EUROPEAN CENTRAL BANK
EUROSYSTEM

European Commission

CURIA RATIONUM
EUROPEAN COURT OF AUDITORS

Fostering Biodiversity in an urban setting

EMAS Days 2024

07 November 2024

European Central Bank
European Court of Auditors
European Commission

Overview

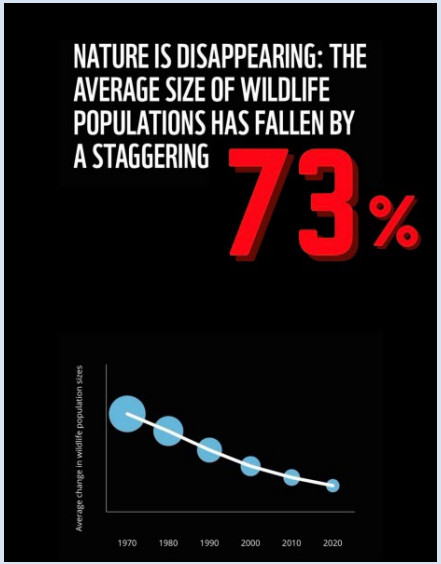
1. Introduction – Biodiversity and Urban Biodiversity
2. Practice case: European Commission/OIB
3. Practice case: European Court of Auditors
4. Practice case: European Central Bank
5. Lessons learned and best practices
6. Discussion

1

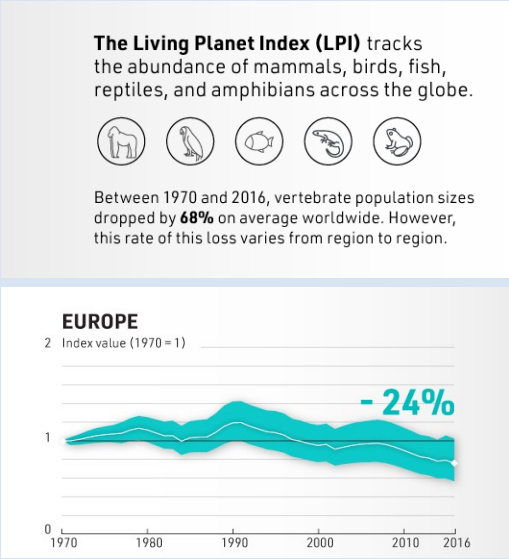
Introduction

Biodiversity and Urban Biodiversity

The average size of **wildlife populations has fallen** by a staggering 73% over just 50 years (1970-2020).
Habitat loss and degradation is the most reported threat to wildlife populations around the world, followed by overexploitation, invasive species and disease.



Worldwide



Europe

Biodiversity refers to variability among living organisms, […] within species, between species and of ecosystems.

The current rate of species extinction is estimated to be 10 to 100 times higher than the natural extinction rate.

Sources: Living Planet Report 2024 (WWF)
NGFS Conceptual Framework, 2023
Accelerated modern human-induced species losses: Entering the sixth massive extinction, Ceballos et al. (2015)

Urban Biodiversity

designates the variety of living organisms, including their genetic variations, as well as the multiplicity of habitats in and around dense human settlements. (WWF)

Cities increase invasive species

The number of non-native species increases toward the centres of urban areas, while the number of native species decreases.

Plants increase, animals decrease

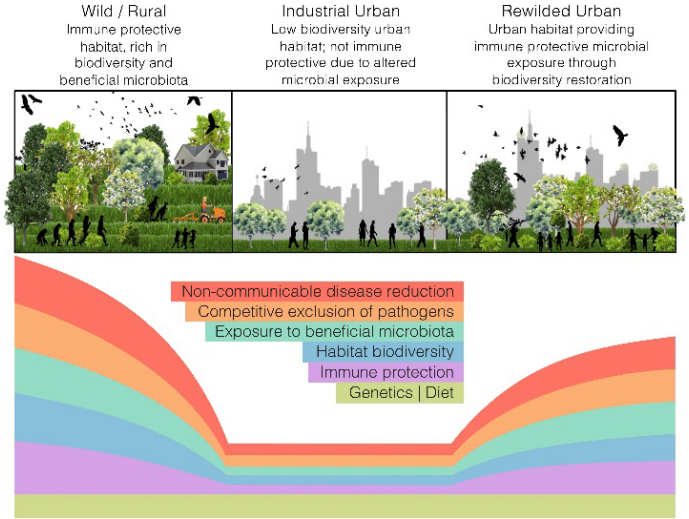
Plant species richness often increases in cities due to importation of exotic species, whereas animal species richness declines

Urban evolution: Species adapt to survive.

