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SCIENCE FOR EVIDENCE-BASED
AND SUSTAINABLE DECISIONS
ABOUT NATURAL CAPITAL

Country Fact Sheet
SLOVAKIA

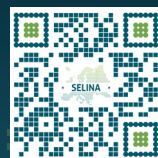


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Country Fact Sheet: Slovakia (SK)

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This fact sheet is based on what partners in SELINA know about what is going on in their country and some additional literature. 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.lieken@vito.be and we update the country fact sheet (until March 2027)

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

In 2014 an initiative was started by the Ministry of the Environment of Slovak Republic to map and assess ecosystem services under the MAES Framework, under the Operational programme “Quality of the Environment 2014-2020”.

A recent project is the ESA project - PEOPLE ecosystem accounting: The main objective of the PEOPLE (Pioneering Earth Observation Applications for the Environment) Ecosystem Accounting project (PEOPLE-EA) is to study the relevance of Earth observations for SEEA compliant ecosystem accounting and to demonstrate its use for terrestrial and freshwater ecosystems. The PEOPLE-EA Consortium gathers the European top experts in the domain of ecosystem accounting and Earth Observation.

The team will co-design together with the Early Adopters a system to prototype the generation of European SEEA-EA Tier-2 / Tier-3 ecosystem accounts.

The system will ease the generation of Earth Observation-based accounts for statistical offices through integration of three technologies (OpenEO, INCA models and ARIES semantics) and keep Europe in the leading position in ecosystem accounting at biophysical level. The Early Adopters explore the generation of ecosystem accounts using Earth Observation in Greece, Italy, the Netherlands, Norway and Slovakia.

1.1 Main objectives

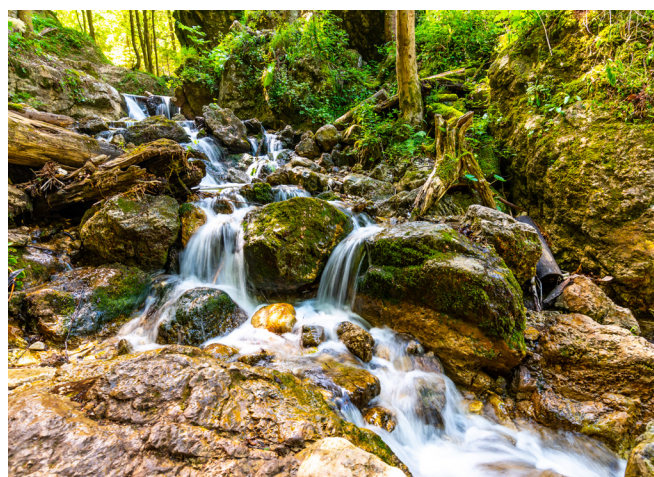
- 1 Review and describe the added value of integrating Earth Observation data for ecosystem accounting in terrestrial and freshwater ecosystems, expressed in physical terms for ecosystem extent, condition and ecosystem services.
- 2 Co-develop (pioneer and test) innovative high-quality EO-based ecosystem account models according to the FAIR principle following an agile method.
- 3 Showcase and validate several selected demonstrators to prove the value of integrating EO in national ecosystem accounting in a regular and consistent manner through the appliance of a cloud-based tool using open standardized interfaces.

- 4 Contribute to the international collaborative efforts to advance the use of EO in ecosystem accounting and support countries developing their national ecosystem accounts.

- 5 Prepare an outlook (R&D roadmap) to further scale-up the use of EO in ecosystem accounting.

A forest condition account provides a consistent framework for the observation, reporting and analysis of past trends and present conditions, can guide investments in the conservation or restoration of degraded ecosystems, and can mainstream the ecological values of forests in policy making and implementation. Our forest condition account aggregates thirteen forest condition variables into a forest condition index to measure the similarity of different forest types to a reference condition based on observations in primary and protected forest sites. All variables can be calculated across every country at the European continent between 2000 and 2023 at yearly basis, and are mostly derived from Earth Observation to describe water availability (NDWI), soil organic carbon (SOC), the number of threatened forest birds, above ground biomass, ecosystem net primary productivity (NPP), forest connectivity, leaf area index (LAI), vegetation index (NDVI), fraction of green cover, severity of drought, tree (canopy) cover density, landscape naturalness and forest fragmentation. At local scale (e.g. province level) six variables are calculated at 10 to 20m spatial resolution.

[More information.](#)



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

Resolution of Government of SR no. 304/2015 from June 3rd, 2015, approved the update of the Wetlands Management Policy for 2015-2021 and its Action plan for wetlands for 2015-2018, wherein the objective 1 in goal 1 relates to ecosystem services (Annex 2).

Mapping and assessment of ecosystem services is also one the core tasks of the **Updated National bio-**

diversity strategy 2020 and its Action plan. It is available in **Slovak**. Currently the new National Biodiversity strategy 2030 is on its way.

Currently, Slovakia has no legislation which takes directly ecosystem services assessment as an obligation.

3

Perceived barriers and needs to enhance uptake

3.1 Barriers

- Insufficient financial sources.
- Political willingness.
- No legislative base.
- No national system for ecosystem accounting and regular assessment with defined needs (only partial work of some organisations).
- Lack of experts.

3.2 Needs

- Find suitable and long-term financial sources.
- To bring up together experts who could focus their work on national needs.
- Achieve better awareness on the role of ecosystems services and accounting in policy development.





