DÂMBOVIȚA COUNTY'S CURRENT FOREST AND ENVIRONMENTAL IMPACT

Gica Pehoiu[1], Ovidiu Murărescu[2]
„Valahia" University Târgovişte, B-dul Carol I, no. 2, 130024, , Dâmbovița Dept., Târgovişte, Romania
e-mail: gpehoiu@yahoo.com

Abstract.
Forest, the subsystem of natural green space, is fully integrated into it, being a very close connection with other subsystems. Recognizing the crucial role of forests in providing and maintaining quality of life, awareness of the danger of degradation of the ecosystem by destroying generated concern on the conservation and protection of forests in the conditions under which demographic pressure, mainly the effects of population growth, manifested by the need for new land agricultural development communication lines, underground exploitation, increasing demands for timber are on the upward curve. We can say also that the forest is and remains the primary means of environmental protection and thus the geographical area, but the most important in maintaining ecological balance.
The area covered by forest and has suffered steady decline in the reference county, because indiscriminate deforestation carried out mainly in the plains and hills (oak forests are most affected), but uncontrolled exploitation of pine forest. These changes in forests, which will be sent to this county issues raised in the present article.

Key-words: forest, impact, Dâmbovița County

1. INTRODUCTION

Over time Romania's forests have suffered a strong setback space, reducing gradually, for example, only during the years 1829-1930 was reduced by about 2 million hectares of agricultural land for expansion, settlements and roads. It is considered that most national forest reduction was recorded following the implementation of agrarian reform law of 1920, when they were cleared about 1.2 million ha of forest area to increase municipal pastures [4].
Forest deforestation action was extended to all forms of relief from the plain, where their share was already insufficient, and in hilly and mountainous, with slopes strongly inclined, having negative impact on the climate, on the erosion soil and territory.
Massive logging in the past and the centralized economy of Romania period negatively influenced the structure and quality of forest stands and environmental balance of Romanian geographical space. Thus can be explained periodic natural disasters recorded in our country, such as catastrophic floods in the years 1970, 1975 and 1999 extended the period 1942-1953 drought, heavy storms in the mountain area of the counties of Covasna, Harghita, Mureş, which felling product and rupture of trees in volume of about 10 million cubic timber in the fall of 1995, or the latest year 2001 in the counties of Suceava and Neamț, soil degradation, activation torrents phenomenon, triggering avalanches of snow etc.
The evolution of forest ownership structure in Romania distinguished four main stages: first, by 1848 when forests belonged to the municipalities (or local), or individuals, and the second (1948-1991), in which all the forests belonged to the state, the third stage (1991-2000), characterized by the formation of property rights in the area of 1 hectare for individual former owners, in accordance with Law no. 18/1991 of the land, and the fourth phase (2000-present), which is reconstituted under Legii1/2000 ownership for all owners and expected return of approx. 2 million ha of forest land [4].
In 2008, Romania's forest area was 6,469,852 ha, 0.2% below the previous year. Current share of forest area and the country is 26.8% if taken into account and the area not covered by forest vegetation forest (348 thousand ha), reaching 28.2%, which ranks Romania as the average area of Europe (29%). The composition of forests in our country is the majority share of deciduous species (70%), followed by pine (30%) [2; 6].
Area bio-geographical River County, crossed

the latitude of 450, about the line of contact between Subcarpathians, the Romanian Plain Bending and includes three major relief units - plains, hills, mountains - with a great diversity of climatic conditions, soil and hydrography, involving a wide variety of terrestrial and aquatic ecosystems, specific geographical areas mentioned.

Given its geographical position, Dâmbovița county has a rich and varied biodiversity, expressed both at the level of ecosystems and species - flora and fauna. Forest held at an altitude of 150 m to 1800 m, occupying 28.34% of the county, of which forest is 29.12%. The high afforestation of the county, especially in mountainous areas and hilly, providing optimal habitat for many species of plants and animals for scientific interest, landscape and economic [1;4].

