



## MISSION CITIES' POLICY BRIEF NATURE-BASED SOLUTIONS POLICY LAB

**This policy brief presents policy recommendations on nature-based solutions formulated by cities participating in the EU Cities Mission (Mission Cities) for EU decision-makers and European national authorities.** *These recommendations have arisen from discussions among seven Mission Cities during the Nature-Based Solutions Policy Lab, facilitated by NetZeroCities.*

*NetZeroCities is a consortium consisting of 34 partners from 27 European countries, managing the Mission Platform for the EU Cities Mission "[100 Climate-Neutral and Smart Cities by 2030](#)".*



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# EXECUTIVE SUMMARY

This Policy Brief is building on regulatory and policy challenges faced in Lahti and Sevilla while deploying nature-based solutions (NbS) supported by the insights of an additional 4 Mission Cities (Helsingborg, Kozani, Lappeenranta, Limassol) and Twin City of Jerusalem<sup>1</sup>. It provides **policy recommendations for EU decision-makers to strengthen international and EU frameworks**, aiming to accelerate the transition to climate neutrality in Mission Cities by 2030.

Cities are at the forefront of implementing the European Green Deal, including its provisions on nature. Therefore, it is crucial for the EU policy agenda to **prioritise overcoming the regulatory and policy barriers faced by Mission Cities**.



<sup>1</sup> Jerusalem is paired with Lahti, under the framework of NetZeroCities Twinning Learning Programme. [Twin Cities Cohort 1](#).

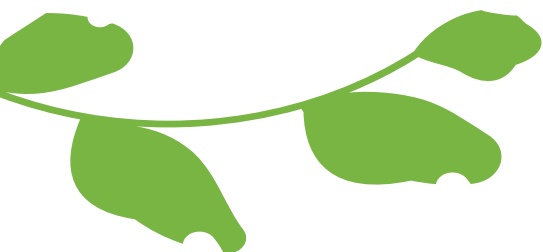
## METHODOLOGY

NetZeroCities Policy Labs at the EU level convene city practitioners from Mission Cities and EU Thematic Policy Experts in a city-centric design to create collective learning on EU public policy by bringing the evidence from real-case city challenges and formulating policy recommendations for EU decision-makers.

The policy brief is based on the presentations and findings from the third Policy Lab, focused on NbS. The session was led by two challenge owner Mission Cities (Lahti and Sevilla) and 5 challenge solver Mission Cities from across Europe who discussed and formulated policy recommendations included below.

NbS are defined as “actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services and resilience and biodiversity benefits.”<sup>2</sup>

In order to strengthen connections between climate and nature, representatives from the EU initiative [NetworkNature](#) and the [CO-CARBON](#) project were invited to share relevant activities and findings to accelerate progress on NbS for climate and biodiversity action in the urban environment.



## CONTEXT

Nature and biodiversity are increasingly recognised as vital for achieving climate neutrality and building sustainable communities. They also address other challenges, such as air quality, health and deliver various social, environmental, and economic benefits.

Due to the multi-faceted character and diverse forms of benefits that they generate, NbS are mentioned and covered under a variety of European and national legislation. However, this brings challenges in terms of policy coherence, trade-offs and governance, e.g. multi-stakeholder coordination, policy integration (land use, urban planning, environmental conservation, climate adaptation), funding and resources, regulatory and legal frameworks (property rights and land tenure issues), measuring and valuing benefits, equity and social inclusion, capacity-building and knowledge-sharing, monitoring and evaluation, scalability and replicability, political will and governance structures. To accelerate the deployment of NbS and ensure sufficient long-term capacities and resources, it is essential to address both the multilevel governance of NbS, adding to the coherence between local, regional and national policies, and the alignment of different policy domains and agendas.

Against this backdrop, this Lab focused on the question of how NbS contribute to climate neutrality and alignment between climate and nature agendas. The discussion addressed two main aspects: first, the role of NbS regarding the potential of avoided emissions and carbon sequestration within urban green infrastructure and how this supports the climate neutrality agenda; second, the additional co-benefits of NbS, including cooling, wastewater, and noise reduction.

A cooperation with NetworkNature and CO-CARBON highlights the advantages of sharing expertise and addressing cities' needs in a coordinated way.

<sup>2</sup> The definition cited in the text is extracted from UNEP EA.5/Res.5 (2022) <https://wedocs.unep.org/bitstream/handle/20.500.11822/39864/NATURE-BASED%20SOLUTIONS%20FOR%20SUPPORTING%20SUSTAINABLE%20DEVELOPMENT.%20English.pdf?sequence=1&isAllowed=y>  
- UNEA-5 2020 Resolution

### **LAHTI: HOW MIGHT EU FUNDING AND POLICIES RESPOND TO OUR INTEGRATED APPROACH ON CLIMATE AND NATURE?**

- *How to increase coherence and integration of climate and NbS in policy development at the EU-level?*
- *What policy instruments are lacking?*

Lahti has an integrated approach to climate and nature, and three components are particularly relevant (see text box on the right). In order to advance and benefit from this approach, a more coherent and supportive policy and regulatory environment is required – and the EU is playing an ever-more important role.

