

**ENSURING SUSTAINABILITY OF FORESTS AND  
LIVELIHOODS THROUGH IMPROVED  
GOVERNANCE AND CONTROL OF ILLEGAL  
LOGGING FOR ECONOMIES IN TRANSITION**



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for  
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**ABBREVIATIONS AND ACRONYMS**

%	percent
BEEPS	Business Environment and Enterprise Performance Survey II
cm	centimeter
EGPRSP	Economic Growth and Poverty Reduction Strategy Paper
GDP	gross domestic product
ha	hectare
m <sup>2</sup>	square meter
m <sup>3</sup>	cubic meter
MDL	Moldovan Leu – LEI (national currency)
MENR	Ministry of Ecology and Natural Resources
NGO	Non-governmental organization
PPP	purchasing power party
SEI	State Ecological Inspection
USD	United States Dollar

**EXCHANGE RATES**

	MDL/USD
1998	5.11
1999	10.29
2000	12.38
2001	12.82
2002	13.53
2003	13.98
2004	12.41

## 1. INTRODUCTION

### 1.1 General Information on Forestry Sector of Moldova

Forest resources are constituted from resources of the forest fund and forest vegetation from lands outside this.

According to the data from the general land cadastre as for 1 January 2004, national forest fund occupies the area of 403 400 ha (11.9% from the country's territory), including forest area of 362 700 ha or 10.7% from the country's territory. At the same time, Moldova has 49 000 ha of forest vegetation outside the forest fund, expressed in 30 500 ha of forest protection belts (from agricultural fields, roads, rivers and aquatic basins, etc.) and 18 500 ha of plantations of trees and bushes, which also contribute essentially to the maintenance of ecological balance.

From the total surface of the forest fund, state forestry authorities manage 359 300 ha or 89.1%, including 318 600 ha of forests. The rest of the lands from the forest fund (44 100 ha or 10.9%) are under the management of mayoralties and other land possessors, including 400 ha of forests in the private property. Forest vegetation outside the forest fund is in the public possession of territorial-administrative units (mayoralties) (78.8%), the Ministry of Transport and Communications (6.2%), other owners (15%), including private individuals (1.7%).

Forests from Moldova are mainly situated in the central part of the country (58% from the total surface of the forests) in the historical province of Moldavian Codrii (Table 1.1).

The area covered with forests is increasing (Figure 1.1, see also Figure 1.2). On the other hand, a large portion of these areas is degraded. About 12% from the surface of forest protection belts require partial reconstruction and about 6% – integral reconstruction. In some regions (*raions*) the share of surfaces that require reconstruction activities (partial or integral) is very high ranging from 27% to 94%. (Source: Complex program for the development of degraded lands and increasing of soil fertility (Governmental Decision No. 636 as of May 26, 2003).

In accordance with Article 14 of Forest Code forests from Moldova are included in the first functional group, having exclusively environmental protection functions.

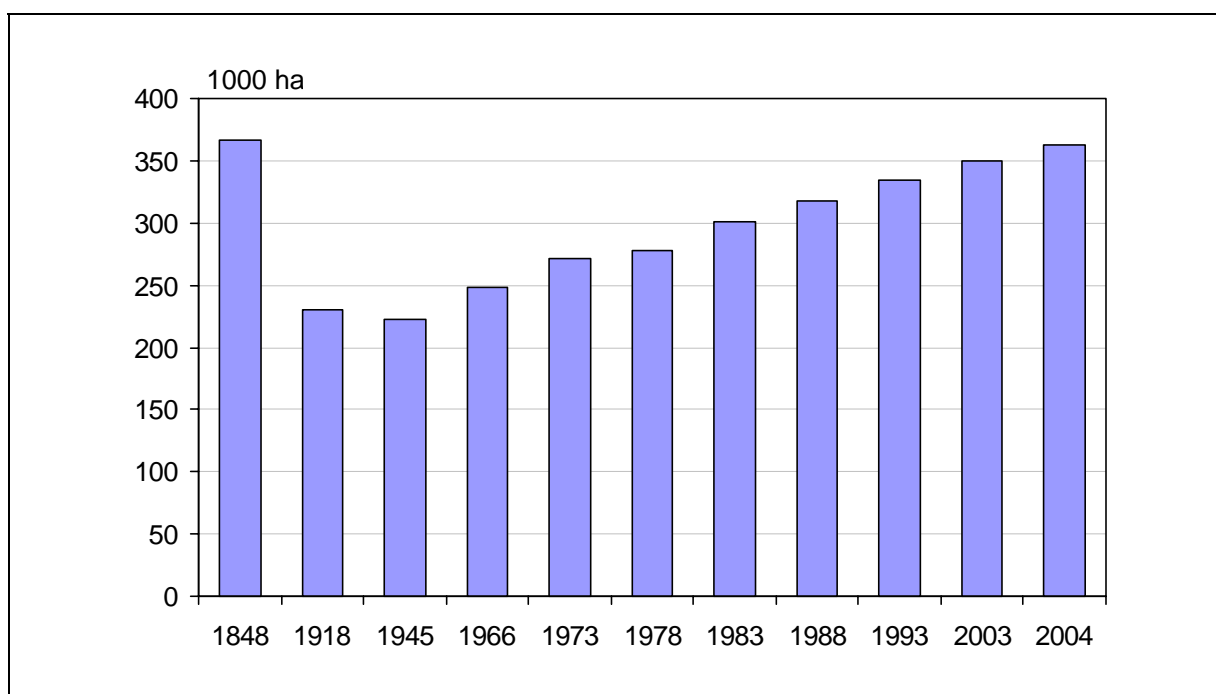
In accordance with their functions, are determined five functional subgroups:

- Forests with water protection functions 1.6%
- Forests with fields and soils protection functions 6.7%
- Forests with functions of protection against unfavorable climate and industrial factors 48.6%
- Forests with recreation functions 29.5%
- Forests of scientific interest and conservation of genetic and ecological funds 13.6%

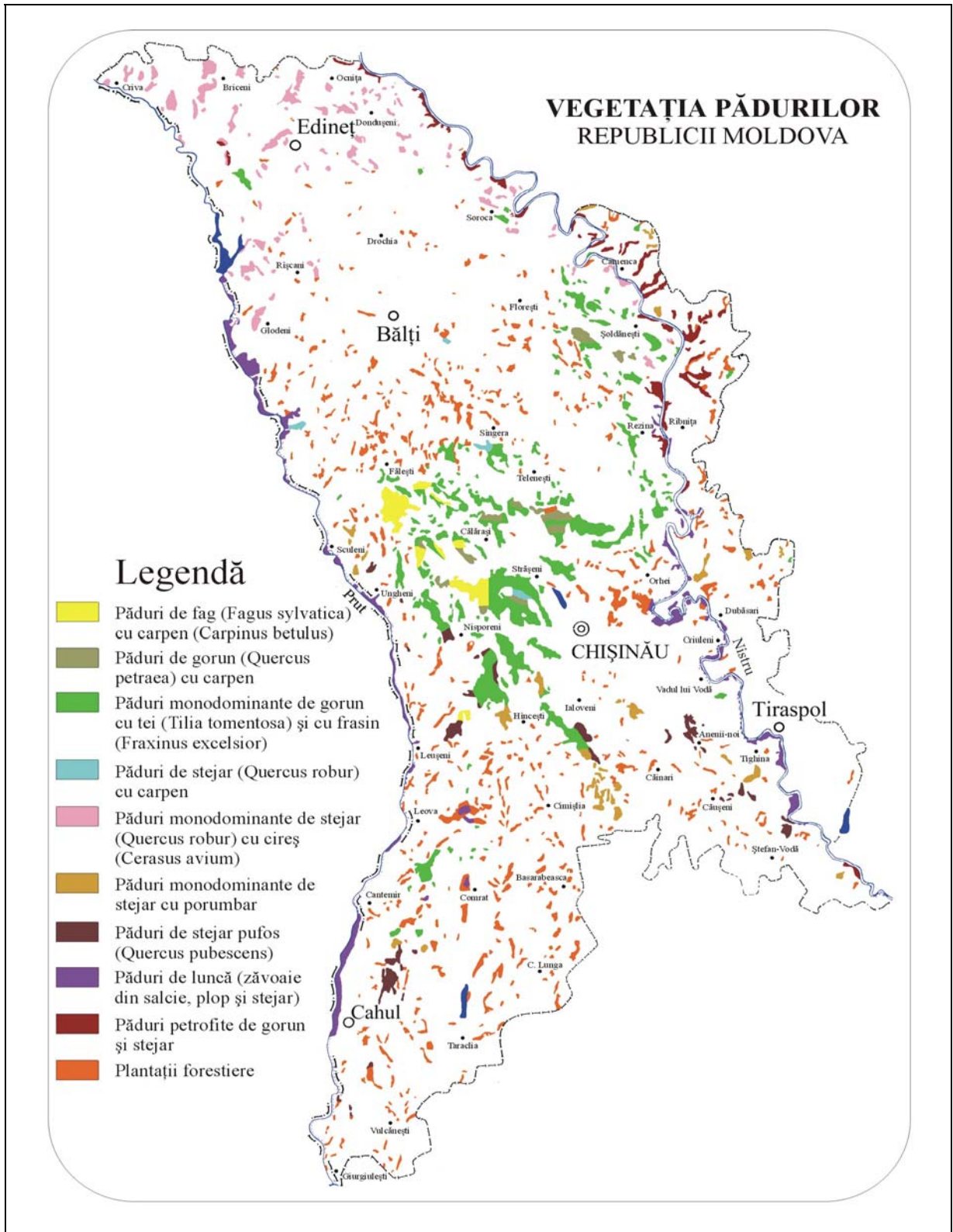
**Table 1.1 Repartition of Forests of Moldova by Geographical Zones**

Region	Area	Forest area	Level of afforestation	Inhabitants	Surface of forests	Total amount of woody biomass	Amount of woody biomass falling
	1000 ha	1000 ha	%	million	ha/person	1000 m <sup>3</sup>	m <sup>3</sup> /person
North	1 149	93	8.1	1.2	0.08	12 000	9.9
Center	1 449	209	14.5	2.5	0.08	26 100	10.4
South	787	60	7.7	0.6	0.11	7 300	11.5
<b>Total</b>	<b>3 385</b>	<b>363</b>	<b>10.7</b>	<b>4.3</b>	<b>0.08</b>	<b>45 400</b>	<b>10.4</b>

**Figure 1.1 Evolution of Surfaces Covered with Forests in Moldova**



**Figure 1.2 Forest vegetation in the republic of Moldova**



For provision of efficient and sustainable management of forest resources of Moldova special institutions are obligated (for example, Forest Research and Management Institute) to carry out the forest management planning for all types of lands with forest vegetation.

