# STUDY REGARDING THE CHANGES IN THE ROMANIAN FORESTRY SECTOR AFTER 1990

# STUDIU CU PRIVIRE LA SCHIMBĂRILE APĂRUTE ÎN SECTORUL FORESTIER AL ROMÎNIEI DUPĂ ANUL 1990

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***Abstract:*** *In rural areas, the predominant proportion of the land continues to remain more or less in a natural state and is mainly used for agriculture, forestry, tourism, mining, fishing, etc..*
*Given the role of forests in human life, we think it is necessary that the entire social mechanism (factor of liability, undertakings, man as an entity) to accept that assurance and ensuring sustainable forest management is the only policy that must be raised at a national rank.*
*In what follows we present, briefly, some aspects of rural development in terms of forestry, stating that sustainable forestry is an important, sometimes dominant regarding rural development.*

***Key words****: sector****,*** *forest area, economic, species*

## INTRODUCTION

The forest has the role to provide a wide range of products of undeniable economic value for human beings. It is not only the wood as we can mention other forest products, including: game, fish, berries, mushrooms, herbs, resin, tannic substances, etc.

**Irrational deforestation of forests have a negative effect on the environment, encouraging landslides, changes in the climate characteristics, hydrological conditions and the quality of air in the atmosphere.**

The phenomenon of restructuring the national economy has affected the forestry branch, knowing significant changes especially in terms of

ownership. However, the whole forest complex regulatory measures are subject to a fundamental objective - ensuring real conditions for sustainable forest management, whoever will be the owner.

Forest is defined as "that area of land covered by forest and with an area greater than 0.25 hectares. As green spaces, these areas are particularly important in maintaining optimal quality of life.

Although it represents less than 27% of the total area of the country forests are a major factor for ecological stability, occupying a prominent place in economic and social life.

## MATERIALS AND METHODS

To achieve the objectives of this paper, the working method used were: study data collection, processing, analysis and interpretation.

## RESULTS AND DISCUSSIONS

**Romania has a valuable forest sector at an European level, with an area of over 6.5 million hectares, and ranks 18th in the EU, where the average in the percentage of forests is 29%, after countries such as Finland, Sweden, Slovenia, Latvia, Estonia, Austria, Slovakia, Portugal, Spain, Germany, France etc.**

**Table 1**

**Forest area in European Union countries**

| No. | Country | Total area (thousand ha) | Forest area (thousand ha) | % from country's area |
|---|---|---|---|---|
| **1** | **Romania** | **23.839** | **6.500** | **27,2** |
| **2** | Austria | 8.387 | 3.887 | 46,3 |
| **3** | Belgium | 3.053 | 675 | 22,1 |
| **4** | Bulgaria | 11.100 | 3.816 | 34,4 |
| **5** | Czech Republic | 7.887 | 2.653 | 33,6 |
| **6** | Cyprus | 925 | 174 | 18,8 |
| **7** | Denmark | 4.309 | 540 | 12,5 |
| **8** | Estonia | 4.523 | 2.231 | 49,3 |
| **9** | Finland | 33.842 | 22.157 | 65,5 |
| **10** | France | 54.919 | 15.858 | 28,9 |
| **11** | Germany | 35.711 | 11.076 | 31,0 |

| | | | | |
|---|---|---|---|---|
| **12** | Greece | 13.196 | 3.843 | 29,1 |
| **13** | Irland | 7.028 | 722 | 10,3 |
| **14** | Italy | 30.134 | 8.993 | 29,8 |
| **15** | Luxemburg | 259 | 87 | 33,6 |
| **16** | Letonia | 6.456 | 3.332 | 51,6 |
| **17** | Lithuania | 6.530 | 2.145 | 32,9 |
| **18** | Malta | 32 | 0,30 | 0,1 |
| **19** | Netherlands | 4.154 | 365 | 8,9 |
| **20** | Poland | 31.268 | 9.282 | 29,7 |
| **21** | Portugal | 9.209 | 3.448 | 37,5 |
| **22** | Slovakia | 4.903 | 1.933 | 39,4 |
| **23** | Slovenia | 2.027 | 1.249 | 61,6 |
| **24** | Spain | 50.537 | 17.821 | 35,3 |
| **25** | Sweden | 45.030 | 28.203 | 62,6 |
| **26** | United Kingdom | 24.361 | 2.867 | 11,8 |
| **27** | Hungary | 9.303 | 2.011 | 21,6 |

*Source: Interpretation after FAOSTAT, yearl 2008*

Forest area is in decline due to a continuing series of factors which appear, often very aggressive.

