

FOREST FINANCE

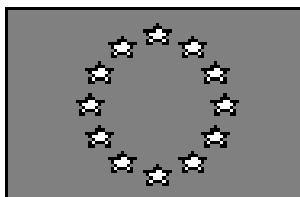
The forest revenue system and government expenditure on forestry in Mali

A paper prepared for the FAO work-programme component on financing sustainable forest management

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THE FOREST REVENUE SYSTEM AND GOVERNMENT EXPENDITURE ON FORESTRY IN MALI

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INFORMATION NOTE ON THE FAO PROGRAMME ON FOREST FINANCE

It is generally accepted that financial considerations represent one of the most important factors that can have an impact on the implementation of sustainable forest management. With this in mind, the FAO Forestry Department has implemented a programme of work on forest finance, to examine how government policies (in forestry and other sectors) affect financing in the forestry sector and the consequences of such policies for sustainable forest management.

One of the most important ways in which governments can have an impact on financing in the forestry sector is through the fiscal policies that they implement within the sector. Where forests are owned or managed by the state, the way in which charges for the use of forest resources are determined and implemented can have a major impact on the scale and types of investment in the sector. A vast literature has developed over the last 30 years examining this topic. Other fiscal policies, such as taxes and subsidies both within and outside the sector, can also have a significant impact on the forestry sector.

The purpose of this work will be to review the impact of current fiscal policies on sustainable forest management, along with other related policies, such as land tenure, which have an impact on forest financing. However, the work will attempt to go beyond simple financial analyses of current policies (which have largely been done before) to examine the broader social, institutional and political aspects of policy reform. It is hoped that this work will assist forestry administrations to identify practical ways in which they can revise their fiscal policies, so that they can more easily pursue the goal of sustainable forest management.

This work has been funded through the FAO Regular Programme and the EC Tropical Forestry Budget Line (FAO-EC Partnership Project on Sustainable Forest Management in African ACP Countries). A large part of the work has been produced by national consultants and institutions, with the supervision and assistance of FAO.

Working papers are being produced and issued as they arrive. Some effort at uniformity of presentation is being attempted, but the contents are only minimally edited for style or clarity. FAO welcomes from readers any information that they feel would be useful for this work. Such material can be mailed to the contacts given below, from whom further copies of these working papers, as well as more information about this programme of work, can be obtained:

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ABSTRACT

This report describes the forest revenue system in Mali. It describes the different forest taxes that are levied on wood production and forest clearance, along with some of the more general taxes that should be paid. It also shows the trends in total revenue collection over the last decade and explains how this revenue should be shared amongst different stakeholders. It presents some information about public expenditure on forestry, which is somewhat higher than the amount of revenue collected. It also discusses at length the difficulties with raising taxes and the problem that the total amount of taxes collected is insufficient to cover the investment required to implement sustainable forest management.

EXECUTIVE SUMMARY

The forest revenue system in Mali is not defined very well. However, forest taxes should be paid for harvesting wood from all types of forest (state, communal and private forests), except in cases where harvesting is for non-commercial or subsistence use. It is believed that this exception results in a lot of tax evasion.

Taxes should be paid for the production of industrial roundwood, wood fuel and for forest clearance. The taxes on production are differentiated according to species and the type of forest where the harvesting takes place (i.e. controlled or managed harvesting as opposed to uncontrolled or unmanaged harvesting). The taxes on forest clearance are also differentiated by geographical region. Taxes are not currently levied on the production of NWFPs or on any other forestry activities. However, taxes on NWFP production will probably be introduced in the near future.

Forest taxes in Mali have been revised seven times since 1960 and were revised most recently in 1995, 1998 and 2001. However, the revision of taxes is not based on any scientific methodology and it is often difficult to implement tax increases. It is believed that the current level of forest taxes and revenue collection is totally inadequate to meet the need for reinvestment in the sector. Thus, in this respect, the forest revenue system does little to support sustainable forest management.

Most of the forest taxes are collected by the Nature Conservation Service but, in some areas, local management structures have been developed that participate in forest management (including tax collection). All money collected from forest taxes is sent to the national treasury, since the national forest fund was abolished in 1993. However, new laws have been passed recently that introduce arrangements for revenue sharing amongst different stakeholders. These arrangements include incentives for forestry personnel and others to report and try to stop illegal activities.

The total revenue collected from the sector includes revenue from the following sub-sectors: forestry; hunting; fishing; and other activities. Forestry accounts for the largest share of this by far (about 80%). In addition, the total amount of revenue collected is divided into revenue from harvesting taxes and revenue from transactions (e.g. fines and penalties). Over the last decade, the amount of revenue collected from transactions has approached 50% of the total in some years, but it usually only accounts for about 10% to 25% of the total. Total revenue collection is currently just under 200 million FCFA per year, which is much less than the amount collected in the late 1980's (over 300 million FCFA).

Information about total public expenditure on forestry is only partially available for recent years. Excluding project expenditure, the average level of public expenditure on forestry was just under 3 billion FCFA per year from 1987 to 1991. From 1992 to 1995, the amount was slightly higher at just over 4 billion FCFA per year on average. About two-thirds of this money came from foreign donors. Over the last decade, forestry projects have amounted to additional expenditure of 9.4 billion FCFA, with almost all of this money coming from foreign donors. As these figures show, public expenditure on forestry is probably ten to twenty times higher than the total amount of revenue collected from the sector.

There are a number of problems with the current fiscal policies in the forestry sector in Mali. Firstly, the most important problem is that the level of taxes does not reflect the true cost of

replacing the wood and other products that are harvested. However, a second problem is that it is also very difficult to raise taxes in such a poor country. Previous attempts to raise forest taxes have led to social problems as producers have passed on the costs of these increases to consumers. It is recommended in this report that taxes should be raised, but that measures should also be introduced to reduce the impact of this on consumers. In addition, it is suggested that the revenue sharing arrangements should give a greater priority to retaining revenue for forest management and that forest funds should be re-established to facilitate the recycling of tax money back into investment in the sector.

A more general problem concerns the overall strength of government finances in Mali. The government does not have a strong tax-base, so the budgets of public sector institutions are generally small and are inadequate to finance all of the investment required to achieve sustainable forest management. Donors have provided a lot of support to the forestry sector in the country in the past, but their priorities do not always match the national priorities. It is suggested that some sort of mechanism should be introduced to improve co-ordination between government forestry institutions, donors and non-governmental organisations.

LIST OF ABBREVIATIONS

ETW	Environmental Tax on Wood
FCFA.....	<i>Franc de la Communauté Financière Africaine</i>
FPT	Forestry Policy Tax
GDP.....	Gross Domestic Product
GFCF.....	Gross Fixed Capital Formation
ICP.....	Industrial and Commercial Profit tax
LTW	Local Tax on Wood
NCS.....	Nature Conservation Service
NONC	National Office for Nature Conservation
NWFP(s)	Non-wood forest product(s)
PAMCA.....	Permanent Association of the Malian Chambers of Agriculture
RSWM.....	Rural Structures for Wood Management
VAT.....	Value-added tax

1 INTRODUCTION

This report has been drafted under the framework of the EU-FAO Partnership Programme on sustainable forest management in African ACP countries, as part of the project on the reform of fiscal policies affecting forest management. The report examines the tax system for forestry and public spending on sustainable forest management in Mali and includes the following information:

- a description of the tax system for forestry;
- a discussion of the administration of the tax system for forestry;
- statistics on the total amount and distribution of revenue collected;
- statistics on public spending on the forestry sector; and
- discussion of the results and conclusions.

