



BURST
FOR URBAN DEVELOPMENT

URBACT



Co-funded by
the European Union
Interreg



**VIRÁGOS
MAGYARORSZÁG**

A városi biodiversitás mint szemléletformálás



**Team
Hub**

Measuring urban biodiversity and accounting
related ecosystem-services to verify, design and
scale up nature-based solutions

Szigeti Ferenc Albert



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**VIRÁGOS
MAGYARORSZÁG**

**Milyen felelőssége van egy „városnak” a
zöld szemléletformálásban saját
zöldfelületei mentén?**



**TeaM
Hub**

**Milyen felelőssége van egy
„közparknak” abban, hogy ablakot
mutasson a világra (a biodiverzitásra)?**

Szigeti Ferenc Albert

Let's Urbactise!

- Cities as experimental places and municipalities as the most local forms of government
- Three level of learning: 1. individual, 2. stakeholder, 3. institutional



Let's Urbactise!

- Hegyvidék (district 12 of Budapest)
- Green Office (first in Hungary) - Central
- First pollinator-friendly municipality of Hungary (URBACT)
- First sponge-city project in Hungary (Városi Eső, LIFE)
- First social prescribing scheme in Hungary (URBACT)



ISMERI a Zöld Receptet?

A kerületi orvosok felírják Önnek a megfelelő mozgásterápiát!

számos ingyenes, beltéri és szabadtéri programot kínál Önnek partnereink keresztül.

Önnek mire van szüksége?

Választható mozgásforma kategóriák, orvosa ajánlása szerint:

- Prevenció
- Energizálás
- Mentálfejlesztés
- Izomfejlesztés
- Stresszcsökkentés
- Hangulatjavítás
- Lazítás-nyújtás

KÉRJE A ZÖLD RECEPTE T ORVOSÁTÓL!

A fenti kategóriákba számos jó hangulatú csoportos program tartozik.

The poster also features a sample 'Zöld Recept' (Green Prescription) form on the left, which lists various health and activity categories for a doctor to prescribe. The form includes sections for 'Prevenção', 'Energizálás', 'Mentálfejlesztés', 'Izomfejlesztés', 'Stresszcsökkentés', 'Hangulatjavítás', and 'Lazítás-nyújtás', each with a list of specific activities and a checkbox for the doctor's recommendation.

Urban biodiversity

- Awareness raising potential

Higher emphasis:

- Mitigating the heat-island effects
- Infrastructure
- Renewal of built environment
- Mitigating disaster risks
- Urban greening
- Mitigating pollution (incl. invasive species)
- Habitat loss



Nature-based solutions (IUCN)

Changing mind-sets?

Nature-based Solutions are actions to protect, sustainably manage, and restore natural and modified ecosystems that address societal challenges effectively and adaptively, simultaneously benefiting people and nature.



Nature-based solutions (IUCN)

- One third of climate mitigation needed to meet the goals of the Paris Agreement can be provided by NbS
- NbS are 50% cheaper in urban infrastructure than grey infrastructure, and its added-value to nature is enormous.



NbS: a 1000 billions € question

No-till, regenerative



Big challenge



- Urban areas: 75% of CO2
- UN: 1,4 billions of people living in huge metropolitan areas are in extreme environmental risk (remember: Paris, Barcelona)
- Taking all potential risks into account, 44% of the GDP produced in the city might be lost if nature is endangered



2030 Biodiversity Strategy and Nature Restoration Law

Habitat restoration



- Restore habitats and species protected by the EU nature legislation
- Reverse the decline of pollinators by 2030
- No net loss of green urban spaces by 2030 and a minimum of 10% tree canopy cover in European cities
- Healthier forests with improved biodiversity
- At least 25.000 km of free-flowing rivers by 2030
- Urban ecosystems – no net loss of green urban space by 2030, and an increase in the total area covered by green urban space by 2040 and 2050
- Cities with a least 20,000 inhabitants have an ambitious Urban Green Plan.
- Habitats of Europe: 81% are in bad condition, however, 1€ invested into habitat restoration, generates 8–38 € profit.
- UN Convention on Biological Diversity 's Kunming-Montreal Global Biodiversity Framework



