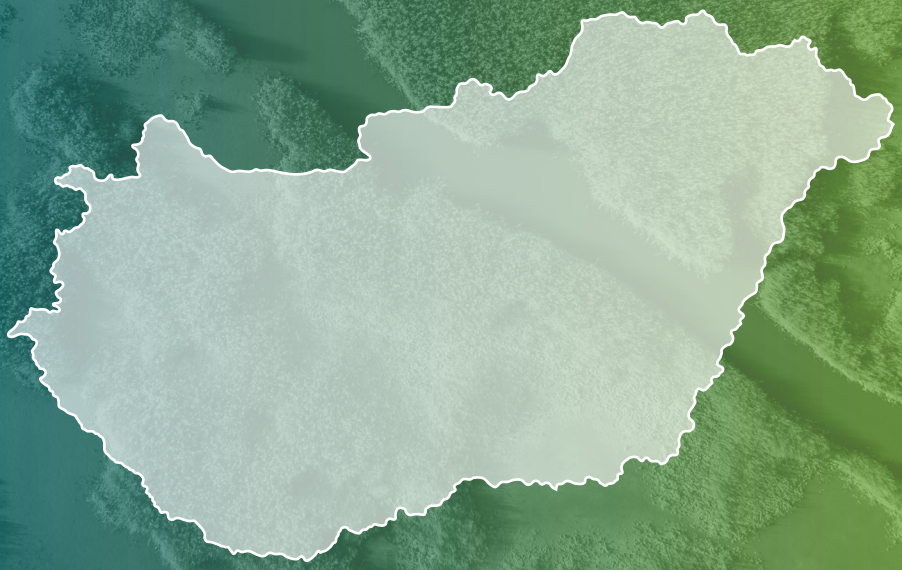
SELINA

SCIENCE FOR EVIDENCE-BASED AND SUSTAINABLE DECISIONS ABOUT NATURAL CAPITAL

Country Fact Sheet

HUNGARY



Funded by the European Union

SELINA receives funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101060415.

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Country Fact Sheet: Hungary (HU)

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June 2024

If you feel there are ongoing or upcoming research projects, policy initiatives or legislations, concerning the use of biodiversity, ecosystem condition and ecosystem services knowledge in decisions and policies, missing please contact inge.liekens@vito.be and we update the country fact sheet (until March 2027)

Contents

1 Update on projects concerning biodiversity, ecosystem condition and ecosystem services assessment and accounting since 2022

Hungary completed its first national MAES project between 2016 and 2021 (Vári et al., 2022). The project aimed at supporting national nature conservation, providing a sound basis for management and decision-making. This work covering the whole country produced a high-resolution ecosystem map (Tanács et al., 2022b), with three hierarchical levels of ET. The project also assessed ecosystem condition, and, in parallel, some EC indicators linked to specific ES (Tanács et al., 2022a). 12 ES were chosen for mapping and assessment through prioritisation in a participatory approach. Some regional assessments complemented the national mappings: several regulating ES for urban areas (four case studies) and for freshwater ES (Zala watershed).

According to the current plans, a follow-up project is starting in late 2024. It includes the further development of mapping methods used in the original MAES-HU and the remaking of several maps to allow an analysis of change. Scenario analysis of the possible future change of EC and certain ES is also planned along several alternative drivers.

There are two ongoing research projects related to the Hungarian MAES. One (carried out by Eötvös Loránd University) is about forest condition mapping with different methods and at different scales and it included the validation of the MAES-HU forest condition map with detailed field data. The other project (by HUN-REN Centre for Ecological Research) includes (a) the validation of other national condition maps from MAES-HU, e.g., croplands (b) exploring the relationship between pressures and condition at the national level (c) identifying ES hotspots and conflict areas by combining the MAES-HU ES and EC maps. It also includes continued cooperation with the Nature Conservation Department of the Ministry of Agriculture (exchange of condition-related data and results).

