood production now comes from these community forests. Approximately 250,000 hectares of forest are logged commercially each year. (National Forest Policy 2003). In 2005, about

26 percent of commercial production came from communal forests.

Several communities have seen their forests severely degraded because of these contracts. This is a threat to their economic survival and might force segments of the population to migrate and live in poorer conditions elsewhere in Suriname. In addition to multinational firms, local entrepreneurs are now using small-scale equipment (chain saws and mobile sawmills) to commercially log communal forests. These activities have contributed to the loss of authority of the village chiefs' violation of villager's (Country Report Chainsaw milling study, 2006).

The indigenous people's generalized perception is that violations include any activities carried out by strangers on indigenous people's land without prior government notification. Indigenous people should be considered as protectors of the natural environment and have the right to raise their voices when they are unjustly treated (Vreedzaam, personal communication). The communities in the far interior are not affected by illegal forest activities because no commercial logging is taking place in their areas. They are, however, affected by other illegal activities, such as gold mining.

Conflicts due to forestland intrusion

Even though the issue of land rights is still unresolved, the government continues to grant licenses to non-tribal people and companies on forestlands claimed by the communities. This leads to conflicts with both the licensee and the government.

1. Community members claim that the issuing of rights to logging companies limits their access to their traditional forest resources and may even lead to deforestation. People have been denied access to forest roads within concessions and prevented from collecting non-timber forest products in traditional sites (Playfair 2006; Tjon 2003).
2. Villagers complain about the fact that traditionally protected forest resources have been spoiled by the arrival of logging and mining companies.
3. The sense of insecurity was increased for the entire population when strangers working for N.V. MUSA Indo-Surinam appeared in the area

looking for timber⁴ (Vreedzaam, personal communication).

4. Government regulations limit road transport of logs in the rainy season. A generalized complaint is that truckers do not obey these regulations. Road damage makes the villages inaccessible and hampers school and medical transportation. On several occasions, people from tribal communities erected roadblocks to stop logging trucks (Playfair 2006).

Impact on the environment

The impact of illegal logging on the environment in Suriname is greatest where sensitive protected areas are illegally logged and when high-value tree species are selectively harvested. Both occur with little or no consideration of species management or ecosystem protection.

Illegal harvesting of mangrove trees for poles and fuelwood by the fishery sector threatens the stability of the mangrove ecosystem in some locations, jeopardizing coastal protection. This is especially the case near concentrations of fishermen in the coastal districts.

Species important for either the handicraft industry or the furniture sector tend to be targeted by small producers with mobile processing equipment. Over-harvesting may endanger the survival of the species.

The species *Cedrela odorata* is a native tree found in the coastal areas in more or less concentrated patches, as well as in the interior. The wood is preferred by handicraft producers and furniture makers because of its durability and workability. The chairperson of the handicraft producer's organization indicated that there is a serious shortage of cedrela. Craft producers expend great efforts to find the wood and purchase it in small quantities from whomever they can. It is likely that most of this production goes unrecorded by the SBB. This type of harvesting may eventually cause cedrela to completely disappear from the coastal area.

4. After abandoning their after long political debate to obtained concessions in the western part of the country, Musa approached the leaders of indigenous villages and asked them to supply the company with logs. They provided the villagers with chain saws and paid them for every log of the desired species and dimensions delivered.

Watrakan (*Cordia*) is another native species much sought after by the furniture sector. Watrakan is found in low densities in heterogeneous forests in the interior. It became popular over the last 10 years, but now is very difficult to find in more accessible areas.

IMPACT ON THE FOREST INDUSTRY

Preserving an adequate supply of raw material to the established (registered) sawmills is an important issue related to illegal logging. Not all sawmills have access to timber concessions or sufficient capacity to meet the demand for raw material from their own logging units. As a result, they purchase a considerable amount of timber from independent loggers. Historically, overcapacity has been a problem in the sawmill industry. In 2000, a total of 74 sawmills and one plywood factory were identified, with an estimated total annual log consumption of approximately 110,000 cubic meters. (Asraf, Matai, and Horsten 2000). By 2003, the total installed sawmilling capacity was estimated at approximately 600,000 cubic meters per year. (National Forest Policy 2003). This figure includes the existing capacity in the mobile and portable mills. Most sawmills are old and inefficient, although over the past few years some new investments have been made. The capacity of the mobile mills is estimated to be at least 120,000 cubic meters of round logs. This estimate is based on the information given by a spokesman of the ABE (see section 2, “Types of Illegal Logging”).

The industry complains about the inadequate supply of raw material. A few years ago, the blame was placed on increased log exports because of higher international prices. Currently, much of the production by independent loggers is sawn into boards by either the loggers or log purchasers, and commercialized in the timber markets or sold

directly to the furniture and construction sectors, rather than to the established sawmills.

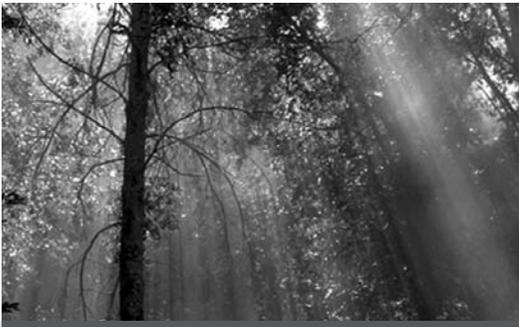
The sawmill industry in Nickerie, on the border with Guyana, complained regularly about the inadequate supply of round logs. Not only were concession contracts difficult to renew, but the supply of logs was probably further reduced because of smuggling to Guyana.

The SBB frequently makes inspection visits to registered sawmills to verify the status of logs. The lack of controls for secondary processors makes it easy for illegally produced timber to enter the chain of custody.

The processing of round logs by small, independent loggers in the forest, or by secondary processors, has an adverse effect on the established industry, which experiences a drop in turnover because of the decrease in wood sales. As a result, the industry now lacks funds for reinvestment and operational maintenance. (ABE, personal communication)

A second issue related to illegal logging and the industry is the price differential between illegally and legally produced timber. Production of sawn timber in the forests tends to be more cost-effective than that achieved by established sawmills. The chain of custody to the consumer is shorter. The fees and other payments to the state are important costs for legal producers that others don't pay. Informal or illegally produced sawn wood is often transported directly from the producer to the secondary industry. Transportation costs are less, and the overhead costs for these small businesses are almost nil. This represents unfair competition for the law-abiding sawmills.

There is no exact information available on price differentials, but one broker indicates that the price of sawn wood sold by sawmills is about 35 percent higher than prices offered by mobile mill operators. The illegally produced timber also benefits the transportation sector in the interior by providing it with a relatively stable income opportunity.



CHAPTER THREE

Forest Sector Institutional Analysis

17

POLICY FRAMEWORK

Major policies related to illegal activities

The national policy for forest utilization was laid down in the Forest Management Act of 1992. The act outlined the parameters for the sustainable and rational use of forest resources, and includes regulations for forest production. From 1997–2004, a number of policy documents on forest management and utilization were prepared in the framework of an FAO advisory assistance project. None of these documents addressed the issue of illegal logging.

In the first half of 2003, the Ministry of Natural Resources prepared the first coherent national forest policy document for the country. The objective of the policy is to enhance the contribution of the forests to the national economy and the welfare of the current and future generations, taking into account the preservation of biodiversity. The issue of illegal logging is mentioned under the thematic goal “land-use planning.” The policy states that illegal logging undermines efforts toward sustainable forest management and is harmful to bona fide companies and the national economy (National Forest Policy 2003). The strategic goal recommended is the reduction of illegal timber harvesting and theft of plants and animals.

