Final conference

Urban transitions through nature-based solutions:
Open.Green.Together

Front Runner City Dortmund ::: Living Lab Huckarde

Dortmund	c. 600,000 (2022)	280.7 km²
Living Lab	c. 9,000 (2021)	22.8 km²

Dortmund is the largest city in Germany's former coal mining and steel industry center. Deindustrialization is driving economic, social and environmental transformation. Large-scale contaminated brownfields, former industrial and transport sites are in need of redeveloping and socio-economic disparaties addressed.

NBS activities in the post-industrial Living Lab in Huckarde district focused on improving green corridors, testing food production systems on contaminated soil and community-led urban garden projects.

Lage und Umsetzungsstand Huckarde Living Lab, Dortmund
Status quo of Huckarde Living Lab, Dortmund

Living Lab Plan | Living Lab Vision map

Update: 11 2022

Ziel 1 Zur Stärkung des sozialen Zusammenhalts und der Identifizierung mit dem Stadtteil sollen in Huckarde neue Grüne Infrastrukturen entstehen und die Angebote an die Bevölkerung sich gärtnerisch zu betätigen, verbessert werden.
Goal1 Implementing Green Infrastructure and gardening activities to improve the social situation and to foster identity within Huckarde.

Ziel 2 Beteiligung der Bürgerinnen und Bürger bei der Planung und Unterhaltung von „grünen Projekten".
Goal2 Involving citizens in the design and management of projects with nature based solutions.

Ziel 3 Beförderung von neuen Geschäftsmodellen, die auf der Idee einer natürlichen Kreislaufwirtschaft beruhen.
Goal3 Promoting new professionalism and business models based on natural solutions of circular economy.


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NBS 1 – Sportangebote im Gustav-Heinemann-Park

Ort: Gustav-Heinemann-Park, Dortmund Huckarde

Beschreibung: Öffentlich zugängliche Bewegungselemente, die Bürger verschiedener Altersgruppen zum spielerischen Gebrauch einladen und die einen gesundheitsförderlichen Ausgleich zu überwiegend sitzenden Tätigkeiten im Alltag darstellen.

Partner: Stadt Dortmund, Amt für Stadterneuerung

Weitere Akteure: Grünflächenamt der Stadt Dortmund, Gustav-Heinemann-Gesamtschule, Huckarder Vereine

NBS 1 – Sports infrastructure within Gustav-Heinemann-Park

Location: Gustav-Heinemann-Park, Dortmund Huckarde

Description: Publicly accessible movement elements which invite citizens of different age groups to playfully try out and which offer a health-promoting balance to predominantly sedentary activities in everyday life.

Partners: City of Dortmund, Department of Urban Renewal

Other stakeholders: City of Dortmund, Department of Green Spaces, Gustav-Heinemann-School, Huckarde Associations


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NBS 3 – Waldgarten in St. Urbanus

Ort: Garten der St. Urbanus-Gemeinde, Dortmund Huckarde

Beschreibung: Auf dem Gelände der St. Urbanus-Gemeinde in Huckarde entsteht auf einer Fläche von 3000 m² ein Waldgarten, in dem vorwiegend essbare Pflanzen in mehreren Vegetationsschichten angepflanzt werden. Der Waldgarten ist ein Beispiel, wie Gärten in der Stadt produktiv und umweltgerecht gestaltet werden können. Er wird in mehreren Workshops von der Gemeinde aufgebaut.

Partner: Fachhochschule Südwestfalen, die Urbanisten e.V.

Weitere Akteure: Kath. Kirchengemeinde St. Urbanus

NBS 3 – Food Forest in St. Urbanus

Location: Garden of St. Urbanus parish, Dortmund Huckarde

Description: A 3,000 m² food forest - a self-sustaining woodland ecosystem designed for food production at the St. Urbanus parish. The food forest of St. Urbanus has been built during workshops with the community and serves as an example of how gardens in the city can be designed in a productive and environmentally friendly way.

Partners: South Westphalia University of Applied Science, die Urbanisten e.V.

Other stakeholders: the parish of St. Urbanus (landowner)


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NBS 4 – Aquaponik

Ort: Kokerei Hansa, Dortmund Huckarde

Beschreibung: Auf einer Fläche des Industriedenkmals Kokerei Hansa entsteht eine wissenschaftliche Versuchsanlage, in der perspektivisch Fisch- und Pflanzenzucht in einen Kreislaufsystem vorgesehen sind. Aquaponik heißt dieses Kreislaufsystem, welches dazu beitragen kann, die Menschen in der Stadt mit gesunder und umweltschonend produzierter Nahrung zu versorgen. Die Anlage dient zur Optimierung technischer Aspekte und zur Analyse, ob sich aufgrund kontaminierter Böden trotz baulicher Schutzmaßnahmen und bodenfreiem Anbau Schadstoffe in Nahrungsmitteln einlagern.

Partner: die Urbanisten e.V., Fachhochschule Südwestfalen, Aquaponik Manufaktur GmbH, Citybotanicals GmbH

Weitere Akteure: Stiftung Industriedenkmalpflege und Geschichtskultur

NBS 4 – Aquaponics

Location: Hansa coking plant, Dortmund Huckarde

Description: On a site of the old Hansa coking plant two greenhouses are built for scientific purposes in which perspectively fish and vegetables will be produced in a circular system (aquaponics). The concept of aquaponics will be advanced technically. As the ground is contaminated constructional protection measures and soilless cultivation will occur. Transfer paths of harmful substances will be examined in the produced food.

Partners: die Urbanisten e.V., South Westphalia University of Applied Science, Aquaponik Manufaktur GmbH, Citybotanicals GmbH

Other stakeholders: The Foundation for the Preservation of Industrial Monuments and Historical Culture (landowner)


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NBS 6 - Verbesserte Zugänglichkeit von Freiflächen

Ort: Halde Deusenberg, Dortmund Huckarde

Beschreibung: Seit der Einstellung des Betriebs 1992 und der anschließenden Rekultivierung hat sich die ehemalige Mülldeponie Deusenberg zu einem beliebten Naherholungsziel entwickelt. Die Zugänglichkeit auf die Halde besteht fast ausschließlich von Osten; an den Huckarder Siedlungskörper ist die Halde daher nicht gut angebunden. Seit Jahren besteht der Wunsch der Huckarder Bürger, die Zugänglichkeit auf die Halde zu verbessern. Daher wurde eine barrierefreie Wegeverbindung am südöstlichen Hangfuß gebaut.

Partner: Stadt Dortmund, Amt für Stadterneuerung

Weitere Akteure: Entsorgung Dortmund GmbH (EDG GmbH; Sachwalter), Emschergenossenschaft

NBS 6 - Accessible green corridors

Location: landfill Deusenberg, Dortmund Huckarde

Description: Since the closure of the site in 1992 and its subsequent recultivation, the former Deusenberg landfill site has developed into a popular local recreation destination. The hill is almost exclusively accessible from the east, which means that it is not well connected to the Huckarde settlement. For many years, the citizens of Huckarde have wanted to improve access to the Deusenberg. Therefore, a barrier-free path connection has been built at the south-eastern foot of the slope.