Moths in industrial areas adopt smoke-like colours, rats in New York evolve smaller rows of teeth.

Policy solutions:

The microbiome rewilding hypothesis proposes the return of human habitat to one high in microbial diversity and with wilder symbiotic, competitive, and predatory micro-ecological processes.



Sources:
https://wwf.ca/habitat/urban-areas/#:~:text=Urban%20biodiversity%20refers%20to%20the,and%20around%20dense%20human%20settlements.%20(
Relating_Urban_Biodiversity_to_Human_Health with the "Holobiont" concept, Mills et al.

2

Practice Case

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Biodiversity approach for Brussels' based EC buildings

Interinstitutional EMAS days – 7 November 2024

Stéphane Rault
OIB.RE.3.002 EMAS, energy and water management

1. Context

- European Green Deal (2019)

  ↓

  Communication ‘Greening the Commission’ (2022)

  ↓

  OIB biodiversity action plan (2023)

- Priority of the Brussels authorities (Brussels-Capital Region + 4 communes) on whose territory a large part of the European Commission buildings are located

- One of the environmental aspects of the EMAS certification system

OIB biodiversity action plan for the surroundings and buildings of the EC in Brussels

Objectives:

- Support the Brussels ecological network through global site management
- Develop areas of vegetation supporting relevant animal species groups
- Enhance the resilience of green spaces to climate change
- Strengthen the attractiveness of the European district
- Improve the well-being conditions of staff
- Harmonize several staff local initiatives for biodiversity

OIB biodiversity action plan for the surroundings and buildings of the CE in BXL

Implementation:

2023: Cooperation with the Liège University

- Matrix evaluating the biodiversity potential of the 34 sites studied (criteria: Location constraints; biodiversity potential; visibility/image)
- Set of factsheets on biodiversity in urban areas

Action plan including:

Integration of standard actions in favor of biodiversity in the specifications for the maintenance of outdoor spaces managed by the OIB

- Systematic consideration of biodiversity during development work of new buildings
- 2 projects per year for the redevelopment of exterior spaces of existing buildings

2. Biodiversity projects - courtyards

AFTER

Green wall

BEFORE

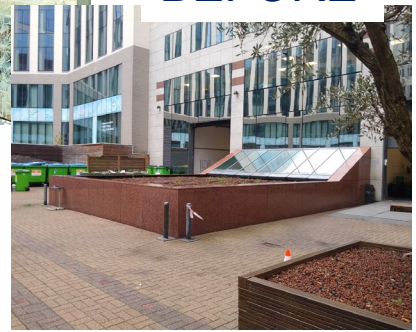
- Indigenous plants
- Combination of various types and heights of plants
- Birdhouses + bat and insect's shelters
- Info-panels to raise awareness & inform

3 gardens with 30+ species

L-41

AFTER

BEFORE



Roofs and terraces

CHAR

BRE2

Managed by a local ‘green team’

