

Some aspects of forestry policy and forestry institutional framework from the Republic of Moldova

1. General data on forestry sector of the Republic of Moldova

Surface of the Republic of Moldova - 33.483,5 km².

Population -4.3 million inhabitants, density – 128 inhabitants / km².

Hydrological network of the Republic of Moldova is represented by 3621 rivers and rivulets (including 7 with the length of above 100 km, and other 247- of above 10 km), 57 lakes (water mirror surface of 62,2 km²) and about 3000 of artificial water reservoirs. Precipitations vary from 546 mm in South to 617 mm in North.

Land resources. Land fund constitutes 3.384.350 ha, including agricultural lands 2.438.685 ha (72,1%), from which arable lands -1.839.657 ha (75,5%), perennial plantations 305.736 ha (12,5%), hayfield and pastures 184.988 ha (11,7%), etc. Level of erosion: slight eroded -504.158 ha, moderate eroded – 252.711 ha and strong eroded – 101.695 ha.

Forest resources from the Republic of Moldova are constitutes from the forest fund and forest vegetation not included in the forest fund. The biggest part of lands form the forest fund (84,1%) are owned by the state (table 1), the rest being in the possession of mayoralties (15,7%) and only 0,2% are private owned.

Table 1. The structure of national forest fund according to general land cadastre (as of 01.01.2005)

Nr. d/o	Category of landowners	Total area/share, thousand ha/%	Area covered with forests/share, thousand ha/%
1.	Forest fund, state property	357,9/ 84,1	328,8/ 90,7
2.	Forest fund, public property of administrative-territorial units (mayoralities)	41,8/ 15,7	33,4/ 9,2
3.	Forest fund, private property	0,9/ 0,2	0,5/ 0,1
TOTAL:		400,6/100	362,7/100

Dispersion and fragmentation of forest resources, their uneven repartition on the country's territory constitute the negative factor for the execution of beneficial eco-protective influences on the environment, creation of comfortable living conditions for the population and provision with wood and non-wood forest products.

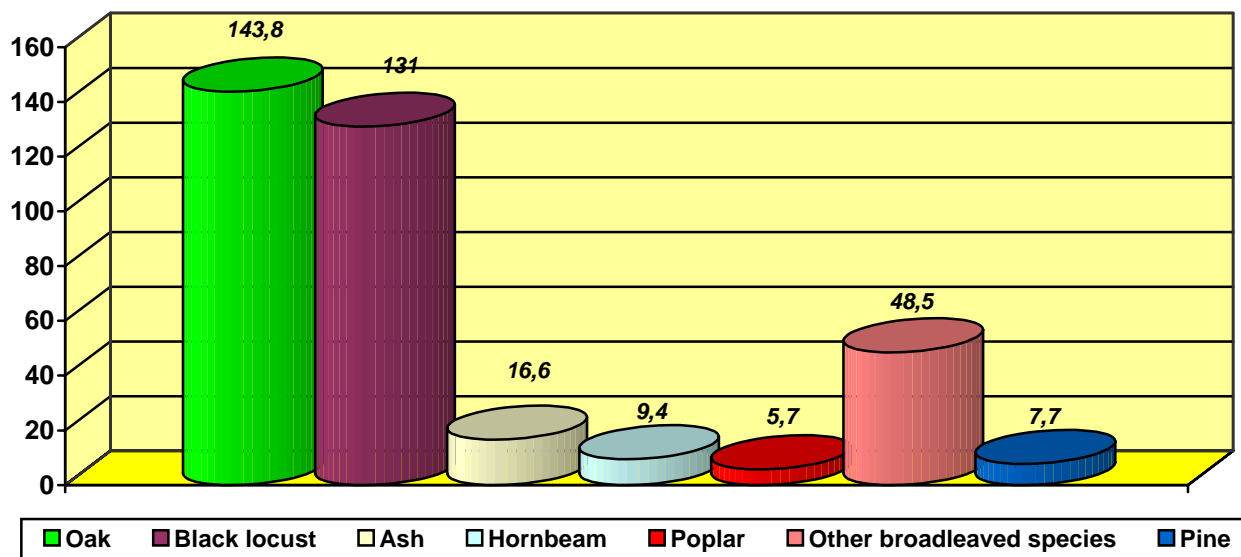
Forests managed by other possessors - 33.4 thousand ha or 9.2.% from the national forest fund are inscribed in the category of forests for land and soil protection, as well as for the protection against harmful climate and industrial factors.

