

BEHIND THE ARTICLES

EXECUTIVE SUMMARY

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Notes:

- “Cities remained absent from discussions on key areas where their role will be critical in terms of enabling transformative change - production, consumption, climate change, the use of nature-based solutions, and mobilising a change in values to protect nature.” https://www.researchgate.net/publication/344537441_Moving_Towards_Transformative_Change_for_Biodiversity_Harnessing_the_Potential_of_the_Post-2020_Global_Biodiversity_Framework P19

INTRODUCTION

UNDERSTANDING BIODIVERCITIES FROM A TRANSFORMATIVE CHANGE APPROACH

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FROM URBAN BIODIVERSITY TO BIODIVERCITIES RECONCILING SOCIETY AND NATURE IN CITIES

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Notes

- Gilles Clément (2004) defines the "third landscape" as something beyond what is natural and that which is built: the set of marginal spaces that harbor significant biological diversity.

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TRANSFORMATION

BIODIVERCITY AND REGION: A UNITARY SYSTEM THE PARADIGM SHIFT IN 21ST CENTURY URBAN DEVELOPMENT

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BIODIVERSITY THRIVES IN THE BUILT ENVIRONMENT

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Notes

- Concerning approaches such as the habitat's social construction and the right to the city (Zárate, 2016).

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SUSTAINABLE URBAN ECONOMIES TRANSITIONS BASED ON BIODIVERSITY KNOWLEDGE

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Recommended reading

- › <http://reporte.humboldt.org.co/biodiversidad/2017/cap3/303/>
- › <http://reporte.humboldt.org.co/biodiversidad/2020/cap2/201/>
- › <http://reporte.humboldt.org.co/biodiversidad/2020/cap3/306/>
- › <https://encasa.parqueexplora.org/maravillosos-perseguidos/>

BIODIVERCITY PLANNING: STRATEGIES FOR INCORPORATING URBAN BIODIVERSITY AND ITS ECOSYSTEM SERVICES

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Notes:

1. There is no single concept that is unanimously accepted in the global institutional environment. For this chapter, the following definition of green finance is adopted: different public and private financing instruments (green bonds, loans, specific fiscal resources, subsidies, grants, donations, etc.).
2. For this chapter, Natural Capital is defined as the stock of renewable and non-renewable resources (Ecosystems, soil resources). The stocks, in this case, are the natural capital and the flows are the ecosystem and abiotic services. <http://www.thebiodiversityconsultancy.com/es/approaches/natural-capital/>
3. <https://www.un.org/development/desa/es/news/population/2018-world-urbanization-prospects.html>
4. "The LAC region is hit by pandemic-driven recessions, severe economic and social consequences of climate change, and inadequate and obsolete infrastructure" (Oliver, E. et al., 2021, p. 4).

5. Better known as green-gray. That is, infrastructure works that combine conventional construction with natural and semi-natural systems.

6. Mention can be made, among others: Bapna & Fuller, 2021; Griscom et al., 2017; Wade & Jennings, 2016; WRI Brazil, 2020.

7. These seek to restrict the use of the environment (e.g., quotas, rights, and concessions on resources or ecosystems, closures, emission limitations) and those seeking to condition natural resources (e.g., zoning, resource use, or exploitation permits).

8. Term coined by BIOFIN - UNPD's Biodiversity Finance Initiative.

9. The "bankability" of the project consists of determining whether the project is capable, within a certain period of time, of generating sufficient cash flows to repay the financing granted.

10. Scalability" refers to the size of the investment and financing of the projects.

11. For example, the IDB has granted ordinary capital loans exclusively for NBS projects to the Ministry of Agriculture and Livestock of El Salvador and Bolivia's Ministry of Environment and Water.

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EXPERIMENTATION

LONDON NATIONAL PARK CITY IMPROVING LIFE IN THE CITY THROUGH SMALL AND ACHIEVABLE ACTIONS

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Notes

- Ranging from grassroots campaigners to Mayors and Ministers, people from lots of different cities have started the National Park City journey. Some are just asking questions. Others have campaigned for years and are ready to apply for the status. These people are from a range of cities including, but limited to: Adelaide, Amsterdam, Auckland, Belfast, Berlin, Breda, Bristol, Calgary, Canberra, Cardiff, Chengdu, Chester, Christchurch, Concepción, Galway, Glasgow, Johannesburg, Kazan, La Plata, London, Louisville, Manila, Melbourne, Milton Keynes, Nairobi, Newcastle, Sacramento, San Francisco, Seoul, Southampton, Swansea, Sydney, Tartu, Tokyo, Van Gogh, Wairiki Park Region, Albuquerque, Chattanooga, San Pedro Garza García / Monterrey.