Evidence from Lahti's case demonstrates the urgent need to address the following questions:

- How to integrate climate and NbS in funding opportunities, rather than treating them separately?
- How can EU funding be more flexible to reflect changing needs during several years of a funding period?
- How can the private sector be more participative, and how can market mechanisms be unlocked?

Engaging the private sector in NbS initiatives involves creating incentives, reducing barriers to entry, and fostering partnerships between public and private entities. Policymakers can play a crucial role by setting clear regulatory frameworks, providing tax incentives, and supporting pilot projects that demonstrate the viability and profitability of NbS.

Additionally, what policy instruments can further underpin progress on NbS? For example, how might the EU support standardisation efforts to help cities account for carbon removals at the city

level, and measure nature positivity?

#### **Significant carbon sink and storage**

- Forests cover 63% of the land area in Lahti. The city owns 24% of forests, thus most forests are privately owned. The city uses continuous cover forestry in its own forests. Other green areas, such as built parks, are also important in the city.

#### **Biodiversity, recreation and health**

- Diverse ecosystems form a base and support for sustainable life. We aim to increase the share of protected areas in Lahti, but the progress is slow. We want to integrate the concept of planetary health in the life of the citizens and in decision-making.

#### **From climate targets to a holistic target for nature-positive Lahti**

- Nature includes climate and natural resources, thus the target of nature-positivity helps to meet the climate targets.

### **SEVILLA: HOW MIGHT EU POLICIES SUPPORT THE INTEGRATION OF NBS IN URBAN INFRASTRUCTURE PROJECTS TO LEVERAGE CO-BENEFITS?**

Sevilla, like many southern European cities, faces extreme heat in summer. Addressing the challenges of thermal comfort zones requires guidance from EU institutions which can provide evidence-based guidance, policy frameworks and funding. High temperatures need to be addressed from multiple angles, including improvements in water, sewage and drainage systems. For example, this involves improving urban wastewater and rainwater collection, reducing noise and atmospheric emissions, and enhancing thermal comfort during high temperatures.

The [LIFE Watercool project](#) focuses on developing and testing innovative solutions for the rainwater system. Building public acceptance for such infrastructure changes, especially among small businesses, is essential and guidance here is welcomed. Guidance from the EU could help in several ways by providing scientific and technical knowledge to design and implement effective NbS, offering funding opportunities and financial incentives to encourage their adoption, and establishing clear and supportive regulatory frameworks that facilitate the integration of NbS in urban planning.

The EU's Water Resilience Initiative, for example, could play a key role in providing guidance on these issues and offer a comprehensive framework for enhancing water resilience, including technical guidance, financial support, and policy frameworks to facilitate innovative water management solutions such as NbS, and therefore, its publication should no longer be delayed.



## EU POLICY RECOMMENDATIONS

### 1) Clear EU framework and guidance are indispensable

The role of the EU can be further enhanced to help leverage support for NbS planning and implementation by the local level, such as professional knowledge-sharing and capacity

building. Mission Cities testify to the fact that EU support has proven to help advance their NbS agenda and build momentum on the ground. Another area where guidance is welcome relates to the responsibilities and roles in NbS planning and implementation given that the multi-functional nature of NbS requires the involvement of various stakeholder groups. There is often little experience of working collaboratively across sectors (e.g. nature protection and business), and good practices to guide these processes are requested. Developing frameworks that facilitate cross-sector collaboration and providing training for city departments can help bridge the gap. Sharing successful case studies and creating platforms for knowledge exchange will also be beneficial. Such initiatives can foster mutual understanding, streamline efforts, and enhance NbS effectiveness.

Support is also requested for scaling up NbS in the context of infrastructure projects in Mission Cities. There are a wide range of EU initiatives providing resources on NbS to cities, such as the one-stop-shop [NetworkNature](#) where cities can search for tools and mechanisms for knowledge on NbS planning, implementation and stewardship.

Users can filter their search according to their specific needs and gaps. Specifically, tools to help capture and analyse data on cost-benefits and cost-effectiveness of NbS – which are often long-term - and NbS impact-assessment are needed<sup>3</sup>.

Harmonising reporting systems and metrics across local, regional, national and EU levels would also benefit cities, as well as contribute to the effectiveness of the wider multi-level governance system.

