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Preliminary Assessment of Forest Habitat Conservation in Forest Management Unit VIII Banloc–Mănăstire Using Phytosociological Indicators

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Abstract: *This study presents a preliminary assessment of the conservation condition of major forest habitat types in Forest Management Unit VIII Banloc–Mănăstire, Lunca Timișului Forest District, Timiș Forestry Directorate, western Romania. The assessment integrates forest management data with indirect phytosociological indicators derived from the 2018 management plan, stand descriptions and compartment map.*

• Introduction

Forest habitat conservation aims to maintain stand structure, species composition, ecological functions, and natural regeneration, in accordance with the EU Habitats Directive [1, 2]. Phytosociological and forest management indicators support the assessment of habitat naturalness, structure, regeneration, and conservation pressures [3, 4, 7].

• Material and method

FMU VIII Banloc–Mănăstire, located in western Romania, covers 968.63 ha, including 865.67 ha of forest land. It comprises 108 compartments and 386 subcompartments, based on the 2018 forest management plan [9].Data sources: The assessment used secondary data from the forest management plan, compartment descriptions, and general map [9, 12]. Forest composition and naturalness, habitat area, stand structure, productivity, regeneration, soil and site conditions, phytosanitary status, destabilising factors, and Natura 2000 conservation context.

• Results and discussions

FMU VIII Banloc–Mănăstire is dominated by lowland oak and mixed broadleaved forests, covering 95% of the forested area. Natural reference-type stands account for 52%, while artificial stands represent 42%.Oak-dominated mixed forests show the most favourable conservation condition. Pure oak stands have moderate naturalness, while floodplain mixed forests are considered vulnerable due to their low naturalness and limited extent. Major pressures include windthrow (341.88 ha), stem breakage, and temporary waterlogging. The management unit also overlaps several Natura 2000 protected areas.Conclusions

• Conclusions

The forest unit has significant conservation potential, but habitat condition varies among forest formations. Priorities include promoting natural regeneration, maintaining native species composition, improving stand structural diversity, and protecting riparian habitats. Field surveys and phytosociological relevés are needed to confirm habitat types and validate the preliminary conservation assessment.