Partners: City of Dortmund, Department of Urban Renewal

Other stakeholders: Dortmund waste management company (advocate), Emschergenossenschaft


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NBS 8 - Biodiversität für Bestäuberinsekten

Ort: an verschiedenen Orten in Dortmund Huckarde

Beschreibung: An den Standorten der NBS 3 und NBS 4 sowie an mehreren Orten in Huckarde werden Pflanzen für Bestäuberinsekten ausgesät. Die einzelnen Standorte sind miteinander verbunden, so dass sich die Insekten einfach zwischen den verschiedenen Grundstücken hin- und her bewegen können. Darüber hinaus profitieren auch die Menschen von der visuellen und ökologischen Aufwertung.

Partner: Fachhochschule Südwestfalen, die Urbanisten e.V.

Weitere Akteure: Stadt Dortmund, Grünflächenamt, N.A.B.U., Kleingartenverein „Glückauf Hansa"

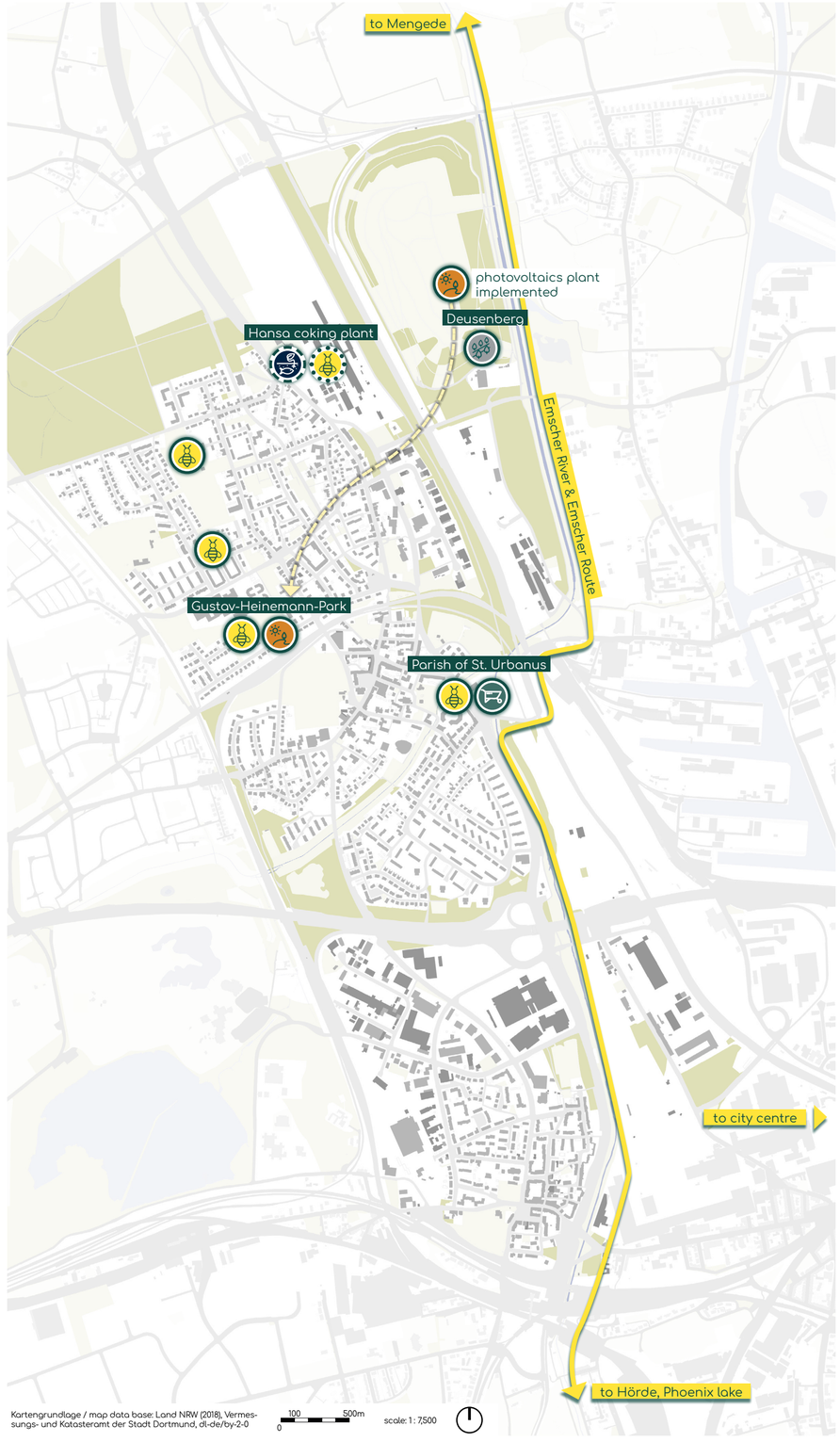
NBS 8 - Pollinator biodiversity

Location: at serveral locations in Dortmund Huckarde

Description: At the sites of the NBS 3 and NBS 4 implementations and at several locations in Huckarde, pollinator-friendly plants have been seeded. The selected sites are close to each other to eventually form a biodiversity pathway. This benefits both humans (color, scent, contemplation) but also enhances the biodiversity within the area by allowing insects to migrate easily between the different patches.

Partners: South Westphalia University of Applied Science, die Urbanisten e.V.

Other stakeholders: City of Dortmund, Department of Green Spaces, N.A.B.U. (environmental association), allotment association „Glückauf Hansa"



Naturbasierte Lösungen
Nature-based solutions

NBS 1
Freizeitaktivitäten und Produktion regenerativer Energien auf ehemaligen Halden
Leisure activities and clean energy on former landfills

NBS 3
Gemeinschaftsgärten und urbane Landwirtschaft
Community-based urban farms and gardens

NBS 4
Aquaponik
Aquaponics

NBS 6
Verbesserte Zugänglichkeit von Freiflächen
Accessible green corridors

NBS 8
Biodiversität für Bestäuberinsekten
Pollinator biodiversity

Umsetzungsstand
Implementation status

umgesetzt / in Nutzung
implemented

in Umsetzung
in progress

in Planung
in planning

Legende
legend

Gebäude Wohngebiet
Residential buildings

Industrie-/ Gewerbenutzung
industrial or commercial use

Grünflächen
green spaces

Wald
forests

Emscher
Emscher River

Emscherweg
Emscher Route

Productive Green Infrastructure for post-industrial urban regeneration (proGIreg)

Email: proGIreg@stadtdo.de
Websites: www.proGIreg.eu
www.proGIreg.dortmund.de
www.hansagruen.de

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 776528.

Planerstellung
map design

lohrberg stadtlandschaftsarchitektur
Partnerschaft Freier Landschaftsarchitekten mbB

Projektpartner
project partners

Stadt Dortmund, Amt für Stadterneuerung
Fachhochschule Südwestfalen, University of Applied Sciences
die urbanisten
aquaponik manufaktur
CITYBOTANICALS

This project (proGIreg) has received funding from the EU Horizon 2020 research and innovation programme under grant agreement no. 776528. This work (in proGIreg) was financially supported by the National Key Research and Development Programme of China (2017YFE0119000).

Final conference

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Front Runner City Dortmund ::: Living Lab Huckarde

How and what changed your thinking and planning culture in proGIreg Living Labs, and NBS development?

