SELINA

SCIENCE FOR EVIDENCE-BASED AND SUSTAINABLE DECISIONS ABOUT NATURAL CAPITAL

Country Fact Sheet

LATVIA

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Country Fact Sheet: Latvia (LV)

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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

Latvia has not yet implemented an overall 'Mapping and Assessment of Ecosystem Services' (MAES) project at national level. Ecosystem service mapping mostly has been implemented through various EU funded projects addressing specific ecosystem types. In 2023, an ambitious national scale project "Nature Census" was concluded which was aiming to prepare the ground for biodiversity conservation and ecosystem protection by surveying the distribution and quality of the protected habitats of European Union importance (Krūmiņa, 2019). The project was implemented by the Nature Conservation Agency, starting from 2016, funded by the EU Cohesion Fund (85%) and the State Budget. The distribution of grassland, mire, forest, freshwater, coastal and inland dune, caves and rocky habitats were mapped over a total area of 1.3 million ha. The results of this project were also planned to be used for national scale assessment of ecosystem condition and ecosystem service mapping. In 2022, the interim results of the "Nature Census" were used for identification and prioritization of areas to be protected for achievement the 30% target of EU Biodiversity Strategy 2030. In a project, commissioned by the Nature Conservation Agency and implemented by the BEF-LV, the areas for protection were prioritized based on their biodiversity value and ecosystem service potential by using spatial conservation prioritization tool "Zonation" (Moilanen et al., 2012). As an input to the prioritization model the nation scale (wall-to-wall) maps were prepared, including distribution of the EU protected habitats and their conservation status, distribution of protected species, grassland connectivity and proportional share in 1x1 km grid cell, ecological condition of freshwaters as well as four regulating ecosystem services – filtration/accumulation, flood control, global climate control, and maintenance of habitats based on both land use and species distribution models for few flagship/umbrella bird species (woodpeckers, owls and lesser spotted eagle) and hermit beetle. From 2023 to 2024, the University of Latvia is implementing a project titled "Preparation of a Geospatial Data Layer on the Coverage of Existing Protected Areas for the Implementation of the EU Biodiversity Strategy 2030," financed by the Latvian Environmental Protection Fund. The project aims to produce geospatial datasets that can be organized and analysed to assess areas with restrictions on economic activities already identified in legislation. It also includes the modelling of suitable habitats for species, which would enhance the existing spatial prioritization tool developed for nature conservation by identifying areas of high ecological value.

From 2020 till end of 2023 a nation scale project "Sustainable territorial development and rational use of land resources" (LandLat4Pol) was conducted by the Institute of Agriculture Resources and Economics, funded by the State Research Programme, Vidzeme University of Applied Sciences and the Latvian University of Life Sciences and Technologies. The project results include the national scale online landscape atlas and identification of the landscapes of national importance, which can contribute to national scale cultural ecosystem service assessment (https://landlat4pol-areigis.hub.arcgis.com/).

The national scale studies of forest ecosystem services are implemented by the Latvian State Forest Research Institute «Silava». This includes the second stage of the study on "Impacts of forestry on forest and related ecosystem services" (2021–2026), which collects quantitative information for a model for mapping and assessing changes in the quality of forest ecosystem services, continuation of the work on the ecosystem service indicators as well as ecosystem service mapping in the state forest by development of algorithm for automated calculations.

In 2022, Interreg Central Baltic project "From MARine Ecosystem Accounting to integrated governance for sustainable planning of marine and coastal areas" (MAREA) was finalized. The project outputs included process-based modelling of ecosystem service supply within entire marine waters of Latvia, developed by the University of Tartu in co-operation with BEF-LV (Forsblom, 2022). The mapping results are used for interim evaluation and updated of Latvian MSP.

In 2022, a national project "Improving knowledge on state of the marine environment" was finalised financed by European Maritime and Fisheries Fund 2014–2020 and lead by Ministry of Environmental Protection and Regional Development of the Republic of Latvia. The work on ecosystem services was im-

