

Modern Methods of presentation of the Corcova Forest District

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Abstract Geographically, the territory of the Corcova Forest District extends over the Hills of Cosuşta in the Motrului Piedmont and, from a hydrological point of view, the Corcova Forest District is located in the Motru River basin. The forests of the Corcova Forest District are located within the area of the following communes: Broşteni, Căzăneşti, Corcova, Floreşti, Ilovăţ, Malovăţ, Prunişor, Sişesti, Şovarna, Târna, and Voloiac, but also in the area of the town of Strehaia in Mehedinţi County and the town of Motru in Gorj County. Of the total of 116,370.04 ha of forest managed by the Mehedinţi Forest District, the forests of the Corcova Forest District represent 5%. From a phyto-climate point of view, the forests of this forest district are located on the hilly floor of *Quercus* species (sessile oak, Turkey oak, Hungarian oak and their mixtures) and hill strips. According to the stationary climate conditions, 49 types of forest were determined on the territory of the Forest Corcova District. The most widespread forest formations within the Corcova Forest District are the Turkey oak – Hungarian oak ones, the mixtures of Hungarian oak, of Turkey oak and mesophic oaks, pure hill beeches and pure sessile oaks. Geographical Information Systems are part of the broader class of information systems. They have as their main characteristic the tracing of information taking into account its spatial, geographical location or location in territories, by coordinates. The present paper aims, by using these modern techniques, to make a contribution to the presentation of the Corcova Forest District in Mehedinţi County.

Key words

International Geographic Systems, cartographic representations, forest district

Geographical Information Systems are part of the broader class of information systems. They have as their main characteristic the tracing of information taking into account its spatial, geographical location or location in territories, by coordinates [12, 14].

The present paper aims, by using these modern techniques, to make a contribution to the presentation of the Corcova Forest District in Mehedinţi County [13].

Geographically, the territory of the Corcova Forest District stretches over the hills of Coşusta in the Motrului Piedmont and, from a hydrographic point of view, the Corcova Forest District is located in the Motru River basin [1, 4, 10].

As territorial-administrative units, the forests of the Corcova Forest District are located within the area of the following communes: Broşteni, Căzăneşti, Corcova, Floreşti, Ilovăţ, Malovăţ, Prunişor, Sişesti, Şovarna, Târna, and Voloiac, but also within the area of the town of Strehaia in Mehedinţi County and of the city of Motru in Gorj County [2, 6, 8].

From a phyto-climate point of view, the forests of this forest district are located on the hilly floor of *Quercus* species (sessile oak, Turkey oak, Hungarian oak and their mixtures) and hill strips.

According to the stationary climate conditions, 49 types of forest were determined on the territory of the Forest Corcova District [7, 11, 15].

Material and Method

In the Corcova Forest District, older topographical plans corrected with recent orthophoto plans were used for the determination of surface areas and the drawing up of landscaping maps in G.I.S.

As a result of the forestry works carried out in the period between the landscaping, new elements have emerged regarding the differentiation of the arboreta in relation to age, provenance, and composition, which led to the individualization of new plots. These new plots, as well as plots handed over partly under land fund laws, were measured with G.P.S., achieving 263.3 km with 6,416 points, the distribution of which per production units is as follows: U.P. I Ruptura, 75.7 km with 1,580 points; U.P. II Corcova, 93.6 km with 2,559 points, and U.P. III Floreşti, 94.0 km with 2,277 points. Measurements with the G.P.S. were processed and transposed on a cartographic basis. In this way, cartographic material was established for the analytical determination of surfaces and the drawing up of G.I.S.

maps at scale of 1:20.000 for production units and 1:50.000 for the general study.

Results and Discussion

Geographically, the territory of the Corcova Forest District stretches over the hills of Coșusta in the Motrului Piedmont and, from a hydrographic point of

view, the Corcova Forest District is located in the Motru River basin.

As territorial-administrative units, the forests of the Corcova Forest District are located within the area of the following communes: Broșteni, Căzănești, Corcova, Florești, Ilovăț, Malovăț, Prunișor, Șișești, Șovarna, Târna, and Voloiac, but also within the area of the town of Strehaia in Mehedinți County and of the city of Motru in Gorj County (Fig. 1).