1.1 *Context*

Mali has a surface area of 1,241,238 km² (see Figure 1), of which 29% is occupied by forests. According to current legislation (Law-95-004), the forest estate is divided into three types of forest:

- state forests;
- forests run by territorial communities; and
- forests run by private individuals.

Mali's population is essentially a rural one (72.1% of the total), of which 80% depends on primary industry. The management of forests and, more generally, of natural resources was exclusively reserved to the state by the means of quite coercive legislation (Forestry Code, State Code). Unfortunately this form of management did not succeed in curbing the degradation of forestry resources, in spite of the enormous efforts made through various forestry projects, mainly due to an imbalance between the ever-increasing needs of the population and the decreasing existing potential. This degradation was also due to the deterioration in climatic conditions. The reasons for human pressure on forestry resources are linked to social factors (runaway population growth) and particularly to economic factors. Indeed, the woodfuel sector alone represents an annual turnover of 10 billion to 14 billion FCFA, because 90% of the domestic energy resources in Mali are made up of woodfuel. Thus, the forestry sector's contribution to GNP is estimated at 5% in monetary terms.

For some years now, forestry harvesting has become the main activity for rural populations after crop harvesting, because it provides substantial income that enables people to make ends meet.

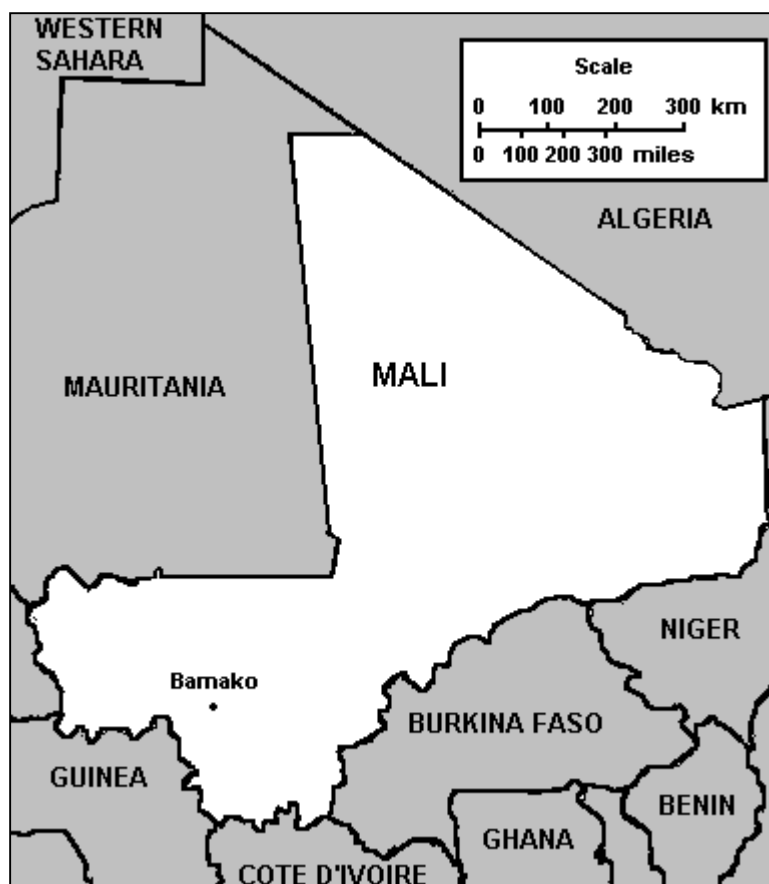
The principle of putting back the resource that has been harvested has led the government to introduce taxes on wood harvesting, but these are derisory compared with the real value of wood.

Law 96-050 of 16 October 1996, outlining the principles of the constitution and management of forests administered by territorial communities, lays down in Article 25 that:

“The rates of tax collected for harvesting on forests run by territorial communities are set by the competent representatives of the territorial community following consultation with the Chamber of Agriculture.”

However, this regulation has not yet been applied due to a lack of demarcation and effective transfer of forestry areas from the state to communities. For the moment, all tax is collected by the state itself, which then pays it to the public revenue department. It is thus not possible to indicate the forest area per domain before their transfer to territorial communities.

Figure 1 A map of Mali



Note: This map has been drawn by FAO and is only an approximation.

2 DESCRIPTION OF THE TAX SYSTEM FOR FORESTRY

In the Republic of Mali, the tax system for forestry is not rigorously defined. Forestry law does, however, generally envisage tax obligations. Thus, apart from exceptional exemptions for users, there is no right to harvest forest products free of charge.

It goes without saying that all harvesters must pay fees and taxes in order to obtain harvesting rights, which are collected from the following permits:

- taxes on the (forest) surface area and the right to transfer work sites; and
- fees on exploration permits and permits for felling firewood and charcoal.

The following taxes and fees are also collected, based on the quantities of products harvested:

- a fixed-fee (per standing tree) for tree felling sites and a fee for a felling permit for industrial roundwood for processing (*bois d'œuvre*); and
- fees for felling permits for other industrial roundwood (*bois de service*).

However, income from forestry activities falls into the category of agricultural revenue and is, therefore, provisionally exempt from proportional taxes. But it should be stated that current legislation concerning regulations for agricultural profits within the General Tax Code have not yet been passed.

The only references in place for forestry taxation are essentially the following basic laws:

- Law number 96-050 of 16 October 1996, which outlines the principles of the constitution and management of forests run by territorial communities;
- Law number 96-051 of 16 October 1996, which determines the fiscal resources of districts;
- Law number 95-003 of 18 January 1995, which outlines the organisation of the harvesting, transport and sale of wood;
- Law number 95-004 of 18 January 1995, which establishes the conditions for the management of forestry resources;
- Decree number 97-053/PRM, which fixes the rates of tax on clearing state forest areas and defines the official southern limit of the Sahelian zone; and
- Decree number 98-402/P-RM of 17 December 1998, which sets down the rates, the methods of collection and the distribution of tax collected on the harvesting of wood in state forests.

In analysing these laws, three types of forestry taxation emerge:

- taxation on the harvesting of wood in state forests (Decree 98-402);
- taxation on the harvesting of wood in forests run by territorial communities (undefined); and
- taxation on the harvesting of wood in forests run by private individuals (tax collection is carried out by the relevant tax services as outlined in the General Tax Code).

The main free user right is the right of individuals in rural communities resident in forests to harvest wood for their domestic use, provided that it is not for sale. This user right is fully exercised by all rural communities. Indeed, outside of urban centres (district county towns), rural populations are not subject to any tax. It should be noted that, in some cases, this user right is contravened and people sell wood. The main cause of this phenomenon is the general level of poverty.

2.1 *Taxes on the production of roundwood*

Industrial roundwood is any log or branch that is used in its round form (untreated) or as primary matter for mechanical or chemical transformation for obtaining finished products (sawnwood, planks, plywood etc.). The measurement unit used is the cubic metre or standing tree. In this report, roundwood is classed as industrial roundwood for processing (*bois d'œuvre*) if it is any log, trunk or block having a diameter greater than 25cm.

The forms or permits used for tax collection from roundwood harvesting are the same as those used for other forestry products. As well as the harvesting permit, a transport coupon is issued for monitoring the origin and circulation of forestry products.

With regard to fines on the fraudulent harvesting or transport of wood, when these are collected, a receipt or bill is issued from the public revenue department.

As a general rule, taxes on roundwood production are determined by Decree 98-402/P-RM of 17 December 1998, setting down the rates and methods of collection of taxes paid for the harvesting of wood from state forests.

All taxes paid for roundwood harvesting are paid to the Nature Conservation Service. The rates of tax depend on whether the products come from natural forests or state forest plantations and vary according to the type of harvesting and tree species.