The government needs to execute a number of follow-up actions to implement the forest policy. These involve:

1. The preparation a strategic action plan to provide the government with details on the necessary actions and measures to be taken. The project document prepared for the formulation of the strategic action plan restates that illegal logging and the uncontrolled collection of plants and animals for subsistence and commercial markets damage the value of the forest for the forest communities, diminish biodiversity, and are harmful to the local economy. No further mention was made regarding these issues.
2. The 2004 framework of the Development Cooperation Program of the Netherlands with Suriname includes a Policy and Action Program for Sustainable Management of the Non Urban Environment Sector (NUES). The only illegal activities mentioned are for the fishery sector. This document does state the need to increase the capacity for sustainable forest management and greater efficiency in forest exploitation. As a follow-up activity, a project for establishing the new forest management authority (BOSNAS) was prepared, and has been submitted for funding by the government of the Netherlands. The

project for establishing BOSNAS is also part of the ITTO program prepared by the Ministry of Spatial Planning, Land, and Forest Management, which is designed to increase the contribution of the sector to the national economy.

Drivers behind illegal activities in the forest sector

Illegal log production is encouraged by the remoteness of the forest area and the inadequate governmental presence. Concessions and other areas where logging has been approved are not demarcated on the ground. The government does little to control unauthorized access to public forests and their resources.

Only the larger companies take any actions to control the access to their forests. The large forest tracts and access roads are usually uninhabited. Only the major settlements in the interior have police stations. Given the vast extent of the forest area and the very limited capacity of the SBB, they cannot effectively monitor the full forest area (see section 3, “Capacity at the SBB for Monitoring and Control”).

A second driver for illegal logging is the strong demand for cheap timber from secondary processors. The numerous timber markets, furniture producers, and construction companies directly purchase wood to satisfy the needs of their clients. The cheaper prices in the informal sector are very attractive. The weak information database on forest producers and consumers allows products made with illegally produced wood to easily enter the domestic market.

The policy of the government is to strengthen the law enforcement institutions in the country, in particular in the interior. The lack of available funding negates effective implementation of the policy.

Law enforcement mechanisms for controlling illegal logging

The FMA provides a comprehensive regulatory framework for control of illegal timber production. It is described in three articles of the act (articles 32, 44, and 45; SB 1992, no. 80) and consists of:

1. The registration of every log harvested with a unique number and identifying characteristics.

2. Placing of numbered tags on every log harvested that identify specific producers and individual harvesting compartments.
3. Documentation of every log shipment, including the tag numbers and final destination.

The FMA further specifies that a license is needed to operate any log processing plant, and that every carrier of wood products or every person engaged in log processing is obliged to supply statistical data to the SBB whenever requested.

Political will to address illegal activities and stakeholders participation

Despite its extensive character, forestry is not high on the political agenda. Government efforts focus on increasing the economic contribution that renewable resources make to the national economy, and environmental protection (ITTO preproject, 2006). Although illegal logging is not regarded to be a major issue, addressing the issue could be important for the country’s image.

The growing interest of multinationals in the country, and the demand for logs for the Asian market, might stimulate an increase in illegally produced timber. It is in the interest of all groups in the logging sector, namely the established industry, the small producers, the tribal communities, and the state, to deal with this issue. The SBB or BOSNAS needs to take the lead and work with the other stakeholders to clearly define illegal logging and draft additional legislation as needed. This process should consider the situation of the small entrepreneurs in the tribal communities who are earning a living in the gray area of informal production and illegal activities.

Unresolved land rights issues also require consideration. At present, there are no forums for discussing these issues. The framework for forest policy formulation and monitoring identifies the need for periodic consultation with stakeholders to reach consensus regarding specific issues on the elaboration and implementation of the forest policy (National Forest Policy 2003). The major stakeholders in this process include: various segments of the forest industry, including primary and the secondary processors, tribal organizations, government institutions for forest management and regional development, the police and customs offi-

cials. A stakeholder list with contact information appears in annex 1.

LEGAL FRAMEWORK

Legislation

Suriname last updated its forest legislation in 1992, when the Timber Act of 1948 was replaced by the FMA. Since then, there have been ongoing discussions concerning needed adjustments. The SBB has submitted a proposal to the government for amending the act, adding a number of articles that would enable the establishment and functioning of BOSNAS as the country's forest management institution.

Laws aimed at preventing illegal forest activities are:

1. Forest Management Act
2. Criminal Code
3. Economic Decree
4. Nature Conservation Act

Penalties imposed on violators are listed for each law:

- Forest Management Act
 - Warning to first-time offender
 - License revocation
 - Confiscation of logs
 - Public sale of confiscated logs
 - Prohibition of the export of illegally produced timber
- Criminal Code
 - Fines
 - Imprisonment
- Economic Decree
 - Fines
 - Imprisonment

At present, five fixed fines are assigned to violations, all of which are based on the fees or taxes due. They apply to the following violations:

- Felling of undersized trees
- Felling of protected tree species
- Fraudulent documentation of tagged timber

- Transportation of wood without the appropriate waybill
- Unauthorized felling of trees or gathering of non-timber forest products

For the first four offenses, the fine is five times the amount of the fees or taxes due (US\$25–30). The fine for the last offense is set at three times the fees or taxes due (US\$15–18).

Incentives and disincentives to legalize forestry operations

No specific disincentives or incentives to legalize forestry operations have been identified. However, it is felt that the administrative or operational resolution of violations—including the payment of fine—is becoming part of the normal production process. Fines for minor violations are not regarded as punishment, but as alternative methods for complying with legal requirements. An example is “tolerated harvest” in concessions with expired licenses, or outside of specified areas of the state forest. These are situations in which the law and actual policy differ, and enforcement becomes flexible. Excessive or unrealistic requirements and standards are also subject to flexible enforcement. A number of examples of flexible enforcement within the system are given below.

- In expired concessions, logging activities of the former license holders are in some cases tolerated while the person is given the chance to renew his license. In such circumstances, along with the normal fee, a “fine” of 200 percent is charged.
- On the islands in the hydro-energy lake and around the lake, loggers from neighboring communities are still allowed to harvest trees. They have never applied for or been given a license for their activities. They are required to pay twice the normal fees for the logs harvested.
- Harvesting of the natural rubber-producing species (*Manilkara bidentata*) is forbidden. The SBB is aware of the fact that natural rubber production is not very feasible and that there is a big demand for the species as a timber tree. In a number of cases, loggers have harvested the trees and paid the extra fees to get hold of this highly appreciated timber tree.

- The species *Vouaca americana* is not only valuable for furniture making, but is also used widely for the production of utility poles. Trees cut for poles often don't have the minimum diameter of 35 centimeters. No fines are imposed for this type of violation.
- To promote sustainable production under the FMA, logging is only allowed with approved management plans. This is also mentioned in the terms in the concession license, but very few operators have approved plans (Playfair 2006). Since the producers neither have the knowledge nor the means to prepare a management plan, the SBB has introduced the concept of extensive management concessions and is gradually introducing proper management practices.

Procedures in timber sales

Although regulations for timber sales in public forests have been prepared, they have not been implemented. The main constraint has been the difficulty of developing procedures that will allow transparency and equitable opportunities for all potential bidders. The FAO recommended additional guidelines as a supplement to the issuance of concessions (Mitchell 1998).