According to Articles 71-73 of the Forest Code, forest management planning includes a system of measures for provision of rational use of lands from the forest fund and realization of forest using, efficient forest regeneration, guard and protection, promotion of an uniform technico-scientific policy based on the forestry development concept.

On the base of forest management planning are operated in ensemble with use of lands from the forest fund and forestry usings during the previous period and are developed basic principles referring to the organization of administration of forest enterprise for the next period.

Forest management planning establishes the management of forest observing and applying principles:

- continuity
- functional efficiency
- rational use of forest resources
- ecological stability.

Forest management planning in Moldova has been carried out in 1935, 1957, 1975, 1985 and 1992-2002.

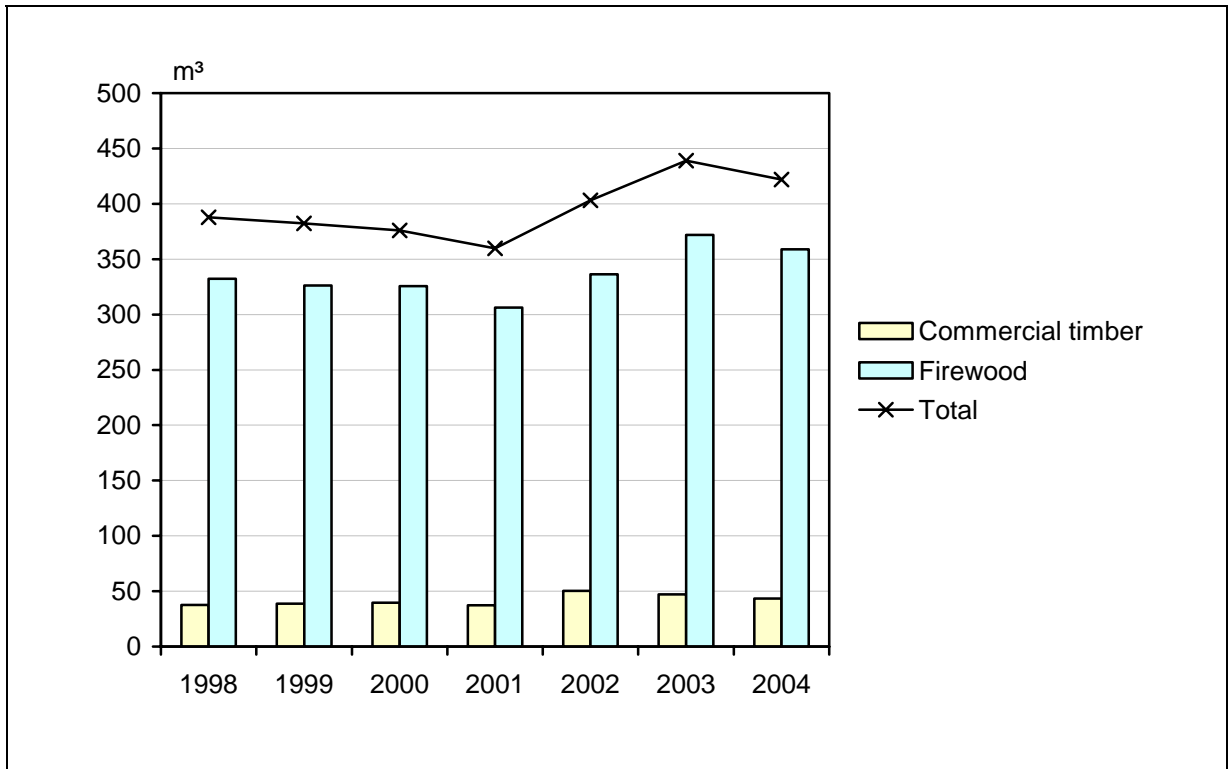
Forest management planning is the main mean of promotion of forestry policy, being in the base of environmental planning and for long-term management of the forest fund.

As against forests managed by Moldsilva, lands with forest vegetation managed by other possessors are not covered with forest management planning and have not justified and argued plans. Management is carried out proceeding from the possessor's considerations and with big infringements of forestry technologies and observance of ecological and forestry requirements.

Total amount of standing wood pulp in the forests of Moldova constitutes 45 million m<sup>3</sup>, falling in average 125 m<sup>3</sup>/ha. Average amount at one hectare of ripe forest stands is 180 m<sup>3</sup>. The most productive are the poplar stands (average 310 m<sup>3</sup>/ha), less productive are the acacia stands (132 m<sup>3</sup>/ha). Average annual increment constitutes 3.3 m<sup>3</sup>/ha and total annual increment is about 1.2 million m<sup>3</sup>.

In the process of all types of silvicultural cuttings (maintenance cuttings, sanitary cuttings, reconstruction cuttings, etc.) carried out in the forest fund managed by Moldsilva about 400 000 m<sup>3</sup> of woody biomass is harvested, from which about 85% constitutes firewood (Figure 1.3).

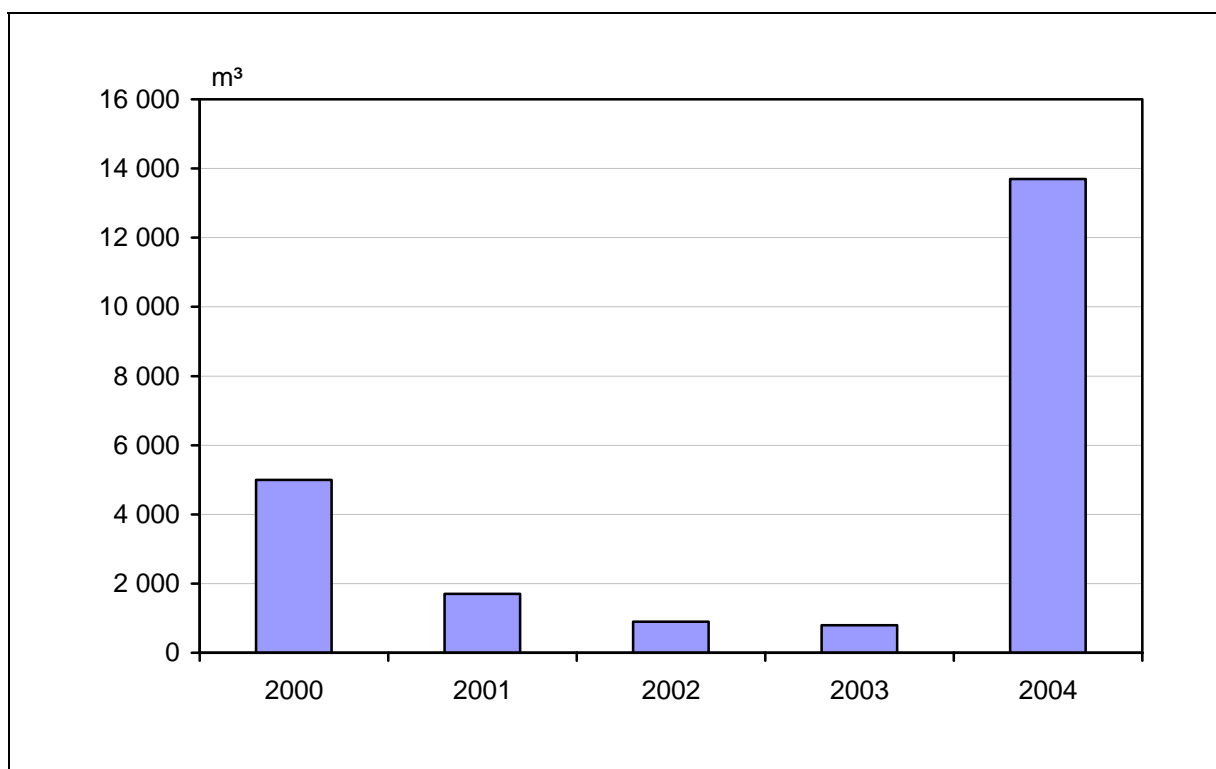
**Figure 1.3 Amount of Wood Mass Harvested in the Forest Fund Managed by Moldsilva**



For the forest fund and forest vegetation outside of it managed by mayoralities and other possessors there is no trustworthy statistics on the amount of woody biomass harvested during the application of silvicultural cuttings. Only the State Ecological Inspection (SEI) has some summarized information in this field, as a institution that authorized (on the base of Article 40 of the Law on Environmental Protection, Article 22 of Forestry Code on the state control and it data) cuttings for all types of vegetation. Thus, during the period of 2000-2004 SEI has authorized harvest of 22 100 m<sup>3</sup> in the forest fund and relevant forest vegetation (see Figure 1.4).

The contribution of forestry sector through the harvesting and processing of non-wood forest products (Table 1.2) (nuts, berries, medicinal plants, agricultural crops, etc.) is also essential.

**Figure 1.4 Authorized harvesting in Forest Fund and other relevant areas**



**Table 1.2 Harvest and Processing of By-products and Agricultural Crops by Moldsilva**

Products	1998	1999	2000	2001	2002
Forest Berries	560	2149	1 700	1 780	2 150
Walnuts and hazelnuts	308	655	271	530	81
Medicinal plants	730	402	1 150	866	212
Dog's rose	317	1 448	1 887	1 800	618
Hawthorn	74	0	0	80	9
Honey	98	87	71	110	45
Fodder	9 350	4 270	4 032	6 870	3 755
Cereals	10 628	6 285	9 186	15 158	8 969

## **1.2 Contribution of Forestry Sector to National Economy**

Moldova is the poorest country in Europe. GDP per capita (2003) was USD 542, and USD 2 428 in purchasing power parity (PPP) terms (2002). Depending on the measure of absolute poverty used, 40-50% of Moldavians are poor and the majority can be considered extremely poor. Poverty rates in large cities have been lower than rates in small towns and among the rural population. Across economic activities, households in which the head is engaged in agricultural activities (mainly hired agricultural workers) are at higher risk of poverty.

Contribution of forestry sector to the national economy is expressed in forest products (wood and non-wood) delivered as final products or semi-fabricates/raw material, as well as rendered services. It is necessary to mention the essential growth of incomes from the production activities for Moldsilva during last year's period. Thus, financial equivalent of these in 2004 constitutes MDL 101.5 million or four times in comparison with 1998 (Table 1.3). At the same time, the share of this in gross domestic product (GDP) of the country remains unessential, making 0.3-0.4% for the reference period. Considering poverty alleviation, forestry sector has a larger potential role as the activities concentrate in the rural areas, which are hardest hit by poverty.

