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ABOUT NATURAL CAPITAL

Country Fact Sheet **BELGIUM**

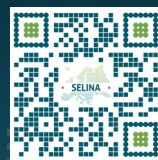


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Country Fact Sheet: Belgium (BE)

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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 will 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 Belgium, the environmental policy is regionalised. The status of activities differs between the regions.

In Flanders the mapping and assessment of ecosystems and ecosystem services is done within the framework of the Nature report (NARA). According to the Nature Decree (legislation of the Flemish Government), the Research Institute for Nature and Forest (INBO) is mandated to report biennially on the state of nature in Flanders (Northern part of Belgium). In 2014 an assessment of the state and trend of 16 ecosystem services was made.

NARA. All the maps and metadata in English can be **downloaded**.

Several studies to assess and value ecosystem services were performed in the years following: ECOPLAN assessing 19 different ecosystem services, leading to a QGIS-plugin integrating both ES and evaluation modules (2013-2017, Staes et al. 2017, Vrebos et al 2020), Socio-economic impact analysis of Natura2000 areas (including ecosystem services) (2019). In 2018 a **web-based tool** to value ecosystem services in local cases was launched.

In a second phase the NARA report (2016) investigated how the ecosystem service approach could be used on several policy levels in decisions around land use and management. In 2018 4 directions to go for nature policy were developed.

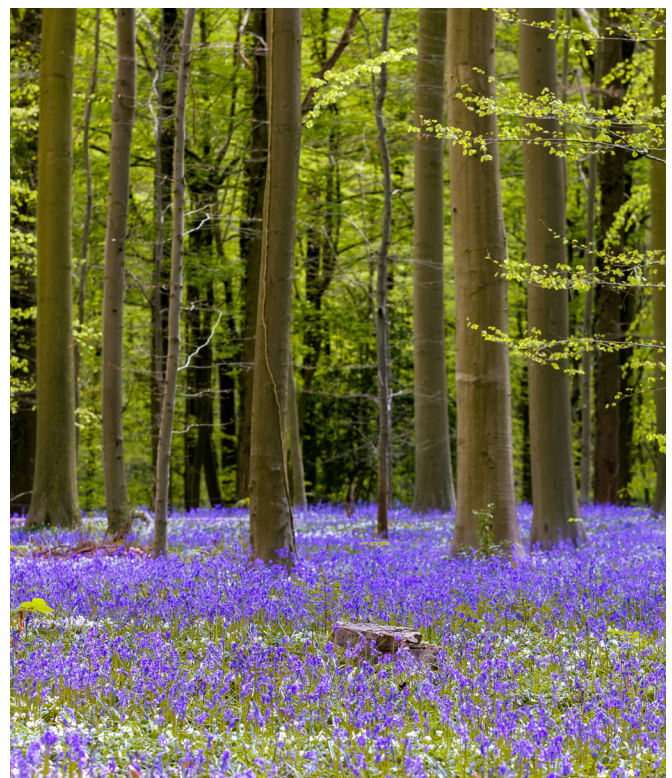
1.1 Ecosystem Accounting

In 2020 a pilot project was launched to calculate an extent account and some ecosystem services supply accounts (wood, water, carbon and health (De Nocker et al. 2023)). The Research Institute for Nature and Forest (INBO) initiated in 2024 the research programme Flanders Ecosystem Accounting (FLEA), in co-operation with the Agency for Nature and Forest (ANB) and other experts. The programme intends to develop proposals of ecosystem accounts in preparation of an expected new EU Regulation that will introduce new modules of environmental-economic accounting. For 2024 FLEA focuses on developing an ecosystem typology in three tiers, and on mapping, quantifying,

and validating the changes in ecosystem extent over the past ten years (2013-2022). FLEA builds on earlier Flemish research on land use modelling and ecosystem assessment. In addition, FLEA will list the monitoring systems and data that are available to develop ecosystem condition accounts. FLEA also links to a network of experts which the Department of Environment and the Flemish Statistical Authority are initiating. This network will provide the Belgian federal government with ecosystem accounts for the Flemish Region to meet the expected reporting requirements of the new EU Regulation.