Realizing Green Infrastructure Projects on post-industrial sites are a greater challenge than assumed.

Which NBS, processes, procedures etc. proved to be the most challenging?

- Identify project sites
- Soil contamination causing extra time and financing
- Construction projects extra time for administrative procedures and approval processes
- Secure financing exceeding proGIreg budgets

What is your „favourite“ NBS?

NBS 3: Food Forest and Permaculture Orchard St. Urbanus

NBS 3 Community urban gardening and farming

Why?

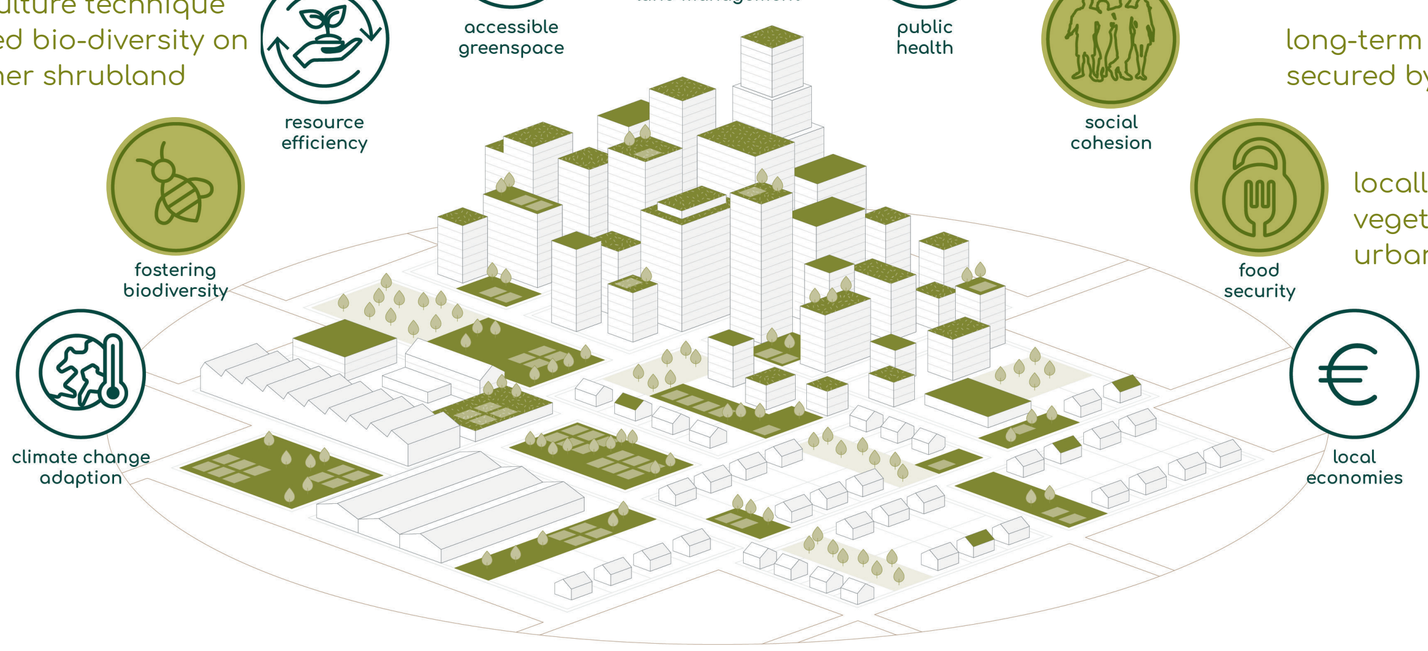
available private land provided by St. Urbanus parish council

active co-design and co-implementation process with church members and citizens of all ages

permaculture technique increased bio-diversity on the former shrubland

long-term maintenance of the garden secured by church members

locally-produced fruit and vegetables consumed by the urban garden community



Scan to watch Living Lab video!

productive Green Infrastructure for post-industrial urban regeneration (proGIreg)
www.proGIreg.eu

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Front Runner City Turin ::: Living Lab Mirafiori Sud

NBS revitalising Mirafiori Sud in line with social needs and supported by civic engagement

	Population	Area
Turin	c. 858,000 (2022)	130.2 km²
Living Lab	c. 33,600 (2022)	11.3 km²

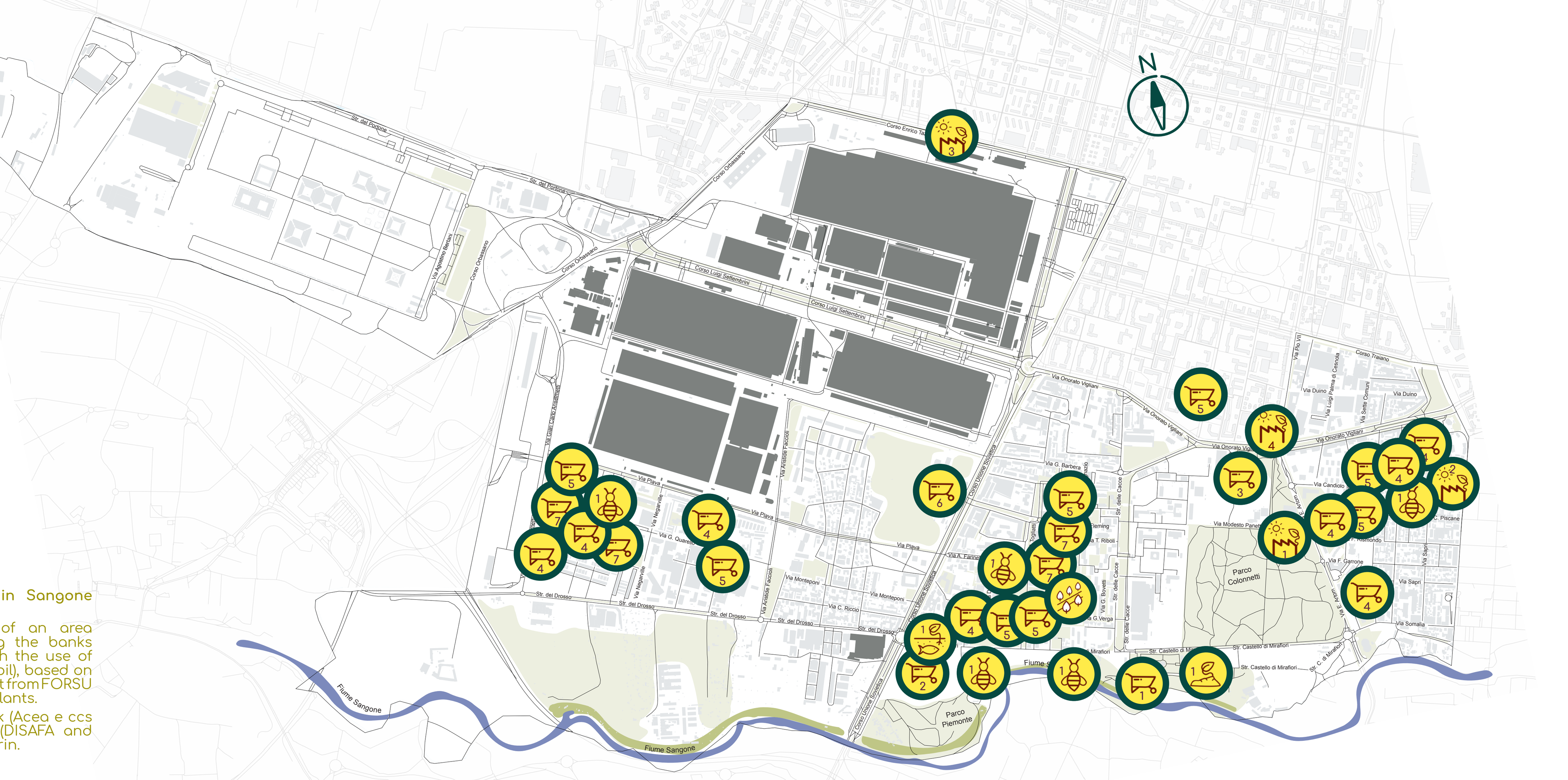
The decline of the car manufacturing industry resulted in decreasing population in Mirafiori Sud, socio-economic dispartities while leaving many sites empty, disused or abandoned. Located by the river Sangone, the area has high urban regeneration potential building on active local NGOs and strong cultural heritage.

