Biodiverse HOGENT campuses

Biodiversity policy 2023-2028

Biodiversity Working Group

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Foreword

HOGENT (University of Applied Sciences and Arts Ghent)'s biodiversity policy was developed by the Biodiversity Working Group - a multidisciplinary team with representatives from different departments, research centres, managements, services, students and external experts. The input from both internal and external experts, along with the perspectives of various stakeholders, was combined with existing biodiversity policy documents (such as those from Ghent University and the VUB), findings from research projects, including a Practice-Based Scientific Research project (*PWO* project) titled ‘Biodiverse Zorggroen’ and experience gained through HOGENT Living Lab.

HOGENT has made significant efforts in recent years to promote biodiversity, including through:

- The creation of swales and the plantation of the surrounding area of Building B with (neo-)native plant species;
- Advice on planting a forest along the cycling path between Schoonmeersen North and Schoonmeersen South (owned by GO!, the Flemish Government Education Department);
- Regeneration of meadow on the Bijloke campus;
- Drastic reduction in the number of mowing sessions of the grass fields on the Schoonmeersen campus;
- Advice on planting small green elements with native herbs and shrubs;
- The ‘Ecolab Schoonmeersen’ project, where co-creation is used to develop a climate-friendly design for the area around Building T;
- Participation in the Green Deals "Businesses and Biodiversity," "Natural Gardens" and "Nature Inclusive Parking Lots” PWO project.
- Advice on the preservation/relocation of trees in the context of sewage works near Building C.

The biodiversity policy builds on these existing efforts and aligns with today’s realities and current revolutions.

The plan was submitted to various entities/stakeholders. It fits within HOGENT’s sustainability policy and was assessed against other sustainability themes.

Reading Guide

The items that are most essential in the **transition to a biodiverse college –** and therefore deserve the most attention - are in bold. Key concepts mentioned in the biodiversity policy are written *in italics* and are included in the glossary.

This biodiversity policy applies to each HOGENT campus, but its implementation will take into account the uniqueness of each campus.

The biodiversity policy must be read within existing (HOGENT) policy frameworks and measures, as well as applicable Belgian, European and international legislation.

This policy plan contributes to the achievement of the Sustainable Development Goals (SDGs), including:

- 3 - Good Health and Well-Being
- 6 - Clean Water and Sanitation
- 11 - Sustainable Cities and Communities
- 13 - Climate Action
- 15 – Life on Land
- 17 - Partnerships for the Goals

1 Vision

Introduction

The vision statement clarifies what biodiverse campuses mean to HOGENT, why HOGENT is committed to them, and how they align with HOGENT's sustainability policy.

Three themes from HOGENT's sustainability policy serve as guiding principles throughout the biodiversity plan:

- **biodiversity,**
- ***climate-resilient+ /climate-neutral+*** (as defined in HOGENT's sustainability policy)
- **inclusion**

By **biodiversity**, we refer to the variability among living organisms (humans, plants, animals, and microorganisms) and the *ecosystems* of which they are part. This includes diversity within species, between species, and of ecosystems. Biodiversity is declining at an unprecedented rate in human history, primarily due to climate change, pollution, and invasive alien species. Hogent aims to improve and enhance biodiversity on its campuses and, where possible, beyond them.

HOGENT aspires to be **climate-resilient**+ by 2023 and is taking action to reduce and mitigate the effects of climate change. HOGENT also aims to be **climate-neutral+** by 2050. This means achieving net-zero emissions while positively contributing to the restoration of planetary harmony by respecting planetary boundaries, including biodiversity. By striving for **biodiverse campuses**, HOGENT takes tangible action against climate change and its impacts. On the one hand, biodiverse campuses help reduce net emissions (mitigation); on the other, they strengthen us to cope with the most important effects of climate change (adaptation). Biodiverse campuses also contribute to water retention (counteracting water scarcity) and help eliminate the use of chemical pesticides, two other critical planetary boundaries.

HOGENT aims to be an **inclusive college** where everyone feels at home, including the outdoor environment. The campus is an accessible, safe place that connects people and activates people, but equally a place that brings peace.