Nature-based solutions





Sponge City (blue): Augustenborg



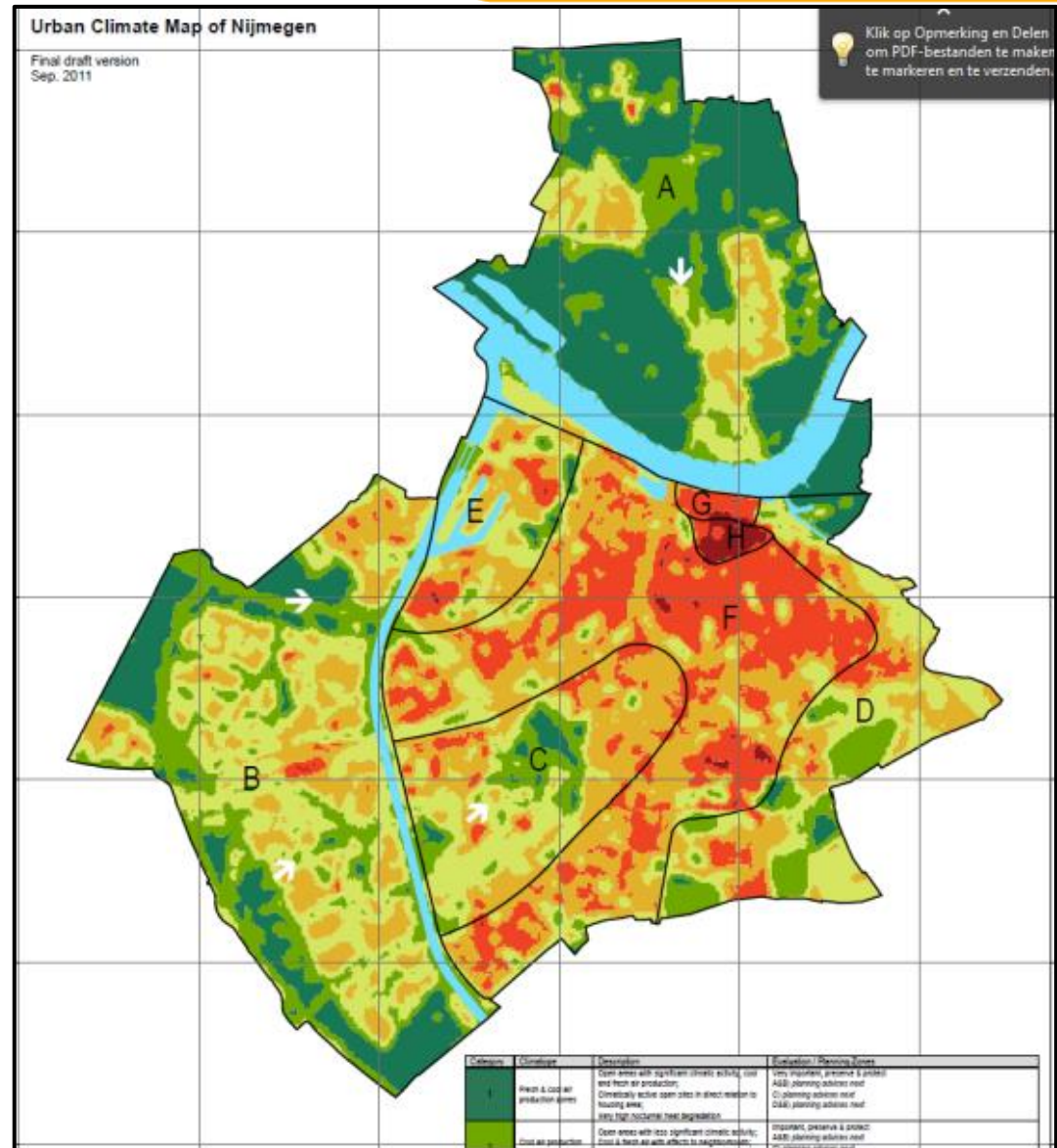
Nature-based solutions



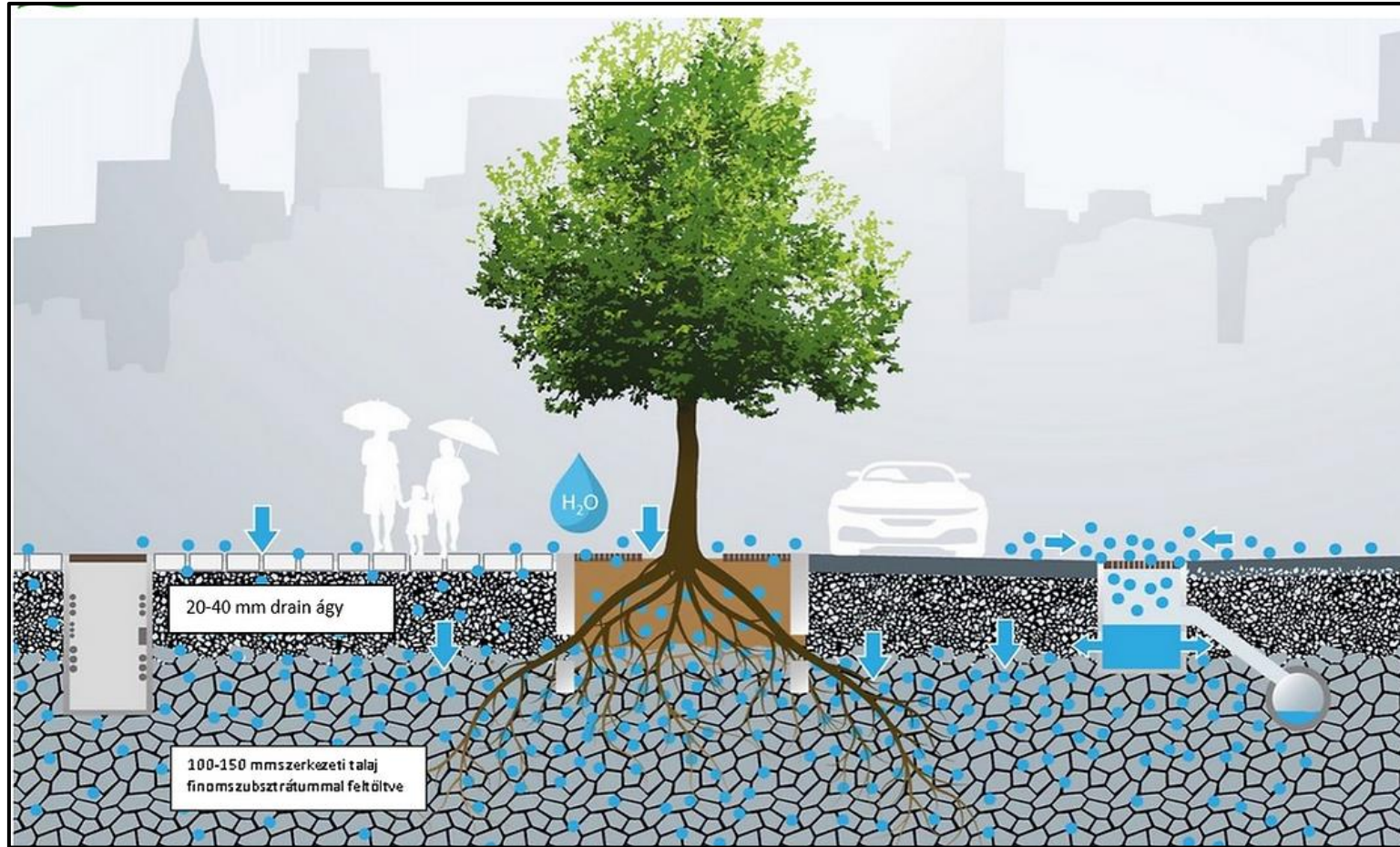
Nature-based solutions (IUCN)



NbS in the city



Not easy to be an urban tree



Legal 'personhood' rights of rivers, lakes and mountains

Magpie River, Canada, New-Zealand, India / 1972 Christopher D Stone



Have an empty chair in the room for nature!