General characteristics of community forests in our days are: small forest tracts, dispersed, situated in limits of urban and rural localities; main species of such forests is the black locust; forestry regime is practically not applied in these forests.

Forest vegetation outside the forest fond includes:

- Forest protection belts established on agricultural lands;
- Forest protection belts, trees and bushes plantings situated alongside the communication ways;
- Separate trees and groups of trees in the perimeter of cities and other localities.

For the time being, Republic of Moldova also has 49.3 thousand ha of forest vegetation outside the forest fund, expressed in 30.8 thousand ha of forest protection belts (for agricultural fields, roads, rivers and aquatic basins etc.) and 18.5 thousand ha – other types of forest vegetation.



In the composition of the forests from Moldova the broadleaves species (97,8%), including oak sps. – 143.8 thousand ha (39.6%), birch – 16.6 thousand ha (4,6%), hornbeam – 9.4 thousand ha (2,6%), black locust – 131.0 thousand ha (36.1%), poplar – 5,7 thousand ha (1,6%) etc. are dominated, conifers make up only 2,2 % .

The total wood volume of standing trees in Moldova's forests constitutes about 45 million cubic meters, with an average of 124 cubic meters. The average annual increment of the forests is estimated at 3.3 m³ /year/ ha, and the total increment constitutes around 1085 thousand m³ /year. The average class of productivity is 2.3. The structure of forest species on age class is unbalanced, especially for those with lowest productivity.

According to the Law on the fund of natural areas protected by the state (nr. 1538-XIII as of February 25, 1998), the surface of protected areas, situated in the limits of the forest fund has been increased considerable, making 61.2 thousand ha or about 17% from the forest fund. Total area of these lands in the country constitutes 66.5 thousand ha.

Forests from the Republic of Moldova belong to the first functional group, having exclusively environment protection functions. In dependence of their functions, the following 5 functional subgroups are marked out:

- forests protecting water,
- forests protecting lands and soils,
- forests protecting against harmful climate and industrial factors,
- forests with the recreation function,
- forests with scientific interest and for the protection of forest genetic and ecological funds.

The main problems of forestry sector of the Republic of Moldova are:

- low afforestation level of territory of the country, evidently insufficient for maintenance of constant ecological equilibrium;
- deficiency in forest resources for economic and social requirements of the country;
- high level of dispersion of forest missives, situated unequal;

- vegetative provenience from offshoots of 2 - 4 generations of about 60% of forests (for oak respective percent is about 90), having reduces resistance against dangerous biotic and abiotic factors;
- about 40% of stands do not correspond to growing conditions;
- insufficient technical assistance, insufficient financial assistance.

2. National forestry legislative framework

During the period 1990-2006 at the level of Parliament/Government a certain number of legislative and statutory acts have been adopted with the reference to the forestry sector:

- Constitution of the Republic of Moldova; Forest Code; Land Code; Law on environmental protection; Law on the improvement of degraded lands by the means of afforestation (nr. 1041-XIV din 15.06.2000); Law on animal kingdom; Water Code; Law on water protection belts; Law on natural resources; Code on administrative offences; Criminal Code; Law on ecological expertise and environmental impact assessment; Law on protected areas.

