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ASPECTS REGARDING THE FORESTRY PATTERN AND USE OF THE ALBA IULIA FORESTRY DEPARTMENT

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Abstract: The paper approaches issues related to the structure an duse of the forestry stock on the territory of the Alba Iulia Forestry Department. The oucoming results show that within the structure of the forestry stock, 98% of the area is covered by forest. Wihin its composition deciduous species prevail, mainly the beech tree (54%), the common oak tree (7%) and the spruce fir (9%). The forest retrocession carried out according to the Law no. 18/1991, 1/2000 and 247/2005 eventuated in a slight shrink of forested areas and to the fragmentation of the forest sock.

Key words: forest stock, structure, use, Forestry Department

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INTRODUCTION

The Forestry department of Alba Iulia is situated within the Apuseni Mountains stretching over the south-western half of the Trascău Mountains to a great extent and their piedmont hills between the Bucerzii and Ighielului Valley and further on the eastern and north-eastern side of the Metaliferi Mts. and the north-western side of the Secașelor Plateau. From an administrative viewpoint it belongs to Alba County and implicitly to the Alba Forestry Department. This interdisciplinary topic is related to geography and forestry and it can be analyzed with the specific methodology of regional geography presented by Cocean (2005). We consider that knowing the structure and use of the forestry stock is of utmost importance in the prospect of particular project implementation concerning the forest protection, preservation and planning from the territory of this forestry department.The issue of forest preservation and protection is justified by the importance which it holds within the environment where it plays a balance role which leads to the environment's quality improvement, the decrease of some negative effects and generally to the set up of a living environment favourable to human society (Tufescu et al., 1982). This concept stems from many studies and laws elaborated by us (Giurgiu, 1978, 1988; Redfearn & Pimm, 1987; Willis & Benson, 1989; Francois, 1991; Badea, 1993; Forestry Code 1996; Leahu, 2001; Bălteanu & Șerban, 2005; Badea et a., 2006; Law no. 46, 2009).

METHODOLOGY

The interdisciplinary approach of this geography and forestry-related topic makes it both prone to regional geography and to forestry-related researches (the observation, the analysis, the synthesis, the comparison, the statistical method). Related to the observation method we have

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initially used direct observation supported by the mapping materials, mainly the topographical maps and currently available references. This stage was followed by the field observation, which eventuated much information related to the forestry stock use and structure. Based on the data gathered on the field, those provided by references and statistics we proceeded to their analysis for the period 2001-2010. The statistical-mathematical method laid at the basis of the analysis through which the data obtained from the Forestry Department of Alba Iulia and further information was processed. The data were presented synthetically within tables and maps. Eventually we have used the synthesis method which was applied as reversed to the analysis method through which the content of the forestry stock per species and its use was accomplished.

RESULTS

Within the structure of the forestry stock the data and information provided by the forestry sock of the Alba Iulia Forestry Department it comes out that the prevailing species within the department are beech and common oak trees followed by hornbeam, spruce, pine, locust, (SC), fir (BR), other different resinous species (DR), hard (DT) and soft-stem (DM) species. Therefore beech and common oak prevail over the species mixture of the forest. Black pine and locust were planted within the former improvement perimeters. It has been noted that the black pine is vulnerable to the wet snow falls which are characteristic for the area. That is why the proliferation of certain more resisting local species is required. From table 1 it comes out that in the ten surveyed years (2001-2011) the percentage of beech, common oak and hornbeam has decreased whereas the proportion of coniferous (spruce, fir) has increased and the other species maintain the same percentage.

Table 1. Evolution of the forestry stock structure (%) in 2011 versus 2010
(Data source: Index feature fact sheet of the forestry stock)

Species %											
Year	FA	GO	CA	MO	PIN	SC	BR	DR	DT	DM	Total
2001	64	12	7	5	3	3	1	1	3	1	100
2011	54	7	5	9	3	3	4	1	3	1	100