On the way to transformative change

4.1 Community of practice

National COP was based on the previous national MAES group with the intention to find and invite new possible partners. Permanent representatives of the group are selected experts from various fields and organisations. The first meeting was attended by representatives of : State Nature Conservancy, Constantine the Philosopher University, Institute of Forest Ecology, Slovak Academy of Science, Bratislava Metropolitan Institute, National Forest Centre, Slovak Hydro meteorological Institute, Statistical Office SR, Ministry of Finance SR, The Slovak Environmental Agency, The Water Research Institute, Technical University, National Agriculture and Food Centre, Esprit Company- research and consulting activities, CETIP – collaborative research network organisation.

During the meeting, projects and activities were introduced, which help to achieve the change and better use of ecosystems services assessments in policy development, but also increase of the environmental awareness. As a conclusion, the group agreed that we need to achieve better awareness on the role of ecosystem services and accounting in policy development, to set it as a priority, and one of tools that can be used is strengthening of the Community of Practise with intention to look for new partners active at national level, potentially more in business sector.

4.2 Seeds of transformative change

Several projects were nominated. Through the online survey SELINA received 3 projects but in the community of practice more projects were discussed.

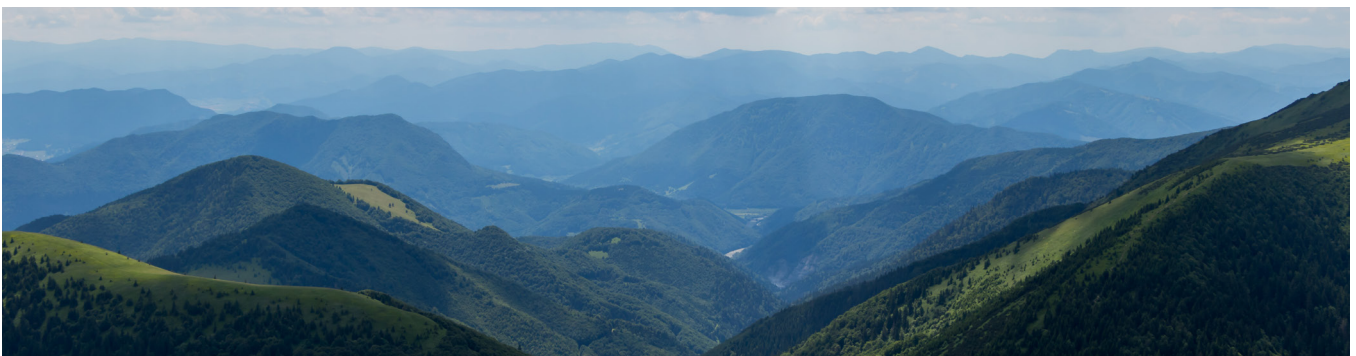
“We care about the landscape”, which was introduced by the representative of the Slovak Academy of Science, as a competition for students at elementary schools and their teachers. The main aim was to motivate children to think and discuss about landscape around their schools as land in a competitive activity. A change they can influence and realistically achieve.

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The overall objective is to create commitment of policy- and decision- makers and key stakeholders in Healthy Forest Regions (HFR) for enhancing forest ecosystem functionality, to safeguard biodiversity and ecosystem services (ES) for human wellbeing and to strengthen sustainable regional development. Therefore, the project will operationalise the potential of capitalising on forest ES for local and regional benefits and develop solutions for a transition to ecosystem-based forest management.

“Coevolvers - Coevolutionary approach to unlock the transformative potential of nature-based solutions for more inclusive and resilient communities” with the focus on question, how can different nature based-solution contribute to the societal change needed to address the ongoing biodiversity and climate crisis. Partners of these project are working on co-designing fair nature-based solution governance techniques, models and practises.

“wildE” that will develop climate-smart rewilding as a nature-based solution to the twin threats of climate change and biodiversity loss. Project works closely with the policy makers, local communities and companies to produce new insights, methods and tools for climate-smart rewilding.





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
-  Centre for Ecological Research
-  Mykolas Romeris University
-  Research Centre of the Slovenian Academy of Sciences and Arts
-  University of Patras
-  space4environment
-  National Institute of Geophysics, Geodesy and Geography
-  Rey Juan Carlos University
-  University of Salzburg
-  University of Bucharest
-  Flemish Institute for Technological Research
-  Foundation for Sustainable Development
-  Baltic Environmental Forum
-  Adam Mickiewicz University
-  National Research Institute for Agriculture, Food and the Environment
-  Copenhagen University
-  Norwegian Institute for Natural Research
-  Estonian University of Life Sciences
-  The Cyprus Institute
-  Wageningen University
-  The Finnish Environment Institute
-  Global Change Research Institute SarVision
-  Ministry of the Environment of the Slovak Republic
-  Gaspar Frutuoso Foundation
-  Flemish Agency for Nature and Forest
-  Municipality of Trento
-  Ministry of Environment of the Republic of Lithuania
-  Ministry of Environmental Protection and Regional Development of the Republic of Latvia
-  Research Centre in Biodiversity and Genetic Resources
-  University of Haifa
-  COHAB Initiative Secretariat
-  KTH Royal Institute of Technology
-  Croatian Forest Research Institute
-  SEAccoop
-  Macroplan
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