**Forest area on 31 December 2007 compared with the same date of 2006, grew by 0.9% (from 6,272,300 ha to 6,314,900 ha, mainly due to the transition of land from "wooded pasture " to forest**, according to GEO nr.139/2005 (Table 2).

**Table 2**

**Evolution of forest areas, between 2003-2008**

**thousand ha**

| **Specification** | **2003** | **2004** | **2005** | **2006** | **2007** | **2008** | |
|---|---|---|---|---|---|---|---|
| | | | | | | thousand ha | **%** |
| **Total area of forests** | **23839,1** | **23839,1** | **23839,1** | **23839,1** | **23839,1** | **23839,1** | **100** |
| **Forests and other lands with forestry vegetation** | **6751,7** | **6779,3** | **6742,8** | **6754,7** | **6740,9** | **6728,6** | **28,2** |
| **Forests** | **6221,3** | **6222,5** | **6233,0** | **6272,3** | **6314,9** | **6309,3** | **26,5** |
| Constructions | 648,9 | 652,8 | 657,1 | 674,7 | 685,7 | 692,1 | 2,9 |
| Roads and railways | 390,5 | 390,6 | 391,1 | 389,4 | 390,1 | 390,4 | 1,6 |
| Water surface | 843,7 | 839,1 | 841,4 | 841,8 | 849,9 | 849,3 | 3,6 |
| Other areas | 486,9 | 465,7 | 465,5 | 447,5 | 463,2 | 476,4 | 2,0 |

*Source: Romanian Statistical Yearbook, 2009;*

The extensive woodland with a diverse structure of species is found in the Carpathians and hill areas (about 90% of total area). The largest share is

held by areas covered by:
- beech 32.5%,
- resin 30.7%,
- Oak 16.8%
- other species accounting for 20% (Fig. 1.).

**Table 3**

**Evolution of forests by species**

**thousand ha**

| Specification | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|---|
| **Total** | **6368,0** | **6382,0** | **6391,0** | **6427,0** | **6485,0** | **6470,0** |
| **Forests** | **6221,3** | **6222,5** | **6233,0** | **6272,3** | **6314,9** | **6309,3** |
| Resin | 1839 | 1852 | 1873 | 1893 | 1920 | 1938 |
| Beech | 1985 | 1996 | 2023 | 2028 | 2041 | 2052 |
| Oak | 1109 | 1099 | 1084 | 1084 | 1077 | 1058 |
| Different species | 1288 | 1275 | 1253 | 1267 | 1277 | 1261 |
| **Other areas** | **147** | **160** | **158** | **155** | **170** | **161** |

*Source: Romanian Statistical Yearbook, 2009;*

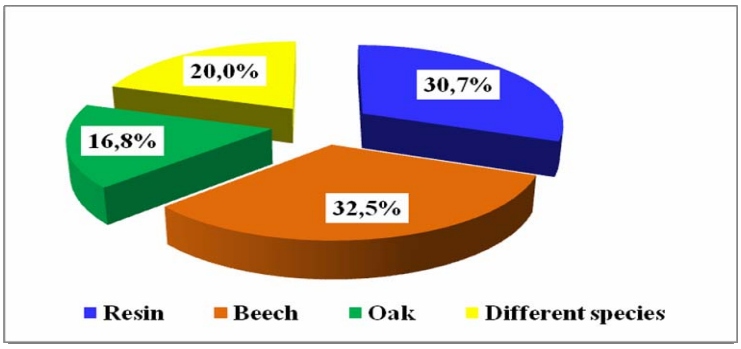



**Fig. 1. Forests distribution by species and group species**

In 2007, afforestation works were carried out over an area of 10,716 ha, with 31.0% less than in 2006. In 2008 afforestation works were carried out over an area of 11,244 hectares, up 4.9% over the previous year, when works were carried out only on 10,716 hectares.