plemented by "Aktiivs" Ltd in the frame of the Study "Building a knowledge and information base of economic and social analysis of the use of marine waters and achievement of the marine environmental targets" (2017–2021), implemented by AKTiiVS Ltd. The study includes an economic and social analysis of marine use, an assessment of the costs of marine degradation, an assessment of potentially necessary additional measures and their cost-effectiveness analysis, an assessment of the socio-economic benefits of the sea and the use of ecosystem services. A new contract that will also cover ecosystem service assessment has been signed by the Ministry of the Climate and Energy with "Aktiivs" Ltd in July 2024. This contract is co-funded by European Maritime, Fisheries and Aquaculture Fund 2021–2027. It is expected that the national methodology and information base will be improved; an assessment tool for socio-economic, including monetary, assessment of marine ecosystem services will be developed. This will include the original research of environmental economic (monetary) evaluation in addition to data collection, evaluating the benefits of various marine ecosystem service provision scenarios at different geographical scales and filling in the gaps with quantitative data for the evaluation of individual ecosystem services. Based on the improved methodology and using the obtained data, the developed tool for evaluating monetary benefits from the use and provision of marine ecosystem services, which should be used for cost-benefit analysis of marine environment protection and management policy. The Tool shall be developed by 01.12.2026. Furthermore, the Latvian Institute of Aquatic Ecology is planning to start a project on development of spatial planning and decision support tool for maritime spatial planning and cumulative impact assessment (by 01.12.2028), including publicly accessible data base with georeferenced information on marine species and habitats in relation to ecosystem service supply (to be ready by 01.12.2026).

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

Biodiversity information is used very widely, including spatial planning as well as all nature or resource related planning processes. Mapping and assessment of ecosystem services explicitly are required by maritime spatial planning (MSP) legislation and marine strategy framework legislation.

Since 2020 Latvian governmental regulations on MSP (Regulation of the Cabinet of Ministers No 740/2012) explicitly require that MSP includes MAES results in the explanatory (descriptive) chapter of the plan. This practice (before the legal requirement) was implemented in development of the first Latvian MSP from 2015–2019. Now, the results of marine ecosystem service assessment are a part in all steps of planning (including evaluation of the plan). Latvian MSP is also an DP07 demonstrating the uptake.

The EU Maritime Spatial Planning Directive 2014/89/EU, which aims to establish and implement MSP by applying an ecosystem-based approach. The MSP directive highlights that healthy marine ecosystem and their multiple services, if integrated into planning decisions, can deliver substantial benefits in terms of food production, recreation and tourism, climate change mitigation and adaptation, shoreline dynamics control, and disaster prevention. Various EU and Baltic Sea basin guidelines on ecosystem-based approach have been supporting the uptake of ES in MSP. The biggest challenge is related to marine data availability in spatially explicit way as well as knowledge on functions and processes due to complex interdependencies of marine components.

Marine protection and management legislation (Regulation of the Cabinet of Ministers No 1071/2010) requires that when conducting assessment of marine environment, the following information shall be included:

- description of the services and resources provided by the marine ecosystem, as well as of their users and an assessment of the value of the respective services, indicating the following:
  - the economic, social, cultural and ecological value of the services and resources.
  - the direct or indirect added value of the types of the use of the sea and employment.
  - the services and resources affected by human activities.

The process is also supported by cooperation among experts at Baltic Sea Level coordinated by HELCOM Secretariate. The knowledge from regional cooperation activities supports national assessments.

3 Perceived barriers and needs to enhance uptake

3.1 Barriers

- Low awareness and recognition of the importance of environmental issues in general, both in society and among decision-makers.
- Low understanding of the ecosystem service concept among society and decision-makers.
- Lack of political will and interest in the topic.
- Insufficient capacity/knowledge among researchers, environmental experts and planning practitioners for applying ecosystem service mapping and assessment methods (particularly regarding ecosystem service modelling methods).
- Limited accessibility and quality/accuracy of spatial data.

3.2 Needs

Active promotion of the ecosystem service concept at different levels (politicians, decision-makers, public administrations, entrepreneurs, leaders of study programmes, society).

- Introducing of the ecosystem service concept in the legislation for land use planning and management.
- Training of ecosystem service mapping/modelling experts.
- Strong cross-border and international cooperation
- Guidelines from European Commission that are linked to the implementation of the Directives.

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 SELINA CoP meeting in Latvia was organized in 23.05.2023. By this we were renewing the Latvian ecosystem service community (started during the ESMERALDA project) and involving many new participants, including researchers, practitioners and civil society representatives interested in the topic of ecosystem services and its uptake in decision-making. In total we have invited ca. 60 people from whom 40 expressed interests in joining the CoP. The first meeting was attended by 32 people, including:

SCIENCE

17 researchers (from University of Lativa; Latvia University of Life Sciences and Technologies; Riga Technical University; Latvian Institute of Aquatic Ecology; Institute of Agricultural Resources and Economics; and Latvian State Forest Research Institute "Silava", BEF)

POLICY

8 representatives of public administrations (Nature Conservation Agency; Kurzeme Planning Region; and Riga City Council, Ministry of Environmental Protection and Regional Development (now reorganised in the Ministry of Smart Administration and Regional Development.)