2. DISTRIBUTION OF FOREST AFTER MAIN FORMS OF RELIEF

Regarding the distribution of forests by the principal forms of relief in the county, it is as follows: forests in mountain areas is 44.7%; the hill 38.8%, those of câmpie16.5% (Fig. 2). There is uneven distribution of their territory, something which is specific, otherwise the whole country, it having negative repercussions on environmental protection and agricultural production [1].

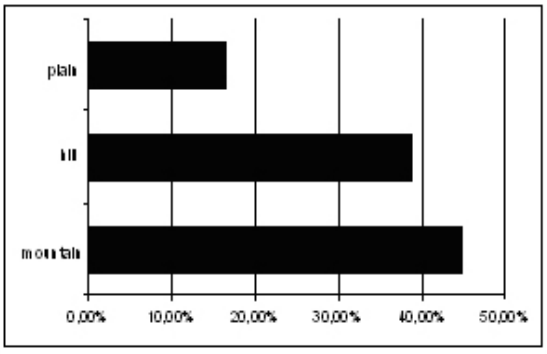

Fig. 2. Distribution of forests by the Dâmbovița County geomorphology (2008)

3. STRUCTURE OF DÂMBOVIȚA COUNTY FOREST

In Dâmbovița County, in the year 2008, the area occupied by forest was 117,112 ha (28.89%) of the total territory of which 114,201 ha (28.17%) is the one occupied by forest. Its structure is as follows: deciduous forests - 99,839 ha (87.42%) - and resinous - 14,362 ha (12.58%) [1;2].

On the forms of ownership, forest situation is as follows:

- state public property (Târgoviște Forestry Department of the National Forest) manages 60,415 ha, 57,751 ha of which 2664 ha forest and other land;
- public property of administrative-territorial units (656 ha forest fund, of which 2 ha and 654 ha forest and other land);
- private property - private and business (56,041 ha forest fund, of which 55,796 ha forest and 245 ha other uses).

Areas of land covered with forests, the property categories and functional groups are presented in Table 1.

Table 1. Categories of forest ownership and function (2008)

Owner	Surfaces wooded (ha)	
	Gr. I - protection	Gr. a II-a - production and protection
National Forest - ROMSILVA	28.296	29.460
Administrative-territorial units	385	269
Natural persons and legal	29.507	26.289
TOTAL	58.188	56.018
GENERAL	*114.201*	

Although forest cover is only 28.34% of the county, the economic value of forests is given primarily for the high volume of timber on foot, but its non-wood products (the fauna of hunting interest, berries, medicinal plants and aromatic, edible mushrooms from the spontaneous flora, etc.).

However, the functions they fulfill [7,8], forests fall into two functional groups: those in Group I, water protection, soil, climate and interest objectives national forests for recreation, to care about genetic fund and those in Group eco-fund II, production and protection functions, which aims primarily to achieve high quality of wood, but also the protection of environmental factors.

The main tree species composition within the forest is represented in Fig. 1:

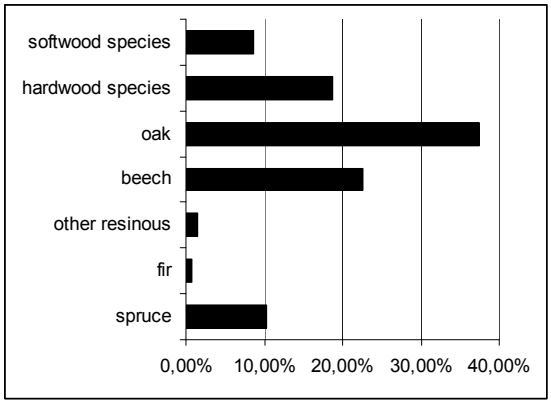

Fig. 1. Share of main tree species in Dâmbovița county

As regards the forest area of forest, broken down by type of property and raw timber situation in the year 2008 is presented in Table 2.

