# SELINA

SCIENCE FOR EVIDENCE-BASED AND SUSTAINABLE DECISIONS ABOUT NATURAL CAPITAL

## Country Fact Sheet

# SLOVENIA

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# Country Fact Sheet: Slovenia (SI)

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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.liekens@vito.be and we update the country fact sheet (until March 2027).

## Contents

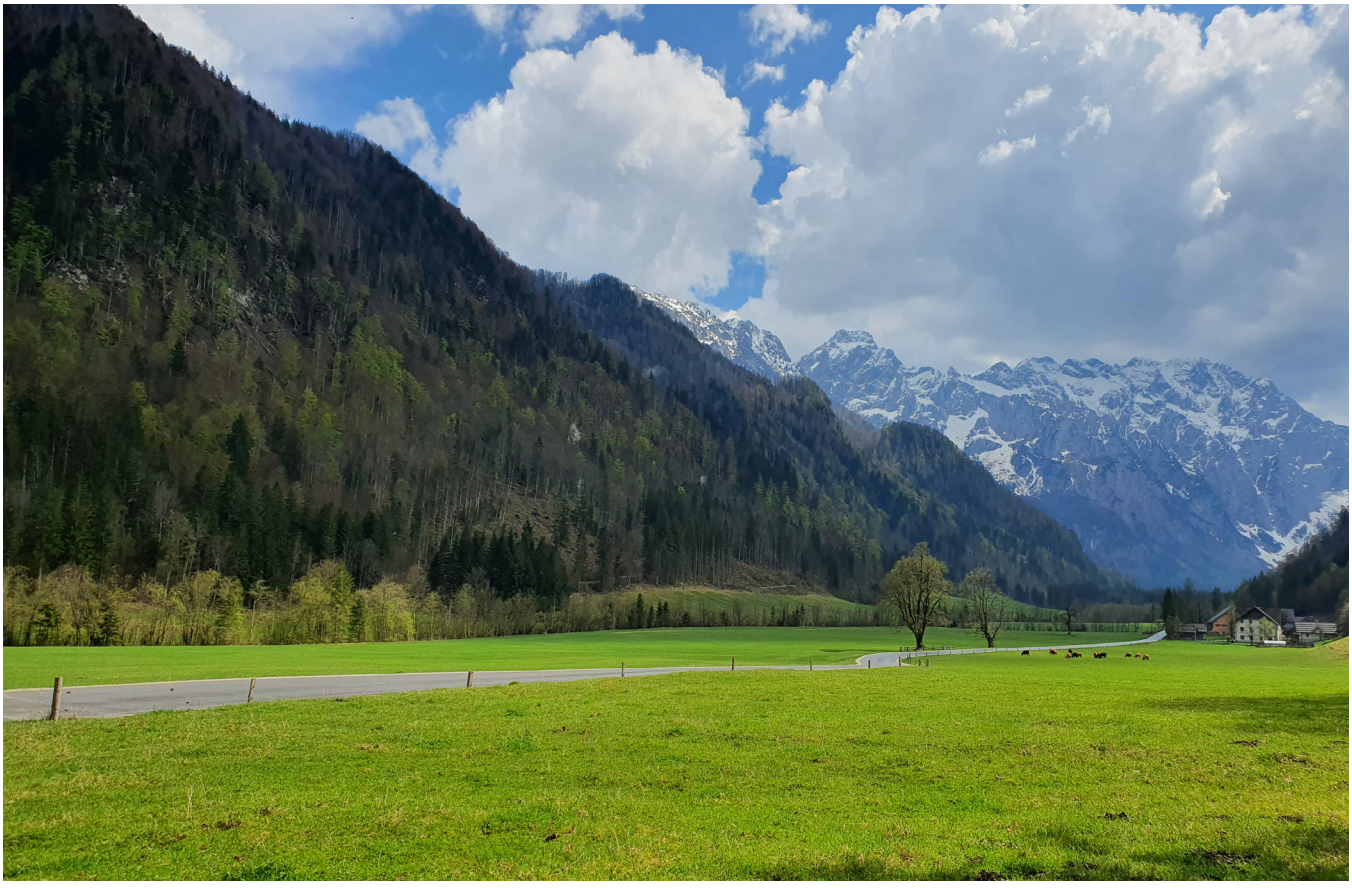
# 1 Update on projects concerning biodiversity, ecosystem condition and ecosystem services assessment and accounting since 2022

In Slovenia, the environmental policy is nationalised and definied in the Nature Conservation Act. However, the assessment and mapping of ecoystem services is not done within the common framework but different organisations and institutions take their own approaches, especially in the framework of national or EU projects. In the recent years, the number of studies on the assessement of ecosystem services has increased in Slovenia. Most of these studies focus on one ecosystem or a specific group of ecosystem services. An overview of the studies taking place in Slovenia is following.