The government sales of seized timber usually involve small volumes. Sales are advertised in local newspapers and companies are invited to bid. This system seems to be operating adequately. Potential

buyers often include the offending company and other companies operating in the same areas.

Procedures for logging operations

Table 5 shows the required activities and procedures for logging operations and estimated costs.

Shortcomings in the legal system regarding illegal forestry activities

The capacity of the judicial system to deal with forestry violations is very limited, due to the general shortage of judges and prosecutors. Because of this situation, criminal and other legal cases can take a very long time before they reach the court. The judicial system is providing alternatives to deal with the less serious cases outside the court. Within the Council for Public Prosecution a special officer is assigned to deal with forestry-related crimes. After consultation with this public prosecutor, many offenses are handled administratively by the SBB itself. While this is more efficient, it does send a message to potential offenders that harsh punishment is unlikely.

Current penalties are not a serious deterrent to violations. The fines are probably set too low, and violators suffer no other negative consequences for their actions. In some instances, illegally produced wood is seized, but violators can pay the fines and reclaim the timber.

TABLE 5
Logging Activities

Activity		Administrative costs	Estimated cost for compliance
Pre-logging	License Application	US\$3	
Preparatory logging activities	• Preparation of logging plan	—	US\$5,000
	• Delineation of concession boundaries	—	—
	• Execution of harvesting inventory		
	• Preparation of harvesting plan		
• Marking of trees to be felled			
Logging	• Filling in cutting register • Marking stumps • Tagging logs	< US\$1 per form	—

With the exception of the five specific cases where the penalty is fixed, all other violations of the law or the logging prescriptions are dealt with on an ad hoc basis. It is left to the judgment of the forest guard to decide what action to take in a specific case. This is particularly difficult because the SBB is still in the process of bringing the timber sector under the regimen of sustainable production.

Institutional preconditions for improving legal compliance

The institutions responsible for law enforcement must have legal authority to act, and operational capacity in terms of personnel, material, and equipment. Current constraints for industry compliance with the law also need to be addressed.

Overall, government administration in Suriname is very centralized. All government agencies and other relevant offices for doing business are headquartered in Paramaribo. Only a few agencies have permanent installations in the other urban centers of the coastal area. Decentralization of the relevant departments and empowerment of SBB field stations to deal with administrative procedures would remove one barrier for producer compliance. This is particularly true for legal operation of concessions in the interior.

The enforcement capacity in the forest sector is weak. The two main institutions for law enforcement, the SBB and the police, both have insufficient manpower and logistical support to execute control in the forest areas. Effectiveness could be improved through better cooperation, e.g. regular meetings to exchange information, and implementation of joint field operations.

Lead field officers require adequate training and motivation. Training and awareness on the issue of sustainable forest management is needed to make both forest guards and police officers better aware of the consequences of illegal activities and motivate them to take proper action.

Alternative means for the funding of control and monitoring activities for sustainable forest management has been widely discussed. In 1994, a process led by the FAO project was set in motion to make the forest management authority independent from the direct political and financial control of the central government. When the initial project funding

for the SBB ran out, this institution again became dependent on the central government and its budgetary procedures. This greatly delayed operations and hindered the execution of tasks.

It has been suggested that the SBB should be self-funding in order to exercise its responsibilities effectively, and with a minimum of bureaucracy and delay. A management fee paid by forest operators would fund the monitoring and control activities of the SBB and BOSNAS, once it is established.

Monitoring and control system

Proper law enforcement requires reliable information systems to determine the legal status of roundwood and timber. The SBB has put a great deal of effort into the development of a tracking system to monitor the flow of wood along the production chain. The key is the assignment of a unique number to each log, which is linked to a cutting register for each harvesting compartment in the concession area, and waybills during the transport. The systems used by the SBB include the LOGPRO timber production database and a geographic information system (GIS) database for the forestry areas.

Agencies in forest law enforcement

Relevant agencies in forest law enforcement are:

- The Forest Service (LBB). The LBB is the legal authority in charge of forest management in the broadest sense of the word, including nature conservation
- The Nature Conservation Division of LBB is the designated CITES authority in Suriname. It is responsible for issuing export permits for all CITES species
- The Foundation for Forest Management and Production Control (SBB) works under the mandate of the LBB and is involved in the management of the production forests regarding the supervision and control of logging.
- The Council of Public Prosecution of the Ministry of Justice. The public prosecutor is responsible for the prosecution of violations of the law, including the Forest Management Act.
- The National Police Force has the authority to take action on violations of any law.

Capacity at the SBB for monitoring and control

The control and monitoring system of the SBB is comprised of two main sections:

1. Production Planning (PDM)
2. Production Control (PCM)

A total of 55 people are engaged in the monitoring, control, and enforcement activities of these sections. Production Control has a staff of 50, and the remaining five people work in Production Planning.

The Production Planning Department monitors preproduction activities, including:

- Assessment of long-term exploitation plans (outline management plan) and the harvesting plan
- Field checks and assistance in the demarcation of concessions and the layout of production compartments and roads
- Field checks of forest inventories
- Field checks of the selection and marking of trees for felling

Law enforcement is the responsibility of 50 forest guards in the Production Control Department. Thirteen are authorized as police officers to take legal action under the regulations of the Code of Criminal Procedure.

The Production Control Department has eight stations, three of which are roadside check stations, and the other five are used as base stations for field operations. Each field station is manned by two to three forest guards at a time. The department also has sawmill and export control units. The sawmill control unit consists of four to six persons, and the export control unit consists of four persons, of whom three are timber inspectors.

From the base stations, the forest guards make regular visits to the production areas in their territory. Their main function is to review and verify felling records. This is done at the request of the logger and through random visits. Stumpage control is done in the forest, and registries and tags are checked at the forest landings. The base station team includes a forest guard with the authority of

an extraordinary police officer, a log scaler, and a tree spotter.

The roadside stations are manned around the clock. They exercise control over wood transport, and truckers are obliged to stop at roadside field stations and have their waybills checked by the forest guards.

Sawmills are the final control point for timber entering the domestic market. The main objectives are to identify illegally produced timber and to make sure that the required fees are paid on all logs entering the market. The sawmill control unit makes regular visits to sawmills to verify the origin of the logs. Untagged timber is considered illegal and is confiscated.

The sawmill control unit seeks to visit each sawmill at least twice a week. With about 50 operational sawmills, this implies 100 visits per week. Given current staffing, this gives the inspectors barely enough time to check all incoming logs. Inspection visits have been expanded to include two or three retailers of minor wood products. Other consumers of logs or roughly processed wood are not yet included in the inspection rotation.

When advised of illegal activity, the control teams respond as possible. The sawmill control unit is also in charge of controlling the mobile mills in the forest areas. Forest guards usually are aware of the location of the mobile mills and their movements. Currently no regular inspection visits are made to these sites.

Monitoring and control activities in timber production.

Control and monitoring is inadequate due to the institutional weaknesses of the SBB. There is a shortage of forest guards, and SBB vehicles are not in good operating condition. The SBB has started a new training program and expects to graduate 30 new forest guards. This will bring the total number of forest guards available for monitoring and control to about 75. In the next cycle, another 30 people will be trained.

A major problem for enforcement and monitoring is the large production area and the dispersion of operational sites. This makes field monitoring and control of all production activities rather unmanageable and expensive.

