

Greening Cities Shaping Cities: Sustainability journal Special issue (APC 1800 CHF– **open access**)

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The topic of pinpointing Nature-Based Solutions (NBS) in the urban context has been lately cultivating interests from different scholars, urban planning practitioners and policymakers. This special issue originates from the Greening Cities Shaping Cities Symposium held at the Politecnico di Milano (12–13 October 2020), aiming at bridging the gap between science and practice of getting NBS implemented in the built environment. In particular, we invite scholars to investigate how NBS and urban greening strategies are re-shaping the built environment and the whole imagery of cities, both from a spatial and a governance perspective. In this special issue we welcome scientific articles that cover novel insights to urban debates on design and planning theory, policy and practice around NBS. Currently, cities are making use of nature as a solution to many challenges, without radically and critically address the full potential of interpreting green as a powerful urban design and governance feature. For instance, how will vegetation infilling strategies affect planners' toolkit and decision-making procedures? How can we get citizens involved in the design and management process around NBS?

We invite authors to address the procedural gaps of greening cities strategies that are currently fore fronting the re-shaping of many urban fabrics nowadays. In specific, we aim to investigate the following aspects:

Governance: A strong emphasis on NBS viability for implementation often encounters hindrances on the governance scale and lacks a strong functional governance model in order to “make it work”. A big tranche of this pitfall is due to the lack of capacities and communication between municipality departments and each other's, as well as the need to raise awareness on how the NBS operate on a day-to day activity. Hence, the capacity building and awareness activities result as one major need in cities decision-making processes to make NBS implementation more inclusive and managerially shared.

Citizen participation: NBS are living and dynamic systems and require specific attention in design and maintenance. Hence, the engagement and the active role of citizens is crucial. One important aspect of innovation in NBS implementation nowadays is its inclusivity and its relatedness to citizen-centered approaches for implementation in Urban Living Labs (ULL). The notion is that ULLs allow a flexible structural pathway and include a variety of sleeve tools to bring everyone one board. Lessons in this section would mainly address the successful case studies from physical or digital ULLs experiences of implementing NBS in urban regeneration processes.

Hence, the major question we posed is if whether the embeddedness of NBS in cities tangibly affects urban morphologies and radically impacts on our approach to urban planning and design strategies and urban governance. Integrating nature and NBS seems happening more and more frequently in city strategic planning and visions; however, a deep recognition of the role of greening in shaping the overall imagery of cities and renovating the role of green as a quintessential element of design and planning seems lacking of a deeper and conscious debate. In sum, in this special issue we aim to touch base on many aspects related to NBS conceptualization, implementation and upscaling in cities. The finality of our exploration is to find clues helping us to critically understand and interpret how greening cities is affecting urban shaping, both from a morphological and governance point of view.

Keywords: Nature-Based Solutions, Greening Cities, Shaping Cities, Co-creation, Shared Governance

Proposed Authors for the Sustainability journal

Final Papers				
	Name	last name	co-authors	Paper Title
1	Rob	Roggema		From nature-based to nature-driven Landscape first for the design of Moeder Zernike
2	Sophie	Mok	Tom Hawxwell , Ernesta Mačiulytė and Pieter Bult	Valuing the invaluable(?) - A framework to facilitate stakeholder engagement in the planning and implementation of nature-based solutions
3	Roberto	Falanga	Jessica Verheij and Olivia Bina	Advancing urban sustainability through participatory budgeting? Insights from Lisbon
4	Giulio	Senes	Giampaolo Cirone, Paolo Stefano Ferrario, Natalia Fumagalli, Paolo Frattini, Giovanna Sacchi and Giorgio Valè	Nature Based Solutions for stormwater management Creation of the Green Infrastructure Suitability Map as a tool for land-use planning at municipal level in the Province of Monza-Brianza (Italy)
5	Alessandro	Arlati	Anne Rödl , Sopho Konjaria-Christian and Jörg Knieling	Stakeholders involvement in planning, design and implementation of Nature-based Solutions Insights from CLEVER Cities project in the District of Harburg, Hamburg, Germany
6	Maria Beatrice	Andreucci	Angela Loder	Exploring Challenges and Opportunities of Biophilic Urban Design Evidence from Research and Experimentation
7	Nathalie	Nunes	Emma Björner and Knud Erik Hilding-Hamann	Citizen Engagement in URBiNAT Living Labs for The Co-creation of Nature-Based Solutions: Developing Categories, Rethinking Engagement and Sharpening Participation.
8	Berit	Balfors	Ulla Mörtberg	Nature-based solutions to enhance green urban structures Policy and planning practices in the Stockholm region
9	Barbara E.A	Piga	Stancato Gabriele, Rainisio Nicola and Boffi Marco	Urban simulation for citizens engagement: the emotional effect of green elements.
10	Ana	Mitić-Radulović	Ksenija Lalović	Citizen engagement and co-creation as critical elements of urban planning for shaping greener cities Comparative analysis of Early Public Consultation processes for new Linear Park and Avala Film Complex in Belgrade
11	Didem	Kara	Güliden Demet Oruç	Eco-therapeutic attributes of urban green areas in Istanbul

Greening Cities, Shaping Cities: Case studies on Nature-based Solutions for sustainable urban planning.