The Walloon government decided to work on the 'development of the implementation of the ES concept into practice within the Public Service of Wallonia (SPW)' (Walloon governmental decision

24/04/2014). To put the ES concept into practice, a regional platform on ecosystem services has been launched in September 2014, entitled 'WalES'. It involves all the administrative services concerned and scientists. Several ecosystem services **assessment tools** have been developed in Wallonia.



In 2022, a new agreement, more modest in its ambitions, was launched to provide Wallonia with a decision support tool which aimed to assess the impact of a change in land use on the provision of ecosystem services. This convention brings together actors from Public Service of Wallonia Agriculture, Environmental Ressources and Environment (SPW ARNE), University of Liège - Gembloux Agro-Bio Tech (ULiège-GxABT) (Biodiversity and Landscape Unit) and the Flemish Institute for Technological Research (VITO). It resulted in a Walloon version of the **Nature Value explorer**.

Another fast and easily applicable evaluation method developed in Wallonia by SPW ARNE and ULiège - GxABT (Biodiversity and Landscapes Axis) is the “capability matrix”.

Stakeholders include design offices, municipal administrations, SPW agents, universities, the Rural Foundation of Wallonia, natural parks, river contracts, local action groups (GAL), the Walloon Institute for Evaluation and Foresight (IWEPS), the Walloon Wood Economic Office, the Federation of Belgian Environmental Associations (Canopea).

This method is part of the spatial indicator models that relate land cover types or ecosystem types to ecosystem services. It provides an estimate of available stocks, i.e. the amount of ecosystem services that each land cover category can provide in its current state. While ecosystem services assessments focus mainly on a limited number of services, this method makes

it possible to consider all the services produced by an ecosystem. It has made it possible to produce a series of service maps published on the Wallonia Geoport and makes it possible to assess the way in which ecosystem services will be affected by a plan or programme that modifies land cover or land use and to represent this change spatially. It was used in Wallonia to carry out an exercise to assess the impact of land artificialisation in Wallonia between 2007 and 2019 on the provision of ecosystem services.

A tool for assessing the multi-performance of hedgerows according to their spatial location in the landscape has also been developed in Wallonia by the SPW ARNE and ULiège - GxABT (Biodiversity and Landscape Unit). The stakeholders are municipal administrations, SPW agents, natural parks, river contracts, local action groups (GAL), etc. The hedge tool presents the structure of the existing bocage and represents/evaluates in the form of simplified indicators the services potentially provided at maturity by hedges newly planted or planted soon as part of a planting project. The indicators evaluated are descriptive indicators of density, land use, parcel boundaries, in relation to the quality of the hedgerow structure (connectivity, proximity to existing edges and location in the harrier action plan areas), the service to combat soil loss and the fight against runoff and in connection with the windbreak effect. The tool produces two types of report: a report for each municipality or watershed covered by the planting project and a summary report, for all municipalities or watersheds combined.



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

Of course biodiversity data are used to report for the obligations toward EU.

But there are not so many examples of where ecosystem services are explicitly mentioned in decision processes or regulations. Ecosystem condition and services are usually cited as a substantive argument to decide matters rather than as an explicit legal rule or policy objective. Which does not alter the fact that these objectives and rules are sometimes ecosystem services related. In many ministerial decrees and policy





plans ecosystem condition and services are mentioned explicitly or implicitly in putting nature-based solutions and their benefits to society as an important measure to climate related issues, agricultural development, city planning etc. For example, National Biodiversity Strategy, Natuurdecreet... mention the restoration of biodiversity, ecosystem condition and services explicitly. For example, the Flemish Climate Adaptation Plan talks about green-blue veining in relation to heat stress, related to evapotranspiration, shadowing and albedo changes by vegetation/trees. The Ministerial decree on high-stem orchards talks about investigating the societal value of those orchards and valorising these values. Several policies/legislations have incentives and policy instruments e.g. subsidies for agri-ecological measures, voluntary agreements that favour ecosystem services, but at the same time instruments, e.g. production subsidies, that work against ecosystem services and biodiversity.

