

## NATURE-BASED SOLUTIONS FOR URBAN RESILIENCE IN LATIN AMERICA

Despite being an emerging concept, Nature-based Solutions (NbS) has been gaining global visibility in the last decade. In general, the concept proposes that challenges related to the environment, biodiversity and society should be addressed jointly, based on synergistic solutions to these issues. Globally, urban growth is on a trend, making cities one of the main targets for the application of NbS, in the search for more resilient and healthy environments for people and biodiversity. Many countries in Latin America and the Caribbean (LAC) already have the vast majority of their population settled in cities and, although there are very particular problems in each case, they share challenges intrinsic to the intense and conflictive urban growth formats, along with climatic, socioeconomic and public management implications, which require articulated and inter-scalar strategies, aiming at the condition of urban resilience.

It is in this sense that the Dossier LABVERDE "Nature-based Solutions for urban resilience in Latin America" opens a unique space for the sharing of unpublished scientific articles that can contribute to the understanding, exchange of information, identification of knowledge gaps and development of future perspectives on this innovative topic in the Latin American region. The first volume of the Dossier is composed of seven papers covering different nuances and scales of the NbS, from its conceptual definition to applied case studies and monetary valuation. These studies express the propensity to link NbS to concepts that are already being applied in LAC cities, such as Green Infrastructure, Natural Infrastructure and urban forest, varying the scale from watersheds to small urban vegetable gardens besides to recognize ancestral techniques as part of NbS. The articles are presented in the authors' original language, Portuguese or Spanish, as indicated below.

The first work, by MARQUES, RIZZI, FERRAZ and HERZOG, brings a key theoretical framework for understanding the NbS concept globally and locally, discussing its applicability in the Latin American context exemplified by two case studies focused on Water Security, one in Rio de Janeiro- Brazil and another in Lima- Peru. It then identifies challenges, knowledge gaps, lessons learned, and suggests future steps that could contribute to the conceptual development, planning, implementation, and scaling up of NbS in Latin America.

ZELAYA ALEGRÍA's work presents the process of planning and installation of NbS that is being developed in a pilot sub-basin of San Salvador- El Salvador (City Adapt- PNUMA). It exposes the importance of involving groups formed by different

actors in the assessment of vulnerability, risk perception, valuation of ecosystems and their linkage with the lifestyles of the population in order to identify which typologies of NbS best meet the needs at different scales of the sub-basin, related to the provision and monitoring of different ecosystem services.

CAMPOS, aligns the concept and application of NbS focusing on the problem of urban drainage in large metropolitan areas based on the cases of São Paulo-Brazil and Mexico City-Mexico. It provides a literature review and confronts the adoption of NbS techniques with the lack of systemic vision in the governmental structure and the inadequacy of the institutional arrangement responsible for the sector.

In-depth analysis of what is being done in the city of São Paulo- Brazil, as part of a recent municipal strategy, PEREIRA et al. provide a technical perspective on the installation of bioretention cells. They discuss the design, planning, geographical considerations, monitoring, maintenance, and participatory planning processes of these structures, recognizing the positive goals of replicating these NbS typologies as part of the city's stormwater drainage solutions.

CAICHE, PERES and SCHENK, present the case of the municipality of São Carlos-Brazil, as an experience of Urban Forest planning based on NbS, which is structured from a System of Open Spaces, shaped by legal bases.

MENDES et al. formulate a simplified monetary valuation method of urban afforestation, based on a study done in the city of Piracicaba - Brazil, which can be used to assist in planning, management and formulation of public policies, and in the proposal of formats of payments for environmental services in urban areas.

Finally, MARTINS DA COSTA and SAKURAI, adopt the optics of environmental justice related to NbS to investigate the relevance of participatory processes related to the installation and maintenance of urban vegetable gardens in the peripheries of São Paulo- Brazil, verifying its relevance to reduce the gaps in accessing ecosystem services.

The editorial team of LABVERDE Journal thanks the effort of the authors and reviewers, as well as the preference of its readers for this first Dossier, which celebrates the 12th anniversary of the Journal.

We wish everyone a good reading!

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