TABLE 6
Monitoring and Control Activities

Activity		Indicator	Responsibility
Pre-logging	Application for license	Assessment of application	MIN of RGB/SBB
Preparatory logging activities	Preparation of logging plan	Assessment of plans	PDM
	Delineation of concession boundaries	Monitoring positioning of boundaries	PDM/GIS office
	Execution of harvesting inventory	Monitoring execution and results	PDM
	Preparation of harvesting plan	Assessment of plans	PDM
	Marking of trees to be felled	Monitoring	PDM
Logging	Filling in cutting register Marking stumps Tagging logs	Control of cutting register Stumpage control Verification of tags	PCM/Base station forest guards
	Transport of logs with waybill	Control of waybills Monitoring quantity Verification of tags	PCM/Roadside station forest guards
Processing	Sawmilling	Sawmill control Verification of origin of wood	PCM/Sawmill unit
Export	Grading	Verification of origin of wood Quality and quantity control	PCM/Wood inspectors; Customs

Monitoring of other forest production activities

SBB monitoring activities are focused on production activities on public forest areas (e.g. concessions and areas under incidental cutting licenses) and commercial timber production in communal forests. Production of wood on private land and subsistence production in communal forests is not monitored by the SBB, except when timber from these areas is transported off site.

Illegally harvested logs from public forestland are detected through roadside inspections and visits to sawmills. The production of minor wood products is also monitored as possible, and the quantities of the different products transported are registered. The production of non-timber forest products, which is mostly done on an informal basis, is not monitored.

Dealing with violations

In the past, violations were reported to the general director of the SBB. All cases were settled without

taking formal legal action. Nonetheless, a number of violations of the Forest Management Act are also covered under the regulations of the Decree on Economic Crimes, and therefore considered more serious offenses. Since mid-2005, the SBB has referred these offenses to the judiciary.

From July to December 2005, about 150 offenses were reported. In the first eight months of 2006, an additional 164 cases were reported. The official policy is to settle less serious offenses and incidental what is meant by incidental violations by first-time offenders administratively within the SBB. Only 15 to 20 percent of the reported cases were brought to the attention of the public prosecutor. Normally, the Council for the Prosecution of Criminal Offenses sends its cases to cantonal judges, or settles them by assessing pre-established fines. Very few violators of the FMA are dealt with by the cantonal judges. In 2005, only two offenders were convicted in these courts.

The probability of detecting illegal activities depends on the type of activity, and the product and quantity involved. The detection rate of illegally

obtained round logs is high, according to the SBB. With the log tracking system operational, every legally produced log that appears at landings, on the road, or at processing sites, can be traced back to its origin. Untagged logs are considered illegal.

Illegal sawn wood transported in closed container trucks is more likely to go undetected. However, the forest guards with police authority can inspect suspicious freight in private and public vehicles.

Criminal offenses are settled within two weeks of detection. This is the result of assigning a special officer dealing with forest sector violations in the Council for Prosecution

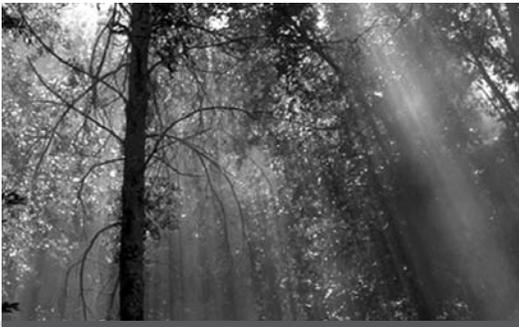
The issue of corruption

The management of the SBB does not believe that a culture of corruption exists within the organization. Although the salaries of the forest guards are not high (US\$300 per month including allowances) the log tracking system is a strong deterrent to corruption. Discrepancies in the registered volumes at the checkpoints can be easily detected (SBB, personal communication). Given the likelihood of detection, the private sector appears unwilling to pay for the extra costs involved with corruption. Petty corrup-

tion may occur when forest guards ignore certain violations.

In earlier years, corruption did play a role in the allocation of timber rights. Both political favoritism and bribery by multinational brokers threatened the equitable issuance of concessions and licenses. Political favoritism was a problem for several decades when political friends and sponsors of governmental parties were given concessions without meeting the legal requirements. Cases of bribery became known after 1994, when several multinationals from Southeast Asia came to Suriname and requested large tracts of forests from the government. To get access to the political decision makers, bribes were offered to civil servants in relevant posts.

In the past few years, corruption has decreased noticeably. This is due in part to the increased transparency of the procedures for obtaining licenses and concessions. Even though this situation no longer occurs, large areas of forest remain in the control of nonproductive companies. As a result, there are fewer areas available to bona fide loggers, and illegal harvesting in inactive concessions and unassigned public forestland is more frequent than it would otherwise be.



CHAPTER FOUR

Underlying Causes of Illegal Activities

25

SOCIOECONOMIC ROOT CAUSES OF ILLEGAL ACTIVITIES IN FORESTRY

The socioeconomic situation of forest producers

Small entrepreneurs, with an annual roundwood production of less than 2,000 cubic meters, account for more than 70 percent of all logging operations in Suriname. Violations by these producers are often attributed to their inability to follow administrative procedures or fulfill the technical requirements for sustainable timber production. Both workers and management alike have little or no formal education and lack awareness of the requirements for sustainable forest management or understanding of the legal regulations. This is also true for mid-size companies, and to a certain extent for the multinational (Asian) companies.

The main cause of illegal activity is the high poverty rate, which is especially severe for tribal peoples in the interior. The lack of alternative employment opportunities for workers from indigenous and maroon communities has pushed many to become subemployed in the informal sector. They make up a group of local entrepreneurs who use chain saws or mobile sawmills and work in both the communal and public forests.

The opportunities for these individuals to obtain timber-cutting rights are currently limited.¹ In addition, law enforcement officers and forest guards are not trained to deal with tribal people, and lack sufficient time and skills to settle matters satisfactorily for all stakeholders.

The issue of good governance

There is a general lack of good governance in Suriname. The severe economic crisis of the past few decades continues to limit the effectiveness of governmental institutions, and Surinamese society in general. According to the Index of Economic Freedom indicates that Suriname has an overabundance of governmental controls in pricing, licensing, and other areas. This partially applies to the forest sector. Illegal activities in both commercial and subsistence production are often related to the bureaucratic, time-consuming administrative procedures necessary for obtaining logging licenses, and to comply with the requirements of the monitoring and control system. The forest sector complains that the SBB's production control system actually hinders efficient logging operations.

1. In the past, every district commissioner had land at his disposal, which he could allot for short periods to small producers.

The industry also argues that the SBB, under the authority of the Suriname Forest Service, lacks a legal mandate for executing control over forest production, and it therefore can be said that the state is also involved in illegal activities.

Poor governance and the acceptance of illegality in the interior are also seen as the results of the past internal unrest in the country (1986–92). The conflict arose between an armed group of maroons and the national army. It eventually spread across the country and involved all the maroon and indigenous people's tribes. Since the conclusion of fighting, the situation of the people in the interior has failed to improve. There are still tensions underneath the surface, and the national government is blamed for not granting formal rights to the tribal populations for the lands they occupy and have used for centuries.