Numerous NBS implementations initiated by proGIreg created green corridors, productive and socially inclusive green spaces while fostering changes in administrative procedures required for managing the transition.

Mirafiori Sud Living Lab Torino | Mirafiori Sud Living Lab Turin

Mappa del Living Lab | Living Lab map

Update: DEC, 2022



Obiettivi e vision generale del LL
Living Lab goals and overall vision

Rigenerare e valorizzare le aree insicure o abbandonate del quartiere di Mirafiori coinvolgendo i cittadini nella progettazione e gestione di spazi verdi pubblici.
To regenerate and enhance the abandoned or unsafe areas of the Mirafiori district by involving citizens in the design and management of public green spaces.

Promuovere nuove professionalità e modelli di business basati sulle soluzioni naturali.
To promote new professionalism and business models based on natural solutions.

Valorizzare i benefici multipli (sociali, ecologici, economici e per la salute) delle soluzioni naturali inserendole negli strumenti di pianificazione e rigenerazione urbana.
To demonstrate the multiple benefits (social, ecological, economic and health) of nature-based solutions as an integral tool of urban planning and regeneration.

Legenda | Legend

Soluzioni nature based
Nature based solutions

- Rigenerazione di suolo / NBS 2: Regenerating soil
- Orticoltura di comunità / NBS 3: Community urban gardening and farming
- Acquaponica / NBS 4: Aquaponics
- Tetti verdi e verde verticale / NBS 5: Green roofs and vertical gardens
- Migliorare l'accessibilità ai corridoi verdi / NBS 6: Improving accessibility to green corridors
- Processi di compensazione ambientale / NBS 7: ICT Tools
- Insetti impollinatori e biodiversità / NBS 8: Pollinator biodiversity

Stato di implementazione
Implementation status

- Realizzato / implemented
- In corso / in progress
- Programmato / in planning

Legenda dei colori
Colour palette

- Parchi/aree verdi / parks/green spaces
- Zone boschive / Forest
- Fiumi/laghi / waterways/lakes
- Costruito / built up areas
- Aree industriali / industrial areas
- Confini del Living Lab / Living Lab area boundary

Scale: 1: 10000

0 — 1000 Metri

Map by Politecnico di Torino, Dep. Architecture and Design

Dettagli sulla NBS 2 | Details on NBS 2

NEW REGENERATED SOIL THANKS TO BIOTIC COMPOUNDS FOR URBAN FORESTRY AND URBAN FARMING

1


Produzione di nuovo suolo rigenerato nel Parco Sangone.
Descrizione: Creazione di un'area di "foresta urbana" lungo le sponde del Sangone attraverso l'utilizzo di suolo rigenerato (New Soil), a base di inerti e compost da FORSU e biostimolanti innovativi.
Partners: Dual, Envipark (Acea e ccs come terze parti), Unito (DISAFA e Dip. Chimica), Città di Torino.

New Soil production in Sangone Park.
Description: Creation of an area of "urban forest" along the banks of the Sangone through the use of regenerated soil (New Soil), based on aggregates and compost from FORSU and innovative biostimulants.
Partners: Dual, Envipark (Acea e ccs as third parts), Unito (DISAFA and Dip. Chimica), City of Turin.

Dettagli sulla NBS 3 | Details on NBS 3

COMMUNITY-BASED URBAN FARMS AND GARDENING ON POST-INDUSTRIAL SITES

1


Recupero rovine Castello di Mirafiori.
Descrizione: Trasformazione paesaggistica per valorizzazione area di interesse storico-ambientale.
Partner: Orti Generali - Comitato Borgata Mirafiori

Castello di Mirafiori ruins recovery.
Description: Landscape transformation for enhancement of an area of historical and environmental interest.
Partner: Orti Generali - Comitato Borgata Mirafiori

2


Orti Generali.
Descrizione: Orti individuali e collettivi assegnati con contributo spese ai singoli cittadini, area didattica comune per attività formative e associative.
Partner: Orti Generali

Gardens in Cascina Piemonte (Orti Generali).
Description: Collective gardens rented to individual citizens, common educational area for training and community activities.
Partner: Orti Generali

3


Giardini fioriti al WOW.
Descrizione: Giardino in cassone e arnie.
Partners: Orti Alti, Fondazione Mirafiori, Miravolante, Città di Torino.

Pollinator friendly gardens at WOW.
Description: Box gardens and beehives.
Partners: Orti Alti, Fondazione Mirafiori, Miravolante, Città di Torino.

4


Orto a scuola in cassone.
Descrizione: Realizzazione o integrazione di orti didattici in cassone e di laboratori scientifici rivolti alla scuola primaria e superiore sui temi di proGIreg.
Partners: Fondazione Mirafiori, Miravolante, Unito (DBios e DISAFA).

School garden in box.
Description: Realization or integration of educational gardens and scientific laboratories aimed at primary and high schools on the topics of proGIreg.
Partners: Fondazione Mirafiori, Miravolante, Unito (DBios e DISAFA).

5


Ortomobile.
Fornitura di uno stock di cassette per la realizzazione di "micro-orti" e compostiere per le scuole e corso pratico per gli insegnanti.
Partners: Iter, Unito (DBios e DISAFA).

Portable school gardens.
Supply of a stock of wood cassettes for the realization of "micro-garden" and composters for schools and practical course for teachers.
Partners: Iter, Unito (DBios e DISAFA).

6


Orti comunitari a scuola.
Descrizione: Orto didattico in cassone.
Partners: Iter, Liceo Scientifico Primo Levi, Unito (DBios e DISAFA)

Community school gardens.
Description: Vegetable garden in wood boxes (raised bed).
Partners: Iter, Liceo Scientifico Primo Levi, Unito (DBios e DISAFA)

7

Orto tra le case.
Descrizione: Posa di cassoni fissi per orticoltura urbana.
Partner: Fond. Mirafiori, Miravolante.

Gardens between houses.
Description: Placing of fixed containers for urban horticulture.
Partners: Fond. Mirafiori, Miravolante.

