

For years, the story of cities has been a tale of attempting to carve out a place for humans outside of nature, a model that has exacerbated our global environmental challenges. Consequently, urban areas are perceived as drivers of environmental degradation, nature loss, climate change, and pollution. Yet, more recently, we have seen a recognition of the value of nature in cities, rural-urban linkages and reduction of urban sprawl. Local governments, hubs of knowledge and innovation, are trailblazing urban experiments that replace or complement grey infrastructure with green.

It is time to flip the script: rethink the relationship between cities, urbanization, people and nature and unleash subnational leadership to harness the power of nature-based solutions (NbS) for liveable, sustainable, resilient and inclusive cities, regions and urban development in line with the Sustainable Development Goals and the New Urban Agenda. For cities and regions to make peace with nature, contributing to achieving goals of the Paris Agreement and the Convention on Biological Diversity, we need to design and redesign our cities and urban infrastructure with nature in mind. Designing with nature implies designing *for nature*. 'Solutions' should be considered not only for their value towards climate, air quality, health and well-being, livelihood and food systems benefits; but also their benefits to biodiversity, i.e. avoiding habitat destruction, expanding wildlife habitat, increasing forest coverage, and fostering a healthy ecosystem that all ultimately underpin human health and well-being and economic development.

Addressing the Climate Emergency: Cities and regions are using NbS to counter climate risks and limit global warming. Many of the world's cities are exposed to extreme weather events, which result in flooding, storm surges, and sea level rise. By 2030 heat stress could cause estimated global economic losses of USD 2.3 trillion due to the demand for cooling, pose serious health threats to citizens and further expose infrastructure. Urban nature-based solutions can help local and regional governments reduce their environmental impacts, for example by reducing energy demand for mechanical cooling, while increasing resilience to extreme heat and weather events, improve air quality and water management, and deliver enhanced health, well-being and quality of life for citizens.

Nature positive: Leveraging sustainable food systems can help build nature-positive cities. Experts, city champions, and national government representatives have come together to better understand urban and peri-urban agriculture's (UPA) potential to advance multiple sustainability goals¹. UPA such as community gardens, rooftop gardens, new technologies, and circular approaches, can contribute to better nutrition, job creation, closed loops of nutrient cycles, more wildlife and biodiversity, and improvement in the community's mental health. This has been highlighted particularly for the 'green global south' where the potential for UPA is great and can help change lifestyles and shape demand patterns. Global mechanisms such as the Coalition on Sustainable and Inclusive Urban Food Systems can be instrumental for multi-level governance, leveraging existing networks, and facilitating knowledge exchange.

Investments that pay off: NbS are ready-to-go, often low-tech and comparatively low-cost. The Italian Presidency of the G20 highlighted the importance of investing on NbS in cities² and this conversation on

¹ IRP 2022, Urban Agriculture's Potential to Advance Multiple Sustainability Goals. Retrieved from here.

² UNEP 2021, Smart, Sustainable, and Resilient: The Power of Nature Based Solutions in Cities (retrieved from here)

investing in nature will be carried over to the G7 discussions this year under Germany's leadership. Pioneer cities are demonstrating effective policy and financing strategies for NbS is possible and beneficial in the urban context. They have set planning, construction, and maintenance standards. They have also tested innovative business models and digital technologies, and piloted community-led initiatives. All this to ensure sustainable, inclusive, and cost-effective ways to bring nature back into cities. For further scale-up, several barriers need to be addressed:

Coordination and multi-level governance.

Ecosystems cut across administrative boundaries. To bring nature back into cities and regions and prevent further degradation of natural habitat, all levels of government need to work together.

- Establish national plans for NbS scale-up, with national and sub-national stakeholders.
- Invest in mechanisms and incentives for intermunicipal collaboration (e.g. city and suburbs).
- Set short-term and long-term targets for NbS, develop monitoring mechanisms, invest in impact quantification, and establish supporting mechanisms to help cities sustain action.
- Include NbS in national strategies for food security, housing, infrastructure, and overall urban development.
- Set up cross-cutting and vertical multi-stakeholder collaboration mechanisms engaging relevant ministries, departments, city and regional authorities, private sector, research institutes, and financial stakeholders for joint planning of actions.

Innovative finance and unlocking investments.

For our global climate, biodiversity and land degradation targets to be met, current NbS investments would need to triple over the next ten years. Globally, investing \$100 million annually in street trees would give 77 million people a 1°C reduction in maximum temperature on hot days. Urban trees in 10 of the world's megacities would generate \$482 million in health cost savings as a result of the reduction in pollutants³. Promoting urban agriculture contributes to gross domestic product (GDP) reducing the need for food imports to cities, releasing rural lands for export markets, and alleviating poverty. Nature-based solutions are, on average, 50% more cost-effective than 'grey' alternatives and deliver 28% more added value, yet last year, they received just 0.3% of overall spending on urban infrastructure⁴.