However, despite increasing income the financial situation of Moldsilva is deteriorating as the pace of revenue expansion cannot keep up with the rise in expenditure. In year 2004 the deficit is projected to be about 15% of budgeted expenditure. One of the contributing factors is the recent trend to increase employment in Moldsilva. About 5 700 employers provide administration/management/guard of forest fund managed by Moldsilva (year 2004). For the forest fund subordinated to mayoralties practically there is no trustworthy information, but according to the previous estimations, this index constitutes about 60 persons.

**Table 1.3 Indexes of Economic-financial Development of Moldsilva in 1998-2004**

Year	Income		Expenditure		Number of staff
	Total	Including from the production activities	Total	Including for guard provision	
	MDL million				
1998	24.4	18.2	23.2	2.8	4 200
1999	46.7	39.3	29.2	4.2	4 900
2000	62.4	53.6	57.0	9.2	4 700
2001	64.9	54.9	63.4	11.2	5 000
2002	76.7	70.5	78.6	14.9	4 700
2003	97.7	94.2	98.5	16.1	5 500
2004e	101.5	93.0	117.0	17.2	5 700

### 1.3 Governance

Moldova inherited weak institutions and has not yet succeeded in building a modern state. As a consequence, ample opportunities for corruption abound. The civil service is politicized, the management of public funds has improved but still lacks transparency and efficiency, local governments have limited capacity to carry out their extensive mandates, the judicial system is not trusted, and civil society has yet to emerge as a significant voice in the country. Not surprisingly, corruption in Moldova is perceived as being very high. The Business Environment and Enterprise Performance Survey II (BEEPS) reports that nearly 60 percent of respondents consider corruption to be a "moderate" or "major" constraint to business, the highest in the region (World Bank 2004). Transparency International the Corruption Perception Index (CPI) gives Moldova a score of 2.3 and rank of 114 out of 145 countries indicating that corruption in the country is widespread. Agenda 21 of Moldova identified forestry sector as one of those where corruption is rife and measures to eradicate needs to be undertaken. However, this proposal was not adopted in subsequent sector plans prepared by the forest administration

Although new civil service rules were introduced officially in 1995, Moldova has yet to internalize the notion of a politically independent, merit-based civil service. Instead, the current public administration represents a mixture of old bureaucratic structures, rules and procedures with some new institutions developed under earlier but currently stalled reforms. Chronic political instability and volatility have worsened the initial lack of institutional capital, while the politicization of the civil service has led to a high turnover of staff, chronic policy discontinuity, a deterioration in operational efficiency, the erosion of institutional memory, and very low staff morale (World Bank 2004). The forest administration is grappling with similar problems.

The last two years have witnessed a major surge in civil society activity, and today close to 3 000 civil society groups / NGOs exist in the country, many of them established with the support of external assistance. The relationship between the civil society/NGOs and the Government has been guarded in the recent past, owing in part to mutual suspicion. Recently, however, under the aegis of the EGPRSP process, there has been a rapprochement, engendered first by the creation of Participation Council<sup>6</sup> and second, by the extensive consultations with the stakeholders. In addition, the monitoring and evaluation arrangements being proposed under the EGPRSP include civil society groups. Thus, the leadership is beginning to involve civil society groups in the local, regional, and national discourse (World Bank 2004). However, based on interviewed stakeholders the relationship between the forest authorities and the NGO community appears strained in Moldova, perhaps even more so than in other natural resource sectors.

## **2. NATIONAL DEFINITION OF ILLEGAL LOGGING**

### **2.1 Definition of Illegal Logging According to National Legislation**

According to the actual legislation the illegal logging is defined as follows:

1. In the Forest Code, Article 84 (No. 887-XIII din 21 June 96, Monitorul Oficial No. 4-5/36 din 16 January 1997), provides the types of forestry infringements. Thus, those with the reference to the illegal logging could be considered the following:
  - illegal logging and damage of trees and bushes before the termination of their growth
  - illegal damage of trees and bushes that does not interrupt the process of their growth
  - destruction or damage of forest in the result of forest fire or the negligent manipulation with fire
  - destruction or damage of forest plantations, young stands having naturally origin, natural seedlings and pre-existent from the lands to be reforested
  - destruction and damage of seedlings and cuttings from forest nurseries and forest plantations
  - harvesting and destruction of rare and protected species of flora and fauna being endangered
  - infringements of established mode of logging and transportation of wood mass
2. According to the Law on Environmental Protection (No. 1515-XII as of 16 June 93. Monitor No. 10 as of 30 October 1993), Article 40 it is stipulated that damage or felling of trees and other forest vegetation are forbidden and attract the responsibility established by the legislation, which is carried out without the permission of central environmental

and natural resources authorities in forest protection belts, in field protection zones, watercourses and reservoirs and those adjoining to railways, highways and green zones of urban and rural localities.

3. Article 35 of the Forest Code and point 19 from the rules on the realization of standing wood in forests foreseen that the harvest of wood is allowed only on the base of authorization for forest exploitation. Any other kind of documents or verbal authorization from responsible persons could not be served as a base for the harvesting and transportation of wood, cutting of tree and shrub species during the effectuation of different forestry works in forests and other mode of use of forest resources.

**Figure 2.1 Forests from Green Zones Around Localities, Destroyed by Illegal Logging**



## **2.2 Analysis of Compatibility of National Definition of Illegal Logging with Indicative Definition**

As against the indicative definition provided in the Terms of Reference, the national definition does not have aspects that have the reflection in the legislations concerning to the administration, penal and civil infringements, for the following:

- thefts of forest production
- with duplicate felling licenses
- using bribes for obtaining authorization for logging
- using deceptive transfer pricing and other illegal accounting practices to distort prices, volumes, cash flows and debt service levels

- that engages in the illegal transport and trade of timber or the smuggling of timber
- that is processed without the required license and that is not in compliance with environmental, social and labor laws

In Moldova in accordance with the current legislation, forests could not be transferred in the concession, but only in leasing and use.

### **3. ILLEGAL LOGGING**

#### **3.1 Volume of Illegal Logging**

According to evidence/control/revision's data, during 2000-2004 the volume of illegal logging in Moldova constituted 33 300 m<sup>3</sup> (Table 3.1). From this volume 19 600 m<sup>3</sup> or 58.3% had been scattered within the forestry fund, that is managed by Moldsilva, the rest 14 000 m<sup>3</sup> or 42% – within the forests and forest vegetation administrated by mayoralities. The total calculated amount of the damage is MDL 8.5 million. Simultaneously, it is necessary to mention that although the total volume of wooden mass that was illegally logged within the forests administrated by Moldsilva is large, however the affection grade of the forests and forest vegetation administrated by mayoralities is larger. Thus the period average of the illegally logged volume per 1 000 ha covered by forests/vegetation for Moldsilva is 12.3 m<sup>3</sup>, while for the mayoralities this index is 30.1 m<sup>3</sup> or it is larger by 2.4. At the same time it is necessary to note that an essential part of illegal logging, particularly on the plots with forestry vegetation administrated by mayoralities is not registered. The last integral revision of forests and forest vegetation administrated by mayoralities (that include the evaluation of administration level, organization of guard) with participation of environmental and forestry authorities took place in 1998.

Another method to assess the extent of illegal logging is to compare estimates of demand with reported harvesting volume. As it was already mentioned, forest resources have an essential share in solution of problems concerning the provision of population with thermal power. Table 3.2 shows that only 12% from the houses from the rural localities are connected to the gas pipelines, the rest requires the solid fuel. Proceeding from the calculation that for the heating of one house it is necessary about 1.5 m<sup>3</sup> of firewood per season, annual necessities in firewood for the population of Moldova constitutes about 1 million m<sup>3</sup>.

**Figure 3.1 Forest Vegetation for the Protection of Water Basins Affected by Illegal Logging**



**Figure 3.2 Forests from the Southern Zone of the Country Strongly Affected by Illegal Logging**



**Table 3.1 Official Volume of Illegal Logging in Moldova During 2000-2004**

Indicator	2000	2001	2002	2003	2004
<b>I. Forest fund managed by Moldsilva</b>					
Number of cases	3 323	2 252	2 656	2 836	1 314
Illegally harvested wood, m <sup>3</sup>	4 920	4 205	4 375	4 159	1 974
Damage, MDL 1000	620	557	642	689	319
Illegally harvested, m <sup>3</sup> /1000 ha	17	16	13	13	10
<b>II. Forest fund and forest vegetation managed by mayoralities</b>					
Number of cases	647	729	1 050	872	644
Illegally harvested wood, m <sup>3</sup>	2 553	990	7 555	1 402	1 505
Damage, MDL 1000	1 142	1 093	1 257	1 539	639
Illegally harvested, m <sup>3</sup> /1000 ha	27	11	81	15	16
<b>Total</b>					
Number of cases	3 970	2 981	3 706	3 708	1 958
Illegally harvested wood, m <sup>3</sup>	7 473	5 195	11 930	5 561	3 479
Total damage, MDL 1000	1 762	1 650	1 899	2 228	957

**Table 3.2 Number of Dwelling Houses in Rural Localities**

Year	Number of dwelling houses	From which are connected to the gas pipeline
1998	749 546	64 865 8.7%
1999	751 547	69 922 9.3%
2000	750 580	72 068 9.6%
2001	750 571	74 305 9.9%
2002	751 471	85 779 11.4%

Source: Statistics from the Department for Statistics and Sociology of Moldova. Letter No. 12-06/25 from 31 March 2004

Table 3.3 shows that in the period of 2000-2004 the demand for wood mass has been covered only at 40.4% from the total amount officially harvested. Also to the same chapter dedicated to official sources could be mentioned those 17.7% originated from the wastes from wood processing of imported timber, biological mass from orchards, vineyards, agricultural fields, pressed dung, etc. Share of illegal logging officially recorded makes only 0.7%, but of unstated/uncertain sources (41.2%). Thus, illegal/unstated/uncertain sources cover 42% from the estimated sources of the wood demand.

**Table 3.3 Comparative Analysis on the Provision with Wood from Different Sources**

Categories	2000	2001	2002	2003	2004
	1 000 m <sup>3</sup>				
Wood harvested in the result of forestry cutting according to the official data	381	361	404	440	436
Wood harvested illegal (official data)	8	5	12	6	4
Imported wood (mainly wastes from wood processing)	20	25	30	30	30
Biomass from orchards, vineyards, agricultural fields (equivalent to firewood)	100	100	100	100	100
Traditional sources, pressed dung, etc. (equivalent to firewood)	50	50	50	50	50
Unstated/uncertain sources of wood	442	458	404	375	381
<b>Total wood consumption</b>	<b>1 000</b>	<b>1 000</b>	<b>1 000</b>	<b>1 000</b>	<b>1 000</b>

### 3.2 Types of Illegal Logging

Based on the classification in official statistics, the most frequent types of illegal logging in Moldova are the following:

- logging without legal acts with power purposes and/or in order to obtain wooden mass for personal consumption within the plots administrated by the authorities of local public administration and by the Ministry of Transport and Communications
- illegal logging for obtaining of wooden mass for commercialization and in order to get illegal revenues from the forests and plots covered by forestry vegetation indifferent of the forestry stakeholder
- illegal creation and commercialization of the wooden mass surpluses created at the moment of the parquet inventory effectuation, omitting of them in the legal permitting acts (licenses and tickets), utilization of the methods for corruption and bribery of responsible persons.

