

Title of the symposium:

The design of the contemporary cities through a green and blue infrastructure for Ecosystem services provision

Detail of organizer(s):

Responsible

Name:	Silvia
Surname:	Ronchi
Email	silvia.ronchi@polimi.it
Organisation/Affiliation:	Department of Architecture and Urban Studies (DAStU), Politecnico di Milano
Telephone:	+390223995404
Country:	Italy
Address:	piazza Leonardo da Vinci 26, 20133 Milano

Co-organizer(s)

Co-organizer

Name:	Andrea
Surname:	Arcidiacono
Email:	andrea.arcidiacono@polimi.it
Organisation/Affiliation:	Department of Architecture and Urban Studies (DAStU), Politecnico di Milano
Address:	piazza Leonardo da Vinci 26, 20133 Milano
Country:	Italy

Co-organizer

Name:	Angela
Surname:	Colucci
Email:	angela.colucci@polimi.it
Organisation/Affiliation:	REsilienceLAB / SIEP-IALE
Address:	via dei mille 136, 27100 Pavia
Country:	Italy

Symposium abstract

Landscape ecology is one of the major challenges of the Anthropocene, and the ecosystems services (ES) most directly linked to human well-being and benefits through the provisioning, regulating, and cultural services they provide.

Urban planning of contemporary cities has to deal with old and new challenges regarding the environmental and landscape quality strictly link with the human well being.

Considering the grey infrastructures of cities composed by the mobility system, the housing equipment, the public services and technological areas for inhabitant, urban areas require a green and blue infrastructures that compensate and integrate the grey'one providing important ES.

Blue and Green infrastructures (BGI) were defined in the EU Biodiversity strategy 2020 as a:

- “territorial tool for natural regeneration, to re-establish a specific ES and landscape conservation;
- can promote the multiple deliveries of ES, improving the general ecosystem functioning;
- mapping ES for GI is essential for planning purposes, especially ones focused on environmental and landscape protection, but the spatial definition of GI is dependent on the assessment of state and trends of ecosystems and their services”.

In contemporary cities, many urban issues could be addressed through BGI with the potential to complement or even replace this grey infrastructure. BGI has practically developed a thought nature-based solution (NBS) as actions that implement an ES approach, thereby addressing ecological, social and economic challenges.

NBS are “living solutions inspired and supported by the use of natural processes and

structures, and are designed to address various environmental challenges in an efficient and adaptable manner, while simultaneously providing economic, social, and environmental benefits” (European Commission, 2015).

Green Infrastructures (GI) become the ecological structure (the spatial bones) for the strategic design of contemporary city, which creates new ecologically oriented landscapes and inclusive public spaces. The GIs are intended as continuous network composed (or including) natural and agricultural areas, open spaces and historic built environment characterised by different values and functions from the city center to the peri-urban areas (where the leisure and cultural functions and the values of ecosystemic (multi)functionality of soil characterises the GIs).

Green infrastructures become a design tool to achieve nature-based solutions, integrating systems of natural areas, agricultural landscape and water resources with slow mobility networks and energy infrastructure. BGI are a territorial tool for natural regeneration and landscape conservation promoting the multiple deliveries of ES, improving the general ecosystem functioning.

Gis and ecosystem services model are tools supporting the evaluation of the planning strategies sustainability (land use transformation) and the monitoring of the plan implementation.

The symposium will host presentations of case studies related to the integration of BGI and NBS in Landscape planning for Ecosystem services provision.

Particular focuses will be dedicated on the approaches for the designing of BGI based on the analysis of landscape ecology and their processes using innovative techniques of Ecosystem services assessment (mapping, modelling and monetary quantification) at different spatial and temporal thresholds and on the implementation models and tools (renovated governance model based on allge partnerships towards Ecosystem services implementation).

How your symposia will improve landscape ecology science?

The symposium is an opportunity to share knowledge and experiences in the approaching of the ES and BGI issues in contemporary cities. ES are strictly linked to human well-being and the quality of life in cities, is an anthropocentric perspective of ecology and environment aimed in promoting urban green space for health and wellbeing.

The symposium will be addressed in a very operative way presenting case study and practical experiences on that topic highlighting opportunities and critical aspects of ES and BGI integration in Landscape planning process and discipline.

The aim is to bring out:

- new priorities for Planning starting from the Environmental and ecological issues (e.g. Climate change, hydrogeological risks, food security, air pollution, soil sealing and land

take, etc) that need to be considered in the definition of the urban structures of cities for their link with human wellbeing.

- new paradigm for spatial planning for the maintenance and regenerating of the built-up city and for the design of open spaces networks based on ES approach.
- Governace model supporting the GIs and ESs implementation.

To overcome these issues a multidisciplinary approach is necessary as a support for co-designing and assessing shared planning strategies. Landscape ecology science is one of the main disciplines that could be involved in this new planning era thiogether with environmental science, agrarian, ecology, pedology, sociology and so on.

Broad thematic areas

Broad thematic areas 1st choice: Green and blue infrastructures

Broad thematic areas 2st choice: Landscape planning

Free Keywords

Spatial Planning, Nature-based solution, Human wellbeing , Ecosystem services

Outcomes of symposium

Special issue in a scientific journal (to be negotiated)