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RIVERS OF CHANGE THE REVOLUTION OF THE PUBLIC SPACE AROUND THE SINÚ RIVER

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Notes

- In 1938, a wall was built to prevent flooding in the market area. The Monteria market, measuring approximately 5,000 m², was built between 1942 and 1946.
- In the beginning, the Sinú riverbank was financed by the private sector as well as by the *Corporación Autónoma Regional de Los Valles del Sinú y del San Jorge* (CVS), who understood the Sinú riverbank as an "environmental observatory." As of the project's fourth year, the license was maintained through a

fee charged for drinking water and essential sanitation services depending on the socio-economic stratum (for 2002, the rates were as follows: stratum 1: COP 1000; stratum 2: COP 2000; stratum 3: COP 3000; stratum 4: COP 5000; strata 5-6: COP 10,000; commercial: COP 6500, and industrial: COP 20,000). These rates increased according to the CPI. Due to the successful operation of the license model, instruments are currently being explored to return to this model.

- In addition to the natural environment and its biodiversity, another vital design criterion was its integration with the built environment, specifically the predominant land use, which in some way also conditioned the zoning of the park's surroundings and accesses.

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PLANNING ROOTED IN BIODIVERSITY PARTICIPATORY TERRITORIAL MANAGEMENT IN HIGH MOUNTAIN CITIES

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Notes

- Acronym for Global Environmental Fund
- All the Biological Mountain Corridors GEF project resources are available at <https://gefmontana.mma.gob.cl/>.

URBAN AMAZON EVOLUTION OF HUMAN SETTLEMENTS IN THE COLOMBIAN AMAZON AND THEIR LIVING CONDITIONS

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Instituto Amazónico de Investigaciones Científicas Sinchi: <https://www.sinchi.org.co/publicaciones>

THE SWEET CITY URBAN PLANNING AROUND POLLINATORS

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Notes

- Parque del recuerdo (Memory Park). The Municipality Office together with the community of the Lomas de Ayarco neighborhood replaced exotic plant

species with native and/or naturalized species, which better adapt to climate change. The park commemorates citizens through their loved ones, who planted a tree in their memory. Today it constitutes new and different attributes such as regeneration, contemplation, and remembrance.

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› <https://www.invu.go.cr/plan-gam-13-30>

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NEIGHBORHOOD SCALED BIODIVERCITIES AN INITIATIVE BY A GROUP OF GRAN CHICÓ NEIGHBORS TO LEARN ABOUT ITS BIODIVERSITY RESULTED IN RECOGNITION OF THE AREA AS A PRIORITIZED ECOLOGICAL CORRIDOR IN BOGOTÁ.

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Notes

- Please visit: https://www.grupoecomunitario.org/_files/ugd/48aa0e_dc8a0f-4b59f04251b6f397c10f0025a5.pdf.

Further reading

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URBAN BIOTOPES PUBLIC SPACE INSPIRED BY BIODIVERSITY

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References

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WIN-WIN SCENARIOS

THE IMPLEMENTATION PROCESS OF TWO DECREES THAT AIM TO RECOVER SIX VALUABLE AND BIODIVERSE WETLANDS IN VILLAVICENCIO.

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Notes

- Cormacarena is the environmental authority of the department of Meta, whose capital is Villavicencio. Among its functions is coordinating the formulation of environmental development plans, programs, and projects to be developed by the various agencies and entities of the Sistema Nacional Ambiental [National Environmental System] (SINA) in the area under its jurisdiction.
- Partial plans are the instruments through which the provisions of the zoning plans are developed and complemented for specific urban land areas

and for areas included as urban expansion land, in addition to those to be developed through urban planning units, macro-projects, or other special urban operations, per authorizations stemming from the general urban planning regulations, under the terms outlined in this Law. Law 388 of 1998, Article 19.

- Administrative act of private and concrete content that authorizes an urban development action. Law 388 of 1998, article 36.
- Property transfer process:
 - The owner makes a request of intention to participate in the land transfer process for additional buildability.
 - The Ministry of Planning and Territorial Development reviews the related documentation and studies the deeds.
 - If the requirements are met, the topographic verification of the area is carried out.
 - Once the above has been completed, the certificate of receipt and subscription of the deed is made in the municipality's name.
 - With the deed being registered, the resolution delivering the additional buildability by land transfer is generated.