ECONOMIC INCENTIVES AND DISINCENTIVES TO COMPLY WITH EXISTING LAWS

A difference in production costs usually exists between illegally and legally produced timber. The cost of compliance with the Forest Management Act includes administrative costs for monitoring by the SBB, fees paid to the state, and extra actions required for sustainable production. In a situation where the timber market is open to both illegally and legally produced wood, it is understandable that these costs can be considered an optional burden for producers. The registered saw mills have frequent control visits by the SBB, and supply themselves largely from legal sources, but there is virtually no monitoring of the furniture sector, the independent wood markets, and the construction sector. Small producers converting round logs into sawn wood with either chain saws or mobile mills deliver sawn wood directly to these secondary industries and can commercialize their production for about 35 percent less than the sawmills (ABE).

A disincentive for taking part in illegal activities is the possible loss of the wood and the cost of fines. The highest penalty is confiscation of the wood and payment of a fine of five times the normal fees. It is doubtful that the penalties as set are considered a

significant disincentive for the industry. Sometimes it appears that the larger operators consider the payment of these penalties a part of the cost of doing business.

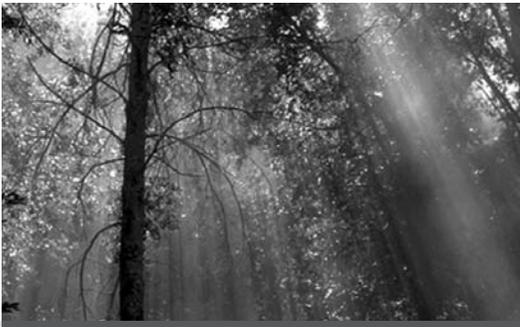
KEY ISSUES WITHIN THE GOVERNMENT AFFECTING ILLEGAL LOGGING

One general cause for the poor compliance is the lack of sufficient capacity in the judicial system. With the control system based on log tracking set up by the SBB, it should be possible to detect the origin of every log encountered at whatever stage in the production, transport, and processing cycle. However, the system can only function properly if all production sites are identified and all destinations for timber are monitored.

Control of timber transport is almost completely limited to the more detectable log shipments. Smaller-dimension wood products, such as sawn wood, can pass by the control stations without detection by forest guards. The SBB does not have the manpower and infrastructure in place to adequately control forest production and extend the monitoring further. The poor financial status of the SBB is a principal cause of its institutional weakness. The SBB currently operates with government subsidies, rather than the management fees foreseen when the SBB was established in 1998.

Improved cooperation between police and the SBB would promote more effective control. The implementation of enforcement activities is somewhat contradictory. Policies and management systems for sustainable timber production are still evolving, and in many instances, no clear-cut rules apply. The policy of "toleration" of infractions by "first-time" offenders may send the wrong message to loggers. The same issue applies to administratively settled cases in which the fines are low and the confiscated wood is returned to the loggers once the fines are paid.

Another aspect of tolerance is illustrated by the fact that 30 percent of the concessions are not active, regardless of the law that stipulates that such concessions should be withdrawn. The authorities are sending out mixed messages that don't help move the sector toward greater legality.



CHAPTER FIVE

Knowledge Management

NATIONAL FOREST DATABASE

The government is criticized for not having adequate data available on the forest sector. This is seen as one of the causes for poor land-use planning and concession management (ITTO 2006). Suriname lacks a proper forest resource assessment, and the value of the total timber stock is not known. Furthermore, no information on potential sources of financing forest information system is available (ITTO 2003).

Improved management of a forestry database and GIS will lead to better planning at the policy and operational levels. The 2003 National Forest Policy recommends establishing a central information system for data storage and processing of land and land tenure (cadastre). The business community would gain from having such a database and information at its disposal. Another ITTO recommendation calls on the government to increase transparency concerning the availability and quality of concessions, as well as the selection and granting process. More information is needed about current stocking as a basis for sustainable forest management and sound concession policy (ITTO 2003).

LOGPRO is the SBB's system for the monitoring of log production and flow. It is a computerized system showing the log origin, volume, and destination. The database on wood imports and exports is maintained by the General Bureau for the

Statistics, which uses the Ascicuda system developed by customs officials. Raw data on exports is provided by the SBB. The concession database developed by the SBB uses a GIS and links a forest land-use map with actual log flow. The information is regularly updated with information from the other land management departments like the Land Management Service and the Institute for Management of the Geographical Land Information System (GLIS).

Compliance with legal and regulatory standards is monitored by the SBB, and includes the type and number of violations, and the persons and companies involved. The Office of the Public Prosecutors maintains a separate database on the offenses brought to this office.

CAPACITY FOR MAPPING AND DEMARCATION OF FORESTLANDS

The relevant government institutions have the basic skills to use GIS and GPS technology for mapping and demarcation of land. The SBB has played a significant role in exploring the possibilities of using this technology in Suriname. However, the existing capacity of GIS and GPS technology is insufficient to fulfill in the needs of the sector. (WWF 2005).

A number of SBB forest guards are trained in the use of GPS equipment and other measuring instru-

ments. They use these skills during their field inspections for production control, and for monitoring the demarcation of concession boundaries. The regulations require that surveyors supervise boundary demarcation. However, the number of authorized surveyors is small, and they are generally not available for work in remote areas. For this reason, the SBB allows loggers to provisionally mark boundaries, which are then verified by the SBB with GPS. In case of disputes, the state land surveyor has decisive authority. It is worth noting that the land registration system in Suriname—more precisely the geographical coordinate system applied on basic topographic maps—does not fully support the use of GPS.

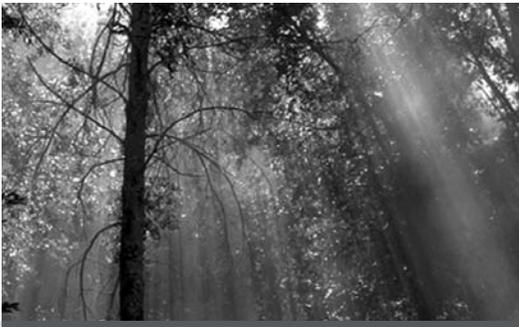
Forests assessment and database information availability to the public

The government has a central role in the storage and retrieval of information for the forest industry and the public. The SBB has put considerable resources into this effort. Its datasets, with information on forests, forest use, and timber production, is largely available to the public. Proprietary information on license and concession holders remains confidential. Although data is not officially published, it is available on request. At this time, the proposed Web site of the SBB is not operational and does not allow access to the data on the Internet.

The SBB's GIS unit produces maps of specific parts of the production areas, including inventory maps. In general, it is responsible for the management of the GIS database and the supply of up-to-date forest production maps to the other departments of the SBB, and to external institutions. The Department for Production Planning provides technical advice and information to potential investors.

The organizations of the timber industry produced the CD-ROM *Sustainable Forest Use Portrayed*, for the Suriname forest industry in 2004. The CD-ROM provides background information on sustainable forest management in Suriname, including information on forest legislation, export regulations, guidelines for reduced-impact logging, and a database of the forest industry.

The Center for Agricultural Research in Suriname (CELOS) is a second site for database storage and retrieval. It is involved in research on the assessment of natural resources. By interpretation of remote sensing data, and with the use of GIS technology, CELOS made the first publicly available digital database on the natural resources of Suriname. Information on the prevailing forest types, and information on the provisional demarcation of the specially protected forests and the timber production areas, is based on CELOS' classification, done in 1999 through the interpretation of Landsat TM data. This information is available to potential users and is provided at cost.