However, with regard to the harvesting of wood in forests run by private individuals, taxes are paid by the harvester, whether they are the owner of the forest or just the holder of a harvesting permit. The taxes paid are either the fixed charges applied elsewhere (i.e. in the tax system for other types of forest) or are based on profits. The rate of tax on profits is an *ad valorem* tax of up to 10% (see Table 1 to Table 3 for the amounts and rates of taxes charged on the production of roundwood).

For other activities covered by the regulations on the use of state forests (e.g. making harvesting and access roads, bridges or other works, as well as establishing factories and barriers) there are no specific taxes. However, all large-scale work in these areas is subject to Decree number 99-189/P-RM of 5 July 1999 outlining the procedures and requirements for Environmental Impact Assessments.

2.1.1 Taxes on the production of industrial roundwood

The rates of tax collected from the harvesting of wood in state forests vary according to whether the products are from natural forests or state forest plantations and depend on the nature of the products (i.e. woodfuel, other industrial roundwood (*bois de service*) or industrial roundwood for processing (*bois d'œuvre*)).

The tax rate also varies according to the type of area harvested: uncontrolled; guided; or controlled (*incontrôlée; orientée* or *contrôlée*). This measure stems from the concern to direct wood harvesting towards controlled areas, so as to ensure that appropriate harvesting techniques are used (i.e. correct felling techniques, harvesting within the allowed quota). For controlled areas, the tax rate on the production of industrial roundwood for processing is varied according to the diameter of the wood. The greater the diameter, the higher the tax rate. This difference reflects the market value of the wood (see Table 1).

Table 1 Tax on the harvesting of industrial roundwood for processing from natural forest (in FCFA per standing tree)

Species	Origin of products				
	Uncontrolled harvesting	Guided harvesting	Controlled harvesting		
			Diameter at 1.30 m from the ground		
			25 - 30 cm	30.5 - 50 cm	< 50 cm
Protected species					
<i>Borassus aethiopicum</i>	5,000	3,000	1,500	2,000	2,500
<i>Pterocarpus erinaceus</i>	7,500	5,000	2,500	3,000	4,500
<i>Afzelia africana</i>	10,000	7,500	3,750	4,500	6,000
<i>Bombax costatum</i>	4,000	3,000	1,500	2,000	2,500
<i>Khaya senegalensis</i>	20,000	15,000	7,500	10,000	12,500
<i>Anogeissus leiocarpus</i>	5,000	3,000	1,500	2,000	2,500
<i>Parkia biglobosa</i> (deadwood)	15,000	10,000	5,000	6,500	7,500
<i>Butyrospermum paradoxum</i> (deadwood)	7,500	5,000	2,500	3,000	3,500
<i>Acacia albida</i> (deadwood)	10,000	7,500	3,750	4,500	6,000
Non-protected species					
<i>Hyphaene thebaïca</i>	3,000	2,000	1,000	1,500	1,750
<i>Isobertina doka</i>	5,000	3,000	1,500	2,000	2,500
<i>Cordyla pinnata</i>	7,500	5,000	2,500	3,000	4,500
<i>Daniella oliveri</i>	6,000	4,000	2,000	2,500	3,000
<i>Ceiba pentandra</i>	2,500	1,500	750	1,000	1,250
<i>Pseudocedrela koschii</i>	2,500	1,500	750	1,000	1,250
<i>Lannea acida</i>	2,500	1,500	750	1,000	1,250
<i>Sclerocarya birrea</i>	3,000	2,000	1,000	1,500	1,750
<i>Prosopis africana</i>	2,500	1,500	750	1,000	1,250
<i>Tamarindus indica</i>	5,000	3,000	1,500	2,000	2,500
<i>Erythrophleum guineense</i>	5,000	3,000	1,500	2,000	2,500
Other non-protected species	1,500	1,000	500	750	800

Source: Decree number 98-402/P-RM.

The variation in the tax on other industrial roundwood from a harvesting zone (see Table 2) also comes from the same concern to direct harvesting to managed zones so as to have more

rigorous monitoring of the harvesting norms and quotas. Harvesters tend to go to uncontrolled areas in spite of the high rate of tax because there they can escape forest monitoring.

Table 2 Tax on the harvesting of other industrial roundwood from natural forests (in FCFA per piece)

Type of product and species	Origin of products		
	Uncontrolled harvesting	Guided harvesting	Controlled harvesting
Poles, posts, forks and stays			
<i>Pseudocedrela kostchii</i>	1,250	750	500
<i>Terminalia spp</i>	1,250	750	500
<i>Prosopis africana</i>	1,250	750	500
<i>Lannea acida</i>	1,250	750	500
<i>Spondia mombin</i>	1,250	750	500
<i>Diospyros mespiliformis</i>	1,500	900	600
<i>Burkea africana</i>	1,500	900	600
<i>Dalbergia melanoxylon</i>	3,000	2,000	1,000
<i>Oxytenanthera abyssinica</i>	75	40	35
<i>Raphia sudanica</i>	60	35	25
<i>Hyphaene thebaïca</i>	2,000	1,200	800
Other protected species	500	300	200
Short poles, Short stakes			
<i>Pseudocedrela kostchii</i>	30	20	10
<i>Prosopis africana</i>	50	30	20
<i>Diospyros mespiliformis</i>	40	25	15
<i>Dalbergia melanoxylon</i>	90	60	30
Other protected species	25	15	10
Palm tree leaves			
Ronier leaves	35	20	10
Doumier leaves	25	10	5

Source: Decree Number 98-402/P-RM.

Table 3 Tax on the harvesting of industrial roundwood for processing and other industrial roundwood from state forest plantations (in FCFA)

Species	Categories of other industrial roundwood (butt diameter)				Categories of industrial roundwood for processing (diameter 1.30 m from the ground)		
	<= 10 cm	10.5-15 cm	15.5-20 cm	20.5-25 cm	25-35 cm	35.5-50 cm	> 50 cm
<i>Eucalyptus spp</i>	350	400	450	500	3,000	6,000	9,000
<i>Cassia spp</i>	250	300	350	400	-	-	-
Neem	300	350	400	450	1,500	2,500	3,000
<i>Tectona grandis</i>	450	500	550	600	5,000	7,500	10,000
<i>Gmelima arborea</i>	250	300	350	400	2,500	5,000	7,500
Bamboo	100	-	-	-	-	-	-
Other	150	200	250	300	1,000	1,500	2,000
<i>Kaya sénégaleensis</i>	-	-	-	-	5,000	7,500	10,000
Other exotic species	-	-	-	-	4,000	5,000	6,000

Source: Decree Number 98-402/P-RM.

The tax rate for harvesting industrial roundwood for processing and other industrial roundwood from state forest plantations depends both on the diameter of the wood and the quality of the wood. Therefore, species like *Kaya sénégaleensis*, *Gmelima arborea* and *Tectona grandis* have the highest rates of tax levied on them (see Table 3).

2.1.2 Taxes on the production of woodfuel

Generally, for harvesting woodfuel in state forests, the rates of tax collected from natural forests vary by origin and type of product (essentially fuelwood and charcoal) and they vary by species in state forest plantations. Fuelwood and charcoal taxes are based on volume (per stacked cubic metre (*stère*) for fuelwood and per quintal for charcoal) and the rates of tax vary according to the nature of species and depending on where the harvesting took place (uncontrolled, guided or controlled harvesting – see Table 4). In state forest plantations, taxes are also based on volume (per stacked cubic metre) and apply to both native and exotic species (see Table 5).