Playgrounds and surroundings

CLOVIS

BERL

2024 biodiversity projects

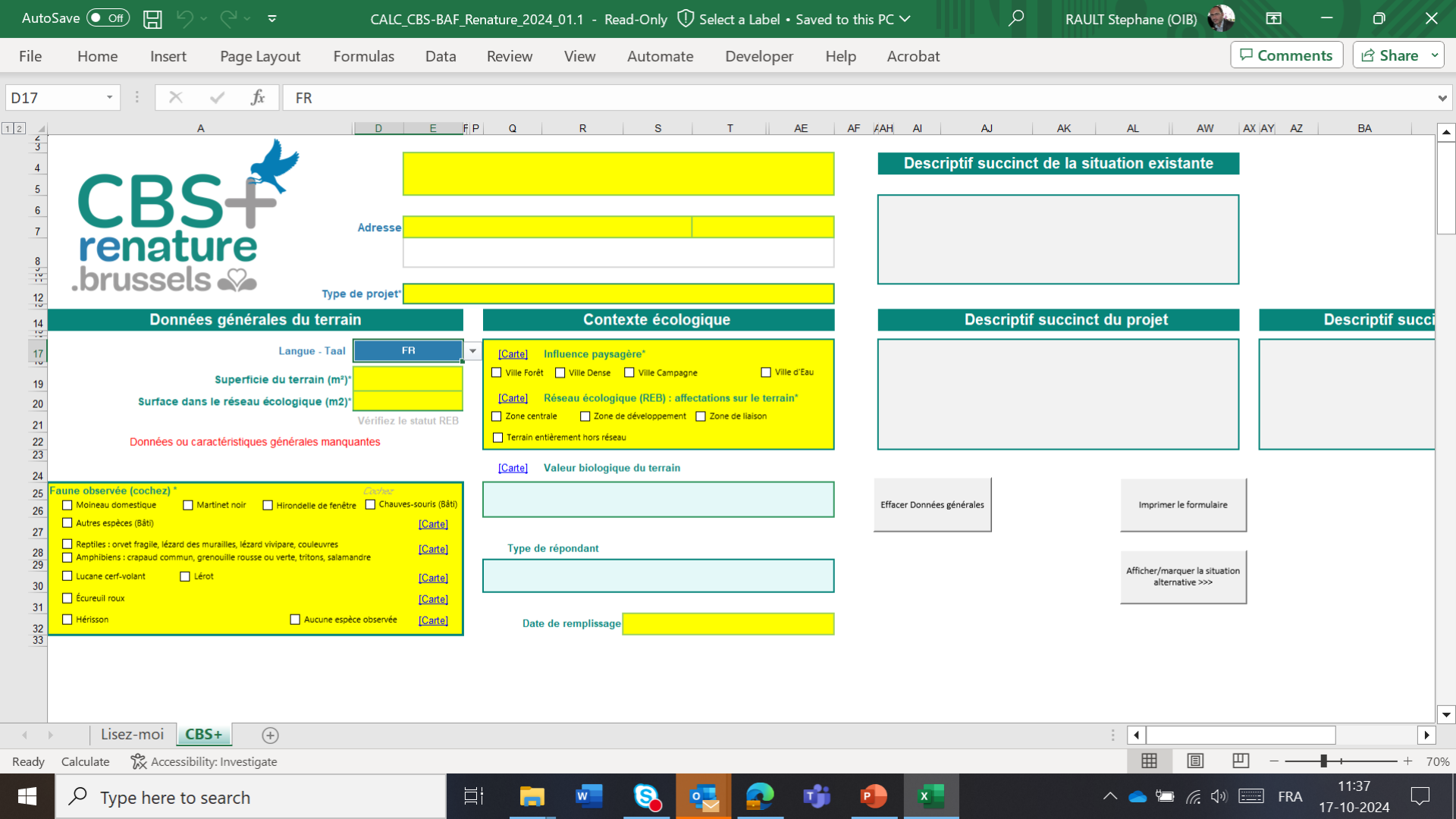
- Green areas to be redeveloped
- Buildings: Berlaymont and MERO/CSM1
- Complex projects - Still under study
- Possible development in Spring 2025

3. Biodiversity indicators

- **EMAS indicator in place: Green areas/total building surface**
  - Estimates the quantity but not the quality of green areas
  - However - need to continue to report it

- **Searching for a more relevant indicator: CBS+? ('Coefficient de Biotope par Surface renforcé')**
  - Easy and quick way to evaluate the biodiversity **potential**
  - Recommended by Brussels Environment and Renature.brussels
  - Enhanced version available since January 2024, but still under revision
  - Includes qualitative and quantitative factors

    = ratio that should be observed on any plot between the areas favoring biodiversity and the total area of the plot
  - New maintenance contract since May – includes an inventory of all green areas + evaluation using CBS+