CHAPTER SIX

Forest Sector Competitiveness

INTRODUCTION

Since the formulation of the National Forest Policy in 2003, a number of other initiatives have been undertaken by the government to develop policies to deal with the main problems of the stagnant development of the forest sector. The private sector also produced a policy document promoting timber production in the country. In the process of identifying strategies for the implementation of the National Forest Policy, stakeholders mentioned the lack of commitment from the government as the underlying cause for the stagnant development. ITTO has twice provided assistance to the Suriname government, namely in 2003 and 2006. In this section, the main factors that affect the sector as identified through several processes will be used to discuss the sector's competitiveness.

The majority of the Surinamese timber operators are categorized as medium and small enterprises. Individual capacity is much reduced than other Amazonian countries and production is irregular. ITTO's 2003 analysis of the forest sector concluded that Suriname needs an enabling, coherent policy and legal framework, together with a more entrepreneurial private sector, if it hopes to become a net exporter of wood products. The private sector has

also identified the lack of an enabling environment as one of the main constraints that depresses the forest sector (ITTO 2006). The government perceives the poor management of the forest companies as the main constraint on the forest sector.

The key groups that can be identified in the forest production sector are:

- Large domestic forest companies
- Small- and medium-size domestic forest companies
- Local entrepreneurs from tribal communities
- Tribal communities
- Foreign companies

While each segment's competitiveness is affected differently, the poor environment for production is a constraint for all. As mentioned earlier, the potential sustainable timber production varies between 500,000 and 1.5 million cubic meters of roundwood per year. However, the actual timber production has for decades averaged only 150,000 cubic meters per year. This means that the available potential is utilized at only 10 to 30 percent of capacity. The most important restrictions and constraints that affect competitiveness are discussed below. They are not listed in any order of priority.

RESTRICTIONS AND CONSTRAINTS AFFECTING FOREST SECTOR COMPETITIVENESS

Forestry legislation

For many years, it has been observed that there is a need to revise the current Forest Management Act. In 2003, ITTO recommended revising the act. In particular, ITTO suggested a change in the design of the forest revenue system and the criteria for determining concession size and duration. These aspects need to be linked in such a way that they promote sustainable forest management, as well as strengthen the private sector. The changes would further minimize the need for administration and control. ITTO's recommendations are comparable with the FAO's advice to the government for revision of the revenue and concession systems. Under the current concession system, only companies with processing facilities can be granted a mid- to long-term concession, and only a vertical "integrated" company can receive a long-term concession. This hampers the sustainability and the security of the investments of logging companies.

Capacity and professionalism in the forest sector

Much of the local timber industry originated from family businesses established in the 1950s. Management is closely held, and technological development has been minimal. Only a small number of logging enterprises are practicing intensive management, while even fewer follow management plans. As a result, logging is very inefficient and not cost-effective. The average felling loss is estimated at 20 percent, while the processing losses are estimated to reach 60 percent.

There is a shortage of competent staff at all levels, with little interest in a career in forestry. Jobs in the forest sector are often associated with low pay and unattractive working conditions. The domestic industry (with the exception of a few larger companies) does not make good use of the country's existing vocational training institute to upgrade the level of its forest workers. This has contributed to the loss of trained workers and professionals to foreign companies and forest-related international organizations.

Smaller companies, including entrepreneurs from the tribal populations in the interior, often have only minimal on-the-job training, and lack managerial skills to run a business profitably. At the same time, workers and management of foreign companies, especially from South East Asia, lack knowledge of the specific forestry conditions in Suriname.

The limited institutional capacity also affects forest administration, research, and training institutions, which hinders their capacity to promote sector development. The study Forest Policy Implementation concluded that the sector organizations have a shortage of capacity and financial means to lead and guide private industry. The Chamber of Commerce has helped members of the sector join forces to negotiate forestry-related issues with the government.

Land rights

The lack of formal rights to resources surrounding their villages has long been a constraint on development of local entrepreneurship within the tribal communities. More broadly, the issue of access to forests and traditional use rights in concessions remains unclear for the stakeholders and leads to violations of the forest law.

Forestry infrastructure

Roads and bridges are in an alarmingly bad state due to inadequate maintenance. The road network is not suitable for heavy loads, especially during the wet season. Tribal villages depend upon these roads, and suffer the consequences of road deterioration. Small-scale producers of sawn wood and other forest products are less affected since they use lighter vehicles that cause less damage. Local entrepreneurs even transport sawn wood using public buses. Infrastructure problems don't end when the logs reach the capital. The harbor facilities are not suitable for the unloading of heavy and bulky logs, which is another bottleneck for the industry.

Credit and investments

Limited access to credit is a general problem for the productive sector in Suriname. The forest industry is unsatisfied with the treatment it receives from the

banks (National Forest Policy 2003). Various companies have had problems getting investment loans. The banks classify the forest sector as “highly risky.” The conditions in the interior, including the absence of police officers and reduced public safety, extensive illegal logging activities, and poor compliance with international standards, contribute to the poor record companies have in repaying loans. (R. Kalloe, personal information). In Suriname, the granting of credits is coupled with the possession of real property, and banks do not accept concession licenses as collateral.

Wood transport companies, exporters, and independent forest enterprises with rights over agricultural land and other properties, are eligible for credit. Even for them, the conditions are unfavorable. It is somewhat easier for wood processors and market traders to obtain credit because their sales are considered guaranteed, making repayment less uncertain. Most companies are not aware of alternative sources of funding, and even if they were, their managers’ lack of formal education would make it difficult for them to access it.

Communication and cooperation

The lack of effective communication between stakeholders in the sector is a serious problem. Periodically, stakeholders get involved in major forest policy processes, but to date no permanent forum with the government exists. This applies to both communication by the government with the private sector, as well as with the people of the interior. ITTO (2003) remarked that the government should work more closely with the private sector, social organizations, and other stakeholders to develop a common agenda to promote integral and sustainable forest management. ITTO further recommended developing more consultative and participatory mechanisms to involve stakeholders as much as possible in decision-making processes.

INCREASING SECTOR COMPETITIVENESS

It is generally recognized that there is an uneven playing field for investors in the forest sector. Foreign investors receive preferential fiscal treatment, while producers from tribal communities

have fewer regulations with which to comply. Illegal timber producers operate at lower costs. Eligibility requirements in the sector should include concrete and verifiable standards for the education, training, and skills of management and forest workers (ITTO 2003).

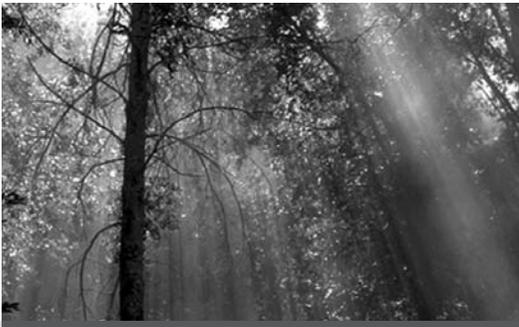
The suggested policy measures to improve sector competitiveness are based on strategic development initiatives of the government. The latest of these initiatives is the execution of the ITTO pre-project “Improved strategies and training needs assessment to achieve sustainable forest management in Suriname.” This project lists these strategic objectives:

- Revise the Forest Management Act and forest regulations
- Promote investments in the forest sector
- Improve compliance in the sector
- Provide information and support for sustainable forest management
- Improve capacity of industry organizations and public sector agencies
- Revise land-use and land-rights systems
- Promote democratic forms of management of communal forests
- Improve cooperation
- Increase the information base

Key stakeholders for increasing competitiveness of the sector include:

- The Ministry of Physical Planning, Land, and Forest Management
- The Foundation for Forest Management and Production Control
- The Ministry of Regional Development
- The Ministry of Justice and Police
- The sector organizations ASHU, ABE
- Chamber of Commerce
- Tribal organizations

Effective implementation of the measures will only be feasible if stakeholders can agree on transparent participatory processes for the execution and monitoring of activities and projects. Stakeholder consultations organized and led by the government have not resulted in full acceptance of the recommendations.