Forest Code, nr. 887-XIII as of 21.06.96 – one of the main laws that regulate relations related to the management of national forest fund and is consisted from XVIII chapters and 94 articles:

- Main definitions used within the Forest Code are stated;
- Reflect the modality of exercising the property rights on lands from the forest fund, mentioning that forests form the Republic of Moldova, used in public interest; make the object of public property. According to the legislation these lands could be given in use or management. Private property on forests is permitted only in the case if these are planted on lands that are in private property, under the conditions of the present law.
- Administration of forestry and hunting funds is established as a prerogative of the state and is exercised by the Government, administration of local public authorities, state forest bodies and other plenipotentiary bodies.
- Tasks of central forestry authorities are stated that are legally authorized to regulate, to coordinate, to control the administration and management of the forest fund, to develop the forestry regime (system of technical, economic, legal and forestry norms related to the forest management planning, use, regeneration, forest guard and protection) and to control over the observance of this regime.
- Contain aspects on management and use of forest fund, rights and obligation of forest managers and beneficiaries, establish criteria of sustainable forest:
 - Maintenance, conservation and improvement of forest biological diversity;
 - Maintenance of forest health and vitality;
 - Maintenance and intensification of forest protection functions;
 - Maintenance and strengthening of productive capacities of forest resources, their contribution in global carbon cycles;
 - Maintenance and stimulation of productive functions of forests (wood and non-wood forest products);
 - Maintenance of other functions and socio-economic conditions.

Law on improvement of degraded lands by the means of afforestation (nr. 1041-XIV as of 15.06.2000) contains aspects related to the allocation and afforestation of degraded lands. The provisions of this law cover degraded lands regardless of the property type. The main purpose of this is to trigger the process of extension of areas with forest vegetation first of all on the account of degraded agricultural lands.

Parliament decision on the approval of the Strategy for the sustainable development of the forestry sector (nr. 350-XV as of 12.07.2001) and Governmental decision nr. 739 as of

17.06.2003 on the implementation of the Strategy for the sustainable development of the forestry sector.

Among main activities that be carried out in the context of General Action Plan are as follows:

- Improvement of policies, legislation and institutional framework (creation of National Council for forestry and hunting, development of package of laws in domain of forest fun management etc.);
- Regeneration and afforestation of lands of forest funds on the area of 95,1 thousand ha;
- Ecological reconstruction of 24,5 thousand ha of forests;
- Extension of lands with forest vegetation by 128 thousand ha (including 27 thousand ha of forest belts for the protection of water courses, communication ways, agricultural lands etc.);
- Carrying out of scientific researches on the evaluation of current state of forests and establishment of the development trends;
- Increase the input of the forest fund to the solving of ecological, economic and social problems through the better processing of forest wood and non-wood products.

The amount of about 346 million lei (about \$26 million US) or about 19 million lei per year are required for the implementation of the General Action Plan (for the period of 18 years).

Governmental Decision nr. 737 as of 17.06.2003 on the approval of the State program on the regeneration and afforestation of lands of the forest fund for the period of 2003-2020 – among the paramount activities of the program could be mentioned:

- Creation of forest planting of the area of 24.655 ha.
- Stimulation of natural regeneration on the area of 39.036 ha.
- Natural regeneration on the area of 31.427 ha.

Regeneration and afforestation works in the forest fund scheduled for the period till 2020 will be carried out on the total area of 95.118 ha. The cost of these works constitute 588,1 million lei.

Legal and regulatory framework contains multiply gaps and imperfections, reflects inefficiently important issues, creating barriers, difficulties, constraints during the implementation process that are expressed in:

- Incomplete delimitation of competences;
- Lack of some legal provisions on the management of community and private forestry sectors.
- Insufficient link with international agreements, including EU standards;
- Unsatisfactory implementation of some legal provisions;
- Inefficient application of penalties/punishments;
- Inefficient clarification of aspects related to the biodiversity conservation, adaptation of forest ecosystems to climate changes etc.