Table 2. Forest types of property and raw timber (thousand m^3)

Essence	Type of propriety	Surface (ha)	Raw timber (thousands m^3)
Resinous	National Forest - ROMSILVA	6.116	1.837
	Administrative-territorial units	1	0.3
	Natural persons and legal	8.245	2.476
	Total	14.362	4.313,3
Hardwood	National Forest - ROMSILVA	51.635	10.327
	Administrative-territorial units	653	131
	Natural persons and legal	47.551	9.510
	Total	99.839	19.968
TOTAL	National Forest - ROMSILVA	57.751	12.164
	Administrative-territorial units	654	131,3
	Natural persons and legal	55.796	11.966
	Total	114.201	24.281,3

The data presented indicates that currently the largest forest areas, and quantity of timber belonging to Gross National Forest (57,751 hectares and 12,164 thousand m^3), followed by those of private owners (55,796 ha and 11,986 thousand m^3).

4. OPERATION AND REGENERATION OF FOREST

Timber included in the economic cycle. In recent years there is a massive growth in the volume of timber harvested, mainly from pine (approx. 42.8%). The volume of timber in 2008, at the national level was 16,705,000 cubic meters (3.1% less compared to 2007), operated at a rate of 82% of businesses authorized to work in this area, while River County businesses have operated for almost 60% of the total wood mass. If national exploitation of wood increased by about 23% during the years 2000-2008, the county reference this increase was far superior, by about 67%, due to higher accessibility forest national average on this indicator [1,2].
In the year 2008, the county had 163.3 thousand m^3 harvested timber from the Forestry Department has capitalized Târgovişte 125.52 thousand m^3 timber with the following destinations: 84.13 thousand m3 for economic and 41.39 thousand m^3 for the supply of the population.
Overall, the destinations, areas of the county forestry are presented in Table 3.

Table 3. Forests - harvesting (thousand m^3 gross)

Place of collection	Resinous	Beech	Oak	Sort	Soft	Total
Public ownership of state forests	15,2	36,9	36,1	25,5	20,4	134,1
Forests public property of administrative-territorial	-	0,9	-	-	0,1	1,0
Private forests	7,2	14,8	3,0	2,4	0,6	28,0
Forest vegetation outside the national fund	0,2	-	-	-	-	0,2
Total	22,6	52,6	39,1	27,9	21,1	163,3

To ensure sustainable forest management, a key factor is to their regeneration. Dynamics of forest cover in the period 2000-2008, show a

decrease in their (from 504 ha in 2000 to 352 ha in 2008), figure 3.

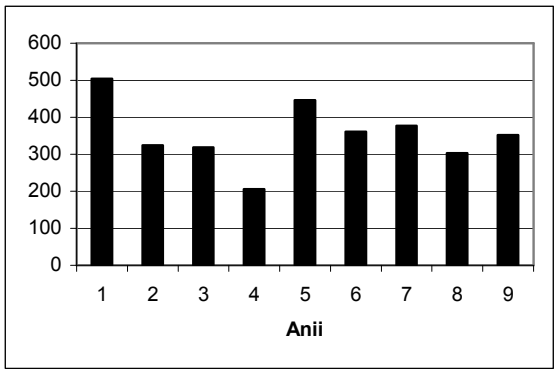

Fig. 3. Dynamic areas of regenerated forest in Dâmbovița County (2000-2008)