**Table 3.4 Share of the Volume of Illegal Logging by Different Purposes**

Reasons behind illegal logging	Share in the general structure of the volume legally harvested	Average amount for the period of 2000-2004 of wood illegal harvested according to the official data and originated from unstated sources
	%	1 000 m <sup>3</sup>
Sale of industrial timber	15-20	84
Sale of firewood	15-20	84
Heating and cooking	70-60	251
<b>Total</b>	<b>100</b>	<b>419</b>

Proceeding from the data from Table 3.4 it is necessary to mentioned that the majority (60-70%) falls to illegal logging appeared in the result of the poverty. The majority of illegal logging takes the place in forests and lands with forest vegetation managed by local public authorities, as well as from the margins of forest massifs managed by the state forest bodies.

Usually, illegal logged trees have the diameter less than 20 cm (mainly *Robinia*) are harvested and transported manually.

Illegal loggings carried out with the purpose of further sale make about 30-40% and usually are realized by organized groups. The object of such logging makes trees of valuable species (oak, cherry-tree, lime-tree, ash, etc.) with the diameter more than 20% (suitable for processing).

**Table 3.5 Checklist on Poverty Driven Illegal Activities in the Forest Sector**

Statement	True/False	Comment
Almost all (more than 80%) of rural people depend on firewood for energy needs	False	The share of rural population depend on firewood makes about 70%
The majority (more than 50%) of rural people depend on firewood for energy needs	True	
There is no feasible alternative energy source available for the rural people who depend on firewood, especially the poor	False	Present, the massive gasification of localities takes place. At the same time the essential part of necessities in firewood can be satisfied from the biomass harvested from agricultural fields and about 30% is originated from animal industry sector. Actual index makes about 18%
Almost all (more than (80%) of urban people depend on firewood (and/or charcoal) for energy needs	False	The share of urban population dependent on firewood constitutes about 20% because apartments and individual houses are connected to the thermal and gas pipe-lines.
The majority (more than 50%) of urban people depend on fuelwood (and/or charcoal) for energy needs	False	
There is no feasible alternative energy source available for the urban people who depend on firewood (and/or charcoal), especially the poor	False	Present, the massive gasification of localities takes place. At the same time the essential part of necessities in firewood can be satisfied from the biomass harvested from agricultural fields and is originated from animal industry sector – about 10%
Almost all (more than (80%) firewood (and charcoal) production and trade is done outside of the formal economy/ without legal authorization	False	According to the estimations the share of firewood harvested and sold from unstated sources makes about 40%
The majority (more than 50%) of firewood (and charcoal) production and trade is done outside of the formal economy/ without legal authorization	False	
The legally extractable supply of firewood (and charcoal) is sufficient to meet the subsistence needs of rural and urban populations.	False	The share of illegal logging of firewood makes up only 40%. Plus to this, about 18% are covered with biomass from agricultural fields and animal industry.
Almost all (more than 80%) of wood used in local construction in the rural areas in harvested and transported without legal authorization	False	The share of industrial timber harvested illegal and used for construction makes about 30%
Most (more than 50%) of wood used in local construction in the rural areas in harvested and transported without legal authorization	False	

### **3.3 Export of Timber**

#### **3.3.1 Export of Roundwood and Other Wood Products**

According to the data from the Customs Department for the period of 1998-2004 from Moldova have been exported wood products (roundwood, parquet, sawn wood, etc.) in the amount of USD 8.3 million. It is difficult to carry out the assessment of total volume of exported wood, because the customs service are recorded forest products in different measurement units (m<sup>3</sup>, m<sup>2</sup>, ton, etc.), but it could be mentioned that during the relevant period have been exported about 15 000 m<sup>3</sup> of roundwood, sawn timber and veneer sheets. At the same period about 234 m<sup>3</sup> of firewood have been exported. It is improbable that the export of firewood is profitable. Most likely that it is the camouflage of real quality of exported timber, that in reality correspond (with a high probability) to the industrial timber proceeding from it technical characteristics.

Analyzing the customs Department data can also concluded that the export of wood products in the condition of Moldova became business that is more profitable because this process is in permanently growth. Thus, the volume achieved in 2004 (USD 3.5 million) exceed eight times the index from the year 1998 (USD 0.4 million).

#### **3.3.2 Import of Forest Products**

During the same reference period in Moldova have been imported forest products in the amount of USD 85.4 million or about 10 times more than the exported volume. Among imported products in this period it is necessary to mention 570 000 m<sup>3</sup> of roundwood, sliced, crossties, veneer sheets, plywood, etc. Import activities for forest product are also in growth, in the year 2004 (USD 26.3 million) achieving the growth of 2.5 times in comparison with the year 1998 (USD 10.6 million).

A considerable part of imported forest products is used for the furniture production, that also is in the growth and there is a permanent growth of demand on industrial wood with especial technical and aesthetic quality. In addition, it is necessary to mention that the national forestry sector has a big potential for offering of forest products to furniture production (about 40% of forests are covered with oaks, the quotes of ash, lime-tree, cherry also are essential) but is not developed.

### **3.4 Impact on the Public Finance**

Incomes in the forest sector could be obtained from two main activities:

- from production activity (forestry)
- from auxiliary-industrial activity

From the production activity the incomes have been grown from 17.5% in 1990 to 75-96% in the year 2004. In the year 2003 from the sale of one cubic meter of the wood the incomes have constituted MDL 152.30 per m<sup>3</sup> (according to the statistic data from the State Forest Moldsilva). Taxes that have be paid made MDL 36.55 per m<sup>3</sup>/a.

Internal consumption as it was indicated is estimated at about 1 000 000 m<sup>3</sup>, from which:

• Harvested within Moldsilva, including wasted from forests and timber processing	410 000-415 000 m <sup>3</sup>
• Harvested in lands managed by other possessors	5 000 m <sup>3</sup>
• Import, only 20-30% from the imported volume will be used for heating purposes	about 30 000 m <sup>3</sup>
• Illegal logging	7 000-10 000 m <sup>3</sup>
• Use of biomass from orchards, agricultural fields, equivalent in firewood	100 000 m <sup>3</sup>
• Use of traditional resources of pressed dung, etc., equivalent to firewood	50 000 m <sup>3</sup>
• From not identified sources	390 000 m <sup>3</sup>

The missed profit from the timber sale: 390 000 m<sup>3</sup> × MDL 152.30 per m<sup>3</sup> = MDL 59.4 million, approximate incomes in the amount of MDL 60 million (USD 4.8 million).

From this quantity of wood mass and the amount of the incomes in the state budget it was necessary to transfer the sum of about MDL 11 million (USD 0.9 million). On the other hand, this amount could have been collected only if the illegal harvesting volume had somehow been “legalized”. Officially, the illegal volume should not have been harvested at all. Unless annual allowable cut is increased, the future timber revenue will remain at the current level.

### 3.5 Environmental Impact Assessment

Illegal logging on the lands with forest vegetation has negative impact on different components of the environment because as a result of this process the degradation of stands is taken place through the reduction of the stands’ density to 0.4-0.6. The composition of stands becomes simplified due to the harvesting of main and valuable species. The following tree species are high valued on the market: cherry, mountain ash, oak, maple species, elm, walnut tree, etc.

Forest vegetation conditions are degraded due to creation of possibilities for installation of ruderal plants and those less valuable. As a result, the natural habitats are modified, situation in worsening and affect the floral and faunistic diversity.

During the period of 1990-1996 the most affected in the result of massive illegal logging were forest protection belts managed by mayoralties. As a result most of it were destroyed and cut up to the density of 0.1-0.3. In this condition forest belts have stop to carry out their protection functions. Soil erosion processes became intensive. Such negative phenomena, as dust storm has appeared again. The humus layer is lifted in the air together with the incorporated seeds of agricultural plants and removed at a big distance. The losses are extremely high both from economic and ecological concerns. Degradation of soils makes impossible the development of the agriculture, and the country however remains agrarian.

Illegal logging taken place on the banks of small rivers, inflows of main rivers from the country Dniester (Nistru) and Prut, also have a s a consequence the wash off from the slopes of big quantities of soil silting the water sources and aquatic basins. One of the big problems

that affect the health condition of the population is the provision of the population and national economy with qualitative aquatic resources and in sufficient volumes.

Illegal logging for heating purposes are carried out near rural localities and are resulted in destruction of national landscape, diminish of it aesthetic values. Also eco-, forestry, tourist potential is suffering.

In the result of degradation of forest plantations around localities, their green carcass, aggravation of local microclimate takes place. Cold winder winds and dry winds during spring/summer time create uncomfortable life conditions.

The influence of illegal logging is essential and put in danger the ecological balance between different environmental factors, increasing the provability of landslides, flooding, dust storms, icings, etc. The intensity of such phenomena has increased essentially during last years and provokes enormous losses to economical agents and to population.

## **4. GOVERNANCE**

### **4.1 Political Framework**

Key purposes of the national forestry sector are mentioned in a number of documents that have been updated/adopted at the different level (parliament, government, etc.) during the period of last 10-12 years. The character of the forest estate as a public good is emphasized along with environmental protection and contribution to socioeconomic development. Among the key documents could be mentioned the following:

#### 1. Constitution of Moldova:

##### (a) Article 126 provides that the state should ensure:

- Rational use of the land and other natural resources (including forests), in accordance with national interests
- Restoration and protection of the environment, as well as maintenance of ecological balance

##### (b) Article 127 provides that

- All resources of entrails, air space, waters and forests, used in public interests, natural resources of an economic zone and a continental shelf, means of communication, and also other resources determined by the law, are objects of extremely public property.