AutoSave Off
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Select a Label • Saved to this PC
RAULT Stephane (OIB)
File Home Insert Page Layout Formulas Data Review View Automate Developer Help Acrobat
Comments Share
D17
FR
CBS+ renature .brussels
Adresse
Type de projet*
Descriptif succinct de la situation existante
Données générales du terrain
Langue - Taal
FR
Superficie du terrain (m²)*
Surface dans le réseau écologique (m2)*
Vérifiez le statut REB
Données ou caractéristiques générales manquantes
Contexte écologique
[Carte] Influence paysagère*
Ville Forêt Ville Dense Ville Campagne Ville d'Eau
[Carte] Réseau écologique (REB) : affectations sur le terrain*
Zone centrale Zone de développement Zone de liaison
Terrain entièrement hors réseau
[Carte] Valeur biologique du terrain
Descriptif succinct du projet
Descriptif succi
Faune observée (cochez) *
Cochez
Moineau domestique Martinet noir Hirondelle de fenêtre Chauves-souris (Bâti)
Autres espèces (Bâti) [Carte]
Reptiles : orvet fragile, lézard des murailles, lézard vivipare, couleuvres [Carte]
Amphibiens : crapaud commun, grenouille rousse ou verte, tritons, salamandre
Lucane cerf-volant Lérot [Carte]
Écureuil roux [Carte]
Hérisson Aucune espèce observée [Carte]
Type de répondant
Date de remplissage
Effacer Données générales
Imprimer le formulaire
Afficher/marquer la situation alternative >>>
Lisez-moi
CBS+
Ready Calculate Accessibility: Investigate
70%
Type here to search
FRA
11:37
17-10-2024

4. Awareness raising and sensibilisation of staff

Dedicated section on the Green Platform

Participation in EMAS events & organisation of workshops in OIB

Information panels on the spot

European Commission

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Practice Case

European Court of Auditors

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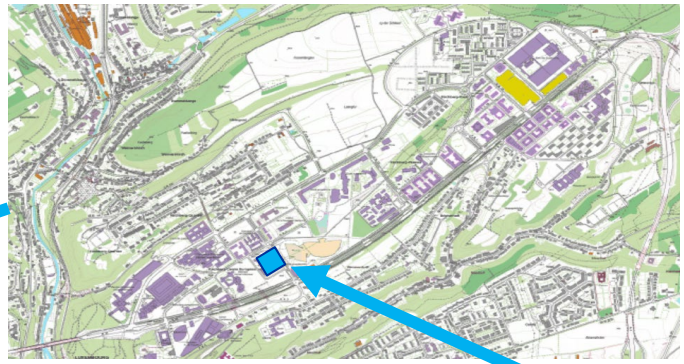
Sustainable garden management at the European Court of Auditors