2 Examples of uptake in decision processes, regulations and/or legislation

The results from MAES-HU were directly used in the new Biodiversity Strategy of Hungary. The involvement of the Ministry in the project ensured that the results were something they could use for their purposes (and this was true for any stakeholder involvement – those involved in the planning and the actual mapping were enthusiastic about using the results). EU requirements are a strong incentive for uptake (e.g. management plans for Natura2000 areas), also any kind of planning or other action that requires national-scale data (e.g. flood protection, designation of areas related to the Nature Restoration Law).

There is also a strong demand for data (especially EC data) at the local level (e.g. local planning) but not all the national-scale data are suitable for that.

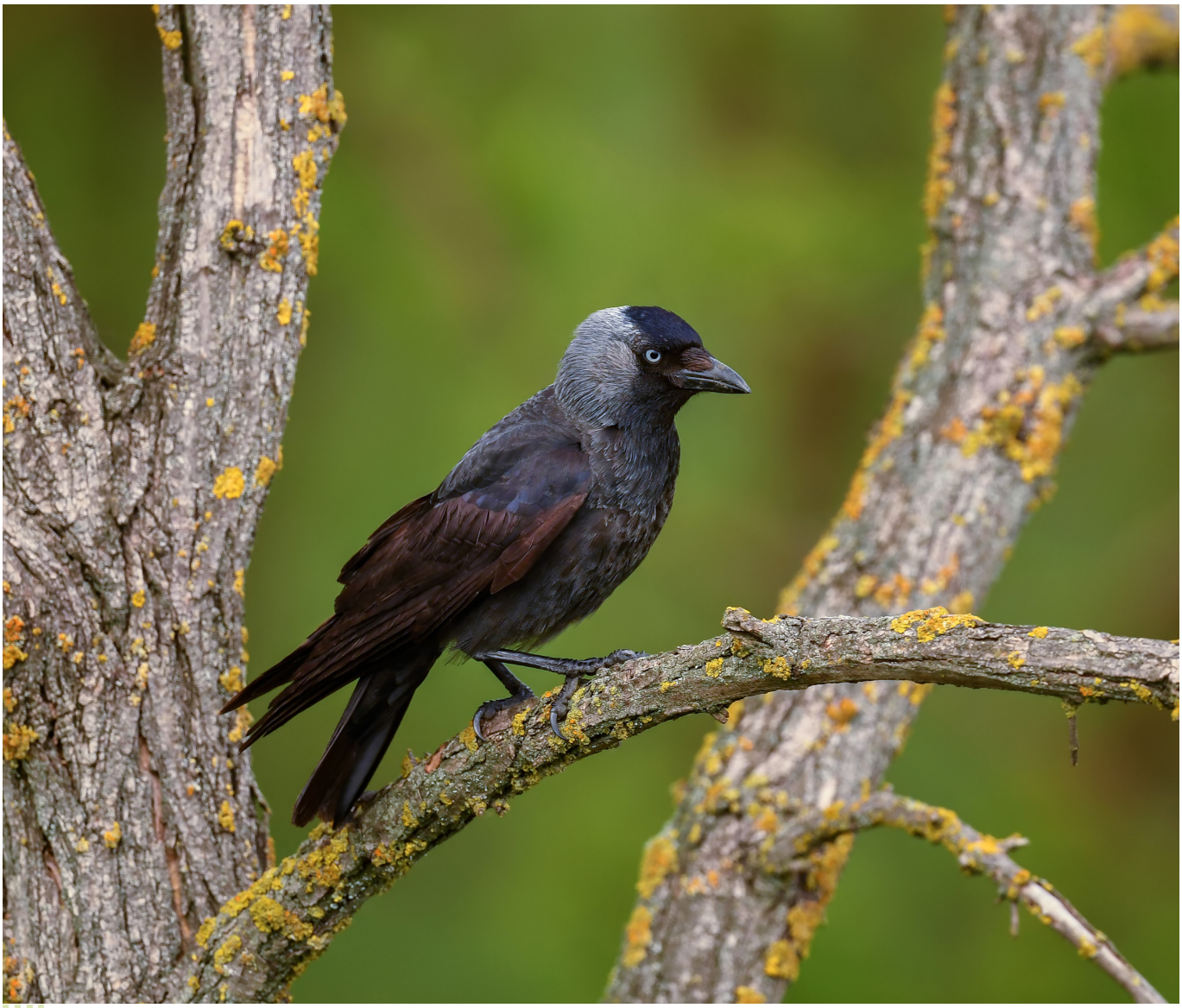
3 Perceived barriers and needs to enhance uptake