Dettagli sulla NBS 4 | Details on NBS 4

AQUAPONICS AS SOIL-LESS AGRICOLTURE FOR POLLUTED SITES

1


Test di acquaponica.
Descrizione: Sistemi di acquaponica su piccola e media scala, progettati con la comunità e installati in due edifici del quartiere
Partner: Città di Torino.

Aquaponics test.
Descrizione: Small and medium scale community - designed aquaponics system, to be set up on two local buildings.
Partner: City of Turin.

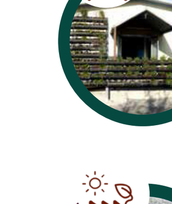
Dettagli sulla NBS 5 | Details on NBS 5

CAPILLARY GI ON WALLS AND ROOFS

1


Nuovo tetto verde Casa Nel Parco.
Descrizione: Ripristino dell'accesso del tetto verde di Casa Nel Parco
Partner coinvolto: Città di Torino, Fondazione Mirafiori.

New green roof at Casa nel Parco.
Description: Restoration of the Casa nel Parco green roof access
Partners: City of Turin, Fondazione Mirafiori.

2


Parete verde a scuola.
Descrizione: Parete indoor con sistema a vaschette estraibili. Progettazione partecipata e co-gestione per la cura delle pareti con coinvolgimento di studenti e personale scolastico.
Partnes: Città di Torino, Politecnico di Torino (DAD e DIATI).

Green Wall at school.
Description: Green indoor wall with removable tray system. Participatory processes and co-management for the maintainence of the green walls with the students and the school staff.
Partners: City of Turin, Politecnico di Torino (DAD and DIATI).

3


Parete verde dormitorio senzatetto.
Descrizione: Parete verde autoportante esterna, con vaschette rimovibili e tasche in feltro. Progettazione partecipata e co-gestione per la cura delle pareti con coinvolgimento degli utenti.
Partners: Città di Torino, Politecnico di Torino (DAD e DIATI).

Green wall at homeless shelter.
Description: Outdoor self-supporting green wall, with removable trays and felt pockets. Participatory design process/co-management for the mantainence together with the users.
Partners: City of Turin, Politecnico di Torino (DAD and DIATI).

4


Tetto verde al WOW.
Descrizione: Realizzazione di un tetto verde estensivo sull'edificio WOW.
Partners: OrtiAlti, Città di Torino.

Green roof at WOW building.
Description: Realization of an extensive green roof WOW building.
Partners: OrtiAlti, City of Turin.

Dettagli sulla NBS 6 | Details on NBS 6

ACCESSIBLE GREEN CORRIDORS

1

Corridoio verde.
Descrizione: Realizzazione di un percorso verde e pollinator friendly.
Partner: Città di Torino.

Green corridor.
Description: Creation of a green and pollinator friendly course.
Partner: City of Turin.

Dettagli sulla NBS 6 | Details on NBS 6

ACCESSIBLE GREEN CORRIDORS

2


Valorizzazione del patrimonio naturalistico nel corridoio verde.
Descrizione: Potenziare la fruizione dell'area naturalistica del corridoio verde e promuovere l'utilizzo della pista ciclabile tramite segnaletica verticale e arredo urbano
Partner: Fondazione Mirafiori

Local natural heritage enhancement in green corridor.
Description: Enhancement of the naturalistic green corridor and promotion of the cycling path through the creation of vertical signage and street furniture.
Partner: Fondazione Mirafiori

Dettagli sulla NBS 7 | Details on NBS 7

LOCAL ENVIRONMENTAL COMPENSATION PROCESSES

1


Partenariato strategico pubblico-privato per il verde in città.
Descrizione: Identificare, raccogliere e mostrare strumenti e opportunità concrete per permettere all'amministrazione di migliorare il patrimonio verde della città grazie alla collaborazione pubblico-privata.
Partner: Città di Torino.

Strategic public-private partnership for greening the City.
Description: Identify, collect and display tools and concrete opportunities in order to allow the Administration to improve the green assets of the City through public private collaboration.
Partner: Città di Torino.

Dettagli sulla NBS 8 | Details on NBS 8

POLLINATOR BIODIVERSITY IMPROVEMENT ACTIVITIES AND CITIZEN SCIENCE PROJECT

1


Giardino farfalle nelle scuole e presso centri per disabili mentali.
Descrizione: Realizzazione di un corso e di varie attività formative sulla vita delle farfalle. Supporto alla realizzazione del giardino delle farfalle. Biomonitoraggio con il metodo del transetto.
Partners: Unito (DBios) e Unito (DISAFA).

Butterfly gardens in schools and for disadvantaged people.
Description: Realization of training activities on the life of butterflies. Supporting the creation of the butterfly garden. Biomonitoring with the transect method.
Partners: Unito (DBios) e Unito (DISAFA).

Partner locali proGIreg (e altri importanti stakeholders)
Local proGIreg partners (and other important stakeholders)

Productive Green Infrastructure for post-industrial urban regeneration (proGIreg)
Email: progireg@la.rwth-aachen.de
Website: www.proGIreg.eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 776528.

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Urban transitions through nature-based solutions: Open.Green.Together

Front Runner City Turin ::: Living Lab Mirafiori Sud

How and what changed your thinking and planning culture in proGIreg Living Labs, and NBS development?

„It‘s essential to plan, design and manage urban transformations together with private sector, academia and NGOs institutions.“ (City of Turin)

Which NBS, processes, procedures etc. proved to be the most challenging?