By Céline Delayer

EMAS Interinstitutional Days 2024

Green Premises

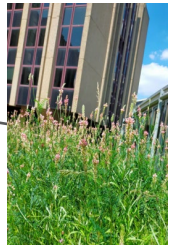


Sustainable garden management at the European Court of Auditors

Green roofs

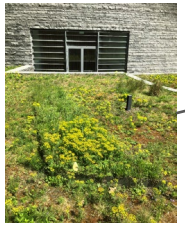
External meeting room

Insects shelter



Flower meadow

Bee hives



Low flowers and succulent plants

Flower garden for butterflies and bees

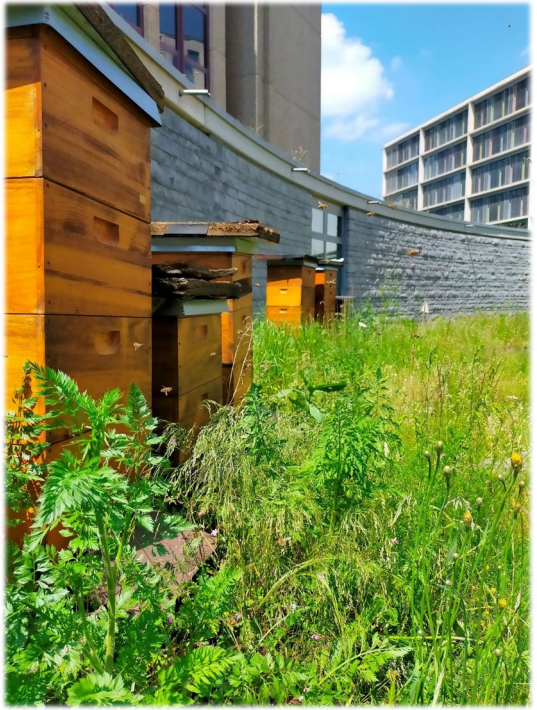
Vegetable raised bed

Composter

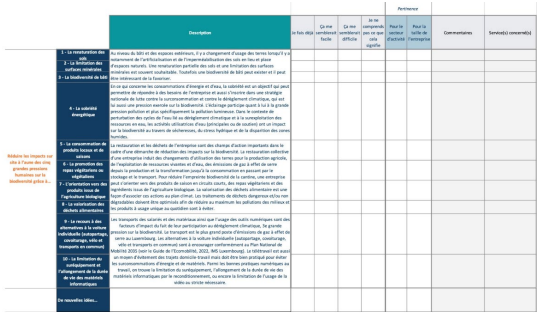
Succulent plants garden

Six key principles

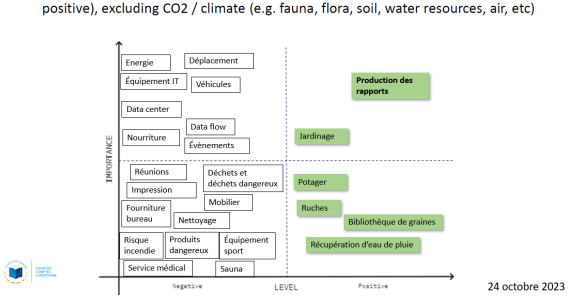
1. No chemical use
2. Conserve water
3. Recycle green waste
4. Promote local plants and diversity
5. Embrace nature’s spontaneity
6. Raise awareness and communicate



A realistic and accessible indicator



Impacts and actions assessment



Materiality analyses

Increase green spaces areas by 1% in 3 year (base line 2022)

Our next steps

Biodiversity inventory in spring 2025

Nature pact for business

Seven eco-communities

Organize actions with **positive impact on the environment**

Improve communication and create opportunities to **meet various colleagues**

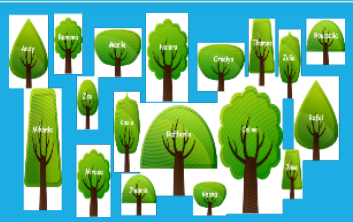
Develop new skills to thrive in a changing climate

Gain **a better understanding of environmental issues**

The ECA bee club

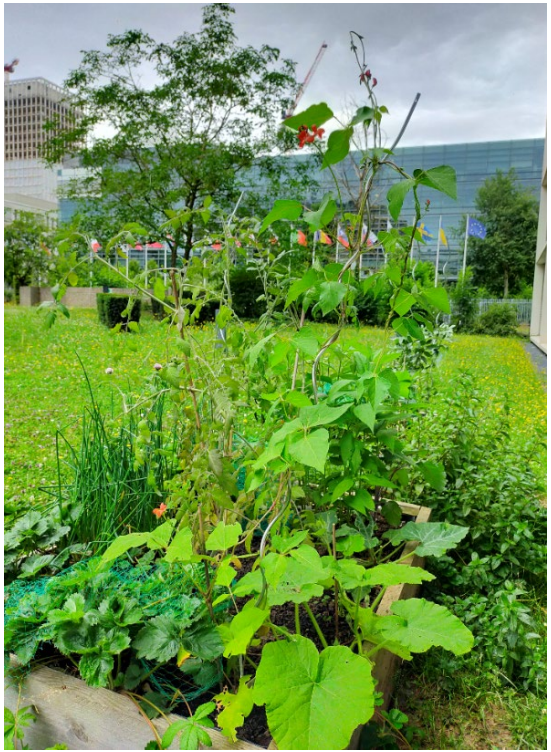
- Training of staff in winter 2019
- Installation of hives in spring 2019
- First investment around 5.000€ (exl. training)
- Creation of the club in 2019
- First honey harvest in 2020.