Researchers from the Slovenian Forestry Institute assessed the value of ecosystem services provided by beavers and created a model of the potential spread of the beaver population within the framework of LIFE BEAVER project – LIFE with the beaver, wetlands and climate change (01.09.2020–30.04.2025).

In 2021 a National research targeted **NatGuidES project – Identification, assessment and mapping of ecosystem services in valuable nature conservation areas in Slovenia** was funded with the aim to establish a protocol for identification and mapping of ecosystem services in protected areas. One of the result is the **Handbook for the Identification and Mapping of Ecosystem Services** (in Slovenian language only) which defines practical steps for implementing the concept of ecosystem services in protected areas.

In the same year a European LIFE project **NarcIS – Nature Conservation Information System** has been implemented by the Slovenian Environment Agency (ARSO) and foresees the establishment of a single-entry point linking all relevant data in the field of nature conservation and also covering some ecosystem data.



In the period of 2022–2024 two projects – ZAGON and JeloviZA – were funded by the Norway Grant program covered evaluation and mapping of several ecosystem services within selected NATURA 2000 sites. The overall aim was to integrate information on ecosystem services into governance systems. Project NATURA.SI (Life program) is to implement nature restoration measures within selected habitats/habitat types, however those measures are being assessed also via their effect on ecosystem services apart from provision of habitats.

Since 2022 Horizon EU SELINA Project – Science for Evidence-based and sustainabLe decisIons about NAtural capital is running in which Anton Melik Geographical Institution at the Research Center of the Slovenian Academy of Sciences and Arts (ZRC SAZU) represents Slovenia. By establishing the Slovenian Community of Practices in 2024 ZRC SAZU is trying to link people with different background that are working on ES in Slovenia, and transfer knowledge on ecosystem condition, ecosystem services assessment and accounting.

The EIP Ecosystem Services project – Contribution of agriculture holdings in climate change mitigation and adaptation through ecosystem services (18.05.2022–18.05.2025) aims to improve the capability of farms in regard to climate change adaptation and to encourage planning and implementation of relevant measures at the level of farms in practice, using an ecosystem services based digital application developed as part of this project.

The national Research Targeted project »Measures for conservation of biodiversity in forest ecosystems« (01.10.2022–30.09.2025) was funded to contribute to: 1) Preserve biodiversity at the ecosystem, species and genetic levels to maintain natural regulatory capacity and maintain the adaptive potential of forests to a changing environment; 2) Adapt forest management to climate change, including all forest functions; and 3) Ensure adequate quality and quantity of forest seeds and planting material. All these goals are set out in the Resolution on the National Forest Programme.

By bringing together the efforts of the public and private sectors, along with the participation of citizens, Forest EcoValue – Supporting multiple forest ecosystem services through new circular/green/bio markets and value chains (11.2022–10.2025), aims to create market frameworks and payment systems for the forest ecosystem services.

**Some other relevant projects just kicked-off in 2024, though are worth mentioned, these are:**

The TRANSFORMIT project – Transforming Forest Management for multiple ecosystem services and nature conservation via the Integrative approach (01.01.2024–31.12.2027), aims to improve and showcase the effectiveness of Integrative Forest Management as a viable pathway for merging biodiversity conservation and societal demands. By integrating both practical and scientific knowledge, it will stipulate collaboration, mutual learning and new synergies amongst science, policy, and practice.

The FoRESisT project – Conservation and Evaluation of Forest and Agricultural Ecosystems in the Cross-Border Area (01.03.2024–31.08.2026), aims to improve the conservation status of habitats, support biodiversity, and evaluate ecosystem services, particularly in relation to forests, agricultural, and freshwater habitats.

There are also many other projects that deal with biodiversity and ecosystem services, although they have remained with awareness raising and are therefore not listed here.