#### 2. Forest Code (No. 887-XIII as for 21 June 1996 with further modifications and amendments):

##### (a) Article 10 provides that among the objectives of administration and management of the forest fund (could be qualified as tasks/purposes for the forestry sector) are the following:

- Amplification water-security, sanitary-and-hygienic, climate-regulative and other functions of woods in interests of public health care and environmental protection
- Development and application of a complex of various actions, a regulation of activity of the state forestry bodies on reduction and the maintenance of forests a

- condition necessary for performance by them of ecological, social and economic functions
- A continuity of functional efficiency of forests and rational use of forest resources.
3. Strategy for the sustainable development of the national forestry sector (Parliament Decision No. 350-XV as for 12 July 2001):
- (a) Chapter III (Forestry policy and management) provides that:
- Forest management should be subordinated only to the national sustainable interests, oriented towards national forestry traditions and objectives and based on the ecological principles. Forest protection and sustainable development it is inseparable from the problem of provision of the population health
  - In the forestry policy it is necessary to put the accent on the conservation of biological diversity at all level, on the professional training of staff, harmonizing of legislative framework, on international cooperation.
- (b) Chapter VII (Basic concept and objectives of sustainable development of the forestry sector):
- Increase of eco-protective and bio-protective potentials of natural forests
  - Conservation of forest biodiversity
  - Expansion of surfaces covered with forest vegetation
  - Increase of efficiency of activities for forest guard and protection
  - Increase of the contribution of the forestry sector in the solution of socio-economic problems (increase of the amount of ripe wood mass, integral processing of wood, rational use of non-wood forest products, etc.)
  - Conservation of national rural landscape (by the means of afforestation of degraded lands, reconstruction of national landscape, improvement of the conditions of life of the population, etc.).
4. Parliament Decision on the approval of National Strategy and Action Plan in the domain of conservation of biological diversity (No. 112-XV as of 27 April 2001) establishing the following main objectives actions related to biodiversity conservation including in the forest sector.
5. Law on improvement of degraded lands through afforestation (No. 1041-XIV from 15 June 2000) and Governmental Decision No. 636 from May 26, 2003 “On the approval of the program of development of lands and increase of soil fertility” – main purpose of it is to trigger the process of extension of lands with forest vegetation from the account of degraded lands. Forestry improvement works will include:
- Creation of new forest protection belts and restoration of those existent
  - Afforestation of degraded lands on the surface of 133 100 ha
6. Governmental Decision No. 737 from June 17, 2003 “On the approval of the State Program for the regeneration and afforestation of lands from the forest fund for the period of 2003-2020” – Regeneration and afforestation works in the forest fund up to the year 2020 will cover the total surface of 95 118 ha.

#### **4.2 State Policy in Combating Illegal Logging**

In Moldova the problem of illegal logging of forests (including forest vegetation outside the forest fund) is discussed as the most difficult and important. Thus, after the specialists from moldsilva have carried out in 1994 the complex study of the forests and forest vegetation managed by mayoralties and agricultural enterprise, recording the enormous amount (about 1 million m<sup>3</sup>) of illegal loggings, the Government has emitted a number of decisions:

1. Governmental Decision No. 106 as of 26 February 1996:
  - Point 1 – ministers: of Environment, Defense, Transport and Communication, Internal Affairs, Agriculture and Processing Industry; councils: of judet, municipal, city and community to provide the relevant protection of forests, forest protection belts and other types of forest plantations.
  - Point 2 – approval of complex interdepartmental plan of measures for prevention of forestry offences for 1996.
  - Point 3 – creation of Forest Guard as a special subdivision for the forest guard.
2. Governmental Decision No. 595 as of 29 October 1996:
  - Point 1 – possessors of forests and forest vegetation, Department for Environmental Protection, Ministry of Internal Affairs, local public administration have to develop and to carry out the concrete measures for combating illegal logging and other forestry offences in forests, forest vegetation and green spaces from cities and other localities.
  - Point 3 – oblige the possessors (mayoralties, agricultural enterprises, etc.) of forests, forest protection belts and other forest vegetation with a total surface more than 50 ha, to foresee the function of a forester, that will ensure the guard of it against illegal logging, grazing of animal, as well as the prevention of a other forestry offences.
3. Governmental Decision No. 107 as of 07 February 2001:
  - Point 4 – Moldsilva, ministries: of Environment, Defense, Transport and Communication, councils: of judet, municipal, city and community to take additional measures for the prevention and combating of illegal logging and other forestry and hunting offences, as well as for provision of forestry regime in the forest fund and for lands with forest vegetation outside of it.
  - Point 5 – Ministry of Environment and Moldsilva have annually to carry out the integration revision of forests and lands covered with forest vegetation managed by the authorities of local public administration and other possessors and to present conclusions and proposal on its condition and measures for its improvement to the Government and judet public authorities.
4. Governmental Decision 27 as of 19 January 2004 – approval of the Regulations on the authorization of cuttings in the forest fund and forest vegetation outside of it that establish the way of issue of authorization by environmental authorities (proceeding from harvesting possibilities established by the forest management planning or special studies, relevant resolutions, etc).

Another relevant measure is the implementation of the Governmental Decision No. 1017 as of 4 November 1999 concerning the State Program to combat criminalization, corruption and protectionism for the period of 1999-2002 and concerning the implementation of the

Parliament Decision on the activity of the General Office of Public Prosecutor and Ministry of Internal Affairs in combating organized crime and corruption.

### **4.3 Adequacy of Governments Response**

The main driver behind illegal logging of firewood is lack of alternative energy sources for the rural population. Commercially oriented illegal logging is made possible by lax enforcement of regulations. Often this does not involve physical removal of trees but corruption and manipulation of financial and field data (e.g., undergrading, underpricing). Rural population may also be involved in commercial activities as hired workers.

The government policy emphasizes improved law enforcement. This is undoubtedly necessary as shortcomings of the law enforcement mechanisms are serious need to be urgently addressed (see ch. 4.5). On the other hand, improved enforcement does little to alleviate the energy problem lying at the root of the problem regarding illegal logging of firewood. The forestry sector plays a significant role in the general energy balance of the country. According to the data from the Department of Statistics and Sociology, the share of forest products of the country's overall energy supply grew from 0.51% in 1992 to 4.6% in 2002. The importance of the sector comes from the fact that firewood is the only major energy source that is available within the country's borders; in 2002 forest products represented 94.1% of the domestic power supply.

The government aims to increase the supply of alternative energy sources but it is unclear at what pace this will happen. A slow adjustment to the post-independence realities left the energy sector with large accumulated debts and deteriorating infrastructure due to a lack of maintenance and investment. While significant reforms were undertaken under previous governments, they have stalled under the current government. Access to an affordable energy supply is increasingly difficult in many rural and small urban communities where district heating either does not exist or where the centralized heating systems collapsed when it became clear that they were not economically viable. The establishment of centralized gas distribution systems in rural communities, "gasification", is reportedly underway but it is unlikely to have major short-term impact on the demand for firewood. The existing gas distribution system provides gasification on average for 17 % of the household with regional averages varying between 3% and 46% (INOGATE 2005).

To address the firewood deficit in the short and medium terms, the government should investigate more thoroughly opportunities to increase firewood supply and reduce its demand. The following options exist.

- **Presence of important reserves of wood biomass.** Annual increment is more than 1million m<sup>3</sup>, but only 40-45% are harvested. The experience of other countries and the structure by the origin and age of forest stands allow us to use rationally and under the condition of strict supervision of the regeneration process of the growth up the amount of 65-70% or additionally about of 300 000 m<sup>3</sup>. Considerable amounts of wood can be obtained in the result of application of the forestry regime and relevant management of lands covered with forest vegetation and forests managed by mayoralities.
- **Presence of some important reserves of wood mass.** Annual increment is more than 1 million m<sup>3</sup>, annual harvest being only of 40-45%. The experience of other countries and

the structure of stands according to the origin and age class allow the rational use under the strict control of regeneration up to 65-70% or additionally about 300 000 m<sup>3</sup>.

- **Reduction of demand for firewood.** For this purpose it is necessary to start with the approval of a certain number of standards for the construction of dwelling houses in rural localities and heating installations (heating boilers and furnaces), not to allow the excessive consumption of power resources and reduce of possible losses to the minimum. It would be very useful to offer variants of houses, different at cost and the area, which would provide thermal isolation of houses, creation of comfortable temperature conditions, maintenance with water and the water drain.
- **Utilization of undeveloped or abandoned lands for afforestation.** The government has drawn up a plan to establish about 130 000 ha of plantations by 2020 and it is necessary to implement this program effectively.

#### **4.4 Legal framework of combating of illegal logging**

The mode of fulfillment of the possessor's right of lands from the forest fund is reflected in Article 6 of the Forest Code, mentioning that forests in Moldova, use in public interest, are exclusively the object of public property. According to the legislation, these lands could be given under the administration or in the use. Private property on forests is allowed only in the case of their planting, in legislative conditions, on private lands.

In Article 12 of the Forest Code there are stated the tasks of the central forestry authority, which is authorized according to the law to adjust, coordinate and supervise management of the forest fund, develop a mode of conducting the forestry (system of technical, economical, juridical and forestry standards concerning forest planning, use, regeneration, guard and protection of forests) and carries out the control over observance of this mode.

Article 29 of the Forest Code establish rights and duties of persons who are managing lands from the forest fund. Managers of lands from the forest fund are obliged, *inter alia*, to, guard forests. unsatisfactory realization of forests guard can lead to termination of managing rights on lands from the forest fund, The right on managing the lands from the forest fund is terminated by the means of the governmental decision under the imitative of the central forestry authority or central environmental authority. At the same time, the rights of persons managing the lands from the forest fund are protected from infringements and in case this happens they have a right to full compensation of damage.

Moldova has a well-developed legal framework regarding the prevention and combating of illegal logging. The relevant framework is composed from seven laws issued by the parliament and four statutory acts issued by the government. The most important components of this framework could be emphasized the following acts and regulations:

##### 1. Forest Code:

- Articles 35-36 – regulation of the process of harvesting and transportation of wood mass
- Article 64 – establishment of the competences of the state forest staff
- Articles 84-85 – statement of the types of forestry legislation
- Annexes 1-16 – establishment of the size of compensations for the damages caused by the Breaking of forestry legislation

2. Law on the environmental protection (Article 40 – prohibition of cuttings in forests and other forest vegetation without the authorization of environmental bodies).
3. Penal Code (Article 231 that foresee the sanctions for the illegal logging of forest vegetation – from 500 to 1 000 conventional units, 180-240 hours of gratuitous work for the benefit of a society, 4-7 years of imprisonment).
4. Code on administrative offenses
  - Article 64 – sanctions for the breaking of the mode established for the use of cutting area, harvest and transportation of wood (3-10 of minimal salaries)
  - Article 65 – sanction for the illegal logging and damage of trees and shrubs, destruction and damage of forest plantations and seedlings from forest nurseries and forest plantations (5-25 of minimal salaries)
  - Article 66 – sanctions for the destruction or damage of forest understory (3-10 of minimal salaries)
  - Article 67 – sanctions for the effectuation of some forest activities that are not correspond to the purposes or requirements stated in the authorization for the forest exploitation or forestry authorization (3-10 of minimal salaries)
  - Article 68 – sanctions for the breaking of rules on the regeneration and improvement of the forest condition, on the use of cutting area (up to 15 minimal salaries)

At the same time an important role in prevention and combating of illegal cutting falls on the relevant application of the Law on the fund of natural areas protected by the state, Law on the natural resources, Law on the zones and protection zones for rivers and water basins, etc.