3. Illegal logging

Illegal loggings are the most frequent infringements of the forestry legislation are caused by the absence of deficiency of thermal agents for house heating, the lack of the means of existence, unemployment and poverty of a considerable part of the population, insufficient forest consciousness and non-observance of the legislation (Table 2).

In the year 2006 employees of the Agency „Moldsilva” have drawn up 1580 statements on forestry infringements (illegal logging and grazing etc.). The caused damages make up 1155 thousand lei, including due to illegal logging of 2,3 thousand m³ of wood.

Table 2. The volume of illegal logging in the Republic of Moldova during the period 2000-2006

nr	Indicators	Reference year							Total for the period	Average for the period
		2000	2001	2002	2003	2004	2005	2006		
<i>I. Forest fund managed by the Agency „Moldsilva”</i>										
1	Number of cases	3323	2252	2656	2836	1314	1097	1159	14637	2091
2	Amount of wood harvested illegally, m ³	4920,4	4205,0	4374,7	4158,8	1973,7	2391,8	2318,1	24342,5	3477,5
3	The amount of caused damages, thousand lei	619,7	556,7	642,3	688,8	318,5	451,4	401,9	1863,6	266,3
4	The volume harvested illegally per 1000 ha covered with forests	17,3	15,5	13,2	13,3	10,3	6,4	6,2	82,2	11,7
<i>II. Forest fund and forest vegetation managed by mayoralities</i>										
1	Number of cases	647	729	1050	872	644	n/a	n/a	3942	788
2	Amount of wood harvested illegally, m ³	2553	990	7555	1402	1505	n/a	n/a	14005	2801
3	The amount of caused damages, thousand lei	1142,0	1093,0	1256,7	1538,7	638,9	n/a	n/a	5669,3	1133,9
4	The volume harvested illegally per 1000 ha covered with forests	27,4	10,6	81,2	15,1	16,2	n/a	n/a	-	30,1
Total wood harvested illegal m³		7473,4	5195	11929,7	5560,8	3478,7	-	-	33637,6	6727,4
Total amount of caused damage, thousand lei		1761,7	1649,7	1899,0	2227,5	957,4	-	-	8495,3	1699,1

Table 3. Comparative analysis on the provision with wood from different sources

Nr.	Categories	Average per year	%
1.	Wood harvested in the result of forestry cutting according to the official data, thousand m ³	404,3	40,43
2.	Wood harvested illegal (official data), thousand m ³	6,7	0,67
3.	Imported wood (mainly wastes from wood processing), thousand m ³	27,0	2,7
4.	Bio-mass from orchards, vineyards, agricultural fields (equivalent to fuelwood), thousand m ³	100,0	10
5.	Traditional sources – pressed dung etc. (equivalent to fuelwood), thousand m ³	50,0	5
6.	Unstated / uncertain sources of wood thousand m ³	411,9	41,19
Total annual consumption of wood, thousand m³		1000	100

The data stated in the table 3 shows that in the period of 2000-2006 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 estimative sources of the wood demand.

Analyzing data and information on illegal logging in the Republic of Moldova it could be ascertained the following:

1. As a social, ecologic and economic phenomenon illegal logging has especial proportions.
2. Statistical data does not reflect the real condition and proportion of the phenomena.
3. Neglect of phenomena lead to the degradation of forest resources, essential financial losses for the forestry economy and the state budget.
4. Insufficient cooperation in the field of prevention and combating of illegal logging among forestry, environmental, local public administration, police and legal authorities.
5. Insufficient consciousness at local level concerning the real hazard of this phenomenon and at central level in order to increase the duties/responsibilities.
6. Absence of some elements of the participatory forest management.

Reasons that have lead to the amplification of this phenomenon could be defined the following:

- Deficiency and high process for power 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;
- 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;
- 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.