## 1.1 Ecosystem Accounting

In May 2024, the Statistical Office of the Republic of Slovenia (SURS) launched an informal working group on ecosystem accounts. SURS has so far implemented 2 international projects in the framework of the European Green Deal (EGD) activities, co-funded by the European Commission (Eurostat), in the years 2022–2024. These are pilot projects, which also covered the topics of ecosystem accounts (development and upgrading), namely: ecosystem volume accounts, ecosystem services accounts and ecosystem status accounts. The aim was to establish methods for the calculation and subsequent reporting of data under these 3 strands, in line with the proposed amendment to **EU Regulation 691/2011 on environmental economic accounts** and Eurostat guidelines.

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

In Slovenia, biodiversity is integrated into all fundamental strategies, plans and programmes at state level, as well as into various sectoral strategic documents. The integration of environmental requirements into all policies and activities is essential for the enforcement and facilitation of sustainable development.In addition, the Operational Programme for the Implementation of European Cohesion Policy 2014–2020 had a special investment priority devoted to the conservation and restoration of biodiversity of soils and promotion of ecosystem services.

However, there is currently no legislation in Slovenia that would provide for systematic monitoring of ecosystem mapping and status, or for the assessment of ecosystem services. It is worth noting that an amendment to EU Regulation 691/2011 (already mentioned above) is expected to be adopted by the end of 2024, which will oblige Slovenia to report from 2026 (the data reporter to Eurostat is expected to be SURS). The revised Regulation foresees 3 sets of ecosystem accounts: Ecosystem Extent Accounts (area by ecosystem type, according to the new EU ecosystem typology), 7 Ecosystem Service Accounts (provision of crops, timber, pollination, global and local climate regulation, nature-based tourism and air filtration) and 9 ecosystem indicators (proportion of urban green space, urban PM 2.5 concentration, organic carbon stocks for fields and grasslands, farmland and woodland bird indices, dead wood, tree canopy density and proportion of impermeable surface in coastal areas). Much of the data on the extent, services and, in particular, the state of ecosystems that is available at national level is part of other national reporting obligations to international institutions or for environmental monitoring. Unfortunately, this data is monitored, collected and published through a number of different institutions, so there is no complete overview of which legislative obligations are behind which. A useful database from a wide range of sources, which also contains some information on this topic, is available from the ARSO, as part of the **Environmental Indicators in Slovenia**.

In addition, Biodiversity conservation is a commitment enshrined in the Nature Conservation Act and by-laws and is one of the key requirements for verifying the impact of documents and interventions on biodiversity conservation through an environmental impact assessment during the adoption process.

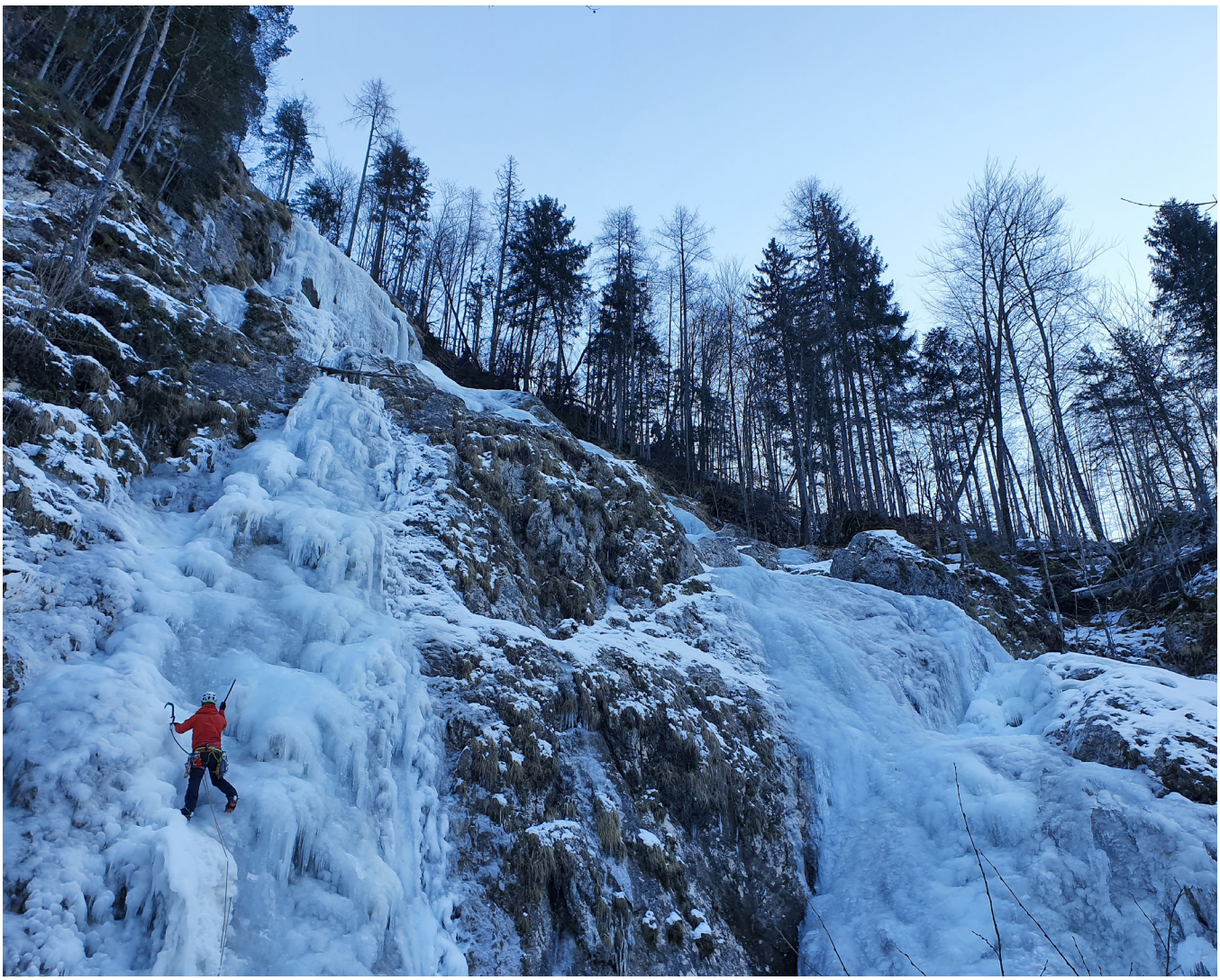
But we have no information and we are not aware of any example of where ecosystem services would be explicitly mentioned in decision processes or regulations.