Plant a tree, grow a forest!



- Community of 40 persons
- One day per year of plantation or maintenance of the forest (4 days in total) for two groups of volunteers of 15 to 20 persons. Up to 160 colleagues can participate to plant 1 270 trees and 200 shrubs by 2025.
- Four guided tours in local forests for groups of maximum 20 persons.
- Communication actions

Community garden



OUR COMMUNITY GARDEN

- Community of 25 person
- First investment for 3 raised beds: 1.000 €
- Trainings and support for one season: 1.500 €

Community garden, the idea caught on

Composter

ECA librarians started a seed library

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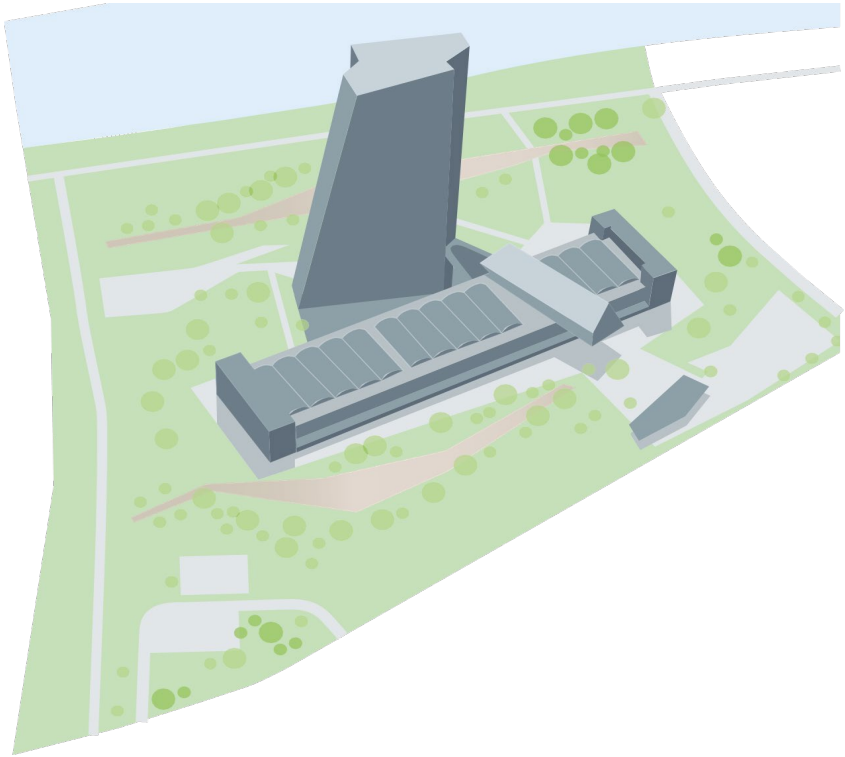


Biodiversity-orientated green space management at the ECB

The ECB's contribution to sustainability, species conservation, and biodiversity

EMAS Interinstitutional Days 2024

Division Administrative Services
Green Area Maintenance

Biodiversity-orientated green space management at the ECB
Introduction

<u>The way green spaces are maintained has a direct impact on the state of biodiversity - Intensive maintenance leads to loss, whereas extensive care improves biodiversity</u>

2020 - Introduction of the environmentally conscious approach to maintaining the ECB's green spaces

2022 – Establishing a close cooperation with the Frankfurt Environmental Office, the Local Nature Conservation Authority as well as the biodiversity network “BioFrankfurt”

→ Species and biotope protection concept for the City of Frankfurt: Classification of the ECB site as “dry biotope”
→ Target species: Sand lizard and blue-winged grasshopper

Since then, the ECB has been in continuous dialogue with local authorities and is supported by nature conservation experts and biologists in all its efforts relating to species conservation and biodiversity

Biodiversity-orientated green space management at the ECB
Green care concept

From the top, left to right, clockwise: (1) The garden and the Skytower; (2) A tree in autumn and the ECB's Main Building; (3) The garden of the ECB with leaves on the ground

Wildflowers and wild herbs are allowed to grow across the entire 6.5-hectare site and remain in place, even after withering as
- seeds need time to ripen and fall out
- insect larvae need the stems to develop