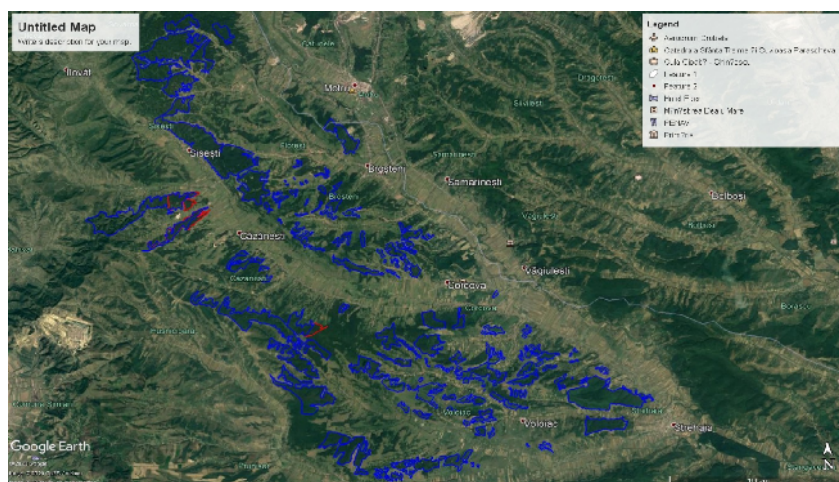


Fig. 1. Forests of the Forest Corcova District

Of the total of 116,370.04 ha of forest managed by the Mehedinți Forest District, the forests

of the Corcova Forest District represent 5% (Fig. 2).

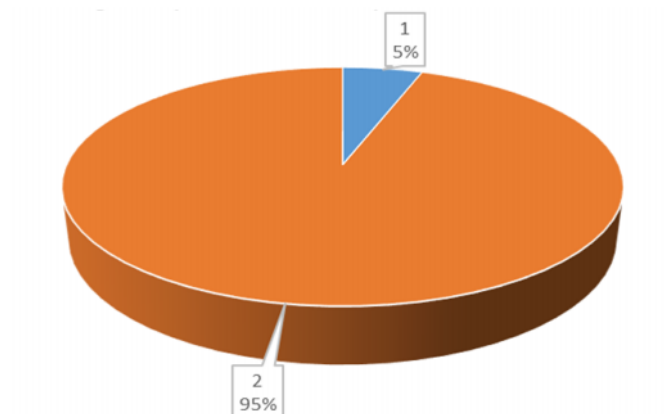


Fig. 2. Area of the Corcova Forest District relative to the area of the Mehedinți Forest District

From a phyto-climate point of view, the forests of this forest district are located on the hilly floor of *Quercus* species (sessile oak, Turkey oak, Hungarian oak and their mixtures) and hills. The public property administered by the Corcova Forest District partially overlaps with the protected natural area included in the Natura 2000 ecological network ROSCI 0432 Prunișor and with the Mehedinți Plateau Geopark, respectively.

According to the stationary climate conditions, 49 types of forest were determined in the territory of the Forest Corcova District. They are

divided into landscape units and determine the following forest formations:

- 42 – Pure hill beech forests (946.87 ha - 14%);
- 43 – Mixed beech forests (600.25 ha - 9%);
- 51 – Pure sessile oak forests (887.80 ha - 13%);
- 52 – Sessile oak-beech forests (197.97 ha - 3%);
- 53 – Hill strips with sessile oak (145.46 ha - 2%);
- 61 – Pure oak forests (5.64 ha);
- 71 – Pure Turkey oak forests (245.50 ha - 4%);
- 72 – Pure Hungarian oak forests (357.77 ha - 5%);
- 73 – Turkey oak – Hungarian oak forests (1748.92 ha - 26%);

- 74 – Mixture of Hungarian oak and Turkey oak with mesophic oaks (1,375.08 ha - 21%);
- 75 – Hill strips with Turkey oak, hill strips with Hungarian oak (42.33 ha - 1%);
- 91 – Pure white poplar forests (29.45 ha - 1%);
- 93 – Mixed white poplar and black poplar forests (30.40 ha - 1%);

- 95 – Pure willow forests (0.7 ha);
- Black alder forests (24.38 ha).

