Ecosystem-based Planning.
The contribution of ecosystem services to Urban and Regional Planning innovation.

Guest editors
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The loss and degradation of important ecosystems and their biodiversity, caused by human activities in the use and management of the soil and accelerated by climate change, generate direct effects on the quality of human life, with significant social and economic consequences. The link between ecosystems and human well-being is now widely recognised due to a paradigm shift that considers humans not as separate from nature but as part of a complex socio-ecological system. Ecosystems provide, directly or indirectly, various individual and social benefits, defined as "Ecosystem Services" (ES), which contribute to maintaining and improving people's living conditions and health. The awareness of the importance of this relationship had a rapid growth of studies, research, projects and policies dedicated to preserving natural capital and restoring ecological conditions in urban areas, aiming to increase the supply of ES and, consequently, human well-being. The assessment of ES allows the understanding and quantification of ecosystems' benefits to people, supporting the definition, implementation and monitoring of policies that guarantee their protection and influence their distribution.
As underlined by the New Urban Agenda, sustainable planning and design are crucial in provisioning and maintaining ES and managing the natural capital of territories and cities. Starting from this awareness, the topic of ES has become increasingly important in recent years not only in the scientific and academic debate but also in the urban planning practice. Adopting an ES-based approach has become an increasingly common approach to understanding, assessing, and mapping ecosystem functions to prevent environmental degradation and related socio-economic impacts. The importance of integrating ES into the planning process also derives from the awareness that choices and strategies adopted in the plans can, directly and indirectly, affect the ES supply and the conditions that underpin ES-related benefits, hence affect (negatively or positively) the human well-being and livability of contemporary territories. Therefore, the term "Ecosystem-based Planning" means an approach based on recognising the value of ES as a structural and supporting principle for planning strategies.
Recent experiences, practices and studies have revealed how the integration of ES into planning has often been facilitated through the design and deployment of Green and Blue Infrastructure (GBI) as networks capable of responding effectively to many contemporary challenges, such as climate change. GBI support the design of ecologically-oriented urban spaces that are in connection with each other and with the surrounding areas. GBI include diverse typologies, functions, and characteristics of green and blue areas, capable of providing a wide range of ES. In recent years, the concept of Nature-based Solutions (NBS), strongly promoted by the European Union, has also gained popularity as a term encompassing various approaches aimed at protecting, enhancing, and restoring ecosystems. Case studies and pilot experiences of integrating GBI and NBSs into urban planning are constantly growing and represent a methodological reference for future practices.

However, despite the general agreement regarding the potential of ES integration in planning practices and the role of GBI and NBSs in designing resilient and adaptive cities and territories, limited experiences still embrace these issues in planning practices and studies. Even fewer, though steadily increasing, are the cases in which the Strategic Environmental Assessment (SEA) promotes ES as a method for coherently integrating ecological and environmental themes, such as those related to climate change, into urban plans. The causes of this limited integration can be traced back to different factors, often combined, such as the reduced knowledge of ES by decision-makers; the difficult procedure of assessing and mapping ES that often requires specialised skills, software and models; and the lack of clear evidence around the added value of using this approach in spatial governance.
The call for paper **"Ecosystem-based planning"** proposes these reflections as a framework to re-think current planning processes through an ES-based approach, where effective decisions to address today's challenges are grounded on the acknowledgement of the benefits provided by ecosystems. In this sense, the contribution of ecosystem-based planning to the discipline lies in integrating scientific knowledge and methods to support long-term decisions that consider the dynamic character of the city, its relationships with the landscape, and the central role of nature in sustainable and resilient urban transformations. The ecosystem-based planning, therefore, pursues a balance between agroforestry regeneration, sustainable soil management, urban transformation, and climate change adaptation, considering the impacts of decisions on citizens' quality of life, on the economic performance of the city, as well as on justice and social cohesion.
This Special Issue aims to collect and promote original contributions that address some of the above-mentioned limitations by suggesting good practices, methods, approaches, and innovative case studies grounded on an ecosystem-based approach.

The call wants to stimulate contributions to the relationship between ES and:

1) *urban and landscape planning*, including methods, techniques, and strategies through which an ecosystem-based approach has been or can be adopted in a planning or related strategic environmental assessment process;
2) *green and blue infrastructure*, including case studies and techniques to design green and blue infrastructure networks based on ES and aimed at reducing cities' vulnerability to climate change impacts;
3) *valuation*, including innovative methods to estimate, predict, and map ES in qualitative or quantitative (including economic/monetary) terms as a knowledge base to support planning and decision-making processes;
4) *participation and environmental justice*, including studies and experiences that considered equity, environmental and social justice, and "non-expert" perception of ES relevance in policy- and planning decisions.

Deadline for the submission: October, 10 - 2023