Flower stalks are left standing over the winter to allow insect larvae to hibernate in them

Stinging nettles are allowed to grow – essential caterpillar food plant for more than 30 native butterfly species

Thistles are kept over the winter – they support and protect wild bees, birds, and butterflies

The foliage is left on the green spaces to provide shelter, nesting sites, and food for various insect populations

Invasive neophytes are removed as soon as an increase in their occurrence is detected

Biodiversity-orientated green space management at the ECB
Green care concept

View of the Main Building's garden towards the Main river

Deadwood that is produced during regular tree maintenance is kept on the site as it serves as hiding places, nesting aids, and habitats

Tree trunks of dead trees are left standing to provide habitats

Wild corner – an area which has been completely untouched for 4 years (around 100m²)

Brambles are allowed to grow in some hidden places as they provide important food sources in late summer and autumn for pollinators

Mowing of green spaces takes place once a year at the end of winter (February)
- → In strips, with at least fortnightly breaks in between
- → Either with a slow-running bar mower or with a scythe
- → Refrain from using any kind of mulching equipment that chops up the mown grass
- → Removal of cuttings to improve access to the soil for ground-nesting wild bees and to prevent nutrient enrichment
- → Some areas remain untouched and are mowed at the end of the following winter (around 30% - recommendations: at least 10%)

Biodiversity-orientated green space management at the ECB
Additional measures

Bird's eye view of the Grossmarkthalle and the garden, with the neighbourhood of Ostend in the background

Already implemented

- Lavender fields
- Plants for nocturnal animals
- Bird and bat houses
- Early bloomers
- Water troughs
- Bird perches
- Compost
- Dead wood piles
- Gravel areas replaced with regional pollinator-friendly plants

Currently implemented

- Planting of additional pollinator-friendly plants (perennial beds)
- Planting of hedges and shrubs
- Additional bird houses
- Creation of stone heaps

Planned

- Construction of a sand dune (according to dry biotope classification)
- Planting of 4 regional fruit trees
- Special bird houses for birds of prey, especially kestrels
- Herb spiral (especially for butterfly species)
- Creation of dry stone walls

Biodiversity-orientated green space management at the ECB
Assessment and monitoring of species

Tree species on autumn day, with the Grossmarkthalle in the foreground

Ongoing

- Since June 2024 - Butterfly species (to continue throughout 2025)
- Since October 2024 - Fungi species (to continue throughout 2025)

Starting March 2025

- Plants
- Wild bees
- Amphibians
- Reptiles
- Bats
- Grasshoppers

Planned

- Birds

The values determined are intended to
a) Provide information on the status of biodiversity on-site
b) Constitute the basis of further measures to improve biodiversity
→ The Local Nature Conservation Authority and experts in species protection and biodiversity will be fully involved in this process

Following the initial assessment, continuous monitoring will be conducted every two years

Biodiversity-orientated green space management at the ECB
Communication measures/awareness raising

Inside the ECB

Ongoing
- Garden tours
- Intranet articles

In progress
- Installation of information trail (English/German)
- Advertisement for certain events run by local nature conservation associations, e.g. orchard maintenance (ideal for team events)

Planned
- Bird feeder stations
- Creation of a ‘green care’ page on the intranet
- Installation of a kestrel nesting box with camera surveillance and direct transmission to the intranet
- Employees actively participating in tree planting

Beyond the ECB

Ongoing

The Environmental Office and the BioFrankfurt network promote the ECB’s biodiversity activities within other institutions in the City of Frankfurt

In progress
- Installation of information trail (English/German)
- Journal article (Assessment of butterfly species at the ECB, will be published in 2025)

Planned
- Bird feeder stations
- Garden tours (conducted by the ECB as well as by experts e.g. birds, wild bees, etc.)
- Article in local press

Biodiversity-orientated green space management at the ECB
Communication measures/emphasising the benefits

Environmental benefits

- Urban gardens, which require neither fertilisation nor irrigation, represent a particularly climate-friendly use of space
- Tall flowers and grasses (even after withering) not only improve biodiversity, but also reduce water evaporation and retain moisture more effectively. They recover naturally, as irrigation is not required
- Species-rich wildflower meadows absorb much more carbon and thus remove the greenhouse gas carbon dioxide from the atmosphere