Frame

Global biodiversity is currently under severe pressure. Recent estimates indicate a 69% decline in natural populations compared to 1970. In Belgium as well, approximately **one third of species are now considered rare, critically endangered, or extinct.** The *planetary boundary*, which indicates biodiversity loss and sets the safe limits humanity must respect to ensure sustainable use of the planet, has already been significantly exceeded for several years. The main causes are changes in land use, pollution, overexploitation, climate change, and the introduction of invasive alien species.

A global biodiversity crisis is unfolding, one that now features prominently on multiple policy agendas:

- The European Union launched its "Biodiversity Strategy 2030" as a pillar of the Green Deal. With this strategy, the EU aims to become a global leader in tackling the biodiversity crisis. All EU member states are required to improve the condition of existing natural areas and create additional nature by 2050.
- At the 2022 UN Biodiversity Conference (COP15), it was agreed to restore 30% of terrestrial and marine ecosystems by 2030 and to promote urban greening initiatives;
- **In Flanders, many hectares must be restored within the so-called Special Protection Areas (SPAs).** Approximately 12% of the Flemish territory is designated as SPA. According to the Flemish Research Institute for Nature and Forest (INBO), 95% of the nature in these zones is currently in an unfavourable or very unfavourable conservation status. This is the worst score in the European Union. **Preserving biodiversity in a fragmented and intensively used landscape such as Flanders is not an easy task**: it is the most fragmented region in Europe and one of the most densely populated, marked by significant urbanisation, heavy transport, and intensive agriculture.
- The legal protection for ecosystems within Flanders
- On 21 April 2021, the European Commission adopted the Corporate Sustainability Reporting Directive (CSRD). The aim of this directive is to steer companies toward more sustainable investments to promote sustainable and inclusive growth. As of the 2025 financial year, large companies will be **required to report** on their sustainability performance, with **biodiversity** included as a mandatory reporting topic. While it is not yet clear whether higher education institutions will fall under this directive, we are actively preparing for that possibility.

Attention to biodiversity is crucial not only for restoring nature but also in the fight against climate change. Flanders aims to combat climate change by creating biodiverse green spaces across the landscape, where carbon is sustainably stored, and water slowly infiltrates the soil. Therefore, new nature should also be developed within the framework of Natura 2000 (more than 18,000 ha) and cities and municipalities are also expected to take initiatives to **enhance the biodiversity of urban green spaces**. Improving the ecological quality of urban areas strengthens landscape connectivity, which is essential as many species are migrating to cooler regions due to climate change. By designing **nature-inclusive cities**, we create stepping stones that support migration and survival of numerous species .

Biodiversity not only has intrinsic value, giving it legitimacy for existence and conservation, but it also provides numerous **benefits to humans and society**. These may be material goods such as wood and clean drinking water, or regulatory processes such as pollination by (wild) bees and carbon sequestration, or cultural services like offering relaxation, inspiration and spirituality. **In Flanders, societal demand for these ecosystem services appears to exceed current supply**. For example, air pollution from human activities exceeds what nature can handle to purify the air. A fifth of Flemish people do not appear to have green space within walking distance. The scarcity is greatest around large cities. On top of this, biodiverse greenery has **positive effects on people's health and well-being**, as the HOGENT PWO project 'Biodivers Zorggroen' shows.

Biodiversity is not only a matter of nature reserves; it can also have a particularly meaningful place in an urban context. At least if we interpret **urban green space in a multifunctional way, paying attention to its ecological, social and economic services**.

The biodiverse campus of the future

As a value-driven organization, HOGENT has a positive impact on the world we live in. HOGENT assumes its responsibility **to actively and increasingly contribute to the preservation, restoration, and enhancement of biodiversity.**

HOGENT has extensive areas of land suitable for *biodiverse green space*, ranging from biodiverse lawns to structurally well-developed woodland. HOGENT **maximizes the area of** biodiverse green space on its campuses and **increases the overall biodiversity** on the campuses **(both quantitatively and qualitatively)**. Our campuses are also **stepping stones** for migration of flora and fauna within the urban context, while enhancing local biodiversity in surrounding neighbourhoods

HOGENT's biodiversity plan provides the necessary **space and time** for biotopes, such as grasslands and forests, to develop. It also creates opportunities for *associated biodiversity*, like certain butterfly species, who can establish themselves on campus. **The management** of our biodiverse campuses, such as mowing policies, is also designed to preserve, restore and increase biodiversity.

