



Cities Under Global Social Transformations: Embracing Change for a Greener Future

Call for sessions

Session chair

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Title of the proposed session

Promoting Urban Blue-Green Infrastructure and Nature-Based-Solutions: socio-ecological practices for planning and design of sustainable and resilient cities

Proposed session format

☐ Full paper presentation

☒ Speed talk session

☐ Dialogue session

Session organization

☒ Hybrid (on-site and online)

☐ On-site only

Publication of session results

☐ No publication is foreseen

☐ A publication is conceivable

☒ There are concrete publications plans (please specify): We

are planning to organize a Special Issue in one of the peer-reviewed academic journals based on the selected papers from the session OR a discussion paper.

Session description

In recent decades, several concepts and approaches of integrating nature into urban planning and design towards urban sustainability and resilience have been developed. Among them are urban blue-green infrastructure (UBGI), ecosystem services (ES), ecosystem-based adaptation (EbA), and nature-based solutions (NBS). These concepts demonstrate the paradigm shift towards solving societal challenges in cities by enabling ecosystems to recover and deliver a wide range of benefits to both people and nature (EC, 2016; IUCN, 2020). UBGI refers to an “interconnected network of natural and designed landscape components, including water bodies and green and open spaces” at the city scale (Lamond & Everett, 2019). UBGI incorporates green spaces and water elements into urban planning and design by integrating publicly accessible and private green spaces, natural green spaces (remnants of native vegetation where some or all endemic ecosystem processes are affected by human activities) as well as specifically designed and managed green spaces (e.g., parks, gardens, lawns, street plantings, green roofs) and blue spaces (retention and detention ponds, re-naturalized and de-culverted rivers, swales and “bioswales”, or rain gardens). Within the UBGI, these elements work together to perform functional roles and provide multiple sustainability benefits, including improved ES delivery (Basnou et al., 2020; Langemeyer and Baró, 2021). Nature-based-Solutions (NBS) are defined as “actions to protect, sustainably manage and restore natural and modified ecosystems in ways that address societal challenges effectively and adaptively, to provide both human well-being and biodiversity benefits” (IUCN, 2020). These multiple positive benefits provided by UBGI and associated NBS for human physical (e.g., through the opportunity for physical activity, recreation) and mental (e.g., ability to relax, stress reduction, spiritual enrichment, cognitive development, reflection, aesthetic experiences) are broadly recognized. Moreover, through their multifunctionality, cost-efficiency, inclusive and community-led approach and the ongoing adaptive management, NBS that are well-integrated into UBGI can play a significant role for transformation towards a sustainable urban society (Dushkova and Haase, 2023; Langemeyer and Baró, 2021; Scolobig et al., 2023). Considering the above mentioned, the goal of this session is to clarify the connection between NBS, BGI and ES and discuss the role of BGI and NBS in the context of urban sustainable transformation. Specifically, we are aiming to address the following questions:

- What are specific issues and challenges relating to UBGI in the context of sustainable transformation (incl. particular solutions and recommendations relating to these topics)?
- What particular mechanisms (e.g. socio-ecological practices) can help to support more sustainable and biodiversity-friendly outcomes within the sustainability transformation?
- How NBS within the BGI can contribute to transformative change?
- How can we monitor and evaluate the transformative impact of NBS/interventions within the BGI?
- What is the role of inter- and transdisciplinary collaboration between different stakeholders for planning, design, implementation and maintenance of NBS and BGI?

We invite scientists, practitioners, decision-makers, and representatives of citizen groups to attend this session and share their experiences as well as discuss the possibilities to further promote BGI and NBS and unlock their transformative potential through diverse socio-ecological practices.

References:

Basnou C., F. Baró, J. Langemeyer, C. Castell, C. Dalmases, J. Pino. (2020) Advancing green infrastructure planning at a regional landscape scale: linking biodiversity, ecosystem functions and services in the province of Barcelona. *Urban Forest. Urban Green.* 55, 126797, 10.1016/j.ufug.2020.126797

Dushkova, D., Haase, D. (2023) Resilient cities, healthy communities, and sustainable future: How do nature-based solutions contribute? In: Liamputtong, P. (ed.) Handbook of social sciences and global public health. Springer, Cham, p. 1-24. 10.1007/978-3-030-96778-9_133-1

EC – European Commission (2016) Topics: Nature-based solutions. Available from: <https://ec.europa.eu/research/environment/index.cfm?pg=nbs>

IUCN (2020) Global Standard for Nature-based Solutions: A user-friendly framework for the verification, design, and scaling up of NbS. First edition. Gland, Switzerland: IUCN.

Lamond, J., Everett, G. (2019). Sustainable blue-green infrastructure: A social practice approach to understanding community preferences and stewardship (191). Elsevier - Landscape and Urban Planning, <https://doi.org/10.1016/j.landurbplan.2019.103639>

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