Employee benefits

- The ECB meadows, with their high-growing plants/grasses, can cool the temperature by one to two degrees Celsius over a wider area
- Herbaceous plants growing in the vicinity of streets have been proven to help reduce dust pollution
- Some areas in the meadows are kept without tall grass, with small paths leading to them – employees can relax and recuperate

Flower species in the ECB's garden

Biodiversity-orientated green space management at the ECB
Conclusion

The ECB's biodiversity measures have shown first positive results

- The number of butterflies observed on-site is higher than expected, including species that were not expected to be found in the urban area at all
- Countless blue-winged grasshoppers could be spotted on-site (target species)
- Plant diversity has increased significantly under the new maintenance concept

At the same time: Reduction of costs

- No watering of green spaces (only trees are irrigated) results in more than half of water saving costs
- No removal of dead trees
- No disposal of deadwood/leaves/dead trees
- Reduction in the number of mowing passes (16 times →1 time)

Future

- The ECB will continue to pursue its efforts to improve biodiversity, cooperating closely with the City of Frankfurt
- The ECB will strive to strengthen communication on the topic of biodiversity

5

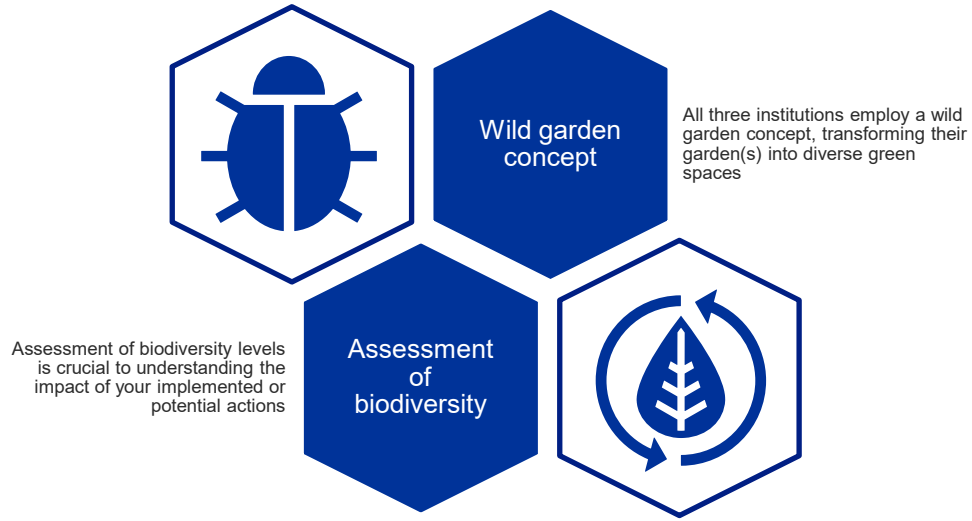
Lessons learned and best practices

Recommendations and lessons learned from our biodiversity concepts

Lessons learned

Lessons learned from implementation of urban biodiversity measures

- Some biodiversity measures can also be considered cost-cutting measures: keeping the garden “wild”, and not mowing it, creates higher biodiversity and is less expensive than mowing it constantly.
- There are many techniques and approaches to fostering biodiversity in your institution, but each urban area presents its separate challenges, specific to its location.
- There is no “one size fits all” approach, trial and error are imperative to finding the best-tailored solutions for a specific situation.



Our recommendations for a greener urban space

- Don’t fall in the trap of easy solutions: some solutions might seem like an easy win on paper, but risk affecting the habitats and biodiversity already present on-site.
- It’s good to be “lazy”: the best biodiversity measures are many times, the ones where you let the ecosystems regulate themselves.
- Staff integration is a great way to foster biodiversity, through engaging them in different projects.
- Biodiversity measures often have a positive effect on the well-being of staff.
- Fostering biodiversity is an effective way to combat climate change.

6

Discussion

Any questions?

Please share your own biodiversity measures with us if you would like to.

Contacts

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