

Back to nature: how green solutions are reshaping city landscapes



Some cities in Europe are embracing nature-based solutions to make life for residents more pleasant and sustainable – and these innovative approaches serve as a model for urban environments elsewhere

In his song '[Concrete Jungle](#)', the reggae legend [Bob Marley](#) sang wistfully about being trapped in a dense and oppressive urban environment 'where the living is hardest', all the while longing for the 'sweet life'.

The reality of twenty-first century existence, however, is that more and more people around the world are moving to, and living in, urban areas. [In Europe, more than three in four people live and work in cities.](#)

Cities have obvious attractions, whether for our professional fulfilment, our social lives or our proximity to vital services like education and healthcare. But cities have drawbacks too – and while not all of them can be described as concrete jungles, their concentration of people, buildings and economic activity creates environmental challenges.



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The increasing trend towards urbanisation therefore requires policymakers to confront these challenges for the long term, to make Europe's cities more sustainable for a net-zero carbon future, and, essentially, to make them more attractive and pleasant places to live.

In the city of the future, the notion of a concrete jungle is perhaps not so undesirable as it first sounds, in the sense that greening a city, and integrating nature-based solutions into the fabric of the built environment, could – while not exactly creating a jungle – make cities prettier, greener, more sustainable and even biodiversity-rich.

For [Ben Delbaere](#), a consultant in nature-based solutions from the Netherlands, this approach is nothing especially new, and can draw on centuries of past experience.

“Even in industrial times, people have always been working with nature and using all the possibilities that nature offers, for example by growing food in gardens or harvesting trees for wood as a building material.”

“But it's only in the past ten or fifteen years that this has become a policy priority, as a successor to the concept of ecosystem services,” he says.

“Public authorities have now largely understood that from a sustainability perspective, our urge to keep on building and using land needed to be matched by an urge to have more nature around us.”

Nature-based solutions in cities can be applied across sectors, and do not have to be limited to specific zones of an urban area. Indeed, these interventions can help to link and unite districts, which in turn strengthens community cohesion, says [Raúl Sánchez Francés](#), natural resources and climate area manager at CARTIF, a non-profit technology centre based in Valladolid, Spain, focusing on industrial innovation and competitiveness.

“No two cities are the same structurally, but most have the same climate change challenges, related to flood and droughts, the heat island effect, and poor air and water quality,” he says.

Nature-based solutions are among the inputs comprising renaturing urban plans (RUPs) for cities, and these can vary enormously – whether bringing residents closer to nature through extending parks and cycle routes, maximising climate impact through urban carbon sinks, or containing floodwater on land susceptible to inundation through ponds in which biodiversity can thrive.

According to Sánchez, another important aspect is bringing stakeholders on board, and moving ahead with the same vision: “RUPs require an ongoing, adaptable and collaborative process that encompasses authorities, urban planners, green infrastructure technology providers, researchers and communicators.”

[URBAN GreenUP](#), an EU-financed project that, for the past five years, has developed, applied and tested nature-based solutions, deployed this approach to develop a suite of integrated solutions for cities to choose from as they face increasing environmental challenges.



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Valladolid, Liverpool and Izmir are the three ‘runner’ cities in the initiative, chosen for their geographical and topographical diversity, as well as their differing social and economic landscapes. Five follower cities include three from outside Europe, in Colombia, Vietnam and China.

Sánchez, who is also URBAN GreenUP’s coordinator, says the project’s impact across these cities has been transformational.

“Through well-designed RUPs, we have succeeded in changing so many residents’ perception of their cities. To see them get involved in greening their environment and starting to turn their urban landscapes into bio-cities, is deeply satisfying.”

“Focusing together on needs and gaps has generated a well-structured and effective body of work, and this is truly the project’s legacy.”

The project celebrates five years in May 2022, which is a chance for project monitor [Jesús Ortuño Castillo](#), a Madrid-based geographer and remote sensing analyst at [GMV](#), a global technology services company, to look back on achievements and lessons learned – some of which the pandemic amplified.

“It convinced many local authorities to accelerate urban greening, which led to a flourishing of nature-based initiatives. That put pressure on specialist contractors and supply chains, because these interventions are still, for the moment, highly innovative and specialised,” he says.

“It’s important that RUPs foresee bureaucratic requirements right from the outset. Additionally, technical considerations may also play a strong role in shaping the RUPs, as we found in Valladolid, where officials decided against pursuing two planned flood management and wastewater schemes.”

“Public procurement processes are also slow, and this needs to be addressed if public authorities are really serious about greening,” says Ortuño.

However, the occasional frustrations paled by comparison to the advantages to citizens.

“The benefits are clear, whether through environmental monitoring through instruments such as air quality sensors and sound level meters, satellite-based remote sensors or whether through citizens’ appreciation of the interventions as demonstrated in their feedback and their increasingly active participation at community level.”

URBAN GreenUP set out to demonstrate that it is possible for cities and nature not only to exist side by side, but to be intimately integrated with one another through the application of nature-based solutions.

The methodologies and models developed stand as a compendium of innovation, and a guide for cities in Europe and beyond to develop and finesse their own approaches to making urban life not only more bearable, but enviable – communities and neighbourhoods where Bob Marley might even have found the sweet life he craved.

Stephen Jones



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