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EDITED AND REVIEWED BY
Riccardo Buccolieri,
University of Salento, Italy

*CORRESPONDENCE
Stefano Salata,
✉ stefano.salata@polimi.it

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Editorial: Shaping healthier cities —Ecosystem services and health for responsive human–nature relations

Stefano Salata^{1*}, Diogo Guedes Vidal², Fátima Alves^{2,3},
Ana Isabel Ribeiro^{4,5,6} and Martina Artmann⁷

¹Lab PPTe, Department of Architecture and Urban Studies, Politecnico di Milano, Milano, Italy, ²TERRA Associate Laboratory, Centre for Functional Ecology—Science for People and the Planet (CFE), Department of Life Sciences (DCV), University of Coimbra (UC), Coimbra, Portugal, ³Department of Social Sciences and Management, Universidade Aberta, Lisbon, Portugal, ⁴EPIUnit, Instituto de Saúde Pública, Universidade do Porto, Porto, Portugal, ⁵Laboratório para a Investigação Integrativa e Translacional em Saúde Populacional (ITR), Porto, Portugal, ⁶Departamento de Ciências da Saúde Pública e Forenses e Educação Médica, Faculdade de Medicina, Universidade do Porto, Porto, Portugal, ⁷Leibniz Institute of Ecological Urban and Regional Development (IOER), Dresden, Germany

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Editorial on the Research Topic

Shaping healthier cities—ecosystem services and health for a responsive human–nature relations

Cities have become the predominant living environments of human beings worldwide. In an era of social-ecological crisis intensified by climate change, loss of biodiversity, and socio-environmental injustice, the shaping of responsive cities is crucial for fostering healthy and regenerative urban societies as well as nature preservation beyond instrumental values. The roles of urban environmental spatial qualities should be rethought in light of the COVID-19 pandemic (Bolleter et al., 2022). However, the relationship between the daily environmental conditions of urban citizens and their health, as well as the interconnection between healthy nature and resilient cities are lacking organic inclusion in urban design. This thus limits the capacity to shape cities in the context of planetary health (Pineo et al., 2021; WBGU, 2021).

Although ecosystem services' relations with urban planning have been the focus of numerous publications aiming to find practical solutions for building sustainable cities, the systematic investigation of how ecosystem services affect human health is still an open subject. Furthermore, the wellbeing of citizens is a concept that goes beyond the instrumental values of nature, which are the focus of the ecosystem service model. In this regard, a valuation of integrative ecosystem services needs to consider relational and intrinsic values unfolding in responsive human–nature relations striving for a good life for humans and non-humans in cities and beyond. Healthy urban human–nature relations call for a fundamental shift in attitudes and norms regarding how we deal with non-humans, considering that our health is inseparable from nature's health, creating a web of interdependencies (Moore, 2015). This is also linked to biocultural diversity, which has gained attention, since recognizing the intangible cultural values of the natural environment is key for promoting intercultural dialogue among communities. In fact, there is a need to consider and integrate the sociocultural specificities of each territory, as well as the diversity of visions for human–nature relations in the new shaping

of healthier cities for all—humans and non-humans. The biocultural diversity concept arises from the inseparable link and feedback between cultural diversity and biological diversity and can be considered a reflexive concept for promoting responsive human–nature relations in cities and beyond (Vierikko et al., 2016; Elands et al., 2019).

This Research Topic collected five manuscripts that investigated the relationships between wellbeing, nature, land uses, and ecosystem services through an organic, integrated perspective. Also, a number of case studies reflected on norms and ethics concerning the responsive relationships between the health of humans and non-humans. Within this perspective, the contribution of Wang et al. entitled “Sustainable land use and green ecology: A case from the Beijing 2022 Winter Olympics venue legacy” examined the spatial distribution of the Beijing 2022 Winter Olympics venue’s legacy. The contribution presented a spatial assessment of Olympic venues’ legacy experiences, in terms of construction and sustainability, discovering how, while not planned, Olympic legacies grow increasingly unsustainable and create conflicts between humans and nature.

The second contribution by leBrasseur, entitled “Linking human well-being and urban greenspaces: Applying the SoftGIS tool for analyzing human wellbeing interaction in Helsinki, Finland” reviewed the relationships between green spaces and their benefits to psychological, social, and physical aspects of human wellbeing, achieved through interaction in the Helsinki urban region in Finland. In this study, multiple aspects of human wellbeing were demonstrated to support the interaction with urban green spaces. The findings demonstrated that human wellbeing benefits most from large urban green spaces, including woodlands containing loose, “wild” vegetation and a number of amenities such as benches and structures.

The third contribution by Zheng et al. entitled “Performance evaluation of the development of eco-cultural tourism in Fujian Province based on the method of fuzzy comprehensive evaluation” built a system of semi-quantitative performance evaluation indicators that were custom-tailored to the different aspects of eco-cultural tourism development in Fujian Province. The findings highlighted that, although Fujian Province is endowed with optimal resources for eco-cultural tourism, further efforts are required to explore and optimize the building of eco-cultural tourism.

The fourth contribution by Wang et al. entitled “Extreme weather and residents’ pro-environmental behaviors” dealt with residents’ environmental protection awareness, encouraging pro-environmental behavior in favor of green economic transformation. This study demonstrated that extreme weather significantly inhibits residents’ behaviors, reducing their motivation to engage in pro-environmentalism.

Finally, the contribution by Maleki et al. entitled “Evaluation of heavy metals in the fruit of black mulberry trees (*Morus nigra*) planted on urban street sides: A case study of Tabriz metropolis” broadly discussed the importance of urban agriculture and horticulture in metropolises, which have different effectiveness in reducing soil and air pollution. This final contribution touched on another crucial aspect: how citizens can proactively reduce their exposure to the harmful effects of pollution in densely inhabited green areas.

Generally, these five investigation approaches attempted to deal with the relationships between health and ecosystem services in urban areas and beyond. Despite many technical advancements in

quantitative studies on the biophysical characteristics of natural features, how nature’s health is interconnected with healthy urban societies and how nature protection can be linked to health protection are still relatively unexplored.

The results of this Research Topic have implications for urban and regional planning, public policy, and human health, and provide insights into the multifunctional design and strategic management of green spaces to provide continued and improved ecosystem services and benefits to humans and nature.

One of these implications is that interdisciplinary approaches among urban scientists, functional ecologists, sociologists, ecosystem modelers, geographers, environmental philosophers, and environmental medicine analysts are required to integrate healthy human–nature relations. Furthermore, since human health is strongly influenced by subjective wellbeing, it necessitates transdisciplinary research that goes beyond data analysis, through GIS assessment, and includes societal, citizens’, and urban users’ perspectives. To capture the demand of non-humans for healthy environments, arts and serious gaming can inspire ideas for human–nature relations beyond anthropocentric constructions, taking into account embodied and affective experiences (Bloom, 2020). The pluralistic valuations of ecosystem services for healthy human–nature ties are, therefore, an asset to develop a more included, appropriate, and integrated adaptation of urban systems and their land teleconnections, promoting care for a good life for human and non-human Earth dwellers.

Author contributions

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