Table 4 *Tax on harvesting of woodfuel from natural forests*

Type of product	Origin		
	Uncontrolled harvesting	Guided harvesting	Controlled harvesting
Fuelwood	800 FCFA/stacked cubic metre	400 FCFA/stacked cubic metre	250 FCFA/stacked cubic metre
Charcoal	1,200 FCFA/quintal	800 FCFA/quintal	500 FCFA/quintal

Source: Decree Number 98-402/P-RM.

Table 5 *Tax on harvesting of woodfuel from state forest plantations*

Species	Rate of tax
<i>Eucalyptus spp</i>	1,500 FCFA/stacked cubic metre
<i>Cassia spp</i>	1,000 FCFA/stacked cubic metre
Neem	1,000 FCFA/stacked cubic metre
<i>Gmelima arborea</i>	1,000 FCFA/stacked cubic metre
Other species	800 FCFA/stacked cubic metre

Source: Decree Number 98-402/P-RM.

2.1.3 Variation in the structure of regional forestry taxation

Because of the specific nature of different regions, the charges for issuing permits to clear land in state forests vary between regions. In the Sahelian zone, the fee for a permit to clear land with destumping is 7,500 FCFA/ha and the fee for clearing without destumping is 5,000 FCFA/ha. In the Sudanian zone, 15,000 FCFA/ha is charged for clearing with destumping as opposed to 10,000 FCFA/ha for clearing without destumping.

2.2 Taxes on non-wood forest products and services

In Mali, up until 2000, these products and services were not taxed because of a legal loophole. There is a flourishing business in these products and services both inside and outside the country. Non-wood forest products, such as: leaves; bark; roots; fruit; and herbs, provide significant income to a section of the population who devote themselves to collecting these products (mostly women and young people). Harvesting other products, such as: gum arabic; and shea tree kernels, is a flourishing export business and the revenue generated from these exports is significant (see Table 6). This legal loophole will soon be closed when the Cabinet passes a decree on this subject.

Table 6 Trends in exports of non-wood forest products 1990 - 1999

Products	Years					
	1990		1991		1992	
	Value ('000 FCFA)	Weight (in kg)	Value ('000 FCFA)	Weight (in kg)	Value ('000 FCFA)	Weight (in kg)
Shea tree kernel	533,696	14,452,641	508,394	13,677,564	2,333,480	23,334,800
Hard gum arabic	60,000	342,000	60,000	1,494,900	44,451	434,525
Friable gum arabic	45,000	546,000	45,000	546,000	-	-
Gum laq	-	-	-	-	-	-
Crude shea tree oil	1,834,488	3,641,417	1,048,410	3,641,417	8,140	53,920
Refined shea tree oil	60,000	600,000	60,000	600,000	300,000	2,000,000
Rubber latex	2,000	20,000	2,000	20,000	-	-
Gum resins	52,500	444,000	161,918	690,041	28,731	241,525
Dates	-	-	-	63,000	-	-
Matting	-	980,000	-	2,000,000	-	16,807
Fans	-	100,000	-	50,000	-	50,000
Baobab leaves	-	-	-	180	-	-
Beeswax	-	5,000	-	-	-	-
Tamarind	-	4,600	-	506,500	-	11,300
Palm nuts	-	-	200	-	-	-
Tamarind juice	-	-	-	800	-	-
Tamarind syrup	-	-	-	-	16,402	57,224
VEG fibre textiles	-	-	-	-	6,960	30,400
Soumbala	-	980,000	-	200,080	-	-

Products	Years					
	1993		1994		1995	
	Value ('000 FCFA)	Weight (in kg)	Value ('000 FCFA)	Value ('000 FCFA)	Value ('000 FCFA)	Weight (in kg)
Shea tree kernel	-	-	65,013	1,130,500	-	-
Hard gum arabic	39,502	172,857	74,009	363,888	-	-
Friable gum arabic	-	-	-	-	-	-
Gum laq	-	-	-	486,000	-	941,000
Crude shea tree oil	-	-	47,900	180,000	-	-
Refined shea tree oil	-	-	-	-	6,000	1,000,000
Rubber latex	-	-	62,466	101,210	5,430	1,200
Gum resins	2,465	39,611	-	796,000	-	69,000
Dates	-	-	-	-	-	-
Matting	-	-	-	800,000	-	100,000
Fans	-	-	-	-	-	-
Baobab leaves	-	-	-	-	-	-
Beeswax	34,500	92,000	-	-	-	-
Tamarind	75	2,250	-	-	-	-
Palm nuts	-	-	-	-	-	-
Tamarind juice	-	-	-	-	-	-
Tamarind syrup	-	-	-	-	-	-
VEG fibre textiles	-	-	-	-	-	-
Soumbala	325,233	2,100,000	-	-	-	-

Source: National Office for Statistics and Data Processing, 1999.

Table 6 Trends in exports of non-wood forest products 1990 - 1999

Products	Years			
	1996		1997	
	Value ('000 FCFA)	Weight (in kg)	Value ('000 FCFA)	Weight (in kg)
Shea tree kernel	1,493,703	2,975,135	65,050	444,000
Hard gum arabic	67,443	383,100	36,185	279,285
Friable gum arabic	-	-	-	-
Gum Laq	-	60,000	-	-
Crude shea tree oil	-	-	-	-
Refined shea tree oil	-	-	-	-
Rubber latex	-	11,000	-	-
Gum resins	-	2,034,000	-	9,490
Dates	-	-	-	150,000
Matting	-	-	-	160,000
Fans	-	-	-	-
Baobab leaves	-	-	-	-
Beeswax	8,552,500	11,000	12,000	69,000
Tamarind	-	-	-	3,000
Palm nuts	-	-	-	-
Tamarind juice	-	-	-	-
Tamarind syrup	-	-	-	-
VEG fibre textiles	-	-	-	3,000
Soumbala	-	-	-	-

Products	Years			
	1998		1999	
	Value ('000 FCFA)	Weight (in kg)	Value ('000 FCFA)	Weight (in kg)
Shea tree kernel	343,459	7,550,640	136,674	2,044,569
Hard gum arabic	60,942	473,334	40,126	520,150
Friable gum arabic	-	-	-	-
Gum Laq	4,171	40,000	-	-
Crude shea tree oil	-	-	-	-
Refined shea tree oil	-	-	-	-
Rubber latex	-	-	-	-
Gum resins	9,968	170,950	1,105	20,000
Dates	-	-	-	-
Matting	-	-	-	-
Fans	-	-	-	-
Baobab leaves	-	-	-	-
Beeswax	-	-	27	530
Tamarind	159,200	3,114,000	102,750	2,055,000
Palm nuts	5,000	500,000	2,505	500,001
Tamarind juice	-	-	-	-
Tamarind syrup	-	-	-	-
VEG fibre textiles	6,163	69,451	16,209	165,647
Soumbala	-	-	-	-

Source: National Office for Statistics and Data Processing, 1999.

2.3 *Taxes on the trade of forestry products and transformed products*

Mali does not envisage any regulations on the taxation of transformed forestry products nor on the trade of forestry products. These are the concern of other public institutions.

2.4 *Other taxes*

In a broad sense, the tax system for forestry includes additional levies and taxes as set down in the General Tax Code. In effect, these additional levies are additional taxes levied on the harvesting of wood.

2.4.1 *Environmental tax on wood*

There is an Environmental Tax on Wood (ETW), which aims to cover the costs of forestry development and the implementation of sustainable forest management and to finance collective investments in villages. This tax is applied nationwide, with payment in the form of a Local Tax on Wood (LTW). This tax is redistributed in the form of a Forestry Policy Tax (FPT), which aims to provide incentives to the sector to act in the chosen direction or to directly finance forestry development activities. This tax is administered through a forestry network promotion fund, which is generally distributed amongst forestry professionals, the Permanent Association of the Malian Chambers of Agriculture (PAMCA) and the Nature Conservation Service (NCS).