**Table 4**

## Evolution of forest areas

**ha**

| Specification | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|---|
| **Total** | **14772** | **14100** | **14389** | **15533** | **10716** | **11244** |
| **Plantations** | **14491** | **13602** | **14196** | **15476** | **10680** | **11205** |
| Resin | 4606 | 4444 | 5382 | 4970 | 4475 | 4365 |
| Hardwood | 98885 | 9158 | 8814 | 10506 | 6205 | 6840 |
| **Direct Sowings** | 281 | 498 | 193 | 57 | 36 | 39 |
| Resin | - | 5 | 36 | - | 8 | 9 |
| Hardwood | 281 | 493 | 157 | 57 | 28 | 30 |

*Source: Romanian Statistical Yearbook, 2009;*

The area covered with forest regeneration cuttings decreased by 2.2% compared to 2007. In this area, cutting species (areas on which the wood was harvested in full), representing 5.3%, being 18.6% lower than the previous year. In 2008 the area was covered with cuts of 85 740 ha, of which cuts breeds represented 5.14% of total area covered with cuts (Table 5).

**Table 5**

## Area covered with cuttings

**ha**

| Specification | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|---|
| **Area covered by regenaration cuttings-total** | **68820** | **82247** | **83564** | **86167** | **84276** | **85740** |
| **In forests** | **57008** | **67136** | **68718** | **70581** | **69557** | **60409** |
| Successive cuts | 9565 | 9482 | 7119 | 6736 | 5691 | 4527 |
| Progressive cuts | 38962 | 46436 | 48721 | 52202 | 53269 | 54774 |
| Gardening cuts | 4998 | 6521 | 7568 | 6163 | 6139 | 5794 |
| Shaven cuts | 3483 | 4697 | 5310 | 5480 | 4458 | 4314 |
| **In groves** | 4329 | 4214 | 3608 | 4111 | 3393 | 3762 |
| Substitution-regeneration cuts for low productive trees | 1659 | 1782 | 1771 | 1335 | 1038 | 1101 |
| Conservation cuts | 5824 | 9115 | 9467 | 10140 | 10288 | 11468 |
| Cleaning and hygiene operations | 693824 | 685270 | 526405 | 583582 | 538346 | 664448 |
| Care cuts in young forests | 170267 | 182205 | 161818 | 155517 | 135560 | 131315 |
| Accidental products cuts | 606056 | 635111 | 583035 | 461898 | 587274 | 459859 |

*Source: Romanian Statistical Yearbook, 2009;*

The volume of harvested timber in 2007, according to legal regulations was 17 238 000 cm, 9.9% more than last year and in 2008 of 16.705 million cubic meters (Table 6).

**Table 6**

**Volume of harvested timber by species**

**thousands $m^3$-gross volume**

| Specification | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|---|
| Volume of harvested timber-total | **16692** | **17082** | **15671** | **15684** | **17238** | **16705** |
| Resin | **7139** | **6357** | **6061** | **5765** | **7491** | **6766** |
| Beech | 4748 | 5412 | 4794 | 4997 | 5182 | 5208 |
| Oak | 1532 | 1694 | 1586 | 1632 | 1485 | 1653 |
| Different hardwood species | 1823 | 2030 | 1852 | 1915 | 1668 | 1760 |
| Different softwood species | 1450 | 1589 | 1378 | 1375 | 1412 | 1318 |