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Further reading

- Decreto 152 de 2021.
- https://www.youtube.com/watch?v=nK6Vwgo_pYU

THE VALUE OF THE URBAN FOREST A METHODOLOGY FOR A COMPREHENSIVE ASSESSMENT OF ECOSYSTEM SERVICES IN URBAN AREAS.

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GREEN ROOFTOPS GIS DATA, ROOFTOP AGRICULTURE, AND GREEN URBAN TRANSFORMATION

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Notes

- For the topic of cooling via rooftop gardens, we looked at the district of Bangu in Rio. We used the Land Surface temperature and combined the GIS data with our flat roof landscape results. This process gave us insights into which roofs are located in these key "hot" areas and should be prioritized.
- Please visit https://pcrj.maps.arcgis.com/apps/MapJournal/index.html?appid=9242476f2d794d80b2bf0af26e80cbc9&fbclid=IwAR-0t5iqJFz64RRncYV8XuSh-DBoTD0U6PZLPUYe_WtcpNACThEJhQ2T6_T0
- Since they are not public spaces, they are not usually included in the municipality's strategy. This means they become lost space that is already there in the city for green areas and should be integrated.

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A RIVER RUNS THROUGH IT THE REVITALIZATION OF MOMPOSINO PUBLIC SPACE THROUGH WATER

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URBAN BIO-CORRIDORS SMALL PRIVATE HABITATS THAT ADD NATURE TO THE CITY

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References

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A BIRD'S EYE VIEW OF CITIES BIRDWATCHING TOURISM AS AN ECONOMIC DEVELOPMENT ALTERNATIVE

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INDUSTRIAL ENVIRONMENTAL FABRIC YUMBO, FROM THE INDUSTRY OF THE FIFTIES TO THE INDUSTRY OF THE FUTURE

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Note

- The Yumbo POT is developed within the framework of Consulting Contract No. 104.10.07.168-2020 of December 2020, in force until 2022, signed between the Municipality of Yumbo and the Yumbo Futuro Temporary Union, integrated by the Foundation for the Integral Development of Yumbo-FEDY and the firm Environmental Analysis, under the general technical direction by the Ph.D. Arq. César Londoño.

LEARNING ENVIRONMENT A SCHOOL AS AN EXPONENT OF BIODIVERSITY CONSERVATION IN BOGOTÁ

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Notes

1. 148 municipalities:

DEPARTMENT	CITY	POPULATION	EXTENSION KM²
Antioquia	Apartadó	131.754	607
Antioquia	Beautiful	569.488	151
Antioquia	Envigado	249.800	51
Antioquia	Marinilla	70.024	116
Antioquia	Medellin	2.612.958	387
Antioquia	Peñol	22.448	145
Antioquia	Rionegro	147.484	198
Antioquia	Sabaneta	90.743	15
Atlantic	Barranquilla	1.312.473	166
Bogota	Bogota	7.901.653	1.605
Boyacá	Oicatá	2.929	62
Boyacá	Villa of Leyva	17.205	121
Caldas	Palestine	15.956	119
Caquetá	Manizales	454.077	477
Caquetá	Florence	176.706	2.292
Casanare	Hato Corozal	12.298	5.581
Cauca	Miranda	32.602	212
Cauca	Padilla	10.152	68
Cauca	Popayan	330.750	464
Córdoba	Monteria	512.994	3.043
Cundinamarca	Cajicá	99.720	53
Cundinamarca	Chipaqué	10.786	130
Cundinamarca	Fúquene	5.588	87
Cundinamarca	La Calera	35.301	340
Cundinamarca	Madrid	136.374	120
Cundinamarca	Tabio	25.964	74
Huila	Guadalupe	18.602	242
Cupcake	Santa Marta	552.391	2.369
Goal	Puerto Lopez	30.799	6239
Goal	Villavicencio	554.173	1.328
North Santander	Cucuta	791.986	1.098
Quindio	Salento	9.772	328
Risaralda	Dosquebradas	227.696	80
Risaralda	Pereira	485.373	702
Santander	Bucaramanga	618.967	154
Santander	Floridablanca	313.745	101
Santander	Piedecuesta	186.435	481
Santander	San Gil	60.804	150
Sucre	The Union	13.311	234
Sucre	San Marcos	62.044	1.012
Tolima	Ibaqué	543.949	1.439
Tolima	Rovira	21.600	733
Valle del Cauca	Jamundi	169.280	603
Valle del Cauca	The Summit	16.716	165
Valle del Cauca	Palmira	358.806	1.044
Valle del Cauca	Santiago de Cali	2.280.907	552
Valle del Cauca	Tuluá	221.604	818
Valle del Cauca	Yumbo	111.474	243