At the same time, HOGENT campuses represent multifunctional green space: areas that serve multiple purposes at the same time, addressing a variety of needs at once:

- Our campuses **bring people together** and **activate** people, while also offering **places of peace**. Places where nature, humans (and animals) coexist in harmony, fostering environments that promote mental, physical, and social well-being.
- Our biodiverse campuses provide **cooling** and shade, support **water retention**, and contribute to carbon sequestration. The campuses help improve **air quality**. Not only for the HOGENT community, but also for the neighbourhood.
- The campuses offer space for **experimentation**, both for students and staff. HOGENT takes into account key principles such as '*nature-inclusive design', 'urban biodiversity'* and '*more-than-human design'*. Initiatives from the local community are also welcomed, if they align with HOGENT's core missions.

The implementation of HOGENT's biodiversity policy is a **shared effort, developed with, by and for its various internal and external stakeholders.** Input from users, experts and managers is aligned as effectively as possible in mutual agreement.

In its exemplary role as an educational institution, HOGENT shows how the outdoor spaces on its campuses can be biodiverse, climate-neutral* and inclusive. These spaces benefit students, staff, visitors, passers-by and the neighbourhood. HOGENT seeks to inspire others and activate them.

2 Ambitions

Based on the vision six key ambitions can be identified.

Ambition 1 - Quantitative and qualitative increase in biodiversity green space on campuses

HOGENT aims to preserve, enhance and expand the existing greenery and biodiversity present on the campuses.

Inspired by the principles of a biodiverse garden, HOGENT considers six fundamental qualities for a biodiverse campus:

1. **Size and connectivity**
   The larger an area, the more species it can support and the greater the biodiversity. HOGENT also considers the connection to the wider green environment (the neighborhood, existing natural areas, etc.). HOGENT campuses serve as landing and living areas for plant and animal species.
2. **Structure and variation in biotopes**
   Structure refers to the presence of various biotopes that together provide vertical and horizontal variation. These biotopes offer animal species a range of resources such as nesting place, food and water. HOGENT aims to include as many different biotopes as possible, providing more resources.
3. **Environmental quality (abiotic factors)**
   Key environmental factors such as soil nutrient levels, the use of pesticides, and artificial lighting help determine biodiversity. HOGENT considers these abiotic conditions when designing, developing, and managing its outdoor spaces.
4. **Appropriate plant species**
   The foundation of a biodiverse campus lies in its plants, as they form the basis of the ecosystem. HOGENT follows several key principles: (1) the right plant in the right place, (2) (neo-)native species wherever possible, and (3) attention to rarer species.
5. **Dynamics created by management**
   Plant and animal species are adapted, and dependent on, what is known as *natural dynamics,* such as a tree falling or animals churning the soil. In its management, HOGENT takes into account mild forms of dynamic. This helps maintain and even increase species diversity. Drastic interventions are avoided, and sufficient rest is ensured (see point 6).
6. **Time and rest as allies**
   Depending on the type of biotope, it can take (hundreds of) years for a biotope to fully develop. Above-ground *associated biodiversity* (butterflies, beetles, etc.) also requires time to establish. With this in mind, HOGENT aims to preserve and integrate existing vegetation in the design or redesign of outdoor spaces. HOGENT also ensures that these environments are given adequate rest to allow natural processes to unfold. HOGENT seeks a balance between human and natural dynamics.

Ambition 2 - Our biodiverse campuses have a positive impact on climate change

HOGENT campuses fulfil three important climate-related functions:

1. The campus as a **carbon reservoir**, where existing carbon is secured, emissions are minimised, and additional carbon is stored.
2. The campus as a **water buffer,** where water is efficiently retained (during abundance) and made available (during droughts).
3. The campus as a **cool place** on hot days (also for the neighbourhood)

Ambition 3 - Our biodiverse campuses are inclusive

HOGENT campuses not only improve the quality of "public space" but also strengthen the connection between users and the outdoor environment. HOGENT creates outdoor spaces that promote the health, happiness and well-being of its users. In doing so, HOGENT considers the diversity of people using these spaces. The outdoor environment (and the connection between buildings) is accessible to a wide range of users and offers places for meeting, relaxation, unwinding and quiet reflection. HOGENT is a place where people enjoy spending time outdoors.