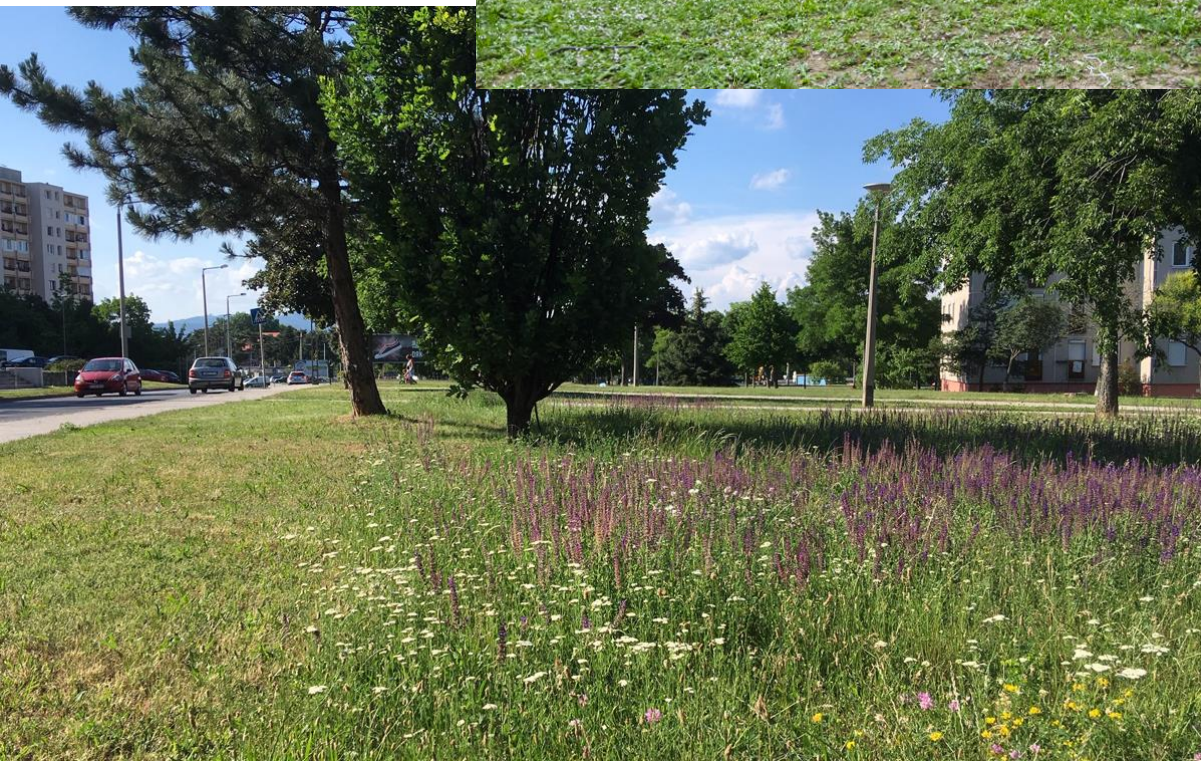


Maintenance and culture

Dunaújváros



Veszprém



Landscape Laboratory: stage to tell the story of climate change

- Building on the significant awareness-raising and innovation potential of cities, the BiodiverCity network will work out community-based approaches to valorise, measure and account biodiversity and related ecosystem services, enabling communities to plan powerful nature-based solutions, foster pro-environmental behaviours and draft Greening Plans, contributing also to the achievement of the EU Biodiversity Strategy."

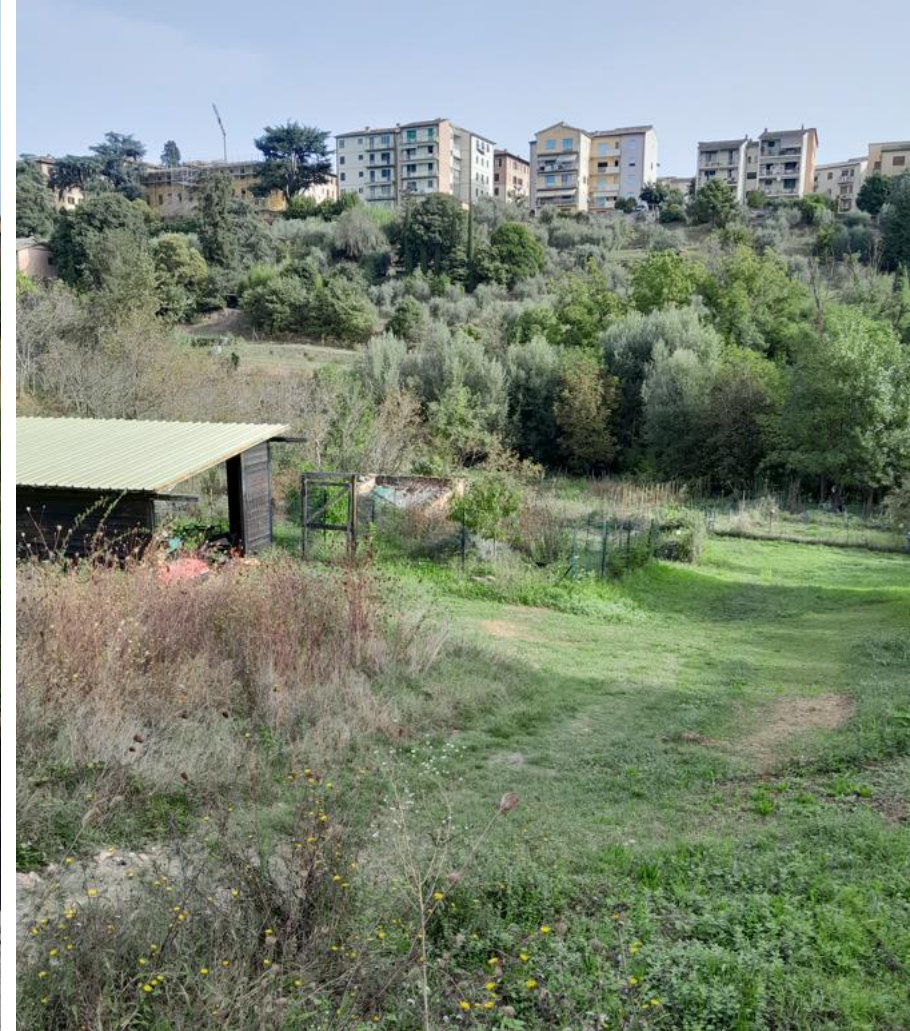


How much does a tree cost?

Limerick







What about a BiodiverCity menu?