In Flanders for some infrastructural projects an environmental impact assessment and a societal cost benefit analysis is obligatory. In the environmental impact assessment biodiversity is explicitly taken along. In the part on impact on people implicitly ecosystem services are considered but not explicitly. In the manual to perform a cost-benefit analysis, the impact on nature is linked to the Nature Value explorer, a web-based tool that quantifies the impact of land use change on 12 ecosystem services. The existence of the tool made it easier to take impact on biodiversity and ecosystem services into account as knowledge gaps and time limits were a barrier before to do a thorough impact assessment.

In Wallonia ecosystem services are at the heart of the definition of the concept of green infrastructure included in the recent reform of **the Territorial Development Code (CoDT)**, which came into force on 01/04/2024. This reform sets out the main principles and new con-

cepts of territorial development to be set out in the **Territorial Development Scheme (SDT)**. The latter was adopted by the Walloon Government on 25/04/2024 and will enter into force on 01/08/2024. It refers extensively to green infrastructure and ecosystem services. The stakeholders are the municipalities, in particular urban planning departments, architects, developers, companies, environmental associations, etc.

The **Walloon Strategic Plan for the Common Agricultural Policy (CAP) 2023–2027** approved by the European Commission on 05/12/2022) explicitly provides for *“Contributing to halting and reversing the process of biodiversity loss, improving ecosystem services and preserving habitats and landscapes”*. It identifies, *via* the SO6 strategic objective “Contribute to the protection of biodiversity, improve ecosystem services and preserve habitats and landscapes”, the possibility of making ecosystem payments within the framework of eco-schemes (RE long land cover, RE ecological network with significant aid for the maintenance of hedges and ponds). The stakeholders are farmers, professional agricultural organisations, advisory services (NATAGRIWAL, PROTECT’eau, etc.), non-governmental organisations, etc.

The **360° Biodiversity Strategy** adopted by the Walloon Government on 25/04/2024 explicitly stipulates that the assessment of the impacts of a project must gradually ensure that the impacts on ecosystem services are taken into account and that these will be valued. Enhancing ecosystem services is foreseen in Strategic Objective 1.3; in particular through operational objective 1.3.4 “Preservation of habitats and associated ecosystem services”; in particular, action 1.3.4.2 provides for the promotion of the consideration of ecosystem services, in particular *through* tools such as “Nature Value Explorer”. In addition, a land artificialisation trajectory will be set in 2025 with a view



to reducing land artificialisation and moving towards zero km²/year by 2050. The approaches that will be developed will be evaluated in particular according to their impact on ecosystem services. A wide range of stakeholders are concerned, such as municipalities, farmers, foresters, companies, etc.

One of the measures and actions of the **Circular Economy Deployment Strategy “Circular Wallonia”** (2021) is to support actions to preserve and restore biodiversity and ecosystem services as part of circular economy projects. The stakeholders are diverse and varied: companies, training institutes, the Public Service of Wallonia (Departments of Soil and Waste, Sustainable Development, Economic Policy Department), business support services, the water sector, technology hubs, etc.

The Brussels Soil Quality Index (IBKB) is a tool to assess soil quality. The IBKB-PRO is intended for all professionals who want to integrate the concept of ‘soil quality’ in the design of their urban development project in order to use better quality soils for the development of biodiversity, vegetable gardening or rainwater infiltration.

The European directives and regulations in this area are a very important lever. Clear objectives to be achieved in terms of biodiversity and ecosystem services are a strong signal.

In addition, several political parties explicitly refer to ecosystem services in their programs. There is growing interest in integrating ecosystem services into policies and actions on the ground.

3

Perceived barriers and needs to enhance uptake

3.1 Barriers

- The lack of knowledge or a poor understanding of the issues related to ecosystem services and their impact on humans;
- The lack of political will;
- Absence of legal obligations;
- The economic context;
- The absence of a transversal unit within the Administration;
- The lack of human and financial resources to support the integration of ecosystemic services.