2.4.2 *Taxation of forests run by territorial communities*

Decree number 98-402/P-RM of 17 December 1998, fixes the rates, methods of collection and distribution of taxes collected on the harvesting of wood in state forests. This decree does not mention the taxation of wood harvesting in forests run by territorial communities.

Territorial communities are authorised to apply taxation in their respective areas according to Article 25 of Law number 96-050 of 16 October 1996, applying the principles of the constitution to the management of the area of territorial communities. To this effect, the rates of tax collected in the case of wood harvesting in territorial community areas should be fixed by the competent authorities of the territorial community, following consultation with the chamber of agriculture.

In fact, the series of taxes decreed by the basic forestry taxation laws are automatically applicable to the activity and to the harvesters in the woodfuel sector. By referring to existing laws regarding the fiscal resources of towns, all executive authorities should deliberate on the rates of municipal taxes.

2.4.3 Fines

The rates of fines for the fraudulent transport of wood vary from 5,000 FCFA to 50,000 FCFA (Article 23 of Law 95-003).

The rates of fines for the fraudulent harvesting of fuelwood and charcoal vary by quantity and are shown in Table 7. In addition to these regulations, in Article 86 of Law 95-004, there are fines from 5,000 FCFA to 100,000 FCFA for the fraudulent harvesting of other forest products.

Table 7 *Fines on the fraudulent harvesting of fuelwood and charcoal (in FCFA)*

Fuelwood		Charcoal	
Quantity	Fine	Quantity	Fine
Less than 1 m ³	1,000	Less than 1 quintal	1,000
From 1 to 4 m ³	3,000	From 1 to 4 quintals	5,000
From 5 to 15 m ³	15,000	From 5 to 15 quintals	20,000
From 16 to 30 m ³	40,000	From 16 to 30 quintals	50,000
From 31 to 60 m ³	60,000	From 31 to 60 quintals	80,000
More than 60 m ³	90,000	More than 60 quintals	100,000

Source: Article 90, Law 95-004.

Offences related to illegal forest clearing are redressed with fines from 10,000 FCFA to 100,000 FCFA (Article 81 of Law 95-004).

2.4.4 Other national and local taxes

More general taxes are laid down in the General Tax Code and include:

- value-added tax (VAT), for which the methods of payment and rates (currently 18%) are fixed by the law;
- various licence fees;
- taxes on salaries; and
- taxes on Industrial and Commercial Profit (ICP).

Some other taxes (and tax rates) are determined by the application of Law number 96-051 of 16 October 1996 determining the fiscal resources of towns. These are in principle comparable to municipal taxes.

3 ADMINISTRATION OF THE TAX SYSTEM FOR FORESTRY

In forestry taxation, there is often confusion between the terms forest taxes and forest fees. The two terms are invariably used in place of each other, but there is actually a difference between the two terms. In fact fees, in the legal sense, adhere to the principle of financial equivalence. That is, there should be a certain proportionality between the total fee and the real cost of providing the good or service to users. In addition, fees are only due from individuals actually using the goods or services at their disposal. On the other hand, the principle of financial equivalence does not necessarily apply to taxes. Taxes have an obligatory nature and must be laid down by law. In most cases in forestry, the term “fees” would be more appropriate but, for pedagogical reasons, the term “tax” is used here.

3.1 *Process of setting forest taxes*

The way that forest taxes are determined complies with the proposals made by the technical service. That is, that they should be determined by the state of the resource (i.e. they should take degradation into account). However, these taxes also take into account the income of rural harvesters and consumers. It is important to recall that wood satisfies 90% of the energy needs of households. Rates of tax that are too high could create social problems, like those of June 2000 with the enforcement of Decree 98-402.

Tax proposals are submitted in three stages. First, they are submitted for the approval of the supervisory department. Then, an inter-ministerial meeting examines the proposals of the technical department. It should be noted that the Chamber of Agriculture, which represents the interests of people living in the countryside, takes part in this inter-ministerial meeting. Finally, the Cabinet passes the document by decree, which then becomes enforceable immediately.

A bill is in the process of being passed, which will determine the methods and conditions for exercising the rights conferred by permits for harvesting forest resources. This bill provides for competition. In fact, in Articles 19, 20, 21 and 22 of Section 4 (on sales in felling areas), the following is stated:

- *“The felling areas for sale are demarcated on the ground by the Nature Conservation Service, which evaluates the species with potential for harvesting in terms of their number and volume and draws up a plan.”*
- *“The rules for harvesting and the conditions to be met by the purchasers are recorded in a schedule of conditions for forest resources.”*
- *“The sales of felling areas are done by an invitation to tender in a sealed envelope.”*
- *“The date and place of purchase are announced at least one month in advance.”*

This same bill also specifies the structure of commissions that should be paid for going through the tendering process as well as the secretarial costs that will be charged. This new law, which will be passed by the Cabinet in the near future, is characterised by a concern for

transparency in the harvesting of forest resources. The passing of this decree will be followed by the drafting of a bill setting out the rates of tax on harvesting forestry resources.

It is planned to review and increase tax rates in order to ensure that enough revenue will be collected to reinvest in the renewal of forests. One of the important innovations of the new bill is the taxation of non-wood forest products (gum, leaves, bark, resins and herbs). Taxes on non-wood forest products (NWFPs) have the advantage of organising a sector that has remained informal for a long time. Likewise, a particular emphasis will also be placed on the forest harvesters who will have to become more professional in the future in order to get the rights to access forestry resources.

An excessive and anarchical removal of leaves and herbs around all towns is noticeable these days. In fact, the illicit practice of animal breeding around big cities is the cause of much of the harvesting of NWFPs (leaves, herbs), which is happening at an increasingly worrying pace. The areas where NWFPs are removed experience quite a lot of damage because they are reliant on rainfall. The excessive removal of leaves in a lot of cases leads to a fall off in plant formations and even their long-term disappearance following drought.

Taxes are updated every time it is required. Since Mali's independence in 1960 up until today, laws governing the taxes on forest harvesting have been revised in 1968, 1977, 1981, 1986, 1995, 1998, and 2001. The review of forest tax rates always rests on the principle of the enhanced value of forest resources and the increase in revenue from rural populations.

Taxes set by laws in 1995, 1998 and 2001 take into account the need for reinvestment in the management of forest areas. In addition, they take particular note of the participation of all actors in the protection and restoration of forests. The main laws setting the rates of tax are the following:

- Order number 77-22-CMLN of 25 February 1977;
- Law number 81-04/AN-RM of 3 March 1984;
- Decree 98-422/P-RM of 6 December 1995; and
- Decree 98-402/P-RM of 17 December 1998.

Information on forestry taxes is clear and is presented to the public in the press and other types of mass media. Following the example of other laws in Mali, information on forestry taxes is first of all published in the Official Journal. It is also broadcast on national radio and broadcast in local languages on local radio stations (where these exist). Information and awareness programmes are also organised for rural populations through administrative and political activities.

The technical services in charge of each forest area, organise information meetings in village communities. Consultation is in fact used as part of the process of setting forestry taxes. The laws currently being amended have been subject to consultation with other technical departments with an interest in these issues.

The forest taxation issue mostly concerns the departments of Finance, Economy, Energy, Social Development, Rural Development and the Consular Chamber of Agriculture (which

defends the interests of people living in the countryside). This means that the process of setting forestry tax rates is very open and transparent.

Forest taxes are not based on any formula or economic studies. However, criteria like the value of forest resources, the increase in incomes of rural populations, their increased buying power and market prices, all influence the setting of taxes. The increasing demand for wood, the erosion of forest areas and the decrease in the productive potential of forests, justify the increases in forest taxes from one period to another.