<sup>3</sup> The NbS Handbook for Practitioners ([https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/evaluating-impact-nature-based-solutions-handbook-practitioners-2021-05-06\\_en](https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/evaluating-impact-nature-based-solutions-handbook-practitioners-2021-05-06_en)), published in 2021, provides a comprehensive NbS impact assessment framework structured across 12 societal challenges: Climate Resilience, Water Management, Natural and Climate Hazards, Green Space Management, Biodiversity, Air Quality, Place Regeneration, Knowledge and Social Capacity Building for Sustainable Urban Transformation, Participatory Planning and Governance, Social Justice and Social Cohesion, Health and Well-being, and New Economic Opportunities and Green Jobs. This handbook serves as a reference for relevant EU policies and activities, guiding urban practitioners in developing robust impact evaluation frameworks for NbS at different scales and offering a comprehensive set of NbS indicators.

## 2) Use Urban Nature Plans to help integrate the current range of city plans and reports

The requirement of cities to produce Urban Nature Plans can be leveraged to create linkages between the local level and national plans. Rather than generating parallel or even overlapping action plans, a more integrated approach would be beneficial. It is crucial to ensure that local public and other stakeholders can feed into, for example, the development of National Energy and Climate Plans (NECPs).

Given that NbS contributes to both climate mitigation and adaptation, cities are already favouring a joint policy development approach. It would be valuable to acknowledge this at national and EU levels, and respond with corresponding frameworks, particularly at EU level. It is critical to have multi-level commitment to advance these central areas of action in cities and reflect the common ambition to accelerate NbS implementation in a systematic way.

## 3) Better incentives for NbS in cities and the role of nature-based enterprises

There is great potential to improve incentive mechanisms for NbS, for example, via procurement and permitting powers at different governance levels. It was mentioned that Mission City Lyon has demonstrated how they can influence and incentivise the private sector through their permitting power regarding a neighbouring policy context, namely circularity. Similarly, at the EU level, actions to incentivise businesses to engage with NbS in urban environments should be further expanded. Initiatives such as the [EU Business & Biodiversity Platform](#) and the [Connecting Nature Enterprise Platform](#) can serve as valuable resources.

The EU can also play a key role in informing cities about innovative financing mechanisms for NbS, investment opportunities and a nature-positive economic approach, through projects such as [NATURANCE](#), [Invest4Nature](#) and [GoNaturePositive](#). The EU could lead by showcasing effective examples and providing support for NbS via

existing initiatives, such as the European City Facility, which helps municipalities and local authorities develop investment concepts for sustainable energy and climate action plans by offering financial grants and technical assistance. This initiative not only supports the initial stages of project development but also fosters collaboration between public and private sectors, encouraging integrated approaches and joint applications to enhance the impact of sustainable investments.

One challenge mentioned by cities is how to engage the private sector and private land-owners in NbS. In the case of Lahti and Lappeenranta, for example, there is a need to engage with private forest and land-owners. The question arises as to what might be needed from national and EU levels to help bridge this gap and how forestry officers might act as intermediaries to negotiate common agreements. While direct management of private landowner relationships is typically outside the EU's competence, the EU can support national efforts by providing financial incentives, developing best practice guidelines, and facilitating NbS knowledge exchange between the public and private sectors. Additionally, funding pilot projects and offering technical assistance can demonstrate effective strategies and promote broader adoption of NbS.

These actions can create a supportive environment that encourages collaboration and integrates private stakeholders into national and regional climate and environmental goals.

## 4) Mainstreaming NbS across policy areas

Given that NbS provide a wide range of co-benefits across environmental, social and economic policy areas, it is important to recognise this and ensure clarity and coordination between sectoral legislation. Mission Cities are leading the way by connecting policies on climate, biodiversity and well-being, and significant steps forward can be made by reflecting this at all governance levels. For example, Limassol addresses urban heat issues through NbS in a [pilot project](#) in a church courtyard using green walls and a green roof, along with the



replacement of materials and asphalt with cooler options, supported by EU projects. Jerusalem's NbS projects include operational eco-parks that serve as groundwater sources, green zones with walking paths, and mobility integration while also addressing heat islands.

### 5) More emphasis on active participation of citizens

Acknowledging the essential role of citizens in the design and implementation of NbS, and building on research findings related to behaviour change, can be strengthened in the EU policy and funding design processes. More emphasis on long-term behavioural change and the value of co-creation should be considered for sustainable and just measures in cities. In this context, Jerusalem stressed the importance of bottom-up engagement in the form of self-managed neighbourhood councils where citizens are actively involved in co-creation processes which lead to increased awareness regarding NbS.

### 6) Increase attention on Urban Carbon Sinks as a climate solution in cities

As presented by researchers from the CO-CARBON project, carbon smartness offers several opportunities for cities, notably it can improve the carbon sequestration of green infrastructure, it can secure carbon pools in urban planning, it helps to develop low-emission practices for landscape construction and management and produces other vital ecosystem services.