3.2 Needs

- Political willingness
- Legislative base or a clear framework (a directive or a rule e.g)
- Administration commitment
- Human resources
- Funding

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 Belgian Platform of transformative change was kicked-off on December 5th 2023 where the common grounds were established. A second meeting took place on April 25th 2024

For the moment it counts 14 participants but many more showed their interest.

	POLICY: Flemish governments departments (environment, education, agriculture, OVAM, INBO, ...)
	SCIENCE: VITO
	BUSINESS: The shift (a network of private organisations), consultants

At the platform we try to bring in some ‘mycelium wisdom’:

- Bringing together people from different disciplines in science, policy, business, and society
- Connecting participants in new ways and allowing for open-ended networking
- Mobilising different forms of knowledge to create new shared knowledge.
- Connecting to and building on existing networks of knowledge, energy, and affection.
- Seeing the questioning and breaking down of ‘old’ paradigms not as acts of violence but as a necessary and valuable source of new life.
- Stimulating the imagination and cultivating a sense of play.

We want to inspire, learn, and create a fertile soil for ‘seeds of transformative change’ to grow. To create a safe space to propose and test ideas and to Taste new ways to engage and look at things.

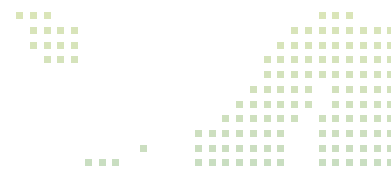
In the second meeting we took a deeper look into the “Nature tissue Plannig” (natuurweefselplanning) project and took lessons from it for our own projects.

Other platforms:

The WAL-ES platform, a cross-cutting regional platform within the Public Service of Wallonia, aims to design and disseminate tools to support public decision-making us-

ing the notion of ecosystem services. From 2014 to 2016 and from 2018 to 2023, it enabled the development of a conceptual framework first and then the development of assessment tools such as the Nature Value Explorer tool, the capacity matrix and the hedge tool.

Workshops to develop the capacity matrix as well as training on the Nature Value Explorer tool, the capacity matrix and the hedge tool were carried out. The participants come from the administration, design offices, municipalities, nature parks, river contracts, local action groups (GAL), research institutes and universities. In addition to the participants in the workshops mentioned above, requests were made by various structures: federations of environmental associations, operators specialising in.



4.2 Seeds of transformative change

8 seeds of change were nominated for Belgium amongst others:

- **“Yes we plant”** Walloon project: Plant 4 000 km of hedges or 1 million trees
- **8-Week program Nature Connectedness**
 - Nature connectedness is the degree to which people regard nature as part of their identity. Research shows that people with a higher degree of nature connectedness reap physical and mental benefits. Even more: in mental well-being, nature connectedness appears to provide health benefits that exceed the (already well documented) benefits of contact with nature. Therefore, two years ago, the INBO Nature and Society team started developing a science-based, multi-week program to encourage nature connectedness in people. The nature exercises offered are based on the five pathways to nature connectedness (Lumber, Richardson, & Sheffield, 2017), which are explained in more detail in this INBO publication. This fall, a group of 12 people was assembled in each Flemish province to follow this na-

ture connectedness program for six weeks. The program combines individual nature exercises with weekly group meetings in a green environment. During the group meetings, certain exercises are repeated, participants get the chance to exchange experiences and are motivated to keep up the program. To assess the impact of the program, participants are surveyed not only before, during and immediately after the program, but also one month later.

- **Greenblue business models for farmers** (Groenblauwe businessmodellen voor landbouwers)
- **Duurzaam beleggen Ugent**
 - To push banks to invest Ugent funds sustainable, otherwise take funds away to another bank.
- **Grassroots – climate farm:** Regenerate a piece of land by producing healthy food for people, powered by energy of the sun (not fossil)
- **Nature network planning** (Natuurweefselplanning) another co-productive way to bring nature back in cities again.



References

NARA All the reports (in Dutch) are to be found <https://www.vlaanderen.be/inbo/inbo-natuurrapporten>.

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PROJECT PARTNERS

-  Leibniz University Hannover
-  Stichting Capitals Coalition
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