3.2 Tax collection and monitoring

The assessment of taxes depends on the nature of the product. Thus, for example, fuelwood is assessed per stacked cubic metre (*stère*). There are in fact various monitoring procedures, from visiting the harvesting areas for other industrial roundwood and industrial roundwood for processing to a system for estimating fuelwood production. According to the means of transport used (bicycle, cart, truck, van, and wagon), the quantities of fuelwood transported can be estimated. The monitoring of charcoal, on the other hand, poses some difficulties in that the dimensions of the packing used vary considerably.

In the cases of industrial roundwood for processing and other industrial roundwood, the taxation system can lead to inaccurate recording of production in that it is based on units and not on volume. In fact, it is extremely difficult to estimate the volume of production from the number trees harvested as industrial roundwood for processing or other industrial roundwood.

The collection of forestry taxes is carried out locally when the permit for harvesting is issued. Forestry personnel responsible for collecting revenue for the public revenue department collect this money in cash. Local communities intervene in the payment of fees and the monitoring of production levels through the local management structures, which are village organisations involved in the management of rural wood markets.

Local management structures are made up of representatives from local communities. They work closely with the forestry service personnel responsible for the collection of fees. The management of the harvesting area is entrusted to the local management structure on a contract basis and the latter has the freedom to issue harvesting permits to individual harvesters and to pay taxes received, in their turn, to the forestry service personnel.

There is a system of follow-up visits to check accounts for tax payment in all administrative regions. The follow-up and checking are based on a system of periodic monitoring, which is carried out at all levels of the forestry service hierarchy.

The private-sector or local management structures make payments to the Nature Conservation Service in each working circle. The Head of the Nature Conservation Service in each circle is then responsible for paying taxes to the public revenue department.

The regional administrations carry out half-yearly checks on the Heads of the Nature Conservation Service to verify that taxes have in fact been paid to the public revenue department. The national administration also conducts annual checks to carry out the same task. Reports on activities and statistical documents produced each month by the Nature Conservation Service are used to check-up and follow up on payments.

Administrative operations that include revenue collection enable primary statistics on forestry production and utilisation to be generated. In return, these primary statistics on forestry production and utilisation assist with the direction of administrative operations. In other words, there is a very strong correlation between administrative operations and the creation of primary statistics on forestry production and utilisation.

3.3 Intervention at different levels of government in fiscal administration

The intervention of different levels of government in fiscal administration in the forestry sector is implemented through the consultative meetings of all ministerial departments with an interest in the sector. Under the decentralisation framework, territorial communities will also henceforth have a certain freedom to set forestry taxes and fees in their own forest areas.

4 AMOUNT AND DISTRIBUTION OF REVENUE COLLECTED

4.1 Total forestry tax collection

4.1.1 Trends in harvesting revenue

Table 8 shows recent trends in harvesting revenue. From 1990 until 1993, the big decrease in harvesting revenue is mainly due to the changes that took place during the revolution of 26 March 1991, characterised by the people's antisocial behaviour. It can be noted that, in response to some of the factors contributing to this state of affairs, the Guidelines for the Rural Development Sector were passed in 1996. New forestry laws were also implemented at the local, regional and national levels, which redefined many of the tasks of the Forestry and Water Services.

The upward trend in revenue, starting in 1994 to 1996, is explained by the passing of new laws, the application of Decree No. 422 and the reinforcement of forestry monitoring in conjunction with local people.

Table 8 Trends in harvesting revenue 1988 - 1999 (in FCFA)

Years	Sub-sector				Total
	Forestry	Hunting	Fishing	Other	
1988	137,554,175	924,435	44,669,000	6,538,800	189,686,105
1989	130,236,045	848,315	44,198,275	6,966,225	182,248,858
1990	135,360,115	739,465	42,363,415	6,610,425	184,623,420
1991	83,264,375	741,500	22,353,200	3,425,575	109,784,700
1992	68,574,865	970,080	19,846,000	2,313,875	91,904,820
1993	63,697,955	1,343,165	13,665,500	1,564,625	80,273,245
1994	66,109,220	4,052,995	22,033,675	2,478,155	94,834,045
1995	99,445,235	5,503,175	34,925,925	2,549,500	142,423,435
1996	111,279,020	6,532,550	36,503,500	2,219,000	156,534,070
1997	95,125,107	4,734,320	29,333,750	1,625,000	130,820,177
1998	84,316,594	5,313,285	22,007,000	1,334,125	112,970,959
1999	127,709,719	18,599,285	1,009,000	2,640,000	149,958,004

Source: Annual Reports of the National Forestry and Water Service and Nature Conservation Service.

4.1.2 Trends in transactions revenue

Table 9 shows recent trends in transactions revenue. The high level of transactions revenue during 1988, 1989 and 1990 is explained by the crackdown on offences at the time, as well as the high levels of fines imposed as a deterrent.

From 1991 onwards, a drastic drop in transactions revenue is noted. This is connected to the revision of the forestry law, which resulted in a fall in the level of fines. Moreover, forestry personnel are now no longer assisted by the police.

Table 9 *Changes in transactions revenue 1988 - 1999 (in FCFA)*

Years	Sub-sector				
	Forestry	Hunting	Fishing	Other	Total
1988	171,235,507	2,554,375	2,408,025	752,795	176,950,702
1989	138,377,880	1,578,750	2,621,625	457,750	143,036,005
1990	123,400,310	1,699,375	2,338,800	664,600	128,103,085
1991	43,398,395	607,500	1,135,125	638,675	45,779,695
1992	11,302,025	777,750	1,029,940	620,330	13,730,045
1993	7,550,760	411,750	9,491,425	425,590	17,906,525
1994	6,046,250	348,750	475,875	1,261,535	8,132,410
1995	11,950,125	1,174,500	1,691,815	842,230	15,658,670
1996	18,518,335	748,750	413,375	140,125	19,820,585
1997	6,038,625	150,000	317,500	537,000	7,043,125
1998	0	0	0	0	0
1999	22,750,863	611,250	535,315	23,597,428	47,494,856

Source: Annual Reports of the National Forestry and Water Service and Nature Conservation Service.

4.1.3 Trends in total forest revenue collection

Table 10 shows the trend in total forest revenue collection (i.e. harvesting revenue plus transactions revenue).

Table 10 *Changes in forestry revenue 1988 - 1999 (in FCFA)*

Years	Harvesting revenue	Transaction revenue	Total
1988	189,686,105	176,950,702	366,636,807
1989	182,248,858	143,036,005	325,284,863
1990	184,623,420	128,103,085	312,726,505
1991	109,784,700	45,779,695	155,564,395
1992	91,904,820	13,730,045	105,634,865
1993	80,273,245	17,906,525	98,179,770
1994	94,834,045	8,132,410	102,966,455
1995	142,423,435	15,658,670	158,082,105
1996	156,534,070	19,820,585	176,354,655
1997	130,820,177	7,043,125	137,863,302
1998	112,970,959	0	112,970,959
1999	149,958,503	47,494,856	197,453,359

Source: Annual Reports of the National Forestry and Water Service and Nature Conservation Service.

4.2 *Distribution of forest revenue*

The taxes collected on wood from harvesting in forest areas are distributed according to Decree No. 98-402/P-RM.

It should be noted that a part of harvesting revenue is paid into the state account. Rebates destined for the development and maintenance of forest areas, as well as those destined for forest monitoring, are paid into two separate accounts. The management of these accounts is defined by a joint law between the Ministry of Finance and the ministry responsible for forest resources.