CiezaBiofílica

treecitiesoftheworld.org



Guimaraes – focus on biodiversity



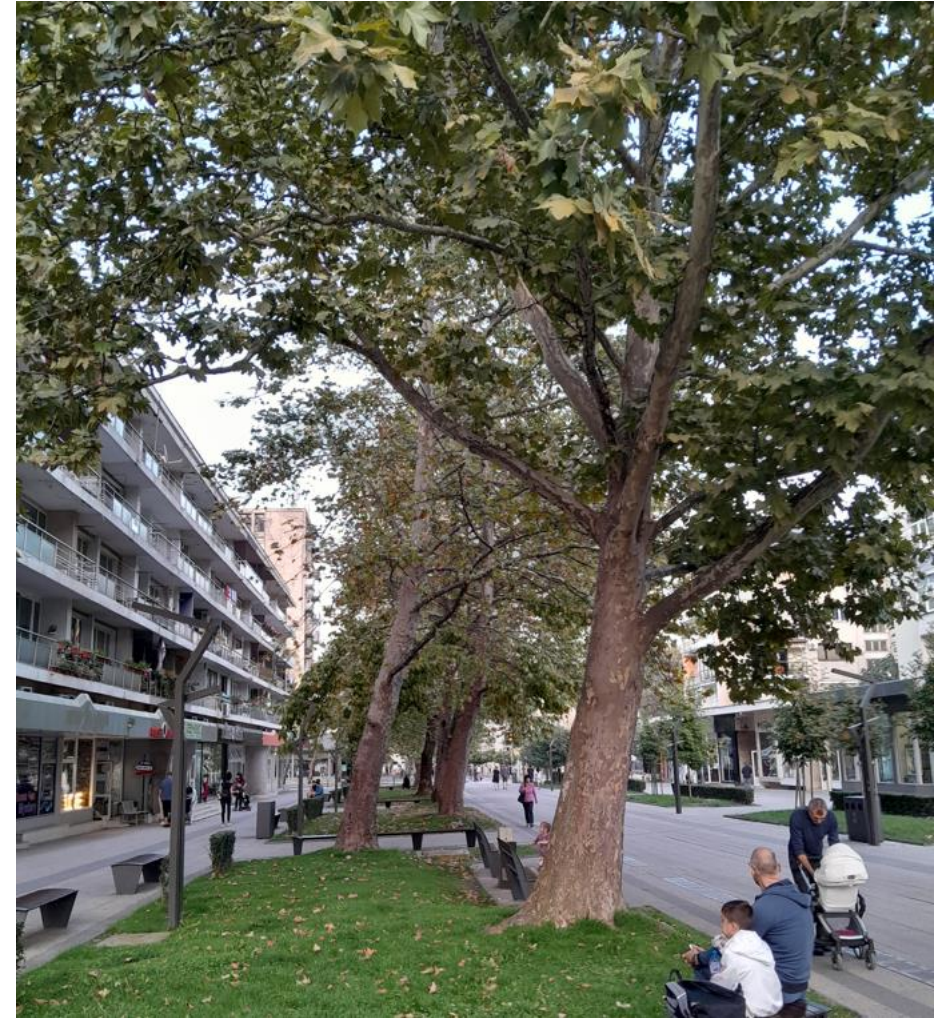
Guimaraes – focus on biodiversity



Guimaraes – blue aspects



Vratsa – financing NbS in infrastructure projects



Vratsa – financing NbS in infrastructure projects

	Structured garden with a lot of flowers	Structured garden	Functional garden	Country garden	Nature garden
					
Level and type of management²	High level of management. Frequent mowing, regular pruning	High- medium management. Frequent mowing, basic pruning	Basic management, Basic pruning, Reduced mowing.	Basic to minimum management. Occasional mowing.	Minimum management. Mowing max once a year
Average	2800 h/ha/an	1200 h/ha/an	800 h/ha/an	250 h/ha/an	90 h/ha/an
Minimum	2500h/ha/an	750h/ha/an	450 h/ha/an	200 h/ha/an	70 h/ha/an
Maximum	4600h/ha/an	1200 h/ha/an	1200 h/ha/an	450 h/ha/an	200 h/ha/an

Adapted from [Rennes, 2008](#) and [Rennes, 2012](#)

Table 2 - Cost-effectiveness studies comparing ecosystem-based and grey approaches

The first case study aims to **reduce sewerage system pressure in Aarhus by retaining or infiltrating 2145m³ of runoff water**. An ecosystem-based approach and a grey –conventional- infrastructure are evaluated.

	Ecosystem-based approaches	Grey infrastructure
	Retention pond	Closed basin
Costs of establishment	246 330 Eur	2 676 960 Eur
Maintenance costs	68 533 Eur	313 653 Eur
Life time	75 years	75 years
Cost-effectiveness ratio	146 Eur/m ³	1 394 Eur/m ³

A second case aims to **reduce the risk of flash flood in the Croult River in Gonnese, near Paris, by storing 55 000 m³ of water**. Following a similar procedure, the cost-effectiveness of the establishment of a flood expansion zone (restoring a floodplain) and some natural basins was evaluated in comparison to grey infrastructure.