Source: National Planning Department, TerriData, <https://terridata.dnp.gov.co/index-app.html#/perfiles/47001>

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Further reading

› <https://www.oasisurbano.org/>

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Moravian Cultural Development Center, an agreement between the Mayor's Office of Medellín and Comfenalco Antioquia

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Notes

1. <https://www.densurbam.com.co/consultas-unidad>
2. It was first applied in the city of Envigado in 2017 and subsequently to the entire metropolitan area of the Valle de Aburrá in 2018.

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SUSTAINABLE FAVELAS REALIZING CLIMATE JUSTICE BY INVESTING IN FAVELA ASSETS

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1. <https://catcomm.org/>

WOODED TRAILS THAT WEAVE CITY PLANNING FOR LANDSCAPE AND FUNCTIONAL CONNECTIVITY IN THE NORTH OF BOGOTÁ

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1. Systemic perspectives on low-carbon cities in Colombia- An integrated urban modeling approach for policy and regulatory analysis" <https://electri-cayelectronica.uniandes.edu.co/es/ciudades-con-bajas-emisiones-de-carbon-in-colombia>.

WEAVING STORIES OF PEOPLE AND PLANTS DISCOVERING THE BIOECONOMY POTENTIAL AT A PLANT’S MARKETPLACE

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1. The following are the additional variables designed for this prioritization stage and a brief description for each: **Production capacity:** production capacity of the species throughout the year (low, medium, or high). **Derived compounds:** identifying information associated with knowledge of active chemical compounds for the species, gathered from secondary sources. **Known products:** identifying products developed or under development using the identified species (as primary raw material or secondary ingredient) present in the market. This variable will be analyzed for the marketplace’s case and with secondary information for other markets in the case of Colombia. **Business projection:** variable that represents the range of possible uses and demand associated with the species for various industries or sectors at the local, national and international levels, mainly the pharmaceutical, cosmetic, and food industries, as well as the facilities for their commercialization. **Related companies and organizations:** formal or informal organizations responsible for the production, transformation and/or commercialization of the species or products associated with the identified species. **Traditional knowledge associated with the species:** identification of traditional uses and ethnic groups related to the species, in cases where information is available from primary or secondary sources.
2. The focus of these life stories is that they are autobiographical accounts that tell the life paths of the people who make Samper Mendoza Marketplace possible through three moments: first, childhood and the early relationship with plants; secondly, adulthood and vocation, which seeks to understand the circumstances that caused this varied group of people to converge in a place like the *plaza* around the trade of selling plants and, finally, a third moment whose objective is to understand the *plaza* as a place under construction that is possible, thanks to a set of diverse relationships between equally heterogeneous human and non-human actors (Méndez, 2021).
3. See page 19 of this document: http://repository.humboldt.org.co/bitstream/handle/20.500.11761/35834/9_publico_Informe%20T%c3%a9cnico%20Final%20Historias%20de%20vida.docx.pdf?sequence=6&isAllowed=y
4. This prioritization is included in the publication *Plants and Knowledge of the Samper Mendoza Marketplace (Plantas y saberes de la Plaza Samper Mendoza)* (Torres-Morales et al., 2021).

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CIRCULAR FOREST BIOECONOMY FINNISH CITIES AND REGIONS MOBILIZING TO ACHIEVE A SUSTAINABLE BIO-BASED CIRCULAR ECONOMY

