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Ecological and forestry assessment of forest stands in Pădurea Verde, Western Romania

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AbstractThis study characterizes the site conditions and forest stand structure of Production Unit VIII Pădurea Verde, situated in the north-eastern sector of Timișoara, western Romania. The assessment is based on the forest-management and field-derived information compiled in the supplied forestry study, including parcel descriptions, site classifications and descriptive stand indicators.

• Introduction

Forest site conditions represent the combined influence of landform, parent material, soil, water availability and climate on the development of forest vegetation.

Material and method

The study identifies its administrative affiliation with the Timișoara State Forest District and describes its main access connections through the Timișoara–Lugoj and Timișoara–Lipova roads. The forest is reported as one main block, Pădurea Verde, with boundaries related to neighbouring forest-management units, roads and the Bega canal. Land-use categories were evaluated from the stated total forest-fund area and its components. In this study, were used descriptive statistics, simple proportions and structured comparison.

• Results and discussions

The reported total forest-fund area is 661.4 ha. Forest-covered land occupies 565.3 ha (85.47%), with the remainder assigned to forest cultivation, forestry production, forest administration, land intended for afforestation and temporarily excluded land.

Conclusions

The reported stand composition is dominated by pedunculate oak (68%), with ash, field maple, Turkey oak and other broadleaved groups providing additional structural and compositional diversity. The overall mean stand age is approximately 80 years and the reported canopy consistency is 0.74.The forest occupies a lowland setting characterized by Quaternary deposits, clay-rich soils and the influence of the Behela drainage system. Within the 566.8 ha classified for site conditions, typical reddish-brown soils occupy 68%, and vertic-pseudogleyed reddish-brown soils 32%.