# 3 Perceived barriers and needs to enhance uptake

Throughout the NatGuidES project, it became evident that the main barriers, particularly in the ecosystem services assessments and their integration into decision-making, include a lack of data in certain areas, insufficient knowledge, and a shortage of trained staff. We identified the need for more detailed analysis, better knowledge transfer, and enhanced collaboration between researchers, nature conservation experts, managers of protected areas and decision-makers. Given the complexity and specialized nature of this knowledge, we recognized that decision-makers and managers of protected areas may struggle to participate fully in all processes without additional support.

Additional barriers include the fragmented monitoring, collection, and publication of data across various institutions, resulting in the lack of a comprehensive overview. There is a clear need for unified databases. Some of this will be addressed by ecosystem accounts in the SURS SiStat database, expected to be published by the end of 2026, with updates on an annual or three-year cycle. Additionally, the NarcIS system at ARSO will contribute, although it has a broader focus and does not specifically target ecosystem services or ecosystem health.

A lack of adequate knowledge in this field poses a significant challenge, as ecosystem services monitoring and related topics are relatively new, and institutions have yet to fully develop expertise in this area. Additionally, there has been insufficient networking and collaboration between institutions working on the same or closely related subjects. To address this, SURS recently established an informal working group focused on the development of ecosystem accounts in Slovenia, as mentioned earlier.



# 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 first Slovenian Community of Practice (CoP) was held on January 23, 2024 with participants representing public research and educational institutions, public professional institute, public administration, protected area management, private non-profit institutes and private companies.

The event began with a warm welcome, followed by an introduction to the SELINA project, the Community of Practice, and the concept of transformative change (Seeds of Change).

During the meeting participants engaged in discussions on **various topics to be further explored**, including:

- Study Circles and Sustainability: non-formal education; participation for decision-making
- Interests in space, dominated by the interests of capital
- Showing that nature is important to people
- How can ecosystem services be involved in decision-making processes
- Objectivity in the evaluation/assessment of ecosystem services
- Landscape design (which spatial/landscape supports need to be strengthened)
- The need for cooperation ecosystem services as means of communication
- Economic valuation of ecosystem services
- Lack of data and indicators
- Standardisation or clarification of terminology: evaluation ≠ valuation

The participants also discussed working methods for next COP meetings and future cooperation, such as networking with partners or members of national CoP from other countries, face-to-face meetings, definition of a common goal, thematic meetings and even the possibility of a memorandum to be signed by CoP participants.