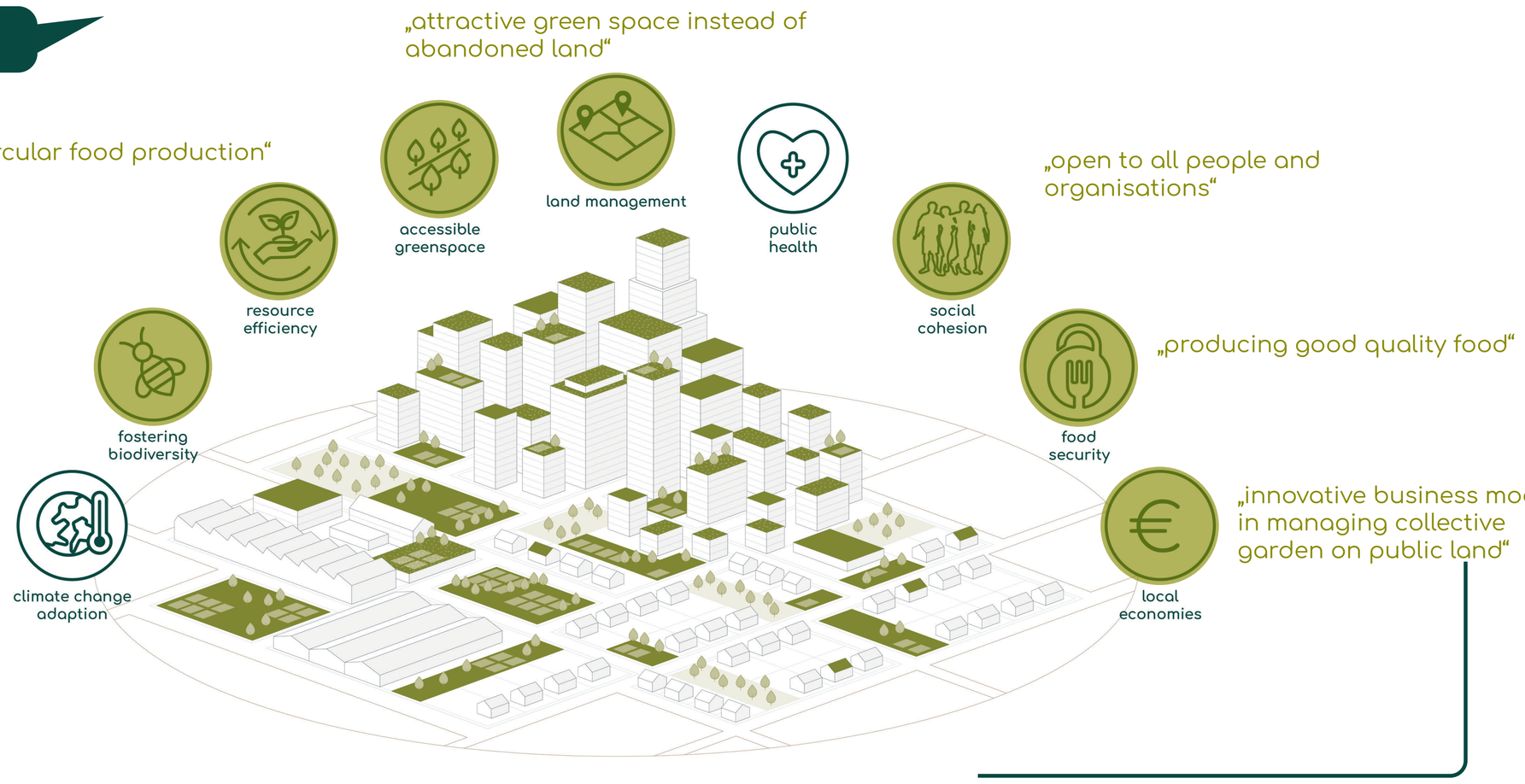
NBS 5 Green roof:
- Abandoned building;
- Structural deficiencies of the building;
- Accessibility permit;
- Public-Private Partnership,
- securing roof maintenance.

What is your „favourite“ NBS?

NBS 3 Community urban gardening and farming

NBS 3 Orti Generali benefits for the Living Lab

Why?



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Living Lab

NBS2

NBS3

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Front Runner City Ningbo ::: Living Lab Moon Lake

Ningbo	25,750	9,816 km²
Living Lab	12,440	2.1 km²

Ningbo is a sub-provincial city in Zhejiang Province, China. Rapid urbanisation has led to poor green and blue areas, low quality and lack of green spaces.

The Living Lab around Moon Lake and Moon Lake Street in the touristic part of downtown Ningbo implemented NBS addressing the key challenge of improving the lake's water quality: Planting aquatic species along the lakeshore using natural purification processes. It also introduced changes to environmental protocols.

Ningbo Living Lab Map

Living Lab Plan
Living Lab Vision map

Update: 11.2021

NBS type: New regenerated soil thanks to biotic compounds for urban forestry and urban farmingr.

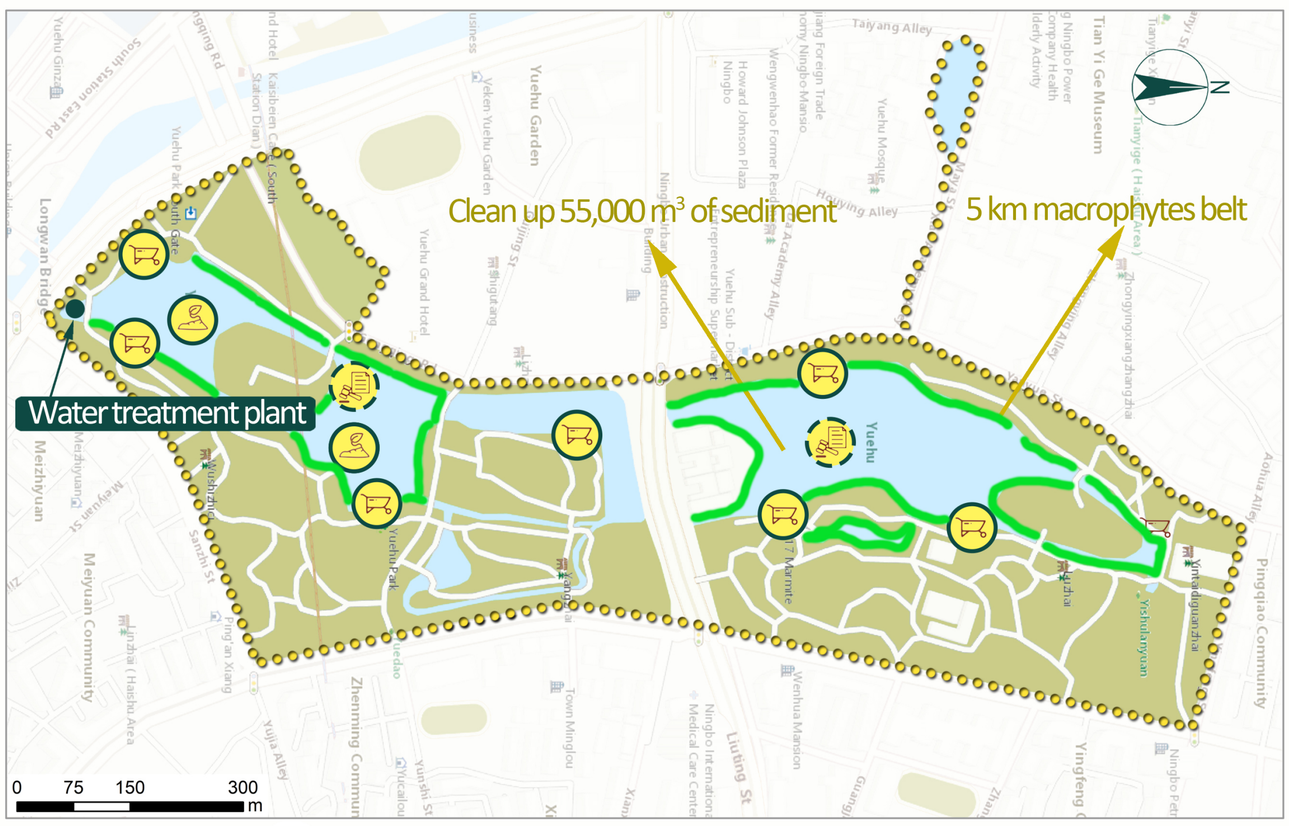
Brief project synthesis: This NBS is for reusing lake bottom sediments and turning waste into treasure.

NBS type: Community-based urban farming and gardening on post-industrial sites.

Brief project synthesis: Planting aquatic plants along the lake can beautify the environment while purifying the water quality. Aquatic plants are being used to re-nature a 5 km corridor.