CHAPTER SEVEN

Conclusions and Recommendations

From the discussions with the experts, it is apparent that illegal logging is not identified as a major issue in Suriname. However, addressing illegal activities is important for the country's international and national image. In 2005, the total amount of illegally produced timber recorded by the SBB amounted to almost 18,000 cubic meters of roundwood equivalent, which represents almost 10 percent of the total registered production. The SBB estimates that an additional 20 percent (36,000 cubic meters) went undetected.

Illegal activities in the forest sector were much more severe and extensive in the previous decade. Demand for roundwood by multinational forest companies was high, and the country experienced uncontrolled harvesting. Political favoritism and bribery made things worse. Since then the situation has improved, but Suriname's rating on the Transparency International Corruption Perception Index is still very low (3.2).

Poverty and the lack of good governance seem to be the main underlying causes for those segments of the population who operate small-scale enterprises in a sphere of informality or illegality. On the plus side, political will to improve the situation in the forest sector has been demonstrated by the approval of the Council of Ministries for the establishment of a strengthened forest management authority.

The following conclusions and recommendation come from this quick assessment of the state of illegal activities within Suriname's timber sector.

- The logging sector over the past decade was underdeveloped, consisting mainly of small entrepreneurs struggling to make a living. The number of more technologically advanced and larger companies is small, but increasing. This could lead to an increase in commercially driven illegal activities. The growing interest of multinationals to invest in the country could also lead to an increased volume of illegally produced wood. Institutional capacity building should be a higher priority in anticipation of these potentially negative impacts.
- The lack of an enabling environment is regarded to be the main constraint for development of the forest sector. ITTO suggests revising the Forest Management Act, especially regarding the forest revenue system and criteria for concession size and duration in order to promote sustainable forest management and a strong private sector.
- Poor management of forest companies and lack of professionalism is another constraint on the sector. Currently, only a small proportion of the

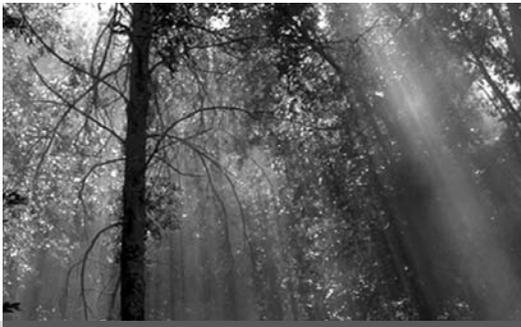
logging enterprises are practicing intensive management. On all levels, there is a shortage of competent staff, and there is little interest among young people for a career in forestry. At the same time, there is a lack of adequate data on the forest sector.

- Both commercial and poverty-driven illegal activities are promoted by the bureaucratic and time-consuming administrative procedures for obtaining logging licenses and for adhering to the administrative requirements for the monitoring of production by the SBB. Development of a new concession policy is one strategic action mentioned in the forest policy that might contribute to resolving this issue. Decentralization of the authorities to deal with administrative procedures would remove another barrier for the producers to meet the administrative requirements.
- Violations by small and illegal producers (40 percent of whom are descendants of tribal populations) are often related to their inability to meet the technical requirements for sustainable timber production. Small producers usually have only a limited amount of training in the forest sector and lack managerial and business skills. The SBB is expected to address the lack of knowledge about the requirements for sustainable forest management by implementing an awareness project with the small producers and communities in the interior. This program should be expanded to include all producers in the sector.
- Poor governance and law enforcement, along with the acceptance of illegality in the forest areas, might be the result of the past internal war, continuing violence in the interior, and the economic crisis in the country. The log tracking system for timber production and GIS database for forestry land use are the SBB's basic instruments for production control. However, the human capacity required to use these tools is inadequate. Establishment of a self-funding forest management authority will help to solve the issue of inadequate control. The implementation of the Ministry of Justice Sectoral Plan should contribute to improved law and order.
- The tendency to settle offenses administratively, without judicial intervention, is seen as a weakness in the administration and enforcement of laws. Although penalties are partially established, there is still no single, uniform treatment of violations. This situation is not unique to the forestry sector. Overall, the judicial system has inadequate capacity, and suffers shortages of judges and public prosecutors. More transparent and clear implementation of the regulations is needed. Clear agreements between law enforcement institutions on how to deal with typical situations could help resolve the problem. Law enforcement officers at the SBB and relevant police officers need to improve their awareness, knowledge, skills, and motivation concerning enforcement of the forestry act. It is further recommended that all staff improve their knowledge of sustainable forest management issues.
- The implementation of sustainable timber production systems in Suriname is still evolving. A number of regulations to ensure sustainability in the public production forests are not yet mandatory for all producers. Another problem is caused by the fact that certain texts do not reflect current policy. This can be partially resolved by making clear cooperation agreements within law enforcement institutions.
- Border trade issues with Guyana continue to be a major problem for the sector. Illegal logging can easily go undetected due to the lack of effective law enforcement at the border, and the general remoteness of the area. Timber smuggling into Guyana requires further discussion with the Guyanese counterparts of the SBB and higher levels of the government.
- Illegal activities of tribal community descendants in the forest sector are frequently poverty related. The main driver behind illegal activities is the lack of employment opportunities. The population in the interior is considered to be less developed, and has a higher poverty rate than the coastal area. The implementation of a development program focused on alternative sources of income generation for the interior could alleviate the poverty issue. In recognition of the situation, the government has formulated a devel-

opment program for the interior that addresses basic human needs and infrastructure development to promote other income-generating opportunities. Implementation of this plan is recommended.

- The lack of clear user rights for tribal communities in regard to the resources surrounding their villages has long been a constraint to the development of local entrepreneurship. The delay in

solving land right issues makes their traditional production activities (logging and mining) illegal, even on their traditional village (forest) land. This is even more of an issue as production is becoming increasingly market oriented. Attention has to be given to the recommendation in the National Forest Policy for the government to start a formal, structured dialogue on the matter of land tenure rights with the tribal communities.

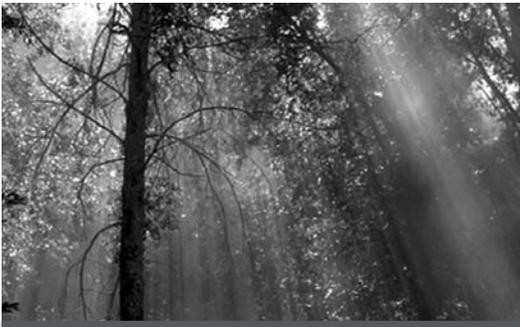


ANNEX I

Key Actors and Contacts for Addressing Illegal Activities

TYPE OF ORGANIZATION	CONTACT PERSON	ADDRESS
Tribal people's organizations		
Federation of the Council of the Aucan Traditional Authorities	Mr. J. Aviankooy	Abongrastraat 12/Flora-A
National Federation of Maroon Organizations	Mr. Salomon Emanuels	Anton de Komstraat 39
Maroon Women Network	Ms. F. Grand-Galou	Verl.Keizerstraat 92
Organization of Indigenous Peoples of Surinam (OIS)	Mr. N. Aloeman	Johannes Kingstraat 7, Rainville
Sanomaro Esa Foundation (indigenous women's organization)	mw H.T.Vreedzaam-Joeroeja	p/a PAS - Verl.Keizerstraat 92
Association of Indigenous Chiefs in Suriname (VIDS)	mw Drs. Laureen Jubithana	p/a PAS - Verl.Keizerstraat 92
Wanhati/Council of the Saramaccan Traditional Authorities	Mr. H. Jabini	p/a (PAS (via VIDS) - Verl. Keizerstraat 92
NGOs		
Bureau Forum NGOs	Drs. H. Wesenhagen	Henck Arronstraat 126 bv
Caribbean Institute	Ms. Maureen Silos	Hoekstraat 5
Conservation International (Suriname)	Drs. W. Udenhout	Kromme Elleboogstraat 20 /
Suriname Conservation Foundation	Mr. Johans N.	Hofstraat 1, 4e Etage

