



AGRO FORESTRY PRACTICES IN WEST BALKAN  
FOR SUSTAINABLE DEVELOPMENT:  
WEAKNESSES AND STRENGTHS



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# Report on defended Master thesis

Belgrade, October 11<sup>th</sup>, 2024



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## Project information

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## Document control sheet

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In October 11<sup>th</sup> 2024 at 11h, in accordance with the Procedure for the Preparation and Defense of a Master's Thesis at the University of Belgrade Faculty of Forestry, the BSC Jelena Peulić's master thesis defense began before three-member committee approved by Teaching-Scientific Council of the University of Belgrade Faculty of Forestry (no. 03-3164/3 from 11.04.2024.):

1. Dr Sara Lukić, Faculty of Forestry, Belgrade – mentor
2. Dr Jelena Beloica, Faculty of Forestry, Belgrade
3. Dr Vladimir Ivezić, Faculty of Agrobiotechnical Sciences, Osijek.

The master's thesis, entitled "*Protective Forest Belts for Improving the Environment in the Area of Bačka Palanka*", spans 42 pages. It consists of seven chapters, six tables, and 25 figures, along with a literature review, abstract with keywords in both Serbian and English, and a summary in Serbian. The research addresses the potential role of protective forest belts in mitigating environmental pressures in Bačka Palanka, where wind erosion and intensive agriculture are identified as key environmental stressors. Furthermore, the study explores the capacity of forest buffer zones to conserve and enhance biodiversity in the area by utilizing native species for their establishment.

To achieve the research objectives, a multi-faceted methodology was employed. This included analyses of the region's sensitivity to wind erosion, natural potential vegetation, and the current state of existing vegetation. Key data sources included the Vojvodina soil database (Živković et al., 1972), agrochemical analyses from the AI Rawafed DOO database, the EuroVeg database, and data from the AGFORWEB project database (2023). These data were processed using tools in a GIS (Geographic Information Systems) environment.

The study produced a map illustrating the sensitivity of the Bačka Palanka region to wind erosion. It also presented analyses of the agrochemical properties of local soils in terms of their agricultural potential, the prevailing wind directions, expected periods of probable drought, and maps of the region's natural potential vegetation. Additionally, the spatial distribution of the existing protective forest belts was analyzed.

The thesis offers practical recommendations for selecting tree and shrub species appropriate for the establishment of new protective forest belts in the Bačka Palanka area. Proposals for the reconstruction of existing belts were made for three specific locations that are designated for field protection. Each site's current condition was thoroughly documented, and recommendations for reconstruction or enhancement were provided based on local environmental conditions and the intended function of the protective forest belts. Additionally, the thesis outlined a proposed schedule for the works, as well as recommendations for the long-term care and maintenance of the protective forest belts.