Living Lab goals and overall vision

On the lake ecological comprehensive control project within one year after the completion of the main water quality indicators will reach IV class, will reach III class for two years.
Water quality purification and ecological restoration projects will continue to remove pollutants in water bodies through moderate human intervention; improve self-purification ability of water bodies through ecological technology.



proGIreg

Nature-based solutions

- NBS 2 (canceled) Transforming lake sediment into soil fertilizer (Due to the high content of heavy metals in the lake sediment, decided not to implement NBS 2)
- NBS 3 Planting aquatic plants along the shore of the lake
- NBS 7 Procedures for environmental compensation

Implementation status

- implemented
- in progress

legend

- Living lab
- Water surface
- Existing green spaces
- Macrophytes belt

NBS type: Establishing protocols and procedures for environmental compensation at local level.

Brief project synthesis: The main content of this activity is to evaluate the comprehensive management results of Mook Lake, that is, collecting meteorological, hydrological, chemical and ecological data to monitor the environment of Mook Lake.

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Final conference

Urban transitions through nature-based solutions: Open.Green.Together

Front Runner City Zagreb ::: Living Lab Sesvete

Zagreb	767,131 (2021)	461 km²
Living Lab	55,000 (2021)	0.13 km²

Sesvete district on Zagreb's east administrative border is witnessing high population development due to immigration and natural growth (on average youngest community in Zagreb). Given urban sprawl and major east-west transects, Sesvete lacks a distinctive socially inclusive and recreational center.

Therefore, NBS activities are regenerating the formerly inaccessible post-industrial area, also bridging Sesvete's North-South sides. The Living Lab experimented with a therapeutic garden, a mini-farm combining green roof and wall with a small-scale aquaponics system.

Karta Living Laba, Sesvete, Grad Zagreb | Living Lab Map, Sesvete, City of Zagreb | 21/12/2022

Ciljevi Living Laba
Living Lab goals

Gradovi se sve više suočavaju s posljedicama klimatskih promjena te se u Europi i svijetu sve više prepoznaje važnost zelene infrastrukture kao sredstva za ublažavanje ekstrema u gradovima. Grad Zagreb zajedno s Dortmundom, Torinom i Ningbom kroz projekt proGIreg (produktivna zelena infrastruktura za urbanu obnovu) radi na podizanju kvalitete života lokalne zajednice uvođenjem rješenja temeljenih na prirodi uzimajući u obzir potrebu za produktivnošću.

Cities are increasingly facing the effects of climate changes so the importance of green infrastructures is being recognized in Europe and in the world as a means of mitigating extremes in the cities. City of Zagreb together with Dortmund, Turin and Ningbo through the proGIreg project (productive green infrastructure for urban regeneration) works to raise the quality of life of the local communities by introducing nature-based solutions considering the need for productivity.

NBS 7: Uvođenje NBS-a u regulativu
NBS 7: Introducing NBS into regulation

* nove smjernice za planiranje niskougljičnog razvoja, koje podrazumijevaju postupak izrade i donošenja prostornih planova kroz rani participativni proces, te zaokret prema niskougljičnom razvoju
* new guidelines for low-carbon development planning, implying procedure for development and adoption of spatial plar through early participatory process, and a turn towards low-carbon development.

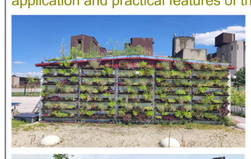
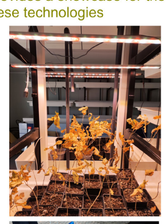
NBS 3: Izgradnja novog terapijskog vrta, modernizacija postojećeg gradskog vrta uz korištenje inovativne tehnologije pročišćavanja podzemnih voda, Info centar projekta

NBS 3: Construction of a new therapeutic garden, modernization of the existing city garden using innovative groundwater treatment technology, project Info point



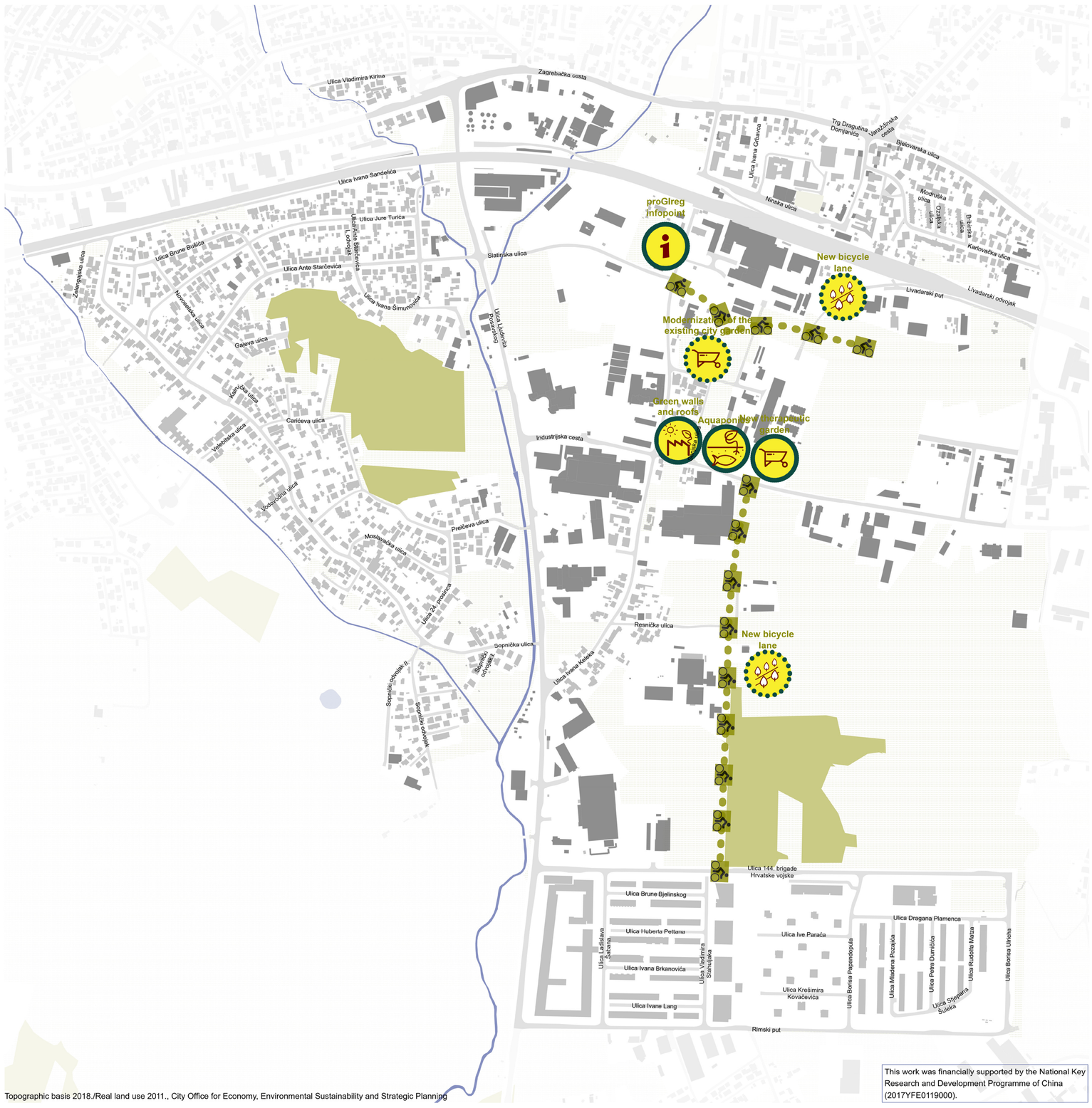
NBS 4/5: Modularna urbana farma koja kombinira NBS 4 (zeleni zidovi i krovovi) i 5 (akvaponika). Farma predstavlja pokazni primjer primjene i praktičnih značajki ovih tehnologija

