IALE 2025

European Landscape Ecology Congress

Landscape Perspectives in a Rapidly Changing World

Bratislava, Slovakia, September 2-5, 2025

Book of Abstracts

Editors:

Juraj Lieskovský, Zuzana Baránková, Viktória Miklósová, Hubert Hilbert, Zuzana Ponecová

Title: IALE 2025 European Landscape Ecology Congress, Landscape Perspectives in a Rapidly Changing World: Book of Abstracts

Editors: Juraj Lieskovský, Zuzana Baránková, Viktória Miklósová, Hubert Hilbert, Zuzana Ponecová

Publishers: Institute of Landscape Ecology, Slovak Academy of Sciences, Bratislava, Slovakia

Year of publication: 2025

Electronic edition: DOI: https://doi.org/10.31577/2025.9788089325344
ISBN 978-80-89325-34-4
EAN 9788089325344

Recommended citation:

[Authors surname][Initial/s](2025)[Title of abstract].In: J.Lieskovský, Z.Baránková, V.Miklósová, H.Hilbert, Z.Ponecová, (Eds.), IALE 2025 European Landscape Ecology Congress. Book of Abstracts (pp. xx-xx), ILE SAS, Bratislava.
DOI: https://doi.org/10.31577/2025.9788089325344

The IALE 2025 European Landscape Ecology Congress (2-5 September 2025) was organised by Institute of Landscape Ecology, Slovak Academy of Sciences (ILE SAS) and Faculty of Natural Sciences, Comenius University Bratislava (FNS CU), European Association for Landscape Ecology (IALE Europe), Czech Society for Landscape Ecology (IALE-CZ), and Mendel University in Brno (MUB). Patronage over the Congress was granted by Mr. Juraj Droba, Chairman of the Bratislava Self-Governing Region, and Mr. Matúš Vallo, Mayor of the City of Bratislava.

Graphic design: Jakub Košša, AI tools

Systematically exploring restoration opportunities at the landscape level

Nina Smits[1*], R. ter Harmsel[1], M. Weijters[2], G. van Dijk[2], E. Bohnen-Verbaarschot[2], J. van Doorn[2], M.F. Wallis de Vries[3], I. Raemakers[4]

[1]Wageningen Environmental Research, the Netherlands
[2]B-WARE Onderzoekscentrum, the Netherlands
[3]Vlinderstichting, the Netherlands
[4]Ecologica, the Netherlands
[*]nina.smits@wur.nl

Despite (restoration) management efforts and research, biodiversity in the Southern part of the Netherlands (Heuvelland region) remains under pressure. Many habitat types and species (designated by the Habitats directive) continue to decline, with challenges such as habitat fragmentation, grassland overgrowth, slow recovery of species-rich forests, and deteriorating groundwater-dependent ecosystems due to nutrient-rich water inflows.

The Heuvelland's unique abiotic conditions, where habitats are often arranged in linear patterns, offer a distinct opportunity for targeted restoration of the entire ecosystem. Since past policies have primarily focused on restoration within Natura 2000 areas, opportunities outside these zones have gone underexplored. However, recent policy developments do emphasize integrated restoration approaches. This project, therefore, aims to identify strategic areas for restoration on the landscape level. The primary goal is to contribute to the restoration of 14 habitat types and 12 species protected under the EU Habitats Directive, many of which are regionally unique to the Heuvelland region.

The key research question is to identify in a systematic way the most promising locations to restore a 'complete system of related habitat types', in other words: at the landscape level.

In phase 1 of this project, we gathered diverse relevant spatial data (soil type, elevation maps, (historical) aerial photos and topographic information a.o.), and combined these with species distribution data of characteristic species per habitat type. We used thresholds for the amount of characteristic species per km2, combined with spatial data, to identify promising areas for restoration per habitat type on a km-grid level. In phase 2, we combined all promising occurrences to identify locations that are promising for the restoration of a specific gradient or landscape.

A systematic prioritization framework will guide the selection of target areas, ensuring a science-based and scalable approach. The final output will provide spatial recommendations for ecological restoration at the landscape level, contributing to national and European conservation objectives. By addressing habitat fragmentation and reinforcing ecosystem resilience, this project aims to enhance the long-term viability of the characteristic biodiversity of the Southern part of the Netherlands.

Oral presentation