Overall, the event provided a national platform for further fruitful discussions and the exchange of innovative ideas. There are currently 25 participants who have agreed to meet in person about twice a year. A further meeting at national level and a bilateral meeting with members of the Swedish CoP are to take place by the end of the year.

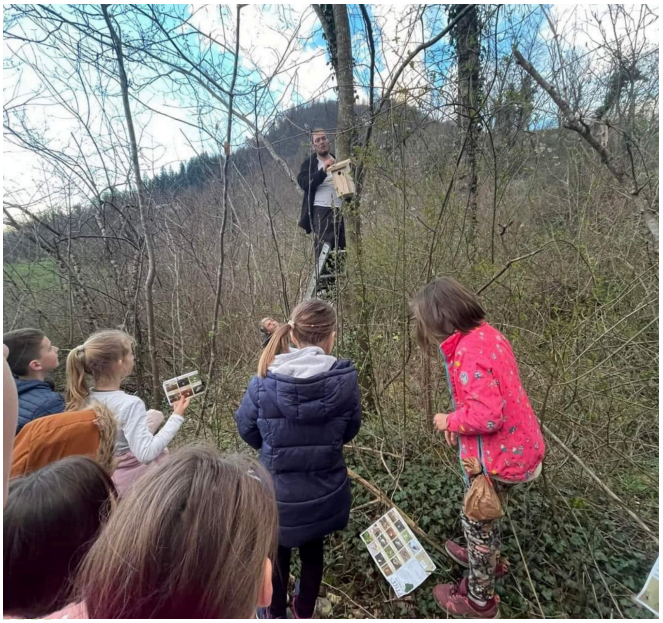
## 4.2 Seeds of transformative change

During the discussion at the first Slovenian Community of Practice 11 exciting proposals were nominated for "Seeds of change", which were later described for the SELINA database:

- **Forest Fund**: funding and implementation of measures for species and habitat types in Natura 2000
- **Floods and the dialogue between forestry institutions**
- **Agricultural policy and the outcome of targeted actions**: impact-based measures designed to help farmers evaluate their own work

**Active communication with agricultural advisors**:

- **Haloze Rural Development Centre**: deals with the development of the countryside of the Haloze region and the search for developmental opportunities for the entrepreneurial and agricultural sector.
- **Mobility in the Julian Alps**: Digital information on how to go in and around the Julian Alps on foot, by bike, bus or train + ideas for a hike/trip for the day, to keep the environment clean by opting for a sustainable transport option.
- **Ponds at the** Škocjan **Caves Park:** Caves are primordial semi-natural water reservoirs that were built by ancestors in natural hollows with clay or clay substrate. These water reservoirs were essential for the survival of people and livestock until the construction of the aqueduct. Restoring these small wetlands not only contributes to the restoration of the individual aquatic habitat, but also to the restoration and maintenance of the network of aquatic habitats in the regions, as well as to the connectivity and coherence of the Natura 2000. All the small wetlands in the project area are inseparably linked into a whole-network.
- **Slovenian Institute for Adult Education with the Study Circles approach**: By searching, improving and exchanging of knowledge, skills and values Study Circles strengthen individuals and the communities with the "added value" not only through knowledge but also through interpersonal relations.
- **'Krater' – the green laboratory** (this one was selected additionally): Krater is an emerging production space for transdisciplinary practices, which sprouted from the neglected, crater-resembling construction site near the city center of Ljubljana. By exploring the potential for world-making projects on the lands of anthropogenic ruins, Krater acts as the situated prototype of a terraforming agency. Site-specific production stations which consist of open access, ever-evolving workshop spaces, are set to create a dialogue with the impoverished crust of earth colonised with invasive and other feral plants.
- **Network on Water-Energy-Food Nexus for a Low-Carbon Economy in Europe and Beyond (NEXUSNET):** The main aim of NEXUSNET is to empower collaborations between European Union and international researchers and stakeholders with the objective to synthesize the existing empirical Nexus research, and to define a concerted research agenda that promotes an integrated approach and produces an intellectual toolkit, demonstrating a clear link to improved resource management and governance outcomes that underlie the value of Nexus.
- **Study Circles at the SHARED GREEN DEAL project**: As part of the Horizon 2020 project SHARED GREEN DEAL, in the Biodiversity Stream so-called Study Circles were set up in which adult participants explore cultural values related to biodiversity, the loss of biodiversity and possible solutions in rural and urban areas.



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**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
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- Ecostack Innovations Limited
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- Pensoft Publishers
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