The Carbon Removals and Carbon Farming (CRCF) Regulation and the upcoming legislation on the EU 2040 target for climate mitigation should include urban and peri-urban areas and provide more efficient steering instruments to maximise climate benefits from NbS. The climate benefits of urban green spaces must be considered at all levels of planning starting from strategic policies to implementation tools. These benefits and the impacts of different alternatives on carbon sinks must be identified when assessing the climate impacts of land use planning. The carbon sequestration of green and blue infrastructure

must be also included in more detailed planning: for example, the green factor tool and different environmental classifications can be developed in a way that they also consider carbon sequestration and other eco-system services. Planners and builders can be encouraged to increase the carbon handprint, for example, through procurement criteria. Life cycle assessment, which is already well-established in the building sector, must be expanded to the planning and construction of green spaces. This brings us closer to holistically evaluating the emissions of the built environment<sup>1</sup>.

## CONCLUSION

Mission Cities joined the third EU Policy Lab to discuss two main aspects of NbS-related policy: the role of urban carbon sinks and the role of co-benefits. It is clear that **EU laws, communications, strategies and financial instruments represent important levers and drivers** for striving towards 112 European climate-neutral and smart cities by 2030 – and to capitalise on this potential, **a better integration of the needs of the cities regarding NbS is indispensable**. A two-way dialogue across the multi-level climate governance system is needed, so that top-down and bottom-up efforts work together, and the collective ambition and vision of the Cities Mission is embedded at each governance level. In this way, the benefits of mainstreaming NbS can really be seized.

Three clear areas for greater EU – City collaboration can be summarised as follows:

- Urban Nature Plans should be considered as a link with other reports and connections between initiatives would make it easier for cities to navigate. Clear tools, targets and mechanisms would be welcomed by cities to guide their planning and implementation.
- On finance, a similar City Facility for financing NbS would be vital to ensure that the benefits of integrating biodiversity, climate and well-being are harnessed more effectively.

<sup>1</sup> Policy recommendations for cities and municipalities - CO-CARBON ([cocarbon.fi](https://cocarbon.fi))

- The nature of all three of the planetary crises – biodiversity loss, pollution, and climate change – requires all levels of government and a myriad of stakeholders to collaborate. The newly-adopted EU Nature Restoration Law provides a strong basis for encouraging and enabling cities' action in the protection and development of urban green space for the mental and physical health of citizens. Thanks to the EU Nature Restoration Law framework, European local and regional governments will be required to make sure that there is no net loss in urban green spaces and to substantially increase urban green space and urban tree cover by 2050. Only with collective action, and especially support from the Member States and European Commission to build capacities at the local level and finance the implementation of Urban Nature Plans, will these targets be achievable.

Mainstreaming NbS needs **a clearer framework at EU and national levels which aligns with the reality at the city level**. NbS has the potential to play a critical role in the transition to climate neutrality, as well as building resilience and strengthening adaptation, and it also represents a way to interlink the plans that cities use, including Climate City Contracts and Urban Nature Plans.

The key insights show that **more coherence and alignment** is needed across policy areas and governance levels, and **consulting cities in the policy development process** will help ensure meaningful, long-term and effective implementation. More exchange among stakeholders is needed - and the NetZeroCities approach to Policy & Partnerships aims to facilitate greater collaboration across sectors and governance actors in the policy arena.

**Organised by ICLEI and EuroCities on behalf of NetZeroCities. With special thanks to CO-CARBON and NetworkNature for their expert contributions.**

## RELATED RESOURCES

From the European Commission and the European Environment Agency:

- [NbS, biodiversity](#)
- [NbS, climate mitigation](#)
- [NbS, sustainable communities](#)
- [NbS, microclimate regulation and air quality](#)
- [NbS, water quality](#)
- [NbS, flood mitigation and coastal resilience](#)
- [Valorisation of NbS Projects](#)
- [NbS and procurement](#)
- [Results pack - 9 EU-funded projects](#)
- [The solution is in nature](#)
- [European Environment Agency](#)
- [Urban Biodiversity: Cultivating Support through Municipal Codes, by Biophilic Cities Network](#)
- [The value of urban nature-based solutions, UK Green Building Council](#)

NbS Catalogues:

- [Catalogue of NbS for urban regeneration, Labsimurb, Polimi](#)
- [UNaLab Technical Handbook of NbS](#)
- [The URBAN GreenUP NbS Catalogue](#)
- [ThinkNature's NbS Handbook](#)
- [Online URBiNAT NbS Catalogue](#)
- [Compendium of nature-based and 'grey' solutions, GrowGreen](#)
- [NbS Catalogue, Ecologic](#)
- [Nature4Cities: 1 & 2](#)
- [A Catalogue of Nature-Based Solutions for Urban Resilience, World Bank](#)



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