The most widespread forest formations, within the Corcova Forest District, are the Turkey oak – Hungarian oak forests, the mixtures of Hungarian oak, Turkey oak and mesophic oaks, the pure hill beech forests and the pure sessile oak forests (Fig. 3).

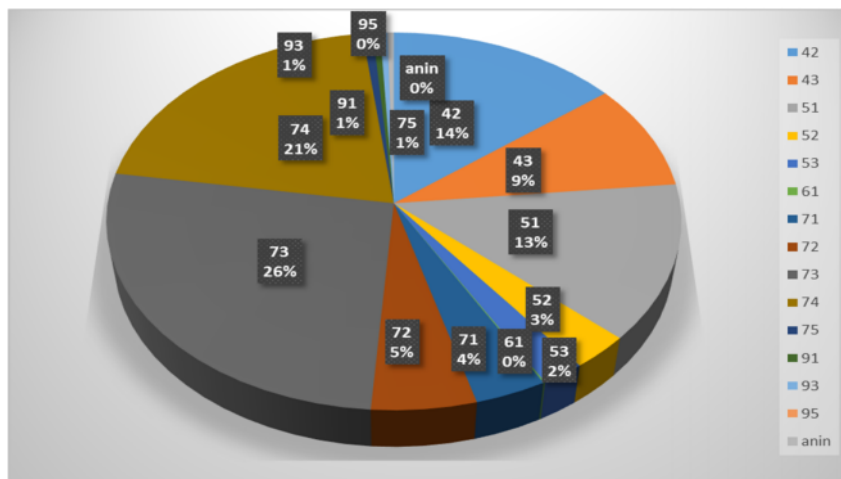


Fig. 3. Area of forest types (%)

Table 1.

Protected areas within the Corcova Forest District

Protected area	U.P.	Plots	Area (ha)		
			Forest	Other uses	Total
ROSCIO432 PRUNIȘOR	I	14%, 15%, 16-52, 217-220	498.46	3.00	501.46
MEHEDINȚI PLATEAU GEOPARK	III	15-86, 98-108, 234-260	1848.58	21.23	1869.81
Total			2347.04	24.23	2371.27

Within the area of the Corcova Forest District, the protected area occupies about 501.46 ha (7% of the

total area) state-owned forest fund, administered by the Corcova Forest District (Fig. 4).

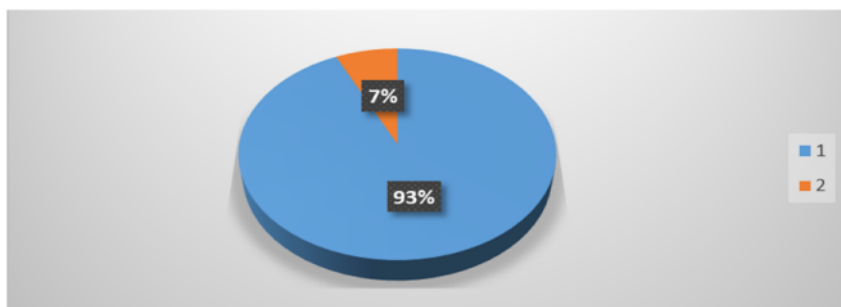


Fig. 4. Area surface in relation to the total area of the Corcova Forest District forest fund

Conclusions

The total area of the forest fund of the Corcova Forest District determined analytically in the G.I.S. system is 6,739.52 ha and is smaller than in the past. The difference was returned to the former owners under the laws of the land fund.

The plot structure of the Corcova Forest District is mostly based on obvious forms of relief such

as valleys and peaks, permanent artificial boundaries and margins in the case of isolated forest bodies.

G.P.S. measurements were performed on the territory of the Corcova Forest District. They have been processed and transposed on a cartographic basis.

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