There is also room for various (neo-)native animal species. In the design, construction and management of the outdoor environment, HOGENT considers the conservation and enhancement of wildlife populations on its campuses.

Ambition 4 – Members of HOGENT are engaged in the biodiversity policy.

Members of HOGENT are familiar with the key points of the biodiversity policy. They are aware of the various projects arising from this policy and understand the importance of the measures taken. They feel involved to contribute: in specifications, during campus management, in specific projects, or when using or wading through the outdoor environment, … and apply these principles in their broader (home) environments. Together with various internal and external stakeholders, members of HOGENT help to shape and develop the biodiversity plan.

Ambition 5 - HOGENT creates space for experimentation in its outdoor environment

HOGENT sees a campus, including the outdoor environment, as an inspiring environment for conducting interdisciplinary projects. Similarly, the outdoor environment lends itself to experimental spaces for research and educational innovation. These spaces bring people together with diverse expertise and aim for synergy between people and resources. Initiatives for these projects come from HOGENT's own staff and students. HOGENT also welcomes neighbourhood initiatives if they fit within HOGENT's core missions. Every experiment takes place within the framework of the principles laid out in the biodiversity policy.

Ambition 6 - The biodiversity plan guides operational, policy and investment decisions

By using the biodiversity as a guiding framework for policy and investment decisions, HOGENT chooses to promote the sustainable development of its campuses and strengthen and restore biodiversity. To achieve this, HOGENT applies a mitigation hierarchy:

1. an approach that prioritizes avoiding negative impacts on biodiversity,
2. minimizing negative impact where they cannot be avoided,
3. restoring affected areas
4. compensating for negative impacts, for instance by creating or restoring habitats.

To achieve its ambitions, HOGENT makes full use of its in-house expertise and applies a **data-driven** approach.

3 Goals

Introduction

The objectives were formulated on two levels: strategic subgoals and operational goals. These goals are aligned with the goals included in the Strategic Plan 2023-2028. The following goals highlight the key priorities HOGENT aims to pursue in its biodiversity plan.

Strategic subgoals

SSG1 - HOGENT preserves and enhances biodiversity and multifunctional green space.

OG1.1 - HOGENT inventories (biodiverse and multifunctional) green space in function of fauna and flora

OG1.2 - HOGENT monitors (biodiverse and multifunctional) green space in function of fauna and flora

OG1.3 - HOGENT monitors emissions when managing and creating green space

OG1.4 - HOGENT creates management plans per campus

OG1.5 - HOGENT identifies and analyses the user of outdoor spaces on its campuses

OG1.6 - HOGENT develops biodiverse green spaces

OG1.7 - HOGENT makes its outdoor environment climate-resilient

SSG2 - HOGENT ensures internal and external engagement

OG2.1 - HOGENT communicates on biodiversity (internal and exTernal)

OG2.2 - HOGENT reports on biodiversity

OG2.3 - HOGENT structurally embeds the biodiversity working group in its operation

OG2.4 - HOGENT facilitates and encourages experimentation in outdoor space

OG2.5 - HOGENT involves colleagues in (smaller) projects on campus (e.g. ecoshelters, co-creation at campus Schoonmeersen)

SSG3 - HOGENT uses the biodiversity plan as a benchmark for development of outdoor spaces

OG3.1 - Drafting and improving water management per campus

OG3.2 – Developing a toolbox/checklist for terrain and/or infrastructure development projects

4 Glossary

Biodiversity sensitive design is an approach to design that considers the biodiversity of an area or ecosystem when designing buildings, infrastructure or other human activities. It aims to conserve or enhance biodiversity by, for example, taking into account the needs of plants and animals, promoting the preservation or restoration of natural habitats, or integrating biodiversity-friendly elements such as green roofs or green walls. This design seeks to create sustainable and harmonious human activities that fit within the ecosystem and promote the well-being of all beings and ecosystems.

Biodivers green space refers to vegetation or green areas that support a high level of biodiversity, meaning they host a wide variety of plants, animals and microorganisms. An outdoor green space is not necessarily biodiverse: for example, a lawn with a single grass species is green, but has very low biodiversity.

