Dr hab. Barbara Sowińska – Świerkosz, associate professor

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Affiliation

University of Life Sciences in Lublin

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Education

2006 – Master's degree in Civil Engineering at the Lublin University of Technology, Faculty of Civil and Sanitary Engineering, major: Civil Engineering, specialty: Protection of Monuments of Architecture and Urban Planning; Title of dissertation: The application of landscape quality objectives for the projected "Roztocze-Solska Forest Biosphere Reserve" as an instrument for shaping the visual context of historic buildings

2011 – PhD in Agricultural Sciences in the discipline of Environmental Protection and Engineering, specialty of Landscape Ecology, University of Life Sciences in Lublin, Faculty of Agrobioengineering; Title of doctoral dissertation: Landscape quality objectives of the projected "Roztocze-Solska Forest Biosphere Reserve" as an instrument of rural areas

environment design

2019 – Habitation in Environmental engineering, mining and energy; Wroclaw University of Environmental and Life Science, The Faculty of Environmental Engineering and Geodesy, Field: Engineering and technology; Title of achievement: Landscape quality indicators for areas with varying degrees of anthropogenic transformation

Research interest

- Assessment of the effectiveness of Nature-based solutions projects
- Optimization methods of selecting Nature-based solutions (NBS)
- Assessment of Nature-based solutions in terms of IUCN global standards
- Nature-based solutions impacts on landscape quality and social perception
- Acceptance baseline for Nature-based solutions projects
- Co-design and co-development of Nature-based solutions implementation
- Application of Citizen Science in environmental research
- Evaluation of ecosystem services provided by urban ecosystems
- Spatial analysis of the environmental impacts of ecosystem-based approaches
- Cultural values of protected areas

The most important publications:

- Retrofitting existing buildings by the use of modular green roofs. JULIA WÓJCIK-MADEJ, BARBARA SOWIŃSKA-ŚWIERKOSZ, GABRIEL PÉREZ LUQUE, MALWINA MICHALIK-ŚNIEŻEK. Building and Environment 2026 Vol 287: 113900 DOI:10.1016/j.buildenv.2025.113900
- Nature-based design and planning: Framing a new interdisciplinary subfield. AURA-LUCIANA ISTRATE, BARBARA SOWIŃSKA-ŚWIERKOSZ. Ambio 2025. DOI: 10.1007/s13280-025-02298-3
- Multi-criteria evaluation for the sustainable use of loess gullies in rural–urban borderline. JAN RODZIK, BEATA ŻURAW, BARBARA SOWIŃSKA-ŚWIERKOSZ, JAKUB KUNA, MAŁGORZATA SOSNOWSKA & MAREK PODSIEDLIK. Scientific Reports 2025 Vol 15: 10801 DOI:10.1038/s41598-025-94597-8
- Multi-Criteria Evaluation Method for the Selection of Nature-Based Solutions for Urban Challenges. JULIA WÓJCIK-MADEJ, JOAN GARCÍA, BARBARA SOWIŃSKA-ŚWIERKOSZ . Journal of Environmental Management 2025 Vol 373, 123387 DOI: 10.1016/j.jenvman.2024.123387
- Linkages between the concept of nature-based solutions and the notion of landscape. BARBARA SOWIŃSKA-ŚWIERKOSZ, JOAN GARCÍA, LAURA WENDLING. Ambio 2024 Vol. 53 s. 227–241, DOI: 10.1007/s13280-023-01935-z

- What are nature-based solutions (NBS)? Setting core ideas for concept clarification. BARBARA SOWIŃSKA-ŚWIERKOSZ, JOAN GARCÍA. Nature-Based Solutions 2022 Vol.2 Article number 100009, DOI: 10.1016/j.nbsj.2022.100009
- Spatial indicators as a tool to support the decision-making process in relation to different goals of rural planning. BARBARA SOWIŃSKA-ŚWIERKOSZ, DAWID SOSZYŃSKI. Land Use Policy 2022 Vol. 119 Article number 106180, DOI: 10.1016/j.landusepol.2022.106180
- A new evaluation framework for nature-based solutions (NBS) projects based on the application of performance questions and indicators approach. BARBARA SOWIŃSKA-ŚWIERKOSZ, JOAN GARCÍA. Science of the Total Environment 2021 Vol. 787 Article number 147615

Principal investigator and co-investigator in international and national research projects

- Head of a project team from the University of Life Sciences in Lublin in **HORIZON-CL6-2024-BIODIV-02** call "Demonstrating Nature-based Solutions for the sustainable management of water resources in a changing climate, with special attention to reducing the impacts of extreme droughts"; project title: "**NBS4Drought**"; 2025-2029
- Head of a project team from the University of Life Sciences in Lublin in **BiodivNbS** call "Nature-based solutions for biodiversity, human well-being and transformative change"; project title: "**NatureScape**: Fostering Urban Transformation for Environmental Quality and Social Well-being through Nature-Based Solutions"; 2025-2028
- Member of the working group **COST Action CA2313**: „Large-scale Interdisciplinary Alliance on Nature-based SoLutions and Health: Indicators, InequalitY and Innovation (**LILY**)"2024-2028

Placements in domestic and foreign scientific or academic centres

- Invited speaker to "International Training on Nature-based Solutions for Resilient Ecosystems and Societies, Centre of Excellence on Sustainable Land Management Indian Council o of Forestry Research and Education, Dehradun ,Uttarakhand2025
- Monthly research internship: Universitat Politècnica de Catalunya-BarcelonaTech, Spain; Topic: *Nature-based solutions and water re-use, 2025*
- Visiting professor at the University College Dublin, Ireland; Topic: *Urban Nature-based solutions* and *Citizen Science in environmental research, 2024*
- Participation in the International week "Universities for Gen Z: modern tools for education and research" at the Mendel University in Brno, Czechia; Topic: *Urban Nature-based solutions* and *Citizen Science in environmental research, 2024*

- Visiting professor in the international weekly PhD course “Programme for Wetland 2024” and speaker at the WETLAND WATCHERS workshop: “Empowering Citizen Science for Climate Action”, Aarhus University, Denmark, 2024
- Weekly research visit: The Universitat Politècnica de Catalunya-BarcelonaTech, Spain; Topic: *Urban Nature-based solutions, 2022*
- Visiting lecturer at the Instituto Politecnico de Beja, Integrated project on Water: “Hyper Spectral Imaging and System Analysis: tools for smart water management”, 2020-2025
- Participation in the International week at the AERES University of Applied Sciences, Netherlands, 2019
- Monthly research internship at the Lviv National Polytechnic University, Ukraine, 2019