**Table 4.1 Checklist on Transparency of Timber Sales**

Statement	True/false	Comment
<b>A. Awarding concessions/selling timber</b>		
Concessions are awarded/timber is sold predominantly through competitive bidding	False	Transmission of forests in concession is not applied. Lands from the forest fund are given in the leasing for other purposes than the harvest of wood (hunting, recreation etc)
The public has notice and opportunity to bid before awards	True	
Several bids are presented as a rule in the bidding processes	False	Though the national legislation does not forbid, but the realization of standing wood is not taken place. The wood is exploited by the managers/possessors of forests and forest vegetation. Wood harvested by the state forest bodies is sold according to the special price-list available for the public.
Bids are made public after awards	False	
Award rules are publicly available	False	
Unsuccessful bidders and other interested parties may challenge awards	True	
An independent internal government watchdog polices the process	False	Concession for the wood harvest is not applied
Forest officials must disclose financial interests in the forest sector (own and those of family members/close relatives)	True	

Statement	True/false	Comment
Concessions are awarded/timber is sold predominantly through competitive bidding	True	
<b>B. Timber harvesting and sales from valid concessions</b>		
Concession contracts, inventories and plans are publicly available	True	
Rules regarding forest practices concerning concession areas are publicly available	True	
Citizens may bring lawsuits or file administrative complaints to enforce concession requirements	False	In principle citizens have the free access to the justice, but as it has been already mentioned the concession for the wood harvest is not applied
<b>C. Timber harvesting and sales from private forests</b>		
Forest officials have a procedure for controlling in the field timber harvesting and sales from private forests	True	
Rules regarding forest practices on private lands are publicly available and accessible to private forest owners	True	
<b>D. Transport of timber</b>		
Government officials have a procedure for controlling the transport of timber	True	
Government officials have a procedure for verifying the origin of timber being transported	True	
<b>E. Sales of confiscated timber</b>		
Records are kept on volumes and assortments of illegally procured or transported wood captured by officials	True	
Captured wood is sold in public auctions or through other kinds of public bidding	False	The relevant wood is sold at the same prices as the wood harvested officially
Records are kept on volumes confiscated and sold as well as on prices obtained	True	
<b>F. Processing of forest products</b>		
Law requires licensing or registration of commercial processing facilities	True	
Government performs regular inspections of processors	True	
<b>G. Export or import of forest products</b>		
Customs officials trained to recognize restricted/prohibited species	True	
<b>H. Concealing revenue from forest activities</b>		
Forest revenue system (royalties, taxes, etc.) establish a clear basis for monitoring revenue collection (volume or area based)	True	
Records are kept on logging volumes and revenue collection by defined geographic areas	False	Is not systematically carried out
Periodic audits are carried out to verify that revenue collected matches with logging volumes/ areas under production	True	
<b>I. Civil services, social, and institutional factors that influence illegal activity</b>		
Forestry officials regularly trained to upgrade law enforcement skills	True	
Judges and prosecutors trained in forest sector issues	False	
Forest agency is subject to independent audits	True	
Civil service has ethical code-of-conduct (e.g., regarding acceptance of gifts and benefits)	True	
Ombudsman or other independent mechanism responds to public complaints	True	

#### **4.5 System of Monitoring and Control of the Forestry Sector**

In the process of regulation and management of natural resources, including forests, are involved both owners/possessors/managers of these and central public authorities having the functions of regulation/control/coordination in these domain.

The Government coordinates environmental protection activities carried out by ministries. It also determines the annual allowable cut. The Ministry of Ecology and Natural Resources (MENR) implements programs concerning guard and protection and organizes ecological monitoring. Moldsilva reporting directly to the Government protects forests against theft in its area and organizes internal control against corrupt practices. The State Ecological Inspection (SEI) under the Ministry of Ecology and Natural Resources (MENR) has the function to carry out the state control on the observance of laws and other statutory acts regarding to environmental protection and use of natural resources problems. Their responsibilities include monitoring and control over all forest areas. Regarding Moldsilva they monitor both illegal removal of trees as well as corruption-related illegal activities.

System of monitoring and control of the production process within the forestry sector are established in a number of legislative and statutory acts. In this domain the most important document is the *Forest Code* defining, *inter alia*, the basic regulations as well as penalties for breaching them (Annex 2). Another extremely important document with the reference to this matter is the Rules of releasing of standing wood approved through the Governmental Decision No. 740 as for 17 June 2003. These rules present a system of norms for the establishment and repartition of harvesting quota, issue of authorization for loggings and other forest products, terms and types of their harvest and transportation. Another important element is the Technical guidelines of assessment of wood mass intended for the exploitation (Annex 3).

Moldsilva's internal structure creates a conflict of interest. At the district level the same persons (forester, foreman and district head) are responsible for authorizing and approving the logging areas as well as for controlling the implementation of harvesting. If internal and external controls are not efficient, data can be manipulated quite easily to conceal major portions of harvested volume.

Moldsilva's activities are hampered by the fact that the forest estate is dispersed and fragmented into small forest areas. Efficiency of work is reduced by lack of transportation and means of communication; salaries of inspection staff are also rather low. It is also necessary to mention that the actual system of monitoring and control of the production process from the forestry sector is applied (with certain improvements) only in the forest fund managed by the state forest agency Moldsilva. The forest fund and forest vegetation outside of it and managed by mayoralties are practically not covered with these activities. Activity of the control/monitoring bodies (environmental authorities, justice bodies, etc.) has *post-factum* order. In other words, they only ascertained the infringements that have already taken place. A considerable part of the forestry infringement even is not recorded. Monitoring carried out by SEI suffers from the fact that they have a limited number of inspectors with forestry education (30 out of 210); capacity to carry out financial audits is very limited.

Another very important indicator for the analysis of forest control is the grade of the offender detection connected with illegal logging. For Noldsilva, during the reference period, the

respective index is 42–52% (data on mayoralty's forests are absent), which is growing during the last years.

In the process of combating and prevention of illegal logging the role of police is expressed through the examination of cases transferred by the environmental and forestry bodies concerning the forestry infringements with a damage that exceeds the amount of MDL 10 000. At the same time, on the base of common interdepartmental plans, police officers are involved in the effectuation of common spot check to combat illegal logging with ecological inspectors and forest guards.

Besides the aspects concerned the revealing of forestry infringements and infringers, especially importance in the process of prevention and combating illegal logging has the punishment of infringers and recovering of caused damages (Annex 4). Now there are many problems in this field that diminish essentially the efforts put during the operative controls/audit. Among this could be mentioned:

- examination of case in administration and the court bodies for a long period
- cessation of cases without proved
- delayed payment of penalties by the means of decisions of the relevant bodies
- reducing of the amount of penalties to be paid
- insufficient quality of cases

The government has introduced several reforms in the legal and judicial sector but the efficiency of the judicial system is still low. The problems include inadequate enforcement of court rulings, and widely differing understanding of justice (Ministry of Justice, judges, prosecutors, attorneys-at-law, notaries, bailiffs, the legal academic community, NGOs). In addition, the political, business, and corporate interests have had undue influence on judges and entire judicial system (World Bank 2004).

## **5. CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Conclusions**

Analyzing data and information on illegal logging in Moldova the following can be ascertained:

1. As a social, ecologic and economic phenomena illegal logging has special proportions.
2. Statistical data does not reflect the real condition and proportion of the phenomena.
3. The problem of illegal logging does not become the paramount activity of the authorities of local public administration and environmental authorities at central and local level.
4. Official statistic data referring to the export and import of wood products need to be cleared and modified in order to have more complete and objective reflection.
5. Neglect of phenomena leads to the degradation of forest resources, essential financial losses for the forestry economy and the state budget.
6. Insufficient cooperation in the field of prevention and combating of illegal logging among forestry, environmental, local public administration, police and legal authorities.
7. Insufficient consciousness at local level concerning the real hazard of this phenomena and at central level in order to increase the duties/responsibilities.
8. Absence of some elements of the participatory forest management.

Reasons that have led to the amplification of this phenomena could be defined in the following way:

- Deficiency and high demand for energy resources
- Poverty of the majority of population
- Absence of the relevant staff at some possessors of lands with forest vegetation
- Non-observance/ignore of forestry legislation
- Absence of efficient state control for the provision of guard for all forest resources
- Existence of group and corporative interests concerning the maintenance of the actual condition of forest guard and forest vegetation
- Inefficiency of forest and environmental legislation concerning the provision of the integrity of forest vegetation
- Combination of functions at certain categories of the state forest service and the State Ecological Inspection, that create possibilities to allow and to carry out illegal logging
- Inefficient and insufficient departmental supervision
- Presence of shadow sector in the national economy, that is provided with forest resource harvested illegally
- Insufficiency of measures for combating social phenomena such as corruption, bribing, criminalization of some activities and domains, etc.

## **5.2 Recommendations**

For the improvement of the situation it is necessary to implement the following measures:

### 1. Enhance the effectiveness of law enforcement

- Further improvement of existent legislation for more favorable development of activities for expansion of lands covered with forest vegetation, including the participation of wide public and for the ensuring of decentralization of the function of the public authority, for the further improvement of the level of management of forest resources and real support of variety of forms of property on forests and forest vegetation
- Strengthening and observance of the provisions of the Code on administrative infringements and of the Penal Code concerning the protection of forests against destructive actions
- Development of certain laws on the management of the forest fund, on grazing and public pastures, etc.
- Actualization of statutory acts concerning forestry, improvement of which is resulted from the continuous social, economic, political, etc. modification
- Maintenance of forest sector with modern technical equipment

### 2. Improve demand-supply balance of timber

- Gasification of localities, as well as the development of alternative sources for the provision with thermal power, increase of it share in the energetic balance of the country
- Improvement of the quality of the dwelling constructions from the point of view of the conservation of power and thermo-power equipment in order to increase it efficiency

- Application of adequate forestry regime and management of lands covered with forest vegetation and forests managed by mayoralties, as well as the optimization of the level of the use of annual increment in forests managed by the state forest bodies in order to obtain additional amount of wood (corresponding about 100 000 and 300 000 m<sup>3</sup>)
- Spreading the surfaces covered with forests and other types of forest vegetation in order to provide the increase of afforestation level of Moldova up to 15%