A **biotope** refers to a specific physical location or environment where certain plants, animals and microorganisms coexist and interact. It includes the combination of the physical characteristics, such as the climate, soil, water and biological communities present. A biotope provides the essential living conditions, such as food, water, shelter and breeding opportunities, needed to sustain specific species and ecosystems.

An **ecosystem** can be defined as a complex and dynamic community of living organisms (plants, animals, microorganisms) interacting with their physical environment. It includes both the living (biotic) and non-living (abiotic) components of a specific area, such as plants, animals, soil, water, air, climate and minerals. Ecosystems involve continuous interactions and exchanges between organisms and their surroundings, including food chains, competition, symbiosis, decomposition, and other ecological processes. They vary in size and complexity, from small ponds to vast forests or oceans. Ecosystems are essential for the functioning of the biosphere, offering ecological services like food production, water purification, climate regulation, and biodiversity.

Associated biodiversity: all species that naturally end up in an ecosystem.

Climate-neutral+ and climate-resilient+
Climate neutral refers to achieving net-zero greenhouse gas emissions at the level of an organization, a country or Europe as a whole. Within the European Green Deal, the EU has set the goal of becoming climate-neutral by 2050.
To make that happen, we must become climate-resilient by 2030, taking decisive action against the effects of global warming and reducing our net emissions by at least 55%. Achieving both goals requires emission reductions across all sectors.

HOGENT adds a + to the terms climate-neutral and climate-resilient to indicate that HOGENT not only wants to work on reducing greenhouse gas emissions but also considers the other planetary boundaries in doing so.
HOGENT aims to have a college that is **climate-resilient+** by 2030, implementing measures that mitigate the effects of climate change. On the one hand, HOGENT aims to reduce its net emissions as much as possible, while on the other hand, it seeks to do so whitin the limits of all planetary boundaries.
The ultimate goal is a climate-neutral+ college: HOGENT has achieved net-zero emissions and contributes positively to all planetary boundaries.

More-than-human design is an approach to design that focuses on human well-being and the needs of other creatures and ecosystems. It aims to preserve biodiversity, ecosystems, and the natural environment. More-than-human design seeks to shape human society in a way that considers the well-being of all beings and ecosystems, rather than prioritizing human needs and interests alone. This can involve, for example, considering the needs of animals, plants and ecosystems when designing urban areas, buildings, or infrastructure. In essence, more-than-human design aims to create a sustainable and harmonious society for both humans and other beings and ecosystems.

Nature-inclusive construction is an approach to construction where nature is actively integrated in homes, commercial buildings and other objects. The building is not seen as separate but is considered in relation to its surrounding environment.

Within the group of alien species, a distinction can be made between species originating from areas far outside the target region (such as other continents, referred to as exotic species), and species with a natural range not far from the target region. The latter are known as **neonative species**. Specifically for Flanders, this refers to species whose northern range limit has not (yet) reached the region. These are typically species from Central and Southern Europe, such as Norway maple, sweet chestnut, downy oak, turkey oak, holm oak, whitebeam, torminalis..., as well as herbs like rosemary and wall germander.

A **planetary boundary** refers to the boundaries and limits that human activities on Earth must respect in order to maintain the sustainable and stable functioning of the planet.

The concept of planetary boundaries highlights the critical ecological systems and processes that underpin life on Earth. These boundaries include climate change, biodiversity, land use, freshwater use, oceans, chemical pollution and the nitrogen and phosphorus cycles. Staying within these boundaries helps preserve the planet's resilience and ensures a livable world for future generations.

Urban biodiversity refers to the biodiversity of urban areas, such as cities, towns or urban regions. It includes all plants, animals, migroorganisms, and ecosystems present in these environments. Urban biodiversity can range from larger animals like birds and squirrels to smaller ones like insects, spiders and frogs, and also includes green spaces such as parks and gardens, as well as green roofs and green walls. Urban biodiversity is essential because it contributes to human well-being, supports ecosystem functioning, and helps preserve overall biodiversity. Moreover, it can play a role in addressing urban challenges such as air pollution, flooding and heat stress.