	Ecosystem-based approach	Grey infrastructure
	Wetland + pond	Concrete open basins
Costs of establishment	722 000 Eur	38 115 000 Eur
Maintenance costs	1 391 602 Eur	8 016 751 Eur
Life time	>50 years	>50 years
Cost-effectiveness ratio	38 Eur/ m ³	838 Eur/ m ³



Poljcane – rural meets urban



Sarajevo – The Sarajevo Process (telling stories frame the co-creation process for NbS)

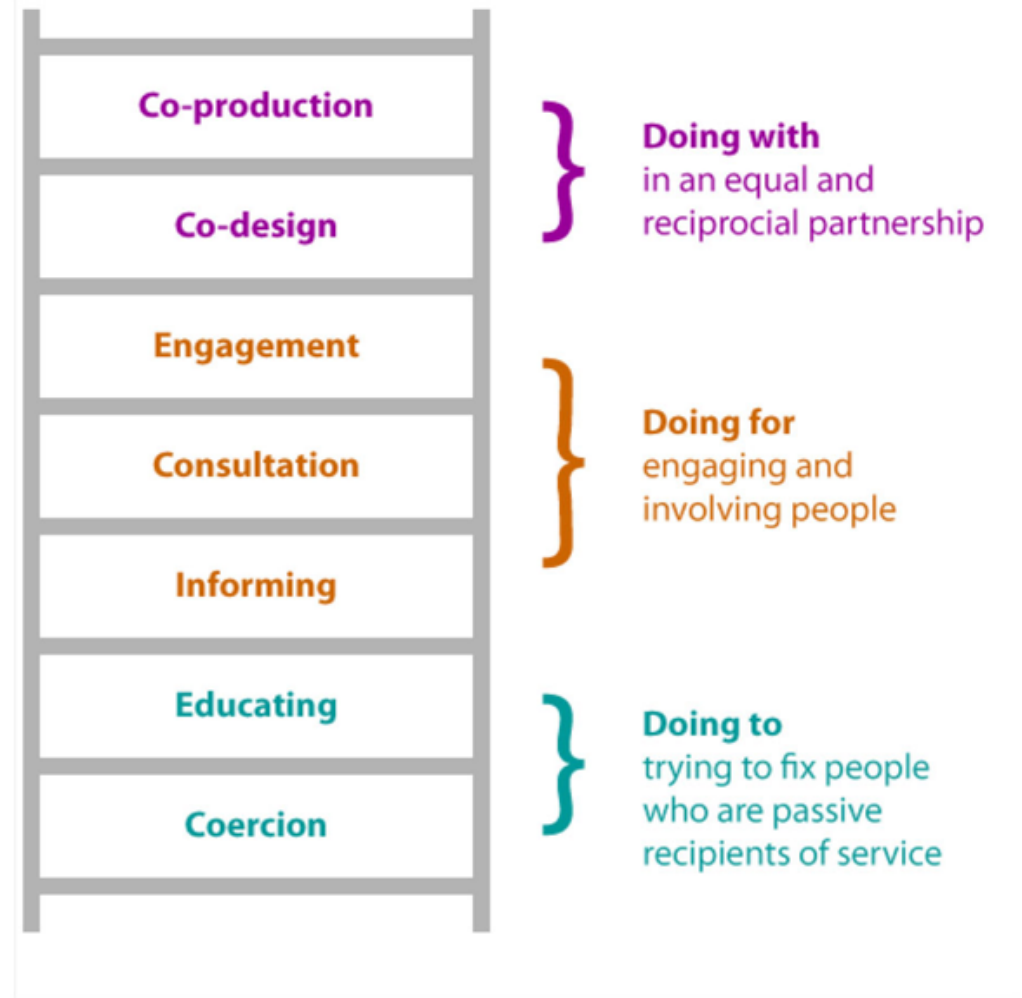


A question of hierarchy

Who involves who when the question is our joint future?

Nature-based solutions are always complex by nature as ecosystems are also complex.

Each nature-based solution should be based on long lasting, reciprocal partnership with equal voices.



BiodiverCity Festivals



Winning Festival Writers share their tree secrets

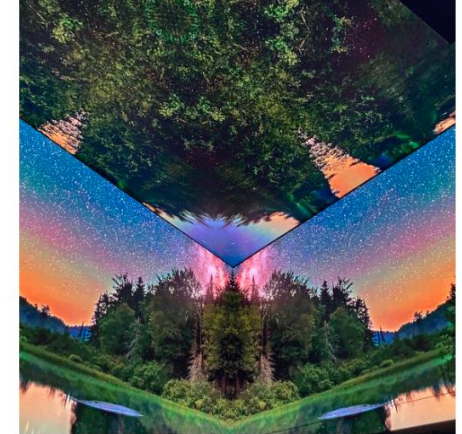
Julian Bishop and **Penny Walker** are this year's **Urban Tree festival writing competition winners.**



Fallen Comrade

[Read More →](#)

16 May 2023



The 2023 Urban Tree Festival Opens...

Urban trees are facing the battle of their lives – get involved and help us to celebrate them this May!