3.1 Barriers

- It is unclear how to reach potential users effectively – they seem to rely mostly on information from trusted sources.
- Scale issues – when someone tries to use the national maps at an inappropriate (usually too fine) scale, they get disappointed for the lack of proper detail (or precision) at the required scale.
- Uncertainty issues – no matter how well uncertainty is documented, the maps/data are sometimes used as if there was no uncertainty – which may lead to a loss in trust.

3.2 Needs

- The demonstration of good practices for potential users (related to the appropriate use of the data and their uncertainty)
- In the long run we would need more detailed and precise data to produce national maps which also work well on a finer scale



4 On the way to transformative change

The overall conclusion of the IPBES global assessment (IPBES 2019) was that Goals for conserving and sustainably using nature and achieving sustainability cannot be met by current trajectories, and goals for 2030 and beyond, may only be achieved through transformative changes across economic, social, political and technological factors.

Transformative or transformational change refers to "a fundamental, system-wide reorganization across technological, economic and social factors, including paradigms, goals and values" (IPBES, 2019). Simply said, doing things differently, rather than doing less or optimising the system.

A means to enhance uptake is bringing people of the quadruple helix together and exchange information and learn from each other. Another is to establish projects that can show that it works and lead to possible pathways of transformative change.

4.1 Community of practice

The Hungarian Community of Practice under SELINA flag is in the planning phase. A first meeting will be organised in fall 2024.

4.2 Seeds of transformative change

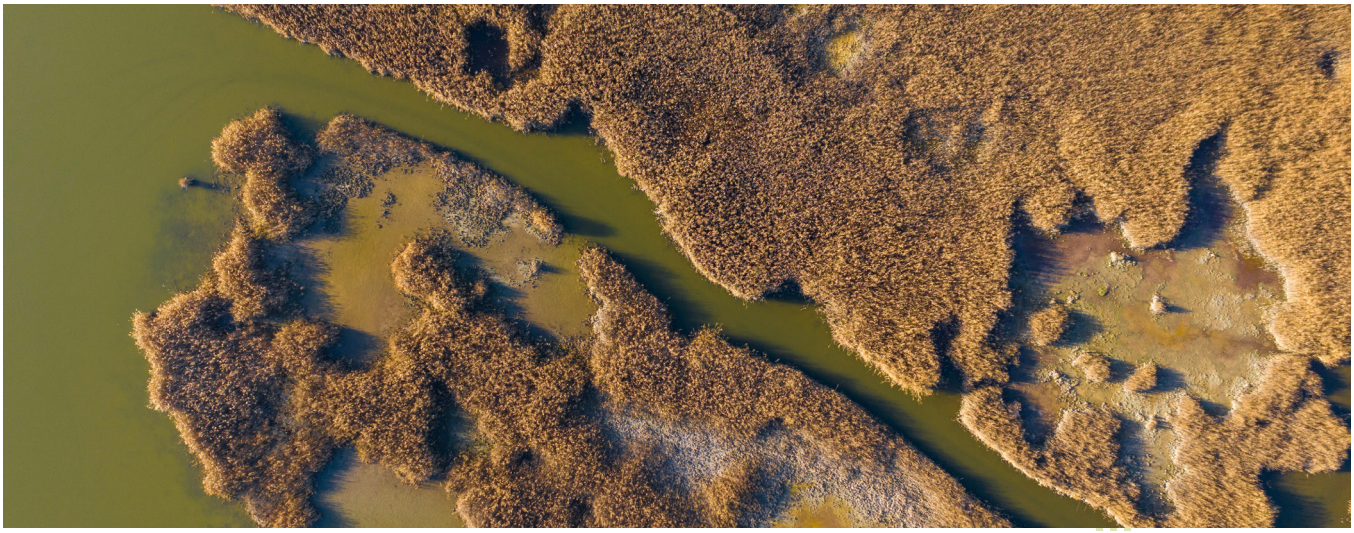
For the moment (June 2024) only two projects were nominated as a potential seed of change:

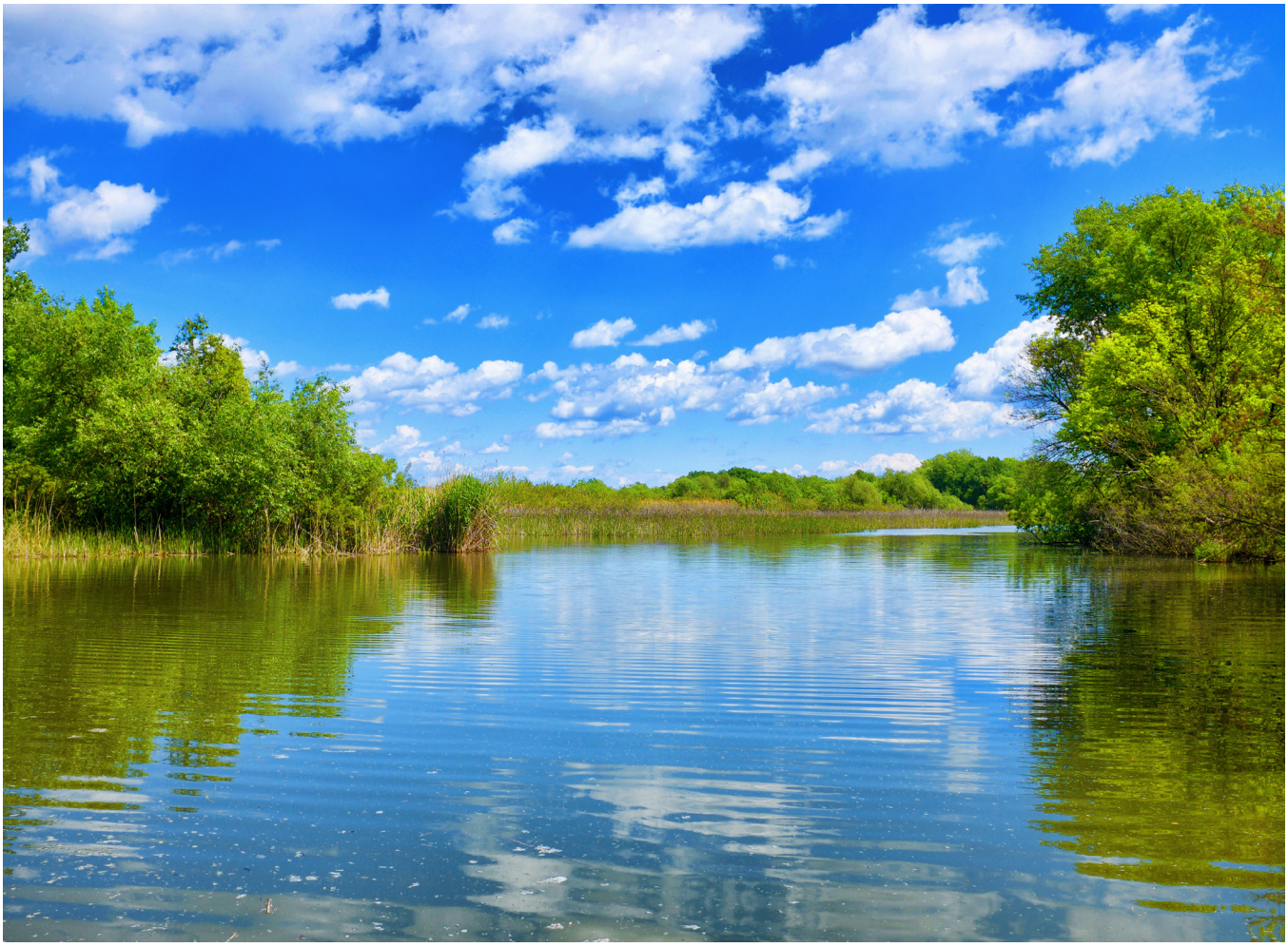
10 millió Fa (10 million Trees): 1 person 1 tree. We professionally plant 10 million trees in Hungary and beyond. We also aim to reach and involve at least 10 million people in the process. So we plant trees and ideas: trees to be our bodyguards in tackling biodiversity and the climate crisis and ideas to go much further than planting 10 million trees.