TYPE OF ORGANIZATION	CONTACT PERSON	ADDRESS
UNDP/Assistant Resident Representative	Mr. M. Ooft	Heerenstraat 17
Community Development Fund Suriname	Mr. Roland King	Kwassiestraat 8
World Wildlife Fund (WWF)	Mr Ir. G.J. Zondervan	Henck Arronstraat 63
Research organizations		
Tropenbos Suriname	Ms. Drs. Shanti Adhin	p/a Prof. Dr. Ir. Ruinardlaan
Institute for Social Sciences; University (IMWO)	Drs. E. Akrum	Leysweg - UvScomplex
Faculty for Agrarian Production; University of Suriname (UvS)	Mr. A. Sheikkariem	UvS-complex/Leysweg
Center for Agricultural Research in Suriname	Dr. R. van Kanten.	Prof.Dr.Ir. Ruinardlaan
Governmental organizations		
Ministry of Natural Resources	Ms. Held	Mr. de Mirandastr. 13-15
Ministry of Labor, Technological Development, and Environment	H. Aroma	Heerenstraat 40
Ministry of Regional Development, Sipaliwini District	Mr Petrusi	Zwartenhovenstraat 225
Council for the Development of the Interior	Mr Rudi Strijk	Zwartenhovenstraat 225
Ministry of Spatial Planning, Land Management and Forests	Ms. Marie Djosetro	Cornelis Jongbawstraat
Nature Conservation Division of the Forest Service	Mr. B. Drakensteyn	Cornelis Jongbawstraat
National Institution for Environment and Development	Ms. Syliva Ang	Onafhankelijkheidsplein
Foundation for Forest Management and Production Control	Mr. I. Krolis	Ds. M.L. Kingweg pc 283
Fund for the Development of the Interior (FOB)	Mr. Steven Alfaisie	p/a Terrein Commissariaat - Van Sommelsdijkstraat 2
National Planning Bureau	Mr John Bouterse	Dr. Sophie Redmonstraat 118
Forest industry		
Platform Timber Sector (PHS)	Mr. A. Gesser	
Loggers Association; ABE	Mr. B.Chin Ten Fung	
Sawmillers Association; ASHU	Mr. K. Soeltansingh	



References

- Asraf, M., R. Matai, and F. Horsten. 2000. Preliminary results of a survey of the wood processing industry, Ministry of Natural Resources, FAO.
- Emanuel, S.S.L. 2002. We hebben honger daarom kappen wij, Paramaribo, Suriname.
- FAO (Food and Agriculture Organization). 2005. "Best Practices for Improving Law Compliance in the Forestry Sector." Forestry Paper 145, FAO, Rome, Italy.
- Healy, C., and M. Heemskerk. 2005. Situation analysis of the small-scale gold mining in Suriname. World Wide Fund for Nature.
- Henderson, J. 2002. Forest and Freshwater Resources—Section 1: Forest Management, Suriname.
- ITTO International Tropical Timber Organization, 2006. "Improved Strategies and Assess Training Needs to Achieve Sustainable Forest Management in Suriname. Pre-project papers. International Tropical Timber Organization.
- ITTO (International Tropical Timber Organization). 2003. "Diagnostic Mission Suriname." Report. International Tropical Timber Organization
- Kambel, Ellen-Rose. 2002. *Resource Conflicts, Gender, and Indigenous Rights in Suriname; Local, National, and Global Perspectives*. Leiden, the Netherlands.
- Kambel, E., and F. MacKay. 1999. "The Rights of Indigenous Peoples and Maroons in Suriname." Document No. 96, International Working Group for Indigenous Affairs, Copenhagen, Denmark.
- Matai, 2001. Productie van kleine houtwaren, SBB.
- Matai, R. 2006. Chain saw milling study. Country report, SBB, Paramaribo, Suriname.
- Matai, R. 2004. "Mobile and Portable Saw Mills." Internal paper. SBB, Ministry of Natural Resources. *National Forest Policy*. Paramaribo, Suriname 2003.
- Ministry of Natural Resources. *Policy and Action Program for Sustainable Management of the Non Urban Environment*. Paramaribo, Suriname, 2004.
- Ministry of Planning and Development Cooperation. *The Multi-Annual Development Plan; 2006-2011*. Paramaribo, Suriname, 2006.
- Mitchell, Andre. 1998. Forest Advisory Assistance to the Ministry of Natural Resources, Forest Concessions, Food and Agriculture Organization, Paramaribo, Suriname.
- Morroy, Henk. 2002. "Mineral Resources." Discussion paper for the development of a framework policy and strategic plan for the sustainable management of the Non Urban Environmental Subsector in Suriname.
- Playfair, M., and K. Tjon. 2004. IPCC, National Report on Emissions and Sinks Reductions of

Greenhouse Gases from Changes in Land Use and Forests, NIMOS, Paramaribo, Suriname.

Playfair, M., and R. Somopawiro. 2006. "Validation of 15 Priority Indicators for Amazon Forest Sustainability in Suriname." Food and Agriculture Organization, Paramaribo, Suriname.

Sanchit, R. 2005. Preliminary outline for a working draft of a national action program concerning the United Nations Conference on Environment and Development in Suriname; Ministry of Labor, Technological Development, and Environment, Paramaribo, Suriname

Sizer, N., and R. Rice. 1995. *Backs to the Wall in Suriname: Forest Policy in a Country in Crisis*. World Resources Insitute, Washington DC.

Skephi NGO Network for Forest Conservation in Indonesia. 1997. Indonesian Loggers in Surinam, Report on MUSA Indo-Surinam N.V.

Smith, Patricia S. 2006. Het Openbaar Ministerie in relatie tot de milieuwetgeving in theorie en

praktijk; stageverslag; AdekUS, Fac. Maatschappij Wetenschappen; studierichting Rechten

Stichting Planbureau Suriname, Meerjaren Ontwikkelingsplan 2006–2011, Regering van Suriname, Juli 2006

Web page; Index of Economic Freedom, 2006 Heritage Foundation, "Index of Economic Freedom," and URL

WWF (World Wide Fund for Nature). 2005. "Building Capacity at the Implementing Institutions to Promote Further Forestry Development in Suriname." Project document,

WWF (World Wide Fund for Nature). 2005. project, To provide the basis for further sustainable forestry development in Suriname by facilitating the implementation of the national forest policy.

WWF-Guianas (World Wide Fund for Nature-Guianas). 2003. "The Guianas: Gold-Mining Pollution Abatement Project." Paramaribo, Suriname.