Recommendations

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

- 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;
- Amplification of activities to combat corruption, bribing, criminalization of some activities or domains with the reference of the national forestry sector;

- Clear division of administration/management functions from those the control and the guard function at certain categories of the state forest service;
- 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;
- 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;
- 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;
- 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;
- 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;
- Application of adequate forestry regime and management of lands covered with forest vegetation and forests managed by mayoralities, 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 and 300 thousand m³);
- Strengthening/establishment of institutional capacities of the possessors of forest fund and forest vegetation (especial at mayoralities 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;
- Maintenance of forest sector with modern technical equipment;
- Spreading the surfaces covered with forests and other types of forest vegetation in order to provide the increase of afforestation level of the Republic of Moldova up to 15 %.

4. Institutional framework

Main institutions that have responsibilities in forestry domain are the following:

1. Ministry of Ecology and Natural Resources represents the central authority empowered to manage natural resources and environmental protection and is subordinated to the Government of the Republic of Moldova. In their activity the ministry is conducted by the Constitution of the Republic of Moldova, by laws and decisions of the Parliament, Presidential decrees, and governmental decisions.

2. Forestry Agency “Moldsilva” is central forestry authority and is subordinated to the Government of the Republic of Moldova.

3. Authorities of local public administration represented by mayoralties of communities, municipalities and Territorial-administrative unit Gagauzia.

Existent institutional framework is characterized by the following:

- Existence of an independent structure with juridical personality and financial autonomy.
- Presence of legislative and regulatory framework;
- Presence of vertical territorial structure capable to ensure the implementation of national strategies in the field of forestry and environmental protection.
- Capacity of national central forestry structure to manage the subordinated forest fund, executing forest regeneration, guard and protection, sustainable use of forest resources, as well as the extension of lands with forest vegetation.
- Institutional continuity of national central authority in the field of forestry, that is very important for the provision of stability and efficient functioning of the whole structure.
- Capacity of national central forestry structure to cooperate with other ministries and governmental departments and territorial administrative structures with the purpose of solving problems and tasks.

To increase the efficiency of activities in forestry domain the following is proposed:

1. Strengthening institutional capacities of the Forestry Agency „Moldsilva” by the means of optimization and reformation of central and territorial structures, proceeding from new socio-economic conditions, including decentralization of functions and responsibilities, delegation of broader rights to second and third levels of administration.

- Creation of financial structure relevant to the forestry sector (Forest conservation and development fund etc.).
- Strengthening technical capacities by the means of provision with equipment, technique etc.
- Creation of National training centre for forestry staff.

2. Strengthening/development of community and private forestry sector.

1. Promotion of agro-forestry and silvo-pastoral practices;
2. Strengthening capacities of community forestry and private sector.
 - Learning of specialized community and private forestry staff.
 - Strengthening of institutional capacities (through integration) of regional institutional structures responsible for the management of forests and other types of community and private forest vegetation.
 - Provision with necessary equipment for the inventory of forest resources (computers, forestry circle, dendrometre, caliper).

3. Development of capacities for the estimation and prognosis of the proposal and consume of forest resources (including in energetic and industrial purposes).

1. Provision of Forestry Agency „Moldsilva” with the equipment and calculation technique for the creation and installation of the branch informational grid, application of GIS technologies etc.
2. Provision with modern equipment and technique for carrying out of forest management planning and inventory of forests and other types of forest vegetation.
3. Carrying out of marketing study on the real consume of wood resources (including for the purposes: energetic, furniture industry, handicrafts etc.), prognosis of this consume, trends of import-export of these.
4. Revising of official statistics at local, district and national levels in order to establish demand for forest resources in the purpose of different use (energetic, construction, processing, package etc.)

4. Forestry training

1. Training of forestry staff for the carrying out of works for inventory, cadastre and forest management planning.
2. Development of training programs for the different staff categories within public and community forestry sector.
3. Creation of national training centre for forestry staff.
4. Provision of assistance for forestry education, through strengthening activities and provision with technique and logistic means etc.