### 3. Improve information basis

- Carrying out of the detailed study on the real volume of illegal logging reasons, the most vulnerable zones and mitigation means
- Carrying out of marketing study on the real consumption of wood products, forecast of this consumption, trend in its import-export
- Provision of free access to the forestry information, transparency in decision making, consultation of the public in the process of development and taking of decision, constitution of the communication and information structure
- Development of national system for public information about the forests condition, about taken decisions, and public participation on decision-making process
- Carry out of the monitoring of rare, endangered and vulnerable species the area of distribution of which are the lands from the forest fund, development and applying of measures for their protection and restoration

### 4. Strengthen institutional framework in the forest sector

- Clear division of administration/management functions from those the control and the guard function at certain categories of the state forest service
- Adjustment of the structure of the central forest authority in conformity with conditions of market economy, with positive influence on ability of cooperation and interaction with other central authorities, local public authorities and local communities, and also creation of the service with advisory and registration functions for public and private owners of forests and the lands with forest vegetation
- Adequate adjustment of participatory management to the new socio-economical realities, being based on democratic norms accepted by global community and its subordination exclusively to the national sustainable interests, developing national traditions, for the best solution of major ecological and socioeconomic objectives as eradication of poverty, increase of wellbeing and health of population of the country, etc.
- Strengthening/establishment of institutional capacities of the possessors of forest fund and forest vegetation (especial at mayoralties and private possessors) for combating of illegal logging and other negative phenomena with social character
- Creation and establishment of consulting structures in domain of forestry for the provision of rational management, conservation and extension of forests and forest vegetation;
- Creation a national system for professional training, training for a new profession, improvement of professional skills of the staff, as well as for public awareness

## 5. Promote intersectoral cooperation

- Amplification of activities to combat corruption, bribing, criminalization of some activities or domains with the reference of the national forestry sector
- Provision of the observance by the relevant authorities (mainly environmental authorities) of statements of the current legislation (Article 22 from the Forest Code, Articles 15-16 and 26-29 from the Law on the environmental protection, etc.) referring to the state control in domain of the provision of the guard for all forest resources, including obligatory provision of some possessors of lands with forest vegetation with forest
- Development and implementation of viable mechanism for cooperation and collaboration among all participants of communication process, as well as among the beneficiaries of the relevant process for strengthening of the management of pastures, forest vegetation and community forests, creation of some premises for the creation and consolidation of forest fund and private forest vegetation

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**LIST OF PERSONS CONSULTED**

Anatolie Popusoi – Director General, State Forestry Moldsilva

Anatolie Ciobanu – Deputy Director General, State Forestry Moldsilva

Marian Scobioala – Head of Department for Forest Guard and Protection, State Forestry Moldsilva

Ivan Mironik – Head of Section for Forest protection, State Forestry Moldsilva

Mihail Nadchernicnii – Head of the State Ecological Inspection

Mihai Coca – Head of Department for Natural Resources, Ministry of Ecology and Natural Resources

Alecu Renita – Chairman of the NGO “Miscarea Ecologicta”

Veaceslav Grati – Member of the NGO “Silva Milleniu III”

## MAIN PROVISIONS OF THE FOREST CODE RELEVANT TO CONTROL AND MONITORING

Main provisions of the Forest Code in the component of control and monitoring of the production process within the forestry sector are the following:

- a) Article 34 provides as:
  - Wood usings are carried out in limits of scientifically proved norms determined on the basis of materials of forest management planning, inventory and inspections of the forestry fund;
  - Principles and the order of establishment of forest exploitation for main products are determined by the central forestry authorities at the common agreement with the central environmental authorities;
  - Possibilities of harvesting of wood biomass for main products are established by the Government.
  
- b) Article 35 provides that realization of wood usings, is allowed only at the presence of the logging ticket or the wood ticket, issued by the enterprises, institutions and organizations managing the forest fund.
  
- c) Article 36 (Loggings and transportation of wood) provides that:
  - The trees appointed for the loggings preliminary are marked by workers of forestry service according to the established norms;
  - Wood production is taken out from timber felling place or from a warehouse only with the support (on all way of transportation) of corresponding documents testifying the legality of its origin (the receipt on payment, the transport waybill, etc.);
  - The state ecological inspection, the state forestry bodies, the police (control bodies) are authorized to supervise the movement of wood production, and also to detain production on which there are no documents on the legality of its origin.
  - Loading in any vehicle of wood production on which there are no documents on legality of its origin, is forbidden. Person who carry out the transportation is obliged to refuse to transport wood production at the absence of documents on legality of its origin. Person who carry out the transportation and who has no documents about the legality of the origin of transported wood production, is obliged to deliver it to a temporary warehouse at his own expense.
  - Warehousing and processing of a round wood to a board and other semi-finished items by owners of installations and the corresponding equipment without documents on legality of an origin of such wood are forbidden;
  - Local wood production can be exported only on the basis of contracts on export and at presence of the certificate on an origin, given by Commercial and industrial chamber, and the certificate of the quality given by the central forestry authorities. For the export of a local round wood the conclusion of territorial environmental bodies is necessary.
  
- d) Article 64 provides that the forestry decision factors in the limits of their competences:
  - To carry out the departmental control upon the condition, use, regeneration, guard and protection of the forest fund and hunting fund that they are managed;
  - To make reports on infringements of the forest and hunting legislation and to direct them to competent bodies for consideration;
  - Forest brands for realization of functions of the control, and also branding the trees appointed for the logging are given out to some categories of workers of forest service. Forest brands are equated to marks and seals. Their prints are registered by the central forestry authorities and are notarially certified.
  
- e) Article 85 provides that in the case when forest beneficiaries breaks the Rules of releasing of standing wood in the forest, the amount of the brought damage is calculated according to the annex nr. 16 to the Forest Code (annex nr. 8). Recovery of damages is carrying out in accordance with the legislation.

## SELECTED REGULATIONS RELEVANT TO CONTROL OF ILLEGAL LOGGING

An extremely important document with reference to control of illegal logging is the Rules of releasing of standing wood approved through the Governmental Decision nr. 740 as for 17.06.2003. These rules present a system of norms for the establishment and repartition of harvesting quota, issue of authorisation for loggings and other forest products, terms and types of their harvest and transportation. Among the provisions of these Rules are the following:

- Forest enterprises carry out the delimitation and a material - monetary estimation of forest cut for carrying out of forest-restoration loggings, loggings for ecological reconstruction with two years prior to start of felling, and at storage of collateral forest production and at carrying out of loggings of intermediate using - one year prior to start.
- Valuation and material - monetary estimation of forest cut is made by the forest enterprises according to Manual on removal and valuation of forest annual cut.
- Forest beneficiary who obtain the annual cut in accordance with established mode for the harvesting of wood mass and other forest products, provide it guard and fulfilment of all duties, stipulated by the legislation.
- Term of the harvesting of wood mass is established from January 1 up to December 31 of the year when the annual cut is foreseen to be exploited. Terms for transportation of wood mass is established up to the date of May 1 of the next year. From forestry consideration, the forestry authority can establish more short period for logging and transportation of wood mass.
- Forest enterprises carry out systematic control of observance of the Rules of release of standing wood. After the exploration of the validity of the authorisation for wood exploitation, forest ticket, the certification of annual cut and places of harvest of wood products is carried out.
- In case of detection of infringements of the present rules from the forest beneficiaries they entrusts instructions for elimination of these deviations or for payment of the put damage. Actions for the compensation of caused damages could be given for the whole terms of validity of authorizations for forest exploitation, forest ticket indifferent of the period of the effectuation of the control.
- At the termination timber felling the survey of places of wood storage and other forest usings is carried out. By results of survey of places of wood storage and other forest production and use of useful properties of forests the act which is signed by forest user and forest enterprise and in case of revealing of made infringements forms the basis for charge of penalties. This act is the official document during the courts consideration about the penalties for the damage for made infringements and non-observance of requirements of the present rules.

Other important element form the relevant system is the Technical guideline of assessment of wood mass intended for the exploitation. These provide technical aspects that are related to the assessment of the real amount of wood mass intended for the exploitation during the forest cuttings. Among of it provisions could be mentioned the following:

- Strict delimitation (by the means of branding with forest brand) of the margins of annual cut.
- Marking with forest brands of trees to be extracted in the process of all types of forestry cuttings (with the exception of clear cuttings).
- Necessity of carrying out by the administration of forestry units of integral control (including the inventory) of the quality of assessment of wood mass.

## REPORT ON THE FORESTRY INFRINGEMENTS REVEALED IN THE FOREST FUND MANAGED BY THE AGENCY "MOLDSILVA"

Index	2000 Illegal logging				2001 Illegal logging				2002 Illegal logging				2003 Illegal logging				2004 Illegal logging				
	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	
	exemplare	m <sup>3</sup>	lei		exemplare	m <sup>3</sup>	lei		exemplare	m <sup>3</sup>	lei		exemplare	m <sup>3</sup>	lei		copy	m <sup>3</sup>	lei		
<b>I. Condition of forest guard</b>																					
1.	In total forestry infringements, including: (a+b+c)	3 323	4 920.37	35 872	619 665	2 252	4 204.95	47 275.72	556 746.2	2 656	4 374.711	55 650.26	642 260.3	2 836	4 158.8	42 030	688 762	1 314	1 973.7	26 068	318 463
	(a) committed by revealed infringers	3 282	1 872.95	17 097	563 802	2 217	1 826.26	30 613.45	497 871.2	2 580	18 58.561	22 254.68	560 248.1	2 774	1 904.8	23 235	633 412	1 291	960.6	13 119	262 956
	(b) committed by unrevealed infringers	41	204.24	2 479	55 863	35	235.39	4 876.80	5 8875.0	76	313.93	9 986.53	82 012.2	62	196.9	1 597	55 350	23	89.6	845	15 707
	(c) revealed by different audits		2 843.38	16 301			2 148.30	122 62.49			2 202.15	23 407.55			2 055.1	17 196			923.5	12 384	
<b>II. Examination of cases on forestry infringements in relevant bodies</b>																					
1.	Have paid damages voluntary	1 638			248 950	1 216			242 206.0	1 493			298 908.0	1 750			305 522	935			211 510
	(a) Materials sent by forestry enterprises for recovering of caused damages, in total, including:	1 285			199 085	805			198 930.0	931			200 180.0	788			190 107	276			63 254
2.	(b) Sent to justice bodies for the recovering of damages on materials rejected by the police and other bodies	80			44 744	123			47 084.0	89			20 884.0	146			54 519	2			398
	(c) Materials applied for examination in the justice bodies, including: (a+b)	1 365			243 829	928			246 014.0	1 020			221 064.0	934			244 626	278			63 652
3.	According to the justice body's decision the recovering of caused damage has been rejected	27			18 692	19			3 576.0	14			5 850.0	23			7 026	10			2 233
4.	Recovery of caused damages has been condemned	812			129 939	553			136 567.0	587			120 773.0	616			135 053	111			22 254
5.	From the material reasons the justice's decision has not been executed	47			6 148	63			8 612.0	44			3 216.0	23			13 053	3			612
6.	Materials that are under examination in the legal bodies (2-4-5)	506			107 742	356			105 871.0	419			94 441.0	295			100 489	157			39 165
7.	Have been paid according to the decision of legal bodies for case from the current year	399			49 207	227			46 156.0	218			63 277.0	304			63 477	62			12 960