- - The most important local dissemination tool is the organisation of an Urban (community-led) Biodiversity Festival, for example a Tree Festival. Variable format, but specify in the Communication Plan. A community-based (tree) festival is a great tool to raise awareness of urban biodiversity issues (walks, talks and other activities).
- <https://urbantreefestival.org/the-programme-2023>

The first CNC in 2016: a competition between Los Angeles and San Francisco

L.A. vs S.F.

Invented by
community science staff

- Lila Higgins at the Natural History Museum of Los Angeles County
- Alison Young and Rebecca Johnson at the California Academy of Sciences



[About](#) [Participate](#) [Education Toolkit](#) [Results](#) [FAQ](#) [Q](#)

City Nature Challenge

Cities around the world collaborate to share observations of nature in the 2024 City Nature Challenge.

[Participate](#)



4 days
At the end of
april

The 2024 CNC takes place in 2 parts



1

April 26 – April 29, 2024

Taking pictures of wild plants and animals.

2

April 30 – May 5, 2024

Identifying what was found.

Results will be announced on Monday May 6, 2024.

iNaturalist  Esplora Comunità ▼ Di più ▼ Accedi o Registrati



Informazioni

Membri  21

Siena BiodiverCity è un progetto di scienza partecipata del Museo di Storia Naturale Accademia Fisiocritici che ha lo scopo di censire la biodiversità urbana di Siena: scopri e osserva le specie di animali, funghi e piante presenti nel territorio del Comune

[Leggi di più >](#)

[Diario del Progetto](#)

Panoramica

5.816
OSSERVAZIONI

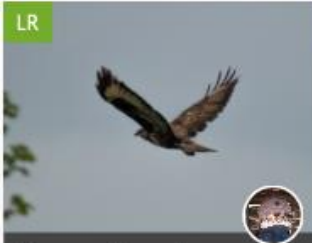
1.400
SPECIE

1.014
IDENTIFICATORI

403
OSSERVATORI

 **Statistiche**

Osservazioni recenti  [Mostra tutto](#)



Common Buzzard



Sun Spurge



Sunflowers, Daisies,



Crosswort

Con più osservazioni

 **1st** andreabenocci 517

 jtkindt 511

 emanuele150 386

 deborabarbato 269

Con più specie

 **1st** emanuele150 219

 andreabenocci 219

 fabio1960 164

 deborabarbato 148

Le specie più osservate

 Lady Orchid 62

 White Campion 49

 Garden Snail 41

 Chocolate-band Snail 38

- Our permanent project covers all the city area of Siena
- 5816 observations for 1400 species
- (from the CNC and extra observations)

**„Doing things
differently“**





Biodiversity menu

Melbourne

Calculation of benefits of trees

Marketing actions

Community grassland picnic

Forest Bathing

Thematic Walks

**Storytelling: Urban Stories
festival**

Thomas Danbo



LAKOSSÁGI PROGRAMOK

Ágaprítás



Komposztálás



Local
application,
50% to pay

Fák kártevő-
mentesítése



Önkéntes szemétszedés



LAKOSSÁGI PROGRAMOK

Veszélyes
hulladékgyűjtés



Small registration fee,
monitoring

Esővízgyűjtő osztás



Zöldfelületek gondozása



LAKOSSÁGI PROGRAMOK

Árnyas Hegyvidék Program
őshonos facsemete osztás

Gyümölcsöző Hegyvidék
Program



Virágosítási akció



Hegyvidéki Csemete és
Suháng program

Közösségi kert



MEGHÍVÓ

A LAKOSSÁGI ÉPÜLETENERGETIKAI FÓRUMRA



Az előadás témája:

Épületkorszerűsítés hatásai és gazdaságossága

- Épületkorszerűsítési lehetőségek beszerzése, energetikai és gazdaságossági értékelése.
- A lakóépületek típusai, jellemzői, a rezsiszabályok szerepe.
- A korszerűsítési intézkedések összehasonlítása.
- Épületüzemeltetéssel elérhető energamegtakarítás.
- Alulütés hatása a belső komfortra.

Lakossági épületenergetikai fórum



Jelentkezz a programra a <https://egyintezes.hegyvidek.hu/cidalon> vagy beírást/registrációt követően, a Zöldroda menüpont alatt is!

• www.zold.hegyvidek.hu • www.facebook.com/Hegyvidek



Hegyvidéki biciklis reggeli



LAKOSSÁGI PROGRAMOK

A HEGYVIDÉK MADARAI



Kiadványok



Ismeretterjesztő séták és előadások

Klíma barát esték



Óvodai programok



KERTEMBEN A TERMÉSZET



Díjazott kert /

HEGYVIDÉKI
ÖNKORMÁNYZAT

Kertemben a természet
pályázat



Udvarzöldítési pályázat

LAKOSSÁGI PROGRAMOK



Magaságyás pályázat

Application based



LAKOSSÁGI PROGRAMOK



Madárbarát Hegyvidék

Fotó: Lendvai Csaba

Holtfa program



Méhbarát terület



Nature-based solutions in the city?