Restore4Life: "Restore4Life's Overall Objective is to develop an online Restore4Life Wetland Restoration Decision Support System that will allow large-scale holistic wetland restoration activities in the Danube basin and Europe through extensive dialogue and co-creation with multiple actors (knowledge holders, policy actors, citizens) as part of the Danube basin lighthouse of the Mission "Restore our ocean and waters by 2030".

Thkio Mosfilies – Outdoor teaching area

To set up a nature reserve and create a hub for environmental education in the Ammochostos District, with the hopes of changing hearts and minds in the area and influencing young children into becoming valuable members of society that love and protect nature.





5 References

Tanács et al., 2022a E. Tanács, Á. Bede-Fazekas, A. Csecserits, L. Kisné Fodor, L. Pásztor, I. Somodi, T. Standovár, A. Zlinszky, Z. Zsembery, Á. Vári 2022a Assessing ecosystem condition at the national level in Hungary - indicators, approaches, challenges One Ecosystem, 7 (2022), p. e81543

Tanács et al., 2022b E. Tanács, M. Belényesi, R. Lehoczki, R. Pataki, O. Petrik, T. Standovár, L. Pásztor, A. Laborczi, G. Szatmári, Z. Molnár, Á. Bede-Fazekas, I. Somodi, D. Kristóf, A. Kovács-Hostyánszki, K. Török, L. Kisné Fodor, Z. Zsembery, Z. Friedl, G. Maucha 2022. Compiling a high-resolution country-level ecosystem map to support environmental policy: methodological challenges and solutions from Hungary Geocarto International, 37 (2022), pp. 8746-8769, 10.1080/10106049.2021.2005158

Tanács E., Á. Vári, Á. Bede-Fazekas, A. Báldi, E. Csákvári, A. Endrédi, V. Fabók, L. Kisné Fodor, M. Kiss, P. Koncz, A. Kovács-Hostyánszki, J. Mészáros, L. Pásztor, R. Rezneki, T. Standovár, Z. Zsembery, K. Török, 2023. Finding the Green Grass in the Haystack? Integrated National Assessment of Ecosystem Services and Condition in Hungary, in Support of Conservation and Planning Sustainability, 15 (2023), p. 8489, 10.3390/su15118489

Á. Vári, E. Tanács, E. Tormáné Kovács, Á. Kalóczkai, I. Arany, B. Czúcz, K. Bereczki, M. Belényesi, E. Csákvári, M. Kiss, V. Fabók, L. Kisné Fodor, P. Koncz, R. Lehoczki, L. Pásztor, R. Pataki, R. Rezneki, Z. Szerényi, K. Török, A. Zölei, Z. Zsembery, A. Kovács-Hostyánszki 2022. National Ecosystem Services Assessment in Hungary: Framework Process and Conceptual Questions. Sustainability, 14 (2022), p. 12847, 10.3390/su141912847

Project duration: 1 July 2022 – 30 June 2027

Keywords: biodiversity, ecosystems, ecosystem services, natural capital accounting, evidence-based decision-making, transformative change

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PROJECT PARTNERS

- Leibniz University Hannover
- Stichting Capitals Coalition
- Ecostack Innovations Limited
- University of Trento
- Pensoft Publishers
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