Areas covered with forest regeneration cuts in the country, made in the forestry treatments for forest transition from one generation to another, grew by 1.7%, coming from 85,740 ha to 84,276 ha in 2007. In this area, cutting races is 5% (4314 ha), being 3.2% higher than 2007.
Concerning the main types of work cutting trees made in 2008, in Dâmbovița County, they have covered: logging regeneration (965 ha), the accidental products (3769 ha), sanitation and cleaning operations of forests (3680 ha) care in young forests (1971 hectares), and the conversion of pasture woodland.
Deficient areas of forest vegetation and availability for afforestation. The program includes forest regeneration and forest ecological reconstruction, especially on degraded land. Currently it has a strong identification of land outside the forest have become unfit for agricultural crops, setting up their paddocks and improve productive player in the circuit.
For example, Forestry Department Targoviste, in late 2008 to complete the task of regenerating an area of 226 hectares in the state forest in public ownership (about 89% of deciduous species and 11% with resin), of which 152 ha have was natural regeneration and afforestation full 74 ha. However, works have been carried out to prepare land for the installation of forest vegetation on an area of 24 hectares, care work carried out on 608 hectares youth culture, of which 53 hectares have been degraded lands. Particular importance was given and work to assist natural regeneration, both in terms of natural sowing installation and maintenance, an area of 642 ha. The total amount of regeneration work in public ownership of state forest was 1264 RON.
The health of forests. In this regard, the parameters considered were de-foliage and discoloration of the crowns of trees, and physical injuries due to biotic and abiotic factors. In the year 2008, the area affected by the phenomenon of dry forest was 7321 ha, the largest area I went to grade respectively 6795 ha -Table 4, [4;7].

Table 4. Deciduous forest area (ha) affected by the phenomenon of drying (2008)

Name	Affected surface	Degree of drying				Volume extracted (m^3)
		I	II	III	IV	
Phenomenon drying the leafy	7.321	6.795	344	182	-	14.347

Forest vegetation drying phenomenon suffer as a result of pollution by salt water and crude oil from the perimeter scaffolding localities Târgovişte, Moreni, Găeşti so that, in the year 2008, this source of pollution, major county affected, among other, and forest areas in the forest pens and Găeşti Târgovişte.

5. EXERCISED HUMAN IMPACT ON FORESTS

Forest is one of the most important stabilizing factor of the environment, primarily to protect the planet from pollution different. It carries a positive role on the nature and environment by the protective functions that satisfy [7;8;9].
- hydrological function (conservation of water resources, protection of their arrangements and the accumulation of water courses);
- function of anti-erosion (soil protection and ensure land stability, preventing erosion and landslides);
- climatic function (to improve the climate factors, such as adjusting humidity, wind speed

reduction or excess temperature during summer);
- purification function of the atmosphere;
- recreational function and healthy;
- landscape aesthetics and function;
- scientific function [8].

The impact of the resources of flora and fauna, capitalized economic purposes, including as genetic resources, has seen an upward rise in recent years, given their recovery both domestic and external.

In order to avoid overexploitation of biological resources economically recovered since 1997 has been conducting activities regulated regime of "collection, capture and / or acquisition and domestic marketing and export of plants and animals of wild fauna and flora. Currently, these activities are governed by Order of the Ministry of Environment and Sustainable Development no. 410/2008. In 2008, Forestry Department Târgovişte harvested and exploited through its processing or through businesses: 122 tons berries, 5.37 tons of fir, 723 pieces of winter trees, 10,087 kilograms trout consumption. Also were collected 315 thousand pieces of forest saplings in forest nurseries [1;4;11].

Organization and the various socio-economic activities, such as petroleum and the mining of gravel in quarries, various other buildings, etc., but also illegal and uncontrolled (illegal logging of forests, grazing abuse, uncontrolled tourism, etc.) generates pressure becoming more evident on the natural, in our case the forest, causing changes landscapes and ecosystems, destruction, or even their disappearance.

In general, forest of Dâmbovița County faces impaired by pollution of forest habitat of salt water and oil, they are adding the degradation of the warblers of river valleys Argeş and Ialomița Rivers, due to exploitation of mineral aggregates, as the effects of extinction of some species of protected plants, such as *Cypripedium calceolus*, the Forest Gorgota by deforestation almost all of it, and *moşişoarele (Liparis loeselii)*, the swamp of Tătărani, by draining it [5;10].