This distribution of taxes between the Ministry of Finance and forest administration was maintained up until the passing of new laws, notably Law 95-004, which is characterised by important features:

- the distribution of state forestry property between three owners (the state, territorial communities and private individuals); and
- the organisation of harvesting (controlled, uncontrolled and guided).

The first text applying this law was the decree of application (Decree No. 98-422/P-RM), which defines the distribution of taxes collected on the harvesting of wood (see Table 11). This decree was passed at a time when many points pertaining to decentralisation required clarification.

It is thus that difficulties in implementing legislation were brought to light in 1996, when laws on decentralisation were being passed. Indeed, dispositions in the decree envisaged the distribution of revenue between the state, territorial communities and Rural Structures for Wood Management (RSWM).

Table 11 *Distribution of harvesting tax*

Allocations	Amount according to the origin of wood		
	Uncontrolled	Guided	Controlled
State budget	60 %	35 %	15 %
Work on development and maintenance of forest areas	-	30 %	45 %
Forest monitoring	35 %	15 %	10 %
Rural towns	-	5 %	10 %
Regional chambers of agriculture	-	5 %	10 %
Rewards for forestry personnel	5 %	10 %	10 %

Source: Decree No 98-422/P-RM.

In Article 4 of Law 95-003 of 18 January 1995, the RSWM are organisations of rural producers registered by the state. Article 14 of the same law gives them a mandate to harvest wood. Thus, they are lucrative organisations that can be considered as cooperatives.

The difficulty in applying Decree No. 98-422/P-RM lay in the fact that it was difficult to envisage the granting of rebates for the RSWM which did not exist (especially for the accounts of the public revenue department) and even less in villages in the state forestry areas.

At the end of Article 8 of Law 95-003 it is stated that the RSWM must maintain and take part in the work of renewing forest areas that they harvest. Thus, Law 96-050 of 16 October 1996 determining the constitution and management of forest areas run by territorial communities lays down in Article 14 that territorial communities can delegate to a village the management of a part or area of their territory.

As a replacement for Decree No. 95-422 of 6 December 1995, Decree No. 402 of 17 December 1998 was also passed, which envisages the following provisions:

- the separation of rates of tax on products from natural forests and plantations;
- the setting of rates depending on the origin of products, the diameter categories and the nature of other industrial roundwood or industrial roundwood for processing;
- the elimination of RSWM in distribution;
- the encouragement of controlled and guided harvesting;
- the establishment of a management fund;
- an increase in the rate of tax on uncontrolled harvesting; and
- the motivation of forestry personnel and other organisations.

It should be pointed out that before the signing of Decree No. 98-402/P-RM (i.e. before 1998), transaction taxes were divided up as follows:

- 75% of revenue was paid to the state; and
- 25% was paid as rewards to informers and to forestry personnel.

The forest service earns a share (25%) of transaction taxes as rewards granted to informers and forestry personnel, so as to motivate and encourage them.

5 PUBLIC SPENDING ON THE FORESTRY SECTOR

In Mali, there is no rigorous planning procedure for allocating annual budgets to the forestry administration. The national forest fund, which was the only special fund allocated for spending on forestry, had mainly been used for the provision of infrastructure (purchase of materials for logistical purposes and the construction of offices and accommodation). This fund was made up entirely of revenue from forest harvesting, fauna and fishing as well as 75% of transactions revenue. The national forest fund was abolished in 1993 for reasons of transparency and as a condition imposed by the World Bank and the International Monetary Fund.

5.1 Spending by the main public forestry institutions

5.1.1 Non-project expenditure on forestry

Table 12 shows non-project spending on forestry (five-year plan – special investment budget) for the years 1987 - 1991 and Table 13 shows this information for 1992 - 1995. Total spending from 1992 to 1995 amounted to 16,545 million FCFA.

Table 12 *Non-project expenditure on forestry 1987 - 1991 (in millions of FCFA)*

	Years					Total
	1987	1988	1989	1990	1991	
Forecast	30,948	29,400	29,952	40,423	45,335	176,058
Realisation	2,420	2,806	2,618	3,287	3,767	14,898

Source: Report from National Office for Statistics and Data Processing (1991).

Table 13 *Non-project expenditure on forestry 1992 - 1995 (in millions of FCFA)*

Years	Capital expenditure			Domestic financing (DF)				Foreign financing (FF)		
	Total	GFCF	Other expenditure	Total	State budget	Own finance	Other	Total	Loans	Subsidies
1992	1,063,2	329,4	733,8	100,0	19,0	81,0	n.a.	963,2	46,0	917,2
1993	2,052,0	616,3	1,435,2	236,2	139,6	16,8	79,8	1,815,8	340,8	1,475,0
1994	2,304,2	816,5	1,442,7	172,9	170,9	2,0	0,0	2,131,3	232,0	1,899,3
1995	n.a.	n.a.	n.a.	651,0	96,0	0,0	555	5,056,0	1,000,0	4,056,0
Total	5,419,4	1,762,2	3,612,2	1,160,1	425,5	99,8	634,8	9,966,3	1,618,8	8,347,8

Source: Report from the National Office for Statistics and Data Processing (1991). Note: GFCF = Gross Fixed Capital Formation (i.e. investment in fixed assets).

Table 13 comprises three parts:

- **Domestic financing:** This is included in the state budget and is made up of the following components: spending on personnel, operating expenditure and other expenses. Spending on personnel is made up of the salaries of regular civil servants and contract employees. Operating expenditure is made up of office supplies, personnel travel expenses (assignment costs), communication expenses (telephone and fax) and electricity and water costs. The other expenses are made up of employees paid by the hour and administrative study costs (or other management costs), current upkeep of buildings and other expenses.
- **Foreign financing:** Foreign financing is made up of loans and grants.

- **Capital expenditure:** Under this heading, the column “Gross Fixed Capital Formation” or GFCF corresponds to the spending on equipment and investment which are made up of the following elements: spending on investment; spending on construction; the purchase of computer equipment; the purchase of technical materials; transport materials; other fixed assets; and studies and research.

5.1.2 Forestry project expenditure

Table 14 shows the financing of forestry projects (with the state budget and foreign aid) since 1992. Total financing amounted to 9,392 million FCFA.

Table 14 *Financing of forestry projects (in millions of FCFA)*

Forestry projects and other	Domestic Financing				Foreign financing		
	Total	State budget	Own finance	Other	Total	Loans	Grants
Bit/KITA project (1993-2000)	35	35	0	0	2,087	0	2,087
Third regional project for the sustainable management of forests	0	0	0	0	2,700	0	2,700
Protection/management of forests and national parks (2000)	27	27	0	0	0	0	0
Support for decentralised forestry structures (2000)	0	0	0	0	150	0	150
Support for reforestation and forest plantations	19	19	0	0	0	0	0
Programme to combat the silting-up of Timbuktu city	0	0	0	0	4,324	0	4,324
Total	131	131	0	0	9,261		9,261

Source: NONC (National Office for Nature Conservation).

5.1.3 Foreign aid

Foreign aid granted to the main forestry institutions was worth 19,227 million FCFA for the period 1992 to 1995 (see Table 13 and Table 14).

This foreign aid, although important, has not met expectations, as it does not always take the real needs for investment in forestry into account. In particular, aspects of institutional support and technology transfer are often neglected. This state of affairs has contributed to the lack of technical skills and know-how at the disposal of managers and the population as a whole.

Foreign aid is not precisely defined, in that many non-governmental organisations (NGOs) intervene in the forestry sector, but information about these activities is unfortunately not relayed back to public forestry institutions. Thus, the amount of foreign aid to public forestry institutions is probably higher than the figures reported above.

5.2 *Spending by other public forestry institutions*

Public spending on forestry research is included in the tables above, but is not specified separately. This lack of information has prevented the evaluation of public spending on forestry research.