- Realising the Potential of Nature-Based Solutions for a Transformative Societal Change (Dóra Almássy)
- IUCN website: agriculture, disaster risk reduction, ecosystem restoration, NbS for climate, NbS in cities
- <https://naturvation.eu/atlas>
- <https://oppla.eu/>

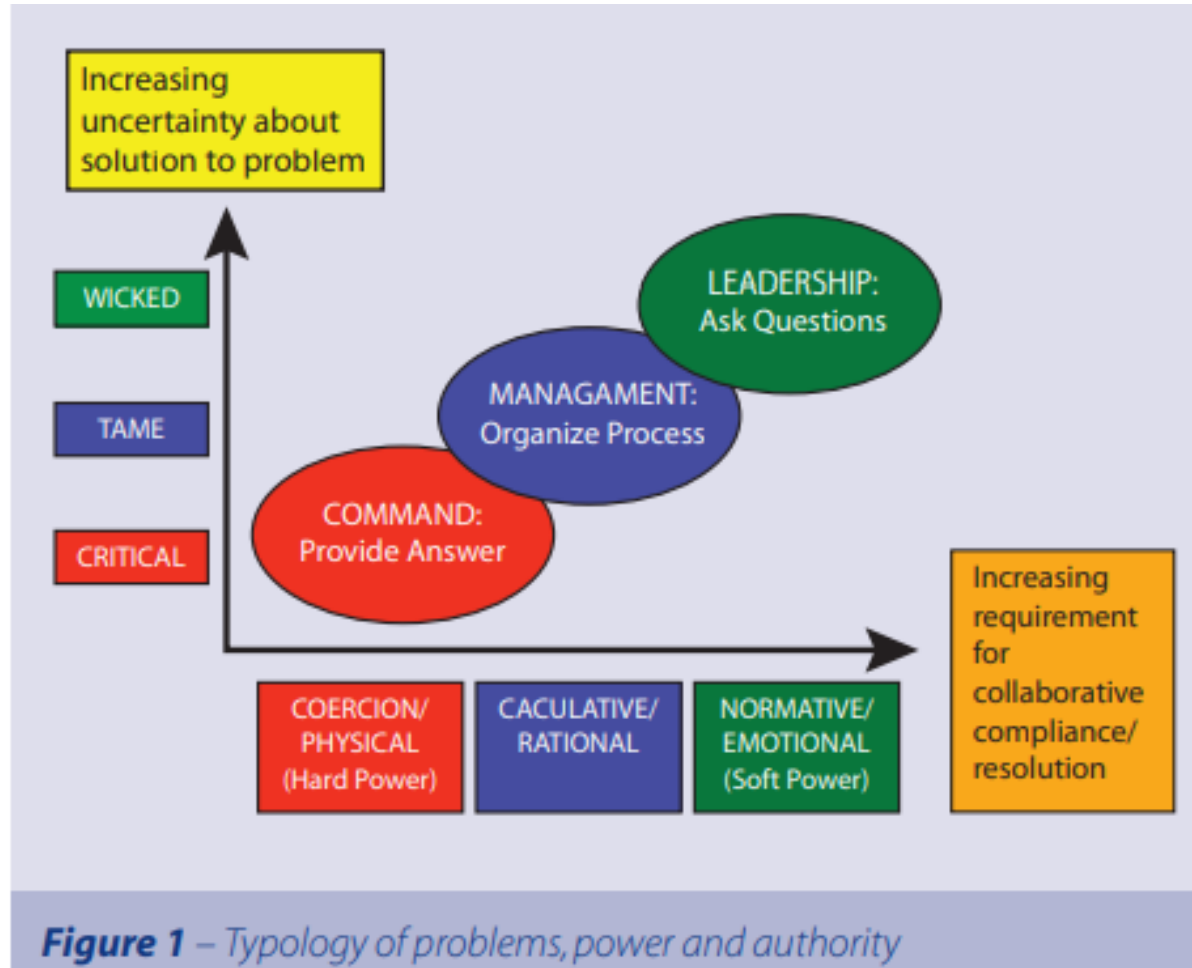


Urban acupuncture + placemaking

People care and value public spaces better when they have **knowledge, emotional connection** and responsibility. **Ownership** of public places create responsible citizens. **Responsible citizens** take care of their environment. Taking care of our environment **transform cities**.

Quoted from Jaime Lerner, the former Mayor of Curitiba, Brazil: smaller symbolic projects can have an effect in creating points of energy and initiating a snowball effect, transforming not only the given public space, but the larger urban context as well.





Keith Grint: Wicked Problems and Clumsy Solutions: the Role of Leadership





**TeaM
Hub.**

Solutions are in nature (where everyone smiles)



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