*Source: Romanian Statistical Yearbook, 2009;*

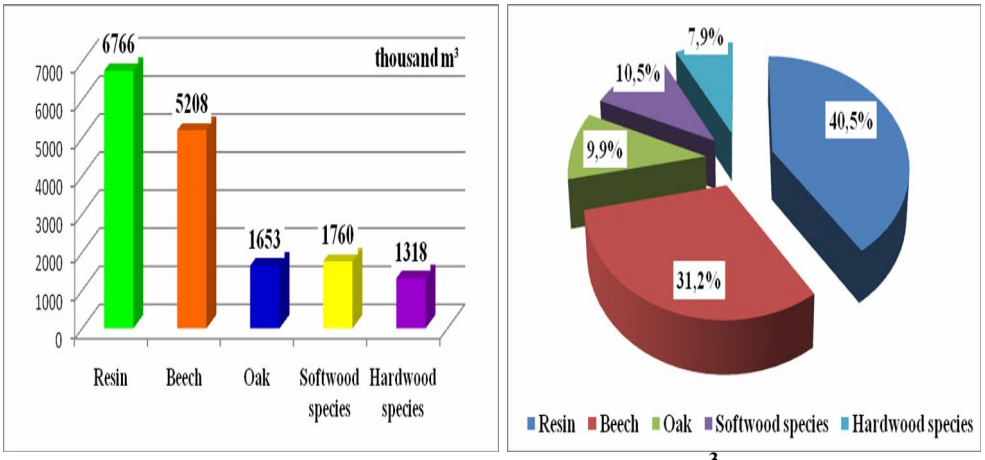



**Fig. 2. Volume of harvested timber by species ($m^3$ şi %), year 2008**

Ownership of national forests is:

- public property, forest - 3.517 million ha;
- public ownership of forest administrative-territorial units (communes, towns, cities) - 974,000 ha;
- private forest cult units (parishes, convents, monasteries), educational institutions or other legal persons - 110,000 ha;
- privately owned forest of 1,869,000 ha.

**Table 7**

**Structure of forest area by ownership in România, 2008**

| | Ownership form | Area (thousands ha) | % |
|---|---|---|---|
| **1** | **Forest area – total** | **6470** | **100,0** |
| **2** | **Public property** | **4491** | **69.4** |
| 3 | - State public property | 3517 | 54.4 |
| 4 | - Administrative-territorials units | 974 | 15.1 |
| **5** | **Private property** | **1979** | **30.6** |
| 6 | - Individual and legal persons | 1869 | 28.9 |
| 7 | - Administrative-territorials units | 110 | 1.7 |

*Source: INS 2008*

**According to the National Institute of Statistics of Romania, in the year 2008, public ownership** represented 69.4% of total forest, which in turn was: **public property**, 54.4% and 15.1% of **territorial administrative units**, while **private property** owned only 30.6% of total forest.

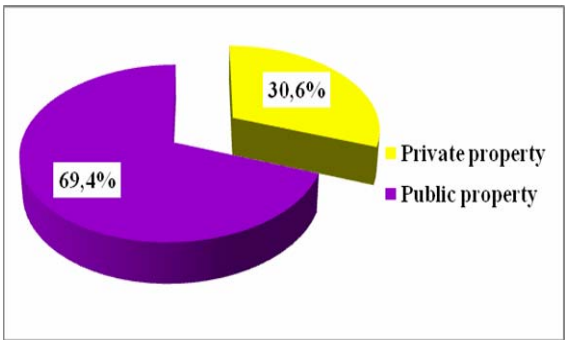



**Fig. 3. Forest area structure by ownership, year 2008**

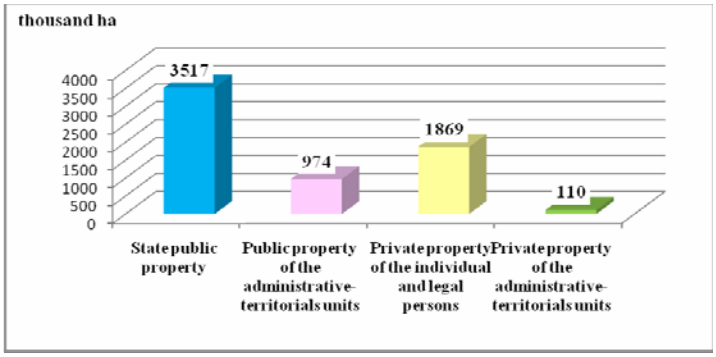



**Fig. 4. Public and private property, year 2008**

## CONCLUSIONS

- Irrational deforestation of forests have a negative effect on the environment, it is particularly encouraging landslides, the change of climate characteristics, hydrological conditions and the quality of air in the atmosphere.
- Most of the forests are located in mountain areas (67%), in the hills 25%, and in the lowlands the forest share is 8%.
- Romania has a valuable forest sector at an European level, with an area of over 6.5 million hectares, and ranks 18th in the EU, where the average in the percentage of forests is 29%, after countries such as Finland, Sweden, Slovenia, Latvia, Estonia, Austria, Slovakia, Portugal, Spain, Germany, France etc.

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