



Editorial: Looking Beyond Greenness: Transdisciplinary Approaches to Urban Green Spaces, Uses and Functions

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Keywords: urban green spaces, urban greening uses and functions, ecological and social systems, ecosystem services framework, transdisciplinary understanding of urban green spaces

Editorial on the Research Topic

Looking Beyond Greenness: Transdisciplinary Approaches to Urban Green Spaces, Uses and Functions

OPEN ACCESS

Edited and reviewed by:

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Technical University of
Munich, Germany

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Specialty section:

This article was submitted to
Urban Greening,
a section of the journal
Frontiers in Sustainable Cities

Received: 29 November 2021

Accepted: 08 December 2021

Published: 24 December 2021

Citation:

Vidal DG, Dias RC, Seixas PC,
Barros N and Maia RL (2021) Editorial:
Looking Beyond Greenness:
Transdisciplinary Approaches to
Urban Green Spaces, Uses and
Functions.
Front. Sustain. Cities 3:824472.
doi: 10.3389/frsc.2021.824472

Urban Green Spaces (UGS) are a central component of urban sustainability and resilience. The multiple benefits that result from UGS are well-documented and go far beyond the environmental dimension: promoting well-being and social cohesion, enhancing physical activity, and providing opportunities to relax and restore within the dense urban environment (Lee et al., 2015; Braubach et al., 2017; Jennings and Bamkole, 2019; Vidal et al., 2021b). Despite these ecosystem services, some disservices have been pointed out in the literature. These disservices are related to the urban vegetation, where the “choice for trees” must consider that some species emit biogenic volatile organic compounds (BVOC). Such BVOC could lead to the development of ozone (O₃) and the degradation of air quality (Graça et al., 2018). Other disservices have been identified: the displacement of native species and, synchronically, the introduction of invasive species in gardens and parks; lower possibilities to use sunlight because of spacious shade; indirect costs caused by land-use restrictions; direct costs caused by planting, maintaining, and removing planted areas; negative health effects related to the pollen released by some plant species (von Döhren and Haase, 2015; Lyytimäki, 2017). Nevertheless, adaptive design and the management of UGS could contribute to minimizing disservices of the ecosystem (Teixeira and Fernandes, 2016, 2017).

Considering this closer, UGS are complex socioecological systems as they combine both the social and the ecological sphere. Current literature contributed to further elaborate on UGS and their ecosystem services provision (Haines-Young and Potschin, 2018). In spite of those efforts made, ongoing debates still lack a deep meaning about the functions and uses of UGS, which is the most challenging dimension yet to be measured (Fish et al., 2016).

Functions and uses of UGS urge for a strong transdisciplinary approach, what could be the reason for the current absence of deeper discussions about this matter. Planning UGS in an era of unpredictability and uncertainty requires a well-built transdisciplinary view to properly address human–nature relations and to integrate scientific knowledge into the decision-making process (Vidal et al., 2021c).

Such a lack of knowledge results in the complex phenomena of environmental and social inequalities which are gaining expression specifically within urban areas. Even though it must be acknowledged that other existing contributions within UGS research, embedded within different disciplinary fields, are of great relevance (such as multidimensional research approaches), transdisciplinary perspectives about this matter still lack on subsistence and visibility.

So far, previous research has focused on the production of knowledge to improve the quality of the urban environment and to promote the well-being of the population. Notwithstanding, structural inefficiencies and inequalities constantly reproduced in the dense urban environment have been neglected thus far (Jennings et al., 2021). This is closely linked with the unfair distribution of UGS in urban spaces, revealing that disadvantaged communities have lesser physical and symbolic access to qualitative UGS (Dai, 2011; Hoffmann et al., 2017; Vidal et al., 2021a). The phenomenon of “green gentrification” (Curran and Hamilton, 2018) is a further problem which urges for the consideration of environmental injustice enforced by non-equity-oriented policies for urban greening. This, for instance, becomes evident in situations where wealthier migrants experience more benefits compared to those who are socially disadvantaged.

Given such shortfalls, the main challenge is to enforce a collective effort to *look beyond the greenness*, previously addressed by articles integrated within this special issue.

Considering the contribution provided by Noël et al., the authors sought to address how social barriers undermine the availability and accessibility of public UGS in the Brussels Capital Region through the application of 51 individual face-to-face in-depth interviews. Three main barriers emerged from the field, such as (i) the fear to use the space due to the lack of social controls or presence of unpleasant elements, (ii) the lack of sense of belonging resulting from the dominance of a specific social group, (iii) and the fact that the public UGS may not fulfill users social needs, suggesting that their social context and needs should be considered in the future interventions in these spaces.

Furthermore, Haq et al. provide a comprehensive understanding of convergences and divergences in UGS as socially perceived on a planetary scale. The findings of their review encourage the use of integrated multidisciplinary approaches and the combination and application of innovative tools to identify users’ perceptions. Moreover, it concludes that as far as residents’ perceptions of and attitudes toward UGS are considered within urban planning and design processes, benefits provided by these spaces may be highly increased.

Another study strongly engages with the experiences and perceptions of urban park visitors in Lisbon/Portugal (Alameda and Estrela) (Viebrantz and Fernandes-Jesus).

Through a questionnaire applied to 188 users of UGS, the authors of this research evaluated the physical and natural characteristics of UGS, as well as their accessibility, the surrounding areas, motives for use and importance, quality, and

quantity. Visitors are aware that UGS may play a vital role in the distribution of relaxing opportunities, as well as recreation, socialization, and physical activities. Estrela park, for instance, is less often visited than Alameda. Nevertheless, users tend to stay longer in the former one due to its pleasant landscape and restful natural environment. In a general overview, the research participants highlighted the need for more parks in the urban space of Lisbon, as well as better maintenance and, most importantly, a more equal distribution within the city.

Finally, a research conducted in England by McClymont and Sinnett aims to contribute to the role of cemeteries within a multifunctional network of a green infrastructure, concerning their accessibility through a two-step analysis. The first one considers the national availability of cemeteries as UGS of proximity, especially in high density urban environments, representing around 4% of accessible greenspaces. Secondly, using the city of Bristol as a case study, the authors surveyed 11 cemeteries, through which they discovered their potential to strongly engage with ecosystem services through acknowledging the need to sustain cultural sensitive spaces for burial and remembrance. Moreover, the study reveals an intense dialogue between the actual actors engaged in the maintenance and provision of cemeteries.

The outstanding contribution of the articles presented in this special issue, covering a wide range of UGS dimensions, gives solid support to the challenge initially proposed: to *look beyond the greenness*. Finally, we argue that in order to enforce urban sustainability and resilience and, most importantly, to maintain the well-being of city dwellers, “UGS planning and design” needs to strongly consider both ecological and social perspectives.

AUTHOR CONTRIBUTIONS

DV wrote the first draft of the manuscript. RD, PS, NB, and RM have contributed to manuscript’s final version and read. All authors contributed to the article and approved the submitted version.

FUNDING

DV is financed by the Fundação para a Ciência e a Tecnologia, I.P., through the SFRH/BD/143238/2019 grant, supported by the European Social Fund, MCTES National Funds, and the Human Capital Operational Program.

ACKNOWLEDGMENTS

DV, NB, and RM would like to thank to UFP Energy, Environment and Health Research Unit (FP-ENAS), an R&D unit (4546) recognized by the Fundação para a Ciência e a Tecnologia, I.P. RD would like to thank to Fundação para a Ciência e a Tecnologia (FCT, I.P.) through the Doctoral Grant SFRH/BD/135804/2018.

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