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Notes

1. In the 19th century, deforestation increased due to the population increase from 1 to 2.5 million, and the resulting demand for more wood for fuel and construction and increased need for agricultural land (Palo, 2004). A strict Forest Act was put in place in 1851 to ensure the availability of forest resources in the future, and a temporary National Board of Land Surveying and Forest Management was established to supervise and oversee the Act (Metsähallitus, 2021). Metsähallitus (freely translated as Forest Administration) was started in 1859 by the Russian Emperor Alexander II. Its task was to manage and protect forests and to sell timber to give revenue to the empire. In 1921 Metsähallitus was placed under the Ministry of Agriculture and Forestry, and it was tasked to “manage, oversee and promote Finnish forestry” (Metsähallitus, 2021). To further support and guide Finnish forest owners in following the forest laws and implementing different forest improvement methods, the state-owned Finnish Forest Management Society Tapio was established in 1907. In 1917 a law was established that placed restrictions on forest cuttings. Further legislation was given in the 1920s, which included state subsidies for reforestation and the drainage of peatlands. (Palo, 2004).
2. As stated in “The Finland We Want 2050—Society’s Commitment to Sustainable Development” (Finnish National Commission on Sustainable Development, 2016)
3. As an example, in the late 1970s, the wastewater that used to go directly to Lake Vesijärvi began to be treated at the Kariniemi wastewater treatment plant. This same area was subjected to intensive cleaning and restoration processes that provided important lessons about the advantages that this brought to the city’s quality of life (Malinen 2015).

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URBAN NATURE AMSTERDAM THIS MAP INVITES PEOPLE TO EXPLORE THE CITY’S LANDSCAPE AND BEYOND FROM ROOFTOPS AND POLDERS.

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Notes

1. <https://amsterdamsmartcity.com/organisations/de-gezonde-stad>

OPINION ARTICLES

THE TRANSFORMATIVE POWER OF URBAN RIVERS

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Notes

1. The Intergovernmental Panel on Climate Change (IPCC) was established in 1988 to provide comprehensive assessments of the state of scientific, technical, and socio-economic knowledge on climate change, its causes, potential impacts, and response strategies.
2. The UN mentioned the following figures in commemoration of Water Day: “Although 70% of the planet Earth is water, only 2.5% is fresh water and, of this percentage, 69% is frozen in the polar caps. In addition, 30% of this resource is underground, and 0.5% is in rivers and streams”.

THE PRIVILEGE OF BEING PART OF A NOVEL, EVOLVING URBAN ECOSYSTEM

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Notes

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URBAN BIODIVERSITY? ARTISTS HAVE THE KEYS

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Further reading

- › www.pmlydon.com
- › www.carmenbouyer.com
- › <https://panteakarimi.com/2018/02/botany-silhouette-installations/>
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WE NEED TO STOP TREATING SOIL LIKE DIRT – EVEN IN CITIES

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Notes

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HOW TO ADDRESS BIODIVERSITY IN CITIES – NO ONE LEVEL OF GOVERNMENT CAN DO IT ALONE

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Notes

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URBAN EXPANSION: AN ALLY OF BIODIVERSITY

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THE CYBORG NATURE OF CITIES

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DOES HOUSING INSECURITY INFLUENCE GREENSPACE CIVIC ENGAGEMENT?

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EAT ME. DRINK ME

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Further reading

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- › 'Whispers of Better Things,' published by Two Rivers Press, Reading 2017

BASIC ECOLOGICAL KNOWLEDGE LEFT BEHIND IN THE URBAN GREENING RUSH

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Further reading

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HAVE YOU EVER HEARD OF BLUE HEALTH IN CITIES?

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Further reading

- › <https://bluehealth2020.eu/>
- › <https://bluehealth.tools/>
- › <https://www.routledge.com/Urban-Blue-Spaces-Planning-and-Design-for-Water-Health-and-Well-Being/Bell-Fleming-Grellier-Kuhlmann-Nieuwenhuijsen-White/p/book/9780367173180>

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1. The Blue Health project received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 666773.

UNEXPECTED BENEFITS OF A PLANETARY HEALTH DIET ON URBAN BIODIVERSITY

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Notes:

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TOP-DOWN AND BOTTOM-UP FOR MORE BIODIVERCITIES? TRANSFORMING OUR CITIES THROUGH BIODIVERSITY

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Further reading

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ARE NATURE-BASED SOLUTIONS GOOD FOR EVERYONE? PROMOTING SOCIAL EQUITY IN NATURE-BASED SOLUTIONS

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DOES WILD FLORA HAVE A PLACE IN CITIES?

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DESIGNING ECOLOGICALLY SMART, JUST CITIES

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LIVING IN A HOTSPOT OF CITY AND BIODIVERSITY - THE CASE OF SYNECOCULTURE

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FIVE LESSONS FOR MEANINGFUL LOCAL ENGAGEMENT IN URBAN PROJECTS - DE CEUVEL, A CIRCULAR GREEN HOTSPOT IN AMSTERDAM

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LEARNING

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