In the area of forestry training, public spending has amounted to 726,990,020 FCFA over the past ten years (1990 – 1999). Table 15 below shows that foreign financing has covered 85.7% of this expenditure on training.

Table 15 *Investment in forestry training 1990 - 1999 (in FCFA)*

Years	Amount of foreign financing	Amount of domestic financing	Total
1990	100,555,500	12,520,000	113,075,500
1991	135,388,000	22,394,2000	157,782,200
1992	141,775,320	-	141,775,320
1993	83,131,500	16,223,500	99,355,000
1994	122,945,000	-	122,945,000
1995	39,294,000	-	39,294,000
1996	-	-	-
1997	-	52,771,000	52,771,000
1998	-	-	-
1999	-	-	-
Total	623,089,320	103,908,700	726,998,020

Source: Tabacoro's Centre for Practical Forestry Training

5.3 *Grants and subsidies to the forestry sector*

It is extremely difficult to assess the grants and subsidies given to companies and individuals in the forestry sector, because the management of such money is not altogether clear. Furthermore, there is no mechanism for coordination, allowing for the gathering and centralisation of data on this topic from companies and individuals.

5.4 *Revenue and expenditure of state forest companies*

Since Mali's independence until today, there has only been one state forestry company (the Malian Wood Company), which went bankrupt very quickly. In other words, there aren't any state forestry companies in Mali at the moment.

6 DISCUSSION AND CONCLUSIONS

6.1 *Overall evaluation of the tax system for forestry*

Mali's tax system for forestry is inefficient because it has no scientific foundation. Indeed, the rates of tax are set without taking into account the real costs of forest management. The taxes on wood are clearly below of the real costs of forest management, which then poses problems for the renewal of Mali's forests. The revenue generated is too derisory to meet to the needs for reinvestment, which are huge. The tax system for forestry is also inefficient, in that collection costs are somewhat higher than the amounts received. Revenue collection incurs expenses that are too onerous (the salaries of forestry personnel responsible for tax collection, operating costs etc.), which prevents efficiency. The fraudulent harvesting of wood also represents a major handicap for the efficiency of the tax system. Beyond the derisory rates of taxes, there is also widespread tax evasion, which reduces the possibilities for reinvestment in forestry.

The rules are clear in the sense that taxes are determined according to the type of zone and according to the nature of the product. However the system seems to be unfair to some stakeholders, notably the wood sellers and hauliers and the wood product retailers. Consumers also pay a heavy price under the current system, because wood is sold to them at a prohibitive price. It would be difficult for the government to increase forest revenue, because increases in the taxes on wood would automatically bring about an increase in consumer prices, which would inevitably leads to social unrest.

The evidence for this is the phenomenon observed in Mali in June 1999, when the wood harvesters went on strike due to the increase in taxes under Decree No. 98-402/P-RM, which took effect from 17 December 1998. This strike caused serious social unrest in Bamako because of the shortage of wood and charcoal which this situation brought about. It resulted in difficulties in immediately implementing the aforementioned decree. It was necessary to observe a three-month moratorium to enable the effective implementation of the legislation on the ground.

The modification of tax rates to take into account to the real costs of forest management is an unavoidable necessity if sustainable forest management is to be achieved. However, any policy to introduce more realistic prices should be supported by the following two accompanying measures:

- the state should harmonise the taxes on wood harvesting to take into account the prices charged to consumers and to reduce disparities; and
- alternative forms of energy should be promoted, so as to reduce the demand for wood.

These measures would not only allow for a reduction in the intensity of harvesting, but would also have the advantage of regulating the taxes and prices paid by consumers.

6.2 *Impact of the tax system for forestry on sustainable forest management*

Mali's tax system for forestry is by nature inefficient because of the low amount of taxes collected, which are derisory compared with the need for investment in forestry. The tax system for forestry is also inadequate to deal with the requirements for sustainable forest management, because Decree No. 98-402/P-RM envisages that only 30% of the harvesting tax (in areas for guided harvesting) and 45% of the harvesting tax (in areas for controlled harvesting) would be used as the only source of revenue for forest management fund. For the years 1999 and 2000, only 14,814,875 FCFA was collected for the forest management fund, which is insignificant compared with investment requirements.

Revenue is shared with other interested parties in the sector, notably the chambers of agriculture and town councils. However, the net impact of taxes and expenditure in the forestry sector is unsustainable on the whole, because the removal of resources is not replaced by adequate reinvestment in the sector.

The tax system for forestry should be revised to take the requirements of sustainable forest management into account. This revision should comprise the three following points:

- the rates of tax should be raised again to generate a sizeable revenue flow to finance the work of forest renewal;
- the distribution of revenue should reserve the largest share of money for forest management; and
- forest management funds should be established in all areas, including areas of uncontrolled harvesting.

6.3 *Public spending on sustainable forest management*

The overall level of public spending specifically intended for sustainable forest management is too low and is insignificant with regard to the need for investment in forests and because of the necessity and urgency to maintain the ecological balance in forests.

In particular, the level of public spending on sustainable forest management is a major concern in the following areas: the training of forestry personnel and the general population; the basic work of forest maintenance (e.g. firebreaks); and the preparation of forest management projects. In addition, the least financed but most important aspect of forestry at the moment is the need for reforestation to accelerate the process of forest renewal.

The two most critical problems that restrict financial support from the public sector are as follows:

- the overall lack of state funds, which does not encourage a significant allocation of funds for sustainable forest management; and
- the attitude of donors, who decide in advance where their funds will be utilised and, more often than not, have priorities that do not correspond to the national priorities for forestry investment.

It is thus important to adopt the following measures:

- to reverse the current trend in the state budget, so that more priority is given to expenditure on sustainable forest management; and
- to encourage donors to become more aware of national priorities with respect to sustainable forest management from the outset of forestry projects.

The impact of grants and subsidies managed by companies, individuals and NGOs has been reduced because of the different and often contradictory approaches used by donors in their various activities. In addition, the interventions of NGOs on the ground are often carried-out without co-ordination or consultation with the government which, in many cases, leads to a waste of financial resources.

In order to optimise the impact of grants and subsidies, a framework for co-ordination between donors and government forestry institutions should be established to achieve better coordination of activities in the field.

6.4 *The impact of other fiscal measures on sustainable forest management*

It would be interesting to explore the possibility of using the taxes on forest clearance to fund sustainable forest management. Furthermore, the subsidies allocated to agriculture could be used in part to support sustainable forest management through the development of agroforestry.

6.5 *Changing attitudes*

The Government of Mali is resolutely committed to support the forestry sector through the implementation of laws and regulations regarding the protection and sustainable management of forest resources. Every day it invests in the search for foreign investment in sustainable forest management. The existence of a number of forestry projects in Mali eloquently illustrates the interest that the government takes in sustainable forest management. This interest is also confirmed by the fact that the protection of the environment holds an important place in Mali's constitution.

Significant efforts have been made by the state to improve the financing of sustainable forest management in the state budget. However, the amounts allocated are still insufficient compared with the need for forestry investment. Recruitment of forestry personnel also takes place every year to bridge the gap in staff shortages.

Important efforts are still to be made by the state, especially in relation to the revision of taxes on harvesting forest resources, which should be modified to take into account the real costs of forest management. But a positive sign is that the government drafted and implemented the Domestic Energy Strategy with the backing of the World Bank. This strategy aims to arrive at a correct value of woodfuel production and the introduction of rational harvesting measures.

It seems likely that the state would view favourably the reform of fiscal policies in the forestry sector leading to an increase in the contribution of domestic resources to finance sustainable forest management.

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