



Biodiversity and Forest Recreation: Economic Valuation in Protected Natural Areas in Serbia

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Collaborations : University of Belgrade, Faculty of Forestry

Thematic action concerned: WP4

Context —

Long-term biodiversity conservation through protected areas (PAs) requires sustainable sources of funding to cover management costs. Researchers and policymakers have suggested that tourism and recreational services could help fund the ever-growing number of protected areas. The traditional reliance on government sources to support PAs is often unsustainable, both in developed and developing countries. In the Republic of Serbia, PAs represented 8.82% of the total territory in 2018. Managers of Serbian PAs can be public or private, but in both cases they face a lack of financial resources needed to maintain the environmental and economic viability of PA management. There is a strong need for studies that can contribute to the development of more sustainable sources of funding, including increased user payments, as well as the establishment of a sound socio-economic basis for public funding.

Objectives —

The main objective is to assess the Serbian population's preferences for biodiversity protection in Serbia's protected areas. This will be used on the one hand to justify the allocation of public funds for PA management, and on the other hand to develop improved market-based mechanisms for financing biodiversity protection in natural areas. More specifically, the study aims to assess the demand for access to PAs, including the determinants of this demand, which will enable 1) optimise the management of the PA according to visitors' preferences and thereby attract more visitors, 2) optimise the pricing of entrance fees, and 3) guide marketing strategies. In addition, we aim to assess the so-called non-use values of biodiversity conservation, which include the value that non-visitors place on biodiversity conservation in the PA. Our hypothesis is that, due to non-use values, public funding will be needed to achieve socially optimal funding of PAs, even with optimally set entrance fees. Finally, the aim is to strengthen the research cooperation between BETA and the Faculty of Forestry at the University of Belgrade in Serbia.

Approaches —

By surveying a representative sample of the adult population in Serbia, we can estimate both use values (for visitors or potential visitors) and non-use values of biodiversity conservation in protected areas in Serbia. Population preferences will be assessed using the travel cost method (visitors) and a discrete choice experiment (all) embedded in a questionnaire. The project provides a unique opportunity to compare not only the results of stated preferences (discrete choice experiment) and revealed preferences (travel cost method), but also to compare them with real transactions (entrance fees). This will be an important contribution to the existing literature on economic valuation. The project benefits from an ongoing PhD study, which provides important data (e.g. PA management costs) necessary for the analysis.

Key results — (presented as separated bullet points)

- Based on an on-site survey in selected protected areas a dataset is obtained with, among others, visitors' travel distance and willingness to pay higher entrance fees.
- Two BETA researchers visited the Faculty of Forestry of the University of Belgrade and two protected areas in October 2022.
- Successful implementation of the survey of the representative sample of the Serbian population December 2023-January 2024 yielded 1020 completed questionnaires.
- A paper with preliminary analyses of the discrete choice experiment has been submitted to the 29th annual conference of the European Association of Environmental and Resource Economists.

Main conclusions including key points of discussion —

The main survey of the general population in Serbia has been delayed as we decided to conduct two pilot surveys, one of PA managers and one of the general population, in order to focus the DCE (identification of relevant attributes describing the scenarios for improving PA management). We have finally obtained a rich dataset, which is currently being analysed and will provide the basis for at least two scientific papers to be submitted this year.

Perspectives —

As the scenarios for the improvement of the management of the PAs include several aspects of rewilding (e.g. reintroducing species) the project provide also estimates of preferences of rewilding that can serve BETA's research in the horizon Europe project wildE.

Valorization — (scientific: publications, book chapter, presentation at conferences...); economic: Soleau envelope, patent, license...; distribution: press release, interview...)

- *Presentation of BETA's research on forest ecosystem services at a seminar at the Faculty of forestry in Belgrade.*