NGOs

3 representatives (Society "Par Lielu Lielo Juglu" and Association "Baltic Coasts")

BUSINESS

4 representatives (LLC "Riga Forests" and two environmental consulting companies - LTD "AKTiiVS" and LTD "Estonian, Latvian & Lithuanian Environment")

The meeting aimed: (i) to present SELINA project and the recent policy developments in Europe regarding ecosystem services and natural capital; (ii) to discuss the current developments and achievements in the field of ecosystem services in Latvia; and (iii) to identify Latvian projects and initiatives that can serve as "seeds of change" on the way to integrating ecosystem services into the decision-making.

Participants of the meeting showed strong interest in further cooperation and information exchange to support ecosystem service research and its uptake in decision making in Latvia. During the discussion the main challenges and opportunities for ecosystem service research in Latvia were highlighted. Participants admitted that recently there are many good ecosystem services related initiatives, however, good examples are lacking on a national level. We have the knowledge and the experts, but we need the political will to apply this knowledge to policy and decision-making. Embedding of the ES approach at national level governance is required. National level ES assessment would have to be conducted in a way that can be used by practitioners in land use/spatial planning. Participants also addressed the data availability issues – often data exist, but the accessibility is chaotic, they are hard to find – data are scattered in many sources, project websites etc. Additionally, part of open access data sets is only available in view mode, which prevents its full use in practical decision-making, especially in the private sector. Furthermore, a need for a centre of excellence of fundamental science was expressed that ould bring together knowledge on biodiversity and ecosystem services.

4.2 Seeds of transformative change

Latvia identified 23 potential seeds of change, of which four were analysed more in detail in the CoP. Those four were nominated for an in-depth analysis within SELINA.

- Ecosystem service-based management of forests
  - Voluntary initiative of the LLC "Riga Forests". A shift in forest management towards an ecosystem service-based approach with extensive public and stakeholder engagement. Focus on the diverse values of forest.
- **m² of a meadow (project GrassLIFE)**
  - Project of Latvian Fund for Nature is finalised, but followed up by several initiatives, e.g. "m2 of meadow", which has successfully involved seniors, as well as a wider society. Showed that everyone can get involved in the conservation of natural meadows (either by donating, or sowing, or collecting seeds etc.)
- **Mitigating the impact of invasive fish species – round gobby**
  - Campaign "Ķeriet svešos!" ("Catch the aliens!"), example of the round gobby. The initiative has led to a significant reduction of the species and recovery of native species and habitats.

- **Removing obstacles from rivers or mitigating their impact: example of river Lielā Jugla**
  - A bottom-up initiative from a local community formed NGO "Par Lielu Lielo Juglu", which demonstrates successful collaboration with municipality as well as public and scientific institutions, addressing the legal constrains and changing the public opinion on how we see the value of rivers. It also serves as inspiration for other local communities/municipalities in removal of dams from rivers.

Another 4 projects were nominated through the online survey:

- **Forest landscape ecological and local forest activities design planning to preserve and increase offer of ecosystem services**.
  - Key objectives: Forest activities planning on base of forests landscape planning. Development of local forest design plans and public discussion with society. Online development of ecosystem services based on actual forest inventory data.
- **Iesēj savu kvadrātmetru, Pilsētas pļavas** *(sow your square meter, Urban meadows)*
  - Key objectives: Involving people in the creation of wildlife oases in different scales – from 1 m2 in private land to hectares of urban green areas transforming them into urban meadows.
- **Let's do good for nature!**
  - To provide possibility for wider public to get involved in (expert indicated) nature conservation activities, with the main benefits:
    - Nature education/awareness raising via personal, practical «hands-on» experience; also included into student internship programs.
    - Team building with high added value (for corporate clients).
    - Possibility to stay fit and healthy (fresh air, nature, physical activity)
    - Visiting places outside touristic hotspots
    - Keeping also cultural heritage alive
  - Cyclebude – Professional and sustainable cargo bike courier service in Rostock

5 References

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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
- 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
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- 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
- SEAcoop
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