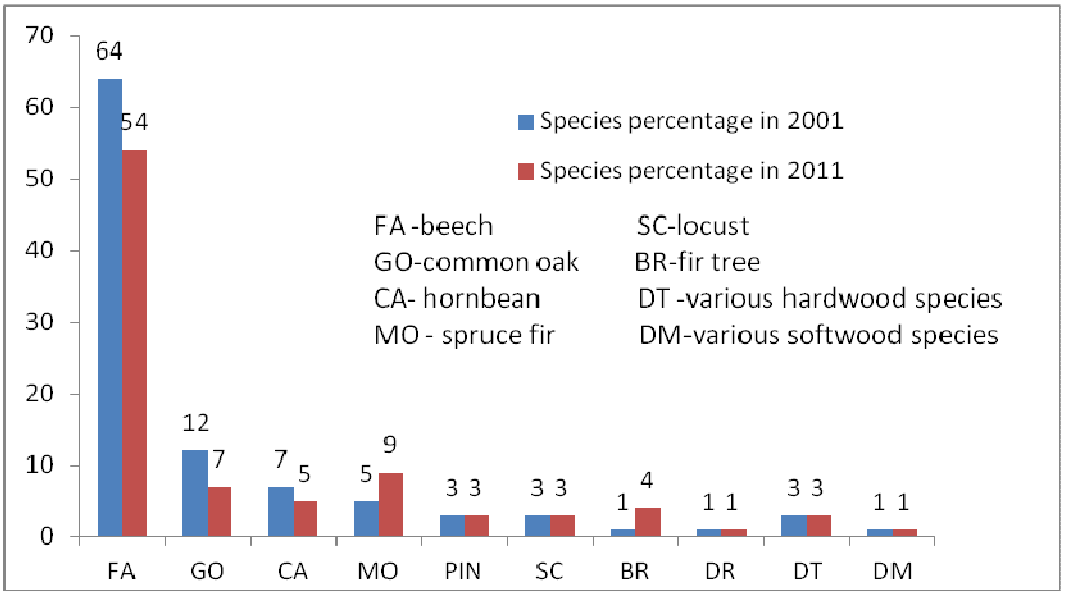

Figure 1. Evolution of the forestry stock structure (%) in 2011 versus 2010

Aspects of forestry vegetation

According to the climatic and stationary conditions on the area of the forestry department a few forestry formations and types of wood could be identified such as: fir wood-beech forest (1%); pure/unspoilt mountain beech forest (57%); pure fir wood hills (21%); mixed fir wood (59,6 ha pure common oak wood (18%); common oak-oak wood forests (3%). A part of the wood types cover reduced areas, their existence being determined by micro relief and the acquired topo climate.

Forestry stock use

The forestry stock is covered in a percentage of 98% with woods. The remaining 2% is represented by the areas which provide for harvest (nursery), production (areas for game nourishment, still waters) needs, which provide for forestry administration needs (areas for forestry production and forestry staff accommodation, forestry roads, forestry warehouses, other areas), areas submitted to forestation, unproductive grounds, areas removed from the forestry stock temporarily (table 2).

Table 2. Forestry stock spread per destinations (2001)
(Data source: Alba Iulia Forestry Department-general study, 2001)

References	Area	
	ha	%
Areas covered with forests	19874,5	98
Areas which cater for harvest needs, of which: Nurseries	2,3 2,3	-
Areas which cater for forestry production needs, of which: -game nourishment -still waters	59,9 4,2 46,7	-
Areas which cater for forestry administration needs, of which: -forestry production areas and forestry staff accommodation -forestry roads -forestry warehouses -other areas	112,8 2,8 71,9 0,5 37,6	1
Areas submitted to forestation	8,8	-
Unproductive areas	268, 4	1
Areas removed from the forestry stock temporarily	34,7	-
Forestry stock total	20352,4	100

Following the forested areas according to the species which they host we can note that from the total area of 19 874.5 ha, the resinous cover 2 184.6 ha (spruce 986.0 ha; fir 300.7 ha, further on DR larch, pines) whereas the deciduous forests stretch over the largest area. The prevailing species is beech with 12 729.3 ha and oak (2 522.1 ha), mainly the peduncle oak and the common oak. Other hard wood species (2 307.1 ha) encountered here are: locust, sycamore maple, ash tree, cherry tree, nut tree. The softwood species (130.8 ha) are featured by linden trees, poplars, locusts (table 3).

Referring to the current state of the forest we mention that after the revolutionary events of 1989-1990, in the situation in which the land retorcessions have taken place in three steps according to the laws in foce: Law 18/1991; Law 1/2000; Law 247/2005, the own or public owenership forestry stock has diminished, it has been dismantled and got the shape of a great mosaique.

This outcome led to the collapse, in theory, of the prodution units (PU), of units which are desgned to be planned as basic units for the forestry departments' management. Badly understood the re-ownership also triggered the degradation of some protected areas and even of the forestry ecosystems (Pop, 2007).

Table 3. Forestry stock area (ha) per use category and species
(Data source: Alba Iulia Forestry Department-general study, 2001)

1	Forestry fund	20352,4
2	Forest area	19874,5
3	Resinous	2184, 6
4	Spruce	986
5	of which: outside the area	835
6	Fir	300,7
7	Dr	25,5
8	Larch	6,9
9	Pine	865,5
10	Decidous	17689,9
11	Beech	12729,3
12	Oak	2522,1
13	Peduncled	43,3
14	Common oak	2402,3
15	Various hardwood species	2307,7
16	Locust	580,4
17	Sycamore maple	128,6
18	Ash tree	10,4
19	Cherry tree	16,8
20	Nut tree	
21	Various softwood species	130,8
22	Linden	7,2
23	Poplar	27,0
24	of which: euramerican poplars	0,6
25	-Locust	44,2
26	-of rd.25 in the danube holm and delta	
33	other areas –total-	477,9
34	Areas which cater for forestry harvest needs	2,3
35	Areas which cater for forestry production needs	50,9
36	Areas which cater for forestry administration needs	112,8
37	Areas reserved for forestation	8,8
38	of which: regeneration category	8,8
39	Unproductive areas	268,4
40	Borderland	
41	Areas removed from the forestry stock temporarily	34,7

CONCLUSION

Within the forestry stock pattern of the Forestry Department of Alba Iulia, the forested areas amount to 98%;

- the forested areas weight is slightly decreasing;
- the domination species within the forest are the beech (54%); common oak (7%) and spruce (9%);
- the evolution of the forestry stock pattern of the last decade (2001-2011) we can note that the ratio of its composing species has not undergone dramatic changes;
- the land retrocession process according to the laws in foce has led to the forestry stock crumbling rendering the latter a mosaic-like shape.

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