NBS 4/5: Modular urban farm combining NBS 4 (green walls and roofs) and 5 (aquaponics). The farm provides a showcase for the application and practical features of these technologies

NBS 6: Novi pješačko-biciklistički koridori koji povezuju fragmentirani prostor bivše industrije, gospodarskog prostora i stambenih naselja

NBS 6: New pedestrian-cycling corridors that connect the fragmented space of former industry, commercial space and residential areas



Rješenja temeljena na prirodi
Nature - based solutions

- Modernizacija postojećeg gradskog vrta — NBS 3: Modernization of the existing city garden
- Novi terapijski vrt — NBS 3: New therapeutic garden
- Akvaponika — NBS 4: Aquaponics
- Zeleni zidovi i krovovi — NBS 5: Green walls and roofs
- Nova biciklistička staza — NBS 6: New bicycle lane

Provedbeni status
Implementing status

- Planirano — In planning
- Provedeno — Implemented

- proGIreg infocentar — proGIreg infopoint
- Vodotoci — Waterways
- Park — Park
- Šuma — Forest
- Neuređene zelene površine — Undeveloped green area
- Prometna infrastruktura — Road infrastructure
- Zgrade — Buildings
- Gospodarske zgrade — Commercial buildings

0 50 100 200 m

Topographic basis 2018./Real land use 2011., City Office for Economy, Environmental Sustainability and Strategic Planning

Koordinator lokalnih aktivnosti / Coordinator of local activities:

GRAD ZAGREB
GRADSKI URED ZA GOSPODARSTVO EKOLOŠKU ODRŽIVOST I STRATEGIJSKO PLANIRANJE

Lokalni partneri projekta / Local project partners:

ZAVOD ZA PROSTORNO UREĐENJE GRADA ZAGREBA

zelene i plave Sesvete

Productive Green Infrastructure for post-industrial urban regeneration (proGIreg)
Email: progireg@zagreb.hr
Website: www.proGIreg.eu

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proGIreg

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Front Runner City Zagreb ::: Living Lab Sesvete

How and what changed your thinking and planning culture in proGIreg Living Labs, and NBS development?

New planning pardigm from grey to green introducing NBS. (ZZPUGZ - Urban Planning)

Which NBS, processes, procedures etc. proved to be the most challenging?

- Lack of collective understanding and acceptance of NBS Lengthy process of updating spatial/urban plans regarding NBS financing and planning procedures
- Lack of efficient legal instruments for spatial/urban plan implementation on privately owned land

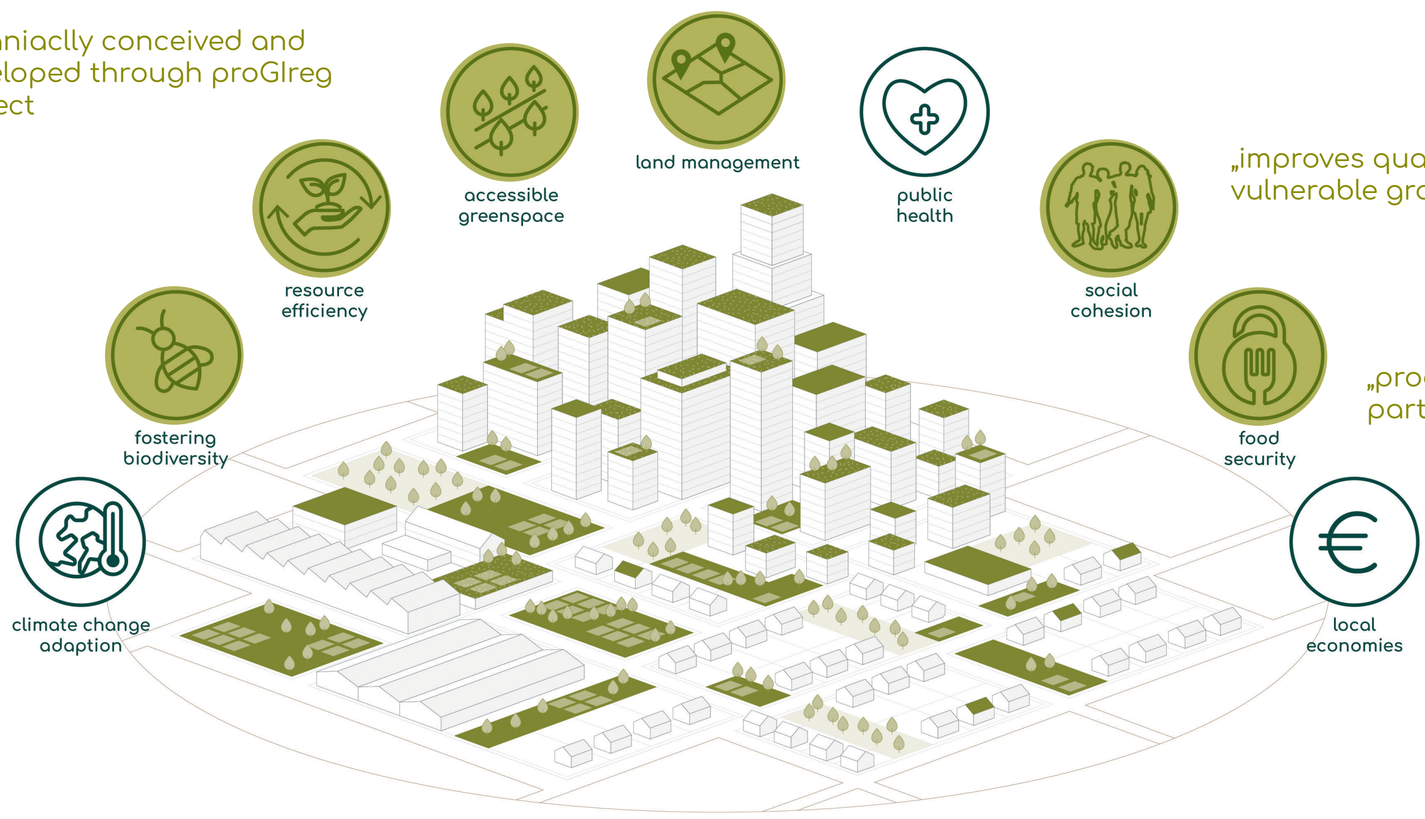
What is your „favourite“ NBS?

NBS 3 Therapeutic garden

NBS 3 Community urban gardening and farming

Why?

organiaclly conceived and developed through proGIreg project



„improves quality of life for vulnerable groups“

„product of early participation and co-design“

Wheel-chair friendly raised beds

Sensory walk

View towards former meat processing factory

Scan to watch Living Lab video!

proGIreg
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