- Use COVID-19 recovery programmes to spur NbS in cities that address citizen's needs and deliver on nature and climate and recalibrate city-region relationships, inclusive solutions
- Establish dedicated funding windows, such as the UK's 'biodiversity net gain mechanism', and additional criteria to unlock NBS in existing ones. Particularly, introduce procedures to ensure NbS are incorporated into land use, vacant city spaces, and infrastructure planning and decision-making to unlock infrastructure investment opportunities.
- Explore innovative municipal finance approaches such as municipal bonds, carbon credits, blended finance or revolving funds, as well as public--private partnerships. A number of innovative examples have seen the light of day, spurring 'nature-based enterprises', often in the form of local micro-enterprises.
- Build capacity in local and regional governments on building bankable projects, as well as
 rebuilding local and regional governments fiscal space and establish the conditions required to
 create a consortium of financial partners that can mutually support each other and work to
 secure the financing needed for urban investments.
- Urge national governments to develop national programmes on financing and investing in local government development, as part of their national urban policies. Such programmes should be jointly led by national and local authorities, including national associations of local government bodies and their members, together with investors, DFIs and UN agencies.

Better understanding the multi-benefits of NbS to build the case for action.

NbS are often undervalued because it is harder to capture their benefits on different time scales and in multiple areas. NbS benefits include socio-economic gains. Spending \$583 billion on NbS for infrastructure and on interventions that release land to nature could create more than 59 million jobs by 2030, including 21 million livelihood-enhancing jobs dedicated to restoring and protecting natural

³ UNEP 2021, Beating the Heat Beating the Heat: A Sustainable Cooling Handbook for Cities (retrieved from here)

⁴ WEF 2022, BiodiverCities by 2030: Transforming Cities' Relationship with Nature (retrieved from here)

ecosystems. Vertical farming can target marginalised neighbourhoods, providing employment especially to those with barriers to traditional career pathways.

Having the capacity to quantify multiple benefits of NbS and document and share successful business models and financing strategies is key for consistent implementation. Currently, most documented urban NbS are located in Europe and North America, leaving a gap in cities in developing countries. For example, the Naturvation Urban Nature Atlas, a database of 1,000 NbS in European cities, provides insights on how we can further scale up NbS.

- Encourage subnational governments to engage with international and regional city networks to document and disseminate experiences on NbS, business models and financing strategies
- Encourage capacity support and awareness raising to assess & record NbS, particularly in the global South
- Invest and seek partnerships with the private sector to improve urban environmental accounting systems that
 - Identify the impacts of NbS on the well-being of urban populations and track progress towards nature-positive urban economies
 - Offer access to accurate information on the state of nature in our cities, and its balance vis a vis current and future consumption.
- Capture nature elements as assets for cities and regions, not only as costs, to enable local governments to make the case for action and unlock investment.
- Promote innovation and technology that improves how we measure and track nature benefits.

<u>Planning and designing with and for nature: make 'green the new grey', when it comes to default</u> solutions for infrastructure and basic service delivery

Additional efforts are needed to build the capacity of local governments on existing nature-based solutions, to enable them to consider these during spatial, land use, infrastructure, and food systems planning, and to conduct robust risk assessments that considers the local needs of both people and nature. We need to rediscover traditional solutions like the Hadrian Aqueducts in Athens and embrace new nature solutions. Cape Town, in search of water scarcity solutions, found that water catchment areas yielded an additional 55 billion litres annually simply from clearing of alien vegetation.

- Increase skill sets and awareness on NbS in local and regional governments as decision makers to consider densification before greenfield conversion and think beyond traditional grey infrastructure as a default solution.
- Engage communities to encourage the adoption and adaptation of nature-based designs, support local traditional knowledge and grassroot experimentation, to equitably connect people and nature. Non-traditional actors in the planning processes, such as local academics and environmental professionals, can act as a bridge between scientific knowledge and city implementation, shifting the narrative between cities and nature.
- Recognize the growing calls for rights-based approaches in relation to access to natural resources and biodiversity actions
- Involve (local) environmental experts in the planning and design of urban areas and ensure the tailoring of nature-based solutions to local contexts and needs.
- Engage with the youth and education agenda to ensure inter-generational sustainability of efforts

In conclusion, NbS are gaining recognition and traction as practical answers to a variety of the challenges facing contemporary urban development. If planned, designed, and managed in an integrated and efficient manner, they can contribute to making cities more liveable places for their citizens and garner health, climate, pollution and nature outcomes, not only making good on the three transformative actions of the NUA and multiple SDGs, but also directly contributing to achieving goals set in multilateral environmental agreements, particularly the Paris Agreement, the Convention on Biological Diversity and the Sendai Framework for Disaster Reduction.

The Decade of Restoration provides a rallying point to further define and collaborate on an Action Agenda including through partnerships such as CitiesWithNature and RegionsWithNature.

Let's flip the script for cities and nature!