Change of ownership of forest regime has contributed to worsening health status of forests, by lowering the consistency of forest stands, non-performance of works provided by or through the practice of forest grazing landscaping abuse.

Also, uncontrolled tourism has generated and generates negative impact on forests through: destruction and degradation of vegetation grass / wood, waste generation and abandon their outside facilities, lighting fires outside the homes especially designed, camping in places arranged in For this purpose, the destruction and degradation boards etc.

Given these issues, in the county were delineated *vulnerable areas* that require reconstruction following scheme:
- protected natural area - Sources of Ciungi Corbi, requiring reconstruction of the warbler, replanting trees to protect the complex of springs;
- Alpine areas - there is overgrazing practice that requires conservation and protection for natural regeneration (ex.: Piciorul Babelor, Valea Obârşiei zones etc.);
- necessary, while ecological reconstruction measures for restoration of degraded the warbler in river valleys Ialomița and Argeş Rivers [5;9;10].

Play a special role is environmental education of the population, which is intended to familiarize young people early on with the concepts and actions that maintain environmental integrity, and thus forest conservation and protecting it. Among the specific actions of the sides, may be referred to the River County: afforestation works, sanitation, installation and care of the crops in nurseries with public participation, ecological actions, mounting boards (with the occasion of the Moon Forest - March 15 - April 15, the forest pens belonging River Forest Department and the Bucegi Natural Park, have been made such claims) [1].

6. CONCLUSIONS AND PROPOSALS

Given the role and importance of the forest environment, it is necessary to implement some measures such as:
- extension of woodland areas, especially those abandoned land, those affected arable strong erosion and landslides, etc.;
- conservation of biodiversity and forests multi-functions health and stability;
- increase the accessibility of forest within the meaning of perpetual endowment of forests by means of transport (forest roads, etc.) For the operation in terms of return on all main and secondary forest products;
- improving forest health by improving and developing surveillance systems, in accordance with European regulations adopted;
- creation of species of crops with the largely forest of fast growing outside forests, to reduce economic pressure on the forest;
- sustainable management of the fund hunting and fishing in mountain areas, in the context of regulations under the Forest Code, which provided a series of actions, including the restocking of existing ecological niches for some species intended to alleviate the increasing stability of ecosystems.

In the end these considerations, we can appreciate that forest destruction results in reducing the chances of overall survival and protection of forests, among other approaches that currently are stringent assumptions help to ensure overall survival and also the continuity of life on Earth.

6. REFERENCES

[1]***, Date statistice şi informaţii - Agenţia Judeţeană pentru Protecţia Mediului Dâmboviţa, 2000-2008.
[2]***, Date statistice - Institutul Naţional de Statistică, Bucureşti.
[3]***, Parks for Life Action for Protected Areas in Europe, IUCN, Gland, 1994.
[4]***, Regia Naţională a Pădurilor - ROMSILVA, Pădurile României. Parcuri naţionale şi parcuri naturale, Bucureşti, 2004.
[5] Beldie Al., Flora şi vegetaţia Munţilor Bucegi, Editura Academiei, Bucureşti, 1967.
[6] Doniţă N.şi colab., Vegetaţia României, Editura Tehnică Agricolă, Bucureşti, 1992.
[7] Giurgiu V., Conservarea pădurilor, Editura Ceres, Bucureşti, 1988.
[8] Giurgiu V., Amenajarea pădurilor cu funcţii multiple, Editura Ceres, Bucureşti, 1988.
[9] Pehoiu Gica, Muică Cristina, Sencovici Mihaela, Geografia mediului cu elemente de ecologie, Editura Transversal, Târgovişte, 2006.
[10] Pop E., Sălăgeanu N., Monumente ale naturii din România, Editura Meridiane, Bucureşti, 1965.
[11] Rojanschi V., Bran Florina, Diaconu Gh., Protecţia şi ingineria mediului, Editura Economică, Bucureşti, 1997.