Index	2000 Illegal logging				2001 Illegal logging				2002 Illegal logging				2003 Illegal logging				2004 Illegal logging			
	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs
	exemplare	m <sup>3</sup>	lei		exemplare	m <sup>3</sup>	lei		exemplare	m <sup>3</sup>	lei		exemplare	m <sup>3</sup>	lei		copy	m <sup>3</sup>	lei	
8.	Have been paid for cases from the previous years	223		20 351	246		51 706.0	234		20 351	57 898.0	126			33 500	178				36 452
<b>III. Examination of cases on forestry infringements in the relevant and administrative bodies</b>																				
1.	Materials sent for the examination in total, including:	3 040		617 635	1 759		437 895.4	2 498		613 324.0	2 573			647 496	1 125					302 182
	• in police bodies	448		279 523	323		190 325.0	440		265 092.0	339			218 249	25					87 323
	• in administrative bodies	2 592		338 112	1 436		247 570.4	2 058		348 232.0	2 234			429 247	1 100					214 859
2.	Have examined materials, in total, including:	2 899		545 326	1 339		289 680.0	1 135		249 776.0	1 446			335 294	1 072					246 432
2.1	In the police bodies in total, including:	307		207 214	268		113 103.0	341		1597 226.0	270			139 026	21					82 893
	(a) rejected materials concerning the excitation of penal cases and sent to the legal bodies for the recovering of damages	80		44 744	28		15 658.0	65		14 770.0	70			49 706	4					4 276
	(b) Have been opened penal cases	158		118 041	206		85 728.0	262		124 172.0	205			93 647	5					2 869
	• from which are sent to the legal bodies for prosecution	155		112 210	174		68 228.0	181		84 472.0	144			62 816	0					0
	(c) Cases were ceased in total, including:	69		44 429	33		10 715.0	42		36 673.0	30			12 424	10					7 537
	• from the absence of infringement	17		2 908	1		1 156.0	19		8 216.0	21			9 202	1					181
	• from the absence of infringer	24		20 718	4		4 619.0	19		22 211.0	3			2 866	6					4 069
	• from the quality of concluded materials	0		0	8		2 945.0	2		5 623.0	0			0	2					2 887
	• upon minors	0		0	1		14.0	1		181.0	1			81	1					400
	• without reasons	28		20 803	19		1 981.0	1		442.0	5			275	0					0
2.2	In administrative bodies, including:	2 592		338 112	1 728		458 563.0	1 886		305 412.0	2 242			77 552	1 118					39 313
	(a) Have been obtained decisions on administrative responsibility	2 560		50 350	1 705		308 749.0	1 960		332 989.0	2 204			75 488	1 105					36 831
	(b) Amount of penalties paid in the result of issued decision	1 251		24 026	668		27 559.0	1 238		149 668.0	1 433			54 112	827					29 206
	(c) Cases were ceased in total, including:	32		1 529	29		3 346.0	5		4 969.0	41			2 905	5					352
	• from the absence of infringer	2		629	3		604.0	1		341.0	19			510	1					202
	• from the absence of infringement	30		900	5		114.0	0		0.0	3			1 823	1					0
	• from the quality of concluded materials	0		0	2		146.0	4		4 628.0	1			230	0					0
	• Din cauzele neintemeiate	0		0	19		2 482.0	0		0.0	18			342	3					150

Index	2000 Illegal logging				2001 Illegal logging				2002 Illegal logging				2003 Illegal logging				2004 Illegal logging				
	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	
	exemplare	m <sup>3</sup>	lei		exemplare	m <sup>3</sup>	lei		exemplare	m <sup>3</sup>	lei		exemplare	m <sup>3</sup>	lei		copy	m <sup>3</sup>	lei		
3.	Have received legal decisions on materials that have been sent for the examination from the police bodies, including:	139			107 565	154			74 379.0	162			73 407.0	141			100 147	4			1 389
	• have been punished by the penal way	136			107 477	133			68 237.0	167			78 963	109			54 680	0			0
	• attraction to the criminal liability has been rejected	3			88	21			4 836.0	30			9 709	32			45 467	4			1 389
4.	Materials are under examination, in total, including:	160			82 155	188			127 737.0	195			114 742	91			88 682	86			20 562
	• in legal bodies (penal cases sent for the examination from the police bodies)	16			4 015	55			19 136.0	31			9 075	34			8 116	21			6 348
	• in the police bodies	144			78 140	122			99 893.0	138			101 256	54			80 181	15			10 945
	• in administrative bodies	0			0	11			8 708.0	26			4 411	3			385	50			3 269
5.	Materials are under the procedure from the previous years, including:	20			36 998	43			32 416.0	35			48 153	29			24 990	98			48 448
	• in legal bodies (penal cases sent for the examination from the police bodies)	17			34 214	26			20 100.0	6			2 497	10			5 459	82			14 592
	• in the police bodies	3			2 784	17			12 316.0	29			45 656	19			19 531	16			33 856

Index	Total				Average				
	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	
	copy	m <sup>3</sup>	lei		copy	m <sup>3</sup>	lei		
1.	In total forestry <b>ingrings</b> , including: (a+b+c)	12 381	19 632.5	206 896.0	2 825 896.5	2 476	3 926.5	41 379.2	565 179.3
	(a) committed by revealed infringers	12 144	8 423.2	106 319.1	2 518 289.3	2 429	1 684.6	21 263.8	503 657.9
	(b) committed by unrevealed infringers	237	1 040.1	19 784.3	267 807.2	47	208.0	3 956.9	53 561.4
	(c) revealed by different audits	0	10 172.4	81 551.0	0.0	0	2 034.5	16 310.2	0.0
1.	Have paid damages voluntary	7 032	0	0	1 307 096.0	1 406	0	0	261 419.2
2.	(a) Materials sent by forestry enterprises for recovering of caused damages, in total, including:	4 085	0	0	851 556.0	817	0	0	170 311.2
	(b) Sent to justice bodies for the recovering of damages on materials rejected by the police and other bodies	440	0	0	167 629.0	88	0	0	33 525.8
	(c) Materials applied for examination in the justice bodies, including: (a+b)	4 525	0	0	1 019 185.0	905	0	0	203 837.0
3.	According to the justice body's decision the recovering of caused damage has been rejected	93	0	0	37 377.0	19	0	0	7 475.4
4.	Recovery of caused damages has been condemned	2 679	0	0	544 586.0	536	0	0	108 917.2
5.	From the material reasons the justice's decision	180	0	0	31 641.0	36	0	0	6 328.2

Index	Total				Average				
	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	Number of records/acts	Volume of wood mass	Cost of standing wood	Damages according to tariffs	
	copy	m <sup>3</sup>	lei		copy	m <sup>3</sup>	lei		
	has not been executed								
6.	Materials that are under examination in the legal bodies (2-4-5)	1 733	0	0	447 708.0	347	0	0	89 541.6
7.	Have been paid according to the decision of legal bodies for case from the current year	1 210	0	0	235 077.0	242	0	0	47 015.4
8.	Have been paid for cases from the previous years	1 007	0	0	199 907.0	201	0	0	39 981.4
1.	Materials sent for the examination in total, including:	10 995	0	0	2 618 532.4	2 199	0	0	523 706.48
	• in police bodies	1 575	0	0	1 040 512.0	315	0	0	208 102.4
	• in administrative bodies	9 420	0	0	1 578 020.4	1 884	0	0	315 604.08
2.	Have examined materials, in total, including:	7 891	0	0	1 666 508.0	1 578	0	0	333 301.6
	In the police bodies in total, including:	1 207	0	0	2 139 462.0	241	0	0	427 892.4
	(a) rejected materials concerning the excitation of penal cases and sent to the legal bodies for the recovering of damages	247	0	0	129 154.0	49	0	0	25 830.8
	(b) Have been opened penal cases	836	0	0	424 457.0	167	0	0	84 891.4
2.1	• from which are sent to the legal bodies for prosecution	654	0	0	327 726.0	131	0	0	65 545.2
	(c) Cases were ceased in total, including:	184	0	0	111 778.0	37	0	0	22 355.6
	• from the absence of infringement	59	0	0	21 663.0	12	0	0	4 332.6
	• from the absence of ingringer	56	0	0	54 483.0	11	0	0	10 896.6
	• from the quality of concluded materials	12	0	0	11 455.0	2	0	0	2 291
	• upon minors	4	0	0	676.0	1	0	0	135.2
	• without reasons	53	0	0	23 501.0	11	0	0	4 700.2
	In administrative bodies, including:	9 566	0	0	1 218 952.0	1 913	0	0	243 790.4
	(a) Have been obtained decisions on administrative responsibility	9 534	0	0	804 407.0	1 907	0	0	160 881.4
2.2	(b) Amount of penalties paid in the result of issued decision	5 417	0	0	284 571.0	1 083	0	0	5 6914.2
	(c) Cases were ceased in total, including:	112	0	0	13 101.0	22	0	0	2 620.2
	• from the absence of ingringer	26	0	0	2 286.0	5	0	0	457.2
	• from the absence of infringement	39	0	0	2 837.0	8	0	0	567.4
	• from the quality of concluded materials	7	0	0	5 004.0	1	0	0	1 000.8
	• Din cauzele neintemeiate	40	0	0	2 974.0	8	0	0	594.8
3.	Have received legal decisions on materials that have been sent for the examination from the police bodies: including:	600	0	0	356 887.0	120	0	0	71 377.4
	• have been punished by the penal way	545	0	0	309 357.0	109	0	0	61 871.4
	• attraction to the criminal liability has been rejected	90	0	0	61 489.0	18	0	0	12 297.8
4.	Materials are under examination, in total: including:	720	0	0	433 878.0	144	0	0	86 775.6
	• in legal bodies (penal cases sent for the examination from the police bodies)	157	0	0	46 690.0	31	0	0	9 338.0
	• in the police bodies	473	0	0	370 415.0	95	0	0	74 083.0
	• in administrative bodies	90	0	0	16 773.0	18	0	0	3 354.6
5.	Materials are under the procedure from the previous years, including:	225	0	0	191 005.0	45	0	0	38 201.0
	• in legal bodies (penal cases sent for the examination from the police bodies)	141	0	0	76 862.0	28	0	0	15 372.4
	• in the police bodies	84	0	0	114 143.0	17	0	0	22 828.6

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