Springer Edited Book –closed call – greeningcities@polimi.it

100 % free for closed access or

with fees for open access – 2170-euro CPC apply)

This edited book originates from the fruitful discussions during the Greening Cities Shaping Cities International Research Symposium held in Milan, Italy, on October 12 and 13, 2020. In this collection of chapters, we deal with two important aspects on Nature-based Solutions assessment and implementation in urban planning policies, as follows:

PART I

Methods for assessing planning policies of NBS in cities: Insights on spatial challenges

In this part we tackle the spatial challenges related to NBS impact analysis and methods related to assessment on potential in cities on different spatial scales. Since NBS have different typologies and spatial scales of implementation, this part addresses the questions of NBS types, physical and land-use change related to NBS implementation in practice. How are the greening cities strategies tangibly affecting urban morphologies and shaping our cities today? How consciously are cities addressing and envisioning the outcomes of greening measures?

The first section, we look at case studies that have proven a possibility to assess performance-based planning approaches to integrate NBS into planning policies (by using quantitative performance criteria, impact assessment, authorization into building codes, etc.); moreover, we dive into the relationship between NBS impact on human comfort and climate resilience through analytical tools and softwares.

The second section looks in specific to how we tackle the urban greening strategies related to physical and urban design of NBS, land use cover and land use availability. Those greening strategies when put in place are strongly tied to urban and regional (macro and micro) spatial scales of implementation; nonetheless, the practice hand side emphasizes the lack of coordination between land use planning and pressuring environmental planning strategies. This gap is often addressed in climate risk planning adaptation and mitigation measures for future scenarios but deficient on the urban planning resilience planning measures due to authorities' silos and mismatching urban governance mechanisms.

PART II

Implementing NBS in cities: Case-study applications

In this part we aim to look at case studies from different urban settings that deal with local regeneration processes that changed the cities' physical organization and enhancement of biodiversity, meanwhile looking at implementing NBS through performance-based planning instead of policy-based planning on the long term.

In the first section we look on answering the following questions: What are the hindrances and bottlenecks in implementing, maintaining and up-scaling NBS in real life cases implementation? Are the current decision-making mechanisms helping NBS getting in route to shape cities? Is there any binding policy in practice that encourages the NBS in place?

In the second section, we look on how the pressuring climate change challenges led cities local governments and urban alliances to work cooperatively to reduce the environmental risk and downscale the temperature increase effects; however, NBS still lack a binding policy to be majorly advanced in urban contexts mainstreaming. Furthermore, experimental decision-making mechanisms in cities paved the way to think on multi-layered-stakeholder types and levels, we investigate whether this multiplicity helped the implementation pathway to spread out from small NBS actions towards to wider-urban scale interventions in cities.

Keywords: Nature-based Solutions, Urban greening, Co-creation, Shared governance, Spatial planning,

Proposed authors for the Springer book chapter.

	Name	last name	co-authors	Paper Title	Word count
	Editors			Preface* *invited Keynote speaker for an opening chapter	2000 words
PART I : "Methods for assessing planning policies of NBS in cities: Insights on spatial challenges"					
1	Eugenio	Morello	Israa Mahmoud	Greening Cities Shaping Cities: How greening actions are transforming urban planning policies	8,000 words
2	Davide	Geneletti	Chiara Cortinovis	Implementing NbS in cities through performance-based planning: A case study in Trento, Italy	8,000 words
3	Silvia	Ronchi	Stefano Salata	Insights for the enhancement of urban biodiversity using Nature-based solutions. The role of urban green spaces for Green infrastructures design	8,000 words
4	Anna Giulia	Castaldo	Israa Mahmoud, Eugenio Morello	Nature-based Solutions and city climate hazards: impacts and spatial challenges on infrastructure deployment and urban planning system	8,000 words
5	Gonçalo	Canto Moniz	Américo Mateus , Knud Erik Hilding-Hamann , Ingrid Andersson and Nathalie Nunes	Inclusive Urban Regeneration with Citizens and Stakeholders: from Living Labs to URBiNAT's Community of Practice	8,000 words
6	Fabiano	Lemes de Oliveira,	Tarek Teba and Maria do Carmo de Lima Bezerra	The environment-technology-culture nexus as an approach for assessing the challenges and opportunities for implementing nature-based solutions in Brazil	8,000 words
PART 2 – Implementing NBS in cities: case-study applications					
7	Alessia	Peluchetti	Mohamed Elagiry, Andrea Costa, Domenico Perfido and Mario Cortese	Nature4Cities: Nature-Based Solutions implementation and evaluation in the city of Milan	8,000 words
8	Gabriel	Dias Mangolini Neves	Ângela Cruz Guirao, Rebeca Veiga Barbosa, Carla de Souza Camarneiro, Mario Jorge Bonfante Lançone, Larissa Miranda Heinisch, Sandrine Giancristófaró Gouvêa	Implementation of Connectivity Area in the Metropolitan Region of Campinas (São Paulo, Brazil) Biodiversity Integration through Regional Environmental Planning	8,000 words

	Name	last name	co-authors	Paper Title	Word count
			, Sophia Picarelli and Ana Paula Pellegrino		
9	Irene	Yerro Vela		Citizen innovation and engagement in emerging practices of urban agriculture. Case study: Zurich	8,800 words
10	Lucia	Nucci		London Nature-based solutions in practice	8,000 words
11	Julia Nerantzia	Tzortzi	Kartik Bajaj and Lorenzo Imbesi	Designing Nature Based Solutions in Piraeus, Greece Documentational process of co-designing NBS for regenerative GI	8,800 words